

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

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

FILING NO /2020

CASE No.

IN THE MATTER OF:

Filing of petition on 'Proposals to recover the additional cost incurred during the period January 2020 to March 2020 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

Sd/-

**Deputy Chief Engineer (Commercial & Planning)
with full powers of Chief Engineer
Kerala State Electricity Board Limited**

Affidavit verifying the application for filing the 'Proposals to recover the additional cost incurred during the period January 2020 to March 2020 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, **B.Pradeep**, son of Sri.P.Balachandran, aged 55 years residing at Vipanchika, Anayara P.O., Thiruvananthapuram do solemnly affirm and state as follows:

I am the **Deputy Chief Engineer (Commercial & Planning) with full powers of Chief Engineer** of the Kerala State Electricity Board Limited, Vydyuthi 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 27th day of May 2020 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

Sd/-

**Deputy Chief Engineer (Commercial & Planning)
with full powers of Chief Engineer**
Kerala State Electricity Board Limited,
Vydyuthi Bhavanam, Pattom
Thiruvananthapuram – 695 004

VERIFICATION

I, the above named deponent, solemnly affirm at Thiruvananthapuram on this, the 27th day of May 2020 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

Sd/-

**Deputy Chief Engineer (Commercial & Planning)
with full powers of Chief Engineer**
Kerala State Electricity Board Limited
Vydyuthi Bhavanam, Pattom
Thiruvananthapuram – 695 004.

Solemnly affirmed and signed before me.

Advocate and Notary

by the Honorable Commission vide letter dated 06.08.2019. The monthly schedule approved by Honorable Commission is attached as **Annexure-II(a)**.

- VI. There is variation in energy availability as well as scheduling from various generating stations from that of the quantum approved by Honorable Commission owing to the following reasons.
- i. Due to change in annual maintenance schedule
 - ii. Due to unscheduled outages in generating stations as well as transmission lines
 - iii. Coal shortage
 - iv. Due to variation in normative auxiliary consumption and plant load factor of various CGS in the Tariff Regulations 2019-2024 issued by CERC in March 2019, from those considered while issuing tariff order dated 08.07.2019.
- VII. KSEBL estimated the energy availability of the Central Generating Stations in the MYT petition based on the maintenance schedule of past years. The annual maintenance schedule of the CGS for the year 2019-20 was not published at the time of preparation of MYT petition. The actual maintenance schedule for FY 2019-20 has varied from the estimate in MYT petition resulting in variation in energy availability. In addition to the scheduled outages, unscheduled outages of CGS also occurred during fourth quarter due to various reasons including coal shortage. Further, the CERC Tariff regulations for the control period from 2019-2024 came into force subsequently and there is difference in normative PLF, PAF and auxiliary consumption of certain stations. It may please be noted that the monthly fixed charges payable to a thermal generating station is based on percentage Plant Availability Factor achieved upto the end of that month. Also, the scheduling of CGS and IPPs are being strictly monitored on a day today basis so as to ensure that the generators are not providing power to other utilities by backing off supply to KSEBL and stations are scheduled on the basis of merit order dispatch subjected to technical minimum. KSEB Ltd has constituted a “market monitoring committee” with the objective of monitoring market on a daily basis and is closely monitoring the schedule of all generators as available in websites of respective RLDCs, the statutory agency for scheduling and despatching of ISGS in order to ensure that the generators are abiding by the provisions of PPA/PSA. The details of station wise availability and the reasons for reduction in availability are enclosed as **Annexure-II(b)**. The actual availability for the month January to March are indicated in the REA statements of SRPC enclosed as **Annexure III**.
- VIII. Though adoption of the tariff for 350 MW power contracted through DBFOO basis ie; 100 MW from M/s Jindal India Thermal Power Limited, 100 MW from Jhabua Power limited and 150 MW from Jindal Power Limited is awaited, Honorable Commission had allowed drawal of power based on these contracts and considered scheduling power from these stations and also considered the tariff of power from M/s BALCO for the provisional estimation of cost of power while approving the ARR & ERC of the

control period 2018-22 vide MYT order 08.07.2019. Since Honorable Commission vide order dated 30.08.2016 has already adopted the tariff under bid-2 as Rs 4.29 per unit as on bid date which is the tariff matched by these generators and also approved the quantum to be scheduled from these stations, KSEBL has been considering the additional liability of these stations also while claiming fuel surcharge.

- IX. But, Honorable Commission vide order dated 14.02.2020, while approving the fuel surcharge applicable with effect from 14.02.2020, has not approved the additional liability incurred for procuring power from M/s Jindal Power Ltd-Bid II (150MW), M/s Jhabua Power Ltd (100 MW) and Jindal India Thermal Power Ltd (100 MW) citing that, the approval of the power purchase from these stations shall be given, only after getting approvals from Government of India for the deviations from the standard bidding documents issued by Ministry of Power, Government of India and after getting the approval of the Government of Kerala on the entire power purchase under DBFOO. The Commission pointed out that the actual tariff paid by KSEB Ltd for procuring power from these three stations were much higher and amounted to Rs.22.38 crore more when compared to the L1 rate of Rs.4.15 per unit paid to BALCO which is the L1 of Bid-2 and reiterated that, during the truing up of accounts for the respective financial years, such excess amount incurred for procuring power from these three generators shall not be considered, unless KSEB Ltd gets the approval of power purchase from Government of India for the deviations from the guidelines and on getting the approval of the Government of Kerala on the entire power purchase under DBFOO.
- X. The rate of power from M/s BALCO (L1 of Bid 2) used for comparison in the order dated 14.02.2020 is Rs 4.15 per unit. But this is not the discovered L1 rate approved by the Commission (Rs 4.29 per unit). On the other hand, it is the average rate of power from BALCO for the first quarter of FY-19. As such the rate Rs 4.15 per unit used for comparison is not a relevant figure. Also this rate is dependent on a number of station specific internal parameters as well as external parameters and is bound to change from month to month, which are to be administered as per the provisions in the DBFOO PSAs executed as per the standard bidding documents issued by MoP under Section 63 of the Electricity Act. The charges payable in each month are dynamic in nature based on various provisions in PSAs.
- XI. The power from all these Generators were scheduled by the petitioner based on orders of the Honorable Commission and the payments are strictly in accordance with the terms of PSA notified by MoP, Gol.
- XII. As per Section 63 of Electricity Act 2003, Honorable Commission shall adopt the tariff if such tariff has been determined through transparent process of bidding in accordance with the guidelines issued by the Central Government. The discovered rate of Rs 4.29 per unit in the Bid II quoted by M/s BALCO was already adopted by the

Honorable Commission. Further, Government of India amended the guidelines under Section 63 of Electricity Act 2003 to enable matching of the discovered rate by other bidders in case the bid quantum cannot be met from the bid of L1 bidder. In the instant case, M/s Jindal Power Ltd-Bid II (150MW), M/s Jhabua Power Ltd (100 MW) and M/s Jindal India Thermal Power Ltd (100 MW) (L2,L3& L4 of Bid II) had matched the L1 rate as on bid date and thus in view of the adoption of discovered rate of Rs 4.29 per unit in Bid II by Honorable Commission there shall be no ambiguity in passing on the same, unless Honorable Commission disallows drawal of power from these stations.

