

BEFORE THE HONOURABLE
KERALA STATE ELECTRICITY REGULATORY COMMISSION
At its office at C V Raman Pillai Road, Vellayambalam, Thiruvananthapuram

FILING No	
CASE No	
IN THE MATTER OF:	Truing up of Accounts of Generation, Transmission and Distribution Strategic Business Units of the Kerala State Electricity Board Limited (KSEBL) for the year 2022-23.
IN THE MATTER OF :	Kerala State Electricity Board Limited, Vydyuthi Bhavanam, Pattom, Thiruvananthapuram – 4
	APPLICANT
	Chief Engineer Commercial and Tariff Kerala State Electricity Board Limited

AFFIDAVIT VERIFYING THE APPLICATION ACCOMPANYING THE PETITION FOR TRUING UP OF ACCOUNTS OF GENERATION, TRANSMISSION, AND DISTRIBUTION FUNCTIONS OF KSEBL FOR THE YEAR 2022-23.

I, **Sajeev G**, son of Sri. N.Gopalakrishnan, aged 53 years residing at Muraleegoplalam, TC 2/990 (4), KPRA-A59(2), Koonamkulam Lane, Murinjapalam, Medical College PO, Trivandrum 695011 do solemnly affirm and say as follows:

I am working as Chief Engineer (Commercial & Tariff), 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 29th day of November 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,
Vydyuthi Bhavanam, Pattom
Thiruvananthapuram – 695 004

VERIFICATION

I, the above-named deponent, solemnly affirm at Thiruvananthapuram on this, the 29th day of November 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
Vydyuthi Bhavanam, Pattom
Thiruvananthapuram – 695 004.

8016/1737/2023
dt 29-11-2023
on per no 30
Part No VIII

Solemnly affirmed and signed before me.

T.N. Omana
29/11/2023



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

In the matter of : Truing up of Accounts of Generation, Transmission and Distribution Strategic Business Units of the Kerala State Electricity Board Limited (KSEBL) for the year 2022-23.

Petitioner : Kerala State Electricity Board Limited,
Vydyuthi Bhavanam, Pattom, Thiruvananthapuram - 4

THE PETITIONER HUMBLY STATES THAT:

CHAPTER- 1 : INTRODUCTION

1.1 The petitioner, Kerala State Electricity Board Limited (KSEBL), is a State Public Sector power utility company constituted by the State Government. The Assets, Rights and Liabilities of former State Electricity Board was re-vested into the company on October 31, 2013. The petitioner company had been submitting ARR, ERC & Tariff and Truing up petitions in accordance with the Tariff regulations notified by the Hon'ble Commission from time to time.

1.2 Hon'ble Commission notified the third MYT Regulation for determination of Tariff in 2021 on 16.11.2021, after repealing the earlier MYT Tariff Regulation, 2018, with a five-year control period starting from FY 2022-23 till 2026-27. The regulations contain a performance-based approval scheme along with a framework for sharing Gains and Losses and specifying the controllable and uncontrollable factors.

1.3 KSEBL had submitted MYT petition for the above-mentioned control period containing ARR & ERC on 31.01.2022, capital investment plan for the five-year control period from 2022-23 to 2026-27 in respect of its three SBUs on 10.01.2022 along with tariff revision proposals for all 5 years of the control period on 10.02.2022, before the Hon'ble Commission, in full compliance with the MYT Regulations 2021. Hon'ble Commission has issued orders on the MYT petition on 25.06.2022 and also was pleased to revise the electricity tariff of all categories of consumers in the state along with bulk supply tariff applicable to other licensees for 2022-23. Even though KSEBL had requested tariff revision for five years during the control period, Hon'ble Commission issued tariff revision orders only for one year.

1.4 In compliance of the directions contained in the order dated 25.06.2022, KSEBL on 08.02.2023, filed proposals to revise Schedule of tariff and terms and conditions for Retail Supply of Electricity by KSEB Ltd with effect from 01.04.2023 to 31.03.2027. The petition was admitted by the Hon'ble Commission as OP No. 18/2023. Subsequently, Hon'ble Commission, as per orders dated 23.03.2023, 30.06.2023 and 31.07.2023 in file no. 0297/D(T)/2022/KSERC was pleased to extend the validity of the tariff order dated 25.06.2022 till 30.09.2023. Thereafter, Hon'ble Commission on 29.09.2023 had extended the validity of tariff order till 31.10.2023 or till the date of effect of new tariff order.

1.4 Hon'ble Commission as per interim order dated 31.10.2023 approved the retail tariff applicable to the consumers of the State w.e.f 01.11.2023 to 30.06.2024, the Schedule of Tariff and Terms and Conditions for Retail Supply of Electricity by KSEB Ltd and all other licensees with effect from 01.11.2023 to 30.06.2024, and the charges such as transmission charges, SLDC charges, wheeling charge, cross subsidy surcharge, green tariff and meter rent as approved above is applicable to all consumers of the State.

1.4 Regulation 10 (1) (iii) of Tariff Regulation, 2021 stipulates filing of annual true up petition. In compliance, the summary of the audited Annual statement of Accounts of KSEBL for the year 2022-23, the amount approved by Hon'ble Commission in the order dt 25.06.2022 and the amount sought for true up is furnished in the Table – 1.1 given below. The Statutory Auditors of KSEBL has conducted audit and issued certificate for the year 2022-23 and a copy of the audited accounts is submitted separately along with this petition.

Table-1.1: Comparison of ARR, ERC and Revenue Gap of KSEBL for 2022-23 (Rs. Cr.)				
No	Particulars	Approved*	Audited	Truing up
1	ARR	18857.66	19946.58	20375.84
2	Non-Tariff Income	891.59	469.69	898.88
3	Net ARR	17966.07	19476.89	19476.96
4	ERC	16038.87	18453.26	17657.56
5	Revenue gap (3-4)	1927.20	1023.62	1819.41
<i>*Approved Vide Tariff Order dt.25.06.2022 in OP No. 11 / 2022</i>				

1.8 The difference between audited accounts and true-up values for 2022-23 are mainly due to the difference in the principles and methodologies adopted in the annual accounts and the same prescribed in the Tariff Regulation, 2021 notified by the Hon'ble Commission. The matter is explained in detail in the respective paragraphs in Chapters below. Function wise segregation of expenses, revenue and surplus sought for true up are summarised below.

Table-1.2: Business Unit wise ARR, ERC and Revenue Gap for 2022-23 (Rs Cr)				
No	Particulars	SBU-G	SBU-T	SBU-D
1	ARR (including RoE)	692.28	1570.93	20285.06
2	Non-Tariff Income	37.59	53.19	808.10
3	Net ARR	654.69	1517.74	19476.96
4	Transfer Value / ERC	654.69	1517.74	17657.56
5	Revenue surplus (gap) (3-4)			-1819.41

1.9 Following chapters in this petition describe the Actual Expenses and Revenue of the petitioner in FY 2022-23 and the comparison with respective approved values.

CHAPTER – 2: TRUING-UP OF ARR OF SBU – GENERATION

2. SBU –Generation – Overview

SBU-G is entrusted with the construction, operation, and maintenance of various types of generating stations of KSEBL. The generation capacity of SBU G comprises a mix of Hydel, Thermal, solar and wind power stations.

- 2.1** The total installed capacity as on 31.03.2023 is **2300.29 MW** of which 90.89 % is Hydel, 6.95% is Thermal, 2.0795 % from solar and rest from the wind. The source wise generation capacity details are given in the table- G 1 below:

Table- G 1: Source wise Generation Capacity		
Source	Installed Capacity (MW) as on 31.03.2023	Percentage share
Hydel	2090.76	90.89%
Thermal	159.96	6.95%
Wind	2.03	0.09%
Solar	47.54	2.07%
Total (Generation)	2300.29	100.00%

- 2.2** Energy generated by the petitioner’s Generation Business Unit was 8667.852 **MU** out of which 8636.52 **MU** was from own Hydro-electric Stations and remaining **31.332 MU** was generated from thermal, wind and solar stations. Source wise generation approved by the Hon’ble Commission and actually generated during the year is furnished below. Details of energy generated and expenses are furnished in paragraphs hereunder.

Table – G2: Energy Generation from own stations for FY 2022-23 (MU)			
Source	KSERC approval	Audited Accounts	Difference
Gross Generation			
Hydro	7057.26	8636.52	1579.26
BDPP	0	0	0
KDPP	0	0.12	0.12
Wind	1.14	1.188	0.048
Solar	60.63	30.024	-30.606
Gross Subtotal	7124.19	8667.852	1543.662
Aux consumption			
Hydro	84.54	98.49	13.95
BDPP	0	0	0
KDPP	0	0.558	0.558
Wind	0	0.001	-0.5
Solar	0.16	0	-0.16
Aux Sub total	84.7	99.049	13.848
Net Generation			
Hydro	6972.72	8538.03	1565.31
BDPP	0	0	0
KDPP	0	-0.44	-0.44
Wind	1.14	1.187	30.071
Solar	60.47	30.024	30.071
Subtotal	7034.33	8636.52	1594.941

2.3 Hydro Generation:

Approved net hydro generation for the FY 2022-23 as per the MYT Order dated 25.06.2022 was 7057.260 MU whereas the actual hydro generation was 8636.520MU, resulting an excess generation of 1579.260 MU. This excess generation was mainly due to higher inflow received during the financial year than anticipated, for limiting the spillage in the reservoir.

The anticipated and actual inflow during the year 2022-23 are given in the table- G 3 below:

Table – G3: The anticipated and actual inflow during the year 2022-23					
Months	Anticipated Inflow (MU)	Actual Gross Inflow (MU)	Actual Spill (MU)	Actual Net Inflow (MU)	Surplus (+) / Deficit (-) (MU)
Apr-22	112.44	215.14	0	215.14	102.70
May-22	190.56	500.97	5.48	495.49	304.93
Jun-22	757.05	463.33	2.04	461.29	-295.76
Jul-22	1418.84	2342.01	390.08	1951.93	533.09
Aug-22	1280.44	2783.81	1109.31	1674.50	394.06
Sep-22	927.32	1424.16	668.59	755.57	-171.75
Oct-22	765.77	755.56	76.71	678.85	-86.92
Nov-22	520.42	416.33	30.3	386.03	-134.39
Dec-22	244.7	277.6	9.93	267.67	22.97
Jan-23	132.7	126.69	2.34	124.35	-8.35
Feb-23	79.35	86.24	0	86.24	6.89
Mar-23	97.91	102.21	10.76	91.45	-6.46
Total	6527.50	9494.05	2305.54	7188.51	661.01

2.3.1 From the table, it may kindly be seen that the inflow received was higher than the level approved by the Hon'ble Commission. Further, inflow during the months April, May, July, August and September was more than expected and in some month this has caused spillage as the water level went up beyond the approved level

2.3.1 In addition to this, it may kindly note that, the spillage of major dams is governed by the rule curve. In the backdrop of unprecedented extreme rainfall occurred in August 2018 in Kerala, it was decided by KSEBL to prepare Emergency Action Plans for the dams and to conduct a study on reservoir water level of selected dams and preparation of Rule Curves for five major dams. The rule levels for the reservoirs were developed in consideration of the suggestions of Central Water Commission (CWC). The Government of Kerala accorded sanction to KSEBL for adopting the alert levels, rules curves as suggested by CWC for Idukki, Idamalayar, Kakki, Banasurasagar and Sholayar dams owned by KSEBL. The operational strategy for the five major reservoirs of KSEBL were updated by reviewing the rule levels. The rule levels of dams were fixed to create dynamic flood cushion for moderating the floods, particularly in the early periods of monsoon.

2.3.2 The details of hydel generation (Including auxiliary consumption) and station wise generation details are given in Table- G5 and G6 respectively hereunder.

2.4 **Projects Commissioned During the FY 2022-23 with write-up, DPR cost, actual cost incurred, reason for time/cost overrun**

2.4.1 Poringalkuthu SHEP(24 MW)

Poringalkuthu Small Hydro Electric Project is situated in Athirappilly Grama Panchayat, Mukundapuram Taluk, Thrissur district of Kerala State. The scheme envisages utilization of spill water from the existing Poringalkuthu reservoir during rainy season.

The construction of the project area was part of old Poringalkuthu Project and the land which was leased from Forest Department, under the custody of Electricity Board since 1956, But the forest officials insisted for fresh forest clearance before commencement of the work and the contractor could not start the construction works from September 2011 as targeted and the Board had to obtain stage I & II clearance from MOE & F. The stage I & II clearances from MOE & F were obtained on 09.07.2013 and 17.03.2014 respectively. Civil works started from 01.04.2014 onwards.

Considering all the issues related with the delay in handing over of forest land, unprecedented flood, financial constraints of the contractor due to National Company Law Tribunal (NCLT) procedures, lockdown due to COVID-19 pandemic etc the time of completion of the civil works of the scheme was extended seven occasions, initially upto 31.03.2017 and finally upto 31.05.2022. Even after granting these time extensions, the targeted progress could not be achieved. Meanwhile Hon'ble High court of Kerala in WP (C) No. 33239/2017 directed KSEBL to ensure the timely completion of the project. For complying the said order, for the speedy commissioning of the project, the balance civil works in critical areas under the contract with M/s. GVR-GMW (JV) were arranged separately by delinking from the original agreement for the commissioning of the project.

The tunnel filling of the project was commenced on 20.03.2022 and the mechanical spinning was carried out on 27.03.2022. The project was dedicated to the nation on 04.05.2022. The project was formally connected to the grid on 16.04.2022 and the commercial operation started on 07.06.2022. Upto date (17.10.2023) total generation from this scheme comes to 164.83Mu.

2.4.2 Dam Rehabilitation work executed during financial year 2022-23

Expenditure for DRIP 1	-	Rs. 12.933 Lakhs
Expenditure for DRIP 2	-	Rs. 1369.310 Lakhs
Total for DRIP during 2022-23	-	Rs. 1382.243 Lakhs
Dam Safety Works & Dam Safety Studies	-	Rs. 159.517 Lakhs

Total Expenditure for Capital works Including DRIP & Dam Safety Works during the FY 2022-23
Rs. 1541.760 Lakhs

2.5 Auxiliary Consumption:

2.5.1 As per Tariff regulation, 2021 the auxiliary consumption of the generating station includes, auxiliary energy consumption of a generating station or a generating unit means the quantum of energy consumed by auxiliary equipment of the generating station or generating unit including switchyard of the generating station and the transformer losses within the generating station or generating unit. The metered energy for auxiliary consumption does not include the energy consumption of excitation system, generator transformer (transformer losses). Hence

KSEBL has worked out a methodology to capture actual auxiliary consumption of power station and its switchyard.

Source	KSERC approved Gross Generation	KSERC approved Aux Generation	Aux % of Gross Generation	Truing up values for Gross Generation	Truing up values for AuX Generation	Truing up Aux % of Gross Generation	Difference in percentage
Hydro	7,057.26	84.54	1.20%	8636.52	98.49	1.14%	-0.06%
BDPP	0	0	0.00%	0	0	0.00%	0.00%
KDPP	0	0	0.00%	0.12	0.558	465.00%	465.00%
Wind	1.14	0	0.00%	1.18757	0.001	0.08%	0.08%
Solar	60.63	0.16	0.26%	21.500872	0	0.00%	-0.26%
Gross Subtotal	7124.19	84.7	1.19%	8659.32	99.049	1.14%	-0.05%

2.5.5 The auxiliary consumption approved by the Hon’ble commission during the FY 2022-23 is 84.7 MU consisting 84.54 MU for hydel stations and 0.16 MU for solar stations. But as per the audited account, the actual auxiliary consumption is 99.05 MU, out of which 98.49 MU denotes auxiliary consumption for hydel stations.

2.5.3 From the table above, it can be seen that the actual generation is greater than the approved generation. Consequently the actual auxiliary consumption shall also increase. This can be compared with the percentage value of auxiliary consumption with that of the gross generation, which is shown in the table G4 above. Comparing with the percentage of auxiliary generation, it can be seen from the above table, that percentage auxiliary consumption is less than that of the approved value.

2.5.4 It may kindly be noted that, as per the tariff regulation 2021, the auxiliary consumption 0.7 % is for Surface hydro-electric generating stations with rotating exciters mounted on the generator shaft, 1% for Surface hydro-electric generating stations with static excitation system and 1.2% for Underground hydro-electric generating station with static excitation system. Auxiliary consumption based on above norms for hydel stations works out to 104.15 MU. The comparison of auxiliary consumption is tabulated below:

Table G5 Comparison of Auxiliary consumption

Year	Auxiliary Consumption (Approved for Hydro)	Auxiliary Consumption (As per Reg for Hydro)	Auxiliary Consumption (Actual for Hydro)
FY 2022-23	84.54 MU	92.89 MU	98.49 MU

2.5.5 In the above table the auxiliary consumption as per Regulation for Hydro was calculated from the gross generation in MU, where 1% was taken for all hydro generating stations except for Idukki for which the value taken is 1.2% as it is an underground generating station. From the above table it can be seen that the auxiliary consumption as per norms is also greater than the approved values as per the regulations for Hydro generating stations.

Further, it is submitted that, the approved hydro generation for the FY 2022-23 was 7057.260MU whereas the actual generation has been 8636.520 MU. Thus, it may kindly be seen that the increase in auxiliary consumption is directly related to the increase in actual generation during the year.

2.5.6 It is further submitted that the auxiliary energy consumption inside any generating station can be classified in to three categories, viz.

- (a) General auxiliaries
- (b) Operational auxiliaries
- (c) Maintenance auxiliaries.

2.5.7 The general auxiliaries include, the auxiliary consumption of lighting loads, dewatering pumps, firefighting system etc. These auxiliaries will be in service for all the time irrespective of actual generation. The power consumption of such auxiliaries is designed during the initial stages of power house design hence further optimisation on such power consumption is very difficult.

2.5.8 The operational auxiliaries mainly contain lubricating oil system, high pressure oil pumps, cooling water system, compressed air oil system etc. The energy consumption of such equipment's will be dominant during the period of generation.

2.5.9 The maintenance auxiliaries including oil purification equipment's, turbine dewatering system, lifting devices etc. Such auxiliaries are essential for daily/monthly/annual maintenance service and the consumption of such auxiliaries depends on its rating, which is finalised by the design manufacture.

2.5.10 Hence during generation period, the general auxiliaries, operational auxiliaries, and maintenance (daily/monthly) will be in service and during weak generation period, the general auxiliaries and maintenance (daily/monthly/yearly) will be in dominant position. As the auxiliary consumption is measured in terms of gross generation during the year, if the gross generation is lower, then the auxiliary consumption as a percentage in relation to such reduced generation would be on a higher side and vice versa. This condition is critical in the case of small hydro stations, where the generation is possible only during monsoon period.

2.5.11 In addition to this, Hon'ble Commission may kindly note that, during the high generation period, the auxiliary consumption will further increase mainly due to following reasons:

(1) if the generation increases, it results increase in temperature on stator/Rotor windings of generator, transformer windings, bearings etc. In order to reduce the temperature rise, the cooling water system needs to operate at high discharge, this will result higher cooling water energy consumption.

(2) During the high generation period, normally air condition, power house cooler operation will be more hence their loading will increase for limiting the power house temperature.

(3) Increase in generation indicates that the running time of generator will be higher, as the running time increases the operational auxiliaries also increases. As a result of these, the hydel generation auxiliary consumption is higher than approved during the FY 2022-23.

2.5.12 In the case of thermal stations, it may kindly be noted that the auxiliary equipment's such as Lube oil circulating pump, Compressors, Air Conditioning systems, Battery chargers, Fire system pumps, general lighting etc consumes power even without generation on account of up keeping of machineries as recommended by the Original Equipment Manufacturer (OEM). The auxiliary energy consumption of such devices is unavoidable for the upkeeping the generator.

2.5.13 The following auxiliary equipment consumes power even without generation as the part of up keeping of machineries as recommended by the OEM.

- (a) Lube oil circulating pump - Needs to operate Weekly ones
- (b) Jacket water Circulating Pumps - Needs to operate Weekly ones
- (c) Auxiliary boiler and all its accessories monthly once
- (d) Compressors Weekly ones
- (e) Air Conditioning systems
- (f) Battery chargers 175A/110V in continuous operation
- (g) Station transformers no load consumption
- (h) Fire system pumps weekly ones
- (i) Water Pumps, lighting system
- (j) Slow barring of engines monthly ones

2.5.14 Hon'ble Commission may kindly note that the auxiliary energy consumption of such devices is unavoidable for the upkeeping of the generator.

2.5.15 Based on the above, it is humbly submitted that, the excess auxiliary consumption over the approval is unavoidable and therefore actual auxiliary consumption may kindly be approved. Month wise and station wise hydel generation and auxiliary consumption is furnished below:

Table-G6: Hydel Generation for FY 2022-23 (MU)							
Month	Generation	Aux Consumption	Net hydro Generation	Month	Generation	Aux Consumption	Net hydro Generation
Apr-22	812.40	9.16	803.23	Oct-22	765.50	8.89	756.61
May-22	647.84	7.14	640.70	Nov-22	599.93	6.86	593.07
Jun-22	547.02	6.20	540.81	Dec-22	561.68	6.49	555.18
Jul-22	873.00	12.18	860.82	Jan-23	492.39	6.03	486.36
Aug-22	1255.57	12.15	1243.41	Feb-23	510.08	6.41	503.67
Sep-22	1110.26	11.30	1098.96	Mar-23	460.85	5.62	455.23
				Total	8636.52	98.4955	8538.03

Table-G7: Station Wise Hydel Generation for 2022-23					
No	Hydro Electric Stations	Generation (MU)	No	Hydro Electric Stations	Generation (MU)
1	Idamalayar	408.991	25	Urumi - II	4.850
2	Idukki	3262.039	26	Poozhithode	10.485
3	Kakkad	242.971	27	Ranni-Perinadu	8.820
4	Kallada	67.520	28	Peechi	0.896
5	Kuttiyadi+KES+KAES	787.268	29	Vilangadu	21.551
6	KuttiyadiTail Race	8.052	30	Chimmony	9.007
7	Lower Meenmutty	5.752	31	Addyanpara	9.402
8	Lower Periyar	689.115	32	Barapole	43.906
9	Maduppatty	4.258	33	Perunthenaruvi	12.340
10	Malampuzha	4.743	34	Kakkayam SHEP	10.292
11	Malankara	25.693	35	Chathankottunada	11.598
12	Neriamangalam+ NES	383.393	36	Upper Kallar	2.007
13	Pallivasal	147.576	37	Poringalkuthu Screw	0.052
14	Panniar	198.917		KSEB Hydro (TOTAL)	8636.520
15	Peppara	8.261		Aux Consumption (MU)	98.495
16	Poringalkuthu + PLBE	240.441		Auxiliary consumption %	1.14%
17	PLBAE	102.992		Net Hydel Generation 8636.520 Mu	
18	Sabarigiri	1536.427			
19	Sengualm	126.419			
20	Vellathooval SHEP	5.384			
21	Sholayar	216.268			
22	Chembukadvu - I	4.1485			
23	Chembukadavu- II	6.534			
24	Urumi - I	8.140			

2.6 Thermal Generation:

2.6.1 Thermal generation for the year 2022-23 was 0.5588 MU. Only KDPP was operated while BDPP was kept idle. Due to high variable cost, thermal generation has been kept to the bare minimum. KSEBL managed the grid without resorting to thermal Generation. But upkeeping of the machines were carried out properly as per the OEM recommendation for meeting unexpected contingencies. As the thermal generating station was operated only for meeting the contingencies and KSEBL has strictly adhere to the merit order despatch strictly, as directed by the Hon'ble Commission in the tariff order dated 25-06-2022, it is submitted that the above thermal generation may be approved.

2.7 Solar & Wind projects:

2.7.1 Hon'ble Commission has approved energy generation from solar and wind stations of 61.77 MU of which 1.14 MU from wind and 60.63MU from solar projects for the FY 2022-23. But the actual generation was only 31.212 MU. Due to technical constraints, maintenance activities, weather conditions etc in the case of solar generation, the anticipated quantum of power could not be generated.

2.7.2 Generation of power from solar is very much affected by the weather conditions of the area where it is installed. In this regard it may be noted that the raining days of the year 2022-23 was

more and in lieu with this, the inflow was also higher than expected. But due to the decrease of sunny days in that year the solar generation was also found lower.

2.7.3 Some Solar generating stations such as that in Edamalar, it is found that the output is continuously much below the standard expectation levels. After conducting various inspections it is now concluded that the main reason for this lower output due to the peculiarity of the terrain, which is in a hilly forest area and is prone to frequent fog. This may be due to climate change.

2.8 ARR ERC of SBU- G:

2.8.1 The actual ARR, ERC for the Generation Business Unit is furnished in **Form G-P&L**. A statement showing comparison of ARR & ERC approved by the Hon'ble Commission and actual for the year as well as true up sought along with deviations are summarized below. Item wise explanation is furnished thereafter. A gist of reasoning is provided hereunder.

TABLE – G8: ARR OF GENERATION BUSINESS UNIT (SBU-G) for 2022-23 (Rs Cr)					
No	Particulars	ARR Approval	Actuals	TU Sought	Difference over approval
1	Cost of Generation of Power	0	0.64	0.64	0.64
2	O&M Expenses for existing stations	167.18	297.97	167.18	-13.25
	O&M Expenses for new stations	28.23		10.92	
	O&M Expenses -Total	191.35		178.10	
3	Interest & Finance Charges	126.03	-39.5	138.52	12.49
4	Depreciation	146.8	758.79	150.69	3.89
5	Repayment of master Trust Bond	21.99		21.99	0
6	Additional contribution to Master Trust	21.6		21.6	0
7	RoE	116.38	159.48	116.38	0
8	Exceptional Items		0.04	0.04	0.04
9	Others		34.48	34.48	34.48
10	Pay Revision			29.84	29.84
11	ARR	624.15	1211.90	692.28	68.13
12	Less Non-Tariff Income	10.3	12.15	37.59	27.29
13	Net ARR (Transferred to SBU-D)	613.85	1199.75	654.69	40.84

2.8.2 It may kindly be seen that even though the actual net ARR is Rs 1199.75, which is more than the approved figure of Rs. 613.85 Cr, the amount sought for true up is only Rs. 654.69 Cr which is Rs 40.84 Cr more from the approved figure.

2.9 Cost of generation of power

2.9.1 Rs 0.64 Cr was actually incurred during the year towards the cost of fuel and lubricants for generation of stations owned by KSEBL, which may kindly be approved. It may kindly note that, lubricating systems, is an essential part of any powerplant maintenance. Any piece of equipment with moving parts depends on some type of lubricant to reduce friction and wear and to extend its life. In most cases, a lubricant also dissipates heat, prevents rust or corrosion, acts as a seal to outside contaminants, and flushes contaminants away from bearing surfaces. The hydraulic oil is used for the purpose of governor action for speed /load control.

2.9.2 Further, the diesel oil is used for boiler operation and lube oils are used for bleeding purpose in connection with regular routine maintenance to upkeep the machines of KDPP in working condition. Hence governor oil and lubricating oils are very much essential and hence such cost may kindly be approved. The split-up details are given below:

Particulars	KDPP	BDPP	Hydro stations	Total
Oil	0.07			0.07
HSD oil	0.03			0.03
Lub oil	0.17		0.04	0.21
Lubricants and consumable stores	0		0.33	0.33
Total				0.64

Station	Heavy Fuel Oil (Furnace Oil, LSHS, Etc.)	H.S.D. Oil	Lub. Oil	For Hydel Power Generation	For Internal Combustion Power Gen.	TOTAL
KDPP	0.07	0.03	0.17	0.00	0.00	0.27
Generation Circle, Moozhiyar	0.00	0.00	0.00	0.17	0.00	0.17
Generation Circle, Moolamattom	0.00	0.00	0.00	0.09	0.00	0.09
Generation Circle, Meencut	0.00	0.00	0.04	-	0.00	0.04
Generation Circle, Kothamangalam	0.00	0.00	0.00	0.04	0.00	0.04
Generation Circle, Thrissur	0.00	0.00	0.00	0.03	0.00	0.03
Total	0.07	0.03	0.21	0.33	0	0.64

2.10 Interest and Finance charges:

2.10.1. Actual Interest and finance charges (gross) for the year 2022-23 has been Rs. 155.20 Cr as against the approved figure of Rs 126.03 Cr. An amount of Rs.138.52 Cr is claimed under the head for true up. The details are given below.

No	Particulars	Approved	Actual	TU	Difference
1	Interest on Outstanding Capital Liabilities	75.76	107.36	91.21	-15.45
2	Interest on GPF	11.75	9.95	9.95	1.8
3	Other Interests		0.36	0.26	-0.26
4	Interest on Master Trust Bonds	32.98	30.83	30.73	2.25
5	Interest on Working capital	5.54	6.7	6.37	-0.83
6	Sub Total	126.03	155.20	138.52	-12.49
7	Less: Capitalized		194.69		0
8	Balance	126.03	-39.50	138.52	-12.49

2.10.2 **Interest on normative loan:** Regulation 26 and 29 of Tariff Regulation 2021 specifies the approval of loan Interest on normative basis. Based on this, while issuing orders on MYT petition, Hon'ble Commission approved Rs.497.93 Cr as opening normative loan as at 01.04.2022 after considering provisional asset addition, contribution and grants etc and

considering interest rate at 9.87% approved normative interest at Rs.75.76 Cr for 2022-23. Hon'ble Commission, as per true up order for 2021-22 has approved normative loan at Rs. 791.31 Cr as on 31.03.2022 for SBU G. Actual entitlement of normative interest amounts to Rs.91.21 Cr as per Tariff regulation is explained in chapter 5. Hon'ble Commission may kindly approve an amount of Rs.91.21 Cr towards interest on normative loan for the year 2022-23.

- 2.10.3 **Interest on PF:** Hon'ble Commission approved Rs 11.75 Cr towards interest on PF. But as per the audited accounts, the actual interest paid on PF was Rs.9.95 Cr, which is less than the approval by Rs 1.80 Cr. The actual interest for SBU- G amounting to Rs.9.95 Cr may kindly be approved.
- 2.10.4 **Interest on bond issued to Master Trust:** State Government, as per notifications dated 31.10.2013 and 28.01.2015, ordered creation of a Master Trust for meeting the unfunded liability of pension, gratuity and leave surrender as on 31.10.2013, in respect of the personnel transferred from erstwhile KSEB to KSEBL. The total liability as on 31.10.2013 was estimated at Rs.12418.72 Cr and necessary funding arrangements put in place through issue of 2 series of Bonds. Hon'ble Commission recognized the unfunded pension liabilities as above and approved recovery of interest on KSEBL share of Bonds as per Tariff Regulations, 2014. Hon'ble Commission approved Rs.32.98 Cr towards interest on Master Trust bonds. As detailed in chapter 5, the share of expenses for SBU G has been Rs. 30.73 Cr, which may kindly be approved.
- 2.10.5 **Interest on Additional Bond to Trust:** In addition to the interest on bonds actually issued, an additional amount of Rs.400 Cr (Rs. 21.60 Cr for SBU G) has been provisionally approved towards unfunded liability. Hon'ble Commission may kindly true up the provisional amount of Rs.21.60 Cr as detailed in chapter 5.
- 2.10.6 **Interest on working capital:** As per Tariff regulation, 2021, KSEBL is eligible to claim Rs. 6.37 Cr as detailed below, which may kindly be approved against Rs. 5.54 Cr approved in the MYT order dated 25.06.2022.

Table G11-Interest on working capital – SBUG (Rs Cr)		
Sl.No	Particulars	Amount
1	Cost of fuel for FY 2022-23	0.64
2	Cost of fuel for one month	0.05
	O&M expenses	
i	As per norms	167.18
ii	O&M Expenses for new stations	10.92
iii	Pay revision expenses	29.84
iv	Additional contribution to Master Trust	21.60
3	Total (I to iv)	229.54
4	O&M Expenses for one month	19.13
5	Approved GFA - Plants and Equipment for FY 2022-23	5440.61
6	Cost of maintenance of spares at 1% of historical cost	54.41
7	Total requirement of working Capital=(2)+(4)+(6)	73.59
8	Base rate as on 01-04-2022 (%)	6.65
9	Interest rate on working capital (%)=Base rate+2	8.65
10	Interest on working capital=(5)*(7)	6.37

2.10.7 In view of the above, the Hon'ble Commission may kindly true up interest and finance charges of Rs. 138.52 Cr as detailed above.

2.11 O&M of SBU-G:

2.11.1 The Hon'ble commission had approved O&M cost of 163.12 Cr for existing stations. It was arrived using the average yearly escalation specified in the Tariff regulation, 2021. But it has been expressly provided that actual inflation for the year can be considered while true up. Rs. 30.07 was approved for new stations. Thus, total approved O&M expenses for 2022-23 has been Rs. 193.19 Cr.

Actual escalation rate for the year 2022-23 is 7.06%. Thus, eligible O&M expenses for the existing stations for 2022-23 is Rs.167.18 Cr.

2.11.2 Only one small hydel project was commissioned during the FY 2022-23, (1) **Poringalkuthu SHEP** of 24 MW which was commissioned on 07.06.2022. The O&M expense for the financial year 2022-23 as per the RE regulation 2020 is Rs. 5.54 Cr.

2.11.3 Solar projects were also commissioned during the FY 2022-23 for a total of 3.67 MW. The O&M cost for these solar projects under SBUG for the FY 2022-23 amounts to Rs.5.32 Lakhs.

2.11.4 In addition to these, projects completed after the base year of 2018-19 was also taken as it was not included for calculating the O&M cost for the existing stations. The table is shown in the annexure. The O&M cost for these stations is Rs 5.32Cr.

2.11.5 The approved O&M expense for existing station is Rs. 167.18 Cr. Hence the O&M expenses for the existing station and new stations for the year 2022-23 is Rs. 178.10Cr (Rs. 167.18 Cr + Rs. 10.92 Cr)

2.11.5 Actual O&M expenses of the generation Business Unit was **Rs. 297.97 Cr**. Hon'ble Commission had approved **Rs 191.35 Cr** towards O&M expenses based on the norms specified in the Tariff Regulation, 2021. However, based on the commissioning of the new generating stations, a claim of Rs. 178.10 Cr is sought for true up for the year 2022-23. It is humbly submitted that the claim towards pay revision and additional contribution to Master trust are claimed separately as detailed in chapter 5.

No	Particulars	Approved	Actual	TU requirement	Difference
1	Employee Cost		227.85		
2	A&G Expenses		47.34		
3	R&M Expenses		22.78		
4	Total	191.35	297.97	178.10	13.25

2.11.6 Detailed explanation on the O&M expenses is furnished in Chapter 5 of this petition. It is humbly prayed that the Hon'ble Commission may be pleased to approve the O&M expense as above.

2.12 Depreciation:

2.12.1 The approved depreciation for the Generation assets for the year 2022-23 was Rs 146.80 Cr whereas the actual amount was Rs. 758.79 Cr. As per MYT Regulation for the control period 2022-27, depreciation is allowable as per the provisions contained in the Tariff Regulations, in which applicable rates as well as methodology to be followed are specified therein. Accordingly, allowable depreciation for SBU G has been worked out at **Rs. 150.69 Cr** as detailed in Chapter 5. Hon'ble Commission may kindly approve the same. Detailed explanation is furnished in chapter 5.

2.13 Return on Equity:

Hon'ble Commission approved Return on equity at Rs.116.38 Cr. Actual RoE for the Generation SBU as per audited accounts amounts to Rs. 159.48 Cr. Hon'ble Commission may kindly approve Rs.116.38 Cr as detailed in Chapter 5.

2.14 Non-Tariff Income:

2.14.1 Hon'ble Commission approved Rs. 10.30 Cr under this head. Actual income earned as per accounts has been Rs.12.15 Cr. SBU G seeks to true up Rs.37.59 Cr under the head non-tariff income as detailed in chapter 5 after excluding income booked under claw back depreciation in accounts. The non-Tariff income includes income from sale of scrap, interest on advances to contractors, interest on staff loans and advances, rent from buildings etc. Hon'ble Commission may kindly true up Rs.37.59 Cr under this head.

2.15 Other items and Prior period expenditure:

2.15.1 Other expenses amounted of Rs.34.48 Cr for the year 2022-23 as detailed in chapter 5, which may kindly be approved.

2.16 Exceptional items:

2.16.1 Share of SBU G as detailed in chapter 5 amounts to Rs.0.4 Cr. Hon'ble Commission may kindly true up the claim.

2.17 Transfer of Generation Costs:

2.17.1 ARR for SBU G sought for true up is **Rs. 692.28 Cr** and Non-tariff income earned is **Rs. 37.59 Cr**. The net ARR of SBU G transferred to SBU-D are **Rs. 654.69 Cr**. This cost is considered as the Cost of own generation in the ARR of SBU-D, which may kindly be approved.

2.18 ARR & Tariff Formats:

2.18.1 Formats relating to Generation Business Units as per the Tariff regulation 2018 are furnished hereafter. However, Forms G-3.1, G-6.5 to G-6.8, G-6.10 to G-7.1 which are not directly relevant or applicable or on which data are not readily available are not included in this submission.

2.19 The Next Chapter thereafter provides the truing up of Transmission Business Unit.

Annexure

Spill in MU 2022-23													
	APRIL'22	May'22	June'22	July'22	Aug'22.	Sept.'22	Oct.'22	Nov.'22	Dec.'22	Jan'23	Feb'23	Mar'23	Total
Kuttiady	0.00	0.00	0.00	27.71	2.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	30.13
Thariode	0.00	0.00	0.00	0.00	9.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.08
Poringal	0.00	3.08	0.00	100.78	183.34	96.35	0.93	0.00	0.00	0.00	0.00	0.00	384.48
Ponmudy	0.00	0.00	0.00	42.56	149.63	123.33	38.64	9.62	0.00	0.00	0.00	0.00	363.78
Neriamangalam	0.00	1.22	0.00	149.04	182.21	184.38	22.59	0.00	0.00	0.00	0.00	0.00	539.44
Lower Periyar	0.00	1.18	0.00	69.99	154.22	60.17	6.16	2.30	0.00	2.34	0.00	0.00	296.36
Sholayar	0.00	0.00	2.04	0.00	61.24	11.10	2.77	0.00	0.00	0.00	0.00	10.76	87.91
Idukki	0.00	0.00	0.00	0.00	164.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	164.57
Pamba	0.00	0.00	0.00	0.00	7.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.46
Kakki	0.00	0.00	0.00	0.00	109.15	131.80	0.00	0.00	0.00	0.00	0.00	0.00	240.95
Idamalayar	0.00	0.00	0.00	0.00	24.00	8.16	0.00	0.00	0.00	0.00	0.00	0.00	32.16
Maduppetty	0.00	0.00	0.00	0.00	61.99	53.29	5.62	18.37	9.93	0.00	0.00	0.00	149.19
Total	0.00	5.48	2.04	390.08	1109.31	668.59	76.71	30.30	9.93	2.34	0.00	10.76	2305.52

Spill in Mcm 2022-23													
	APRIL'22	May'22	June'22	July'22	Aug'22.	Sept.'22	Oct.'22	Nov.'22	Dec.'22	Jan'23	Feb'23	Mar'23	Total
Kuttiady	0	0	0	21.9905	1.92	0	0	0	0	0	0	0	24
Thariode	0	0	0	0	7.207	0	0	0	0	0	0	0	7
Poringal	0	8.7932	0	287.9479	523.8386	275.2916	2.645	0	0	0	0	0	1099
Ponmudy	0	0	0	31.75959	111.6641	92.03889	28.8347	7.18198	0	0	0	0	271
Neriamangalam	0	1.405532	0	171.3122	209.4314	211.9334	25.96664	0	0	0	0	0	620
Lower Periyar	0	2.565	0	152.147	335.255	130.8121	13.393	5	0	5.089	0	0	644
Sholayar	0	0	2	0	60.10299	11.962	2.72	0	0	0	0	11.3115	88
Idukki	0	0	0	0	109.713	0	0	0	0	0	0	0	110
Pamba	0	0	0	0	3.892	0	0	0	0	0	0	0	4
Kakki	0	0	0	0	56.9086	68.7177	0	0	0	0	0	0	126
Idamalayar	0	0	0	0	96.0083	32.6219	0	0	0	0	0	0	129
Maduppetty	0	0	0	0	21.228	18.249	1.925	6.292	3.399	0	0	0	51
Total	0.0	12.8	2.0	665.2	1537.2	841.6	75.5	18.5	3.4	5.1	0.0	11.3	3172

Solar Projects Commissioned during 2022-23								
SI No	Project	Scheme	COD	Capacity (KW)	O&M full in Rs	COD month	Available months	Proportionate O&M cost as per RE regulation in Lakhs
Soura –KSEB Funded								
1	co op institute of technology vadakara	RTS model 1	27-10-2022	0.19	134.70	10	6	67.35
2	Govt polytechnic college Kasarkode	RTS model 2	23-09-2022	0.075	53.17	9	7	31.02
3	kannur unv campus Palayad	soura model 1	22-02-2023	0.172	121.94	2	2	20.32
4	Govt polytechnic Kannur	soura model 1	10-08-2022	0.08	56.72	8	8	37.81
5	CET thalassery	soura model 1	10-10-2022	0.184	130.45	10	6	65.22
6	kannur unv Thavakkara Kannur	RTS model2	22-03-2023	0.082	58.13	3	1	4.84
7	residential women polytechnic Kannur	soura model 1	23-03-2023	0.054	38.28	3	1	3.19
8	Kannur unv Dharmasaala	RTS model 1	23-02-2023	0.154	109.18	2	2	18.20
9	KMCT college of engineering	RTS model 1	23-02-2023	0.17	120.52	2	2	20.09
10	Govt eng college Kozhikode	soura model 1	23-02-2023	0.071	50.34	2	2	8.39
11	Govt medical college Kozhikode	RTS model 1	02-03-2023	0.05	35.45	3	1	2.95
12	medical ofcrr Govt hospital Bathery	soura model 2	04-03-2023	0.166	117.69	3	1	9.81
13	Womens polytechnic college kottakal	RTS model 1	23-02-2023	0.092	65.22	2	2	10.87
14	govt polytechnic kunnankulam	soura model 1	29-09-2022	0.02	14.18	9	7	8.27
15	pharmaceutical corporation kerala	RTS model 1	24-09-2022	0.015	10.63	9	7	6.20
16	Principal Govt polytechnic Pala	soura model 2	22-07-2022	0.106	75.15	7	9	56.36
17	St marys arcade Ernakulam	soura model 2	01-11-2022	0.01	7.09	11	5	2.95
18	RLV college	soura model 1	23-09-2022	0.025	17.72	9	7	10.34
19	Govt womens polytechnic hostel Kayamkulam	RTS model2	19-09-2022	0.033	23.40	9	7	13.65
20	SMCSI med college and hospital	soura model 2	22-09-2022	0.15	106.34	9	7	62.03
21	Sree budha college of eng	soura model 1	20-09-2022	0.19	134.70	9	7	78.58
22	Govt polytechnic Adoor	soura model 1	10-08-2022	0.014	9.93	8	8	6.62
23	IHRD engineering college Adoor	soura model 1	10-08-2022	0.139	98.55	8	8	65.70
24	M/s Holy trinity Anglo Indian school	soura model 1	19-09-2022	0.043	30.49	9	7	17.78
25	TKM college of eng	soura model 2	19-09-2022	0.018	12.76	9	7	7.44

26	Govt polytechnic college Neyyattinkara	soura model 1	26-10-2022	0.12	85.08	10	6	42.54
27	KINFRA Thumba TVPM	soura model 1	24-03-2023	0.289	204.89	3	1	17.07
28	Govt cet TVPM	soura model 1	18-01-2023	0.075	53.17	1	3	13.29
29	Govt polytechnic college Meppadi	RTS model 1	22-02-2023	0.075	53.17	2	2	8.86
REES- Projects								
1	Planning Secretariat building Alappuzha		26-04-2022	30	21268.85	4	12	21268.85
2	Civil station Wayanad		23-08-2022	15	10634.42	8	8	7089.62
3	Bar association building Kollam		12-04-2022	20	14179.23	4	12	14179.23
4	Treasury building Kollam		12-04-2022	20	14179.23	4	12	14179.23
5	110 KV substation Ayathil		12-01-2023	30	21268.85	1	3	5317.21
6	Mini civil station Kottarakkara		04-08-2022	60	42537.70	8	8	28358.46
7	110Kv substation Kinalur kozhikod		03-03-2023	35	24813.66	3	1	2067.80
8	Mini civil station kunnamangalam		09-06-2022	20	14179.23	6	10	11816.03
9	B1 block Malappuram civil ststion		04-07-2022	50	35448.08	7	9	26586.06
10	B3 block Malappuram civil ststion		04-07-2022	50	35448.08	7	9	26586.06
11	civil station Pathanamthitta		13-06-2022	20	14179.23	6	10	11816.03
12	civil station Kudappanakkunu		13-04-2022	35	24813.66	4	12	24813.66
13	staff building idukki civil station		29-09-2022	30	21268.85	9	7	12406.83
14	Brahmapuram Solar 2.75MW		03-02-2023	2750	1949644.40	2	2	324940.73
	Total			3167.86	2245892.52			532143.57
	Total Solar projects Capacity in MW			3.16786	O&M Cost for New Solar Projects Commissioned during 2022-23 in Lakhs			5.32

Small Hydro Projects Commissioned during 2022-23							
Sl No	Project	COD	Capacity (KW)	O&M full in Rs	COD month	Available months	Proportionate O&M cost as per RE regulation in Lakhs
1	Poringalkuthu SHEP(24 MW)	07-06-2022	24	665.57	6	10	554.64

O&M cost for projects commissioned after the base year 2018-19 till FY 2021-22						
Sl. No	Projects	COD	Capacity	Project Type	Rate as per Norms for the year FY 2022-23 in Lakhs	Addl O&M Cost in Lakhs
1	Perunthenaruvi	23-10-2017	6	SHEP above 5MW	27.73	166.39
2	Chathankottunada	20-06-2021	6	SHEP above 5MW	27.73	166.39
3	Upper Kallar	30-09-2021	2	SHEP below 5MW	38.30	76.59
4	solar projects	FY 2018-19	3.315	Solar	7.09	23.50
5	solar projects	FY 2019-20	0.65	Solar	7.09	4.61
6	Banasura sagar floating solar	04-12-2017	0.5	Solar	7.09	3.54
7	Nellimampathy and parambikular off grid	04-04-2017	0.0836	Solar	7.09	0.59
8	Soura Solar	2020-21	2.13	Solar	7.09	15.10
9	Soura Solar	2022-23	6.64	Solar	7.09	47.08
10	Agali	22-01-2022	1	Solar	7.09	7.09
11	Kanjikode	19-02-2022	3	Solar	7.09	21.27
						532.16

O&M Cost for new projects proportionate to the COD for the year 2022-23				
Sl No	Project Type	O& M Cost for projects commissioned during FY 2022-23 in Lakhs	O& M Cost for projects commissioned after base year till 2021-22 in Lakhs	Total O&M Cost for the FY 2022-23 in Cr
1	Solar	5.32	532.16	10.92
2	Small Hydro	554.644		
	Total	559.97		

CHAPTER 3: TRUING UP OF ARR OF SBU – T & SLDC FOR 2022-23

3.1 The functions of the STU as envisaged in the Electricity Act is entrusted to the Strategic Business Unit – Transmission (SBU-T). As per the second Transfer Scheme, SBU-T is entrusted with the development and execution of long-term plans for evacuation and supply of power at voltages of and above 33KV, in consultation and co-ordination with the other SBUs. At present SBUT is also carrying out the functions of State Load Despatch Centre, as provided in Part-II of Schedule-A1 of the Second Transfer Scheme. As per the Second Transfer Scheme, all assets of voltage level of 66KV and above is assigned to SBU-Transmission. At the same time, SBU-T is entrusted with the construction of 33kV and above system. The voltage level wise SBU T capacity of Transmission system and number of substations and transmission lines at the beginning of the financial year, ie as on 1st April, 2022 is summarized below:

Table-T1: Transmission System statistics			
Sl. No	Item	Unit	Quantity as on 01.04.2022
1	400 kV Lines	Ckt-km	177.03
2	220 kV Lines	Ckt-km	3366.21
3	110 kV Lines	Ckt-km	5299.84
4	66 kV Lines	Ckt-km	1541.43
5	400 kV Substations	Nos	1
6	220 kV Substations	Nos	29
7	110 kV Substations	Nos	174
18	66 kV Substations	Nos	58
9	Total Transmission Capacity	MVA	23824
10	Bays	Nos	2842

Projects commissioned during 2022-23

During the period 2022-23, following substations and lines were commissioned.