- XIII. But in the order dated 14.02.2020 , Honorable Commission used the rate of Rs 4.15 per unit for the above mentioned three stations which is the average actual cost of power purchase from M/s BALCO for the first quarter of financial year 2018-19. It is submitted that the petitioner had diligently followed the provisions in the PSAs while administering payments to these generators based on the KSERC adopted tariff of Rs 4.29 per unit under Bid II. In the case of power purchase through DBFOO contracts, the PSA notified by MoP , Gol under Section 63 of EA 2003 prescribes regulating FC based on predetermined parameters and allows pass through of actual fuel cost based on certain parameters . This will not be the same for different generators having fuel supply from different coal suppliers. The variable cost is dependent on the delivered cost of fuel supplied by respective fuel supplier with whom the supplier has executed fuel supply agreement. As the source of fuel, distance from source of fuel (mine) and grade of coal varies for different generators the variable charges for each generators will be different. Even though the tariff discovered as on bid date as agreed by all the successful bidders under Bid 2 is the same ie; Rs 4.29 per kWh, the same can be administered only in accordance with the provisions in PSAs. The PSAs executed with each supplier is independent in nature and is to be administered accordingly. Hence the actual monthly cost of power from approved sources should be based on the respective PSAs of the generating stations. Hence the disallowance as done vide order dated 14.02.2020 is not going hand in hand with the provisions of the PSA notified by Gol in accordance with Section 63 of Electricity Act.
- XIV. Honorable Commission vide order dated 30.08.2016 has already adopted the tariff under bid-2 as Rs 4.29 per unit as on bid date. Even though PSA in respect of L2, L3 and L4 are awaiting approval of Honorable Commission, the rate in respect of generators under bid 2 cannot be redetermined. As per the provisions of Electricity Act 2003 and the judgment of Hon'ble Supreme Court dated 11.04.2017 in CA 5399-5400 of 2016 and also as per the various orders of Hon'ble Commission, the State Commission do not have jurisdiction in respect of determination or redetermination of tariff of interstate generating stations. The terms and conditions of PSA has to be as per the standard bid documents notified by Gol under section 63 of EA 2003. As the tariff under bid 2 is adopted by the this Honorable Commission and

the power is allowed to be drawn in respect of L2, L3 and L4 generators, the rate of power in respect of these generators during the tenure of PSA can be allowed by this Honorable Commission only in accordance with the standard PSA notified by MoP, Gol. Hence the order of Honorable Commission to pass on the cost in respect of other generators at the rate of BALCO is an apparent error on face of records.

- XV. Aggrieved by the order dated 14.02.2020, KSEBL filed a review petition on 30.03.2020 seeking review of the order dated 14.02.2020 on Petition no OA29/2019 and prayed to allow passing on the additional fuel cost incurred against PSAs with M/s Jindal Power Ltd(150 MW), M/s Jhabua Power Ltd(100 MW) and M/s Jindal India Thermal Power Ltd(100 MW). The petition is attached as **Annexure VI**. It is humbly prayed that the contentions therein may be considered as an integral part of this petition and duly taken into account while deciding on the prayers under this petition.
- XVI. Since, presently the matter is under review, KSEBL is claiming the additional liability of these three stations in this petition. The variable cost of these three stations is not specified in the order dated 08.07.2019. The DBFOO framework allows pass through of actual fuel cost based on predetermined Station Heat Rate, which shall not exceed 2350 kCal/kWh. Further, the Station Heat Rate has to be certified by the generators based on the tests prescribed in the PSA prior to date of commissioning. The Station Heat rates duly certified by generators under Bid 2 viz; M/s Jindal Power Ltd (150 MW), M/s Jhabua Power Ltd (100 MW), M/s Jindal India Thermal Power Ltd (100 MW) and M/s BALCO (100 MW) are 2327 kCal/kWh, 2347.9kCal/kWh, 2350 kCal/kWh and 2350 kCal/kWh respectively. Further, the delivered cost of coal to each generator would depend on the grade of coal supplied by Coal India Ltd or its subsidiaries, the notified price of coal of the respective mine from which coal is supplied and the cost of transportation which again depends on the mode of transportation and distance from mine. Hence, the fuel cost/variable cost of BALCO cannot be used for estimation of additional liability for these stations. So KSEBL is provisionally assessing the additional liability due to these purchases based on the actual variable cost/fuel cost of these stations with respect to the variable cost used for estimation in the MYT petition dated 31.10.2018.
- XVII. KSEBL is preparing the current petition based on final invoices of January and February-2020 and provisional invoice of March 2020 which is based on the final REA statement issued by SRPC for the month of January and February and provisional REA for the month of March 2020. Monthly invoices raised by generation companies whose tariff is approved by CERC comprises of Fixed Charges and Variable Charges. These Fixed Charges and variable charges payable to a thermal generating station for a calendar month is calculated in accordance with the formula specified in the tariff regulation for the control period. In the case of variable charges, the landed cost of fuel for the month is verified with the details in Form 15 where the price of fuel corresponding to the grade and quality of fuel is taken from the latest price

notification of Coal India Ltd/Singareni Collieries inclusive of royalty, taxes and duties as applicable and the transportation cost by rail or any other means is taken from the latest freight charges of railways. In addition, the 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.

XVIII. The actual per unit variable cost of power purchase for fourth quarter, from various sources, over the approved level has varied mainly on account of changes in the variable cost due to the variation in normative SHR and auxiliary consumption (consequent to the notification of CERC Tariff Regulation for control period 2019-24), the variation in the price of primary fuel, secondary fuel and changes in calorific value of fuel, cost of transportation of fuel. There is non-uniform variation in energy charge and increase in the same from the estimated figures, which are attributable to the following.

- i. Honorable Commission approved the variable charges for the year 2019-20 of Central Generating Stations and IPPS whose tariff is determined by Central Electricity Regulatory Commission(CERC) , after giving an escalation of 2% on the actual variable charges for the year 2018-19 vide order dated 08.07.2019. Central Electricity Regulatory Commission notified Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 dated 07.03.2019, with effect from 01.04.2019. Thus there was revision in normative station heat rate and auxiliary consumption for all Central Generating Stations and stations whose tariff is determined by CERC, through the notified Tariff Regulations, 2019 dated 07.03.2019, due to which energy charges increased considerably compared to last quarter of FY-19. The impact of CERC Tariff regulations was not accounted in the tariff of 2019-2020 approved in the MYT order.
- ii. In addition to the above, the 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 source(Coal mines), mode of transport etc.
- iii. 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 coal shortage from linkage sources, the generating stations has to augment coal from other domestic sources and also imported coal. 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 etc. The price of coal from Singareni Collieries (SCCL) is based on the price notifications of Singareni Collieries where as coal price of Coal India Ltd (CIL) is based on the notification dated 8/1/2018 and the fuel price is based on the coal price and the transportation cost. There are frequent revisions in SCCL price notification compared to CIL. Honorable

Commission may please note that the following price revisions were notified by SCCL subsequent to MYT petition contributed to increase in energy charges.

1. SCCL per price notification no.107/2018-19 dt 11.10.18 wef 01.10.18
2. SCCL per price notification no.109/2018-19 dt 28.11.18 wef 01.12.18
3. SCCL per price notification no.111/2018-19 dt 31.12.18 wef 01.01.19
4. SCCL per price notification no.113/2018-19 dt 9/3/2019 wef 09.03.19
5. SCCL per price notification no.114/2019-20 dt 04/05/19 wef 04.05.19
6. SCCL per price notification no.117/2019-20 dt 31/08/19 wef 01.09.19
7. SCCL per price notification no.118/2019-20 dt 30/11/19 wef 01.12.19
8. SCCL per price notification no.119/2019-20 dtd 10/2/20 wef 11/2/2020

The copies of price notifications are enclosed as **Annexure VII**.

- iv. NLC has revised the Lignite transfer price guidelines 2019-24 dated 17.09.2019 wef October 2019. As per the revised lignite price guidelines, the basic price of pooled lignite is revised from Rs. 1950/ton to Rs. 2050/ton with effect from 1/10/2019. Further, security charges, ground water charges and recovery of lignite price due to surrender of power of the linked power plants are billed in addition to basic price from 1.10.2019 onwards. The energy charges of NLC stations shows an increase in the third quarter of FY-19 owing to the revised Lignite transfer price guidelines 2019-24.
- v. The monthly energy charges varies depending upon the receipt of coal from different sources. The energy charge rate calculated as per Tariff regulations is based on the following formula Energy charge rate= $\{(GHR-SFC*CVSF)*LPPF/CVPF+(SFC*LPSFi)+(LC*LPL)*100/(100-Aux)\}$

Where
GHR is Gross station heat rate in Kcal per kWh
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;
- vi. 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:
- vii. 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 has 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. The details of calorific value and landed price of coal is available in Form 15 attached as **Annexure VIII**.

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

Table-1					
Sl No	Source	Approved	Actual (Rs/ kWh)		
		(Rs/ kWh)	Jan-20	Feb-20	Mar-20
Central Generating Stations					
1	NTPC-RSTPS Stage I & II	2.49	2.628	2.603	2.604
2	NTPC-RSTPS Stage III	2.45	2.591	2.565	2.558
3	Talcher	1.73	2.064	2.044	2.083
4	Simhadri TPS Stage II	2.89	3.207	3.231	3.059
5	NLC-Stage-1	2.64	2.766	2.766	2.768
6	NLC-Stage-II	2.64	2.766	2.769	2.768
7	NLC I Expansion	2.44	2.547	2.549	2.549
8	NLC II Expansion	2.44	2.593	2.556	2.556
9	Vallur STPS	3.13	3.705	3.603	3.650
10	NTPL	3.21	2.940	2.786	2.785
11	NTPC Kudgi	3.91	3.607	3.598	3.864
Independent Power Producers					
12	RTPS	2.30	3.003	2.998	3.011
13	Mejia	2.46	2.891	2.706	2.839
14	Maithon Power Ltd- Contract I	2.39	2.566	2.601	2.671
15	Maithon Power Ltd- Contract II	2.39	2.566	2.601	2.671
16	Jindal Power Ltd-Bid I	1.29	1.310	1.310	1.310
17	Jhabua Power Ltd-Bid I	1.91	1.960	1.960	1.960
18	Jindal Power Ltd-Bid II	1.19	1.310	1.310	1.310
19	Jhabua Power Ltd-Bid II	1.73	1.880	1.880	1.880
20	JITPL	1.03	1.140	1.140	1.140
21	BALCO	1.19	1.160	1.160	1.160

XX. The monthly energy charge variations during the fourth quarter is due to following reasons.

- NTPC RSTPS Stage I& II,III: Coal linkage is from Singareni Collieries (SCCL). Coal price is based on the notified price of Singareni Collieries from time to time. The energy charges for the month of January was based on the price of coal vide notification of SCCL {118/2019-20 dt 30/11/2019} wef 01/12/19 and the energy charges for the month of February is based on the coal price

notification of Singareni Collieries {119/2019-20 dt 10/02/2020 wef 11/02/20} and the energy charges for the month of March is based on the coal price notification of Singareni Collieries {121/2019-20 dt 01/03/2020 wef 01/03/20}. The slight variations in monthly fuel charges is due to the variations in calorific value of fuel.

- NTPC Talcher STPS-Stage II:- Coal linkage is from Kaniha area of Talcher coal fields(MCL). Due to the coal shortage, full allocation from MCL has not been received from August onwards, and domestic coal is seen received from IB valley (MCL), SCCL & ECL. SCCL and ECL coal are high graded coal and is more expensive. Further it is seen that due to domestic coal shortage, imported coal at higher rate is used during the quarter. Depending on the blending ratio of coal receipt from different sources having different cost, the landed cost of fuel varies. The monthly variations in landed price and calorific value of fuel leads to monthly variation in energy charges.
- NTPC Simhadri :- Coal linkage is from MCL. In most of the months coal linkage from MCL is 50 % only. Due to shortage of coal from MCL, domestic coal is being arranged from SCCL, ECL & CCL. Further it is seen that due to domestic coal shortage, imported coal at higher rate is used during the quarter. Depending on the blending ratio of coal receipt from different sources having different cost, the landed cost of fuel varies. The monthly variations in landed price and calorific value of fuel leads to monthly variation in energy charges.
- NLC stations:- The slight variations in fuel cost is due to the change in calorific value of fuel.
- NTECL Vallur:- The increase in monthly energy charge of Vallur is due to the usage of coal at higher rate (SCCL coal at premium rate).
- NTPL:- For NTPL ,imported coal is used during the quarter. Depending upon the quantity of imported coal monthly energy charges varies.
- NTPC Kudgi:- For KUDGI stations imported coal and e auction coal is used due to shortage of coal during the quarter and depending on the varied blending ratio, the monthly energy charges varies.
- DVC Mejia:- The monthly variation energy charges for DVC Mejia during this quarter is due to the variations in usage of expensive coking coal.
- Maithon Power Ltd:- In the case of Maithon Power Ltd , the coal linkage is from CCL and BCCL. BCCL coal is high grade coking coal which is expensive compared to CCL coal. Further imported and eauction coal s used in this quarter. Depending upon the blending ratio of coal the monthly energy charges varies.

XXI. The summary of additional liability for fourth quarter of 2019-20 as per fuel surcharge regulations is given in **table 2** below.

Table 2 Additional liability for the third quarter 2019-20							
Source	Energy procurement			Per unit cost		Add liability	
	Apprvd quantum	Actual	Admissible as per regulation	Approved	Actual	Actual	Admissible as per regulation
	(MU)	(MU)	(MU)	(Rs/kWh)	(Rs/kWh)	(Rs. Cr)	(Rs. Cr)
CGS	2394.03	2333.11	2155.88	2.45	2.56	40.87	39.19
IPPs	2290.67	2290.52	2204.88	1.76	1.89	34.30	33.36
Total	4684.70	4623.63	4360.77	2.11	2.23	75.17	72.55

XXII. Honorable Commission may please note that KSEBL has incurred an additional liability of Rs 75.17 crore for purchasing 4623.63 MU of energy from various approved thermal sources during the fourth quarter of FY 2019-20. Out of which Rs 72.55 Cr. is the admissible additional liability as per regulations. Details in this regard as per the provisions of fuel surcharge formula specified in 'Annexure X' to Tariff Regulations, 2018, are furnished in **Annexure IV**.