Table-T2: Substation Commissioned during 2022-23				
SI No	Name of Substation	Voltage Level	New/ Upgradation	Date of Commissioning
1	Kunnamkulam	220kV	New	20.08.2022
2	Thalaserry	220kV	New	31.01.2023
3	Ettumanoor	220kV	New	25.05.2022
4	Vizhinjam	220kV	New	11.05.2022
5	Velliyamparamba(110kV Mattannur – Kinfra Park)	110kV	New	15.12.2022
6	Kuravilangad	110kV	Upgradation	25.05.2022

Table-T3: 220kV lines Commissioned During 2022-23			
Sl No	Name of line	Voltage Level	Date of Commissioning
1	Wadakkanchery – Kunnamkulam	220kV	20.08.2022
2	Mundayad-Thalasseri	220kV	30.01.2023

Table-T4: 110 kV lines Commissioned During 2022-23			
Sl No	Name of line	Voltage Level	Date of Commissioning
1	Lines under Kottayam Lines package - Lines between Ettumanoor, Kuravilangad, Vaikom, Thycattusery and Thuravoor substations	110kV	20.05.2022
2	Kodungallur-Irinjalakuda	110kV	18.04.2022
3	Mundayad-Thalasseri	110kV	30.01.2023

The summary of the asset created during 2022-23 is given below. Details of the capital works executed in 2022-23 are enclosed as Annexure- 1.

Table-T5: Transmission System statistics - Asset created during 2022-23			
Sl. No	Item	Unit	Asset Created during 2022-23
1	400 kV Lines	Ckt-km	0
2	220 kV Lines	Ckt-km	88.41
3	110 kV Lines	Ckt-km	161.01
4	66 kV Lines	Ckt-km	0
5	400 kV Substations	Nos	0
6	220 kV Substations	Nos	4
7	110 kV Substations	Nos	2
8	66 kV Substations	Nos	0
9	Total Transmission Capacity	MVA	1520.5
10	Bays	Nos	63

The voltage level wise SBU T capacity of Transmission system and number of substations and transmission lines as on 31st March, 2023 is summarized below;

Table-T6: Transmission System statistics			
Sl. No	Item	Unit	Quantity as on 31.03.2023
1	400 kV Lines	Ckt-km	177.03
2	220 kV Lines	Ckt-km	3454.62
3	110 kV Lines	Ckt-km	5460.85
4	66 kV Lines	Ckt-km	1542.232*
5	400 kV Substations	Nos	1
6	220 kV Substations	Nos	33
7	110 kV Substations	Nos	176
8	66 kV Substations	Nos	54**
9	Total Transmission Capacity	MVA	25344.5
10	Bays	Nos	2905

*Difference of 1 km due to change in line length with GIS mapping

** Reduction due to upgradation to 110 kV

3.2 The SBU-T handle total energy sold to consumers and licensees within the state, open access power drawn by the consumers, the quantum energy sold outside the state and energy transmitted by Captive Consumers. The ARR, ERC and Transfer cost to SBU-T are furnished as per Form T P&L and Form T1. Transfer price for SBU T as per accounts has been Rs. 1339.50 Cr against approval of Rs. 1310.51 Cr. Net ARR in line with the Tariff Regulation sought for true up in this petition amounts to Rs. 1517.74 Cr. Item wise explanation is furnished thereafter.

TABLE – T7 : ARR OF TRANSMISSION BUSINESS UNIT (SBU-T) & SLDC for 2022-23 (Rs Cr)				
No	Particulars	Approved	Actual	Truing up requirement
1	Interest on loan	213.61	93.97	318.43
2	Interest on GPF	24.46	19.31	19.31
3	Interest on Bonds issued to Master trust	68.72	59.83	59.62
4	Interest on Working Capital	18.54	13.00	22.90
5	Other interest		0.48	0.23
6	Interest & Finance Charge	325.33	186.59	420.49
7	Return on Equity (14%)	119.99	214.08	119.99
8	Depreciation	231.40	373.51	275.15
9	O&M expenses	584.79	616.50	588.41
10	Repayment of existing master trust	45.81		45.81
11	Additional contribution to Master Trust	44.98		44.98
12	Edamon - Kochi line compensation	10.48		8.08
13	Pugalur – Thrissur line compensation			0.86
15	Other expenses		0.50	0.50
16	Incentive on Transmission Availability			8.43
17	Pay revision expenses			58.22
18	ARR	1362.76	1391.19	1570.93
19	Less: Non-tariff Income	52.25	51.69	53.19
20	Net ARR (Cost Transferred to SBU-D)	1310.51	1339.50	1517.74

Interest and Finance charges:

3.3 An amount of Rs 325.33 Cr had been approved by the Hon Commission under this head. The actual expense incurred was **Rs.397.59 Cr**. Item wise explanation is furnished below.

3.4 Interest on Normative loan: While issuing orders on MYT petition, Hon'ble Commission approved Rs. **1608.54** Cr as opening normative loan as on 01.04.2022 after considering provisional asset addition for the year 2021-22 and contributions and grants. The interest was approved at 9.83%. Further, provisional approval of Rs. 1520.57 Cr was granted for the asset addition during 2022-23 with contribution and grant as Rs.160.16 Cr. Actual entitlement of normative loan as on 01.04.2022, GFA addition during 2022-23, repayment during the year and closing normative loan as on 31.03.2023, interest on normative loan along with SBU wise segregation are computed and explained in chapter 5. Based on the computation, an amount of Rs. 318.43 Cr is claimed towards interest on normative loan for the year 2022-23.

3.5 During the year, capital works executed by SBU-T was Rs.1032.73 Cr and Rs.1129.64 Cr has been capitalized as per accounts. GFA addition includes decommissioning liability of Rs.0.25 Cr. Out of the GFA addition during the year, assets worth Rs.65.75 Cr represent part capitalization within the meaning of Tariff Regulations. Further, Rs.31.48 Cr worth of part capitalized assets in earlier years were commissioned during the year. Thus, in order to arrive at the GFA addition allowable as per Tariff Regulations, 2021, part capitalized assets and decommissioning liability during the year were deducted from the GFA addition as per accounts. Thereafter, part commissioned assets in earlier years but commissioned in 2022-23 were considered to arrive at the asset addition eligible as per Tariff Regulation. This amounted to Rs.1095.11 Cr as detailed in chapter 5.

3.6 Hon'ble Commission may kindly approve GFA addition of Rs.1095.11 Cr for 2022-23. Consumer contribution, grants and subsidies received during the year amounted to Rs.32.63 Cr are as detailed **Appendix 5**. GFA addition to the tune of Rs. 1062.48 Cr (Rs.1095.11 Cr-Rs.32.63 Cr) may kindly be approved as GFA addition eligible for normative loan and Rs.1051.73 Cr (excluding land value Rs. 10.29 Cr, ie Rs. 11.26 Cr – Rs. 0.97 Cr) as GFA eligible for depreciation.

3.7 Normative loan as on 31.03.2023 and normative interest for the year works out to Rs. 3738.56 Cr and Rs. 318.43 respectively as detailed in chapter 5 of this petition may kindly be approved.

3.8 Interest on GPF: Interest paid on GPF during the year amounts to Rs. 197.78 Cr as detailed in chapter 5. The share of interest on GPF for SBU-T along with approved figure is furnished below.

Table-T8: Interest on GPF for SBU-T for 2021-22			
	Approved	Actual	True-up requirement
	Rs. Cr	Rs. Cr	Rs.Cr
SBU-T	24.46	19.31	19.31

3.9 Interest on Master Trust Bonds: Hon'ble Commission, by virtue of provision contained in Tariff Regulation, 2021 had approved Rs.68.72 Cr towards interest on Master Trust bonds. Actual expenses for SBU T have been Rs. 59.83 Cr as explained in Chapter 5. Thus, Hon'ble Commission may kindly approve Rs.59.62 Cr for the year 2022-23.

3.10 Additional contribution to Master Trust: Hon'ble Commission, by virtue of provision contained in Tariff Regulation, 2021 had approved Rs.44.98 Cr towards additional bond to Master Trust bonds. Hence Hon'ble Commission may kindly true up the Rs.44.98 Cr as detailed in chapter 5.

3.11 Interest on Working Capital: As per the Regulation 32 of Tariff Regulation 2021, interest on working capital is allowed normatively at a rate equal to two per cent higher than the base rate as on the first day of the financial year for which petition is filed. Hon'ble Commission approved the Interest on Working capital at a rate of 8.65% on the working capital of Rs.214.37 Cr and the interest on working capital approved for SBU-T for 2022-23 is Rs. 18.54 Cr. Regulation 32(2) of Tariff Regulations 2021, allows Interest on normative level of working capital at two percent higher rate than the base rate as on first day of April of the year of ARR filing. Further, as per the Regulation 3(12) of the Tariff Regulations, 2021, Base rate" means the External Benchmark-Linked Lending Rate (EBLR) declared by the State Bank of India as applicable on first day of April of respective financial year. Base rate of SBI on 01.04.2022 has been 6.65% and therefore the normative interest rate for the computation of working capital interest for 2022-23 would be 8.65%. Based on the working capital requirement computed as per Tariff Regulation, a sum of Rs. 22.90 Cr is claimed as interest on working capital as detailed below, which may kindly be approved.

Table-T9: Interest on working capital (Rs Cr)		
Particulars	Approved	True up requirement
O&M Expenses As per norms	584.79	588.41
Pay revision expenses		58.22
Additional contribution to Master Trust		44.98
Total O&M expenses		691.61
GFA Plants and Equipment	5737.52	8131.42
Transmission charges	1299.20	1509.297
O&M Expenses for one month	48.73	57.63
1% of Historical cost of plants & Equipment	57.38	81.31
Receivables (Transmission charges for one month)	108.27	125.71
Total requirement of working capital	214.37	264.64
Rate of interest	8.65%	8.65%
Interest on Working Capital	18.54	22.90

3.12 Other interest: Hon'ble Commission has not approved any amount towards other interest. Actual expenses incurred under this head for SBU-T amounts to Rs.0.48 Cr as detailed in chapter 5 and Rs. 0.23 Cr is claimed for true up as shown below, which may kindly be approved.

Table T10: Details of other charges under Interest and Finance Charges (Rs. Cr)		
No	Particulars	SBU T
1	Interest Expenses-others	0.23

3.13 Summary of Interest & Finance charges: A comparison of the approved and actual values of various items of Interest & Finance charges are given below:

Table- T11: Summary of Interest and Finance charges (Rs Cr)				
No	Particulars	Approved	True-up requirement	Difference
1	Interest on Outstanding Capital Liabilities	213.61	318.43	-104.82
2	Interest on GPF	24.46	19.31	5.15
3	Interest on Master Trust Bonds	68.72	59.62	9.10
4	Interest on Working capital	18.54	22.9	-4.36
5	Other interest	0	0.23	-0.23
5	Total	325.33	420.49	-95.16

3.14 O&M Expenses: As per the provisions of Regulation 58, the O&M expenses applicable for the SBU-T is based on the number of bays, MVA Capacity of the Power Transformer and transmission line length in ckt km. Further as per the regulation, The O&M expenses for any year of the Control Period shall be allowed by multiplying the O&M norms for that year with the actual number of bays existing at the beginning of the financial year, total MVA capacity of the transformers and transmission line length in circuit km for the previous year and at 50 per cent of the circuit kilometre of transmission lines, MVA capacity of the transformers and number of Bays in the substation of the Transmission Licensee added during the year and put to its intended use. The no. bays, MVA capacity and circuit kilometres and the O&M cost based on the norms approved for 2022-23 and actual are as shown below:

Table-T12: Approved and actual Cost Drivers of Transmission Business for 2022-23		
Item (66 kV & Above)	KSERC provisionally considered for 2021-22 end	Actual for 2021-22 end
Substation Bays*	2933	2842
Tran Lines***	11025	10384.51
MVA Capapcity	22055	23824
* Excluding 33 kV bays *** (in CktKms)		

Table-T13: Approved and actual Cost Drivers of Transmission Business for 2022-23		
Item	KSERC provisionally considered for 2022-23 addition	Actual for 2022-23 addition
Substation Bays*	132	63
Tran Lines***	748	249.42
MVA Capapcity	2183	1520.5
* Excluding 33 kV bays *** (in CktKms)		

3.15 Even though the Hon'ble Commission in the Tariff Regulation considered an escalation rate of 4.454% for determining the norms for the control period 2022-27, Annexure 7 of Tariff Regulation allows actual escalation rates based on actual inflation existing for each year of the control period at the time of truing up of the considered financial year. The O&M cost norm for SBU-T for 2022-23 as per the Regulation and the O&M cost based on the norms considering the actual inflation of 7.06% for 2022-23 over to 2021-22 norms are submitted below.

Table 14: O&M Norms		
Item	Norms approved for 2021-22	Norms for 2022-23 (Arrived by applying escalation of 7.06% over 2021-22 values)
Rs. lakh per Bay	7.121	7.624
Rs. lakh per MVA	0.788	0.844
Rs. lakh per circuit km	1.438	1.540

- 3.16** The O&M expense calculated based on norms for the period 2022-23 is Rs. 588.41 Cr. Against this, Rs. 577.67 Cr is for the asset at the beginning of the FY 2022-23 and Rs. 10.74 Cr is for the new asset created during the period 2022-23. The O&M details are tabulated below;

Table 15: SBU T O&M Charges	
Item	2022-23
O&M cost for Bay (Rs lakh/Bay)	7.624
O&M cost (Rs lakh/circuit km)	1.540
O&M cost (Rs lakh/MVA)	0.844
Opening bays (Nos)	2842
Bays added during the year (Nos)	63
Opening line length (Circuit Km)	10384.51
Line length added during the year (Circuit Km)	249.42
Opening MVA	23824
MVA added during the year	1520.5
For assets at the beginning of the year –(A) in Rs. Lakh	57767.01
For assets added during the year – (B) in Rs. Lakh	1073.86
Total Normative O&M expenses in Rs. Lakh	58840.87
Total Normative O&M expenses – (A) + (B) Rs. Cr	588.41

- 3.17** It may please be noted that, Hon'ble Commission as per order dated 25.01.2022, has approved 30321 nos as allowable staff strength and observed that the revised numbers will be considered since 01.04.2022. But the tariff regulation for the control period was finalised before the redetermination of staff strength and the release of true up orders for the year 2018-19. As per Tariff Regulation 2021, notified by the KSERC on 16.11.2021, KSERC had determined the norms based on the O&M cost approved in the ARR for 2018-19 along with a sum of Rs. 248.47 Cr towards annual pay revision (due from July/August 2018) impact. Therefore, the provisional norms determined as per Tariff Regulation, 2021 is to be finalized for claiming the eligible O&M expenses in the truing up petition for 2022-23.

- 3.18** The expected O&M expenses based on the revised norms and actual escalation factor as detailed above is given below. Truing up petition for the financial year is prepared based on the norms specified in the Tariff regulation 2021 with escalation factor as submitted under para 3.15. However, it is submitted that, Hon'ble Commission may revise the O&M norms based on the revised employee strength & trued up values for 2018-19 with actual pay revision expenses. A calculation of O&M cost based on the norms so arrived, as detailed under chapter 5, is

submitted below. Hon'ble commission may approve the parameters for determining SBU T based on the revised norms;

Table 16: SBU T O&M Charges – Revised Norms	
Item	2022-23
O&M cost for Bay (Rs lakh/Bay)	7.955
O&M cost (Rs lakh/circuit km)	1.605
O&M cost (Rs lakh/MVA)	0.880
Opening bays (Nos)	2842
Bays added during the year (Nos)	63
Opening line length (Circuit Km)	10384.51
Line length added during the year (Circuit Km)	249.42
Opening MVA	23824
MVA added during the year	1520.5
For assets at the beginning of the year –(A) in Rs. Lakh	60240.37
For assets added during the year – (B) in Rs. Lakh	1119.762
Total Normative O&M expenses in Rs. Lakh	61357.88
Total Normative O&M expenses – (A) + (B) Rs. Cr	613.60

3.19 Depreciation: Hon'ble Commission approved depreciation for the assets at the beginning of the year 2022-23 at Rs. 197.42 Cr and for the asset added during the year 2022-23 at Rs. 33.98 Cr. Thus, the total depreciation approved for the year 2022-23 is Rs. 231.40 Cr against this actual depreciation as per audited accounts was Rs.373.51 Cr as detailed in **Form T3**. The difference in depreciation is because of the methodology as per Ind AS and Tariff Regulations

3.20 Depreciation eligible as per MYT Regulation for the year 2021-22 has been worked out at Rs. 275.15 Cr as detailed in chapter 5. Comparison of approval, actual and true up requirement is furnished below:

Table-T17: Depreciation (Rs Cr)				
No	Particulars	Approved	Actual	True-up requirement
1	Depreciation	231.40	373.51	275.15

3.21 Return on Equity: Hon'ble Commission approved Rs.119.99 Cr towards RoE of SBU-T. Same amount is sought for true up in this petition.

Table-T18: Return on Equity (Rs Cr)				
No	Particulars	Approved	Actual	True-up requirement
1	Return on Equity	119.99	214.08	119.99

Amortization of intangible assets:

A. Edamon-Kochi line:

3.22 The Government of Kerala, vide G.O.(Ms) No.29/ 2015/ PD dated 30/07/2015 of Power (C) Department, approved a revised Special Compensation Package, meant exclusively for the construction of 400 kV transmission line in the Edmon – Kochi sector, as a special case.

3.23 Hon'ble Commission, as per order dated 09.08.2019 in OP 58/2018, has provisionally approved 50% of the additional financial liability due to the special compensation package of the 400 KV Edamon - Kochi transmission line as KSEBL's share as per the orders of the Government. KSEBL share of compensation actually paid was allowed to be recovered in 12 years with interest as part of truing up.

3.24 An amount of Rs. 25.78 Crore has been transferred to the District Collector, Ernakulam during the year 2022-23 as detailed below.

Sl.No	Amount	Payment Details	Remarks
1	Rs.25,78,10,000	Transferred to District Collector, Ernakulam through RTGS, UTR No. SBINR52022121520772047 on 15.12.2022	Sanctioned vide BO(FTD)No .726/2022/(DIRTSO/AE6/2022/2369) dated 26.08.2022

3.25 Out of the above, share of KSEBL to the tune of Rs.12.89 Cr has been accounted under Intangible Assets. It is respectfully submitted that a sum of Rs.18 Cr was paid during 2019-20 out of which, KSEBL share was Rs.9 Cr. A sum of Rs. 0.75 Cr was proposed for amortization during 2019-20. A sum of Rs.22 Cr was paid during 2020-21 out of which, KSEBL share was Rs.11 Cr. A sum of Rs. 40.65 Cr was paid during 2021-22 against this, KSEBL share was Rs. 20.33 Cr. During the year 2022-23, a sum of Rs. 25.78 Cr was paid and out of which KSEBL share was Rs. 12.89 Cr. During the year 2021-22, Rs. 3.36 Cr was proposed for amortization. Now for the FY 2022-23 an amount of Rs. 8.08 Cr is proposed for the amortization along with interest.

3.26 As per orders of the Hon'ble Commission interest (at average interest rate for 2022-23 at 8.49%) and amortization amounts to Rs.8.08 Cr (Amortization + Interest) for 2022-23 as shown below.

Sl. No	Amount (Rs Cr)	Year of disbursement	KSEBL share (Rs Cr)	2019-20		2020-21		2021-22			2022-23		
				Amortization (Rs Cr)	Balance (Rs Cr)	Amortization (Rs Cr)	Interest @ 9.88%	Amortization (Rs Cr)	Balance (Rs Cr)	Interest @ 9.57 %	Amortization (Rs Cr)	Balance (Rs Cr)	Interest @ 8.49 %
1	5.2	2019-20	2.6	0.22	2.38	0.22	0.24	0.22	1.95	0.19	0.22	1.73	0.15
2	0.8	2019-20	0.4	0.03	0.37	0.03	0.04	0.03	0.3	0.03	0.03	0.27	0.02
3	12	2019-20	6	0.5	5.5	0.5	0.54	0.5	4.5	0.43	0.5	4	0.34
4	22	2020-21	11			0.92	0.38	0.92	9.16	0.88	0.92	8.24	0.70
5	40.65	2021-22	20.33					1.69	18.63	1.78	1.69	16.94	1.44
6	25.78	2022-23	12.89								1.07	11.82	1.00
7		Total		0.75	8.25	1.67	1.2	3.36	34.54	3.31	4.43	43.00	3.65

B. Pugalur-Thrissur line

- 3.27** Government of Kerala vide G.O(MS)No.7/2019/PD dated 04.05.2019 and G.O.(MS) No.15/2019/Power dated 19-7-2019 have issued special compensation package for construction of Thrissur to Pugalur +-320 KV HVDC transmission line from Thrissur to Pugalur forming part of the Raigarh-Pugalur-Thrissur HVDC scheme and for the Line in Line out construction of Thrissur to Kochi. Government vide order dated 18-5-2021 has ordered that the financial liability due to special compensation package shall be shared equally between Government of Kerala and KSEB Ltd.
- 3.28** The approximate estimate of compensation to be paid in accordance with the orders is worked out as Rs.45 Crore and KSEB Ltd share is estimated as Rs.25.11 Cr at 50:50 sharing of expense by KSEB Ltd/GoK.
- 3.29** 3.7.8 It is humbly submitted that KSEBL already submitted separate petition before Hon'ble Commission seeking approval of the Special Compensation package of Pugalur-Thrissur line. Hearing on the matter is conducted. The final order from KSERC is awaiting.
- 3.30** An amount of Rs. 4.83 Crore has been transferred to the District Collector, Ernakulam during the year 2022-23 as detailed below.

Table T21- Details of compensation released during 2022-23

Sl No	Amount Paid (Rs)	Payment Details	Sanctioned vide BO	Remarks
1	1,20,35,728	Cheque No.134583 dtd 15.07.2022.	BO (FTD) No. 501/2022/D(T&SO)/T4/Pugalur-Thrissur compensation/2020-21 dt. Tvpm. 08.06.2022.	Paid to the Special Tahsildar (LA), Power Grid, Palakkad through online transfer to Canara Bank Account No. 0812101071441
2	1,80,45,560	Cheque No. 809255 dated 24.11.2022	BO. FTD No. 892/2022/D (T & SO) /T4/Pugalur-Thrissur compensation/2020-21 dated 10.11.2022.	
3	1,82,67,927	Cheque No. 809407dated 23.02.2023	BO. FTD No. 47/2023/D (T & SO) /T4/Pugalur-Thrissur compensation/2020-21 dated 03.02.2023.	

- 3.31** In the case of Pugalur-Thrissur line, KSEBL remitted its first share of compensation of Rs. 6,02,638/- towards Tower Standing Area (TSA) in 2021-22, based on the request made by the Special Tahsildar, LA unit, Palakkad. This included the GoK share of Rs. 3,01,319/- also. GoK was requested to reimburse the amount of Rs.3,01,319/- to KSEBL, which is not yet done.
- 3.32** Since then, KSEBL has been remitting its share of compensation (TSA and line corridor) only to the LA unit, Palakkad, based on the DVS approved by the District Collector, Palakkad and forwarded by the Special Tahsildar, LA unit, Palakkad. GoK has been requested to transfer its share directly to the LA unit, Palakkad. On 10.03.2022, KSEBL remitted an amount of Rs.

2,49,83,467/- as its share of compensation. A total of Rs. 4.83 Cr has been remitted during 2022-23 as per Table T 21 given above. Amortization & interest on compensation for Pugalur-Thrissur line is tabulated below;

Table T22- Amortization & interest on compensation for Pugalur-Thrissur line							
				2021-22		2022-23	
Sl.No	Amount (Rs Cr)	Year of disbursement	KSEBL share (Rs Cr)	Amortization (Rs Cr)	Balance (Rs Cr)	Amortization (Rs Cr)	Interest @ 8.49%
1	0.06	2021-22	0.03	0.003	0.028	0.003	0.002
2	2.5	2021-22	2.50	0.208	2.292	0.21	0.19
3	4.83	2022-23	4.83			0.40	
4		Total				0.64	0.22

3.33 A sum of Rs. 0.86 Cr (Rs. 0.64 Cr +Rs. 0.22 Cr) is proposed for amortization during 2022-23.

3.34 Total amortization of intangible assets: The total amortization of intangible assets and interest for the year amounts to Rs. **8.94 Cr** as submitted below may kindly be approved.

Table T23- Total amortization of intangible assets and interest for 2022-23

Sl. No.	Transmission Line	Amortization amount (Rs. Cr.)
1	Edamon-Kochi	8.08
2	Pugalur-Thrissur	0.86
	Total	8.94

3.35 Transmission Availability: The transmission system of KSEBL could achieve an availability of 99.05 %. The certificate of SLDC and detailed calculations are enclosed as **Annexure-2**. As per Regulation 56(2) of the KSERC (Terms and Conditions for determination of Tariff) Regulations, 2021, the transmission licensee shall be entitled to incentive on achieving annual availability above the target availability, in accordance with the following formula: -

$$\text{Incentive} = \frac{\text{Aggregate Revenue Requirements} \times [\text{Annual availability achieved} - \text{Target Availability}]}{\text{Target Availability}}$$

The Regulation further stipulates that the computation of incentive shall be undertaken during truing up for each financial year. Accordingly, SBU-T prays approval of Rs. 8.43 Cr as calculated below.

Table –T24: Incentive on transmission availability (Rs Cr)	
ARR excluding incentive (Rs. Cr.)	1509.80
Annual availability achieved	99.05%
Target availability	98.5%
Incentive	8.43

It is humbly requested that the above incentive amounting to **Rs. 8.43 Cr** may kindly be approved as incentive for SBU-T.

3.36 Other expenses (Rs. 0.49 Cr) and **Exceptional items** (Rs. 0.01 Cr) as detailed in chapter 5 may kindly be approved.

3.37 Non-Tariff Income: Hon'ble Commission approved Rs. 52.25 Cr under this head. As per trifurcated accounts, a sum of Rs. 51.69 Cr has been accounted under SBU T and a sum of Rs. 53.19 Cr is claimed in the truing up petition as detailed under chapter 5, may kindly be trued up.

3.38 Net ARR (Transfer Cost) of SBU-T and SLDC: ARR for Transmission Business Unit for the year 2022-23 had been Rs. 1570.93 Cr and non-tariff income earned was Rs. 53.19 Cr. Therefore, Net ARR of SBU-T has been Rs. 1517.94 Cr. This cost may kindly be approved as the Cost of intra-state Transmission in the ARR of SBU-D.

3.39 Transmission loss: The total energy *delivered to* the transmission system was 27977.17 MU in FY 2022-23. The losses in the transmission system at different voltage levels are given in the Table below. The peak demand of the State for the year 2022-23 was 4585 MW on 28.03.2023 from 22.00 to 22.30 hours. The losses are segregated based on Load flow studies done up to 33 kV level using computer simulation model in "Mi-Power" Software The methodology adopted for study is similar to that suggested by CEA and Adopted by Forum of regulators (FOR) for loss assessment. Balance losses are attributable to the HT and LT Network. Thus, the actual energy losses in the transmission system (upto 66KV) were 722.24 MU. The transmission loss approved by Hon'ble Commission for the year 2022-23 and the actual are submitted below.

Table 25: Voltage wise Transmission Losses										
4585 MW for 2022-23										
Voltage level	Flow in MW	Transformer loss(MW)	Line loss (MW)	Loss (MW)	% loss corresponding to maximum demand	Loss in MU corresponding to LLF of 0.553	Loss up to each voltage level (MU)	energy input (MU)	% loss up to each voltage level	
400 kV	2521	9.376	7.168	16.544	0.656	80.14	80.143	27977.17	0.29	
220 kV	3017.194	17.602	46.194	63.796	2.114	309.04	389.187		1.39	
110 kV	4384.675	12.124	46.718	58.842	1.342	285.05	674.232		2.41	
66 kV	767.53	1.91	8	9.91	1.291	48.01	722.238		2.58	
	4585	41.01	108.08	149.09	3.25	722.24				
Transmission loss										2.58

3.40 Auxiliary consumption of substations of Transmission SBU:

The actual auxiliary consumption for the year 2022-23 was **23.18 MU** as tabulated below. The auxiliary consumption in substations comprise of energy required for lighting, air compressors, battery charging, switch gears operating mechanism etc.

Table-T26: Auxiliary consumption of substations for FY 2022-23 (MU)	
Month	Sub Total
April	1.91
May	1.92
June	1.8
July	1.81
August	1.96
September	1.85
October	1.96
November	1.9
December	1.99
January	1.99
February	1.89
March	2.21
Sub Total	23.18

This energy loss is not captured in the transmission losses determined by simulation using load flow software. This energy consumption is actually measured by meters in the respective substations.

- 3.7 The formats for Truing up of Transmission Business Units as per the Tariff Regulation 2021 are provided hereunder.

Annexure 1

SUBSTATIONS COMMISSIONED DURING 2022-23											
Sl. No	Name of Substation	Voltage level (kV)	New / Upgn.	Date of Commng.	Start Date		Commissioning date		AS amount in Lakhs	Actual Expenditure in Lakhs	Remarks (Reason for Cost overrun and Time overrun if any)
					Scheduled	Actual	Scheduled	Actual			
TRANSMISSION CIRCLE: POOVANTHURUTHU											
1	Kuravilangad	110 kV	Upgradation	25.05.2022	01.01.2022	01.01.2022	30.09.2022	25.05.2022	425	403.81	
TRANSMISSION CIRCLE: KANNUR											
1	110kV Mattannur – Kinfra Park (Velliyamparamba)	110 kV	New	15.12.2022	01.12.2021	01.12.2021	31.03.2023	15.12.2022	1500	1050	
TRANSGRID											
1	220kV Substation, Kunnankulam	220kV	New	20.08.2022	21.09.2019	21.09.2019	20.03.2021	20.08.2022	6613	3790.25	Reason for Time overrun- Covid restrictions
2	220kV Substation, Thalassery	220kV	New	31.01.2023	21.09.2019	21.09.2019	20.03.2021	31.01.2023	6664	4139.71	Reason for Time overrun- Covid restrictions
3	220kV Substation, Ettumanoor	220kV	New	25.05.2022	21.09.2019	21.09.2019	20.03.2021	25.05.2022	6650	5373.85	Reason for Time overrun- Covid restrictions and heavy rain
4	220kV Substation, Vizhinjam	220kV	New	11.05.2022	21.09.2019	21.09.2019	20.03.2021	11.05.2022	7500	4882.99	Reason for Time overrun- Covid restrictions and heavy rain

LINES COMMISSIONED DURING 2022-23											
Sl. No	Name of Line	Voltage level (kV)	New / Upgn.	Date of Commng.	Start Date		Commissioning date		AS amout in Lakhs	Actual Expen diture in Lakhs	Remarks (Reason for Cost overrun and Time overrun if any)
					Scheduled	Actual	Scheduled	Actual			
TRANSMISSION CIRCLE: KOZHIKODE											
1	LILO of Nallalam Kunnamangalam feeder at 110kV Substation, Chevayur	110kV	New	04.06.2022	25.01.2022	25.1.22	10.05.2022	04.06.2022	112	66.7	
TRANSGRID											
1	Wadakkanchery – Kunnamkulam 220/110kV MCMV line	220kV	New	17.08.2022	13.07.2019	15.08.2019	12.01.2021	17.08.2022	5185	7204.23	Reason for cost over run - Tender excess over estimate Reason for Time overrun- Covid restrictions
		110kV	New	20.08.2022	13.07.2019	15.08.2019	12.01.2021	20.08.2022			
2	Mundayad – Thalassery 220/110kV MCMV line	220kV	New	31.01.2023	13.07.2019	23.07.2019	12.01.2021	31.01.2023	10614	5141.77	Reason for Time overrun- Covid restrictions
		110 kV	New	30.01.2023	13.07.2019	23.07.2019	12.01.2021	30.01.2023			
3	Kottayam Linbes Package – 220kV lines between Kottayam – Ettumanoor & Thuravur Substations	220kV	New	25.05.2022 Partially charged	13.07.2019	2.08.2019	12.01.2021	25.05.2022	10110	11942.57	Reason for cost over run - Excess quantity due to an inadvertent error in calculation Reason for Time overrun- Covid restrictions and heavy rain
4	Kodungallur – Irinjalakkuda 220/110kV MCMV line	110kV	New	18.04.2022	13.07.2019	15.08.2019	12.01.2021	18.04.2022	8189	7598.71	Reason for Time overrun- Covid restrictions and heavy rain

CAPACITY ADDITIONS DURING 2022-23											
Sl. No	Name of Substation	Voltage level (kV)	New/Upgn./ Cap. Addn./Cap.en hct.	Date of Commng.	Start Date		Commissioning date		AS amout in Lakhs	Actual Expen diture in Lakhs	Remarks (Reason for Cost overrun and Time overrun if any)
					Scheduled	Actual	Scheduled	Actual			
TRANSMISSION CIRCLE: THIRUVANANTHAPURAM											
1	110kV Substation, Attingal	110/11kV	Capacity Enhancement- 2x16MVA to 2x25MVA 110/11kV Transformers	25.06.2022 28.11.2022	5.4.2022/8 .11.2022	5.5.2022/8 .11.2022	25.6.2022/ 25.11.2022	25.6.2022 2	425	489	<p>Work commencement delayed due to Board exams.</p> <p>During dismantling of first 16 MVA,110/33kV Transformer, the transformer slipped from rail and become damaged while pulling to storage place. This work was started on 05.05.2022 and completed on 09.05.2023.</p> <p>The new transformer(25 MVA, 110/33kV) unloadaed at road side and pulling to existing plinth. Taken 20 days for placing the transformer at plinth due to rain.</p> <p>The erection work started on 07.06.2022 and completed on 13.06.2022.</p> <p>The second transformer(16 MVA,110/33kV) dismantling work started on 27.10.2022 and new 25 MVA transformer erection work started on 08.11.2022 and completed on 25.11.2022.</p> <p>The second transformer work started only after shifting the first dismantled transformer to PTRU for testing on 26.10.2022.</p>

2	110kV Substation Kazhakuttom	110/11kV	New addition - 20MVA 110/11 kV Transformer	01.04.2022	06.09.2021	27.09.2021	21.10.2021	01.04.2022	6090 (AS amount involves providing addl 3MVA power to Technopark Phase 3)	398.05	Work started in September 2021, Work stopped due to heavy rain as crane cannot be taken into yard for assembling transformer accessories. Work got delayed due to Pandemic Covid -19 after which transformer assembly was completed by January 2022. As the transformer was brought without any impact recorder SFRA(Sweep Frequency Response Analysis) had to be conducted and after completing this, only Hot Oil Circulation was scheduled. Again this also got delayed due to rain and finally Hot Oil Circulation and interconnections were completed by 05-03-2022.
3	110kV Substation, Neyyattinkara	110/11kV	New addition - 12.5MVA, 110/11 kV Transformer	06.08.2022	01-04-22	01-04-22	31-05-2022	06.08.2022	837.569	247	Installation of No 3 tfr. was a part of upgradation of 66KV S/S NTA to 110KV. AS amount included with TVT upgradation. The 12.5MVA transformer received from 110kV Substation TERLS was installed.
4	110kV Substation TERLS	110/11kV	Capacity Enhancement- 2x12.5MVA to 2x20MVA 110/11kV Transformers	18.07.2022 24.09.2022	16.04.2022	22.05.2022	30.09.2022	18.07.2022 24.09.2022	400	398.45	Work commencement delayed due to delay in getting the transformer accessories. Further the work was delayed due to contractor issues
5	110kV Substation, Medical College	110/11kV	Capacity Enhancement- 1x12.5MVA to 1x20MVA 110/11kV Transformers	13.10.2022	20.06.2022	20.06.2022	29.07.2022	13.10.2022	346.23	174.3	The work was executed in rainy season. Pulling and turning of new transformer from stacking place to existing place took more time as substation was slightly water logged

TRANSMISSION CIRCLE: ALAPPUZHA											
1	110kV Substation, Aroor	110/11kV	New addition - 20MVA, 110/11 kV Transformer	21.11.2022	27.07.2022	27.07.2022	21.11.2022	21.11.2022	281	305.64	Reason for Cost over run: Revision in the cost of transformer.
TRANSMISSION CIRCLE: KOTTARAKKARA											
1	110kV Substation, Kavanad	110/11kV	Capacity Enhancement- 1x12.5MVA to 1x20MVA 110/11kV Transformers	12.01.2023	30.11.2022	30.11.2022	31.01.2023	12.01.2023	200	200	
TRANSMISSION CIRCLE: POOVANTHURUTHU											
1	220KV Substation, Ettumanoor	220/110	New addition - 100MVA, 220/110kV Transformer	20.05.2022	20.09.2019	20.09.2019	19.03.2021	20.05.2022	1670	935.97	Time over run – Work rescheduled to 2021-22 due to change in the type of Substation to 220kV GIS and the work was carried out by Transgrid.
2	110KV Substation, Ettumanoor	110/11kV	New addition - 2x20MVA, 220/110kV Transformer	02.08.2022	29.07.2021	29.07.2021	28.10.2021	02.08.2022			

3	110KV Substation, Kuruvilangad	110/11kV	New addition - 2x12.5MVA, 110/11kV Transformer	24.05.2022 25.02.2023	01.01.2022	01.01.2022	30.09.2022	24.05.2022 25.02.2023	425	403.81	
4	110KV Substation, Koothattukulam	110/11kV	New addition - 1x12.5MVA, 110/11kV Transformer	06.01.2023	05.01.2017	05.01.2017	31.03.2023	06.01.2023	1327	1199	
TRANSMISSION CIRCLE:KALAMASSERY											
1	110kV Substation, Kadavanthara	110/11kV	Capacity Enhancement- 1x10MVA to 1x12.5MVA 110/11kV Transformers	01.11.2022	01.10.2022	01.10.2022	01.12.2022	01.11.2022	157	157	
3	110kV Substation, Vyttila	110/11kV	Capacity Enhancement- 1x12.5MVA to 1x20MVA 110/11kV Transformers	24.05.2022	28.04.22	28.04.22	28.06.22	24.05.2022	200	187	

4	110kV Substation, Kaloor	110/11kV	Capacity Enhancement- 1x12.5MVA to 1x20MVA 110/11kV Transformers	10.06.2022	24.05.22	24.05.22	24.07.22	10.06.2022	246	175	
5	110kV Substation, Edappally	110/11kV	Capacity Enhancement- 1x12.5MVA to 1x20MVA 110/11kV Transformers	04.09.2022	11.07.22	11.07.22	11.09.22	04.09.2022	275	175	NILL
TRANSMISSION CIRCLE: THRISSUR											
1	110kV Substation, Chalakkudy	110/11kV	Capacity Enhancement- 1x12.5MVA to 1x20MVA 110/11kV Transformers	02.07.2022	23.5.2022	23.5.2022	4.6.2022	02.07.2022	235.00	177.00	Time Over run-Testing delayed due to other contingency works

2	110kV Substation, Ayyampuzha	110/11kV	Capacity Enhancement- 1x10MVA to 1x12.5MVA 110/11kV Transformers	15.06.2022	28-5-22	28-05-2022	7-6-22	15.06.2022	4.39	3.52	Time Over run-Testing delayed due to other contingency works
3	110kV Substation, Kunnamkulam	110/11kV	Capacity Enhancement- 2x12.5MVA to 2x20MVA 110/11kV Transformers	1. 08.02.2023 2. 18.08.2023	1. 16.08.2022 2. 16.03.2022	1. 25.08.2022 2. 16.09.2022	1. 31.01.2023 2. 01.04.2023	1. 08.02.2023 2. 18.08.2023	478.00	279.00	Time Over run- 2nd transformer installation work delayed due to non availability of power cables. Second transformer taken from Vennakkara SS ,so its cost not reflected in actual expenditure
4	110kV Substation, Kunnamkulam	110/33kV	New addition - 1x16MVA, 110/33kV Transformer	06.01.2023	30-11-2022	10.12.2022	16-01-2023	06.01.2023	180.00	134.00	
5	110kV Substation, Kodungallur	110/33kV	New addition - 1x16MVA, 110/33kV Transformer	27.12.2022	30.07.2021	30.07.2021	30.10.2022	27.12.2022	950.00	799.20	Time Over run-Due to difficulties in load sharing from Valapad Substation and CT Repairing work at Yard

TRANSMISSION CIRCLE: PALAKKAD

1	110kV Substation, Parali	110/11kV	Capacity Enhancement- 1x12.5MVA to 1x20MVA 110/11kV Transformers	01.04.2022	16.03.2022	18.03.2022	14.05.2022	01.04.2022	160	132.8	
2	110kV Substation, Nenmara	110/11kV	New addition - 1x12.5MVA, 110/11kV Transformer	13.10.2022	21.05.2022	26.5.2022	13.10.2022	13.10.2022	850	507	
3	110kV Substation, Pattambi	110/33kV	New addition - 1x16MVA, 110/33kV Transformer	05.05.2022	04.03.2021	10.03.2021	05.05.2022	05.05.2022	206	186.4	
4	110kV Substation, Malampuzha	110/33kV	New addition - 1x16MVA, 110/33kV Transformer	09.06.2022	1.09.2020	1.09.2020	01.05.2022	9.6.2022	480	233.546	

TRANSMISSION CIRCLE: KOZHIKODE

1	110kV Substation, West Hill	110/11kV	Capacity Enhancement- 2x12.5MVA to 2x20MVA 110/11kV Transformers	19.08.2022	28.04.22	28.04.22	30.08.22	19.08.2022	360	396	
3	110kV Substation, Vadakara	110/11kV	Capacity Enhancement- 1x10MVA to 1x20MVA 110/11kV Transformers	11.05.2022	05.04.22	05.04.22	31.05.22	11.05.2022	200	185.56	
4	110kV Substation, Mankav	110/66kV	New addition - 1x40MVA, 110/66kV Transformer	26.09.2022	26.04.2018	1.12.2019	30.09.2022	26.09.2022	86	28	Part of SS upgradation work

6	110kV Substation, Meppayur	110/11kV	Capacity Enhancement- 2x5MVA to 2x10MVA 110/11kV Transformers	02.03.2023	02.03.2017	04.03.2017	31.03.2017	02.03.2023	290	107	
7	110kV Substation, Koyilandy	110/11kV	Capacity Enhancement- 1x10MVA to 1x20MVA 110/11kV Transformers	28.12.2022	01.11.2022	17.11.22	31.12.2022	28.12.2022	220	211.5	
TRANSMISSION CIRCLE: KANNUR											
1	110kV Substation, Mangad	110/11kV	New addition - 1x12.5MVA, 110/11kV Transformer	14.11.2022	19.02.2021	22.07.2022	31.03.2023	14.11.2022	255	215	
2	110kV Substation, Valiyavelicham	110/11kV	New addition - 1x12.5MVA, 110/11kV Transformer	01.04.2022	04.03.2021	04.03.2021	01.04.2022	01.04.2022	230	211	Commisisoned on 01.04.2022

4	110kV Substation , Chovva	110/11kV	Capacity Enhancement- 1x12.5MVA to 1x20MVA 110/11kV Transformers	27.05.2022	07.09.2021	07.04.2022	06.11.2021	27.05.2022	450	174	AS amount incudes the cost of 2 transformers. 2 nd transformer erection not completed.
5	110kV Substation, Pinarayi	110/11kV	Capacity Enhancement- 2x10MVA to 2x12.5MVA 110/11kV Transformers	07.05.2022	17.01.17	17.01.17	07.05.2022	07.05.2022	337	299	
6	220kV Substation, Ambalathara	220/110kV	New addition - 1x100MVA, 220/110kV Transformer	05.06.2022	23.12.2020	23.12.2020	30.05.2022	05.06.2022	3365	70.45 (labour charge only)	100MVA Transformer taken from 220kV Malapamba Substation.
7	110kV Substation, Kanjangad	110/11kV	Capacity Enhancement- 2x12.5MVA to 2x20MVA 110/11kV Transformers	16.09.2022 15.10.2022	30.07.2022	30.07.2022	17.10.2022	16.09.2022 15.10.2022	370	568.03	Cost over run: Due to the cost escalation of transformer
9	110kV Substation, Kubanoor	110/11kV	Capacity Enhancement- 1x10MVA to 1x12.5MVA 110/11kV Transformers	18.09.2022	20.08.2022	22.08.2022	20.09.2023	18.09.2022	120	81.76	12.5MVA Transformer taken from 110kV Kanhangad Substation.