XXIII. Honorable Commission may please note that the actual demand during the quarter was less by 139.08 MU. But the actual hydro generation was less by 190.35 MU, power from CGS decreased by 183.05 MU, renewable energy purchase less by 244.93 MU and power purchased from private IPPs outside the State through long term contracts decreased by 80.56 MU against the approved quantum. The reduction in availability necessitated in the increase in power purchase through short term/power transfer through deviation settlement mechanism, by 446.31 MU.

XXIV. KSEBL has purchased 180.40 MU from short term market through exchanges and by means of power transfer through deviation settlement mechanism during the fourth quarter of FY-2019-20 at a total amount of Rs 55.15 Cr @ Rs 3.06 per unit which is less than the average cost of power purchase approved for 2019-20. However, it is submitted that the said quantum had to be purchased against the shortfall from various sources as detailed in para XXIII above, marginal cost of which is lower than the rate of short term procurement, and has created additional financial liability on the petitioner, over and above the approved power purchase cost.

XXV. The month wise details of short term procurement are given in the **table 3** below.

Table 3 Details of procurement from Short-term market and traders									
Source	January			February			March		
	Quantum	Rate	Amount	Quantum	Rate	Amount	Quantum	Rate	Amount
	MU	Rs/ unit	Rs Cr.	MU	Rs/	Rs Cr.	MU	Rs/unit	Rs Cr.
IEX	38.28	5.85	22.40	10.71	2.92	3.13	3.78	3.11	1.17
PXIL	0.00	0.00	0.00	0.12	3.60	0.04	0.47	3.33	0.16
DSM	45.30	2.24	10.17	40.54	2.42	9.83	41.20	2.00	8.24
Total	83.58	3.90	32.57	51.37	2.53	13.01	45.44	2.11	9.57

*Quantum and rate at Kerala periphery

- XXVI. In addition to the above KSEBL availed energy through various banking arrangements as detailed below.
- XXVII. In order to overcome the anticipated power and energy shortage in summer months, KSEBL entered banking arrangement with M/s PTC India Ltd and M/s BSES Yamuna Power Ltd, from February 2020 to April 2020 which was approved by Honorable Commission vide order dated 14.01.2020. KSEBL availed 198.53 MU during the month of February & March through these banking arrangements. Further, unit 2 at Idukki HEP tripped on 20.01.2020 due to the flashing of 11 kV bushing of excitation transformer and unit 6 of Idukki power station tripped on 01.02.2020 due to the flashing of lightning arrester- voltage transformer. Unit-II was expected to put into service during 1st week of April 2020 and Unit 6 is expected to put in service during May 2020. Incidentally, consequent to the nationwide lock down, the rectification works could not completed as planned. Due to the above forced outage there was an additional shortage of 260 MW during peak and an energy shortage of around 40.3 MU during March 2020. In order to meet shortage due to this KSEBL entered banking arrangements with BRPL through Manikaran power Ltd for the month of March 2020 for procuring 50 MW RTC and 100 MW from 14.00hrs to 24.00 hours. KSEBL filed petition before Honorable Commission on 30.03.2020 seeking approval for the banking transactions with BRPL for the month of March 2020. KSEBL availed 55.90 MU for the month of March 2020, through banking transaction with BRPL.
- XXVIII. Hon'ble Commission had not given approval for scheduling power from RGCCPP for the year 2019-20 vide tariff order dated 08.07.2019. But as per power purchase agreement KSEBL is bound to pay fixed charges. It is humbly submitted that power purchase cost being an uncontrollable cost, Hon'ble Commission may kindly allow the fixed charges paid towards RGCCPP at the time of truing up.
- XXIX. 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 ie; the fuel surcharge for the fourth quarter of FY-20 is to be adjusted from June 2020 onwards as per regulation. Honourable Commission may please note that owing to the Covid -19 pandemic and subsequent lock down the consumption in the State has come down by 20%. Hence KSEBL could not recover the fuel surcharge approved for the first quarter within the period of recovery approved by the Honourable Commission and KSEBL vide letter dated 14.05.2020 filed a request before the Honourable Commission to extend the recovery period for consumption period upto 31.05.2020. Further, since the recovery of fuel surcharge of second quarter and third quarter is pending, KSEBL is of the view that the fuel surcharge for the fourth quarter could not be adjusted from June 2020 onwards. Hence, for calculation purpose KSEBL is considering the energy sales from December 2020 onwards for three months for arriving the fuel surcharge

recovery rate and the same is arrived as 12 paise per unit. The details of calculation are furnished in **Annexure V**. KSEBL humbly requests before the Honorable Commission to consider the energy sales for the corresponding period while approving fuel surcharge recovery rate.

XXX. It is prayed that Honourable Commission may approve the additional liability of Rs 72.55 crore for the fourth quarter of FY2019-20 as per Regulation 86 of KSERC Tariff Regulations, 2018 and allow KSEBL to recover this additional cost as fuel surcharge from all categories of consumers including bulk consumers/licenseses from December 2020 onwards @ 12 paise per unit as per the regulations.

PRAYER

KSEBL humbly prays before this Hon'ble Commission that,

- (a) The additional financial liability incurred by KSEBL, amounting to Rs 72.55 Cr., due to the variation in power purchase cost resulting from the variation in cost of fuel for the period from January to March 2020 for the procurement/ generation of energy from various thermal sources as per Regulation 86 of KSERC Tariff Regulations, 2018 as detailed in **Annexure IV & V** 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 86 of KSERC Tariff Regulations, 2018, @ 12 paise per unit from December 2020 onwards.

Sd/-

**Deputy Chief Engineer (Commercial & Planning)
with full powers of Chief Engineer**

**Acc: 1. Formats 1 to 4
2. Annexure I-VIII
3. Copies of invoices**

Formats

Format-1

Details of Energy Billed for retail sale January-March 2020(Provisional)		
1	Energy billed with in the State*	Actual
(a)	Total energy billed to LT, HT and EHT consumers (excl. energy billed to bulk consumers/ other Licensees) (MU)	5651.95
(b)	Energy billed to bulk consumers/ other licensees (MU)	153.88
(c)	Total energy billed (MU)	5805.84
2	Energy Input (Excluding External losses) (MU)	6688.91
3	T & D Losses (Internal) (%)	13.20

*The energy billed for the month of January February and March is shown in table and are not the energy sales corresponding to energy input during the quarter .