12	110kV Substation, Mylatty	110/11kV	Capacity Enhancement- 2x12.5MVA to 2x20MVA 110/11kV Transformers	03.08.2022 10.11.2022	28.05.2022 07.10.2022	28.05.2022 07.10.2022	30/06/2022 10.11.2022	03.08.2022 10.11.2022	475	545.5	Transformer cost exallation
13	110kV Substation, Velliyamparamba	110/11kV	New addition - 1x20MVA, 110/11kV Transformer	15.12.2022	04.03.2021	04.03.2021	01.04.2022	01.04.2022	230	211	
TRANSMISSION CIRCLE: MALAPPURAM											
1	220kV Substation, Areacode	110/11kV	Capacity Enhancement- 1x12.5MVA to 1x20MVA 110/11kV Transformers	19.07.2022	25.09.2022	29.05.2022	30.07.2021	19.07.2022	467	352.2	As the Trfr was transported with out impact recorder,SFRA test done, which delayed the commissioning.
TRANSGRID											
1	220kV Substation, Kunnamangalam	220/110kV	New addition - 2x100MVA, 220/110kV Transformer	20.08.2022	-			20.08.2022			Included in the expenditure of Substation

2	220kV Substation, Vizhinjam	220/110kV	New addition - 2x100MVA, 220/110kV Transformer	01.05.2022	-	-	-	01.05.2022		Included in the expenditure of Substation	
3	220kV Substation, Vizhinjam	110/11kV	New addition - 2x20MVA, 110/11kV Transformer	01.05.2022	-	-	-	01.05.2022		Included in the expenditure of Substation	
4	220kV Substation, Pallivasal	110/11kV	New addition - 1x63MVA, 110/11kV Transformer	06.05.2022	-	-	-	06.05.2022		Included in the expenditure of Substation	
5	220kV Substation, Thalassery	220/110kV	New addition - 2x100MVA, 220/110kV Transformer	31.01.2023	-	-	-	31.01.2023		Included in the expenditure of Substation	

Annexure II

Consolidated availability for 2022-23																
400kV																
Feeder	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23				
weight age factor	99248.7540	99248.7540	99248.7540	99248.7540	99248.7540	99248.7540	99248.7540	99248.7540	99248.7540	99248.7540	99248.7540	99248.7540	99248.7540	1190985.0480		
wi*Ta v	99248.7540	98435.0209	99248.7540	99248.7540	99248.7540	99248.7540	97714.6671	98987.9963	99248.7540	99248.7540	99248.7540	99248.7540	99248.7540	1188376.4703	99.78	
	1.0000	0.9918	1.0000	1.0000	1.0000	1.0000	0.9845	0.9974	1.0000	1.0000	1.0000	1.0000	1.0000	0.9978		
Transformer																
W.F	945.00	945.0000	945.0000	945.0000	945.0000	945.0000	945.0000	945.0000	945.0000	945.0000	945.0000	945.0000	945.0000	11340.0000		
Wi*Ta v	934.98	931.6633	945.0000	937.4778	942.5655	945.0000	944.7389	920.9229	943.0383	940.8861	945.0000	940.6603	940.6603	11271.9344	99.40	
	0.9894	0.9859	1.0000	0.9920	0.9974	1.0000	0.9997	0.9745	0.9979	0.9956	1.0000	0.9954	0.9940			400kV system
220kV																99.5523
Feeder																
weight age factor	398357.5040	398357.5040	415681.5360	415681.5360	425824.2560	425824.2560	425952.2560	425824.2560	428315.1360	424499.4560	424499.4560	424499.4560	424499.4560	5033316.6080		
wi*Ta v	384342.6725	391799.2794	409908.8363	411086.9229	422517.0187	419205.1132	422144.6154	417763.4408	424581.8259	418804.3789	418213.2161	421104.2699	421104.2699	4961471.5900	98.57	
	0.9648	0.9835	0.9861	0.9889	0.9922	0.9845	0.9911	0.9811	0.9913	0.9866	0.9852	0.9920	0.9857			
Transformer																
W.F	9070.0000	9070.0000	9696.0000	9696.0000	9846.0000	9896.0000	9896.0000	9896.0000	9896.0000	10096.0000	10096.0000	10012.6700	10012.6700	117166.6700		

Wi*Ta v	8970.7914	8885.8972	9629.5632	9659.2618	9713.9108	9787.4130	9802.5903	9837.3101	9803.0262	9781.1010	10018.5426	9947.909 9	115837.317 5	98.87	
	0.9891	0.9797	0.9931	0.9962	0.9866	0.9890	0.9906	0.9941	0.9906	0.9688	0.9923	0.9935	0.9887		220kV system
110kV															98.7062
Feeder															
weight age factor	167179.104 0	167934.304 0	169378.400 0	170498.400 0	168724.576 0	168949.280 0	168664.800 0	169961.440 0	169966.240 0	169966.240 0	169966.240 0	168614.3 040	2029803.32 80		
wi*Ta v	165136.433 7	166167.023 5	167982.123 6	169698.708 0	167932.692 3	168219.639 8	167512.283 3	168521.000 5	168922.144 1	168906.948 8	168824.684 5	167512.0 504	2015335.73 26	99.29	
	0.9878	0.9895	0.9918	0.9953	0.9953	0.9957	0.9932	0.9915	0.9939	0.9938	0.9933	0.9935	0.9929		
Transf ormer															
W.F	10476.5000	10485.0000	10541.5000	10489.0000	10596.5000	10646.5000	10666.5000	10748.0000	10761.5000	10847.5000	10791.5000	10799.00 00	127849.000 0		
Wi*Ta v	10398.4900	10397.2352	10483.9026	10441.9399	10548.5830	10600.5644	10594.1651	10617.4072	10706.4741	10785.7979	10713.2493	10727.71 32	127015.522 0	99.35	110kV system
	0.9926	0.9916	0.9945	0.9955	0.9955	0.9957	0.9932	0.9878	0.9949	0.9943	0.9927	0.9934	0.9935		99.3251
66kV															
Feeder															
weight age factor	17488.9600	16557.9600	15258.4600	15258.4600	15698.9600	15574.0500	15388.4500	15388.4500	15226.4500	15226.4500	15226.4500	15052.45 00	187345.550 0		
wi*Ta v	17315.1965	16422.1110	15084.2547	15163.9215	15623.8206	15472.0591	15269.2382	15250.7476	15125.9559	15124.5742	15133.7183	14930.24 75	185915.844 9	99.24	66 kV system
	0.9901	0.9918	0.9886	0.9938	0.9952	0.9935	0.9923	0.9911	0.9934	0.9933	0.9939	0.9919	0.9924		99.2858
Transf ormer															



KERALA STATE ELECTRICITY BOARD LTD.

Office of the Chief Engineer(Transmission System Operation)

LD Centre, H.M.T.Colony P.O., Kalamassery - 683 503.

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Email : cesoklsy@gmail.com, ceso@kseb.in

No. CESO/EELD I/AEGS2/Tr..Avlbt/2023-24/1453

Dt: 21.10.2023

To

The Director (Transmission ,SO, & Planning),
KSEBL, VB, Pattom,
Thiruvananthapuram.

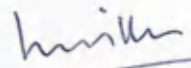
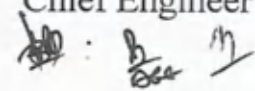
Sir,

Sub: Certification of Availability of Kerala Transmission system for 2022-23.

This is to certify that as per records the availability of Kerala system for the year 2022-23 is as below.

Transmission Elements	Availability
400 kV System	99.55 %
220 kV System	98.70 %
110 kV System	99.32 %
66 kV System	99.28 %
System Availability	99.05 %

Yours faithfully


for Chief Engineer (TSO).


Acc: As above

Copy to : The EE, Planning, VB, Pattom, TVPM

Voltage wise consolidated system availability for 2022-23 of Kerala System

	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23	Total Availability
400kV	99.36%	98.83%	100.00%	99.52%	99.85%	100.00%	99.37%	98.37%	99.88%	99.74%	100.00%	99.72%	99.55%
220kV	97.53%	98.19%	98.92%	99.22%	98.97%	98.65%	99.08%	98.69%	99.10%	97.85%	98.84%	99.27%	98.69%
110kV	99.07%	99.08%	99.35%	99.54%	99.54%	99.57%	99.32%	98.92%	99.45%	99.41%	99.30%	99.34%	99.32%
66kV	99.12%	99.34%	99.01%	99.39%	99.18%	99.24%	99.15%	99.36%	99.35%	99.50%	99.47%	99.34%	99.29%
System Availability	98.50%	98.66%	99.21%	99.42%	99.24%	99.14%	99.16%	98.87%	99.31%	98.63%	99.16%	99.36%	99.06%

As per KSEERC (Terms and conditions for determination of Tariff) Regulations 2021 under item 56. Operational Norms:-

(1) Target availability for full recovery of annual transmission charges for alternating current (AC) system shall be 98 per cent;

(2) The transmission licensee shall be entitled to receive incentive on exceeding the annual availability above the target availability of 98.5 per cent, provided that no incentive shall be payable for the availability above 99.75%.

Wink


Chief Engineer (TSO)
State Load Dispatch Center
KSEBL, Kalamassery
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Page 11

Chapter– 4: TRUING UP OF ARR OF SBU – DISTRIBUTION

An overlook on Kerala Distribution network:

4.1 Kerala State Electricity Board Limited supplies electricity to about 3.56 Cr of entire population across 14 districts in Kerala. There are about 1.04 crore domestic consumers, 25.39 Lakh commercial/general consumers, 1.50 Lakh industrial consumers, 5.18 Lakh agricultural consumers. The key statistics of distribution network is given below:

Table-D1 Key Statistics of KSEBL Distribution Network as on 31.03.2023	
Particulars	Statistics
Area Sq.km.	38863 km ²
Districts No's	14
Electrical Circle Offices	25
Population in Cr	3.56
Consumers (Nos)	13648851
Distribution transformers (Nos)	87584
HT lines (Ckt. Kms)	70269
LT lines (Kms)	302626
Energy sales by KSEBL including external sales MU	26743.18
Energy consumption inside the State(incl open access & captive consumption) in MU	25557.66
T&D loss in % (including transmission loss)	9.27%
Distribution loss in %	6.87%
AT&C loss in % as per CEA methodology	7.55%

TRUING UP of 2022-23

Energy Sales for 2022-23:

4.2 Hon'ble Commission, vide order dated 25.06.2022, had approved energy sale of 24880.38 MU for the year 2022-23 after accounting the impact of solar penetration and e-mobility. The energy sales estimated without accounting solar penetration and impact of e-mobility was 24941.19 MU. The energy sale of KSEBL inside the State for FY 2022-23 was 24923.51 MU. 1813.11 MU had been sold outside the state. The category wise energy sale to consumers as well as the total energy sales by KSEBL inside the State is given in table below.

Table. D2 Energy sales details for the year 2022-23				
Sl. No	Consumption Category	Number of consumers as on 31.03.2023	Energy sales	Connected load/ Contract Demand as on 31.03.2023
			MU	MW/MVA
I	LT I Domestic	10376078	12380.21	20942.79
	LT II	0	0.82	0.00
	LT III	173	1.39	0.68
	LT IV A Industrial	143933	1251.91	1900.39
	LT IV B Industrial	2653	10.11	13.70
	LT V A Agriculture	482403	286.38	916.00
	LT V B Agriculture	35934	96.07	102.02
	LT VI A General	129385	233.49	389.10
	LT VI B General	39282	126.51	165.71
	LT VI C General	45506	249.53	311.95
	LT VI D General	34797	25.82	46.02
	LT VI E General	10697	3.37	10.19
	LT VI F General	552335	1069.52	1183.03
	LT VI G General	19503	89.38	142.60
	LT VII A Commercial	1273887	2079.98	2734.58
	LT VII B Commercial	425337	151.40	166.37
	LT VII C Commercial	1907	26.99	29.83
	LT VIII A Public lighting	1639	218.64	120.03
	LT VIII B Public lighting	62736	143.66	88.96
	LT IX Advertisement & Hoardings	1869	1.78	2.81
LT X Electric vehicle charging stations	1536	2.56	16.80	
	LT total	13641590	18449.52	29283.54
II	HT I A Industrial	2859	2470.95	1006.67
	HT I B Industrial	28	15.04	7.82
	HT II A General	475	244.69	108.34
	HT II B General	1149	677.94	223.55
	HT III A Agriculture	55	6.75	12.94
	HT III B Agriculture	10	2.30	1.48
	HT IV A Commercial	1226	316.09	181.32
	HT IV B Commercial	1258	498.62	226.02
	HT V Domestic	131	19.07	12.53
	HT VI Electric vehicle charging stations	3	0.53	1.285
	HT VII Temporary		0.30	
	HT Total	7194	4252.30	1781.97
III	EHT I 66 KV Industrial	13	231.07	77.05
	EHT II 110 KV Industrial	20	715.56	168.7
	EHT III 220 KV Industrial	1	225.70	50
	EHT General A	1	4.45	1
	EHT General B	1	36.70	12
	EHT General C	4	26.76	14.16
	EHT Railway Traction	13	388.90	111
	KMRL	3	13.43	6.1
		EHT Total	56	1642.57
IV	Bulk Supply/ Licensees	11	579.13	114.265

V	HT, EHT & Licensees	7261	6473.99	2336.243
VI	Energy billed inside the State for FY 2022-23	13648851	24923.51	29283.54/ 2336.243
VII	Energy given to RGCCPP for meeting the auxiliary consumption through non operative periods		6.57	
VIII	Energy sales outside the State		1813.110	
IX	Total energy sales including energy given to RGCCPP during nonoperative periods	13648851	26743.19	29283.54/ 2336.243

- 4.3 While approving the energy sales for FY 2022-23, Hon'ble Commission considered the energy sales including energy wheeled through open access. Embedded open access consumers imported 135.32 MU at Kerala periphery and energy injected by IPPs into the grid for sale outside the State through open access was 52.77MU. The embedded open access consumers availed 128.98 MU through open access at consumer end and loss associated with this transaction is 8.13 MU. The details are furnished in table below.

Particulars	Energy at Kerala Periphery	Energy at injection/ drawal point
Import	135.32	128.98
Export	-44.04	-52.77

- 4.4 In addition to the above captive power producers injected energy into the grid and availed energy through banking at their consumer premises. Further, solar prosumers with a total installed capacity of 504.73 MW as on 31.03.2023 also inject energy into the grid and consumes energy from the grid through banking arrangements. The energy injected by the captive consumer /solar prosumer is taken as export to the grid (injection to grid) and energy adjusted against this injection is considered as the energy drawal from grid ie; energy import from grid for loss calculation purposes.

Source	Category	Installed capacity (MW)	Generation	Export to grid by captive consumer/ solar prosumer	Banking adjustments against export	Consumption from own generation for solar prosumers	Consumption against captive generation
			A	B	C	D	C+D
SHEP	EHT 66	33	111.56	111.56	90.15	0	90.15
	EHT 110				0.34		0.34
Wind	HT	10	26.09	26.09	17.71	0.00	17.71
	EHT Gen	504.73	48.52	31.34	26.22	17.18	43.40

Solar(grid connected)	KMRL	1.435	12.75	5.02	4.33	7.73	12.06
	EHT 110		4.81	0.58	0.58	4.23	4.81
	HT *		65.04	12.10	8.97	52.94	61.91
	LT*		350.06	260.14	176.41	89.92	266.33
Solar offgrid	LT		1.90	0.00	0.00	1.90	1.90
			620.73	446.83	324.70	173.90	498.60

*including export from Saura scheme

4.5 In addition to the above 6.57 MU was availed by RGCCPP for meeting the auxiliary consumption from the grid. Table below gives the comparison of energy approved vs energy used from grid.

Table –D5: -Details of Energy sales inside the State , energy wheeled through open-access, energy adjusted against captive injection - comparison with approved (MU)							
Sl. No	Category	Approved*	Actual	Energy thru open access	Energy adjusted against captive injection	Total energy	% variation against appvl**
I	LT I Domestic	13471.82	12380.21			12380.21	-8.10
	LT II	3.7	0.82			0.82	-77.74
	LT III	0	1.39			1.39	
	LT IV A Industrial	1107.12	1251.91			1251.91	13.08
	LT IV B Industrial	9.36	10.11			10.11	7.98
	LT V A Agriculture	326.28	286.38			286.38	-12.23
	LT V B Agriculture	63.21	96.07			96.07	51.99
	LT VI A General	200.56	233.49			233.49	16.42
	LT VI B General	124.56	126.51			126.51	1.56
	LT VI C General	248.31	249.53			249.53	0.49
	LT VI D General	21.58	25.82			25.82	19.65
	LT VI E General	3.06	3.37			3.37	10.20
	LT VI F General	957.21	1069.52			1069.52	11.73
	LT VI G General	75.06	89.38			89.38	19.08
	LT VII A Commercial	1562.62	2079.98			2079.98	33.11
	LT VII B Commercial	202.23	151.40			151.40	-25.14
	LT VII C Commercial	22.03	26.99			26.99	22.51
	LT VIII A Public lighting	196.25	218.64			218.64	11.41
	LT VIII B Public lighting	107.65	143.66			143.66	33.45
	LT IX Advertisement & Hoardings	1.15	1.78			1.78	54.84
	LT X Electric vehicle charging stations	0.55	2.56			2.56	365.62
	LT total	18704.32	18449.52		268.23	18717.75	0.07

II	HT I A Industrial	2323.12	2470.95	0.17		2471.12	6.37
	HT I B Industrial	14.96	15.04			15.04	0.54
	HT II A General	204.22	244.69			244.69	19.82
	HT II B General	636.13	677.94	2.04		679.98	6.89
	HT III A Agriculture	7.96	6.75			6.75	-15.18
	HT III B Agriculture	2.14	2.30			2.30	7.66
	HT IV A Commercial	344.87	313.38	0.01		313.39	-9.13
	HT IV B Commercial	326.67	501.33	7.55		508.88	55.78
	HT V Domestic	21.94	19.07			19.07	-13.07
	HT VI ELECTRIC VEHICLES CHARGING STATIONS	31.81	0.53			0.53	-98.33
	HT VII Temporary	0	0.30			0.30	#DIV/0!
	HT Total	3913.81	4252.30	9.76	79.61	4341.68	10.93
III	EHT I 66 KV Industrial	316.92	231.07	33.91	90.15	355.13	12.06
	EHT II 110 KV Industrial	762.54	715.56	78.57	5.15	799.28	4.82
	EHT III 220 KV Industrial	132.8	225.70	6.56		232.27	74.90
	EHT General A	12.92	4.45		43.40	47.85	270.32
	EHT General B	43.84	36.70			36.70	-16.28
	EHT General C	0	26.76			26.76	
	EHT Railway Traction	321.49	388.90			388.90	20.97
	KMRL	9.76	13.43		12.06	25.48	161.10
	EHT Total	1600.28	1642.57	119.04	150.75	1912.36	19.50
IV	Bulk Supplyconsumers / Licensees	661.96	579.13	0.18		579.30	-12.49
	Sub total	661.96	579.13	0.18		579.30	-12.49
V	HT, EHT & Licensees	6176.05	6473.99	128.98	230.37	6833.34	10.64
	Energy supplied to RGCCPP towards its axiliary consumption during non operative periods.					6.57	
VI	Grand Total	24880.38	24923.51	128.98	498.60	25557.66	2.72

4.6 The total consumption of the state is given in table below

	Energy sales by KSEBL (MU)	Open access import (MU)	Sub Total (MU)	Captive generation (MU)			Total (MU)
				SHP	Solar	Wind	
LT	18449.52	0	18449.52		268.23		18717.75
HT, EHT & Bulk	6473.99	128.98	6602.97	90.49	122.17	17.71	6833.34
Total	24923.51	128.98	25052.49	90.49	390.40	17.71	25551.09

RGCCPP aux. consumption	6.57		6.57				6.57
Total	24930.08	128.985	25059.06	90.49	390.40	17.71	25557.661

4.7 The actual energy sale inside the State by KSEBL was 43.15 MU more than approval.

Considering the energy availed by embedded open access consumers through open access and consumption adjusted against captive injection for captive consumers/solar prosumers, the actual quantum was 503.41 MU more than the approved quantum (2.02%). Total consumption of the State including energy from captive generation is 25557.661 MU which is about 2.72% more than approved quantum.

4.8 The energy sale inside the State to the consumers during 2022-23 was 24923.51 MU against 23499.59 MU in 2021-22. All categories except domestic category registered increase in sales as compared to previous year. The domestic sales witnessed a reduction in growth of about 2.33 % over the previous year; LT industrial sales show a growth of 8.31 %, HT industrial sales by 8.23% and EHT industrial by 15.06%. The total energy sales to LT registered an increase by 3.12 % and HT energy sales by 15.11% & EHT energy sales by 15.44%. The total energy sales in 2022-23 registered an overall increase of 6.06 % over the year 2021-22.

4.9 The reason for reduction in energy sales in domestic category may be due to the increasing solar penetration. The steep increase in energy sales in other categories is mainly due to the normalisation of consumption in post Covid period.

4.10 The energy sales pattern for 2022-23 is given in table below:

Table-D7: Energy Sales pattern for 2022-23			
No	Category	Energy sales	
		MU	%
1	LT Domestic	12381.03	49.68
2	LT Industrial	1262.01	5.06
3	LT Agriculture	382.46	1.53
4	LT Commercial	4061.72	16.30
5	LT Public Lighting	362.30	1.45
6	HT &EHT Total	5492.54	22.04
7	EHT Railway Traction	388.90	1.56
8	KMRL	13.43	0.05

9	Bulk Supply	579.13	2.32
10	Total sales to consumers (within state)	24923.51	100.00
11	External sale	1813.11	
12	Energy given to RGCCPP for meeting the auxiliary consumption during non operative periods	6.57	
12	Total energy sale by KSEBL	26743.19	

T & D Loss

4.11 Hon'ble Commission, vide order dated 25.06.2022, had approved the T&D loss target for FY 2022-23 as 11.22%. The targets approved for transmission loss, distribution loss and total AT & C loss was 3.4 % ,8.10 % and 12.11 % respectively with a collection efficiency target of 99 %.

4.12 KSEBL achieved better loss reduction when compared with the targets approved by the Hon'ble Commission owing to the measures depicted in table D10 below. The actual T&D loss for the year 2022-23 was 9.27%. The actual transmission loss and distribution loss for the year 2022-23 was 2.58 % and 6.87 % respectively. The AT&C loss for SBU-D for the year FY 2022-23 as per CEA methodology was 7.55%. KSEBL achieved a collection efficiency of 99.26%.

4.13 Hon'ble Commission may kindly note that KSEBL was able to reduce loss by 1.95% over and above the target approved (11.22%), as detailed below:

Table D8: T&D loss for the year 2022-23 (MU)		
SI No	Particulars	2022-23
A	Energy Input	
i	Energy generation by KSEBL excl auxiliary consumption	8560.33
ii	Power Purchase /energy injected by captive consumers/solar prosumers at Kerala periphery	21133.30
iii	Sub Total (MU) (A+B)	29693.63
iv	Energy injected to the grid by private IPPs for sale outside the State through OA	52.77359
v	Energy wheeled by embedded open access consumers from outside the State at KSEB end	135.32

vi	Total energy input at Kerala periphery	29881.73
vii	Energy sales by KSEBL outside the State	1813.11
viii	Energy transfer outside the State by KSEBL through banking arrangement	19.14
ix	Energy sale by private IPPs for sale outside the State through open access	49.13
x	Toatal energy sale/transfer through banking outside the State	1881.38
xi	Net Energy Input at Kerala periphery (MU)(vi-x)	28000.35
xii	Substation auxiliary consumption (MU)	23.18
A.xiii	Net Energy Input excluding auxiliary consumption (MU) (xi-xii)	27977.17
B	Energy sales/usage	
i	Energy sales by KSEBL	24923.51
ii	Energy consumed by embedded open access consumers at consumer end by wheeling from outside the State	128.98
iii	Energy supplied by KSEBL for meeting the banked energy injected by captive prosumers/solar prosumers including solar prosumers under saura scheme by KSEBL	324.70
iv	Energy availed by RGCCPP to meet the auxiliary consumption	6.57
B.v	Energy at consumer end availed from grid(MU)	25383.77
C	T&D loss (MU) (A.xiii-B.v)	2593.40
D	T& D loss for 2022-23 in %(C*100/A.xiii)	9.27
E	T& D loss target approved for 2022-23 in %	11.22
F	Achievement in loss reduction in excess of target approved (E-D in %)	1.95

Energy supplied by KSEBL for meeting the banked energy injected by captive prosumers/solar prosumers including solar prosumers under saura scheme by KSEBL

Distribution loss:

- 4.14 The actual T&D loss during the year 2022-23 was 9.27%. It may please be noted that the total transmission loss up to 66 KV level was 722.24 MU. The voltage wise transmission loss is depicted in chapter 3 of the petition. Based on the above the distribution loss for 2022-23 is assessed as follows:

Table – D9: Distribution losses			
SI No	Particulars	Quantum	Unit
(i)	Total Generation and Power Purchase at Kerala periphery (item xiii of table D8)	27,977.17	MU
(ii)	Transmission loss	722.24	MU
(iii)	Total energy input into the distribution system (i)-(ii)	27,254.93	MU
(iv)	Total energy output (item B.v of Table D7)	25,383.77	MU
(v)	Distribution loss (iii)-(iv)	1,871.16	MU
(vi)	Distribution loss in % (v)*100/(iii)	6.87	%

- 4.15 Hon'ble Commission may kindly note that, KSEBL has been continuously reducing the T&D loss since the year 2001-02. Consistent T&D loss reduction was one of the major achievements of the KSEB Ltd. KSEBL was able to reduce the total T&D loss in the KSEBL system including transmission system from the level of 30.76% in 2001- 02 to the level of 9.27% during the year 2022-23. Thus, the losses in the Distribution system, as a percentage of the total energy input is one of the lowest among the distribution utilities in the country.
- 4.16 The AT&C loss for the year 2022-23 as per CEA methodology was 7.55 %.
- 4.17 KSEBL has undertaken a series of measures during 2022-23, as detailed below, in order to achieve the above loss reduction.

Table- D10 Steps taken for T&D loss reduction	
Particulars	Achievement during 2022-23
Substations Commissioned	
400 kV	
220 kV	4
110 kV	2
66 kV	
33 kV	
Total	6
Lines Commissioned (Ckt km)	
400kV	0
220kV	88.41
110 kV	161.01
66 kV	
33 kV	
Capacity addition/enhancement (MVA)	1585.5
11 KV line constructed(km)	1557
LT line constructed(km)	4036
No. of distribution transformers	2283
HT re conductoring (km)	552
LT re conductoring (km)	9348
1 phase to 3 phase conversion(km)	1179
Meter Replacement (Nos)	331593

- 4.18 As KSEBL achieved loss reduction of 1.95% above the target of 11.22%, power purchase could be reduced to the extent of 364.63 MU. Considering the average power purchase cost of Rs 5.32 per unit for the year 2022-23; KSEBL was able to save Rs 189.50 Cr under cost of power purchase on account of this achievement.
- 4.19 As per Regulation 14 of Tariff Regulations, 2018, the aggregate gain on account of controllable factors shall be dealt with the following manner:

- a. One-third of the amount of such gain shall be passed on to consumers as a rebate in tariffs.
- b. The remaining two third of the amount of such gain may be utilised at the discretion of licensee

4.20 KSEBL would like to claim the gain attributable due to T&D loss reduction based on the weighted average calculation. Thus, the gain to be retained by KSEBL amounts to Rs.126.34 Cr and passed on to consumers is Rs 63.16 Cr as detailed below, which may kindly be approved.

Table- D11 Gain attributable to KSEBL on over achievement of T&D loss reduction target.			
SI No	Particulars	Quantum	Unit
	Energy sales by KSEBL	25059.06	MU
	Energy input needed at 11.22% loss	28226.023	MU
	Energy input needed for 2022-23	27861.39	MU
	Energy savings	364.63	MU
	Weighted average power purchase cost	5.20	Rs/kWh
	Power Purchase cost saved due to over achievement of loss	189.61	Cr.
	2/3 of savings	126.41	Cr.

4.21 The energy requirement for meeting the consumption of State is given in table below.

Table- D12 Comparison of energy availability				
SI No	Particulars	Approved	Actual	Difference
1	Energy sales including banked energy supplied by KSEBL to solar prosumers/captive consumers in MU	24880.38	25254.78	374.40
2	Energy input for meeting the energy sales in MU(C-F-G-J) of table D6	28024.71	27861.39	-163.32
	Internal Generation in MU (excl aux)			
3	Hydro	6972.72	8538.03	1565.31
4	Thermal	0	-0.44	-0.44
5	Solar & wind	61.61	22.74	-38.87
	Subtotal generation	7034.33	8560.33	1526.00
6	Power Purchase in MU at Kerala periphery i			
7	CGS	11190.36	10386.03	-804.33
8	RGCCPP			
10	IPP-wind & SHPs CPPs & solar prosumers	588.73	1068.01	479.28
11	LTA(Maithon, DVC)	3016.36	2923.25	-93.11
12	LTA(DBFOO approved contracts)	2169.87	1682.25	-487.62

13	SECI-LTA wind	210.00	247.30	37.30
14	Power purchase approved in lieu of DBFOO unapproved contracts	3363.29	3267.59	-95.70
15	Medium Term JITPL	962.75	810.05	-152.70
16	RPO-solar	899.53		-899.53
17	RPO-nonsolar	371.18		-371.18
18	Short term contracts(MU)	164.56	158.51	-6.05
19	Power Purchase excluding purchase from exchanges/swap/DSM	22936.63	20542.99	-2393.64
20	Purchase through exchanges/swap		594.17	594.17
21	DSM		-3.86	-3.86
22	Sub Total Power Purchase	22936.63	21133.30	-1803.33
23	Sub Total generation & Power Purchase by KSEBL (MU)	29970.96	29693.63	-277.33
24	Energy availability(MU)	29970.96	29693.63	-277.33
25	Substation auxiliary consumption (MU)		23.18	23.18
26	Energy requirement for sale inside the State	28024.71	27861.39	-163.32
27	External sale/swap return(MU)	1946.25	1832.24	-114.01

4.22 It may kindly be seen from the table that the energy demand for FY 2022-23 was increased by about 374.40 MU. Hydro generation was more by 1565.31 MU. There was a reduction of 804 MU from CGS and 580.73 MU from approved IPPs outside the State against the approval granted by the Hon'ble Commission. There was a further reduction of 754.14 MU from the approved quantum in RPO solar and non solar power purchase approved by the Honorable Commission. Thus there was a total reduction of 2393.64 MU in power purchase (excluding power purchase through contracts and deviation settlement mechanism) from that of the approved quantum. The reduction in power purchase from the approved quantum and the peak shortage was met through purchase from short term contracts, exchanges, banking arrangements and through increased hydro generation, which were not originally approved in the order.

Availability of Electricity for Supply:

4.23 The petitioner has ensured 100% availability of power for supply in the state. There had been no load shedding enforced in the State even during the extreme summer months

of 2023, except for emergency supply interruptions caused by uncontrollable factors. The gross availability of electricity for supply for 2022-23 as per regulations was 104% and the month-wise details of power availability is given as **Annexure D 1**.

Analysis of various ARR components

Cost of Generation:

- 4.24 The gross energy generation from own generating stations was 8659.39 MU as detailed in Table D 12. ARR for SBU G for the year 2021-22 was **Rs. 692.28 Cr** and Non-tariff income earned is **Rs. 37.59 Cr**. The net expenses of SBU G transferred to SBU-D are **Rs. 654.69 Cr**. Deviation from approval is explained in chapter dealing with Truing up of SBU G.

Cost of intra state transmission

- 4.25 ARR for Transmission Business Unit for the year 2022-23 had been Rs. 1570.93 Cr and non-tariff income earned was Rs. 53.19 Cr. Therefore, Net ARR of SBU-T has been Rs.1517.74 Cr. as detailed in chapter 3. This cost may kindly be approved as the Cost of intra-state Transmission in the ARR of SBU-D.

Cost of Power Purchase

- 4.26 As already submitted, the Distribution Business Unit of the KSEBL had sold 24923.51 MU to its consumers during the year 2022-23 and supplied 6.57 MU to meet the auxiliary consumption of RGCCPP, Kayamkulam during non-operative periods. In addition to the above, KSEBL supplied 324.70 MU to captive consumers /solar prosumers against their banked energy. Thus, KSEBL supplied 25254.78 MU during 2022-23. This was met through own generation and power purchase from various sources. The total own generation (net of auxiliary consumption) was 8560.33 MU and power purchase by KSEBL was 20686.47 MU (21133.30-446.83) at Kerala periphery. Further captive consumers/solar prosumers injected 446.83 MU to the grid. The energy requirement for meeting the energy consumption of 25254.78 MU was 27861.39MU. Thus, SBU G was able to supply 8560.33 MU (31%) only of the total requirement and balance power requirement was procured from CGS and IPPS within and outside the State, power exchanges, banking arrangements etc.
- 4.27 Hon'ble Commission had approved a cost of Rs. 9833.64 Cr for the purchase of 229 17.84 MU from various sources. The actual power purchase quantum was 21133.30 MU including injection by captive/solar prosumer at Kerala periphery at a cost of Rs 11240.32 Cr as detailed in **Form**

D3.1. The true up requirement is Rs.10979.68 Cr, which is more than the approved cost by Rs 1146.34 Cr. A summary of the approved and actual power purchase and true up requirement is given in Table below.

Table – D13: Power Purchase for the year 2022-23									
No	Particulars	Approved		Actual		Truing up		Variation	
		Energy (MU)*	Cost	Energy (MU)*	Cost	Energy (MU)*	Cost	Energy (MU)*	Cost (Rs Cr)
			(Rs Cr)		(Rs Cr)		(Rs Cr)		
1	Central Gen. Stations	11190.36	4443.55	10386.03	4919.71	10386.03	4919.71	-804.33	476.17
2	Long Term Contracts (Maithon,DVC,approved contracts)	5186.22	2209.74	4605.50	2018.78	4605.50	2018.78	-580.72	-190.96
3	in lieu of DBFOO provisionally approved/un approved contracts	3363.29	1345.32	3267.59	1407.51	3267.59	1232.98	-95.70	-112.34
4	Medium Term Contracts	962.75	318.67	810.05	289.65	810.05	289.65	-152.70	-29.02
5	Renewable purchase	2069.44	586.70	868.48	275.51	868.48	275.51	-1182.18	-311.19
6	Short Term purchase	164.56	65.82	158.51	112.54	158.51	112.54		46.72
7	RGCCPP, Kayamkulam (net)	0.00	100.00	0.00	98.16	0.00	98.16	0.00	-1.84
8	Exchanges/DSM/Swap			590.31	230.87	590.31	230.87		230.87
9	Captive/Solar prosumer injection**			446.83	8.54	446.83	8.54	446.83	8.54
10	Transmission charges		760.55		1788.40	0.00	1788.40	0.00	1027.85
11	NLDC charges		3.00						-3.00
12	Other charges in connection with sale				4.55	0.00	4.55	0.00	4.55
13	Provisions for energy availed through banking transactions from outside the State which was not returned during FY 2022-23				86.40		0.00		0.00
14	Total	22936.62	9833.64	21133.30	11240.62	21133.30	10979.68	-1784.54	1146.34
	Average power purchase cost as per accounts(Rs/unit)	5.32							
	Average Power Purchase cost as per true up(Rs/unit)	5.20							
	* Energy at KSEB Bus								
	**Energy injection during 2022-23 is shown in the table:								

4.28 KSEB Ltd during the year 2022-23 had purchased power from the following sources such as;

- Central Generating Stations,
- Wind, solar, small hydro and other IPPs within the State,
- Power Purchase from Thermal IPPs,
- Power purchase from IPPs/Traders outside the State,
- Power purchase under short term contracts including Traders, exchanges
- Power availed through banking arrangements and power transacted through Deviation Settlement Mechanism (DSM)

4.29 The source wise procurement of power is detailed in **Annexure-D6**. The details of approval is attached as **Annexure D2**. Hon'ble Commission may please note that the petitioner had taken earnest efforts to obtain power at the lowest cost from different sources duly observing merit order dispatch principle.

Power Purchase from Central Generating Stations:

4.30 Honorable Commission vide MYT order dated 25.06.2022 approved 11587.81 MU for a total power purchase cost of Rs 4443.54 Cr @ rs 3.84 per unit. KSEBL scheduled 10807.33 MU for a total power purchase cost of Rs 4919.71 Cr at an average rate of Rs 4.55 per unit.

4.31 A station wise comparison of approved and actual energy purchased from CGS and their costs are given in the Table below.

Table – D14 Power Purchase from Central Generating Stations for the year 2022-23									
Sl No	Station	Approved		Audited accounts		True up requirement		Variation	
		Energy* (MU)	Cost (Rs Cr)	Energy* (MU)	Cost (Rs Cr)	Energy* (MU)	Cost (Rs Cr)	Energy* (MU)	Cost (Rs Cr)
1	RSTPS I & II	1696.81	621.64	1398.03	683.617	1398.03	683.62	-298.78	61.98
2	RSTPS III	425.93	153.10	355.73	166.341	355.73	166.34	-70.20	13.24
3	Talcher Stage-II	2980.96	853.18	3189.84	1023.265	3189.84	1023.26	208.88	170.08
4	Simhadri TPS Stg II	600.03	270.32	505.57	330.704	505.57	330.70	-94.46	60.38
5	NLC Stage-I	422.33	156.88	291.54	164.4121	291.54	164.41	-130.79	7.53
6	NLC Stage-II	603.17	223.42	458.44	228.00	458.44	228.00	-144.73	4.58
7	NLC 1 Expansion	464.13	169.42	434.84	228.69	434.84	228.69	-29.29	59.27
8	NLC II Expansion	511.51	252.65	270.88	129.844	270.88	129.84	-240.63	122.81
9	MAPS	122.72	31.56	76.43	19.91	76.43	19.91	-46.29	-11.65
10	KAIGA	389.17	136.97	577.23	203.96	577.23	203.96	188.06	66.99
11	Kudankulam	1507.12	628.97	1789.39	789.93	1789.39	789.93	282.27	160.96
12	Vallur	350.72	175.75	317.96	176.60	317.96	176.60	-32.76	0.85
13	NTPL	506.33	248.43	407.03	252.09	407.03	252.09	-99.30	3.66
14	Kudgi	780.71	418.80	504.57	414.63	504.57	414.63	-276.14	-4.17
16	NNTPP	226.17	102.45	229.85	103.30	229.85	103.30	3.68	0.85
17	Aravally Corporation Ltd(IGSTPS Jhajjar)				4.42		4.42		4.42
	Total	11587.81	4443.55	10807.33	4919.71	10807.33	4919.71	-780.48	476.17
	*Energy at exbus								

4.32 Table D14 shows that there was an overall reduction in CGS to the extent of 780.48 MU from the approved quantum during the year 2022-23. The actual power purchase cost from CGS was

more by Rs 476.17 Cr from the amount approved by the Hon Commission as detailed in table above.

4.33 Hon'ble Commission may kindly note that KSEBL has been scheduling energy based on merit order despatch basis. Accordingly, during low demand period and period of excess hydel generation to avoid spillage, KSEB Ltd has surrendered power from the stations having high variable cost. The reduction in availability is due to the energy surrender during low demand periods as well as for utilising the low market rates by surrendering high cost power and also due to outages. KSEBL has surrendered 1209.71 MU during 2022-23 from Central Generating Stations as shown in table below. The details of energy availability as well as the details of energy surrender are detailed in table below:

Table D15 Details of energy availability and surrender of CGS during 2022-23(MU)						
CGS	Approved	Actual	Surrender	Deemed Surrender	Total	Increase/decrease in availability after accounting surrender
RSTPS I & II	1696.81	1398.03	361.38	34.64	1794.05	97.24
RSTPS III	425.93	355.73	61.36		417.09	-8.84
Talcher Stage-II	2980.96	3189.84	93.29		3283.13	302.17
Simhadri TPS Stg II	600.03	505.57	136.84		642.41	42.38
NLC Stage-I	422.33	291.54	8.39		299.93	-122.40
NLC Stage-II	603.17	458.44	22.91	0.00	481.35	-121.82
NLC 1 Expansion	464.13	434.84	18.45	0.00	453.28	-10.85
NLC II Expansion	511.51	270.88	6.16	0.00	277.04	-234.47
MAPS	122.72	76.43			76.43	-46.29
KAIGA	389.17	577.23			577.23	188.06
Kudankulam	1507.12	1789.39			1789.39	282.27
Vallur	350.72	317.96	50.93	2.59	371.48	20.76
NTPL	506.33	407.03	110.44		517.47	11.14
Kudgi	780.71	504.57	337.40	98.69	940.66	159.95
NNTPP	226.17	229.85	2.17		232.02	5.85
Total	11587.81	10807.33	1209.71	135.92	12152.97	565.16

4.34 From the above table it can be seen that the actual availability from Central Generating stations is higher as compared to the approved figures except for NLC stations and MAPs.

4.35 The reasons for reduction in availability for NLC stations was mainly due to the outages. The reasons for surrender is enclosed as **Annexure D3**. The reduction in availability from NLC stations and MAPs for FY 2022-23 was 544.66 MU.

Table D 16 Reduction in availability from NLC stations and MAPs		
SI No	CGS	Reduction in availability after accounting surrender
1	RSTPS III	-8.84
2	NLC Stage-I	-122.40
3	NLC Stage-II	-121.82
4	NLC 1 Expansion	-10.85
5	NLC II Expansion	-234.47
6	MAPS	-46.29
	Total	-544.66

4.36 The variations in power purchase cost from that of the approved cost is mainly due to following reasons.

- i. Variations in fixed charges due to the revision in capacity charges in the Tariff orders issued by CERC during the control period.
- ii. Variations in energy charges due to the revision in prices of domestic coal, transportation charges, change in blending ratio, calorific value etc
- iii. Ash evacuation expenses
- iv. Revision in fixed charges after the issuance of truing up orders for the period 2014-19.
- v. Inclusion of RLDC charges, Incentive, supplementary claims such as water cess, security charges

4.37 In the case of Central Generating Stations, the power purchase cost includes fixed cost, variable charges RLDC charges, incentive claims and the various supplementary claims approved vide corresponding regulations/CERC orders. The 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 CERC tariff regulation for the control period. The fixed charges of each Central Generating stations is approved by Hon'ble CERC from time to time. As per the Tariff regulations, the fixed charges payable to the

generator is proportional to the availability. ie; the fixed charges paid depends on the actual declared availability of the generating Station.

4.38 It may please be noted that Tariff orders for most of the Central Generating stations for the control period 2019-24 were not issued at the time of filing of MYT petition. Hence KSEB Ltd estimated the fixed cost of CGS whose tariff is not yet approved @95% of the fixed claimed by the generators in their tariff petitions for the years 2022-23 to 2023-24, on the assumption that CERC may approve 95% of the fixed cost claimed while issuing the final orders.