Details of energy billed for retail sale for third quarter 2019-20						
Month	Energy billed (MU)*		T&D loss(%)		Energy Input(MU)	
	Actual	Approved	Actual	Approved	Actual	Approved
Jan-2020	1913.61			12.42% at the end of FY-20	2213.89	
Feb-20	1955.72				2157.93	
March-20	1936.51				2317.09	
Total	5805.84				6688.91	

*The energy billed for the month of January February and March is shown in table and not the energy sales corresponding to energy input during the quarter. As the corresponding energy sales against energy input will be available from billing of subsequent months, the monthly actual loss details is not furnished

Format-3						
Month Wise Details of Purchase of Energy (claiming for fuel surcharge cost)						
Source	Energy Purchase (MU) at exbus		Variable Cost (Rs/kWh)		Total variable cost (Rs.Cr)	
	Actual(A)	Approved ('B)	Actual (C)	Approved ('D)	Actual E=A*C)	Approved (F=B*D)
January-2020						
Central Generating Stations						
RSTPS I & II	155.33	170.15	2.63	2.49	40.82	42.37
RSTPS III	42.51	42.77	2.59	2.45	11.01	10.48
Talcher Stage-II	287.34	273.83	2.06	1.73	59.31	47.37
Simhadri TPS Stage II	52.30	53.18	3.21	2.89	16.77	15.37
NLC Stage-I	39.77	35.86	2.77	2.64	11.00	9.47
NLC Stage-II	60.08	52.41	2.77	2.64	16.62	13.84
NLC 1 Expansion	45.85	19.93	2.55	2.44	11.68	4.86
NLC II Expansion	12.12	25.60	2.59	2.44	3.14	6.25
Vallur STPS	23.34	31.90	3.70	3.13	8.65	9.98
NTPL	48.35	46.30	2.94	3.21	14.22	14.86
Kudgi	16.97	68.45	3.61	3.91	6.12	26.76
Sub total CGS	783.98	820.38	2.54	2.46	199.34	201.61
Long Term contracts with generators outside the State						
DVC Reghunathpur TPS	25.50	32.35	3.00	2.30	7.66	7.42
DVC Mejia TPS	67.02	65.56	2.89	2.46	19.38	16.12
Maithon Power Ltd- Contract 1	103.59	102.62	2.57	2.39	26.58	24.48
Maithon Power Ltd- Contract II	103.59	102.62	2.57	2.39	26.58	24.48
Jindal Power Ltd-Bid I	129.99	127.22	1.31	1.29	17.03	16.41
Jhabhua Power Ltd -Bid I	81.28	73.15	1.96	1.91	15.93	13.97
Jindal Power Ltd-Bid II	97.49	95.42	1.31	1.19	12.77	11.35
Jhabhua Power Ltd -Bid II	70.68	63.61	1.88	1.73	13.29	11.00
Jindal India thermal Power Ltd	63.43	63.61	1.14	1.03	7.23	6.55
BALCO	65.40	63.61	1.16	1.19	7.59	7.57
TOTAL LTA	807.98	789.77	1.91	1.76	154.03	139.37
Total	1591.95	1610.15	2.22	2.12	353.38	340.98
February-2020						
Central Generating Stations						
RSTPS I & II	144.56	126.61	2.60	2.49	37.63	31.53
RSTPS III	39.80	31.05	2.56	2.45	10.21	7.61
Talcher Stage-II	271.43	238.09	2.04	1.73	55.48	41.19
Simhadri TPS Stage II	47.24	48.64	3.23	2.89	15.26	14.06
NLC Stage-I	39.47	30.25	2.77	2.64	10.92	7.99
NLC Stage-II	56.21	49.25	2.77	2.64	15.56	13.00
NLC 1 Expansion	43.54	37.07	2.55	2.44	11.10	9.05
NLC II Expansion	26.52	23.95	2.56	2.44	6.78	5.84

Vallur STPS	22.00	30.62	3.60	3.13	7.93	9.58
NTPL	44.62	21.40	2.79	3.21	12.43	6.87
Kudgi	51.43	65.79	3.60	3.91	18.50	25.72
Total	786.81	702.72	2.56	2.45	201.80	172.43
Long Term contracts with generators outside the State						
DVC Reghunathpur TPS	28.91	27.76	3.00	2.30	8.67	6.37
DVC Mejia TPS	64.68	58.37	2.71	2.46	17.50	14.35
Maithon Power Ltd- Contract 1	92.33	92.73	2.60	2.39	24.02	22.12
Maithon Power Ltd- Contract II	92.33	92.73	2.60	2.39	24.02	22.12
Jindal Power Ltd-Bid I	120.77	114.91	1.31	1.29	15.82	14.82
Jhabhua Power Ltd -Bid I	76.04	66.07	1.96	1.91	14.90	12.62
Jindal Power Ltd-Bid II	90.53	86.18	1.31	1.19	11.86	10.26
Jhabhua Power Ltd -Bid II	66.12	57.46	1.88	1.73	12.43	9.94
Jindal India thermal Power Ltd	62.05	57.46	1.14	1.03	7.07	5.92
BALCO	60.63	57.46	1.16	1.19	7.03	6.84
TOTAL LTA	754.39	711.13	1.90	1.76	143.32	125.36
Total	1541.20	1413.85	2.24	2.11	345.51	297.79
March-2020						
Central Generating Stations						
RSTPS I & II	151.82	170.15	2.60	2.49	39.53	42.37
RSTPS III	5.55	42.77	2.56	2.45	1.42	10.48
Talcher Stage-II	285.53	299.42	2.08	1.73	59.48	51.80
Simhadri TPS Stage II	45.89	58.44	3.06	2.89	14.04	16.89
NLC Stage-I	40.96	35.86	2.77	2.64	11.34	9.47
NLC Stage-II	56.22	52.41	2.77	2.64	15.56	13.84
NLC 1 Expansion	46.39	39.63	2.55	2.44	11.83	9.67
NLC II Expansion	14.07	25.60	2.56	2.44	3.60	6.25
Vallur STPS	19.90	31.90	3.65	3.13	7.26	9.98
NTPL	40.00	46.30	2.79	3.21	11.14	14.86
Kudgi	55.98	68.45	3.86	3.91	21.63	26.76
Total	762.32	870.93	2.58	2.44	196.82	212.37
Long Term contracts with generators outside the State						
DVC Reghunathpur TPS	28.54	32.35	3.01	2.30	8.59	7.42
DVC Mejia TPS	57.26	65.56	2.84	2.46	16.26	16.12
Maithon Power Ltd- Contract 1	71.78	102.62	2.67	2.39	19.17	24.48
Maithon Power Ltd- Contract II	71.78	102.62	2.67	2.39	19.17	24.48
Jindal Power Ltd-Bid I	127.15	127.22	1.31	1.29	16.66	16.41
Jhabhua Power Ltd -Bid I	81.28	73.15	1.96	1.91	15.93	13.97
Jindal Power Ltd-Bid II	95.36	95.42	1.31	1.19	12.49	11.35
Jhabhua Power Ltd -Bid II	70.68	63.61	1.88	1.73	13.29	11.00
Jindal India thermal Power Ltd	59.56	63.61	1.14	1.03	6.79	6.55
BALCO	64.76	63.61	1.16	1.19	7.51	7.57
TOTAL LTA	728.16	789.77	1.87	1.76	135.87	139.37
Total	1490.48	1660.70	2.23	2.12	332.69	351.73