4.39 KSEB Ltd in the MYT petition has also claimed additional fixed cost towards fly ash transportation Rs 0.15/unit. Thus the fixed charges approved by the Honorable Commission for the year 2022-23 vide order dated 25.06.2022 is given in table below

Table D17 Fixed charges approved by the Honorable Commission			
No.	Station	Energy availability (MU)	Total fixed charges(Rs Cr)
1	RSPTS Stage I & II	1696.81	150.34
2	RSTPS Stage III	425.93	41.88
3	TALCHER - Stage II	2980.96	296.9
4	Simhadri Exp	600.03	95.19
5	NLC-II- Stage-1	422.33	42.92
6	NLC-II- Stage-2	603.17	60.55
7	NLC- Exp- Stage-1	464.13	55.47
8	NLC - II Exp	511.51	119.61
9	Vallur JV with	350.72	63.72
10	NTPL(Tuticorin JV)	506.33	93.19
11	Kudgi Unit I II & III	780.71	140.51
12	NNTPP	226.17	51.9
	Total	9568.81	1212.18

4.40 The fixed charges excluding the ash transportation expenses approved by Honorable Commission was Rs 1068.25 Cr. and actual fixed charges for the year 2022-23 was Rs 1013.62 Cr excluding the ash transportation expenses. Honorable CERC vide order dated 28.10.2022 on petition No. 205/MP/2021 directed that fly ash transportation cost incurred by the generator, shall be recovered, in proportion to the coal consumed corresponding to the scheduled generation at normative parameters in accordance with the 2019 Tariff Regulations or at actuals, whichever is lower, for the supply of electricity to the respective Discoms. Hence the same is considered separately.

- 4.41 As detailed above ,as per the CERC Tariff Regulations, 2019, the tariff of the CGS and IPPs whose tariff determined by Honorable CERC comprises of fixed charges for recovering the annual fixed charges approved by CERC and variable cost for recovering the primary and secondary fuel cost. The fixed charges/capacity charges payable to thermal stations for a calendar month is calculated in accordance with the formula specified as per Regulation 42(2) of the CERC Tariff Regulations, 2019, which is applicable for the control period from 2019-20 to 2023-24.
- 4.42 The normative annual plant availability factor (NAPAF) in percentage for coal based station is 85% and that for NLC Stage-1 stations are 72%. The CERC Regulation provide for recovering the fixed cost of generation under two segments in an year, for high demand season (for three months) and low demand (period of remaining nine months).
- 4.43 The details of the PAF in low demand months (May-2023 to January-2023) and high demand months (April 2022, February 2023and March 2023), the fixed cost payable at normative availability and the fixed cost actually paid for the year 2022-23 is given as **Annexure-D 4** to this petition. The period of low and high demand months is declared by RLDC.
- 4.44 KSEB has remitted the fixed charges in accordance with the formula specified as per Regulation 42(2) of the CERC Tariff Regulations, 2019, which is applicable for the control period from 2019-20 to 2023-24.
- 4.45 Honorable CERC issued tariff orders for the following stations wherein the fixed charges were revised as follows

Table D18 Tariff orders subsequent to MYT Petition			
Station	Date of Tariff order	Annual Fixed charges for the station as per order	Fixed charges to be payable by KSEBL at normative availability
		Rs Cr.	Rs Cr.
Talcher-Stage II	27.04.2023	1112.65	237.59
RSTPS Stage-III	07.11.2021	290.82	35.44
Simhadri Stage II	08.02.2023	1017.91	86.81
NLC II Stage I	10.03.2023	346.89	34.97
NLC II Stage II	10.03.2023	476.07	51.32
NLC TPS I Expansion	23.12.2022	283.21	43.66
NLC TPS II Expansion	3.11.2022	672.59	103.85
NTECL Vallur	30.05.2023	1808.3024	62.24
RSTPS Stage I & II	05.10.2023	1101.20	

- 4.46 It may please be noted that provisions has been made in the accounts for the above stations during 2022-23 even though payments were effected in 2023-23 except RSTPS Stage I & II .
- 4.47 Further as part of Truing up claim of CGS during the previous tariff period of 2014-19, the AFC paid/ adjusted during the year 2022-23 is given below.

Table D19 AFC paid for previous years (Tariff period 2014-19)		
SI No	Station	Capacity Charges (Rs Cr)
1	Talcher	38.52
2	NLC- II Stage I	8.82
3	NLC- II Stage II	16.33
4	NLC TPS-I Expansion	3.02
5	NLC TPS-II Expansion	-16.98
6	NTECL Vallur	2.61
7	NTPL	0.005
8	Aravally Power Corporation Ltd	4.42
9	Sub Total	56.76

- 4.48 Thus the fixed charges approved by Commission and remitted by KSEBL during 2022-23 is given in table below

Table D 20 Fixed charges of Central Generating Station,				
No.	Station	Energy availability (MU)	Fixed charges excluding ash transportation (Rs Cr)	
			Approved	Actual
1	RSPTS Stage I & II	1696.81	124.89	119.04
2	RSTPS Stage III	425.93	35.49	33.89
3	TALCHER - Stage II	2980.96	252.19	276.18
4	Simhadri Exp	600.03	86.19	86.72
5	NLC-II- Stage-1	422.33	36.59	35.28
6	NLC-II- Stage-2	603.17	51.5	54.76
7	NLC- Exp- Stage-1	464.13	48.5	46.64
8	NLC - II Exp	511.51	111.93	42.90
9	Vallur JV with	350.72	58.46	64.58
10	NTPL(Tuticorin JV)	506.33	85.6	77.27
11	Kudgi Unit I II & III	780.71	128.8	134.18
12	NNTPP	226.17	48.51	40.94

13	Aravally Power Corporation Ltd			4.42
	Sub total	9568.8	1068.65	1016.80

- 4.49 In the MYT order dated 25.06.2022, the variable charges of various stations for the control period was calculated by this Hon'ble Commission by giving an escalation of 2% on annual basis, on the actual variable charges for the first half of the year 2021-22. There was considerable variation in energy charges during 2022-23 due to the variations in cost of domestic fuel consequent to the price notifications issued after the issuance of MYT order dated 25.06.2022, blending of imported coal, changes in calorific value etc.
- 4.50 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.
- 4.51 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 had to augment coal supply from other domestic sources and imported coal as well. Coal from Eastern Coal Fields (ECL) and ,SCCL ,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. Fuel price is based on the coal price and the transportation cost. 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**
- 26. SCCL price notification no.135/2022-23 dtd 31.01.2023 wef 01.02.2023.**
- 27. SCCL price notification no.136/2022-23 dtd 07.02.2023 wef 08.02.2023**

4.52 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 variation 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

4.53 Monthly energy charges depends upon the landed price of fuel and its , calorific value. The energy charge rate calculated as per Tariff regulations is based on the following formula:

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

4.54 Energy charges depends on gross calorific value of primary (CVPF) and secondary fuel (CVSF) 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, transportation charges notified from time to time, blending ratio etc. The monthly variation of these parameters leads to variation in monthly energy charges. The price of imported coal is much higher as compared to domestic coal.

4.55 During the year 2022-23 the energy charges increased considerably mainly due to the changes in price of domestic coal as stated above as well as 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 take immediate action for importing coal for blending.

- 4.56 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 **31st March 2023** to maintain resource adequacy and 24x7 supply to consumers.
- 4.57 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.
- 4.58 Ministry of Power vide notification dated 09.01.2023 has directed all Central, State Gencos and IPPs to take necessary action and immediately plan to import coal through a transparent competitive procurement for blending at the rate of 6% by weight so as to maintain coal stocks at their power plants for smooth operations till September 2023. The domestic coal supply to those Gencos who do not follow these instruction shall be restricted on prorata basis. A copy of notification is enclosed as **Annexure-D5**.
- 4.59 Hence the variable charge increased considerably during FY 2022-23. Thus, the actual per unit variable cost of power purchase from various sources varied from the approved level and this matter was well considered by the Honorable Commission, by issuing regulations for claiming fuel surcharge. KSEBL filed quarterly fuel surcharge petitions during 2022-23 along with the reasons for variations in monthly fuel surcharge. Honorable Commission was pleased to consider the variations in variable charges during FY 2022-23 in orders on fuel surcharge recovery for the period from April to December 2022 vide orders dated 25.01.2023 and 31.05.2023.
- 4.60 The station wise energy charge is given in table below

Table D21 Energy Charges for Central Generating Station for FY 2022-23					
SI No	Particulars	Rs/kWh		(Rs Cr.)	
		Approved	Actual	Approved	Actual
1	RSTPS I & II	2.78	3.97	471.71	555.07
2	RSTPS III	2.61	3.65	111.17	129.97
3	Talcher Stage-II	1.87	1.94	557.44	618.71

4	Simhadri TPS Stg II	2.92	4.32	175.21	218.25
5	NLC Stage-I	2.7	3.86	114.03	112.5
6	NLC Stage-II	2.7	3.72	162.86	170.69
7	NLC 1 Expansion	2.46	3.55	114.18	154.27
8	NLC II Expansion	2.6	3.51	132.99	94.96
9	MAPS	2.57	2.60	31.54	19.91
10	KAIGA	3.52	3.53	136.99	203.96
11	Kudankulam	4.17	4.41	628.47	789.93
12	Vallur	3.19	3.51	111.88	111.54
13	NTPL	3.07	4.16	155.44	169.47
14	Kudgi	3.56	5.52	277.93	278.69
15	NNTPS	2.24	2.79	50.66	64.17
	Sub Total			3232.497	3692.09

4.61 Further the actual power purchase cost includes ash evacuation expenses amounting to Rs 104.68 cr. which is given in table below.

Table D22 Details of ash transportation expenses of various station		
SL No	Station	Ash transportation expenses(Rs Cr
1	Talcher	78.641
2	Simhadri	18.958
3	RSTPS Stage I & II	5.606
4	RSTPS Sage III	1.474
5	Kudgi	0.000
6	Sub Total	104.679

4.62 In the case of NLC stations, Honorable CERC directed NLCIL to consider the lignite transfer price @ Rs 2132.24/MT pertaining to previous control period during the year as an interim measure. Subsequently Honourable CERC vide order dated 4.05.2023 in Petition No.223/MP/2022 has approved the interim lignite Input price for the period 2019-2024 in respect of Neyveli Mines as per CERC Terms and Conditions of Tariff), Second Amendment, Regulations,2021. The interim Lignite transfer price for the control period based on CERC order dated 04.05.2023 is given in table below

Table D 23 Impact of revision in lignite transfer price on energy charges			
Sl No	Year	Lignite transfer price considered for the energy charge in MYT petition (Rs/Tonne)	Revised Lignite transfer price based on CERC dated 04.05.2023 (Rs/Tonne)
1	2019-20	Rs2132.24/Tonne	Rs 2266.23/Tonne
2	2020-21	Rs2132.24/Tonne	Rs 2324.02/Tonne
3	2021-22	Rs2132.24/Tonne	Rs 2383.27/Tonne
4	2022-23	Rs2132.24/Tonne	Rs 2407.79/Tonne
5	2023-24	Rs2132.24/Tonne	Rs2506.38/Tonne

4.63 Due to the above revision the increase in energy charges including arrears for various stations for the period from 2019-20 to 2022-23 amounts to Rs 154.04 Cr. as detailed in table below

Table D24 Impact of revision in lignite input price in energy charges for the period from FY 2019-20 to 2022-23				
Sl No	Station	2019-22	2022-23	Total
		Rs Cr		
1	NLC TPS II Stage I	22.62	10.05	32.67
2	NLC TPS II Stage II	29.21	15.81	45.02
3	NLCTPS I Expansion	25.31	13.39	38.7
4	NLCTPS II Expansion	15.97	8.17	24.14
5	NNTPP			13.51
6	Sub Total			154.04

4.64 Further the actual power purchase cost includes RLDC charges, incentive claims and various supplementary claims approved vide corresponding regulations/CERC orders which is not considered while approving the ARR of FY 2022-23 vide order dated 25.06.2022.

Table D25 Supplementary claims for CGS during FY 2022-23(Rs Cr)							
Sl No	Station	RLDC	Incentive	Cess on Auxiliary power consumption	O&M wages revision for the tariff period 2014-19	Other Supplementary claims(IT,FERV , Water cess etc)	Total
1	Talcher	-0.16	11.23	6.18	19.77	12.70	49.73
2	Simhadri	0.05	0.19	0.00	0.00	6.54	6.77

3	RSTPS Stage I & II	0.14	0.33	0.00	0.00	3.43	3.90
4	RSTPS Sage III	0.04	0.69	0.00	0.00	0.29	1.01
5	Kudgi	0.07	0.00	0.00	0.00	1.69	1.76
6	NNTPP	0.03	0.27	0.00	0.00	-2.10	-1.81
7	NLC- II Stage I	0.05	0.00	0.00	0.00	16.58	16.63
8	NLC- II Stage II	0.07	0.00	0.00	0.00	2.48	2.55
9	NLC TPS-I Expansion	0.05	0.31	0.00	0.00	27.43	27.79
10	NLC TPS-II Expansion	0.06	0.00	0.00	0.00	-8.09	-8.03
11	NTECL	0.03	0.37	0.00	0.00	0.08	0.00
12	NTPL	0.06	0.00	0.00	0.00	5.29	5.35
	Sub Total	0.48	13.38	6.18	19.77	66.32	105.65

4.65 In addition to the above as part of truing up for the period 2014-19 , Rs 4.42 crores towards Aravally Corporation Ltd was paid towards revision of fixed charges .

4.66 Thus the total power purchase cost of Central Generating Stations is given in table below

Table D 26 Total Power Purchase Cost for Central Generating Stations for the Year 2022-23									
Particulars	Capacity Charges	Energy Charges	RLD C	Incentive	Cess on Auxiliary power consumption	O&M wages revision for 2014-19	Ash transportation expenses	Other supplementary claims	Total
Rs Cr									
RSTPS I & II	119.04	555.07	0.14	0.33	0.00	0.00	5.61	3.43	683.62
RSTPS III	33.89	129.97	0.04	0.69	0.00	0.00	1.47	0.29	166.34
Talcher Stage-II	276.18	618.71	0.16	11.23	6.18	19.77	78.64	12.70	1023.26
Simhadri TPS Stg II	86.72	218.25	0.05	0.19	0.00	0.00	18.96	6.54	330.70
NLC Stage-I	35.28	112.50	0.05	0.00	0.00	0.00	0.00	16.58	164.41
NLC Stage-II	54.76	170.69	0.07	0.00	0.00	0.00	0.00	2.48	228.00
NLC I Expansion	46.64	154.27	0.05	0.31	0.00	0.00	0.00	27.43	228.69
NLC II Expansion	42.90	94.96	0.06	0.00	0.00	0.00	0.00	-8.09	129.84
MAPS		19.91							19.91
KAIGA		203.96							203.96
Kudankulam		789.93							789.93
Vallur	64.58	111.54	0.03	0.37	0.00	0.00	0.00	0.08	176.60
NTPL	77.27	169.47	0.06	0.00	0.00	0.00	0.00	5.29	252.09
Kudgi	134.18	278.69	0.07	0.00	0.00	0.00	0.00	1.69	414.63
NNTPS	40.94	64.17	0.03	0.27	0.00	0.00	0.00	-2.09	103.30

Aravally Power Corporation td	4.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.42
Total	1016.80	3692.09	0.48	13.38	6.18	19.77	104.68	66.32	4919.71

4.67 All the above factors contribute to variation in the per unit power purchase cost of FY 2022-23 and these are beyond the control of utility. Thus, the power purchase cost is dependent on Tariff Regulations and variations in coal price from time to time and is an uncontrollable factor. Therefore, Hon'ble Commission may kindly approve the power purchase cost as submitted in the table below. Further KSEBL humbly requests before the Hon'ble Commission to kindly allow the revisions in charges on the issuance of Tariff orders for remaining Central Generating Stations as and when it materialises.

Table – D27 True up claim of Power Purchase from Central Generating Stations for the year 2022-23			
SI No	Station	Energy* (MU)	Cost (Rs Cr)
1	RSTPS I & II	1398.03	683.62
2	RSTPS III	355.73	166.34
3	Talcher Stage-II	3189.84	1008.87
4	Simhadri TPS Stg II	505.57	330.70
5	NLC Stage-I	291.54	164.41
6	NLC Stage-II	458.44	228.00
7	NLC 1 Expansion	434.84	228.69
8	NLC II Expansion	270.88	129.84
9	MAPS	76.43	19.91
10	KAIGA	577.23	203.96
11	Kudankulam	1789.39	789.93
12	Vallur	317.96	176.60
13	NTPL	407.03	252.09
14	Kudgi	504.57	414.63
16	NNTPP	229.85	103.30
17	Eastern region	0.00	14.39
18	Aravally Corporation Ltd		4.42
	Total	10807.33	4919.71
	*Energy at exbus		

Power Purchase from wind and small hydro and solar IPPs within the State:

4.68 KSEBL had purchased 588.73 MU for Rs.203.61 Cr against the approved quantum of 621.18 MU for Rs 204.02 Cr. The details of approval are furnished in Annexure D2 of this petition. The purchase of power from Independent Power Producers /CPP injection/solar prosumer injection is given in table below.

Table-D28: Power Purchase from IPPs									
Sl No	Station	KSERC approval		Audited Accounts		Truing up requirement		Difference	
		Energy (MU)	Cost (Rs Cr)	Energy (MU)	Cost (Rs Cr)	Energy (MU)	Cost (Rs Cr)	Energy (MU)	Cost (Rs Cr)
1	Wind	122.98	46.00	110.88	41.54	110.88	41.54	-12.10	-4.46
2	SHEP	141.71	50.74	164.54	53.82	164.54	53.82	22.83	3.08
3	Solar	324.04	106.87	345.75	108.65	345.75	108.65	21.71	1.78
	Sub total	588.73	203.61	621.18	204.02	621.18	204.02	32.45	0.41

Wind IPPs

4.69 Hon'ble Commission approved 122.98 MU from various wind IPPs for a total cost of 46 Cr against which, KSEBL purchased 110.88 MU for a total cost of Rs 41.54 Cr as shown in table below.

Table-D29: Power Purchase from Wind IPPs								
Station	KSERC approval		Audited Accounts		TU requirement		Difference	
	(MU)	(Rs Cr)	(MU)	(Rs Cr)	(MU)*	(Rs Cr)	(MU)	(Rs Cr)
Wind-Ramakalmedu	27.87	8.75	23.61	7.373	23.61	17.88	-46.54	-4.14
Wind-Koundikkal	12.56	3.94	8.73	10.51	8.73			
Wind- Agali	29.72	9.33	24.87		24.87			
Wind Ahalya	20.98	10.97	17.59	8.92	17.59	8.92	-3.39	-2.05
INOX	30.84	12.61	34.86	14.26	34.86	14.26	4.02	1.65
Kosamattom	1.01	0.4	1.23	0.48	1.23	0.48	0.22	0.08
Wind Sub total (within state)	122.98	46	110.88	41.54	110.88	41.54	-12.10	-4.46

4.70 The true up claim for FY 2022-23 towards cost of power purchase from wind generating stations amounts to Rs 41.54 crores may kindly be approved.

Small Hydro IPPs

4.71 Hon'ble Commission vide order dated 25.06.2022 approved 141.71 MU from various small hydel IPPs @ of Rs 50.74 Cr. KSEBL has procured 164.54 MU at a cost of Rs 53.82 Cr. Power Purchase from M/s Arippara was not approved vide MYT order dated 25.06.2022. Subsequently Honorable Commission vide order dated 08.03.2023 has approved the levelised tariff for the electricity generated from the 4.5 MW SHEP installed by M/s CIAL Infrastructures Ltd at Arippara, @ Rs 4.30/unit duly considering the benefit of accelerated depreciation. Arippara SHEP (4.5 MW) injected 12.29 MU to the grid during FY 2022-23. The generator did not raise invoices during FY 2022-23 and hence the corresponding power purchase cost was not accounted during FY 2022-23. Honorable Commission may kindly approve the power purchase cost of 4.5 MW SHEP

installed by M/s CIAL Infrastructures Ltd at Arippara as and when it materialises. Thus the true up claim of Rs 53.8 crores towards the power purchase cost of IPPs may kindly be approved. The station wise details of approved and actual power purchase quantum, power purchase cost is shown in table below .

Table-D31: Power Purchase from Wind SHEP									
Station	Installed capacity	KSERC approval		Audited Accounts		TU requirement		Difference	
		(MU)	(Rs Cr)	(MU)	(Rs Cr)	(MU)*	(Rs Cr)	(MU)	(Rs Cr)
Ullunkal(EDCL)	7	17.79	4.34	20.91	5.05	20.91	5.05	3.12	0.71
Iruttukanam Stage-I & II(Viyyat)	4.50	24.69	6.67	27.38	7.00	27.38	7.00	2.69	0.33
Karikkayam HEP(AHPL)	15	37.56	15.62	48.20	20.05	48.20	20.05	10.64	4.43
Meenvallom(PSHCL)	3	8.44	4.12	9.87	4.43	9.87	4.43	1.43	0.31
Kallar of Idukki District Panchayat	0.05	0	0	0.00	0.00	-	-	0.00	0.00
Mankulam of Grama Panchayat	0.11	0	0	0.00	0.00	-	-	0.00	0.00
Minar Renewable energy project Ltd	8	25.54	8.91	20.89	7.29	20.89	7.29	-4.65	-1.62
Deviar micro	0.05	0	0	0.00	0.00	-	-	0.00	0.00
Anakkampoil	8	27.67	11.07	25.01	10.00	25.01	10.00	-2.66	-1.07
Arippara	4.5			12.29	0.00	12.29	-	12.29	0.00
SHEP subtotal	50.71	141.71	50.74	164.54	53.82	164.54	53.82	22.83	3.08

Solar IPPs

4.72 Hon'ble Commission approved 324.05 MU from solar IPPs for a total cost of Rs 106.87 crores. The details of approval is given in Appendix II. KSEBL purchased 345.75 MU from various solar IPPs as shown in table below for a total power purchase cost of Rs 345.75crores. In the MYT order dated 25.06.2022 Honorable Commission has not approved power purchase cost of 10 MW solar project owned by M/s CIAL. Subsequently Honorable Commission vide order dated 10.11.2022 , in line with the provisions of the Electricity Act, 2003, Guidelines for short term Procurement of Power by Distribution Licensees through Tariff based bidding process notified by the Ministry of Power, Government of India, dated 30.03.2016, KSERC (Terms and Conditions for Determination of Tariff) Regulations,2021, and other relevant Rules ad Regulations, approved the short-term procurement of 10MW Solar power from M/s CIAL Infrastructure Limited @Rs 2.37/unit for the period from 15.06.2022 to 31.03.2023 to meet the Solar RPO for

the financial year 2022-23. KSEBL purchased 12.434 MU for a total power purchase cost of Rs 2.95 crores.

4.73 The PPA with M/s Anert was signed on 04.12.2019 and submitted before Honorable Commission for approval. As per the order of Honorable Commission dated 28.08.2021 and 08.10.2021 KSEBL has initialled modified PPA with M/s ANERT and submitted the same before Honorable Commission for approval on 30.11.2021 @ Rs 2.69 per unit as ceiling rate, but the tariff of the petition could not be determined for want of details. Honorable Commission vide order dated 25.03.2022 disposed the petition and directed M/s ANERT to file a fresh petition with complete expenditure details relevant for the determination of project specific tariff of the electricity generated from 2 MW Solar plant at Kuzhal mannam of the petitioner as per the provisions of the KSERC (Conduct of Business) Regulations 2003 and its amendments. KSEBL had been remitting the payment till June 2022 @ Rs 2.69 per unit. Honorable Commission vide order dated 24.06.2022 in the Truing up of Accounts of 2020-21 disallowed the power purchase cost for FY 2020-21 amounting to Rs 3.11 Cr citing that the tariff was yet to be determined by the Honorable Commission. Honorable Commission also ordered that KSEBL shall direct M/s ANERT to file the petition for tariff determination under Section 62 of EA-2003 before the Honorable Commission and no payment shall be released by KSEB for any injection of energy by M/s ANERT.

4.74 M/s ANERT injected 2.31 MU to the grid and KSEBL remitted the payment amounting to Rs 0.10 crores till June 2022 . It is requested that the payment made to M/s ANERT till June 2022 may kindly be approved.

4.75 The station wise details of approved and actual power purchase quantum, power purchase cost is shown in table below

Table-D32: Power Purchase from Solar IPPs									
		KSERC approval		Audited Accounts		TU requirement		Difference	
		Energy	PP Cost	Energy	PP Cost	Energy	PP Cost		
Station	MW	(MU)	(Rs Cr)	(MU)	(Rs Cr)	(MU)*	(Rs Cr)	(MU)	(Rs Cr)
Solar									
Solar IREDA	50	73.37	28.1	71.68	27.45	71.68	27.45	-1.69	-0.65

Solar IPP ANERT		0	0	2.31	0.10	2.31	0.10	2.31	0.10
THDCIL	50	73.37	22.74	93.10	28.86	93.10	28.86	19.73	6.12
NTPC Solar	92	177.31	56.03	167.54	49.29	167.54	49.29	-9.76	-6.74
CIAL Ettukudukka	10	0	0	11.11	2.95	12.434	2.95	12.434	2.95
Solar IPP sub total	202	324.05	106.87	345.75	108.65	345.75	108.65	21.71	1.78

4.76 KSEBL humbly requests the Honorable Commission to approve the true up claim of Rs 108.65 crores towards the power purchase from solar IPPs as given in table above.

Captive Power producers/Solar prosumers

4.77 Captive power producers injected energy into the grid and availed energy through banking at their consumer premises. In addition to the above, solar prosumers also injected energy into the grid and consumed energy from the grid through banking arrangements. The energy injected by the captive consumer /solar prosumer is taken as export to the grid (injection to grid) and energy adjusted against this injection is considered as the energy drawal from grid ie; energy import from grid for loss calculation purposes.

4.78 The details of energy generation export to the grid and consumption adjusted against the injection is depicted in table D4 of the petition.

4.79 The energy in the bank at the end of settlement period is considered for settlement purposes. Hon'ble Commission vide order dated 23.02.2023 has approved the APPC @Rs 2.69/unit for the year 2022-23 for settling the surplus banked energy as on 30.09.2022 and 31.03.2023. The remaining energy in bank as on 30.09.2022 for solar prosumers was 54.36 MU and corresponding amount was Rs 14.622 Cr and the settled energy as on 31.03.2023 for 77.28 MU and corresponding amount was Rs 20.79 Cr. The settled energy as on 31.03.2023 for captive consumers was 4.592 MU and corresponding settlement amount was Rs 1.235 Crores. The settlement amount was being refunded to the consumers after adjusting against the arrears during FY 2022-23 and FY 2023-24 as per the agreement. Thus the energy settled at the end of settlement period for captive/solar prosumers was 136.22 MU and the total settlement amount at APPC rate of Rs 2.69 per unit is Rs 36.645 Cr. An amount of Rs 8.54 crores were refunded during 2022-23. Table D31 shows the details of settlement amount against solar injection/captive injection.

Table D33 Total settlement amount paid during FY 2022-23 against captive /solar injection			
Sl No	Source	Energy (MU)	Amount (Rs cr)
1	Grid connected -solar(settlement)	131.633	35.41
2	captive consumer settlement	4.591	1.235
3	Total	136.224	36.645
4	Amount accounted during 2022-23		8.54

Thermal IPPs

Power purchase from RGCCPP, Kayamkulam:

- 4.80 Hon'ble Commission, vide order dated 25.06.2022, did not approve any schedule from RGCCPP for the year 2022-23 and approved Rs 100 crores as the annual fixed charges of RGCCPP for FY 2022-23. KSEBL did not schedule energy from RGCCPP during FY 2022-23. The auxiliary consumption of the station supplied by KSEBL during non operative periods was 6.57 MU. KSEBL remitted Rs 98.16 crores towards RGCCPP during FY 2022-23 towards various charges as given in table below.

Table :- D 34 Power Purchase cost towards RGCCPP for the year 2022-23				
Particulars	Capacity Charges	Deviation charges	Others	Total
	Rs Crores			
RGCCPP	100.00	-1.857	0.0197	98.16

- 4.81 Hon'ble Commission may kindly approve Rs 98.16 Cr as per the accounts of KSEBL for the year 2022-23.
- 4.82 **Total power purchase from IPPs inside the State is summarized as below:**

Table-D35: Power Purchase from IPPs								
Station	KSERC approval		Audited Accounts		Truing up requirement		Difference	
	Energy (MU)	Cost (Rs Cr)	Energy (MU)	Cost (Rs Cr)	Energy (MU)	Cost (Rs Cr)	Energy (MU)	Cost (Rs Cr)
RGCCPP	0	100	0	98.16	0	98.16	0	98.16
Wind	122.98	46	110.88	41.54	110.88	41.54	-12.1	-4.46
SHEP	141.71	50.74	164.54	53.82	164.54	53.82	22.83	3.08
Solar	324.04	106.87	345.75	108.65	345.75	108.65	21.71	1.78
Grid connected solar prosumers (settlement)			136.224	8.54	136.224	8.54		8.54
Subtotal	588.73	303.61	757.394	310.71	757.394	310.71	32.44	7.1

IPPs outside state through approved firm contracts;

- 4.83 KSEBL, with the approval of Hon'ble Commission, entered into agreements with various independent power producers outside the State. The details of approval are attached as Appendix D2.

Power Purchase from Maithon and DVC stations whose tariff is determined by CERC

- 4.84 Hon'ble Commission had approved 3123.49 MU for a total amount of 1319.86 Cr from various generators against which KSEBL had purchased 3022.36 MU for a total cost of Rs 1431.51 Cr from various contracts. The details of cost of power purchase through long term contracts as per audited accounts are given in table below.

Table-D36 : Power Purchase thru various LTA as per audited accounts approved for FY -23								
Source	KSERC approval		Actual		Truing up		Difference	
	Energy* (MU)	Cost (Rs Cr)	Energy* (MU)	Cost (Rs Cr)	Energy* (MU)	Cost (Rs Cr)	Energy* (MU)	Cost (Rs Cr)
Maithon Power Ltd-I	1034.96	417.99	1066.65	455.76	1066.65	456.40	31.69	38.41
Maithon Power Ltd-II	1034.96	417.99	1066.63	457.02	1066.63	456.38	31.67	38.39
DVC Mejia	705.51	315.71	659.63	389.12	659.63	389.12	-45.88	73.41
DVC RTPS	348.06	168.17	229.46	12960	229.46	129.60	-118.60	-38.57
Subtotal	3123.49	1319.86	3022.363	1431.506	3022.36	1431.51	-101.13	111.65
* Energy at ex bus								

Maithon Power Ltd: - (150 MW through PPA-I and 150 MW through PPA-II)

- 4.85 Honorable Commission may please note that KSEBL scheduled 2133.28 MU for a total power purchase cost of Rs 912.78 Cr against approved quantum of 2069.92 MU for a total power purchase cost of Rs 835.98 Cr from Maithon Power Ltd.
- 4.86 The annual energy availability from the Station is 91%. There was an energy surrender of 38.58 MU and 38.59 MU from Maithon I & II during FY 2022-23 during low demand periods. The reasons for monthly surrender is enclosed as **Annexure D3**.
- 4.87 From the above table it can be seen that there was an increase in schedule of 31.69 MU over the approved quantum and the power purchase cost also increased by Rs 38.41 Cr. for PPA-I and 31.67 MU over the approved quantum and the power purchase cost also increased by Rs 38.39 Cr. for PPA-II. The details are given below

Table-D37: Power Purchase thru various LTA as per audited accounts approved for FY -23						
Source	KSERC approval		Actual		Rate(Rs/Kwh)	
	Energy* (MU)	Cost (Rs Cr)	Energy* (MU)	Cost (Rs Cr)	Approved	Actual
Maithon Power Ltd-I	1034.96	417.99	1066.65	456.40	4.04	4.28
Maithon Power Ltd-II	1034.96	417.99	1066.63	456.38	4.04	4.28

4.88 The increase in power purchase cost is mainly due to the increase in variable charges due to variation in fuel cost ,increase in fixed charges ,supplementary claims such as gain sharing due to refinancing of loan, ash disposal charges etc as detailed below.

The annual fixed charges for Maithon Power Station for the financial year 2022-23 was Rs 1085.90 crores. Honorable CERC vide order dated 08.01.2022 issued the true up order and an amount of Rs 979720 and Rs 946651 towards fixed charges for the previous period 2014-19 was admitted during FY 2022-23 which contributes to increase in fixed charges. The variation in energy charges is due to the variations in price of fuel, transportation charges and calorific value. In addition to the above, ash disposal charges amounting to Rs 9.90 Crores towards Maithon-I and Maithon II was admitted during 2022-23. Rs 5.50 crores is refunded to M/s MPL pertaining to the reduction in fixed charges on account of saving in interest due to re-financing or restructuring of loan .

As per regulation 61 of CERC order dated 07/03/2022, saving in interest due to re-financing or restructuring of loan shall be shared with the generator & beneficiaries as follows:

61. Sharing of saving in interest due to re-financing or restructuring of loan

(1) If refinancing or restructuring of loan by the generating company or the transmission licensee, as the case may be, results in net savings on interest after accounting for cost associated with such refinancing or restructuring, the same shall be shared between the beneficiaries and the generating company or the transmission licensee, as the case maybe, in the ratio of 50:50.

(2) In case of dispute, any of the parties may make an application in accordance with the Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999 for settlement of the dispute:

Provided that the beneficiaries or the long term customers shall not withhold any payment on account of the interest claimed by the generating company or the

transmission licensee during the pendency of any dispute arising out of re-financing of loan.

In addition to the above, supplementary claims amounting to Rs 3.15 Cr were also admitted during FY 2022-23. The details are given in table below.

Table D 38 Power Purchase from Maithon Power Ltd		
Particulars	Maithon Power Ltd -PSA I	Maithon Power Ltd -PSA II
Energy at exbus(MU)	1066.65	1066.63
Energy at Kerala periphery(MU)	1031.92	1031.90
Capacity Charges(Rs. Cr.)		
For FY 2022-23	155.13	155.13
for tariff period 2014-19 approved vide True up order 08.01.2022	0.10	0.10
Sub Total I capacity charges	155.23	155.22
Energy Charges(Rs. Cr.)	291.90	291.88
RLDC Charges(Rs. Cr.)	0.13	0.13
Incentive(Rs. Cr.)	1.60	1.60
FERV (Rs. Cr.)	0.002	0.002
Ash evacuation expenses (Rs Cr)	4.95	4.95
Gainsharing towards refinancing of loan(Rs Cr.)		
For FY 2022-23	1.71	1.71
for period 2019-21	1.05	1.05
Sub Total	2.75	2.75
Sharing of gains(Rs Cr)	-0.96	-0.96
LC charges(Rs Cr)	0.80	0.80
Total	456.40	456.38

DVC Mejia and DVC RTPS

- 4.89 Honourable Commission may please note that KSEBL scheduled 659.63 MU for a total power purchase cost of Rs 389.12 Cr against the approved quantum of 705.51 MU for a total power purchase cost of Rs 315.71Cr from 100 MW of power contracted from Mejia Power Station . Further, 229.46 MU was scheduled from 50 MW of power contracted from Reghunathpur TPS for a total power purchase cost of Rs 129.60 Cr. against 348.06 MU approved for a total power purchase cost of Rs 168.17 Cr.
- 4.90 The energy availability from Mejia during the year was 92.67% ie; above normative availability. It may please be noted that Honourable CERC vide order dated 27-04-2023 approved the tariff of Mejia Thermal Power Station for the control period . The annual fixed charges for the control was increased vide order dated 27.04.2023 and an amount of Rs 27.90 crores was admitted as

fixed charges towards previous period from 2019-20 to 2021-22. The annual fixed charges for the year 2022-23 was Rs 109.743 crores. In addition to the above, an amount of Rs 10.34 crores for the period from 2014-19 and Rs 8.955 Crores for the period 2019-23 was paid towards ash evacuation expenses. The variable charges also increased significantly due to the blending of imported coal as per MOP guidelines. The details of power purchase cost of M/s DVC Mejia and DVC RTPS are given in table below.

- 4.91 It may please be noted that the availability from Reghunathpur Stations during the financial year was only 63% due to ash handling issues and KSEBL has remitted fixed charges proportionate to the availability only. The variation in variable charges is due to the blending of Imported coal. Thus the variation in coal prices and transportation charges also contributes to variation in energy charges.

Table D 39 Power purchase cost details for MTPS and RTPS			
SL No	Particulars	DVC MTPS	DVC RTPS
1	Energy at exbus(MU)	659.63	229.46
2	Energy at Kerala periphery(MU)	637.09	221.93
3	Capacity Charges(Rs. Cr.)		
i	For FY 2022-23	109.743	40.99
ii	for tariff period 2014-19 approved vide True up order 08.01.2022	27.92	
iii	Sub Total I capacity charges	137.66	40.99
4	Energy Charges(Rs. Cr.)	231.90	88.48
5	RLDC Charges(Rs. Cr.)	0.085	0.04
6	Ash evacuation expenses (Rs Cr)		
i	For the period 2014-19	10.34	
ii	the period 2019-23	8.955	
iii	Sub Total	19.294	
7	LC charges(Rs Cr)	0.181	0.181
8	Total	389.12	129.60

- 4.92 There was an energy surrender of 71.49 MU and 15.91 MU from DVC Mejia TPS and DVC Reghunathpur TPS during FY 2022-23 during low demand periods. The reasons for monthly surrender are enclosed as **Appendix-D2**.

Power Purchase through DBFOO contracts.

- 4.93 KSEBL sought approval for the purchase of 865 MW of power contracted through DBFOO contracts as given below.

- i.PSA for 200 MW capacity (under Bid-1) with Jindal Power Ltd.
- ii.PSA for 115 MW capacity (under Bid-1) with Jhabua Power Ltd.
- iii.PSA for 100 MW capacity (under Bid-2) with M/s BALCO
- iv.PSA for 150 MW capacity (under Bid-2) with Jindal Power Ltd.
- v.PSA for 100 MW capacity (under Bid-2) with Jhabua Power Ltd.
- vi.PSA for 100 MW capacity (under Bid-2) with Jindal India Thermal Power Ltd.

4.94 Honourable Commission vide order dated 30.08.2016 adopted the tariff and granted approval for the procurement of 200 MW from Jindal Power Ltd under Bid –I and 100 MW from M/s BALCO under Bid-II. The approval of the remaining contracts 150 MW from Jindal Power Ltd under Bid II,115 MW from Jhabua Power Ltd under Bid I,100 MW from Jhabua Power Ltd and 100 MW of power from M/s JITPL under Bid -2 are is pending at present before Honorable Commission.

Power contracted through approved DBFOO contracts

4.95 Hon'ble Commission approved power procurement of 2246.94 MU from 200 MW of Jindal Power Ltd Bid I and 100 MW of M/s BALCO under Bid II of DBFOO contracts for a total cost of Rs 889.88 Cr from projects under DBFOO basis for the financial year 2022-23. KSEBL procured 1741.22 MU for a total power purchase cost as per audited accounts of Rs 587.28 Cr.

Table-D40 : Power Purchase thru approved DBFOO contracts								
Source	KSERC approval		Actual		Truing up		Difference	
	Energy* (MU)	Cost (Rs Cr)	Energy* (MU)	Cost (Rs Cr)	Energy* (MU)	Cost (Rs Cr)	Energy* (MU)	Cost (Rs Cr)
Jindal Power Ltd-Bid I	1497.96	576.63	1496.657	544.5794	1496.66	544.58	-1.30	-32.05
BALCO	748.98	313.25	244.56	42.70	244.56	42.70	-504.42	-270.55
Subtotal	2246.94	889.88	1741.22	587.28	1741.22	587.28	-505.72	-302.61
* Energy at ex bus								

4.96 Honorable Commission may please note there was a reduction of 504.42 MU from M/s BALCO due to the reasons cited below. The overall availability during 2022-23 was only 29%. The availability from M/s BALCO was 'nil' from April to August and during November 2022. The reasons given by BALCO was that

- In view of the coal shortage within the country, South Eastern Coalfields Ltd (SECL) halted the supply of coal to non-power sector by rail mode. Further the ministry of Railways put an embargo on the loading of coal by granting high priority in loading of coal for power house for thermal purposes. As BALCO

procures non linkage coal to meet its captive load, BALCO was forced to import power under open access including from exchanges in order to keep the aluminium smelters operational, for which BALCO had to use the grid connectivity. However, on application to WRLDC for standing clearance for aforesaid import of power, WRLDC had issued standing clearance to BALCO for transacting power through Power Exchanges subject to the condition that, BALCO should ensure that at any point of time there shall not be both import and export of power. In other words, **no export of power is allowed during the period of power import to meet the captive load**. BALCO utilised the available grid connectivity for the purposes of importing power for its captive load, in order to ensure the continuous operations of its smelters. As such, BALCO was unable to supply power to the LTA beneficiaries including KSEBL.

4.97 KSEBL has requested M/s BALCO several times to take urgent actions for rectifying the defects of the power plant and to provide the full contracted capacity as agreed. Ministry of Power, Government of India issued circular dated 26.03.2022, for taking timely action for adequate coal availability for power generation. Para No.4 of circular states that

'The procurers and sellers are legally bound by the PPA in force as signed by both the parties. While the procurers are bound to pay the bills timely as per the PPA, the sellers are bound to maintain adequate fuel stocks and offer availability as per the PPA. Not maintaining adequate fuel stocks or not giving availability on any pretext (such as high price of imported coal etc) is inexcusable. Such a conduct on the part of seller should be immediately responded to, by the procurer sternly by using all possible contractual and other available legal interventions at the level of the State Government. If any gaming is noticed on the part of the seller such as not supplying electricity under the PPA and selling it in the market should be brought to the notice of the Regulatory Commission without any delay under intimation to Ministry of Power for immediate intervention'

4.98 Based on the circular dated 26.03. 2022 of the Ministry of Power, Government of India, letter has been issued to BALCO, informing that the action of the firm of not providing the contracted power to KSEBL is breach of the contract , and BALCO has to pay all the damages as per the agreement including the cost incurred by KSEBL for the purchase of power from the power exchange in order to meet the summer demand due to non-availability of power from BALCO. M/s BALCO was requested to start the supply of power to the extent of 100MW within 24 hours from the date of the communication ie; 04.052022,with an intimation that KSEBL will take up the matter with the Ministry of

Power for issuance of appropriate orders and claim compensation from BALCO at the rate of power available in the market to meet the summer demand of KSEBL as per clause 29.1 of the agreement if M/s BALCO failed to do so.

4.99 The non-availability of power from BALCO has been intimated to the Principal Secretary, Power Department, Govt. of Kerala for bringing the matter to the notice of the MOP, Govt. of India for immediate intervention. Accordingly, the Principal Secretary, Power Department, Govt. of Kerala has intimated the non-availability of power from BALCO, to the MOP, Govt. of India.

4.100 Damages to the tune of Rs 35.81 crores was recovered during 2022-23 as per Clause 21.6.2 of the PSA for reduction in availability below normative availability.

4.101 In addition to the above as per clause 29.1 of the PSA entered between KSEBL and M/s BALCO, KSEBL recovered compensation to the tune of Rs 38.391 crores during 2022-23 which is included under the head 'Miscellaneous Receipts'.

4.102 In the MYT order dated 25.06.2022, Hon'ble Commission provisionally approved fixed charges as per the provisions of PSA by applying a depreciation of 2 % on the base fixed charges of previous year. Additional expenditure towards the installation of ECS and fly ash transportation is also included in the fixed charges. The variable charges are approved by applying the provisions of PSA on the average variable cost of first half of FY 2021- 22. The details of power purchase approved by Honourable Commission vide order dated 25.06.2022 is given in table below

Table D 41 Power purchase Cost approved for Commission approved PPA through DBFOO contracts (Rs Cr)								
Trader/Source	Energy at exbus	Energy at Kerala periphery	Fixed charges at exbus	Fixed charges	Variable charges at exbus	Variable charges	Other charges	Total
		A		B		C	D	E
		Rs Cr.	Rs/kWh	Rs Cr.	Rs/kWh	Rs Cr.	Rs Cr.	Rs Cr
Jindal Power Ltd-Bid I	1,497.96	1446.58	2.65	396.96	1.33	199.23	-19.56	576.63
Balco	748.98	723.29	3.18	238.18	1.18	88.38	-13.31	313.25
Sub Total	2246.94	2169.87		635.14		287.61	-32.87	889.88

4.103 The actual power purchase cost for these stations for FY 2022-23 are as follows

Table D 42 Power purchase Cost for Commission approved PPA (Rs Cr)									
Trader/Source	Energy at exbus	Energy at Kerala periphery	Fixed charges at exbus	Fixed charges	Variable charges at exbus	Variable charges	Incentive/ Damages	Other charges	Total
		A	B	C		D	E	F	G
		Rs Cr.	Rs/kWh	Rs Cr.	Rs/kWh	Rs Cr.	Rs Cr.	Rs Cr.	Rs Cr
Jindal Power Ltd-Bid I	1,496.66	1447.12	2.51	375.59	1.63	243.249	0.00	-74.26	544.58
Balco	244.56	235.13	3.16	77.31	1.22	28.75	-35.58	-27.79	42.70
Total	1,741.22	1,682.25	5.67	452.90	2.85	272.00	-35.58	-102.05	587.27

4.104 The increase in variable charges for M/s Jindal Power Ltd is due to the usage of imported coal during July 2022, September 2022, October 2022 and January 2023 to March 2023. Thus the total cost of Rs 587.27 crores may kindly be approved.

Power contracted through provisionally approved/ un approved DBFOO contracts

4.105 Honourable Commission vide order dated 25.06.2022 did not permit KSEB Ltd to continue scheduling of power from the following four provisionally approved/ unapproved contracts, (i) Purchase of 115MW of Power from Jhabuapower Ltd of L2 of Bid-1, (ii) 150 MW from Jindal Power Ltd of Bid-2, (iii) 100MW from Jindal India Thermal Power Ltd and (iv) 100 MW of power from Jhabua Power Ltd of Bid-2. In order to avoid any power shortage and other contingencies, the Commission permitted KSEB Ltd to make necessary arrangements for procuring 465 MW of equivalent power on medium term basis through competitive bidding as per Section 63 of the Electricity Act, 2003 and directed KSEBL to make necessary arrangements for procuring 465 MW from power plants through competitive bidding route who have assigned coal linkage as per the SHAKTI policy of the Central Government. In the MYT order Honorable Commission estimated the cost of power purchase for the 3363.29MU of power at Kerala periphery in lieu of the four unapproved DBFOO contracts at Rs 4.00/ kWh for the year 2022-23 for a total cost of Rs 1345.32 crores.

The relevant portion is extracted below

“6.112: In view of the foregoing facts and developments, the Commission cannot permit KSEB Ltd to continue scheduling of power from the following four provisionally approved/ unapproved contracts, (i) Purchase of 115MW of Power from Jhabuapower Ltd of L2 of Bid-1, (ii) 150 MW from Jindal Power Ltd of Bid-2, (iii) 100MW from Jindal India Power Ltd and (iv) 100 MW of power from Jhabua Power Ltd of Bid-2.

6.113: *The Commission noted that, during the MYT period 2022-23 to 2026-27, KSEB Ltd has proposed to schedule 465 MW and 3263.29 MU annually from the above four DBFOO contracts. As per the power requirement projected by KSEB Ltd in the present petition and in order to avoid any power shortage and other contingencies, the Commission hereby permits KSEB Ltd to make necessary arrangements for procuring 465 MW of equivalent power on medium term basis through competitive bidding as per Section 63 of the Electricity Act, 2003. Alternatively, KSEB Ltd may make necessary arrangements for procuring 465 MW from power plants through competitive bidding route who have assigned coal linkage as per the SHAKTI policy of the Central Government.”*

- 4.106 Considering the KSERC orders, it was decided to bill the four unapproved DBFOO contracts (Jhabua Power Ltd Bid 1-115 MW, Jindal Power Ltd Bid 2-150 MW, JITPL Bid 2-100 MW, Jhabua Power Ltd Bid 2-100 MW) from the billing month of July 2022 onwards **considering the lower of L1 rate of respective bids subject to a ceiling of Rs 4.00 per unit for the year 2022-23** till necessary arrangements for procuring 465 MW of equivalent power on medium term basis/long term basis is done to avoid any power shortage and other contingencies. Aggrieved by the Multi Year Tariff (MYT) order dt 25.06.2022 of KSERC, M/s Jhabua Power Limited (JPL) has filed an appeal on 29.07.2022 (DFR No.314/2022) before APTEL with KSERC as Respondent-1 and KSEBL as Respondent-2 with prayer to set aside the order dated 25.06.2022 passed by the State Commission with respect to orders on DBFOO purchase. **APTEL vide interim order dated 21.10.2022 and 10.02.2023 directed as a provisional and interim measure to pay to the generator the cost of electricity purchased at the rate of L1 in Bid#2 in terms of the PPA.** The billing of M/s Jhabua Power Ltd from the month of October 2022 was done by limiting to the L1 rate of respective Bids at Kerala periphery as per the direction of APTEL in its interim order dated 21.10.2022.
- 4.107 Aggrieved by the Multi Year Tariff (MYT) order dt 25.06.2022 of KSERC, M/s Jindal India Thermal Power Limited (JITPL) filed an appeal (DFR No.312/2022) before APTEL with KSERC as Respondent-1 and KSEBL as Respondent-2 with prayer to set aside the order dated 25.06.2022 passed by the State Commission with respect to orders on DBFOO purchase. **APTEL vide interim order dated 16.12.2022 directed as a provisional and interim measure to pay to the appellant, the cost of electricity purchased at the rate of L1 in Bid#2 in terms of the PPA.** The billing of JITPL was revised as per APTEL order from the month of December 2022 by limiting to the L1 rate of respective Bid at Kerala periphery as per the direction of APTEL.
- 4.108 In the meantime KSEBL has invited medium term power procurement tender for 500 MW RTC power for a period of 5 years on FOO basis from generators having linkage coal with commencement of supply from April 2023. The tender was floated in DEEP portal with Bid start date on 04.11.2022 with e-Tender No. KSEBL/Medium/Coal from Linkage Coal/22- 23/ET/179 and e-reverse auction No. KSEBL/Medium/Coal from Linkage

Coal/22-23/RA/173. In spite of wide publicity and extending the last date of submission of bid was extended several times as per the request of various generators.

4.109 Only two firms submitted their bids in DEEP portal with offered quantum totaling to 250 MW against requisitioned capacity of 500 MW, but failed to qualify the bid due to the reasons given below

Table D43 Outcome of bidding of Medium term during 07.01.2023			
Sl No	Name of firms participated in bid	Quantum Offered	Reason for Not Qualifying
	M/s. Jindal Power Limited	100 MW	Not submitted the original bid documents.
	M/s. RKM Powergen Pvt Limited	150 MW	Failed to meet the required criteria of having linkage coal

4.110 The Hon'ble Supreme Court vide order dt 10/2/2023 in the Appeal filed by KSERC against the APTEL order dated 20.11.2020 in the Hon'ble Supreme Court) directed the Commission (KSERC) to take a call and decide as expeditiously as possible (but in no case later than three months and both the parties shall cooperate in getting expeditious disposal of the pending case ie, by May 10th2023. The Hon'ble Supreme Court in Civil Appeal No. 41/2021 filed by this Commission on 10.02.2023 has issued a direction to the Commission that the Commission will take a call and decide O.A. No. 5 of 2021 (OP No.5/2021) as expeditiously as possible but in no case later than three months and both the parties shall cooperate in getting expeditious disposal of the pending O.A. It was also clarified that the present interim arrangement shall continue up to the date of the disposal of O.A. No. 5 of 2021 and for a further period of two weeks thereafter. Honourable Commission, after due proceedings, vide order dated 10/5/2023 has rejected the petition OP No.5/2021 filed by KSEB Ltd seeking to issue final orders with respect to drawal of power from generators of the following unapproved PSAs:

1. 115 MW of power from Jhabua Power Ltd (L-2 of Bid-1)
2. 150 MW of power from Jindal Power Ltd (Bid-2)
3. 100 MW of power from Jindal India Thermal Power Ltd (Bid-2)
4. 100 MW of power from Jhabua Power Ltd (Bid-2)

4.111 Aggrieved by the order KSEBL has filed its appeal (Appeal No.518) against the judgment of KSEERC before APTEL since this is adversely affecting the power position of Kerala. Subsequently , Government of Kerala issued a letter invoking Section 108 of Electricity Act, 2003 keeping in view the larger interest of the public, and directed to reconsider/review the orders in OP No. 5/2021 filed by KSEBL, in accordance with the policy of the Govt for the best interest of the state and public at large and the matter is now subjudice before the Honourable Commission for approval. (Review Petition RP3/2023.).

4.112 Thus it can be seen that despite best efforts, KSEBL could not enter medium term contracts for power in lieu of provisionally approved/unapproved DBFOO contracts. Hence in compliance to the direction in MYT order dated 25.06.2022, in order to avoid power contingencies KSEBL continued the arrangement of scheduling power from 115 MW of Jhabua Power Ltd under Bid I,100 MW of Jindal Power Ltd and 100 MW from JITPL under bid-2 during 2022-23. KSEBL remitted the payment to these generators as per the APTEL order dated 21.10.2022, 16.12.2022 & 17.04.2023. **APTEL vide interim order dated 21.10.2022,16.12.2022 ,10.02.2023, 17.04.2023 directed as a provisional and interim measure to pay to the generator the cost of electricity purchased at the rate of L1 in Bid#2 in terms of the PPA.**

4.113 The details of power purchase approved in lieu of DBFOO provisionally approved contracts /unapproved contracts is given below.

Table D 44 Power purchase in lieu of provisionally approved/unapproved DBFOO contracts							
Source	Energy approved in lieu of DBFOO provisionally approved/unapproved contracts			Actual			
	Energy at exbus (MU)	Energy at Kerala periphery (MU)	Power Purchase cost (Rs crores)	Energy at exbus (MU)	Energy at Kerala periphery (MU)	Power Purchase cost as per accounts (Rs crores)	Power Purchase cost paid (Rs crores)
Jhabua Power Ltd-Bid I*	861.33	831.78	332.71	834.93	807.42	327.80	295.29
Jindal Power Ltd-Bid II*	1123.47	1084.93	433.97	1122.49	1085.34	479.42	419.90
Jhabua Power Ltd-Bid II*	748.98	723.29	289.32	725.94	702.02	327.05	275.47
JITPL*Bid II	748.98	723.29	289.32	695.83	672.81	273.25	242.31
Sub Total	3482.76	3363.29	1345.32	3379.18	3267.59	1407.51	1232.98
			4.00				3.77

Power purchase through provisionally approved contracts -Jhabua Power Ltd (115 MW) under Bid 1

4.114 KSEBL scheduled 834.93 MU during 2022-23 from 115 MW of M/s Jhabua Power Ltd under Bid I. The L1 rate of Bid I(200 MW of Jindal Power Ltd) as per audited accounts is Rs 3.76 per unit. M/s Jhabua Power Ltd raised the claim of Rs 327.80 Cr for FY 2022-23 and KSEBL remitted Rs 295.29 crores at the rate of Rs 3.657 per unit at Kerala periphery. KSEBL admitted the power purchase cost of M/s Jhabua Power Ltd as per PSA for the first two months of FY 2022-23. Subsequent to the MYT order dated 25.06.2022, **the rates were admitted based on the** L1 rate of Bid I subjected to the conditions of PSA for the period from June 2022 to March 2023 in compliance with the APTEL order dated **21.10.2022, and 10.02.2023**. The variation in power purchase rate of M/s Jhabua Power Ltd from that of L1 rate is mainly due to the variation in power purchase cost for April 2022, May 2022 and due to the variations in transmission charges and losses as on bid date from that of L1 and the rate of power purchase is less than that of the bid rate of L1. Hence Honourable Commission may kindly consider the claim of Rs 295.29 Crores at the time of truing up with the liberty to claim the power purchase cost as per the final order to be issued by Honourable Commission on the approval of this contract which is subjudice before Honourable Commission (RP3/2024), as and when it materialises.

Power purchase through unapproved contracts -Jhabua Power Ltd (100 MW), Jindal Power Ltd (150 MW), JITPL (100 MW) under Bid 2

4.115 KSEBL scheduled 2544.26 MU from 100 MW of Jhabua Power Ltd, 150 MW of Jindal Power Ltd and 100 MW of JITPL under Bid II. As stated above, Honourable APTEL vide interim order dated 21.10.2022,16.12.2022 ,10.02.2023, 17.04.2023 directed as a provisional and interim measure to pay to the generator the cost of electricity purchased at the rate of L1 in Bid#2 in terms of the PSA. It may please be seen that the actual availability of M/s BALCO was only 29% and as a result damages to the tune of Rs 35.81 crores d was levied on M/s BALCO during FY 2022-23. Hence the rate of L1 Bidder of Bid II M/s BALCO could not be considered for determining the power purchase cost of other bidders of Bid-II. Hence KSEBL effected the payment@ L1 (M/s BALCO) rate of Bid II as on bid date at Rs 4.29 per unit in terms of the PSA for the abovementioned stations during 2022-23.

4.116 The generators raised a claim amounting to Rs 1079.72 Cr. KSEBL remitted the payment of these generators @ L1 (M/s BALCO) rate of Bid II as on bid date at Rs 4.29 per unit in terms of the PSA for the above-mentioned stations during 2022-23. The amount claimed by M/s JITPL (100 MW), M/s Jindal Power Ltd (150 MW), M/s Jhabua Power Ltd (100 MW) under Bid –II and amount remitted to the generators by limiting the rate as mentioned in the paragraph above is given in table below

Table D45 Power purchase cost of generating stations through DBFOO contracts for which PPA not approved				
Trader/Source	Energy at exbus	Energy at Kerala periphery	Power Purchase Cost for FY 2022-23 (Rs Cr)	
			Claim of generator	Amount paid by KSEBL limiting the rate to 4.29 at Kerala periphery in terms of PSA
	MU	MU	Rs Cr	Rs Cr
Jindal Power Ltd-Bid II	1122.49	1085.34	479.42	419.90
Jhabua Power Ltd-Bid II	725.94	702.02	327.05	275.47
JITPL-Bid II	695.83	672.81	273.25	242.31
Total	2544.26	2460.17	1079.72	937.69

4.117 Honourable Commission may please note that the per unit rate is much lesser than the market price and the rate approved by the Commission in MYT order. Hence Honourable Commission may kindly consider the claim of Rs 937.69 Crores at the time of truing up with the liberty to claim the power purchase cost as per the final orders in this matter as and when the same materialises.

4.118 The true up claim for stations under DBFOO contracts is given below.

Table D46 True up claim of Power purchase cost towards power contracted through DBFOO guidelines for FY 2022-23		
Source	As per accounts	True up claim
	Rs Cr	
Jindal Power Ltd-Bid I	544.58	544.58
Jhabua Power Ltd-PSA I	327.80	295.29
Jindal Power Ltd-Bid II	479.42	419.90
Jhabua Power Ltd-Bid II	327.05	275.47
JITPL-Bid II	273.25	242.31
BALCO-Bid II	42.70	42.70
Total	1994.79	1820.25

4.119 Considering the above, Hon'ble Commission may kindly approve the true-up claim as per this petition.

Power Purchase 200MW wind power with the Solar Energy Corporation of India Limited on long-term Basis

4.120 KSEBL entered PSA with SECI to purchase 200 MW of wind energy on long Term basis for a period of 25 years. 75 MW of power starts scheduling from March 2021 onwards. Honourable Commission vide order dated 19.02.2020 approved Power Sale Agreement (PSA) for 200 MW wind power with SECI dated 14.06.2019 and its amendment dated 12.12.2019, for a period of 25 years from the Scheduled Commissioning Date (SCD) or from the date of full commissioning of the projects, whichever is earlier, at the tariff as below. (a) @Rs 2.83/ kWh from the Scheduled Commissioning Date (SCD) until the commissioning of the cumulative awarded capacity/ cumulative capacity and at the pooled tariff arrived @Rs 2.83/ kWh as per the Schedule-1 of the PSA dated 14th June 2019 from the commissioning of the cumulative awarded capacity/ cumulative capacity commissioned. Honourable Commission vide order dated 28.10.2021 approved the trading margin of Rs 0.07/kWh in the Power Sale Agreement for 200MW wind power with Solar Energy Corporation of India Limited on long term basis. Honourable Commission had approved 210 MU from 75 MW PSA @ 2.83 per unit only without including trade margin. KSEBL procured 247.30 MU @ 2.89 per unit during the year 2022-23 for a power purchase cost of 71.48 Cr which is inclusive of LC charges amounting to Rs 121291/-

Power purchase considered under short term/medium term contracts

Medium Term contracts

4.121 In order to meet the peak demand during summer months, KSEB Ltd has taken arrangements for procuring 270 MW RTC power on medium term basis, through PTC, the Aggregator appointed by MoP under Pilot Scheme II, for the period from January to June in a year for three years with the date of commencement of supply from 01-01-2022 with the approval of the Honourable Commission (order dated 07.10.2021) at a rate of Rs 3.31/unit. As per the provisions of PSA the variable charges are to be escalated based on inflation indices and an increase of 2 paise per unit is expected for subsequent years. Honourable Commission in MYT order dated 25.06.2022 approved 962.75 MU at Kerala periphery for a total power purchase cost of Rs 318.67 crores @ Rs 3.31 per unit at exbus. KSEBL scheduled 810.05 MU at Kerala periphery and the corresponding power purchase cost as per accounts is Rs 289.65 crores.

4.122 As per clause 11.6.4 of the PSA- The Base Variable Charge specified in Clause 11.6.2 shall be increased for every Accounting Year following the Base Year so as to reflect 50% (fifty per cent) of the variation in WPI occurring between January 31 immediately preceding the Base Year and January 31 immediately preceding the Accounting Year for which such revision is undertaken.

- 4.123 As per the PSA, the Fixed Charge is Rs.1.63/kWh which is constant throughout the contract period and the variable charge is calculated in accordance with Clause 11.6.2, 11.6.3 and 11.6.4 of the PSA.
- 4.124 As per Clause 11.6.4 of the PSA, the variable charge as on Bid date is Rs 1.63 per unit. There was an escalation of 20.64 % inflation from January 2019 to January 2022 and thus the variable charge for April 2022 was Rs 1.80 per unit after escalating the rate of variable charge by 10.32% (50 % of increase in WPI). The rate for 2022-23 as per PSA was Rs 3.43 per unit.
- 4.125 The availability from M/s JITPL during June 2022 was only 14.89 MU at Kerala periphery ie only 7.92%. As per clause 11.5.2, in the event the availability is less than the normative availability, the fixed charge for such month shall be reduced to the extent of shortfall in normative availability and in addition, any reduction below the normative availability shall be multiplied by a factor of 0.25 of the fixed charges which is reduced on account of short fall in availability below normative availability. Thus KSEBL deducted Rs 5.57 crores as damages for the reduction in availability during June 2022-23.
- 4.126 The Ministry of Power (MoP) vide order dated 26.05.2022 had issued the direction to the generating companies having domestic coal based plants supplying electricity under Section 63 of the Electricity Act 2003. Under this direction, such power plants shall use imported coal for blending up to 31.03.2023 and any incremental expenditure on account of coal would be pass through in the tariff and also directed the State Government/Discoms to use the methodology issued for supplying power under section 63 of the Electricity Act 2003 to calculate the compensation due to blending of imported coal with domestic coal.
- 4.127 The Ministry of Power vide notification dated 01.06.2022 had stated that those GENCOs/PPs who either do not place their indents with Coal India Ltd (CIL) by 03.06.2022 or have not initiated their own process of purchase of imported coal for blending purpose, will be allocated only 70% of the quantity of domestic coal. Accordingly, JITPL being domestic coal based plant, had given requisition to CIL for import of coal for blending with domestic coal for the Quarter-2 (July 2022 to Sep 2022) on 03.06.2022.
- 4.128 Thereafter vide the order dated 09.01.2023, MoP had issued directions to the Central/State Gencos and IPPs to take necessary action to import coal for blending at the rate of 6% by weight till September 2023.
- 4.129 In lieu of this JITPL had blended imported coal with domestic coal as per the coal received in the plant from 01.02.2023 onwards and had claimed this impact on tariff from February 2023 onwards up to April 2023 amounting to Rs.3,86,53,897/- and Rs.5,78,18,622/- respectively for Feb 2023 and March 2023. KSEBL has not admitted the imported coal compensation claim initially. Meanwhile the Aggregator M/s. PTC India Ltd had uploaded the invoice for the claim of imported coal compensation for Feb 2023

and March 2023 amounting to Rs.3,86,53,897/- and Rs.5,78,18,622/- respectively in PRAAPTI portal. Since passing of the imported coal compensation to beneficiaries is not allowed under lumpsum tariff, KSEBL had returned the said invoices in PRAAPTI portal.

4.130 Thereafter JITPL uploaded the invoice of imported coal compensation for April 2023 in PRAAPTI and KSEBL had returned the same. But the returned invoice of April 2023 amounting to Rs.85,92,995/- was resubmitted by PTC India Ltd in PRAAPTI, responding that MoP has issued order on 21.03.2023 giving clarification that the additional cost impact due to blending of imported coal has to be passed through by DISCOMs. Therefore, JITPL raise the dispute against the reply of KSEBL and requested to pay the claimed amount of Rs.85,92,995/-.

4.131 M/s JITPL has forwarded the MoP letter dated 21.03.2023 which gives clarification on the directions issued by MoP on 26.05.2022 to Generating Companies having coal based plants supplying Electricity under Section 63 of the Electricity Act 2003. As per point 3(b) of the MoP letter dated 21.03.2023 that- In regard to disputes in processing the compensation claims in case of PPAs with single part tariff, it may be noted that a Model Agreement for Procurement of Medium Term Power on Finance Own Operate (FOO) basis, issued in January 2019, has provision for break-up of lumpsum tariff into fixed charges and variable charges. It provides that the base variable charge comprises generation cost (ECR), transmission charges and transmission losses. It also provides that the base fixed charge shall be equal to base variable charge excluding transmission charges and transmission losses. Therefore, there is no issue in having the ECR component of the tariff in the PPAs, which are already based on the MoP's Model Agreement. In this regard it is clarified that in PPAs with single part tariff where break-up of ECR component is not available, the ECR shall be calculated as per provisions of ECR calculation in CERC(Terms and Conditions of Tariff), Regulations 2019.

4.132 As per the methodology proposed by the MoP for calculation of compensation due to blending of imported coal the following supporting documents are submitted by JITPL.

1. Agreement executed between CIL and JITPL on 30.06.2022 for the supply of imported coal.
2. Acceptance of the agreement for import of coal by CIL on behalf of JITPL for delivery at Paradeep port.
3. The coal invoice of Coal India Ltd (Invoice No.9560000074 dated 20.12.2022) dispatching 43680 MT coal to JITPL and the corresponding transportation invoices lifting this coal from Paradeep port to JITPL power plant.
4. The certificate of Quality Council of India stating the GCV of the imported coal.
5. Statutory Auditor certificate of all facts and figures and computation in respect of power supplied under Pilot Scheme-II using imported coal.
6. Copy of the MIS report submitted to CEA and MoP about the use of imported coal through National Power Portal on daily basis.

4.133 Based on the above documents KSEBL admitted the compensation for February and March 2023, due to blending of imported coal in the domestic coal based generating stations supplying power under Sec-63 of Electricity Act 2003 based on the methodology adopted by the MoP for calculating the impact on tariff of mandatory blending of imported coal in consultation with CEA (vide the MoP notification No.23/13/2021-R&R(Pt-1) dated 26.05.2022. The details of power purchase through medium term contract is given in table below.

Table D 47 Power Purchase cost through Medium term contracts		
Sl No	Particulars	Quantum
1	Energy at exbus(MU)	841.31
2	Energy at Kerala periphery(MU)	810.05
3	Capacity charges (Rs Cr)	132.31
4	Energy Charges (Rs Cr)	161.08
5	RLDC (Rs Cr)	0.01
6	Incentive (Rs Cr)	2.94
7	Damages (Rs Cr)	-8.28
8	Others(LC charges, open access charges)(Rs Cr)	1.58
	Total Power Purchase Cost(Rs Cr)	289.65

4.134 Honorable Commission may kindly approve the true up claim of Rs 289.65 crores towards the power purchase cost 270 MW RTC power on medium term basis, through PTC.

Short term contracts

4.135 Hon'ble Commission vide order dated 25.06.2022 provisionally approved peak shortage of 164.56 MU at Rs 4.00 per unit for a total power purchase cost of Rs 65.82 crores. Subsequently, the Commission vide order dated 23.09.2022, adopted the tariff discovered in accordance with Section 63 of the Electricity Act 2003, and also granted approval for entering into short term power procurement arrangement with NVVNL for procurement of 100MW RTC power during March 2023 as per the price discovered through DEEP portal on 26.07.2022.

4.136 Further, Honorable Commission vide order dated 17.01.2023 adopted the tariff discovered in accordance with Section 63 of the Electricity Act 2003 at the price discovered in the DEEP portal on 14.12.2022, and approved short term power procurement arrangement with M/s TATA Power Trading Corporations Ltd (TPTCL), M/s PTC India Ltd and M/s Jindal Power Ltd for meeting the anticipated power shortages for the months of February 2023 and March 2023.

4.137 Thus in order to meet the deficit during summer months, with the approval of Honorable Commission as mentioned above, KSEB Ltd entered into short term power procurement arrangement with Tata Power Trading corporation Ltd(TPTCL), NTPC

Vidyuth Vyaapar Nigam Ltd (NVVNL), PTC India Ltd (PTC), Jindal Power Ltd, as detailed below.

Table D48. Energy purchased thru short term contracts for FY 22-23(MU)					
Sl No	Period	Duration (Hrs)	Quantum (MW)	Rate at Kerala periphery	Source of Power
1	M/s Tata Power Trading Corporation Ltd(TPTCL)				
	01.02.2023 to 28.02.2023	RTC	45	Rs 6.15/unit	NBVL, Odisha
	01.03.2023 to 31.03.2023	14 to 24	50	Rs 7.18/unit	PPGCL, UP
2	M/s PTC India Ltd				
	01.03.2023 to 31.03.2023	14 to 24	50	Rs 7.18/unit	JNSTPP,MP
3	M/s Jindal Power Ltd				
	01.02.2023 to 28.02.2023	RTC	55	Rs 6.15/unit	
4	NTPC Vidyut Vyapar Nigam Ltd(NVVNL)				
	01.03.2023 to 31.03.2023	RTC	100	Rs 8.03/unit	IL & FS Tamilnad Power Company Ltd

4.138 The details of energy purchased from short term contracts during FY 2022-23 is given in table below

Table D49. Power purchased through short term contracts						
SL No	Particulars	SR periphery	KSEBL periphery	PGCIL loss	Power Purchase Cost	Rate
		MU	MU	MU	Rs Cr	Rs/kWh
1	Purchase from Jindal Power Ltd	37.91	36.43	1.48	22.40	6.15
2	Purchase from PPGCL through TPTCL	13.4	12.91	0.49	9.27	7.18
3	Purchase from JNSTPP Through PTC	14.44	13.91	0.54	9.98	7.18
4	Purchase from NBVL through TPTCL	31.01	29.8	1.21	18.33	6.15
5	Purchase from IL&FS Tamilnad Power Company Ltd through NVVNL	67.98	65.47	2.51	52.58	8.03
	Sub Total	164.74	158.51	6.23	112.54	

Power Purchase from Exchanges:-

4.139 In order to meet the peak deficit and also for utilising the market price optimally KSEBL purchased 363.19 Mu during FY 2022-23. Table below shows the details of energy

purchased from exchanges (IEX, PXIL and HPX). Average rate of purchase is Rs 5.93 per unit at Kerala periphery.

Table D50 Energy purchased in MU through exchanges				
Particulars	SR periphery	KSEBL periphery	PP Cost	Rate
Power exchanges	MU	MU	Rs Cr	Rs/kWh
IEX				
DAM	145.09	139.57	62.03	4.44
TAM	19.48	18.79	21.02	11.19
RTM	86.13	82.97	35.69	4.30
GDAM	47.11	45.41	22.09	4.87
GTAM	14.68	14.11	7.61	5.39
Subtotal	312.49	300.85	148.45	4.93
PXIL				
TAM	30.81	29.78	42.72	14.34
GTAM	6.42	6.17	3.34	5.42
Subtotal	37.23	35.95	46.06	12.81
HPX				
TAM	14.11	13.54	14.19	10.48
GTAM	13.37	12.85	6.85	5.33
Subtotal	27.48	26.39	21.04	7.97
Total Power purchase	377.20	363.19	215.55	5.93

4.140 The power purchase cost associated with energy exchanges is as shown in table below:

Table D51 : Power purchase through exchanges			
Sl No	Source	Energy* (MU)	Cost (Rs Cr)
1	IEX	300.85	148.45
2	PXIL	35.95	46.06
3	HPX	26.39	21.04
4	Sub total	363.19	215.55
	* Energy at Kerala periphery		

4.141 Honourable Commission may please note that the price discovered in the market during 2022-23 was very high owing to the coal blending. The month wise price discovered in day ahead market of IEX is given in table below

Table D 52 Monthwise IEX rates for FY 2022-23					
Month	RTC	Evening	Day	Night	Morning
April	10.07	10.97	8.36	11.30	9.56
May	6.76	8.13	5.63	7.73	4.96
June	6.49	8.31	4.49	8.31	4.09

July	5.41	8.44	3.21	5.56	4.43
August	5.17	7.93	3.41	4.79	4.76
September	5.63	8.62	3.78	5.27	5.02
October	3.83	5.79	2.87	3.22	3.63
November	4.60	5.86	4.30	3.49	5.16
December	5.24	6.34	5.38	2.87	7.47
January	6.18	7.77	6.43	2.96	8.99
February	6.68	8.05	5.59	4.82	9.79
March	5.43	6.73	4.12	5.12	6.29

Swap arrangement:

4.142 KSEBL entered banking arrangements with the traders, M/s Arunachal Pradesh Power Corporation Pvt Ltd and M/s Kreate Energy (I) Pvt Ltd for banking of power during the period from 01.02.2023 to 30.09.2023 for managing the power deficit during Summer 2023. The Commission vide the Order dated 19.10.2022 in Petition Op No. 58/2022 had approved the following SWAP transactions to meet the summer demand of the State.

(a) SWAP transaction through M/s Arunachal Pradesh Power Corporation Pvt Ltd

- 200 MW RTC power in the month of March 2023, which is to be returned from 16.06.2023 to 30.06.2023. and 200MW RTC power in the month of April 2023, which is to be returned from 01.07.2023 to 31.07.2023.
- 200MW RTC power in the month of May 2023 (from, 01.05.023 to 20.05.2023) which is to be returned from August 2023 to September 2023.

(b) SWAP transaction through M/s Kreate Energy (I) Pvt Ltd

- 50MW power in the month of February 2023 during 14:00 hrs to 22:00 hrs, which is to be returned from 16.06.2023 to 30.06.2023.
- 50MW RTC power in the month of March 2023, which is to be returned from 01.07.2023 to 15.07.2023. - 50MW power in the month of March 2023, during 14:00 hrs to 23:00 hrs, which is to be returned from 01.07.2023 to 15.07.2023.
- 75MW power in the month of February 2023, which is to be returned from 16.06.2023 to 15.07.2023

4.143 In addition to the above KSEBL returned energy through banking arrangements with M/s BRPL through M/S. Arunachal Pradesh Power Corporation Pvt Ltd. with the approval of Honourable Commission. The summary of the banking arrangements including its supply period, trading margin, return period, quantum of power to be returned etc are indicated in the table below.

Table D53 Energy availed through banking arrangements

Banking arrangement with Arunachal Pradesh Power Corporation Ltd

Utilities	Supply to KSEBL			Return from KSEBL						Trading Margin (Paise/kWh)	
	Supply Period	Duration (Hrs)	Quantum (MW)	Return Period	Duration (Hrs)						Return (%)
					0-3	3--6	6--18	18-22	22-24		
Arunachal Pradesh Power Corporation Ltd	Mar-23	RTC	200	16.06.2023 to 30.06.2023	100	100.13	100	50	100	107.91%	
	Apr-23	RTC	200	01.07.2023 to 15.07.2023	100	150.13	250	50	150		
				16.07.2023 to 31.07.2023	100	150.13	250	50	150		
	01.05.2023 to 20.05.2023	RTC	Jul-00	Aug-23	100	150.13	246	50	150		
				Sep-23	100	150.13	250	50	100		

Banking arrangement with Kreate Energy(I) Pvt Ltd

Utilites	Supply to KSEBL			Return from KSEBL						Trading Margin (Paise/kWh)	
	Supply Period	Duration (Hrs)	Quantum (MW)	Return Period	Duration (Hrs)						Return (%)
					0-3	3--6	6--18	18-22	22-24		
Kreate Energy(I) Pvt Ltd-BRPL	Feb-23	14-22	50	16-06-2023 to 30.06.2023	240	240.11	16.33	16.33	240.11	105	
	Mar-23	RTC	50	01.07.2023 to 15.07.2023	240	240.11	16.33	16.33	240.11		
14-23		50									
Kreate Energy(I) Pvt Ltd-BYPL	Feb-23	14-24	75	16-06-2023 to 15.07.2023	86	50	8	15	86	3	

Banking arrangement with BRPL through APPCL

	Supply to KSEBL			Return from KSEBL				Trading Margin (Paise/kWh)
	Supply Period	Duration (Hrs)	Quantum (MW)	Return Period	Duration (Hrs)		Return (%)	
					23.00 to 1.00	01.00 to 04.00		
				15.06.22 to 30.06.2022	123.48	123.48	103	2.75
	Mar-22	18-24	100	01.07.2022 to 15.07.2022	124.48	123.48	103	2.75

4.144 Table below shows the details of power received by KSEBL through swap arrangement.

Table D54 .Power received through banking arrangement for 2022-23

Utility	Trader	Period	Energy received at exbus	Energy received at Kerala periphery	Loss
			MU	MU	MU
PSPCL	Arunachal Pradesh Power Corporation Ltd	Mar-23	148.80	148.7	0.06
BRPL	Kreate Energy(I) Pvt Ltd	Feb-23	11.2	10.88	0.32
		Mar-23	51.15	51.13	0.02

BYPL	Kreate Energy(I) Pvt Ltd	Feb-23	21	20.23	0.77
Total			232.2	231.0	1.16

4.145 KSEBL returned 19.1394 MU during 2022-23 to M/s BRPL through M/S. Arunachal Pradesh Power Corporation Pvt Ltd for the power availed in March 2022. The expenditure on account of banking transactions for FY 2022-23 was 0.72 crores. A provision of receivables of Rs 86.40 crores is provided in the annual accounts of FY 2022-23 as a provision against the energy availed in FY 2022-23 which is to be returned during FY 2023-24. It may please be noted that the energy was settled during FY 2023-24, and hence KSEBL is not claiming the same in true up petition.

Deviation Settlement Mechanism (DSM):

4.146 KSEB had delivered a energy of 216.93 MU export to the grid and availed 213.07 MU through deviation settlement mechanism (DSM). **Table below** shows the details of energy transacted through deviation settlement mechanism during the year 2022-23.

Table D55 Deviation for the year 2022-23			
Month	Import in MU	Export in MU	Net Deviation in MU
April-22	20.48	-22.69	-2.21
May-22	27.55	-16.39	11.16
June-22	23.69	-14.76	8.93
July-22	23.83	-23.29	0.54
August-22	13.27	-42.44	-29.17
September-22	16.32	-31.75	-15.43
October-22	26.10	-15.71	10.39
November-22	25.98	-11.13	14.85
December-22	10.67	-9.76	0.90
January-23	9.32	-6.08	3.24
February-23	9.44	-7.98	1.46
March-23	6.44	-14.96	-8.52
Total	213.07	-216.93	-3.86

4.147 An amount of Rs 14.96 crores was accounted for import as power purchase cost and an amount of Rs 53.52 crores was accounted in the Misc receipts /charges from inter-state trading of energy as revenue in Revenue from sales of power for DSM export.

4.148 In view of the details furnished above, it may kindly be seen that the shortfall in energy availability from approved sources had been effectively met through procurement of power from various sources at optimum cost. The details of purchases through long-term, short-term contracts are given as **Annexure D7**. The summary of power Purchase from power exchanges and power transfer through deviation settlement mechanism against quantum approved towards short term contracts for FY 2022-23 is furnished below:

Table D 56: Details of power purchase against approval for short term procurement								
Source	Approval			Actual			Difference	
	Energy (MU)	Cost (Rs Cr)	Rate Rs/unit)	Energy (MU)	Cost (Rs Cr)	Rate Rs/unit)	Energy (MU)	Cost (Rs Cr)
Short Term	164.56	65.82	4	158.51	112.54	7.10		
IEX/PXIL				363.19	215.55	5.93		
Deviation Settlement Mechanism				-3.86	14.96			
SWAP				230.99	0.72			
Total	164.56	65.82	4	748.83	343.77	4.59	584.27	277.95

Energy sale outside the State: -

4.149 Hon'ble Commission approved sale of surplus power of 1946.22 MU for a total revenue of Rs 729.83 Cr. KSEBL sold 1813.11 MU of power through exchanges during 2022-23 for a total revenue of 1171.93 Cr as given in table below.

Table D57 Energy sale o/s State					
SI No	Source	Energy at KSEB periphery	Total Amount	Rate	Expenditure
		MU	Rs. Cr.	Rs/Unit	Rs Cr
1	IEX TAM	30.05	17.30	5.76	4.55
2	IEX DAM	999.66	631.29	6.32	
3	IEX RTM	632.19	438.93	6.94	
4	IEX GDAM	24.19	19.60	8.10	
5	IEX Total	1686.09	1107.11	6.57	
6	PXIL TAM	114.16	54.74	4.80	
7	PXIL DAM	11.28	9.49	8.42	
8	PXIL RTM	0.10	0.12	12.00	
9	PXIL Total	125.53	64.35	5.13	
10	HPX TAM	1.48	0.46	3.12	
	Total	1813.11	1171.93	6.46	

4.150 Thus, KSEBL sold 1813.11 MU for a total amount of Rs 1171.93 Cr. @ Rs 6.46 per unit against the approved quantum of 1946.22 MU for Rs 729.83 Cr and the expenditure associated with sale through power exchanges amounts to Rs 4.55 Cr.

4.151 It may kindly be noted that KSEB Ltd could realise a higher rate from sales through short term market than the rate derived while procuring power through short term market (Rs 5.93 per unit). Hence Honourable Commission may kindly approve the expenditure associated with the sale amounting to Rs 4.55 Cr.

Inter-state Transmission charges paid to PGCIL:

- 4.152 Hon'ble Commission, vide order dated 25.06.2022, approved interstate transmission charges of Rs 760.55 Cr for 2022-23. Actual transmission charges incurred by KSEBL during 2022-23, as per audited accounts, were Rs. 1788.40 Cr. which may kindly be approved.
- 4.153 Honourable CERC has issued the Central Electricity Regulatory Commission (Sharing of Inter-State Transmission Charges and Losses) Regulations, 2020 on 04.05.2020 with effect from November 2020. As per the new regulations the transmission charges for Kerala increases considerably by about 80% as was existed before 2020. Actual transmission charges incurred by KSEBL during 2021-22, as per audited accounts, were Rs. 1062.13 Cr.
- 4.154 The increase in transmission charges during 2022-23 was mainly due to the impact of (Sharing of Inter-State Transmission Charges and Losses) Regulations, 2020 as well as inclusion of the transmission charges for Raigarh-Pugalur -Thrissur line and other transmission assets. The Power Grid Corporation of India Limited had filed Tariff petitions before Honourable CERC For Determination of Tariff of Raigarh Pugalur Trichur HVDC system under the CERC terms and conditions of the Tariff Regulation 2019 from the Date of COD to 31.03.2024. In the Tariff petitions (685/TT/2020). Honorable CERC vide order dated as 29.09.2022 allowed the annual, fixed charge, (AFC) for 2019-24, considering 30% of the yearly transmission charges (YTC) as National Component and 70% of YTC as Regional Component with effect from 1/11 /2020. The request of SR beneficiaries submitted before CERC during the hearing of the petition to consider the asset as National Component was denied resulted in significant increase in the transmission charges to be paid by SR beneficiaries. The capital investment of Raigarh Pugalur Thrissur HVDC alone was Rs 22,000 Cr. Since the capital investment of this scheme is very huge, the transmission tariff impact on SR beneficiaries is huge.
- 4.155 With the commissioning of Raigarh-Pugalur-Thrissur HVDC scheme, the transmission charges payable by KSEBL has increased by about Rs. 26 Cr per month. Since the CERC order was issued on 29.09.2022, (FY 2022-23) the transmission charges of Raigarh Pugalur Thrissur line and arrear amounting Rs 215 Cr, towards the period of 2019-to 2022 towards Raigarh Pugalur Trissur transmission scheme and 71.74 crores towards other asset addition amounting to Rs 286.67 Cr was paid.
- 4.156 Honorable Commission may kindly approve the true up claim of transmission charges amounting Rs. 1788.40 Cr.
- 4.157 The total power purchase cost as per annual accounts is Rs 11240.62 Cr. As stated in above paragraphs Rs 179.27 Cr towards the unadmitted claims/withheld amount towards Jhabua Power Ltd(115 MW), Jindal Power Ltd(150 MW),Jhabua Power Ltd-II(100 MW) ,Jindal India Thermal Power Ltd (100 MW) is not claiming in this petition. Further provision towards energy availed through banking arrangement to be returned

during FY2022-23 amounting to Rs 86.403Cr is also not claiming in the truing up petition. Hence Hon'ble Commission may kindly true up the total power purchase cost amounting to Rs 10979.68 Cr as detailed in **Annexure D 7**, summary of which is provided in table below.

Table D58 True up claim of Power Purchase cost for the year 2022-23	
Particulars	Amount (Rs Cr)
Power Purchase as per accounts	11,240.62
Less provision towards energy availed through banking arrangement to be returned during FY2022-23	86.40
Less provision for Jhabua Power Ltd 115 MW towards unadmitted claims and disallowance	32.51
Less provision for Jhabua Power Ltd 100 MW towards unadmitted claims and disallowance vide order dated 26.08.2020	51.58
Less provision for Jindal Power Ltd 150 MW towards disallowance vide order dated 26.08.2020	59.52
Less provision for JITPL100 MW towards unadmitted claims and disallowance vide order dated 26.08.2020	30.93
Power Purchase claimed in the truing up petition	10,979.68
Energy at Kerala periphery for FY 2021-22	21133.30
Rate per unit	5.20

The source wise details of power purchase was detailed in Form D3.1 of the petition

4.8 O&M Expenses:

4.158 Honorable Commission approved Rs 3345. 05 Cr towards O&M expenses which comprised of Rs 2844.43 crores towards Employee expenses and A&G expenses and Rs 500.62 Cr towards R&M expenses for FY 2022-23.. Actual O&M expenses for SBU D for the year 2022-23 has been Rs. 4154.87 Cr (net of capitalization) as detailed in Form D3.4.

4.159 Cost Drivers: Tariff Regulation, 2021 considers the following cost drivers for determination of normative O&M expenses. The growth of the drivers is given in the Table below.

Table D 59 Cost drivers of O &M Expenses									
Item	FY14	FY15	FY16	FY17	FY-18	FY-19	FY-20	FY-21	FY 22
Consumers (Nos)	11192890	11430895	11668031	11994816	12276321	12552206	12826185	13142910	13422642
Dist Transformers (Nos)	67546	71199	73460	75759	77724	79876	81470	83465	85594
HT Lines (KM)	53579	57309	59476.66	61398.43	62855	64393.5	64808.75	66648	68972.66
LT lines(km)	268753	268753	278574	283811	286784	289804	293280	295921	299538
Energy Sales (MU)	17454	18426	19325.07	20087.55	20998	22369.59	22728.34	22413.03	25602.22

4.160 The parameters of FY-22 are taken for computing normative O&M expenses. The norms for determining the O&M expenses for FY 2022-23 as depicted in Tariff regulations 2021 and normative values of employee cost and A&G expenses is given in table below:

Table D 60: Normative O& M expenses for 2022-23		
No	Parameters	Quantity
	Norms	
1	No. of consumers (Rs. Lakh/1000)	4.282
2	Dist Transformers (Rs. Lakh/DTr)	0.845
3	Length of HT line (Rs. Lakh/km)	0.837
4	Length of LT line (Rs. Lakh/km)	0.183
5	Energy sales (Rs/unit)	0.189
	Parameters	
6	No. of consumers as on 31.03.2022	13422642
7	No. of Dist Transformers (Nos) as on 31.03.2022	85594
8	Length of HT Line (Km) as on 31.03.2022	68973
9	Length of LT line (km) as on 31.03.2022	299538
10	Energy sales in MU during 2021-22	25602

4.161 Eventhough Honorable Commission in the Tariff Regulations considered an escalation rate of 4.454 % for determining the norms for the control period 2022-27, Annexure 7 of Tariff Regulation allows actual escalation rates based on actual inflation existing for each year of control period at the time of truing up of the considered financial year. The actual inflation rates is given in table below.