Format-4

Sourcewise Energy Input from January to March-2020 in MU

SI No	Particulars	Jan-20		Feb-20		Mar-20		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	439.68		404.61		470.86		1315.15		
	(b) Less Aux consumption	2.20		2.02		2.35		6.58		
	(c) Net Hydro Gen	437.49		402.59		468.50		1308.58		
2	KSEB thermal									
	(a) BDPP	0.00		0.00		0.00		0.00		
	(b) KDPP	0.00		0.00		0.00		0.00		
	(c) Subtotal	0.00		0.00		0.00		0.00		
	(d) Less Aux consumption	0.00		0.00		0.00				
	(e) Net BDPP+KDPP	0.00		0.00		0.00				
3	Wind Generation(net)	0.10		0.09		0.04		0.23		
4	Solar Generation(net)	1.46		1.65		1.67		4.78		
	Total own generation(net)	439.05		404.33		470.21		1313.58		
5	CGS (Import)	926.14	973.48	909.09	911.24	959.98	1093.55	2795.22	2978.27	-183.05
6	IPPs									
	RGCCPP	0.00		0.00		0.00		0.00		
	BSES	0.00		0.00		0.00		0.00		
	KPCL	0.00		0.00		0.00		0.00		
	Wind	6.37		6.62		3.23		16.22		
	Solar	7.02		7.08		8.26		22.36		
	Ullunkal(EDCL)	1.08		0.87		1.02		2.97		
	Iruttukanam Stage-I (VIYYAT)	0.53		0.19		0.20		0.92		
	Iruttukanam Stage-II	0.02		0.04		0.04		0.10		
	Karikkayam HEP(AHPL)	2.10		1.73		1.90		5.73		
	Meenvallom (PSHCL)	0.15		0.09		0.07		0.31		
	Pathamkayam	0.00		0.00		0.00		0.00		
	Subtotal	17.25		16.62		14.73		48.60		
7	Purchase through Longterm contract									
i	Purchase From DVC Reghunathpur	25.50		28.91		28.54		82.96		
ii	Purchase from DVC Meja	67.02		64.68		57.26		188.96		
iii	Purchase from Maithon power-1, ER	103.59		92.33		71.78		267.71		

iv	Purchase from Maithon power-2 ,ER	103.59		92.33		71.78		267.71		
v	Purchase from (JPL STAGE2) -DBFOO	129.99		120.77		127.15		377.91		
vi	Purchase from jhabhua- SGPLNLR,TPCL DBFOO	81.28		76.04		81.28		238.60		
vii	Purchase from jhabhua-(PSA-2)SGPLNLR,TPCL DBFOO	70.68		66.12		70.68		207.48		
viii	Purchase from (JPL STAGE2) -(PSA-2)DBFOO	97.49		90.53		95.36		283.37		
ix	Purchase from JITPL	63.43		62.05		59.56		185.04		
x	Purchase from BALCO	65.40		60.63		64.76		190.79		
	Sub Total	807.98	687.16	754.39	733.01	728.16	789.79	2290.52	2209.96	-80.56
	Purchase through exchanges(net)	39.22		11.09		4.35		54.66		
	Deviation settlement mechanism	45.30		40.54		41.20		127.05		
	Power transferred to inside the State thru banking arrangement	0.00		80.30		184.30		264.60		
	Power Purchase	1835.90		1812.03		1932.72		5580.64		
	PGCIL losses	61.04		58.43		85.84		205.31		
	Net Power Purchase	1774.86		1753.60		1846.88		5375.34		
	Total Gen & PP	2213.90		2157.93		2317.09		6688.91		

Annexure-I				
Power contracted through long Term agreements				
Allocation from Central Generating Stations				
No.	Station	IC (MW)	Allocation	Allocated Capacity to KSEBL (MW)
		MW	%	2019-20 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	500	3.24%	16.2
	Total			1740.58
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		

Monthly energy schedule approved for Central Generating Stations at ex bus for the year 2019-20

Source	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Total
RSPTS Stage I & II	164.66	153.95	125.46	153.95	129.64	164.66	170.15	148.98	129.64	170.15	126.61	170.15	1,808.01
RSTPS Stage III	41.39	42.77	41.39		42.77	41.39	42.77	41.39	42.77	42.77	31.05	42.77	453.27
TALCHER - Stage II	289.76	299.42	289.76	224.57	299.42	217.32	224.57	217.32	299.42	273.83	238.09	299.42	3,172.90
Simhadri Exp	51.46	53.18	28.28	53.18	29.22	51.46	53.18	51.46	53.18	53.18	48.64	58.44	584.87
NLC-II- Stage-1	27.22	35.86	27.22	35.86	35.86	34.70	28.12	34.70	35.86	35.86	30.25	35.86	397.35
NLC-II- Stage-2	50.72	52.41	38.04	52.41	39.31	50.72	52.41	38.04	39.31	52.41	49.25	52.41	567.42
NLC- Exp- Stage-1	38.35	39.63	38.35	20.50	39.63	38.35	39.63	38.35	39.63	19.93	37.07	39.63	429.02
NLC - II Exp	24.77	25.60	24.77	25.60	15.71	15.20	25.60	24.77	25.60	25.60	23.95	25.60	282.78
MAPS	11.08	11.45	11.08	11.45	11.45	11.08	5.72	11.08	5.72	11.45	10.60	11.45	123.59
KAIGA Stg I& II	33.82	24.32	43.30	44.75	44.75	32.03	44.75	43.30	44.75	44.75	41.51	44.75	486.76
K'kulam - I & II	137.64	142.23	137.64	142.23	142.23	137.64	142.23	137.64	69.52	72.71	134.43	142.23	1,538.37
Vallur JV with	20.58	31.90	30.87	31.90	31.90	21.07	31.90	20.58	31.90	31.90	30.62	31.90	347.05
NTPL(Tuticorin)	44.80	46.30	22.11	46.30	46.30	44.80	46.30	44.80	46.30	46.30	21.40	46.30	501.99
Kudgi Unit I & II	66.24	68.45	66.24	57.04	57.04	55.20	57.04	55.20	57.04	68.45	65.79	68.45	742.20
Bhavini			23.41	24.19	24.19	23.41	24.19	23.41	24.19	24.19	21.98	24.19	237.31
Total	1,002.51	1,027.46	947.92	923.90	989.40	939.05	988.55	931.04	944.82	973.46	911.24	1,093.53	11,672.87

Monthly Schedule approved for LTA at ex bus for 2019-20

Source	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Total
Maitthon power	99.31	102.62	99.31	102.62	102.62	99.31		99.31	102.62	102.62	92.73	102.62	1,105.73
Maitthon power	99.31	102.62	99.31	102.62		99.31	102.62	99.31	102.62	102.62	92.73	102.62	1,105.73
DVC-Meija TPS	63.44	65.56	63.44	65.56		63.44	65.56	63.44	65.56	65.56	58.37	65.56	705.50
DVC-R'pur TPS	31.30	32.35	31.30	32.35	32.35	31.30	32.35		32.35	32.35	27.76	32.35	348.10
Jindal Power	123.12	127.22	123.12	127.22	127.22	123.12	127.22	123.12	127.22	127.22	114.91	127.22	1,497.96
Jindal Power	92.34	95.42	92.34	95.42	95.42	92.34	95.42	92.34	95.42	95.42	86.18	95.42	1,123.47
Jindal Thermal	61.56	63.61	61.56	63.61	63.61	61.56	63.61	61.56	63.61	63.61	57.46	63.61	748.98
Jhabua Power	70.79	73.15	70.79	73.15	73.15	70.79	73.15	70.79	73.15	73.15	66.07	73.15	861.33
Jhabua Power	61.56	63.61	61.56	63.61	63.61	61.56	63.61	61.56	63.61	63.61	57.46	63.61	748.98
BALCO	61.56	63.61	61.56	63.61	63.61	61.56	63.61	61.56	63.61	63.61	57.46	63.61	748.98
Total	764.31	789.79	764.31	789.79	621.60	764.31	687.16	733.01	739.79	789.79	711.13	789.79	8,994.76