Table D. 61 Escalation Rate based on actual inflationary index for FY 2022-23			
SI No	Escalation factors/year	2021-22	2022-23
1	CPI Industrial Workers)2001=100	356.06	377.62
2	Annual CPI Increase (%)	5.13	6.05
3	WPI(2011-12) series	139.4	152.5
4	Annual WPI Increase (%)	12.97	9.40
5	CPI:WPI (70:30) weightage (%)	7.48	7.06

4.162 The norms based on actual escalation rate for FY 2022-23 @ 7.06% and the norms based on actual inflation is given in table below

Table D 62: Normative O& M expenses for 2022-23				
No	Parameters	Norms for FY 2021-22	Actual Escalation Rate	Norms for FY 2022-23 based on actual inflation
1	No. of consumers (Rs. Lakh/1000)	4.1	7.06	4.389
2	Dist Transformers (Rs. Lakh/DTr)	0.809	7.06	0.866
3	Length of HT line (Rs. Lakh/km)	0.801	7.06	0.858
4	Length of LT line (Rs. Lakh/km)	0.175	7.06	0.187
5	Energy sales (Rs/unit)	0.181	7.06	0.194

4.163 The normative O&M expenses based on the norms specified in above table is given below

Table D 63: Normative Employee expenses and A&G expenses for 2022-23		
No	Parameters	Quantity
	Norms	
1	No. of consumers (Rs. Lakh/1000)	4.389
2	Dist Transformers (Rs. Lakh/DTr)	0.866
3	Length of HT line (Rs. Lakh/km)	0.858
4	Length of LT line (Rs. Lakh/km)	0.187
5	Energy sales (Rs/unit)	0.194
	Parameters	
6	No. of consumers	13422642
7	No. of Dist Transformers (Nos)	85594
8	Length of HT Line (Km)	68973
	Length of LT line (km)	299538
9	Energy sales in MU	25602
10	Employee, A&G Cost (Rs Cr)	2978.97

4.164 As per Annexure 7 of Tariff regulations 2021, R&M expenses of Distribution licensees is:

- (i) *The R&M expenses for the distribution licensees is benchmarked at 4% of value of opening Distribution gross fixed assets (excluding the value of land and land under lease) as on 1st April of respective financial year.*

4.165 Based on the above normative R&M expense is calculated as follows:

Table D 64 Normative R&M expenses (Rs Cr.)	
Particulars	Amount (Rs Cr)
Opening GFA as on 01.04.2023 (Rs Cr.)	14365.04
Less land	22.42
R& M @ 4% on opening GFA	573.70

4.166 Thus, O&M expenses sought for true up as per the norms prescribed in the Tariff Regulations, 2021 amounts to Rs. 3552.67 Cr. (Rs. 2978.97 Cr+ Rs 573.70 Cr). The actual O&M expenses for

the year 2022-23 was Rs 4167.97 crores. A comparison of approved normative and actual O&M expenses is given in table below:

Table – D65 : Components of O&M Expenses for SBU D (Rs Cr)							
No	Particulars	Approved	As per accounts	Normative	True up claim	Variation of true up claim from approval	Remarks
1	Employee Cost & A&G Expenses	2844.43	3934.78	2978.97	2978.97	134.54	See Form D3.4 (a)
2	R&M Expenses	500.62	233.19	573.70	573.70	73.08	See Form D3.4 (c)
3	Total	3345.05	4167.97	3552.67	3552.67	207.62	See Form D 3.4

4.167 It may please be noted that, Hon'ble Commission, as per order dated 25.01.2022, has approved 30321 nos as allowable staff strength and ordered that the revised numbers will be considered since 01.04.2022. But the tariff Regulation for the third control period was finalized before the redetermination of staff strength and the release of true up orders for the base year (2018-19). As per Tariff Regulation, 2021 notified by the KSERC on 16.11.2021, KSERC had determined the norms based on the O&M cost approved in the ARR for 2018-19 (as per order dated 08.07.2019) along with a sum of Rs. 248.47 Cr towards annual pay revision (due from July / August, 2018) impact (provision as per accounts RS.176 Cr /8.5 months *12 months) Therefore, the provisional norms determined as per Tariff Regulation, 2021 is to be finalized for claiming the eligible O&M expenses in the truing up petition for 2022-23.

4.168 The expected O& M Expenses based on the revised norms as detailed above is given in table below.

Table D 66: Normative O& M expenses for 2022-23		
No	Parameters	Quantity
1	No. of consumers (Rs. Lakh/1000)	4.697
2	Dist Transformers (Rs. Lakh/DTr)	0.927
3	Length of HT line (Rs. Lakh/km)	0.918
4	Length of LT line (Rs. Lakh/km)	0.201
5	Energy sales (Rs/unit)	0.207
6	No. of consumers (Nos)	13422642
7	No. of Dist Transformers (Nos)	85594
8	Length of HT Line (Km)	68973
9	Length of LT line (km)	299538
9	Energy sales in MU	25602
10	Employee, A&G Cost (Rs Cr)	3188.72

Expenses towards Pay Revision

4.169 Pay revision arrears in line with the orders of the Hon'ble Commission amounts to Rs. 401.47 Cr as detailed in chapter 5 may kindly be approved over and above norms.

Expenses towards Covid

4.170 Expenditure amounting Rs 1.59 Cr was incurred during FY 2022-23 over and above the normative expenses

Depreciation:

4.171 Hon'ble Commission had approved the depreciation of SBU-D for FY 22-23 at Rs 266.09 Cr. Actual Depreciation for the Distribution assets as per accounts for the year has been Rs. 786.81 Cr as detailed in **Form D3.5 (2)**.

4.172 Hon'ble Commission may kindly note that depreciation as per accounts has been worked out in line with IND AS and claw back depreciation was determined and credited to other income. But, as per MYT Regulation for the control period, depreciation is allowable as per the provisions contained in the Tariff Regulations, 2021 in which applicable rates as well as methodology to be followed are specified therein. Accordingly, allowable depreciation for SBU D has been worked out at Rs 311.83 Cr. as detailed in Chapter 5. Hon'ble Commission may kindly approve the same.

4.12. Interest and Finance charges

4.173 Hon Commission had approved the interest and finance charges for SBU-D for the year 2022-23 at Rs. 1649.61 Cr. However, as per the audited accounts, the actual expenses incurred under interest and finance charges were Rs. 1364.76 Cr (after capitalized portion of interest). True up claim amounts to Rs. 1709.70 Cr as summarized below.

Table D67: Comparison of I&FC for 2022-23 (Rs. Cr)				
No	Particulars	Approved	Accounts	True up clam
1	Interest on outstanding Loans	482.67	371.90	459.71
2	Less: Interest capitalized		24.95	
3	Net interest	482.67	346.95	459.71
4	Interest on Security Deposit	151.46	137.43	128.74
5	Interest on GPF	181.3	168.53	168.53
6	Other Interest		76.09	75.68
7	Interest on Master Trust Bond	509.13	522.25	520.45
8	Carrying cost on revenue gap till 2022-23	325.05		356.59
9	Interest on working capital		113.51	
10	Grand Total	1649.61	1364.76	1709.70

4.174 KSEBL has executed capital works to the tune of Rs. 1577.53 Cr. and added fixed assets of Rs. 1439.81 Cr under SBU D during the year as detailed in Chapter 5. Physical addition to fixed assets is summarized below:

Table – D68 : Details of Capital Works during 2022-23		
	Particulars	Achievement
1	Service Connections (Nos)	373133
2	HT Line construction (km)	1566
3	LT Line construction (km)	4036
4	Transformer installation (Nos)	2283
5	Line conversion (km)	1179
6	HT re-conductoring (conductor km)	552
7	LT re-conductoring (conductor km)	9348
8	Faulty meter replacement (Nos)	331593

Interest on normative loan

4.175 Honorable Commission vide MYT order dated 25.06.2022 provisionally approved Rs 482.67 Cr. as interest on normative basis. The normative loan at the beginning of the year ie; on 01.04.2022 has been determined as per Regulation by considering GFA, Approved depreciation, Consumer contribution and grants and Equity. Thus, addition, repayment and closing normative loan as on 31.03.2023, interest on normative loan along with SBU wise segregation are determined and furnished in chapter 5. Based on the computation, KSEBL is entitled to Rs.459.71 Cr as interest on normative loan for the year 2022-23, which may kindly be approved.

Interest on security deposit:

4.176 Hon'ble Commission approved interest on SD for the year at Rs. 151.46 Cr. Actual disbursement in the FY 2022-23 amounted to Rs. 128.74 Cr (disbursement made against provision amounting to Rs 136.20 Cr created @ 4.25% on SD for FY 2021-22) as per provisions in Supply Code, 2014. Hon'ble Commission may kindly approve the actual disbursement in 2022-23 amounting to Rs 128.74 Cr under SBUD.

Interest on working capital:

4.177 The Normative Working Capital for SBU-D, as per Regulation 32, includes O&M Cost for one month, cost of maintenance spares as one twelfth of average of the book value of stores for that financial year, receivables for two months excluding security deposits. KSEB Ltd has computed the Interest on Working Capital at a rate of 9.55% (7.55%(base rate) + 2%) as per Regulation 32(2). The parameters adopted for computation of Interest on Working capital for the control period are furnished below.

Table D69 Parameters for estimation of working capital (Rs Cr)		
Sl No	Particulars	Amount (Rs Cr)
1	Normative O&M cost	3552.67
2	Pay revision expenses	401.47

3	Additional contribution to Master Trust	333.42	
4	O&M Cost		4287..563
5	Revenue for the year 2022-23	16533.53	16533.53
6	Opening stock of inventory	723.11	
7	Closing stock of inventory	943.97	
8	Average inventory		833.54
9	Opening Security deposit (Note 21)	3235.94	3235.94

4.178 Based on the above, net working capital computed is negative as detailed below

Table D 70 Interest on working capital (Rs Cr)		
Sl No	Particulars	Rs Cr
	O&M Exp for 1 month	357.30
	Maintenance spares @ One twelfth of average of opening and closing balance of Inventory	69.46
	Revenue (2 months)	2755.59
	Total	3182.35
	Less: Security deposit	3235.94
	Net Working Capital	-53.59

Carrying cost on approved revenue gap:

4.179 Hon'ble Commission approved carrying cost of Rs. 325.05 Cr for the year 2022-23 after deducting average GPF balance from the approved gap to determine the revenue gap for which carrying cost is eligible. Hon'ble Commission had trued up revenue gap of Rs. 7130.73 Cr till 2020-21 (excluding 2014-15, for which orders are yet to be issued). Hon'ble Commission has trued up surplus of Rs.753.17 Cr for 2021-22 as per order dated 03.10.2023 but earmarked the same against revenue gap determined for 2023-24 while issuing tariff revision orders. Therefore, the surplus for 2021-22 has not been considered for the computation of carrying cost. Thus, carrying cost for the revenue gap of Rs. 7130.73 Cr is claimed in this petition.

4.180 Based on the methodology adopted by the Hon'ble Commission, average GPF balance of 2891.85 Cr (Rs.2607.16 Cr for 2021-22) and security deposit over normative working capital (Rs Cr) have been excluded from the approved gap to determine the revenue gap eligible for carrying cost in line with Regulation 29 (9) of Tariff Regulation, 2021.

4.181 Actual average interest on loans during 2022-23 for SBU D had been 8.52 %. Accordingly, a sum of Rs.416.36 Cr is claimed as carrying cost for the year 2022-23 in respect of trued up revenue gap as detailed below:

Table D 71: Computation of carrying cost on approved revenue gap (Rs Cr)		
1	Trued up revenue gap till 31.03.2022	7130.73
2	Less: Average PF balance for 2022-23 (2783.61+3000.09)/2	2891.85
3	Less: Security deposit as per Reg 29 (9)	53.59
4	Net revenue gap (3-4)	4185.32

5	Carrying cost at average interest rate of 8.52 % on above(A)	356.59
6	Current Year revenue Gap excluding carrying cost	1,403.05
7	Carrying cost on current year revenue gap at average interest rate of 8.52 % on above(B)	59.77
8	Total carrying cost	416.36

4.182 Hon'ble Commission may kindly approve Rs. 416.36 Cr towards carrying cost for 2022-23 for SBU D.

Interest on PF:

4.183 Hon'ble Commission approved Rs 181.30 Cr towards interest on PF for 2022-23. But as per the audited accounts, the actual interest on PF was Rs. 168.53 Cr, which is less by Rs. 12.77 Cr. Therefore Rs. 168.53 Cr is sought for true up as detailed in chapter 5, which may kindly be approved.

Interest on Master Trust Bonds:

4.184 State Government, as per notifications dated 31.10.2013 and 28.01.2015, ordered creation of a Master Trust for meeting the unfunded liability of pension, gratuity and leave surrender as on 31.10.2013, in respect of the personnel transferred from erstwhile KSEB to KSEBL. The total liability as on 31.10.2013 was estimated at Rs.12418.72 Cr and necessary funding arrangements put in place through issue of 2 series of Bonds. Hon Commission recognized the unfunded pension liabilities as above and approved recovery of interest on KSEBL share of Bonds as per Tariff Regulations, 2021. Thus, Hon'ble Commission approved Rs.509.13 Cr towards interest on Master Trust bonds against share of SBU D. Actual share of expenses for SBU D has been Rs.520.45 Cr as detailed in chapter 5, which may kindly be approved.

Other Charges:

4.185 Hon'ble Commission has not approved any amount towards other interest. Actual expenses incurred as per accounts amounts to Rs.75.68 Cr as detailed in chapter 5, which may kindly be approved.

Table D.72 Details of other charges under Interest and Finance Charges (Rs. Cr)		
No	Particulars	SBU D
1	Generation based incentive	
2	Other Bank Charges	0.37
3	Interest on Power purchase	75.31
4	Total	75.68

4.186 In view of the above submission, Hon'ble Commission may kindly approve interest and finance charges as summarized below:

Table D73: Comparison of I & F Charges-Approved, Actual and TU requirement for 2022-23 (Rs. Cr)					
No	Particulars	Approved	Accounts	TU Sought	Difference over approval
1	Interest on outstanding Loans	482.67	371.90	459.61	-23.06
2	Interest on Security Deposit	151.46	137.43	128.74	-22.72
3	Interest on GPF	181.30	168.53	168.53	-12.77
4	Other Interest	0.00	76.09	75.68	75.68
5	Interest on Master Trust Bond	509.13	522.25	520.45	11.32
6	Carrying cost on revenue gap till 2021-22	325.05	0.00	356.59	31.54
	Carrying cost on current year revenue gap			59.77	
7	Interest on working capital	0.00	113.51	0.00	0.00
8	Less: Interest capitalized	0.00	24.95	0.00	0.00
9	Grand Total	1649.61	1364.76	1769.37	59.99

Additional contribution to Master Trust

4.187 Hon'ble Commission was pleased to provisionally approve Rs.333.42 Cr towards additional contribution to Master Trust under SBU-D. KSEBL seeks truing up of Rs. 333.42 Cr also as detailed in chapter 5.

Repayment of Bonds issued to Master Trust

4.188 Hon'ble Commission, in line with Regulation 34 (iv) of Tariff Regulation, 2021, had approved Rs. 407.20 Cr for the year 2022-23 in the MYT order dated 25.06.2022. Hon'ble High Court of Kerala, as per judgment dated 07.09.2023 in WP (C) 19205/2023, set aside the enabling Tariff Regulation 2021 (Regulation 34 (iv)) owing to fault with the procedure. Hon'ble Court however observed that by following the procedure contemplated for framing regulations, even the aspects contained in Regulation 34(iv) can be included.

4.189 In view of the above and subject to the final decision of the Hon'ble Commission on Regulation 34 (iv), KSEBL prefers a claim of Rs.339.42 Cr for truing up for the year 2022-23 under bond repayment.

Return on Equity:

4.190 Hon'ble Commission vide order dated 25.06.2022 approved Return on equity at Rs 253.50 Cr, which, the Hon'ble Commission may kindly true up.

Other expenses and exceptional items:

4.191 As detailed in chapter 5, a sum of Rs. 30.05 Cr is sought for true up, under other expenses and exceptional items Rs. 13.12 Cr, which may kindly be tried up.

Non-tariff income and other income:

4.192 Hon'ble Commission approved Rs.829.04 Cr under non-tariff income. The share of non-tariff income and other income of SBU D as per accounts amounting to Rs. 1080.25 Cr is detailed in Form D 2.4. Rs. 808.10 Cr is sought for true up as detailed in chapter 5 of the petition. Hon'ble Commission may kindly approve the same.

Tariff income:

4.193 Hon'ble Commission approved revenue from sale of power as Rs 15337.64 Cr and net revenue as Rs 15309.04 Cr after deducting Rs 28.60 Cr as power factor incentive. An amount of Rs 667.94 Cr was also approved towards revenue from surplus energy sales outside the State. Further Honourable Commission vide order dated 25.06.2022 has approved to recover an additional revenue of about Rs 1010.94 crores through revision in Tariff . Further Honorable Commission vide order dated 25.01.2023 has approved to recover fuel surcharge amount for the period of April to September 2022 of Rs 87.07 crores and allowed KSEBL to recover it from all consumers including consumers of other distribution licensees except consumers having monthly consumption less than 40 units and connected load less than 1000 W. from the consumption from February 2022 for a period of 4 months

4.194 Thus the KSEBL has realised revenue based on the prevailing Schedule of Tariff and prevailing fuel surcharge. Actual revenue from tariff during the year 2022-23 which amounted to Rs. 16533.53 Cr. Hon'ble Commission may kindly note that reconciliation of revenue sale as per this submission and as per audited accounts is furnished in chapter 5. A summary of the revenue from sale of power inside the State as well as outside State is given below.

Table – D74: Revenue from Sale of Power within the State					
No	Category	Energy sales		Revenue	
		MU	%	Rs Cr	%
1	Domestic incl colonies	12381.03	49.66	6104.22	45.13
2	Commercial	4061.72	16.29	4087.23	21.3
3	Public lighting	362.30	1.45	182.40	1.31
4	Irrigation & Dewatering	382.46	1.53	117.80	0.83
5	Industrial LT	1262.01	5.06	963.34	5.83
6	Railway Traction	402.32	1.61	267.65	1.1
7	Bulk Supply /CESCK	579.13	2.32	419.98	2.36
9	HT	4252.30	17.06	3527.70	18.38
10	EHT	1240.24	4.97	863.21	3.76
11	Energy supplied to RGCCPP to meet its auxiliary consumption during non operative periods	6.57			

12	Total sales (within state)	24930.08	100.00	16533.53	100
13	Interstate sale	1813.11		1171.93	
14	Total	26743.18		17705.46	

4.195 Hon'ble Commission while approving the revenue from sale of power had deducted Rs 28.60 Cr. as power factor incentive against which incentive actually extended during the year was Rs 47.90 Cr, (booked under A&G expenses) as explained in chapter 5. Accordingly, actual power factor incentive to the tune of Rs. 47.90 Cr is deducted from the revenue from SoP. The revenue from sale of Power includes fixed charges/demand charges, energy charges, the subsidy allowed by the Government in the case of domestic consumers with monthly consumption up to 120 units and LT Agricultural consumers and cross subsidy surcharge. It may be seen that 49.66% of total consumption was domestic which contribute 45.13 %of revenue. Actual revenue was more by Rs. 1195.9 Cr from approval. A comparison of approved vs actual sale is given in table below.

Table – D75 : Revenue comparison Approved Vs Actuals							
No	Category	Energy sales (MU)			Revenue (Rs. Cr)		
		Approved	Actual	Deviation	Approved	Actual*	Deviation
1	Domestic	13475.52	12381.03	-1094.49	6461.67	6104.22	-357.45
2	Industrial	1116.48	1262.01	145.53	827.22	963.34	136.12
3	Agriculture	389.47	382.46	-7.02	107.24	117.8	10.56
4	Commercial	3418.92	4061.72	642.80	3331.67	4087.23	755.56
5	Public Lighting	303.90	362.30	58.39	146.75	182.4	35.65
6	HT Total	3913.81	4252.30	338.48	3059.16	3527.70	468.54
7	EHT Total	1269.03	1240.24	-28.79	771.63	863.21	91.58
8	Railway Traction	331.25	402.32	71.07	209.5	267.65	58.15
9	Bulk Supply	661.96	579.13	-82.84	422.79	419.98	-2.81
10	Energy given to RGCCPP to meet their auxiliary consumption		6.57				
11	Total sales (within state)	24880.38	24930.08	49.70	15337.64	16533.53	1195.9
12	Interstate sale	1946.22	1813.11	-133.11	729.83	1171.93	442.18
13	Total	26826.6	26743.18	-83.42	16067.47	17705.46	1637.99
14	Less Power Factor incentive			0.00	28.6	47.9	19.3
15	Revenue from Sale of power	26826.6	26743.18	-83.42	16038.87	17657.56	1618.69

4.196 Hon'ble Commission may kindly true up actual revenue from sale of power (including external sale) as above.

4.197 It is respectfully submitted that, as per audited accounts, KSEBL has suffered a loss of Rs.1023.62 Cr. But, as per regulatory accounts, revenue gap during 2022-23 has been Rs. 1819.41 Cr only as deliberated in detail in this petition. Even though Hon'ble Commission had amortized past approved revenue gap of to the tune of Rs. 850 Cr while approving ARR for the year 2022-23 , in the absence of regulatory surplus during the year ,KSEBL is not able to amortize

the past revenue gap during the year as approved by Honourable Commission. Summary of ARR & ERC of SBU D for the year 2022-23 is furnished below:

TABLE – D76: ARR & ERC OF DISTRIBUTION BUSINESS UNIT (Rs Cr)				
Particulars	Approved	Actual	True up	Difference
Cost of Generation (SBU-G)	613.86	1199.75	654.69	40.83
Cost of Power Purchase incl RLDC charges	9,833.64	11,240.62	10,979.68	1146.04
Cost of Intra-State Transmission (SBU-T)	1310.51	1339.5	1517.74	207.23
Interest & Finance Charges	1649.61	1364.76	1769.47	119.8599
Additional contribution to Master Trust	333.42		333.42	0.00
Depreciation	266.09	786.81	311.83	45.74
Normative O&M Expenses	3345.05	4154.87	3552.67	207.623
Expenses towards Covid			1.59	1.59
Pay revision arrears			401.47	401.47
Return on equity (14%)	253.5		253.5	0.00
Other Expenses		156.87	30.05	30.05
Exceptional items		13.12	13.12	13.12
Sharing of gains on account of higher T&D loss reduction			126.41	126.41
Recovery of past gap	850			-850.00
Repayment of Bonds	339.42	0	339.42	0.00
Total ARR	18795.11	20,256.30	20,285.06	1,489.95
Tariff Income incl fuel surcharge	15337.64	17,281.33	16,533.53	1195.89
Less Power factor incentive	28.6		47.9	19.30
Revenue from external sale	729.83	1171.93	1171.93	442.10
Non-Tariff Income	829.04	405.85	808.1	-20.94
Total ERC	16867.91	18,859.11	18465.66	1597.75
Net Revenue Gap (-)/ Surplus (+)	1927.20	1397.18	1819.41	-107.80

4.198 Annexures described in paragraphs above are attached here under. The forms are attached thereafter. The next chapter contains explanations relating to various expenses and income in general.

Annexure-D 1	
Power Availability for 2022-23	
Month	Gross Availability of electricity for Supply
April	100%
May	100%
June	113%
July	104%
August	110%
September	104%
October	108%
November	100%
December	104%
January	104%
February	103%
March	102%
Average	104%

Appendix –D2: Details of approval of long term /short term contracts for procuring power during 2022-23

Source	Contracted Capacity (MW)	Commission Approval Letter/Order	Approved Tariff
Central generating Stations			
RSTPS I & II	2100	Deemed Approval vide Tariff Regulations 2014	CERC Tariff
RSTPS III	500		CERC Tariff
Talcher Stage-II	2000		CERC Tariff
Simhadri TPS Stg II	1000		CERC Tariff
NLC Stage-I	630		CERC Tariff
NLC Stage-II	840		CERC Tariff
NLC 1 Expansion	420		CERC Tariff
NLC II Expansion	500		CERC Tariff
MAPS	440		CERC Tariff
KAIGA Stage I to IV	880		CERC Tariff
Kudankulam Unit I & II	2000		CERC Tariff
Vallur	1500		CERC Tariff
NTPL	1000	CERC Tariff	
Kudgi(Unit I to III)	2400	KSERC order dated 22.02.2023	CERC Tariff
NNTPP	1000	KSERC order dated 22.02.2023	CERC Tariff
continued			

Annexure D 2 continued

Source	Contracted Capacity (MW)	Commission Approval Letter/Order	Approved Tariff
Long Term contracts			
Maithon Power	150	No.2158/C.Engg/Maithon/2013/1398 dated 26.12.2013	Approved under Section 62 of Electricity Act 2003
Maithon Power	150	Order dated 08 - 07- 2015	
DVC Mejia	100	No.500/C.Engg/DVC/2014/348 dated 28.03.2014 & Order dated 21.01.2016	
DVC RTPS	50		
Jindal Power Ltd-PSA I (DBFOO)	200	Order dated 30.8.2016	Approved under Section 63 of Electricity Act 2003.
BALCO	100	Order dated 30.8.2016	
Jhabua Power Ltd-PSA-I (DBFOO)	115	Pending for approval	Rate yet to be approved
Jindal Power Ltd-PSA I (DBFOO)*	150		
Jhabua Power Ltd-PSA-I (DBFOO)*	100		
JITPL*	100		
SECI Wind	200	Order dated 19.09.2020 on OP 53/19	2.89
continued			

Annexure D 2 continued			
Source	Contracted Capacity (MW)	Commission Approval Letter/Order	Approved Tariff
IPPs inside the State			
RGCCPP, Kayamkulam		Deemed Approval vide Tariff Regulations 2014	
Wind- Ramakkalmedu		Order dated 07.08.2008	3.14
Wind-Koundikkal			3.14
Wind- Agali			3.14
Wind Ahalya		Order dated 22-02-2017/ Order dated 10.10.2022	5.34/4.70
INOX		Order dated 03.10.2018.	4.09
Kosamattom		Order dated 7.12.2019	3.93
Ullunkal(EDCL)		Order dated 13.11.2005	2.44
Iruttukanam Stage-I (Viyyat)		Order dated 15.12.2006	2.07
Iruttukanam Stage- II(Viyyat)		Order dated 30.09.2011	2.94
Karikkayam HEP(AHPL)		Order dated 01.11.2014	4.16
Meenvallom(PSHCL)		Order dated 12.01.2015	4.88
Minar Renewable energy project Ltd		06.09.2019 & 14.11.2019	3.96
Anakkampoil		Interim order dated 25.10.2021	4
Arippara		Order dated 08.03.2023	4.3
Solar IREDA		Order dated 06.02.2019	3.83
THDCIL		Order dated 29.10.2021 on OP No 33/2021	3.1
CIAL Ettukudukka		Order dated 10.11.2022	2.37
NTPC Solar Float		CERC order dated 09.05.2022	2.94
Medium Term			
JITPL through PTC		Order dated 07.10.2021	Approved under Section 63 of Electricity Act 2003.

Annexure D2 continued			
Source	Contracted Capacity (MW)	Commission Approval Letter/Order	Approved Tariff
Short term			
M/s Tata Power Trading Corporation Ltd(TPTCL)	45-50	Order dated 17.01.2023	6.15/7.18
M/s PTC India Ltd	55		6.15
M/s Jindal Power Ltd	50		7.18
M/s NTPC Vidyut Vyapar Nigam Ltd	100	Order dated 23.09.2022	8.03
Banking Arrangement			
Through M/s Arunachal Pradesh Power Corporation Pvt Ltd	200 MW RTC/peak	Order dated 19.10.2022	
through M/s Kreate Energy (I) Pvt Ltd	50/75		

Annexure D3

Details of Monthwise availability and surrender for FY 2022-23					
Month	CGS	LTA	Deemed surrender	Total	Reason for surrender
Apr-22	6.75	0.38	0.00	7.13	During the initial period of the month when demand was also low. surrender of CGS and LTA was done on merit order whenever feasible .
May-22	90.97	10.54	13.19	114.70	Summer rains received in almost all parts of Kerala in the 2nd half of the month of May above normal.surrender of CGS and LTA was done on merit order
Jun-22	24.76	1.85	1.39	28.00	Poor monsoon witnessed , however surrender done as per merit order to accommodate the hydel plan and low demand .
Jul-22	177.88	29.63	0.26	207.77	the monsoon was aggressive in the month of July , hence to accommodate the must run hydel generation , low demand and adhering to the daily hydro plan .Merit order Surrender and sale was done.
Aug-22	244.02	41.60	16.08	301.70	As rainfall was found to be increasing and there was forecast of further rainfall, all hydro stations were being operated as must run from 1st August onwards. Accordingly, the hydro plan was fixed with 17MU at Idukki and 4.5MU at Sabarigiri
Sep-22	202.17	28.24	6.02	236.43	Inflows to major reservoirs were more than anticipated for the third consecutive months. Hence the generation achieved during the month was slightly above the planned figures. As the monsoon showed weakening trend from the second week of September, Hence surrender and sale done to achieve the hydel plan and to balance the low demand
Oct-22	235.51	39.92	80.20	355.63	While Sabarigiri and Idamalayar received excess and normal inflows respectively during October, Idukki and Kuttiady received deficient inflow. Sabarigiri was operated as must run, where as generation plan of Idukki was fixed at 6MU per dayHence surrender and sale done to achieve the hydel plan and to balance the low demand.
Nov-22	51.31	4.72	18.79	74.82	As the north east monsoon was below the expected level, major reservoirs recorded a reduction in inflow. However surrender and sale done to match the LGB.
Dec-22	36.14	3.23	0.00	39.37	surrender and sale done to adhere to the hydel schedule as per plan and to match the LGB.
Jan-23	58.03	1.31	0.00	59.35	surrender and sale done to adhere to the hydel schedule as per plan and to match the LGB.
Feb-23	38.36	1.78	0.00	40.14	surrender and sale done to adhere to the hydel schedule as per plan and to match the LGB and to accommodate the increase in solar generation , the decrease in demand due to increase in solar penetration and also on holidays when the demand was very low..
Mar-23	43.80	3.97	0.00	47.77	The increase in solar generation and the low demand during the day time due to increase in solar penetration was managed through merit order surrender. Also low demand during holidays and weekends were managed through surrender as market rates were very low in the day time.
Total	1209.71	167.17	135.92	1512.81	

Annexure D 4 Plant Availability factor and reduction in Fixed cost due to Low PAF

Station	PAF(%)				Annual Fixed charges of TPS (Rs Cr)	AFC payable at normative availability (Rs Cr)	AFC for 2022-23	FC for previous claims	Total fc
	low demand		high demand						
	(May-22 to Jan23)		(Apr22 Feb23 &Mar23)						
	peak	off peak	peak	off peak					
Central Generating Stations									
Talcher	95.21	95.316	99.442	99.351	1112.65	237.59	237.64	38.53	276.17
Simhadri	91.762	91.839	99.4	99.376	1017.91	86.81	86.72		86.72
RSTPS Stage I&II	85.382	85.797	90.744	90.731	1057.69	120.87	119.04		119.04
RSTPS Stage III	79.465	79.421	101.754	101.531	290.82	35.44	33.89		33.89
Kudgi	90.481	90.01	92..298	88.176	2795.25	134.30	134.18		134.18
NLC IIStagel	56.101	56.752	68.249	68.182	346.89	34.97	26.46	8.82	35.28
NLC IIStagell	63.555	64.246	76.11	76.236	476.07	51.32	38.79	16.33	54.76
NLC Exp I	86.404	86.469	91.58	91.578	283.21	47.95	43.62	3.02	46.64
NLC ExpII	46.056	46.25	41.167	41.385	672.59	114.04	59.89	-16.98	42.90
NTECL Vallur	86.513	86.683	95.949	95.828	1858.96	62.24	61.97	2.61	64.58
NTPL	88.1	88.038	74.374	74.56	1090.17	79.66	77.27	0.005	77.27
NNTPP	85.004	85.103	93.101	92.516	1259.60	40.94	40.94		40.94
Aravally Power Corporation Ltd								4.42	4.42
IPPs inside the State									
Maithon Power Ltd-I	93.48	92.50	89.16	88.76	1085.90	25.86	155.13	0.10	155.23
Maithon Power Ltd-II	93.48	92.50	89.16	88.76	1085.90	25.86	155.13	0.09	155.22
DVC Mejia	89.74	89.70	95.79	95.45	1019.21	101.92	101.92		101.92
DVC RTPS	57.23	56.89	68.68	68.78	1395.55	58.19	40.99		40.99
							960.39	56.76	1016.80

Annexure D5

CENTRAL ELECTRICITY REGULATORY COMMISSION NEW DELHI

Suo Moto Petitions No. 10/SM/2022

Coram:

Shri I. S. Jha, Member

Shri Arun Goyal, Member

Shri P. K. Singh, Member

Date of Order: 26.07.2022

In the matter of:

Blending of imported coal with domestic coal to mitigate the domestic coal shortage

Background

The recent sharp increase in electricity demand has necessitated that the thermal generating stations generate and supply electricity to their maximum feasible level. However, 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, the Ministry of Power directed the concerned stake holders to import at least 10 % of their requirement of coal for blending and if required, higher percentage of blending in future. However, some generating companies have pointed out that they are facing problem to comply with the above direction of Ministry of Power on account of delay in accord of permission and in some cases, absence of permission by the concerned beneficiaries.

2. In reference to Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019, in the public interest, Ministry of Power has issued direction to this Commission under section 107 of Electricity Act, 2003 to allow higher amount of blending of blending up to 30 % with imported coal, subject to

technical feasibility, without the requirement of prior consultation with the beneficiaries up to 31.03.2023 to maintain resource adequacy and 24X7 supply to consumers.

3. Regulation 43 of 2019 Tariff Regulations provides for Computation and Payment of Energy Charge in respect of Thermal Generating Stations which is extracted as follows:

“43. Computation and Payment of Energy Charge for Thermal Generating Stations

(1) The energy charge shall cover the primary and secondary fuel cost and limestone consumption cost (where applicable), and shall be payable by every beneficiary for the total energy scheduled to be supplied to such beneficiary during the calendar month on ex-power plant basis, at the energy charge rate of the month (with fuel and limestone price adjustment).

Total Energy charge payable to the generating company for a month shall be

Energy Charges = (Energy charge rate in Rs./kWh) x {Scheduled energy (exbus)for the month in kWh}

a) For coal based and lignite fired stations: $ECR = \{(SHR - SFC \times CVSF) \times LPPF / (CVPF + SFC \times LPSFi + LC \times LPL)\} \times 100 / (100 - AUX)$ (b) For gas and liquid fuel based stations: $ECR = SHR \times LPPF \times 100 / \{(CVPF) \times (100 - AUX)\}$

(b) For gas and liquid fuel based stations: $ECR = SHR \times LPPF \times 100 / \{(CVPF) \times (100 - AUX)\}$

Where, AUX = Normative auxiliary energy consumption in percentage.

CVPF = (a) 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;

(b) Weighted Average Gross calorific value of primary fuel as received, in kCal per kg or per litre or per standard cubic meter, as applicable for lignite, gas and liquid fuel based stations;

(c) 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;

LC = Normative limestone consumption in kg 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. (In case of blending of

fuel from different sources, the weighted average landed fuel cost of primary fuel shall be arrived in proportion to blending ratio);

SFC = Normative Specific fuel oil consumption, in ml per kWh;

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

Provided that energy charge rate for a gas or liquid fuel based station shall be adjusted for open cycle operation based on certification of Member Secretary of respective Regional Power Committee during the month.

(3) In case of part or full use of alternative source of fuel supply by coal based thermal generating stations other than as agreed by the generating company and beneficiaries in their power purchase agreement for supply of contracted power on account of shortage of fuel or optimization of economical operation through blending, the use of alternative source of fuel supply shall be permitted to generating station:

Provided that in such case, prior permission from beneficiaries shall not be a precondition, unless otherwise agreed specifically in the power purchase agreement:

Provided further that the weighted average price of alternative source of fuel shall not exceed 30% of base price of fuel computed as per clause (5) of this Regulation:

Provided also that where the energy charge rate based on weighted average price of fuel upon use of alternative source of fuel supply exceeds 30% of base energy charge rate as approved by the Commission for that year or exceeds 20% of energy charge rate for the previous month, whichever is lower shall be considered and in that event, prior consultation with beneficiary shall be made at least three days in advance.

Xxxxxx”

4. The Commission published the Staff Paper on “Blending of imported coal with domestic coal to mitigate the domestic coal shortage” and sought comments from the stakeholders vide notice dated 2.6.2022, on “to what extent blending of imported coal can be allowed without the permission or consultation of the beneficiaries and to what extent the increase in energy charge rate over and above base energy charge rate, approved by the Commission for that year, be allowed upon blending of imported coal”. The Generating companies have made following submissions/ suggestions to meet extraordinary situation:

(i) Seeking prior consent for the import of coal from the beneficiaries, particularly, generating stations having multiple beneficiaries, would be very difficult in the prevailing situation and may not be practicable.

(ii) The restriction on the percentage of blending should be removed until the coal shortage situation is normalized; or in the alternate the generators should be allowed to procure imported coal equivalent to the shortfall in quantity as per coal requirement and coal available under FSA.

(iii) The cost of imported coal should be allowed to be recovered in full as a pass through and there should not be any cap on the ECR and the clause pertaining to obtaining consent of beneficiaries should be removed.

(iv) As the blending of imported coal depends on domestic coal availability, energy required technical feasibility etc, upfront determination of blending percentage and increase in ECR may be difficult. Therefore, the ceiling in ECR may be kept in abeyance till 31.03.2024.

5. It has been further submitted that the percentage increase in ECR on account of imported coal is very high for the plants with lower ECR (pit head stations) in comparison to plants with high ECR (non-pit head stations) and import of coal requires additional working capital, new infrastructure and certain modification in plant design, which involves capital expenditure. Further, the impact in increased ECR due to imported coal may be excluded for scheduling of power in Merit Order Dispatch (MOD) stack ;compensation for the non-use of imported coal due to low scheduling should be provided and deficiency in coal quantity due non consent of beneficiaries should be treated as deemed availability.

6. The DISCOMs are of view that price of imported coal is volatile and would impact the Energy Charge Rate of power supply. The higher blending of imported coal would lead to excessive increase in ECR of power supply to DISCOMs and result in substantial increase in cost of power for the end consumers. The end users have an option of either paying exorbitantly high charges or else face load shedding and the same would impact the finances of the DISCOMs. Therefore, the percentage of coal

blending may be reduced to the minimum possible extent and a cap may be levied for the cost of imported coal and should not be allowed more than 10 % and increase in ECR upto 30 % also may be allowed in a smooth manner, so that consumers do not feel the tariff shock. Further, pit head plants or the generating stations which are far away from coast require inland transportation of imported coal, which further escalates ECR. Therefore, these stations, particularly, pit head stations may be excluded from imported coal and option of swapping imported coal quantity with equivalent domestic linkage coal quantity of coastal power projects may be explored in order to reduce the inland transportation cost, burden on road / rail and cost of coal thereof.

7. Some stakeholders are of the view that shortage in coal is temporary in nature and due to monsoon, in the coming months, the demand would reduce and other sources of generation (hydro and wind) also would be available to meet the demand requirement. The coal availability has increased across the country on account of higher production by CIL and operationalization of new captive mines. Further, excessive import would lead to higher ECR, which may not be affordable to the consumers and act as a counter measure in meeting the demand of the consumers.

8. The Commission has considered the submission of the parties. The Commission has also analysed the power demand-supply position as also coal availability in thermal power plants in the country. As per CEA monthly coal report, coal stock as on 31.05.2022 stands at 23.68 million tons (MT) for an installed capacity of 204 GW (Thermal) as compared to coal stock of 32.63 million tons (MT) as on 31.05.2021 for an installed capacity of 202 GW (Thermal). On the demand side, it is noted that the peak demand met and energy supplied during the period April – May 2022 was about 207 GW and 267 BUs respectively as compared to 182 GW peak demand met and 226 BUs of energy supplied during the period April – May 2021. The onset of south-west monsoon could adversely affect the mining and transportation of coal from mine

to power stations. Accordingly, in order to maintain adequate coal stocks, coal from alternative sources is required to be arranged to avoid any power crises in future.

9. The Commission has also noted that the Ministry of Power has issued directions under Section 11 of the Electricity Act, 2003 to all imported coal based generating stations to maximize generation. The Ministry has also directed all GENCOs based on domestic coal to import at least 10 per cent of their requirement of coal for blending.

10. The Commission is vested with the power to relax any of the provisions of the 2019 Tariff Regulations on its own motion or on an application made by an interested person. Regulation 76 of the 2019 Tariff Regulations is extracted as under:

“76. Power to Relax: The Commission, for reasons to be recorded in writing, may relax any of the provisions of these regulations on its own motion or on an application made before it by an interested person.”

11. The Commission has noted the directions issued by the Government of India under section 107 of the Act and considered the recent inadequate coal stocks / supply from domestic sources for meeting the increasing power requirement in the country.

In the light of the analysis of the power demand-supply and coal stock position in the country as highlighted in para 8 above; with due consideration to the views of the stakeholders in response to the Staff Paper in this context; in order to facilitate availability of adequate quantum of coal in thermal power plants to ensure smooth and uninterrupted generation and in turn to aid the distribution companies to meet their universal supply obligation to consumers, the Commission in exercise of its powers under Regulation 76 of the 2019 Tariff Regulations, relaxes the provisions of Sub-Regulation (3) of Regulation 43 and issues the following directions:

- a. The first proviso of sub Regulation (3) of Regulation 43 of 2019 Tariff Regulations shall be read as under:

“Provided that in such case, prior permission from beneficiaries shall not be a precondition for blending upto 20% from alternate sources of fuel supply

including imported coal, subject to technical feasibility, unless otherwise agreed specifically in the power purchase agreement.”

- b. The operation of second and third provisos of sub Regulation 3 of Regulation 43 of 2019 Tariff Regulations shall be kept in abeyance.
12. The directions contained in Para 11 of this order shall remain operative till 31.10.2022 or until further orders, whichever is earlier.
13. Petition No. 10/SM/2022 is disposed of in terms of the above.

sd/-
(P. K. Singh)
Member

sd/-
(Arun Goyal)
Member

sd/-
(I. S. Jha)
Member

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Suo Moto Petition No. 2/SM/2023

Coram:

**Shri I. S. Jha, Member
Shri Arun Goyal, Member
Shri Pravas Kumar Singh, Member**

Date of Order: 14.02.2023

In the matter of

Blending of Imported Coal with Domestic coal.

Background

CERC had published in June, 2022 a staff paper on “Blending of imported coal with domestic coal to mitigate the domestic coal shortage” and invited comments from the stakeholders vide notice dated 2.6.2022, on issues such as “the extent of blending of imported coal that can be allowed without the permission or consultation of the beneficiaries and to what extent the increase in energy charge rate over and above base energy charge rate, approved by the Commission for that year, be allowed upon blending of imported coal”.

2. Based on the comments of stakeholders and considering the inadequate coal stocks / supply from domestic sources and power demand scenario, **this Commission in exercise of its powers under Regulation 76 of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 (hereinafter “2019 Tariff Regulations”), vide Order in Petition No. 10/SM/2022 dated 26.07.2022 relaxed the provisions of Sub-Regulation (3) of Regulation 43 till 31.10.2022 or**

until further orders, whichever was earlier. The Order dated 26.07.2022 allowed blending of imported coal up to 20% without prior permission of the beneficiaries and operation of the second and third provisos of regulation 43 (3) of the 2019 Tariff Regulations regarding ceiling limits for increase in ECR by 30%/20% were kept in abeyance, up to 31.10.2022.

3. The actual Power Supply Position for December 2022 and January 2023 indicates surge in the all India energy demand and peak power demand as compared to the projected figures for the year 2022-23. As compared to the anticipated all India energy requirement and peak demand of 118254 MU and 196950 MW, as per CEA Load Generation Balance Report (LGBR) report 2022-23 for the month of December 2022, the actual all India energy supplied and peak demand met is 121913 MU and 205101 MW respectively. Similarly for January 2023, as against the anticipated all India energy requirement and peak demand of 121402 MU and 202065MW, the actual all India energy supplied and peak demand met is 125151 MU and 210618 MW respectively. As per the "Report on Twentieth Electric Power Survey of India" published by CEA in November 2022, the all-India peak electricity demand for the year 2023-24 is projected to be around 230 GW.

4. Ministry of Power, in consideration of anticipated surge in energy demand during remaining period of current financial year (2022-23) and first two quarters of 2023-24, has assessed that increase in supply of domestic coal supply shall not be commensurate with the energy demand. Ministry of Power vide its letter dated 09.01.2023 has directed the Central Gencos, State Gencos and IPPs to take necessary action and immediately plan to import coal through a transparent competitive

procurement for blending at the rate of 6% by weight so as to have coal stocks at their power plants for smooth operation till September 2023.

5. In light of the above there is a need for providing regulatory support to GENCOs to procure and blend imported coal so as to have adequate coal stocks at their power plants for smooth operation.

6. Regulation 43 of the 2019 Tariff Regulations provides for Computation and Payment of Energy Charge in respect of Thermal Generating Stations, the relevant provision of which is extracted as follows:

“43. Computation and Payment of Energy Charge for Thermal Generating Stations

(1).....

.....

(3) In case of part or full use of alternative source of fuel supply by coal based thermal generating stations other than as agreed by the generating company and beneficiaries in their power purchase agreement for supply of contracted power on account of shortage of fuel or optimization of economical operation through blending, the use of alternative source of fuel supply shall be permitted to generating station:

Provided that in such case, prior permission from beneficiaries shall not be a precondition, unless otherwise agreed specifically in the power purchase agreement:

Provided further that the weighted average price of alternative source of fuel shall not exceed 30% of base price of fuel computed as per clause (5) of this Regulation:

Provided also that where the energy charge rate based on weighted average price of fuel upon use of alternative source of fuel supply exceeds 30% of base energy charge rate as approved by the Commission for that year or exceeds 20% of energy charge rate for the previous month, whichever is lower shall be considered and in that event, prior consultation with beneficiary shall be made at least three days in advance.

.....”

7. The Commission is vested with the power to relax any of the provisions of the 2019 Tariff Regulations on its own motion or on an application made by an interested person. Regulation 76 of the 2019 Tariff Regulations is extracted as under:

“76. Power to Relax: The Commission, for reasons to be recorded in writing, may relax any of the provisions of these regulations on its own motion or on an application made before it by an interested person.”

8. Accordingly, in order to facilitate availability of adequate quantum of coal in thermal power plants to ensure smooth and uninterrupted generation and in turn to aid the distribution companies to meet their universal supply obligation to consumers, the Commission in exercise of its powers under Regulation 76 of the 2019 Tariff Regulations, relaxes the provisions of Sub Regulation (3) of Regulation 43 and issues the following directions:

a. The first proviso of sub Regulation (3) of Regulation 43 of 2019 Tariff Regulations shall be read as under:

“Provided that in such case, prior permission from beneficiaries shall not be a precondition for blending up to 6% by weight GENCO wise from alternate

sources of fuel supply including imported coal, subject to technical feasibility, unless otherwise agreed specifically in the power purchase agreement.”

b. The operation of second and third provisos of sub Regulation 3 of Regulation 43 of 2019 Tariff Regulations shall be kept in abeyance.

9. The above directions shall remain operative till 30.9.2023 or until further orders, whichever is earlier.

10. Petition No. 2/SM/2023 is disposed of in terms of the above.

sd/-
(P. K. Singh)
Member

sd/-
(Arun Goyal)
Member

sd/-
(I.S. Jha)
Member

Annexure – D6 Source wise details of Power Purchase for 2022-23						
No	Source	Approved Energy (MU)	Approved Cost (Rs Cr)	Actual Energy (MU)	Actual Power purchase cost as per accountd (Rs Cr)	True up claim(Rs Cr)
CENTRAL GENERATING STATIONS						
	RSTPS I & II	1696.81	621.64	1398.03	683.62	683.62
	RSTPS III	425.93	153.10	355.73	166.34	166.34
	Talcher Stage-II	2980.96	853.18	3189.84	1023.26	1023.26
	Simhadri TPS Stg II	600.03	270.32	505.57	330.70	330.70
	NLC Stage-I	422.33	156.88	291.54	164.41	164.41
	NLC Stage-II	603.17	223.42	458.44	228.00	228.00
	NLC 1 Expansion	464.13	169.42	434.84	228.69	228.69
	NLC II Expansion	511.51	252.65	270.88	129.84	129.84
	MAPS	122.72	31.56	76.43	19.91	19.91
	KAIGA	389.17	136.97	577.23	203.96	203.96
	Kudankulam	1507.12	628.97	1789.39	789.93	789.93
	Vallur	350.72	175.75	317.96	176.60	176.60
	NTPL	506.33	248.43	407.03	252.09	252.09
	Kudgi	780.71	418.80	504.57	414.63	414.63
	NNTPS	226.17	102.45	229.85	103.30	103.30
	Aravally Power Ltd				4.42	4.42
	PGCIL losses	397.46		421.30		
	Sub Total	11190.35	4443.54	10386.03	4919.71	4919.71
	RGCCPP, Kayamkulam		100.00	0.00	98.16	98.16
	Renewable Energy					
	Wind IPP					
	Wind-Agali	29.72	9.33	24.87	17.88	17.88
	Wind-Koundical	12.56	3.94	8.73		
	Wind-Ramakkalmedu, Wind	27.87	8.75	23.61		
	Wind -Ahalya	20.98	10.97	17.59	8.92	8.92
	Wind-INOX	30.84	12.61	34.86	14.26	14.26
	Wind-Kosamattam	1.01	0.4	1.23	0.48	0.48
	Wind Sub total	122.98	46	110.88	41.54	41.54
	SHEP					
	Ullunkal(EDCL)	17.79	4.34	20.91	5.05	5.05
	Iruttukanam Stage-I & II(Viyyat)	24.69	6.67	27.38	7.00	7.00
	Karikkayam HEP(AHPL)	37.56	15.62	48.20	20.05	20.05
	Meenvallom(PSHCL)	8.44	4.12	9.87	4.43	4.43
	Minar Renewable energy project Ltd	25.54	8.91	20.89	7.29	7.29
	Deviar micro	0.02	0.01	0.00		
	Anakkampoil	27.67	11.07	25.01	10.00	10.00
	Arippara	0	0	12.29	0.00	0.00
	SHEP subtotal	141.71	50.74	164.54	53.82	53.82
<i>Continued</i>						

No	Source	Approved Energy (MU)	Approved Cost (Rs Cr)	Actual Energy (MU)	Actual Power purchase cost(Rs Cr.)	True up claim (Rs Cr)
	Solar					
	Solar IREDA	73.37	28.1	71.68	27.453	27.453
	Solar IPP ANERT			2.31	0.10	0.10
	THDCIL	73.37	22.74	93.10	28.86	28.862
	NTPC Solar	177.3	56.03	167.54	49.29	49.294
	CIAL Ettukudukka			12.43	2.95	2.95
	Solar IPP sub total	324.04	106.87	345.75	108.65	108.652
	Sub Total IPPs	588.73	303.61	621.18	302.18	302.179
	Grid connected -captive prosumer/solar prosumer (settlement)			136.224	8.54	8.540
	grid connected solar injection			309.18		0.000
	captive consumer SHEP and wind injection			137.65		0.000
	Wind Power through SECI	210	59.22	247.30	71.49	71.48
	RPO-Solar/ Non-solar	1270.71	223.87			
	Sub Total	2069.44	586.70	1315.31	382.21	382.20
3	Long Term Contracts outside the State					
	Maithon Power Ltd-I	1034.96	417.99	1066.65	456.40	456.40
	Maithon Power Ltd-II	1034.96	417.99	1066.63	456.38	456.38
	DVC Mejia	705.51	315.71	659.63	389.12	389.12
	DVC RTPS	348.06	168.17	229.46	129.60	129.60
	Jindal Power Ltd-Bid I*	1497.96	576.63	1496.66	544.58	544.58
	Jhabua Power Ltd-Bid I	861.33	332.71	834.93	327.80	295.29
	Jindal Power Ltd-Bid II*	1123.47	433.97	1122.49	479.42	419.90
	Jhabua Power Ltd-Bid II	748.98	289.32	725.94	327.05	275.47
	JITPL	748.98	289.32	695.83	273.25	242.31
	BALCO	748.98	313.25	244.56	42.70	42.70
	Total exbus	8853.19	3555.056	8142.76	3426.29	3251.76
	PGCIL losses	303.68		269.68		
	Sub TotalLTA	8549.51	3555.056	7873.09	3426.29	3251.76
4	Medium term Short term/Exchanges/swap					
	Purchase from JITPL through PTC	996.95	318.67	841.31	289.65	289.65

No	Source	Approved Energy (MU)	Approved Cost (Rs Cr)	Actual Energy (MU)	Actual Power purchase cost(Rs Cr.)	True up claim (Rs Cr)
5	Short Term					
	DEEP purchase from JPL			37.91	22.40	22.40
	DEEP purchase from NBVL through TPTCL			31.01	18.33	18.33
	Purchase from NVVN/IL&FS			67.98	52.58	52.58
	Purchase from TPTCL/PPGCL			13.40	9.27	9.27
	Purchase from PTC/JNSTPP			14.44	9.98	9.98
	Sub Total Short term/Medium term			1006.05	402.19	402.19
	PGCIL losses			37.49		
	Sub Total Short term			968.56	402.19	402.19
	IEX/PXIL					
	IEX DAM	164.56	65.82	145.09	62.0	62.03
	IEX TAM			19.48	21.0	21.02
	PXIL TAM			30.81	42.7	42.72
	HPX TAM			14.11	14.2	14.19
	IEX RTM			86.13	35.7	35.69
	IEX GDAM			47.11	22.1	22.09
	IEX GTAM			14.68	7.6	7.61
	PXIL GTAM			6.42	3.3	3.34
	HPX GTAM			13.37	6.8	6.85
	Deviation Settlement Mechanism*(net)			-3.86	14.60	14.60
	Swap Purchase			232.15	0.72	0.72
	PGCIL losses	34.2		15.16		0.00
	Sub Total ST/MT/Exchanges DSM/Swap	1127.31	384.49	1558.88	633.06	633.06
	Total LTA /MTOA/STOA	9676.82	3939.55	9431.96	4059.35	3884.81
	Transmission charges payable to PGCIL		760.55		1788.40	1788.40
	RLDC charges		3			
	Total	22936.61	9833.64	21133.30	11149.66	10973.12
	Power returned through banking arrangements			19.14		0.00
	Sale through IEX	1946.22		1686.09	4.55	4.55
	Sale through PXIL			125.53		0.00
	Sale through HPX			1.48		0.00
	Provisions for energy availed through banking transactions from outside the State which was not returned during FY 2021-22				86.40	
	Net Power Purchase	20990.39	9833.64	21133.30	11240.62	10979.68

Annexure – D7 : Actual Rate of Power from external IPPs, traders and energy exchanges,DSM,swap					
Name of IPP/trader	Energy at exbus(MU)	Energy at Kerala end (MU)	Power Purchase cost as per audited accounts	True up claim of power purchase cost (Rs Cr)	Rate at exbus (Rs/unit)
Long Term contracts					
Maithon Power Ltd-I	1066.65	1031.92	456.40	456.40	4.28
Maithon Power Ltd-II	1066.63	1031.9	456.38	456.38	4.28
DVC Mejia	659.63	637.5	389.12	389.12	5.90
DVC RTPS	229.46	221.93	129.60	129.60	5.65
Jindal Power Ltd-Bid I*	1496.66	1447.12	544.58	544.58	3.64
Jhabua Power Ltd-Bid I	834.93	807.42	327.80	295.29	3.54
Jindal Power Ltd-Bid II*	1122.49	1085.34	479.42	419.90	3.74
Jhabua Power Ltd-Bid II	725.94	702.02	327.05	275.47	3.79
JITPL	695.83	672.81	273.25	242.31	3.48
BALCO	244.56	235.13	42.70	42.70	1.75
Purchase of power thru SECI	247.3	247.3	71.49	71.49	2.89
Subtotal	8390.06	8120.38	3497.78	3323.24	3.96
Medium Term Contract					
Purchase from JITPL through PTC	841.31	810.05	289.65	289.65	3.44
Short term contract					
Purchase from Jindal Power Ltd	37.91	36.43	22.40	22.40	5.91
Purchase from PPGCL through TPTCL	13.4	12.91	18.33	18.33	13.68
Purchase from JNSTPP Through PTC	14.44	13.91	52.58	52.58	36.41
Purchase from NBVL through TPTCL	31.01	29.8	9.27	9.27	2.99
Purchase from IL&FS through NVVNL	67.98	65.47	9.98	9.98	1.47
Sub Total	164.74	158.52	112.54	112.54	6.83
Exchanges					
IEX					
DAM	145.09	139.57	62.03	62.03	4.28
TAM	19.48	18.79	21.02	21.02	10.79
RTM	86.13	82.97	35.69	35.69	4.14
GDAM	47.11	45.41	22.09	22.09	4.69
GTAM	14.68	14.11	7.61	7.61	5.18
PXIL					
TAM	30.81	29.78	42.72	42.72	13.86

GTAM	6.42	6.17	3.34	3.34	5.21
HPX					
TAM	14.11	13.54	14.19	14.19	10.06
GTAM	13.37	12.85	6.85	6.85	5.12
Sub Total	377.20	363.19	215.55	215.55	5.71
Deviation Settlement Mechanism(Net Export)	-3.86	-3.86	14.60	14.60	
Swap	232.15	232.15	0.72	0.72	
Total	10001.60	9921.76	4130.84	3956.30	3.97

CHAPTER – 5: GENERAL EXPLANATION ON VARIOUS EXPENSES

5.1 Interest and finance charges: An amount of Rs 2100.97 Cr had been approved by the Hon'ble Commission under this head. The actual expense incurred was Rs.1511.85 Cr (net of capitalized interest Rs.290.36 Cr). A comparison summary of I & F charges under various heads, as approved by the Hon'ble Commission and actually incurred as per audited accounts, are given below.

Item	Approval				Actual				Difference over approval			
	SBU G	SBU T	SBU D	Total	SBU G	SBU T	SBU D	Total	SBU G	SBU T	SBU D	Total
Interest on Term Loan	75.76	213.61	482.67	772.04	107.36	164.69	371.90	643.94	31.60	48.92	110.77	128.10
Security Deposit Interest			151.46	151.46			137.43	137.43	-	-	14.03	14.03
Master Trust Bond Interest	32.98	68.72	509.13	610.83	30.83	59.83	522.25	612.91	2.15	8.89	13.12	-2.08
WC/OD interest	5.54	18.54		24.08	6.70	13.00	113.51	133.22	-1.16	5.54	113.51	-109.13
PF interest	11.75	24.46	181.30	217.51	9.95	19.31	168.53	197.78	1.80	5.15	12.77	19.72
Other charges	-	-	-	-	0.36	0.48	76.09	76.93	-0.36	-0.48	76.09	-76.93
Carrying cost	-	-	325.05	325.05					-	-	325.05	325.05
GROSS TOTAL	126.03	325.33	1,649.61	2,100.97	155.20	257.31	1,389.71	1,802.21	29.17	68.02	259.90	298.76
Less: Interest capitalized	-	-	-	-	194.69	70.72	24.95	290.36	194.69	70.72	24.95	-290.36
Total I&FC	126.03	325.33	1649.61	2100.97	-39.50	186.59	1,364.76	1,511.85	165.52	138.74	284.85	589.12

5.2 Interest on loans: The normative interest on loan provisionally approved amounted to Rs. 772.04 Cr but actually incurred Rs. 643.94 Cr, which was less than the sum approved by Rs.128.10 Cr. The variation from approved expenses is mainly because of the normative approach adopted to assess the extent of loan on which interest is allowable and the weighted average interest rate. While approving ARR, Hon'ble Commission considered trued up normative loan for 2020-21 and provisional GFA addition for 2021-22 to ascertain the level of normative loan as on 31.03.2022. Thereafter approved GFA addition, depreciation, and grants for the year 2022-23 was considered to arrive at the normative loan as on 31.03.2023. Actual rate of interest (9.87%) during the year 2020-21 was considered and normative interest approved at Rs.772.04 Cr as summarized below:

Sl. No	Description	SBU G	SBU T	SBU D	Total
1	Opening levels of normative Loan (as on 1-4-2022)	497.93	1608.54	4772.4	6878.87
2	Provisional Asset Addition for 2022-23	686.11	1520.57	683.15	2889.83
3	Contribution & Grants	0	160.16	210.96	371.12
4	Net Addition to Normative loan 2022-23 (2-3)	686.11	1360.41	472.19	2518.71
5	Repayment for 2022-23 (Depreciation)	146.8	231.4	266.09	644.29
6	Closing provisional Normative Loan 31.03.2023	1037.24	2737.55	4978.50	8753.29
7	Average normative loan	767.58	2173.045	4875.45	7816.07
8	Rate of interest	9.87%	9.83%	9.90%	9.87
9	Interest charges	75.76	213.61	482.67	772.04

5.3 However, the actual outstanding loan as on 31.03.2023 was Rs.7332.99 Cr as against the assessed normative loan of Rs.8753.29 Cr by the Hon'ble Commission in the MYT order. Actual loan was less than the assessed levels by Rs. 1420.30 Cr, whereas the actual opening loan as on 31.03.2021 was less than the approved normative loan by Rs. 781.82 Cr. Average interest for the year was 8.49 % against 9.87% considered for ARR approval. These have contributed to the difference of actual interest over approval. Hon'ble Commission may kindly note that closing loan as per accounts does not include Rs. 1643.51 Cr (Rs. 1299.10 Cr for 2021-22) received from KIIFB and DRIP, which were disclosed under Note 21 of the audited accounts.

5.4 Summary of loan details are furnished below. Source wise borrowings, repayments and interests are furnished in **Appendix- 1**. SBU wise details are furnished in **Appendix 1A, 1B and 1C** respectively for SBU G, SBU T and SBU D.

SBU	Opening (01/04/2022)	Add: additions during the Year	Less: Repayments during the year	Closing (31/03/2023)	Average loan	Interest on loan	Average interest rate (%)
SBU G	1399.91	319.95	466.28	1253.57	1326.74	107.36	8.09
SBU T	1918.72	540.16	598.74	1860.13	1889.43	164.69	8.72
SBU D	4513.92	806.85	1101.49	4219.28	4366.60	371.9	8.52
Total	7832.55	1666.96	2166.51	7333.00	7582.77	643.94	8.49

5.5 **Basis of apportionment loans among SBUs in accounts.** The basis adopted in apportioning loan among SBUs in accounts are tabulated below:

No	Institution	Basis
A	SECURED LOANS-TERM LOANS	
1	L I C	GFA+CWIP
2	REC ON VARIOUS SCHEMES	GFA+CWIP
3	REC R-APDRP PART-B	DISTRIBUTION
4	R E C – RGGVY	DISTRIBUTION
5	REC – Medium Term Loan	GFA+CWIP
6	PFC-Pallivasal	GENERATION
7	PFC R-APDRP	DISTRIBUTION
8	SOUTH INDIAN BANK-Barapole	GENERATION
9	PFC GEL KAKKAYAM	GENERATION
10	REC-Distribution-23 circle scheme	DISTRIBUTION
11	REC-Distribution-Meter scheme	DISTRIBUTION
12	REC-Thottiyar	GENERATION
13	REC-Transmission-Kattakkada-Pothencode	TRANSMISSION
14	REC-Transmission-Group 1	TRANSMISSION
15	Special loan assistance REC	GFA+CWIP
16	DRIP	GENERATION
17	R E C-DDG Scheme	DISTRIBUTION
18	RIDF of NABARD-Upper Kallar & Banasurasagar	GENERATION
19	Special loan assistance -PFC	GFA+CWIP
20	PFC GEL Perunthenaruvi	GENERATION
B	UNSECURED LOANS TERM LOANS	
	REC	GFA+CWIP

- 5.6 Hon'ble Commission may kindly note that since short term loans could be obtained at comparatively lower rate than long term loans, KSEBL had earlier availed short-term loans for meeting capital liabilities in the past. Considering the risk involved in financing capital project through short term loans, KSEBL started availing long and medium-term loans for this purpose by restricting STL borrowings to the possible extent. STL as on 31.03.2023 has been Rs. 500 Cr. A summary of Short-Term loans is given in **Appendix-2**. Interest on STL for the year 2022-23 had been Rs. 18.69 Cr (Rs.41.87 Cr for 2021-22). The details are given in **Appendix-3**. Overdrafts & Demand loans as on 31.03.2023 amounted to Rs. 1566.80 Cr (Rs.1500.63 Cr in 2021-22) with an interest to the tune of Rs. 133.22 Cr (Rs.122.99 Cr for 2021-22). Thus, Long term loan and STL decreased by Rs.499.56 Cr and hike in OD balance by Rs. 66.17 Cr during the year. There was an increase in receipt from KIIFB and DRIP to the tune of Rs.344.41 Cr (Note No. 21 of Audited accounts) due to which the overall borrowings was lesser by Rs.88.98 Cr in comparison with 2021-22.
- 5.7 During 2022-23, KSEBL executed capital works to the tune of Rs.2940.24 Cr during the year and works capitalized to the tune of Rs 2825.71 Cr. Project wise details of CWIP are furnished in **Appendix 4**. A summary of capital works is furnished below:

Table 5.5: Summary of capitalization during 2022-23 (Rs. Cr)					
Sl. No	SBU	CWIP as on 01/04/2022	Works executed during the year	GFA Addition	CWIP as on 31/03/2023
1	Generation	1,843.96	329.99	256.27	1,917.71
2	Transmission	957.78	1032.73	1129.63	860.86
3	Distribution	728.08	1577.53	1439.81	865.80
4	GRAND TOTAL	3,529.81	2,940.24	2,825.71	3,644.37

- 5.8 It is respectfully submitted that Hon'ble Commission has determined normative loan as on 01.04.2015 (at the beginning of the 3-year control period from 2015-16 to 2017-18). Aggrieved by the determination of normative loan balance as on 01.04.2015 (Rs.2276.22 Cr) by the Hon'ble Commission in the truing up order for 2015-16, KSEBL sought review for an additional claim of Rs.467.60 Cr, which was turned down as per order dated 16.05.2019. Considering the long-lasting financial implication, KSEBL has filed appeal petitions before the Hon'ble APTEL for each succeeding year (from 2015-16 to 2020-21). In view of the pendency of above appeals, KSEBL retains the disputed claim in true up petition for 2022-23 also as had been done for the earlier years. Trued up normative loan for 2021-22 was at Rs.7966.49 Cr. Therefore, Normative loan at the beginning of the year 2022-23 in this petition has been considered at Rs. 8434.09 Cr , inclusive of disputed claim, as summarized below:

Table 5.6 Computation of Normative loan as on 01.04.2022					
Sl. No	Description	SBU G	SBU T	SBU D	Total
1	Closing balance of Normative loan as per True up order for 2021-22 (OP 17/2023 dated 03.10.2023)	791.31	2820.02	4355.16	7966.49
2	Add: Disputed claim pending before APTEL	135.23	131.21	201.16	467.60
3	Normative loan as on 01.04.2022 considered in this petition	926.54	2951.23	4556.32	8434.09

Additional capitalization during 2022-23 and normative loan thereon.

5.9 GFA addition during 2022-23 was Rs. 2825.71 Cr. The asset class wise details of fixed assets addition under the strategic business units of SBU G, SBU T and SBU D during 2022-23 as per accounts is furnished below:

Table 5.7 SBU wise -Asset class wise GFA addition for 2022-23 (Rs Cr)					
Sl.No	Description	SBU G	SBU T	SBU D	Total
1	Land	0.66	11.26	0.10	12.03
2	Building	64.16	96.60	24.25	185.01
3	Hydraulic works	110.62	0.45		111.07
4	Other Civil works		23.35	2.93	26.28
5	Plant & Machinery	78.63	345.69	65.82	490.14
6	Lines, cable networks etc.	0.52	649.38	1339.60	1989.50
7	Vehicle	0.38	1.04	0.42	1.84
8	Furniture & Fixtures	0.42	0.61	2.03	3.05
9	Office equipment	0.81	1.01	4.31	6.13
10	Total	256.24	1129.38	1439.46	2825.08
11	Add: Decommissioning liability 2022-23	0.03	0.25	0.34	0.62
12	GFA addition during the year-2022-23	256.27	1129.63	1439.81	2825.71

5.10 It is humbly submitted that, in compliance of the audit objections etc the following adjustments amounting to Rs. 869.21 Cr were made in the Gross Fixed Assets (GFA)

Table 5.7 A: Adjustments on GFA (Rs Cr) pertaining to earlier years					
Sl. No	Description	SBU G	SBU T	SBU D	Total
1	Cost of damaged assets withdrawn	0.00	0.00	805.39	805.39
2	Fair value of Land as per para 1 (l) of audited accounts for 2021-22.		14.61		14.61
3	Investment property disclosed separately-Note no. 4 of 2022-23	7.07	1.23	21.01	29.31
4	Decommissioning liability withdrawn-para 1 (h) of audited accounts 2021-22	4.23	4.68	10.99	19.90
5	Total	11.30	20.52	837.39	869.21

5.10.1 Assets lost due to natural calamities during the period from 2017-18 to 2021-22 on account of Okhi, flood etc amounts to Rs. 805.39 Cr has been removed from books along with accumulated depreciation (Rs. 510.30 Cr). The balance written down value of Rs. 295.09 Cr has been adjusted against grant given by the State Government for the purpose. Details are furnished below:

Table 5.7 B: Details of asset lost due to natural calamity and the claim received from the Government (Rs Cr)						
Particulars	2017-18	2018-19	2019-20	2020-21	2021-22	Total
GFA Lost due to natural calamity	125.85	232.07	279.12	109.83	58.52	805.39
Depreciation charged	79.74	147.04	176.85	69.59	37.08	510.3
Loss due to natural calamity	46.11	85.03	102.27	40.24	21.44	295.09
Grant received		46.11	85.03	142.51	21.44	295.09

5.10.2 In order to rectify the audit qualification on capitalization of land in lieu of receivables amounting to Rs. 174.61 Cr by Statutory auditors in their report for 2021-22 (para 1 (l) page 55 of 11th

Annual Report) KSEBL has withdrawn Rs. 14.61 Cr from land value and written off the same. KSEBL, in its truing up petition for 2020-21 had submitted the following:

5.38 *As per the direction of the Government of Kerala, OTS scheme was granted to M/s Travancore Cochin Chemicals Ltd (M/s TCCL) to settle the arrears from May 1999 to October 2016 with Interest @ 6% aggregating to Rs. 174.14 Cr in lieu of 20 Acres of land in Eloor village, owned by M/s TCCL and under lease to M/s BSES Kerala Power Ltd. The fair value of land was yet to be published. As per IND AS 16, if the acquired item is not measured at fair value, its cost is measured at the carrying amount of the asset given up. In the settlement with M/s TCCL, KSEBL had given up its receivable from sale of power to the extent of Rs.174.61 Cr against the land transferred to KSEBL. In view of the above, Board of Directors of KSEBL resolved to adjust the current charge arrears of M/s TCCL amounting to Rs. 174.61 Cr against 20 Acres transferred to KSEBL by M/s TCCL as per IND AS 16. Land value has been booked under SBU T to the extent of Rs.174.61 Cr. Interest amounting to Rs. 48.32 Cr on account of arrear settlement of M/s Travancore Cochin Chemicals Ltd Interest on belated payment of charges (Note No. 29 of audited accounts).*

5.10.3 Hon'ble Commission may kindly note that the value of land taken over by KSEBL in full settlement of the dues of M/s TCCL has been recognized at Rs. 160 Cr and therefore Rs. 14.61 Cr removed from GFA of SBU T and written off in the restated accounts as on 01.04.2021. This fact has duly been furnished in Note No. 51.1 (4m (1)) of the audited accounts for 2022-23.

5.10.4 In response to another audit qualification in the matter of policy relating to the recognition of decommissioning liability by the Statutory auditors in their report for 2021-22 (para 1 (h) page 55 of 11th Annual Report) KSEBL changed the policy because of which Rs. 19.90 Cr has been withdrawn.

5.10.5 Investment property and its depreciation were disclosed separately in Note No. 4 of accounts after excluding the same from Property, Plants and Equipment (Fixed asset schedule)

5.11 SBU wise details of GFA addition considered for truing up with explanation is furnished below:

SBU GENERATION:

5.12.1 GFA worth Rs. 4.20 Cr represent part capitalization within the meaning of Tariff Regulations. Asset category wise details of part capitalized assets are furnished in **Appendix 4A**.

5.12.2 Hon'ble Commission did not approve decommissioning liability in GFA addition, accounted by virtue of IND AS provisions, during the course of truing up for the year 2016-17. Therefore, decommissioning liability of SBU G is not considered in GFA addition during the year for truing up purpose. Further, Rs. 3.08 Cr worth of part capitalized assets in earlier years has been considered as GFA addition during 2022-23, details of which are furnished in **Appendix 4B**.

5.12.3 After adjusting part capitalized assets and de commissioning liability from the GFA addition as per accounts, the asset addition during the year eligible as per Tariff Regulation amounted to Rs.255.08 Cr as detailed in Table below.

5.12.4 Item wise break up of GFA of SBU G are summarized below:

No.	Particulars	Gross fixed assets for 2022-23 as per Accounts			Part capitalized in 2022-23	Part capitalized in earlier years but considered in 2022-23				Decom. liability	TU Claim
		Year beginning	Additions	Year End		2017-18	2018-19	2019-20	2021-22		
1	Land & land rights	1518.51	0.66	1519.17	0						0.66
2	Hydraulic works	1592.18	110.62	1702.8			0.02	0.64	1.62		112.9
3	Building & Civil works of Power plant	677.2	64.16	741.36	3.66	0.02	0.56		0.19		61.27
4	Plant & machinery including sub-station equipment	13729.89	78.63	13808.51	0.46		0.03				78.2
5	Line, cable network etc	10.32	0.52	10.84	0						0.52
6	Vehicles	15.87	0.38	16.26	0						0.38
7	Furniture & fixtures	13.16	0.42	13.58	0.03						0.39
8	Office Equipment	14.95	0.81	15.76	0.05						0.76
9	Decommissioning liability		0.03							0.03	0
	Total (1) to (9)	17572.07	256.27	17828.28	4.20	0.02	0.61	0.64	1.81	0.03	255.08
	Enhancement in value due to revaluation	11988.98		11988.98							
	Net of enhanced in value	5583.09	256.27	5839.36							

5.12.5 Decommissioning liability amounting to Rs. 0.03 Cr included in the GFA addition for the year has not been considered in the computation of GFA addition eligible as per Tariff regulation. Hon'ble Commission may kindly note that Rs. 0.09 Cr was received as capital subsidy and grants during 2022-23. Hon'ble Commission may be pleased to approve GFA addition under SBU G at 254.99 for the year 2022-23 for the purpose of normative loan and 254.33 Cr (Excluding land value of Rs. 0.66 Cr) for depreciation.

SBU Transmission:

5.13.1 As per audited accounts, GFA addition during the year has been Rs.1129.63 Cr. Details are furnished in Appendix 4. Out of the GFA addition during the year, assets worth Rs.65.75 Cr represent part capitalization within the meaning of Tariff Regulations. Asset category wise break up in respect of part capitalized assets are furnished in **Appendix 4C**.

5.13.2 KSEBL, as per truing up petition for 2016-17 to 2021-22, has excluded part capitalized projects in respect of SBU T as envisaged in the Tariff Regulations. Out of the projects part capitalized in earlier years, projects aggregating to Rs. 31.48 Cr were commissioned in 2022-23. Details are furnished as per **Appendix 4 D to 4 F**. Project wise GFA addition details are furnished in **Appendix 4 G**.

5.13.3 Thus, part capitalized assets and decommissioning liability during the year were deducted from the GFA addition as per accounts. Thereafter, part commissioned assets in earlier years but commissioned in 2022-23 were considered to arrive at the asset addition eligible as per Tariff Regulation. This amounted to Rs.1095.11 Cr as detailed in Table below:

No	Assets Group	Gross fixed assets			Adjustments	Part capitalized in earlier years but commissioned during 2022-23			Addition as per Regulation
		Year beginning	Additions	Year End		Part capitalized	2019-20	2020-21	
1	Land & land rights	505.96	11.26	517.23	0.97		0.34	0.12	10.75
2	Buildings	417.53	96.60	514.13	2.92		0.74	0.13	94.55
3	Hydraulic Works	11.43	0.45	11.88	0				0.45
4	Other Civil works	518.08	23.35	541.43	6.28		0.08	0.68	17.83
5	Plant & Machinery	3276.90	345.69	3622.59	46.73	0.26	11.14	11.36	321.72
6	Lines, cable networks etc.	3594.74	649.38	4244.12	8.7			6.61	647.29
7	Vehicle	11.40	1.04	12.44	0				1.04
8	Furniture and Fixtures	10.16	0.61	10.76	0				0.61
9	Office Equipment	18.97	1.01	19.98	0.15			0.02	0.88
10	Decommissioning liability		0.25	0.25					
11	Gross Asset (Total (1) to (10))	8365.18	1129.63	9494.81	65.75	0.26	12.30	18.92	1095.11

Decommissioning liability amounting to Rs. 0.25 Cr is included in the GFA addition for the year.

5.13.4 Hon'ble Commission may kindly approve GFA addition of Rs.1095.11 Cr for 2022-23. Consumer contribution, grants and subsidies received during the year amounted to Rs.32.63 Cr as detailed **Appendix 5**. GFA addition to the tune of Rs. 1062.48 Cr (Rs.1095.11 Cr-Rs.32.63 Cr) may kindly be approved as GFA addition eligible for normative loan and Rs.1051.73 Cr (excluding land value Rs. 10.75 Cr, ie Rs. 11.26 Cr – Rs. 0.97 Cr) as GFA eligible for depreciation.

GFA addition for SBU D:

5.14.1 As per audited accounts, assets capitalized during the year has been to the tune of Rs.1439.81 Cr as detailed below:

No	Assets Group	Gross fixed assets			Adjustments	Addition as per Regulation
		Year beginning	Additions	Year End		
1	Land & land rights	22.42	0.10	22.52		0.10
2	Buildings	116.84	24.25	141.10		24.25
3	Hydraulic Works	0.08	0.00	0.08		0.00
4	Other Civil works	9.31	2.93	12.24		2.93
5	Plant & Machinery	3044.52	67.93	3112.45		67.93
6	Lines, cable networks etc.	11068.24	1339.60	12407.84		1339.60
7	Vehicle	11.50	0.42	11.92		0.42
8	Furniture and Fixtures	50.29	2.03	52.31		2.03
9	Office Equipment	41.83	2.21	44.04		2.21
10	Decommissioning liability		0.34		0.34	0.00
11	Gross Asset (Total (1) to (14))	14365.04	1439.81	15804.50	0.34	1439.46

5.14.2 Decommissioning liability amounting to Rs. 0.34 Cr is included in the GFA addition for the year. Consumer contribution, grants and subsidies received during the year 2022-23 has been Rs.742.07 Cr, details of which are given in **Appendix 5**. After excluding contribution etc GFA

addition eligible for normative loan amounts to Rs. 697.40 Cr. (Rs.1439.81 Cr- (Rs.742.07 Cr+ Rs.0.34 Cr). GFA addition eligible for depreciation amounts to Rs. 697.30 Cr after excluding land value of Rs.0.10 Cr (Form D3.5 of the petition).

5.15 Capitalization of expenses: It is respectfully submitted that KSEBL earmarks amounts meant for capitalization of various expenses incurred on capital works carried out during the year. Such amount earmarked for subsequent capitalization is deducted from the actual employee cost, A&G expenses, and interest on loan annually and directs the ARUs to include the same under CWIP itself. Expenses so earmarked for capitalization during subsequent years amounted to Rs.837.49 Cr. It may kindly be noted that expenses earmarked annually would continue to be disclosed under CWIP till completion of related works and transfer to GFA. Apportionment of expenses earmarked for capitalization among SBUs in 2022-23 is furnished below:

Table5.11: Details of expenses capitalized in 2022-23 (Rs Cr)					
Sl. No	Description	SBU G	SBU T	SBU D	Total
1	Interest and Finance charges	194.69	70.72	24.95	290.36
2	Employee cost	58.27	105.1	382.67	546.04
3	A&G expenses		0.36	0.72	1.09
3	Total	252.96	176.18	408.34	837.49

5.15.1 In respect of the capitalized portion of expenses, Hon'ble Commission may kindly note that the capitalized portion of expenses comprises of employee cost, interest, and A&G expenses. KSEBL is following the rules, policies and standards prescribed in Electricity (Supply) Annual Accounts Rules (ESAAR) 1985 saved as per section 185 (2) of the Electricity Act, 2003 for Capitalization of expenditure. Accounting standards for capitalization of expenditure is specified in Annexure III -Basic Accounting Policies and principles. It is respectfully submitted that KSEBL is consistently following the above prescribed accounting policies. The employee cost attributable to the creation of fixed assets is being capitalized as cost of fixed asset by following the prescribed accounting standards. The highlights are as follows:

-All employee costs in respect of the construction units are fully charged as cost of capital assets.

-Staff costs which are chargeable to capital works shall be:

- (1) Identified to specific capital job wherever possible.*
- (2) Failing which identified to a specific group of capital jobs wherever possible (and within the group allocated on an ad-valorem basis).*
- (3) Failing which identified to a project wherever possible (and allocated on an ad-valorem basis over various jobs within the project).*
- (4) Failing which, allocated on an ad-valorem basis over various projects and various jobs within each project.*

-Identification to one or more jobs should be done only, if possible, to identify without any allocation. In all other cases, ad-valorem allocation shall be adopted.

5.15.2 As the employees of the SBUs, Generation (Civil), Transmission and Distribution are also engaged in the capital expenditure nature of works, every year a portion of such employee cost capitalized in a pre-set percentage as below.

Generation (Civil)-100%
Transmission-25%
Distribution-14 %
Head office-5%

5.15.3 It is respectfully submitted that the portion of expenses capitalized at HO level are communicated to the ARUs for inclusion in accounts. Such expenses are booked under CWIP (various capital projects in progress) by the ARUs and therefore capitalized portion of expenses are carried over under the respective CWIP head of account till the asset is capitalized transferred to the GFA account. Hon'ble Commission may kindly note that the expenses so communicated for capitalization at field level will not be reflected under GFA addition during the year in its entirety as the amount is distributed among all the works- both completed during the year as well as ongoing projects.

5.15.4 Interest and finance charges are capitalized at the Head office as prescribed in the accounting policies. These amounts are also allocated to the ARUs based on actual capital expenditure incurred during the year for charging in the concerned project/assets. Thus, capitalization of interest (Interest during construction-IDC) is done based on relevant standards applicable. Capitalization of borrowing cost is computed based on the weighted average cost of general borrowing that are outstanding during the period and used for the acquisition /construction/erection of capital asset. As per the method, interest applicable for loans attributable to capital works in progress is segregated from the total interest burden and only the interest portion applicable to already capitalized assets alone is charged to P&L account.

5.15.5 The accounting treatment followed in annual accounts towards capitalization of expenses differs from that adopted for Regulatory purposes. Regulatory approval of normative interest is granted only for the commissioned assets and no allowance is permissible for CWIP. Similarly, O&M expenses regarding GFA are allowed at normative basis on assets put to use. The norms were derived based on net true up expenses of previous years. Therefore, in the trueing up petition, normative interest as well as normative O&M expenses are considered as a charge in ARR. Expense portion earmarked towards future capitalization could be claimed only as part of GFA value from the date the relevant asset is put to use.

Contribution and Grants:

5.16 SBU wise break up of Capital subsidies and Grants received during the year as per accounts and considered in true up are as follows:

Table 5.12 SBU wise break up of Contribution & grants received during 2022-23 (Rs Cr)					
SL No.	PARTICULARS	GEN	TRANS	DIST	TOTAL
1	Consumer contribution	0.09	11.27	376.61	387.97
2	Grants Recd. Towards Cost of Fixed Assets	0.00	11.76	241.03	252.79
3	Others	0.00	0.81	122.10	122.91
4	Adjustments		8.80	2.32	11.12
5	Gross Total	0.09	32.63	742.07	774.79

5.16.1 Subsidy received for Roof top solar Rs. 19.20 Cr and accounted under SBU G has been given to the contractors. Therefore, the same has been reversed during the year 2022-23. During the year 2022-23, grant amounting to Rs. 295.09 Cr received in earlier years against written down value of damaged assets. R APDRP grant of Rs. 207.94 Cr received on 31.03.2022 was accounted at HO during 2021-22. The same amount was again booked by ARU in 2022-23 resulting in duplication and therefore withdrawn. A sum of Rs. 11.12 Cr has been transferred from consumer deposit to grant based on audit observation. Item wise details are furnished in **Appendix 5**.

5.17 Based on the above submission, GFA addition eligible as per Tariff Regulation, 2021 amounts to Rs. 2789.66 Cr against Rs. 2825.71 Cr as per audited accounts. GFA addition eligible for depreciation amounts to Rs.2003.36 Cr and additional normative loan Rs. 2014.87 Cr. Details are furnished below:

Table 5.13: Breakup of additional capitalization as per Accounts and as per KSERC Regulations for 2022-23					
Sl. No	Particulars	SBU G	SBU T	SBU D	TOTAL
1	Addition as per Accounts	256.27	1129.63	1439.81	2825.71
2	Less: Part capitalization	4.20	65.75		69.95
3	Less: Decommissioning liability	0.03	0.25	0.34	0.62
5	Add: Part capitalization in 2017-18 but commissioned during 2022-23	0.02			0.02
6	Add: Part capitalization in 2018-19 but commissioned during 2022-23	0.61			0.61
7	Add: Part capitalization in 2019-20 but commissioned during 2022-23	0.64	0.26		0.90
8	Add: Part capitalization in 2020-21 but commissioned during 2022-23		12.30		12.30
9	Add: Part capitalization in 2021-22 but commissioned during 2022-23	1.81	18.92		20.73
10	GFA addition eligible as per Regulation	255.08	1095.11	1439.47	2789.66
11	Less: Consumer contribution & grants	0.09	32.63	742.07	774.79
12	GFA addition eligible for normative loan as per Regulation	254.99	1062.48	697.40	2014.87
13	Less: Land value addition (excluding the portion under part capitalization)	0.66	10.75	0.10	11.51
14	GFA addition eligible for depreciation	254.33	1051.73	697.30	2003.36

5.18 Normative loan as on 31.03.2023 and normative interest for the year works out to Rs.9711.29 Cr and Rs. 869.36 Cr respectively as detailed below may kindly be approved.

Table 5.14 Computation of Normative loan as on 31.03.2023 and normative interest for 2022-23 (Rs Cr)					
Sl. No	Description	SBU G	SBU T	SBU D	Total
1	Closing balance of Normative loan as per True up order for 2021-22 (OP 17/2023 dated 03.10.2023)	791.31	2820.02	4355.16	7966.49
2	Add: Disputed claim pending before APTEL	135.23	131.21	201.16	467.60
3	Opening normative loan for 2022-23	926.54	2951.23	4556.32	8434.09
3	Additional normative loan for 2022-23	254.99	1062.48	697.40	2014.87
4	Normative repayment 2022-23	150.69	275.15	311.83	737.66
5= (1+2+3)-4	Closing normative loan 31.03.2023	1030.84	3738.56	4941.89	9711.29
6= (1+5)/2	Average Normative loan for the year 2022-23	978.69	3344.90	4749.10	9072.69
7	Weighted average interest rate for 2021-22 (%)	9.32	9.52	9.68	9.58
8	Normative interest for 2022-23	91.21	318.43	459.71	869.36

5.19 Interest on Overdraft: A sum of Rs.133.22 Cr (Rs. 122.99 Cr in 2021-22) was incurred during the year under this head. Expenses under this head could not be claimed as per Tariff Regulation, 2021. Hon'ble Commission has been approving carrying cost on approved and unbridged revenue gap along with working capital interest. In view of the above, KSEBL is not seeking true up of actual interest paid on overdraft during the year 2022-23.

5.20 Carrying cost on approved revenue gap:

5.20.1 Hon'ble Commission had trued up revenue gap of Rs. 7130.73 Cr till 2020-21 (excluding 2014-15, for which orders are yet to be issued). Hon'ble Commission has trued up surplus of Rs. 753.17 Cr for 2021-22 as per order dated 03.10.2023 but earmarked the same against revenue gap determined for 2023-24 while issuing tariff revision orders. Therefore, the surplus for 2021-22 has not been considered for the computation of carrying cost. Thus, carrying cost for the revenue gap of Rs. 7130.73 Cr is claimed in this petition.

5.20.2 Based on the methodology adopted by the Hon'ble Commission, average GPF balance of Rs. 2891.85 Cr (Rs.2607.16 Cr for 2021-22) and security deposit over normative working capital (Rs Cr) have been excluded from the approved gap to determine the revenue gap eligible for carrying cost in line with Regulation 29 (9) of Tariff Regulation, 2021.

5.20.3 Actual average interest on loans during 2022-23 for SBU D had been 8.52 %. Accordingly, a sum of Rs.356.59 Cr is claimed as carrying cost in 2022-23 in respect of trued up revenue gap till 31.03.2022 as detailed below:

1	Trued up revenue gap till 31.03.2022	7130.73
2	Less: Average PF balance for 2022-23 (2783.61+3000.09)/2	2891.85
3	Less: Security deposit as per Reg 29 (9)	53.59
4	Net revenue gap (3-4)	4185.29
5	Carrying cost at average interest rate of 8.52 % on above	356.59

5.20.4 It is further submitted that the Hon'ble APTEL, as per judgment dated 08.04.2015 in appeal 160 of 2012 and batch has laid down the principle based on which carrying cost is to be allowed. The decision was reiterated in judgment dated 22.04.2015 in appeal 174 of 2013 as well. The same is reproduced below:

42. We find that for carrying cost, the State Commission has considered the revenue gap to be applicable from the end of the year of the occurrence of the revenue gap up to the middle of the year in which the same is proposed to be recovered. This is not correct. The interest to be calculated for the period from the middle of the financial year in which the revenue gap had occurred up to the middle of the financial year in which the recovery has been proposed... This is because the expenditure is incurred throughout the year and its recovery is also spread out throughout the year. Admittedly, the revenue gap will be determined at the end of the financial year in which the expenditure is incurred. However under or over recovery is the resultant of the cost and revenue spread out throughout the year. Similarly, the revenue gap of the past year will be recovered throughout the financial year in which its recovery is allowed. Therefore

interest on revenue gap as a result of true up for a financial year should be calculated from the mid of that year till the middle of the financial year in which such revenue gap is allowed to be recovered.

43. To explain this point let us assume that there is a revenue gap of 12 crores in the true up of FY 2010-11. If the cost and the revenue and the permitted expenditure had been properly balances, this gap of 12 crores would have been recovered throughout the 12 months of FY 2010-11. Now, this revenue gap is allowed to be recovered in tariff during FY 2013-14. The recovery of gap of Rs. 12 crores from the distribution licensee consumers will be spread over the 12 months period of 2013-14. Therefore, carrying cost would be calculated from the middle of FY 2010-11 to middle of FY 2013-14 ie 3 years.