Annexure II(b) Details of energy availability for the fourth quarter of FY-20

Sl.No.	Name of the Station	Availability			Reason for low availability	Details of Penalty
		January	February	March		
1	NTPC RSTPS Stage I & II	92.689%	91.397%	93.955%	Above normative availability	FC paid based on cumulative availability as per Regulations
2	NTPC RSTPS Stage III	99.964%	99.980%	13.053%	The 500MW unit was under shut down from 2/3/2020 to 8/3/2020 due to boiler Tube Leakage. The unit was again under shut down from 11/3/2020 upto the end of March due to heavy steam leakage from the HP turbine.	
3	NTPC Talcher II	101.978%	100.68%	97.12%	Above normative availability	
4	NTPC Simhadri Stage II	103.954%	96.47%	101.12%	Above normative availability	
5	NLC TPS I Expansion	99.45%	100.96%	100.66%	Above normative availability	
6	NLC TPS II Expansion	22.30%	52.11%	25.89%	The availability of this station is normally low from the year the station was commissioned ie, 2015-16. The units were under shut down alternatively during Jan and March 2020 resulting in low availability	
7	NLC - II - Stage I	95.68%	100.03%	103.53%	Above normative availability	
8	NLC - II - Stage II	101.75%	99.67%	100.85%	Above normative availability	
9	Vallur	90.03%	101.22%	92.20%	Above normative availability	
10	NTPL	100.57%	97.73%	100.83%	Above normative availability	
11	Kudgi	100.79%	101.99%	101.90%	Above normative availability	

Sl.No.	Name of the Station	Availability			Reason for low availability	Details of Penalty
		January	February	March		
12	DVC Mejia (100MW)	102.148	102.005	91.51	Above normative availability	FC paid based on cumulative availability as per regulations
13	DVC Raghunathpur (50 MW)	79.448%	95.228%	101.998%	Normative availability	
14	Maithon Power Ltd - PPA1	99.97%	94.73%	71.19%	During March 2020 only one unit available from 16-03-2020 onwards because of boiler tube leakage of one unit. However cumulative availability for 2019-20 is 87.29%	
15	Maithon Power Ltd - PPA2	99.97%	94.73%	71.19%		
16	Jindal Power Ltd--PSA 1	129.99	120.77	127.50	Above normative availability	
17	Jindal Power Ltd--PSA 2	97.49	90.53	95.36	Above normative availability	
18	Jhabua Power Ltd -PSA 1	81.28	76.04	81.28	Above normative availability	
19	Jhabua Power Ltd- PSA 2	70.68	66.12	70.68	Above normative availability	
20	Jindal India Thermal Pvt Ltd	89.74%	93.84%	84.27%	Intermittent tripping of Unit	
21	BALCO	92.53%	91.70%	91.62%	Above normative availability	

ANNEXURE IV

DETAILS OF ADDITIONAL LIABILITY

1. Details of Power Purchases - Energy procurement from Central Generating Stations during the period January to March 2020

Table 1 - Central Generating Stations							
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)
1.1 NTPC-RSTPS Stage I & II							
Jan-20	170.15	155.33	155.33	2.490	2.628	2.14	2.14
Feb-20	126.61	144.56	126.61	2.490	2.603	1.63	1.43
Mar-20	170.15	151.82	151.82	2.490	2.604	1.73	1.73
Total	466.91	451.71	433.76	2.490	2.612	5.51	5.30
1.2 NTPC-RSTPS Stage III							
Jan-20	42.77	42.51	42.51	2.450	2.591	0.60	0.60
Feb-20	31.05	39.80	31.05	2.450	2.565	0.46	0.36
Mar-20	42.77	5.55	5.55	2.450	2.558	0.06	0.06
Total	116.59	87.86	79.11	2.450	2.577	1.12	1.02
1.3 NTPC Talcher-II STPS							
Jan-20	273.83	287.34	273.83	1.730	2.064	9.60	9.15
Feb-20	238.09	271.43	238.09	1.730	2.044	8.52	7.48
Mar-20	299.42	285.53	285.53	1.730	2.083	10.08	10.08
Total	811.34	844.30	797.45	1.730	2.064	28.20	26.70
1.4 NLC - TPS – II Stage 1							
Jan-20	35.86	39.77	35.86	2.640	2.766	0.50	0.45
Feb-20	30.25	39.47	30.25	2.640	2.768	0.51	0.39
Mar-20	35.86	40.96	35.86	2.640	2.768	0.52	0.46
Total	101.97	120.20	101.97	2.640	2.767	1.53	1.30
1.5 NLC-TPS-II Stage-2							
Jan-20	52.41	60.08	52.41	2.640	2.766	0.76	0.66
Feb-20	49.25	56.21	49.25	2.640	2.768	0.72	0.63
Mar-20	52.41	56.22	52.41	2.640	2.768	0.72	0.67
Total	154.07	172.51	154.07	2.640	2.767	2.20	1.96

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)
1.6 NLC-TPS-I Expansion							
Jan-20	19.93	45.85	19.93	2.440	2.5470	0.49	0.21
Feb-20	37.07	43.54	37.07	2.440	2.549	0.47	0.40
Mar-20	39.63	46.39	39.63	2.440	2.549	0.51	0.43
Total	96.63	135.79	96.63	2.440	2.548	1.47	1.05
1.7 NLC-TPS-II Expansion							
Jan-20	25.60	12.12	12.12	2.440	2.593	0.19	0.19
Feb-20	23.95	26.52	23.95	2.440	2.556	0.31	0.28
Mar-19	25.60	14.07	14.07	2.440	2.556	0.16	0.16
Total	75.15	52.71	50.14	2.44	2.56	0.66	0.63
1.8 NTPC Simhadri TPS – Stage II							
Jan-20	53.18	52.30	52.30	2.890	3.207	1.66	1.66
Feb-20	48.64	47.24	47.24	2.890	3.231	1.61	1.61
Mar-20	58.44	45.89	45.89	2.890	3.059	0.78	0.78
Total	160.26	145.44	145.44	2.890	3.168	4.04	4.04
1.9 Vallur STPS							
Jan-20	31.90	23.34	23.34	3.130	3.705	1.34	1.34
Feb-20	30.62	22.00	22.00	3.130	3.603	1.04	1.04
Mar-20	31.90	19.90	19.90	3.130	3.650	1.03	1.03
Total	94.42	65.24	65.24	3.13	3.65	3.42	3.42
1.10 NTPL							
Jan-20	46.30	48.35	46.30	3.210	2.940	-1.31	-1.25
Feb-20	21.40	44.62	21.40	3.210	2.786	-1.89	-0.91
Mar-20	46.30	39.9967	40.00	3.210	2.785	-1.70	-1.70
Total	114.00	132.97	107.70	3.21	2.84	-4.90	-3.86
1.11 NTPC KUDGI (Unit I, II & III)							
Jan-20	68.45	16.97	16.97	3.91	3.607	-0.51	-0.51
Feb-20	65.79	51.43	51.43	3.91	3.598	-1.60	-1.60
Mar-20	68.45	55.98	55.98	3.91	3.864	-0.26	-0.26
Total	202.69	124.38	124.38	3.91	3.72	-2.38	-2.38

2. Details of Power Purchases - Energy procurement from Private Generators Outside the State during the period January to March 2020.

Table 2 - Private Generators Outside the State							
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)
2.1 Maithon Power Ltd (150 MW) - Contract I							
Jan-20	102.62	103.59	102.62	2.39	2.57	1.87	1.85
Feb-20	92.73	92.33	92.33	2.39	2.60	1.99	1.99
Mar-20	102.62	71.78	71.78	2.39	2.67	2.05	2.05
Total	297.97	267.71	266.74	2.39	2.61	5.90	5.89
2.2 Maithon Power Ltd (150 MW) - Contract II							
Jan-20	102.62	103.59	102.62	2.39	2.57	1.87	1.85
Feb-20	92.73	92.33	92.33	2.39	2.60	1.99	1.99
Mar-20	102.62	71.78	71.78	2.39	2.67	2.05	2.05
Total	297.97	267.71	266.74	2.39	2.61	5.90	5.89
2.3 Jindal Power Limited –Bid I (200 MW)							
Jan-20	127.22	129.99	127.22	1.29	1.31	0.26	0.25
Feb-20	114.91	120.77	114.91	1.29	1.31	0.24	0.23
Mar-20	127.22	127.15	127.15	1.29	1.31	0.25	0.25
Total	369.35	377.91	369.28	1.29	1.31	0.76	0.74
2.4 Jhabua Power Limited-Bid I (115 MW)							
Jan-20	73.15	81.28	73.15	1.91	1.96	0.41	0.37
Feb-20	66.07	76.04	66.07	1.91	1.96	0.38	0.33
Mar-20	73.15	81.28	73.15	1.91	1.96	0.41	0.37
Total	212.37	238.60	212.37	1.91	1.96	1.19	1.06
2.5 Jindal Power Limited –Bid II (150 MW)							
Jan-20	95.42	97.49	95.42	1.19	1.31	1.17	1.15
Feb-20	86.18	90.53	86.18	1.19	1.31	1.09	1.03
Mar-20	95.42	95.36	95.36	1.19	1.31	1.14	1.14
Total	277.02	283.37	276.96	1.19	1.31	3.40	3.32

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)
2.6 Jhabua Power Limited-Bid II (100 MW)							
Jan-20	63.61	70.68	63.61	1.73	1.88	1.06	0.95
Feb-20	57.46	66.12	57.46	1.73	1.88	0.99	0.86
Mar-20	63.61	70.68	63.61	1.73	1.88	1.06	0.95
Total	184.68	207.48	184.68	1.73	1.88	3.11	2.77
2.7 Jindal India Thermal Power Limited-Bid II (100 MW)							
Jan-20	63.61	63.43	63.43	1.03	1.14	0.70	0.70
Feb-20	57.46	62.05	57.46	1.03	1.14	0.68	0.63
Mar-20	63.61	59.56	59.56	1.03	1.14	0.66	0.66
Total	184.68	185.04	180.45	1.03	1.14	2.04	1.98
2.9 BALCO – BID II(100 MW)							
Jan-20	63.61	65.40	63.61	1.190	1.160	-0.20	-0.19
Feb-20	57.46	60.63	57.46	1.190	1.160	-0.18	-0.17
Mar-20	63.61	64.76	63.61	1.190	1.160	-0.19	-0.19
Total	184.68	190.79	184.68	1.190	1.160	-0.57	-0.55
2.10 DVC Meja (100 MW)							
Jan-20	65.56	67.02	65.56	2.458	2.891	2.90	2.84
Feb-20	58.37	64.68	58.37	2.458	2.706	1.60	1.45
Mar-20	65.56	57.26	57.26	2.458	2.839	2.18	2.18
Total	189.49	188.96	181.19	2.46	2.81	6.68	6.46
2.11 DVC RTPS (50 MW)							
Jan-20	32.35	25.50	25.50	2.295	3.003	1.81	1.81
Feb-20	27.76	28.91	27.76	2.295	2.998	2.03	1.95
Mar-20	32.35	28.54	28.54	2.295	3.011	2.04	2.04
Total	92.46	82.96	81.81	2.30	3.00	5.88	5.80

3 Summary of total additional liability for the fourth quarter

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

Source	Approved energy requirement (MU)	Actual Energy procurement (MU)	Per unit cost		Additional liability on account of variation in power purchase cost of approved sources	
			Approved	Actual	Actual	Admissible as per fuel surcharge regulations
			(Rs/kWh)	(Rs/kWh)	(Rs. Cr)	(Rs. Cr)
CGS						
RSTPS I & II	466.91	451.71	2.49	2.61	5.51	5.30
RSTPS III	116.59	87.86	2.45	2.58	1.12	1.02
Talcher Stage-II	811.34	844.30	1.73	2.06	28.20	26.70
Simhadri TPS Stage II	160.26	145.44	2.89	3.17	4.04	4.04
NLC Stage-I	101.97	120.20	2.64	2.77	1.53	1.30
NLC Stage-II	154.07	172.51	2.64	2.77	2.20	1.96
NLC 1 Expansion	96.63	135.79	2.44	2.55	1.47	1.05
NLC II Expansion	75.15	52.71	2.44	2.56	0.66	0.63
Vallur STPS	94.42	65.24	3.13	3.65	3.42	3.42
NTPL	114.00	132.97	3.21	2.84	-4.90	-3.86
Kudgi	202.69	124.38	3.91	3.72	-2.38	-2.38
Sub Total CGS	2394.03	2333.11	2.45	2.56	40.87	39.19
Private IPPs outside the State						
DVC RTPS	92.46	82.96	2.30	3.00	5.88	5.80
DVC Mejia	189.49	188.96	2.46	2.81	6.68	6.46
Maithon Power Ltd-I, ER	297.97	267.71	2.39	2.61	5.90	5.89
Maithon Power Ltd-II, ER	297.97	267.71	2.39	2.61	5.90	5.89
Jindal Power Ltd-Bid I	369.35	377.91	1.29	1.31	0.76	0.74
Jhabua Power Ltd-Bid I	212.37	238.60	1.91	1.96	1.19	1.06
Jhabua Power Ltd-Bid II	184.68	207.48	1.73	1.88	3.11	2.77
Jindal Power Ltd-Bid II	277.02	283.37	1.19	1.31	3.40	3.32
JITPL	184.68	185.04	1.03	1.14	2.04	1.98
BALCO	184.68	190.79	1.19	1.17	-0.57	-0.55
Sub Total IPPS	2290.67	2290.52	1.76	1.89	34.30	33.36
Total	4684.70	4623.63	2.11	2.23	75.17	72.55

*Variable cost of these stations were not separately approved. Thus variable cost as per MYT projection is taken as approved rate.

Annexure-V

Rate of Fuel Surcharge in Paise per unit	
Amount of Fuel Surcharge (F) in crore	72.55
Energy expected to be billed for Retail sale to whole consumers for the three months starting from December 2020 in MU	5852.76
Energy billed for domestic consumers having monthly consumption less than 20 units and connected load below 20 units for the three months starting from December 2020 in MU	0.22
Energy billed for Retail sale to consumers other than the domestic consumers with connected load less than 500 W and monthly consumption below 20 units consumers for the three months starting from December 2020 (E) in MU	5852.54
Rate of fuel surcharge in Paise per unit (F/E)*100	12.40
Rounded to 12.00 paise per unit	