5.20.5 Revenue gap for the year 2022-23 sought for true up is Rs. 1403.05 Cr (excluding carrying cost on revenue gap till 31.03.2022 as per Table 5.20.3). In view of the APTEL order, Hon'ble Commission may kindly approve carrying cost for the revenue gap for 2022-23 from the middle of the year at **Rs.59.77 Cr** (Rs. 1403.05 Cr X (8.52%/2)).

5.20.6 Hon'ble Commission may kindly note that KSEBL has managed the overall finances through borrowings and deferred liabilities. Therefore, Hon'ble Commission may please approve Rs.416.36 Cr towards carrying cost for 2022-23 under SBU D as detailed below:

Table 5.15 A: Computation of carrying cost for 2022-23		
1	On approved revenue gap till 31.03.2022	356.59
2	On current year revenue gap Rs.1403.05 Cr	59.77
3	Total	416.36

Interest on working capital

5.21 Hon'ble Commission may kindly approve Rs.6.37 Cr and Rs.22.90 Cr respectively for SBU G and SBU T as detailed in chapter 2&3 of this petition.

Interest on security deposit:

5.22 Hon'ble Commission approved interest on SD for the year at Rs.151.46 Cr. The Actual Security Deposit balance as per accounts was Rs.3235.94 Cr at the beginning of the year (01-04-2022) and Rs. 3941.69 Cr at the year end. Interest at 4.25 % on SD is provided in accounts for FY 2022-23 (Rs 137.43 Cr) on accrual basis. Actual disbursement in the FY 2022-23 amounted to Rs.128.74 Cr (disbursement made against provision Rs. 136.20 Cr created @ 4.25% on SD for FY 2021-22) as per provisions in Supply Code, 2014. Hon'ble Commission may kindly approve the actual disbursement in 2022-23 amounting to Rs.128.74 Cr as per Regulation 29 (8) under SBU D.

Interest on PF:

5.23 Hon'ble Commission approved Rs 217.50 Cr towards interest on PF. But as per the audited accounts, the actual interest paid on PF was Rs.197.78 Cr, which was less than approval by Rs.19.73 Cr. Hon'ble Commission had considered average PF balance for 2022-23 at Rs. 3063.42 Cr but actual average PF balance was Rs.2891.85 Cr. The actual rate of interest remained at approved rate of 7.10 % during the year. The actual interest as per the audited accounts may kindly be approved among SBUs as given below:

Item	SBU G	SBU T	SBU D	Total
Interest on GPF	9.95	19.31	168.53	197.79

Interest on Master Trust Bonds:

5.24 State Government, as per notifications dated 31.10.2013 and 28.01.2015, ordered creation of a Master Trust for meeting the unfunded liability of pension, gratuity and leave surrender as on 31.10.2013, in respect of the personnel transferred from erstwhile KSEB to KSEBL. Funding arrangements were put in place through issue of 2 series of Bonds for the total liability as on 31.10.2013 amounting to Rs.12418.72 Cr. Hon Commission recognized the funded pension liabilities as above and approved recovery of interest on KSEBL share of Bonds as per Tariff Regulations, 2021. Thus, Hon'ble Commission approved Rs.610.80 Cr towards interest on Master Trust bonds in the MYT order.

5.24.1 KSEBL, as per audited accounts, has not accounted pension and terminal liabilities under employee cost by virtue of operationalization of Master Trust. Instead, accounted 10% interest on Bonds issued to Master Trust amounting to Rs.610.80 Cr. Bifurcation of interest on bonds among SBUs are as detailed below:

Item	SBU G	SBU T	SBU D	Total
Interest on Bonds	30.73	59.62	520.45	610.80

5.24.2 It is respectfully submitted a sum of Rs. 2.11 Cr was additionally incurred on account of delay in transfer of fund to trust. But there is no deviation between interest approved on bonds for the year as per the MYT orders of the Hon'ble Commission and the actual interest as per audited accounts. However, there has been minor difference between approval and actual under SBU wise segregation of total interest. In the MYT order, Hon'ble Commission adopted employee cost ratio for 2017-18 as the basis for SBU wise segregation of allowable interest whereas the ratio of working employee strength in SBUs was considered for the purpose in the audited accounts.

5.25 Other Charges:

5.25.1 Hon'ble Commission has not approved any amount towards other interest. Actual expenses incurred as per accounts amounts to Rs.76.93 Cr and its ARU wise segregation is furnished below.

No	Particulars	SBU G	SBU T	SBU D	Total
1	Generation based incentive	0.13			0.13
2	Other Bank Charges	0.13	0.23	0.37	0.73
3	Decommissioning cost	0.10	0.25	0.41	0.76
4	Interest on Power purchase			75.31	75.31
5	Total	0.36	0.48	76.09	76.93

It is humbly submitted that KSEBL has incurred Rs. 75.31 Cr as interest on power purchase on account of various orders of Hon'ble CERC but accounted in separate heads as above. Details of interest are furnished below:

Table 5.19 Details of interest on power purchase expenses during the year 2022-23 (Rs Cr)			
SI No	Payee Name	Reason of Interest	
1	NTPC Ltd	Interest claimed vide bill dt 2022-09-05, NTPC- Simhadri -Refinance Saving -NTPC Share	0.08
2	NTPC Ltd	Interest claimed vide bill dt 2022-12-05, NTPC- RSTPS1, RSTPS111, Simhadri & Talcher 11 - carrying cost on Ash Tr Expenses for the period from 2019-20 to 2021-22 as per CERC order dtd 28/10/2022 in petition no 205/MP/2021. Rs 1930719+559388+37440137+137340235	17.73
3	NTPC Ltd	Interest claimed vide bill dtd 2023-01.06, NTPC- RSTPS-1, RSTPS-111, Simhadri, Talcher-11, Carrying cost on Ash Tr Expenses for the period from 2019-20 to 2021-22 as per CERC order dtd 28/10/2022 in petition No 205/MP/2021, Rs. 1058956+218057+707460+1645657	0.36
4	NTPC Ltd	Interest claimed vide bill dt 2023-04-06 , NTPC-Talcher-11, CERC turing UP order of Talcher for 2014-19 in petition no 392/GT/2020 dt 29/03/2023	1.61
5	PGCIL	PGCIL-NON-POC-CERC Tariff revision 2014-19 ti 2019-22-as per CERC Order Dt:27/04/2022 in Petition No:413/TT/2020)	0.87
6	MAITHON	MAITHON-on CC Revision from 2016 to 19-as per CERC Order Dt:13/12/2022 in Petition No:4/RP/2020 in Petition No:408/GT/2020)	0.09
7	DVC	DVC -Mejia as per CEC Corrigendum order dtd 27/01/2023 in Petition no 205/GT/2020 of Mejia Tds	6.49
8	NTPC Tamil Nadu Energy Ltd	NTPC Vallur as per CERC order dt 20/03/2023 in petition no 576/GT/2020 Truing up for 14-19	0.19
9	NLCIL-TPS I EXP	CERC Truing up Order Dt:30/09/2022 in Petition No:365/GT/2020) NLC-TPS-I-EXP-	7.16
10	NLC-TPS-I-EXP-	CERC Tariff Order Dt:23/12/2022 in Petition No:384/GT/2020) NLC-TPS-I-EXP-	0.88
11	NLC-TPS-II-Stage-I	CERC Truing Up Order 2014-19 Dt:28/02/2023 in Petition No:368/GT/2020) NLC-TPS-II-Stage-I	1.64
12	NLC-TPS-II-Stage-II	CERC Truing Up Order 2014-19 Dt:28/02/2023 in Petition No:368/GT/2020) NLC-TPS-II-Stage-II- Shifted)	3.13
13	NLC-TPS-II-Stage-I	CERC Tariff Order 2014-19 Dt:10/03/2023 in Petition No:385/GT/2020) NLC-TPS-II-Stage-I	2.29
14	NLC-TPS-II-Stage-II	CERC Tariff Order 2014-19 Dt:10/03/2023 in Petition No:385/GT/2020) NLC-TPS-II-Stage-II- Shifted	2.86
15	NTPC Ltd	NTPC-Talcher Tariff Arrear-bill dtd 06-05-2023 (CERC order in Petition No.441/GT/2020 dtd 27-4-2023)	11.81
16	DVC	DVC -Tariff Arrear Invoice No.1444,1459,1460 dtd 23-06-2023 for Mejia Stations (CERC order in Petition No.568/GT/2020 dtd 27/04/2023	18.09
17		Expenses of other ARUs	0.02
		Total	75.31

5.25.2 Interest on decommissioning cost of Rs. 0.76 Cr is the interest provided on the provision for decommissioning liability build up at the discounted value to its future liability as per Ind AS - 16. Other bank charges comprise of the following:

Table 5.20 Other bank charges (Rs Cr)	
Stamp duty on bill discounting facility	0.06
Payment of premium for Swapping of loans	0.59
Other Bank Charges	0.07
Guarantee Charges	0.01
TOTAL	0.73

5.25.3 Hon'ble Commission may kindly approve the expenses as per Table 5.22 above (as reduced by the interest on decommissioning cost of Rs. 0.76 Cr) amounting to Rs. 76.17 Cr as furnished below:

No	Particulars	SBU G	SBU T	SBU D	Total
1	Generation based incentive	0.13			0.13
2	Other Bank Charges	0.13	0.23	0.37	0.73
3	Interest on Power purchase			75.31	75.31
4	Total	0.26	0.23	75.68	76.17

5.26 Based on the submission in preceding paragraphs, Hon'ble Commission may kindly approve interest and finance charges as summarized below:

Item	Approval				True up requirement			
	SBU G	SBU T	SBU D	Total	SBU G	SBU T	SBU D	Total
Interest on Term Loan	75.76	213.61	482.67	772.04	91.21	318.43	459.71	869.36
Security Deposit Interest	11.75	24.46	181.3	217.51	-	-	128.74	128.74
Master Trust Bond Interest	32.98	68.72	509.13	610.83	30.73	59.62	520.45	610.80
WC/OD interest	5.54	18.54		24.08	6.37	22.90	-	29.27
PF interest			151.46	151.46	9.95	19.31	168.53	197.79
Other charges				0	0.26	0.23	75.68	76.17
Carrying cost			325.05	325.05	-	-	416.36	416.36
GROSS TOTAL	126.03	325.33	1649.61	2100.97	138.52	420.49	1769.47	2328.49

Additional contribution to Master Trust

5.27 Hon'ble Commission provisionally approved Rs.400 Cr towards unfunded actuarial liability in the MYT order. Tariff Regulations provide that, the annual pension contribution by KSEBL to the Master Trust based on the actuarial valuation is allowed to be recovered through tariff on annual basis. Statutory transfer scheme as well as tripartite agreement provides for the same.

5.27.1 It is respectfully submitted that as per the Actuarial valuation as on 31.03.2023, the increase for the year 2022-23 has been Rs.5318.66 Cr and the same was captured in audited accounts for 2022-23 as follows:

- (i) Liability pertaining to 2022-23 amounting to Rs.1273.33 Cr has been booked under employee cost for the year and
- (ii) Remaining portion, pertaining to earlier years Rs.4045.33 Cr under other comprehensive income in P&L account.

5.27.2 The net liability as on 31.03.2023 amounted to Rs. 22,556.46 Cr as disclosed under Note 52 of the audited accounts.

5.27.3 Kerala Service Rules as applicable in the Government are applicable to employees of KSEBL. The details of terminal benefits paid to retired employees in FY 2022-23 through Master Trust amounts to Rs.2524.10 Cr as detailed below:

Month	Rs. Cr	Month	Rs. Cr
Apr-22	187.74	Nov-22	181.02
May-22	170.47	Dec-22	154.31
Jun-22	213.51	Jan-23	143.28
Jul-22	228.27	Feb-23	140.72
Aug-22	395.19	Mar-23	160.12
Sep-22	366.64		2524.10
Oct-22	182.83		

5.27.4 It is humbly submitted that KSEBL has fully remitted the amount due on Master Trust bonds during 2022-23 along with interest for belated payment in earlier years. A sum of Rs. 742.27 Cr has been paid more than the liability on Master Trust bonds as on 31.03.2023 as detailed below:

1	Payable to Trust as per audited accounts 2021-22	-47.11
2	Principal repayment due on 20yr bond in 2022-23	407.20
3	Principal repayment due 10 yr bond in 2022-23	350.79
4	Interest on 20yr bond-2022-23	610.80
5	Interest on 10yr bond-2022-23	203.74
6	Received from Government	52.40
7	Interest on belated transfer of fund to Trust in earlier years	204.01
8	Total payable in 2022-23	1,781.83
9	Payment made during the year	2,524.10
10	Payable to Trust on 31.03.2023 as per audited accounts	-742.27

5.27.5 Considering the above, it is humbly requested that the Hon'ble Commission may true up Rs.400 Cr for 2022-23 towards additional contribution to Master Trust, since KSEBL has no other source to meet these expenses as detailed below.

Item	SBU G	SBU T	SBU D	Total
Additional contribution to Master Trust	21.60	44.98	333.42	400.00

5.27.6 Hon'ble Commission may kindly note that additional contribution to Master Trust was approved in the previous control period also. The additional actuarial liability for the year 2022-23 amounts to Rs.1273.33 Cr and the same has been included in the employee cost for the year as per accounts. Hon'ble Commission may be pleased to consider the actuarial additional liability over Rs.400 Cr amounting to Rs. 873.33 Cr (Rs. 1273.33 Cr – Rs. 400 Cr) with interest as and when the scheme for unfunded liability is finalized.

Repayment of Bonds issued to Master Trust

5.28 Hon'ble Commission, in line with Regulation 34 (iv) of Tariff Regulation, 2021, had approved Rs. 407.20 Cr for the year 2022-23 in the MYT order dated 25.06.2022. Hon'ble High Court of

Kerala, as per judgment dated 07.09.2023 in WP (C) 19205/2023, set aside the enabling Tariff Regulation 2021 (Regulation 34 (iv)) owing to fault with the procedure. Hon'ble Court however observed that by following the procedure contemplated for framing regulations, even the aspects contained in Regulation 34(iv) can be included.

- 5.28.1 In view of the above and subject to the final decision of the Hon'ble Commission on Regulation 34 (iv) in the wake of Hon'ble High Court judgment, KSEBL prefers a claim of Rs. 407.22 Cr for trueing up for the year 2022-23 under bond repayment as furnished below:

Table 5.26: Repayment of Master Trust Bonds (Rs Cr)				
Item	SBU G	SBU T	SBU D	Total
Additional contribution to Master Trust	21.99	45.81	339.42	407.22

Depreciation:

- 5.29 Depreciation as per audited accounts amounts to Rs.1919.11 Cr has been worked out for the entire GFA without considering consumer contribution and grants. From this amount, claw back depreciation has been determined at Rs.324.04 Cr and credited to Other Income under Note 30 of Annual accounts. Since depreciation can be claimed strictly in line with Tariff Regulations, 2021 in regulatory accounts, it is humbly requested that the income accounted under note 30 towards claw back as per accounts may not be considered in True up.

- 5.29.1 Hon'ble Commission may kindly note that KSEBL has not been providing depreciation on increase in the value of Plant and Machinery notified by the government while re-vesting. This in turn lead to adverse audit qualification by the statutory auditors. The recurrence of the same audit qualification year after year was also seriously commented by the CAG during the audit for the FY 2021-22. Hence to avoid the qualification, KSEBL has provided depreciation on the revalued asset as well. Accordingly, the depreciation as per account for 2022-23 is inclusive of Rs. 565.59 Cr towards enhancement in asset value at the time of re-vesting. This is duly disclosed in Note No. 36 of audited accounts.

- 5.29.2 Property, plant, and equipment lost / damaged due to natural calamities like Okhi and flood during the period from 2018 to 2022 amounting to Rs. 805.39 Cr were derecognized and financials were re stated accordingly. The fact thereof is disclosed in Note 2.3 of audited accounts.

- 5.29.3 Accumulated depreciation on the derecognized assets amounts to Rs. 510.30 Cr. Thus, the loss due to natural calamities during the period has been Rs. 295.09 Cr (Rs. 805.39 Cr – Rs. 510.30 Cr). The above loss of Rs. 295.09 Cr was compensated by the Government of Kerala and the receipt of which had been accounted under contribution & grants during 2018-19 (Rs. 46.11 Cr), 2019-20 (Rs. 85.03 Cr), 2020-21 (Rs. 142.51 Cr) and 2021-22 (Rs. 21.44 Cr). Derecognition of GFA and restatement of financials were done by removing GFA (Rs. 805.39 Cr), accumulated depreciation (Rs. 510.30 Cr) and consumer contribution & grants (Rs. 295.09 Cr). Overstatement of land value (SBU T) to the tune of Rs. 14.61 Cr (referred to in para 5.10 and 5.31) along with the duplication in grants (Rs. 207.94 Cr, para 5.16) and reimbursement of subsidy (Rs. 19.20 Cr, para 5.16) were duly considered while preferring depreciation claim for 2022-23.

5.29.4 In view of the above restatements in accounts, the same is captured in regulatory accounts under GFA and grants. Thus, normative depreciation for 2022-23 has been computed at Rs.737.66 Cr as detailed below:

Table 5.27: Normative Depreciation for 2022-23 (Rs Cr)					
	Particulars	SBU-G	SBU-T	SBU-D	KSEBL
1	Approved GFA as on 31.03.2022	5440.61	8146.03	14521.69	28108.33
2	Less: Adjustments in 2022-23				
	Cost of damaged assets			805.39	805.39
	Land value withdrawn		14.61		14.61
3	Adjusted GFA as on 31.03.2022	5440.61	8131.42	13716.3	27288.33
4	Assets >13 years old (GFA as on 1-4-2009)	3132.03	3029.04	3088.04	9249.11
5	Fully depreciated Assets (assets up to 1-4-1992)	352.37	106.46	368.6	827.43
6= (4-5)	Assets having life 13-30 yrs	2779.66	2922.58	2719.44	8421.68
7	Value of land on above*	85.67	179.47	7.95	273.09
8	Grants and contributions till 31.03.2009			2504.14	2504.14
9	Grants and contributions till 01.04.1991-fully depreciated			108.42	108.42
10= (8-9)	Grants and contributions on assets having life from 13 to 30 years			2395.72	2395.72
11= 6-(7+10)	Assets having life 13-30 years	2693.99	2743.11	315.77	5752.87
12= (11*1.42%)	Depreciation for Assets 13-30 years (@1.42%)	38.25	38.95	4.48	81.69
13= (3-4)	Assets < 13 years old (1-4-2009 to 31-3-2022)	2308.58	5116.99	11433.65	18859.22
14	Value of land (from 01.04.2009 to 31.03.2022) *	155.84	326.49	6.76	489.09
15	Less: Value of land withdrawn		14.61		14.61
16= (14-15)	Adjusted value of land	155.84	311.88	6.76	474.48
17	Grants and contributions (1-4-2009 to 31-3-2022)	111.72	735.78	6299.06	7146.56
18	Less: Grant against damaged assets, duplication, and reimbursement	19.20		503.03	522.23
19= (17-18)	Grant for <13-year-old assets	92.52	735.78	5796.03	6624.33
20= (13-16-19)	GFA < 13 years old as on 01.04.2022	2060.22	4069.33	5630.86	11760.41
21	Asset addition for 2022-23 as per this submission	254.33	1051.73	697.30	2,003.36
22= (20+21)	Closing balance of Assets <13 years Old	2314.55	5121.06	6328.16	13763.77
23= (20+22)/2	Average Value of Assets <13 Years old	2187.38	4595.20	5979.51	12762.09
24= (21*5.14%)	Depreciation for assets <12 years (@5.14%)	112.43	236.19	307.35	655.97
25= (12+24)	Total Depreciation for assets for 2022-23	150.69	275.15	311.83	737.66

*Details furnished in Table below.

5.29.5 Land value considered in the above computation is determined as detailed below:

Table 28 Computation of land value for the purpose of depreciation (Rs Cr)

Sl No	Particulars	SBU G	SBU T	SBU D	TOTAL
1	Land value 31.3.2022-Data form and audited accounts.	1518.51	505.96	22.42	2046.89
2	Revaluation 31.10.2013	1277			1277
3= (1-2)	Land value excluding revaluation	241.51	505.96	22.42	769.89
4	More than 30 years -As on 1.4.1991			7.71	7.71
5= (3-4)	For computation of normative depreciation (1 to 30 years)	241.51	505.96	14.71	762.18
6	Land value > 13 years ie 01.04.1991 to 31.03.2009 (proportionate)	85.67	179.47	7.95	273.09
7= (5-6)	Land value < 13 years	155.84	326.49	6.76	489.09
7	Less: Land value withdrawn		14.61		14.61
8= (6-7)	01.04.2009 to 31.03.2022	155.84	311.88	6.76	474.48

5.29.6 Consumer contribution, grants and subsidy has been considered in the above computation as detailed below:

Table 29 Contributions grants for the purpose of depreciation (Rs Cr)

Sl No	ACCOUNTS	SBU-G	SBU-T	SBU-D	KSEBL
1	Grant till 31.10.2013			4169.87	4169.87
2	01.10.2013 TO 31.03.2022	111.72	735.78	4633.33	5480.83
3= (1+2)	Till 31.03.2022	111.72	735.78	8803.2	9650.70
4	Less: Grants applicable on fully depreciated assets -Receipt till 01.04.1991	0	0	108.42	108.42
5= (3-4)	Grant obtained -1 to 30 years old	111.72	735.78	8694.78	9542.28
6	Less: 13 to 30 years -1991 to 2009			2395.72	2395.72
7= (5-6)	Grant < 13 years -01.04.2009 to 31.03.2022	111.72	735.78	6299.06	7146.56
8	Less: Grant on damaged assets removed in 2022-23.			295.09	295.09
9	Less_ Duplication and reimbursement	19.20		207.94	227.14
9= (7-8)	Grant on assets <13 years old	92.52	735.78	5796.03	6624.33

Consumer contribution, Grants and Subsidy

5.30 Details of Consumer Contribution and grants as on 31.03.2023 as per accounts amounted to Rs.4315.40 Cr (Note no. 23 & 28 of accounts) as detailed below:

Table-5.30: Details of consumer contribution and grants as on 31.03.2023 (Rs. Cr)			
No	Particulars	Amount	Amount
1	Consumer contribution	3,172.51	
2	Subsidies	166.16	
3	Grant	1,954.26	
4	Local bodies etc	724.43	
5	De commissioning liability (IND AS)	9.73	
6	Adjustments	11.12	
	Total	6,038.21	
	Less Grant withdrawn	295.09	5743.12
6	Less: Clawed back		
7	2013-14	9.12	
8	2014-15	24.65	
9	2015-16	39.39	
10	2016-17	77.1	
11	2017-18	97.39	
12	2018-19	145.18	
13	2019-20	200.21	
14	2020-21	245.69	
15	2021-22	309.88	
16	2022-23	324.04	
	Total	1472.65	
	Less: Claw back reversed	44.92	1427.73
17	Contribution and grants 31.03.2023		4315.40

5.30.1 Hon'ble Commission may kindly note that decommissioning liability considered under this head does not involve cash flow. Therefore, actual receipt of Consumer Contribution and grants till 31.03.2023 amounted to Rs.5733.39 Cr (Rs.5743.12 Cr-Rs. 9.73 Cr). SBU wise break up of consumer contribution and grants as on 31.03.2023 as per accounts are furnished in **Appendix 5** hereto.

5.30.2 Hon'ble Commission may kindly note that the receipt of contribution and grants during the year amounts to Rs.774.79 Cr.

Others Rs. 191.85 Cr:

5.31 The details of other expenses as per the audited accounts and detailed explanation of various items are provided there under.

Table 5.31 DETAILS OF OTHER EXPENSES (Note No. 38)					
No	Particulars	SBU G	SBU T	SBU D	Total
1	Discount to Consumers			3.80	3.80
2	Research and Development Expenses	0.36		-	0.36
3	Loss on account of flood/ cyclone		0.38	7.28	7.66
4	Miscellaneous Losses and Write Offs	34.12	0.11	145.80	180.03
	TOTAL	34.48	0.49	156.87	191.85

5.31.1 Discount to consumers (Rs. 3.80 Cr) denote discount allowed for advance remittance. Loss on account of flood/ cyclone (Rs. 7.66 Cr) denote the following:

Table 5.32 Details of losses on account of flood etc

Particulars	Rs Cr
Shortage On Physical Verification of Stock	0.02
Compensation For Injuries, Death & Damage-Staff	1.25
Compensation For Injuries, Death & Damage-Outsider	6.39
TOTAL	7.66

5.31.2 Miscellaneous losses and write off consist of the following:

Table 5.33 Break-up of Miscellaneous losses and write offs (Rs Cr)

Particulars	Rs Cr
Withdrawal of Prior Period Credit to revenue	4.36
Bad Debts written off -TSD Angamaly	0.11
Bad & Doubtful Debts Provided for	111.45
projects suspended temporarily- written off	25.60
Provision for the long pending advances given to the UMPP	19.36
Amount written off - seignarage value of trees given to forest department	8.50
Provision for the amount deposited in various ARUs	4.54
provision for trade receivable other than sale of Power	6.11
Total	180.03

5.31.3 Bad and doubtful debts provided for (Rs. 111.45 Cr) denotes the amount of provision created in books against trade receivable in line with the accounting policy spelt out in Note no. 1.10.2.f of audited accounts. Provision for trade receivables other than sale of power (Rs. 6.11) has also been created as an expense in P&L account. The provision as on 31.03.2023 has been Rs. 500.38 Cr (against Rs. 382.89 Cr as on 31.03.2022) and duly disclosed in Note no. 13 of audited accounts. Provision has also been created against security deposit (Rs. 4.54 Cr) and UMPP advance (Rs. 19.37 Cr) and disclosed the same in Note no. 9 of audited accounts.

5.31.4 It has been the consistent stand of the Hon'ble Commission that provision towards doubtful receivables cannot be approved and the same can be considered for approval only after actual write off. Therefore, KSEBL is not seeking true up of Rs. 141.46 Cr (Rs. 111.45 Cr+ Rs. 6.11 Cr+ Rs. 4.54 Cr+ Rs. 19.36 Cr) on account of provisions created in 2022-23 as described in previous paragraph. Thus, KSEBL is seeking true up of Rs. 38.57 Cr under this sub head as described in succeeding paragraphs.

- (i) Chairman KSEB, as per order BO (CM) No. 1134/2013 (EsttVIII/9076/2003 dated 23.06.2013 has ordered to write off Rs. 0.11 Cr outstanding against a retired official, which was effected by Transmission store division, Angamaly during the year.
- (ii) Statutory auditors, as per paragraph 2 c of their independent audit report for 2021-22, has observed overstatement of CWIP due to impairment to the extent of Rs. 25.60 Cr on abandoned projects. Therefore, KSEBL has written off the same during 2022-23.
- (iii) Based on the observations of the Statutory auditors, as per paragraph 7 of their independent audit report for 2021-22, KSEBL has written off Rs. 8.50 Cr being seignarage value of trees given to forest department.
- (iv) Withdrawal of prior period credit to revenue represents write off revenue recognized in earlier years. A sum of Rs. 4.36 Cr was written off during the year as detailed in

Appendix 11.

5.31.5 As already submitted, a portion of receivables from M/S TCCL amounting to Rs. 14.61 Cr has been written off based on the audit observation and the value of land taken over by KSEBL has been adjusted accordingly. Hon'ble Commission may kindly note that the fair value of land was not considered in 2020-21 and therefore the value of land was considered at Rs. 174.61 Cr and trued up an income of Rs.48.32 Cr towards interest on dues. The fact is duly disclosed under Note 51.1 of the audited accounts. It is humbly prayed that the Hon'ble Commission may true up Rs. 14.61 Cr as write off M/s TCCL arrears.

5.31.6 In view of the above submission, Hon'ble Commission may kindly true up Rs 65.02 Cr as tabulated below:

Table 5.34 DETAILS OF OTHER EXPENSES sought for true up 2022-23					
No	Particulars	SBU G	SBU T	SBU D	Total
1	Discount to Consumers			3.80	3.80
2	Research and Development Expenses	0.36			0.36
3	Loss on account of flood/ cyclone		0.38	7.28	7.66
4	Miscellaneous Losses and Write Offs	34.12	0.11	4.36	38.59
5	Write off arrears of M/s TCCL and land value			14.61	14.61
	TOTAL	34.48	0.49	30.05	65.02

5.32 **Exceptional items Rs.13.17 Cr:** Expenses incurred for the restoration of assets damaged due to natural calamities are accounted under this head. Item wise break up is furnished below:

Table 5.35 Details of exceptional items (Rs Cr)	
O&M work related to Natural Calamity-Plant& Machinery	0.19
Payment to contractors-O&M work related to natural calamity-Building	0.01
Payment to contractors- O&M work related to natural calamity-civil works	0.05
Payment to contractor-natural calamity	0.01
Material Issued from stores for the O&M related to natural calamity	4.75
Payment to contractors for the O&M work related to natural Calamity	8.15
TOTAL	13.17

5.32.1 It may kindly be seen that KSEBL has been able to contain R&M expenses at optimum levels despite the ageing assets that are being maintained by KSEBL. Hon'ble Commission may kindly approve Rs. 13.17 Cr over and above the normative claim. SBU wise break up of other expenses are furnished below, which may kindly be approved.

Table 5.36: Exceptional items (Rs Cr)				
Item	SBU G	SBU T	SBU D	Total
Exceptional items	0.04	0.01	13.12	13.17

5.33 **O&M Expenses:** Hon'ble Commission approved Rs.4121.19 Cr under this head on normative basis against which a sum of Rs.5069.34 Cr was actually incurred during the year 2022-23, exceeding approval by Rs.948.15 Cr. as summarized below:

Table 5.37: Details of O&M expenses 2022-23 (Rs Cr)									
No	Particulars	Approval				KSEBL Accounts			
		SBU G	SBU T	SBU D	Total	SBU G	SBU T	SBU D	Total
1	Employee cost					286.12	558.3	3849.61	4694.03
2	Less: Capitalized					58.27	105.10	382.67	546.04
3	Balance					227.85	453.20	3466.94	4147.99
4	R&M expenses					22.78	35.43	220.08	278.29
5	A&G expenses					47.34	128.23	468.57	644.14
6	Less: Capitalized					0	0.36	0.72	1.08
7	Balance					47.34	127.87	467.85	643.06
8	Total O&M Expenses	191.35	584.79	3345.05	4121.19	297.97	616.50	4154.87	5069.34

5.33.1 **Employee cost:** It is respectfully submitted that gross employee cost during the year amounts to Rs. 4694.03 Cr. Item wise tabulation is furnished in **Appendix 6**.

Table 5.38: Gross Employee Cost for the year 2022-23 (Rs. Cr)				
Particulars	SBU G	SBU T	SBU D	Total
Gross employee cost	3508.41	5658.96	4418.84	4,694.03

5.33.2 **R&M expenses** SBU wise split up of R&M expenses as per accounts is furnished below:

Table 5.39: R&M expenses for 2022-23 (Rs Cr)				
Item	SBU G	SBU T	SBU D	Total
R&M expenses	22.78	35.43	220.08	278.29

5.33.3 **A&G expenses** Hon'ble Commission may kindly note that net A&G expenses as per accounts amounts to Rs.643.06 Cr as detailed in Note 37 of the Annual Statement of Accounts. Expenses under this head contain predominantly, the following expenses:

Table 5.40: Administrative & General Expenses 2022-23 (Rs Cr)		
1	Conveyance & travel	71.10
2	Other operative expenses	270.80
3	Expenditure on Filament free Kerala	1.37
4	Electricity Duty u/s 3(I), KED Act	143.73
5	Power factor incentive to consumers	47.90
6	Freight & other expenses	30.26
7	Rent, rates & taxes	14.74
8	Printing, Stationery, Telephone etc	23.23
9	Expenditure in connection with Covid 19	1.59
10	Notary fee and other expenses relating to KSERC & CGRF	3.64
11	Expenditure NILAAVU Scheme	2.60
12	All Other A&G expenses	33.19
13	Gross A&G Expenses	644.15
14	Less: Expenses Capitalized	1.09
15	Net A&G Expenses	643.06

5.33.4 Hon'ble Commission may kindly note that a sum of Rs.47.90 Cr has been extended to consumers towards Power factor incentive. In this regard, the following submission is made for the kind consideration of the Hon'ble Commission. KSEBL respectfully submits that the Hon'ble Commission may permit exclusion of power factor incentive from A&G expenses and the same deducted from revenue from sale of power in this petition.

5.33.5 It may kindly be seen that an amount of Rs.1.37 Cr has been incurred for the filament free Kerala campaign in which LED lamps were supplied to consumers. An income of Rs. 2.30 Cr has been booked under Income from bulb, scrap, tender form etc (Note 29 B of audited accounts). Break up details are furnished in **Appendix 10**. It is humbly requested that the Hon'ble Commission may consider the cost of bulbs booked under A&G expenses as a reduction from sale proceeds of LED Bulbs while truing up.

5.33.6 KSEBL incurred an amount of Rs. 1.59 Cr towards expenses for combatting Covid 19 pandemic. Hon'ble Commission may kindly approve the same over and above O&M norms while truing up the accounts for 2022-23 as detailed below.

Table 5.41 Breakup of expenses for combatting Covid 19 (Rs Cr)	
Expenditure in connection with COVID 19	1.54
Expenditure of KSEB Ltd in connection with the efforts to defend COVID-19	0.05
TOTAL	1.59

5.33.7 One of the major expense items booked under A&G expense is the section 3(1) duty payable by KSEB to the Government. The section 3(1) duty is a statutory levy. Hon'ble Commission has not been admitting section 3(1) duty as a revenue expenditure quoting the provisions in the "Kerala Electricity Duty Act- 1963" that "(3) The duty under this section on the sales of energy should be borne by the Licensee and shall not be passed on to the consumers". Accordingly, since the year 2003-04, Hon'ble Commission has not admitted duty as pass through in tariff. It is humbly submitted that KSEB had already taken up the matter with the Government to enable Section 3(1) duty as pass through in tariff and also filed a second appeal before the Hon'ble Supreme Court of India in the matter, which is pending disposal as of date.

5.33.8 KSEBL has incurred a sum of Rs. 2.60 Cr (Rs. 3.07 Cr in 2021-22) towards Nilaavu scheme on account of expenditure incurred by KSEBL in connection with dismantling old street light and installing led street lights. Hon'ble Commission, as per order dated 03.12.2020 in OP No. 38/2020, has directed KSEBL to submit all the details including the direct and indirect cost and revenue earned as per Government order dt 10.08.2020 for taking the role of SPV for the implementation of the scheme in the truing up petition for the years concerned. KSEBL earned revenue of Rs. 13.08 Cr as revenue during the year 2022-23 and accounted under Miscellaneous receipts under Note 29 B.

5.33.9 It was prayed before the Hon'ble Commission in the TU petition for 2021-22 that KSEBL may be permitted to furnish details of expenses (including the amount applicable for 2021-22) and revenue pertaining to the scheme in the truing up petition for the year 2022-23.

5.33.10 It is humbly submitted that the expenses booked amounting to Rs. 5.67 Cr during 2021-22 and 2022-23 were spent in the respective years. But the indirect cost has not been computed and accounted till 2022-23 in compliance of the order dated 03.12.2020. KSEBL has issued direction to account the same in 2023-24. Therefore, it is humbly submitted before the Hon'ble Commission that the expenses and income on Nilaavu scheme may be trued up in 2023-24.

5.33.11 Based on the Tariff Regulation, KSEBL is entitled to claim normative O&M expenses of Rs.4319.18 Cr for 2022-23 in line with Tariff Regulation, 2021, as explained in the respective chapters against Rs. 4121.19 Cr approved by the Hon'ble Commission, as summarized below.

Sl. No	Particulars	SBU G	SBU T	SBU D	Total
1	True up claim as per Tariff Regulation	178.10	588.41	3552.67	4319.18
2	Approved as per Order dated 25.06.2022	191.35	584.79	3345.05	4121.19
3	Variance over approval	-13.25	3.62	207.62	197.99

5.33.12 Hon'ble Commission may kindly true up O&M expenses for the year at Rs.4320.77 Cr as detailed below:

Sl. No	Particulars	SBU G	SBU T	SBU D	Total
1	As per norms	178.10	588.41	3552.67	4319.18
2	Expenditure in connection with Covid 19			1.59	1.59
3	Total O&M expenses	178.10	588.41	3554.26	4320.77

5.34 As per Tariff Regulation, 2021 Hon'ble Commission determined the norms for the 5-year control period from 2022-23 to 2026-27 based on the O&M cost approved in the ARR for 2018-19 (as the trued-up figures were not available). In addition, a sum of Rs. 248.47 Cr was also considered for pay revision due from July/ August 2018. It was stated in Annexure 7 that "During February 2021, KSEB Ltd has implemented the Pay Revision with effect from

July/August 2018 for its Officers and staff. As per Hon'ble APTEL decision in OP 1/2013 and 19/2013 in the Order dated 10.11.2014, the effect of pay revision have to be allowed as part of employee cost. The final norms of KSEB Ltd can be arrived at only after the truing up of the figures from the financial year 2018-19 is over and after the sub judice matter is resolved. The norms will be reworked accordingly. KSEB Ltd may file the petition for the approval of ARR & ERC for the Control period based on the provisional figures as mentioned in Tables 2 to 7 above."

5.34.1 In compliance, KSEBL filed the MYT petition for the approval of ARR & ERC for the Control period based on the provisional figures as mentioned in Tables 2 to 7 of Annexure 7 and the Hon'ble Commission has decided the same as per order dated 25.06.2022.

5.34.2 It may please be seen that the final norms of KSEBL can be arrived at only after the truing up for the financial year 2018-19 is over and after the redetermination of allowable employee strength and implementation of pay revision. Hon'ble Commission has issued truing up order for 2018-19 (base year considered for the present control period) on 14.06.2022 and determined the allowable staff strength at 30321 as per order dated 14.07.2022. Pay revision since July / August 2018 has also been implemented and the financial commitment for 2018-19 has been trued up as per order dated 03.10.2023 in the matter of truing up for 2021-22.

5.34.3 Therefore, it is humbly submitted that the provisional norms contained in Tariff Regulation, 2021 can be finalized, which would enable KSEBL to claim its eligible O&M expenses in the truing up petition for 2022-23 onwards. To facilitate the process, KSEBL has computed the norms in line with the methodology adopted by the Hon'ble Commission and directions contained in the Tariff Regulation, 2021 for the kind consideration of the Hon'ble Commission. The revised normative O&M values are computed based on trued up figures for 2018-19, additional employee cost allowed from 2022-23 onwards and the pay revision impact approved for the base year 2018-19.

5.34.4 The normative values as per Tariff Regulation, 2021 and revised values are enclosed as **Appendix 11 and 12**. Details of inflation is furnished in **Appendix 13**.

5.34.5 The computation methodology is briefly described below:

- (i) The values trued-up for O&M expenses for 2018-19 has been Rs. 2721.49 Cr, which does not include pay revision expenses as well as employee cost for additional employee strength approved. is furnished below:

Table 5.44 Approved O&M expenses for 2018-19 as per TU order dated 14.06.2022						
Table 2.20, 2.23 & 2.24 of the order						
O&M expenses eligible for SBU-G as per the Tariff Regulations, 2018				SBU T	SBU D	Total
Particulars	Existing stations	New stations	Amount (Rs. Cr)			
Employee expense	95.34	0.575	95.91	264.93	1876.16	2237
R&M expenses	23.09	0.139	23.23	79.56	251.54	354.33
A&G expenses	5.34	0.032	5.38	18.73	106.05	130.16
Total	123.77	0.746	124.52	363.23	2233.75	2721.49

- (ii) **Cost of additional staff strength:** - Based on the methodology adopted by Hon'ble Commission to disallow employee cost over 2009 level during 2009-10 to 2017-18, the additional employee cost (for 3146 nos) eligible for inclusion in base value has been computed at Rs. 137.49 Cr.
- (iii) **Impact of Pay revision:** - Hon'ble Commission, as per order dated 03.10.2023, approved Rs. 181.18 Cr for 27175 employees. Thus, the allowable pay revision expenses for 2018-19 computed as follows:
- (i) Proportionate expenses for 30321 nos since it has been ordered to capture employee strength of 30321 nos from 2022-23 onwards. This amounts to Rs. 202.15 Cr (Rs. 181.18 Cr *30321 / 27175).
- (ii) Based on the methodology adopted by the Hon'ble Commission in the Tariff Regulation, the annualized pay revision commitment for 2018-19 amounted to **Rs. 285.40 Cr** (Rs. 202.15/8.5*12) against Rs. 248.47 Cr provisionally considered in the Tariff Regulation, 2021.
- (iv) Thus, it may kindly be seen that the base level O&M cost to be considered for norm determination for the control period from 2022-23 onwards amounts to Rs. 3144.38 Cr against Rs. 2961.93 Cr considered in the Tariff Regulation, 2021. The increase of Rs.182.45 Cr, works out to 6.16 % of the provisionally considered base value of Rs. 2961.93 Cr. Item wise details are furnished below:

Table 5.45: Comparison of base value for norm determination (Rs. Cr)

O&M break up	Base value considered in TR, 2021(Rs.in Cr)				Revised base value (Rs Cr)				Difference (Rs Cr)			
	SBU-G	SBU-T	SBU-D	Total	SBU-G	SBU-T	SBU-D	Total	SBU-G	SBU-T	SBU-D	Total
Employee cost-2018-19	95.63	264.93	1873.91	2234.47	95.91	264.93	1876.16	2237	0.28	0	2.25	2.53
R&M expenses-2018-19	23.16	79.56	246.25	348.97	23.23	79.56	251.54	354.33	0.07	0	5.29	5.36
A&G expenses-2018-19	5.36	18.73	105.92	130.02	5.38	18.73	106.05	130.16	0.02	0	0.13	0.14
O&M expenses-2018-19	124.15	363.23	2226.08	2713.46	124.52	363.22	2233.75	2721.49	0.37	-0.01	7.67	8.03
PR expenses	11.36	33.15	203.96	248.47	12.24	33.8	239.37	285.40	0.88	0.65	35.41	36.93
Additional employee cost for 2018-19					5.89	16.27	115.31	137.49	5.89	16.27	115.31	137.49
Total	135.51	396.38	2430.04	2961.93	142.65	413.29	2588.43	3144.38	7.14	16.91	158.39	182.45
Proportion					4.29	11.84	83.87	100				

- (v) The revised O&M norms for 2022-23 to 2026-27 are worked out based on the revised base values. For arriving at the O& M norms for 2022-23 to 2026-27, the base year 2018-19 value is escalated at the rate of 4.84% till 2021-22 and 4.454% thereafter as has been adopted in the Regulation.

5.34.6 The O&M expenses for 2022-23 based on the normative values thus determined amounts to Rs.3978.31 Cr as summarized below. It is humbly submitted that the actual escalation rate based on inflation in 2022-23 (7.06 %) has been considered on the norms determined for 2021-22. Hon'ble Commission may kindly note that the increase in O&M cost on account of

norm revision computed by KSEBL amounts to Rs. 243.75 Cr, which works out to 6.53 % on the normative O&M cost as per prescribed norms in Tariff Regulation, 2021.

Table 5.45 A Comparison of O&M expenses (Rs Cr)					
Sl. No	Particulars	SBU G	SBU T	SBU D	Total
1	O&M expenses as per norms contained in Tariff Regulation, 2021 (excluding R&M for SBU D)	167.18	588.41	2978.97	3734.56
2	O&M expenses based on revised norms (excl R&M for SBU D)	175.99	613.60	3188.72	3978.31
3= (2-1)	Difference	8.81	25.19	209.75	243.75
4= (3/1) X 100	Variation in %	5.27	4.28	7.04	6.53

5.34.7 It is humbly submitted that Hon'ble Commission may kindly consider the above submission and may be pleased to revise norms and approve the O&M expense after applying revised norms while issuing final true up order for 2022-23 so as to allow eligible O&M cost to KSEBL.

5.35 Pay revision arrears

5.35.1 Hon'ble Commission, while deliberating the provision created for pay revision during 2018-19 to 2020-21, had observed that the expenses towards pay revision can be approved only on payment basis. It was also ordered to claim the expenses on payment basis along with supporting documents. In view of the direction KSEBL had preferred claim in the true up petition for the arrears disbursed during 2021-22 to the extent of 2 instalments. The background of pay revision was also appraised in detail before the Hon'ble Commission. The pay revision arrears of work men and officers from 01.08.2018 to 31.12.2020 and 01.07.2018 to 31.12.2020 respectively were ordered to be credited to the GPF account of the respective workmen / officer in 4 instalments on 01.06.2021, 01.01.2022, 01.06.2022 and 01.01.2023. Two instalments were disbursed in 2021-22 and the remaining 2 instalments in 2022-23.

5.35.2 Regulation 14 (3) of the Tariff Regulation, 2018 (for the control period from 2018-19 to 2021-22) specifies that expenses relating to pay revision, if any, during the control period for the same level of employees as admitted in the truing up of accounts for the year 2016-17 of the Generation business/company or Transmission business/licensee or distribution business/licensee may be considered for pass through after due prudence check. Accordingly pay revision expenses applicable for the admitted level of employees (27175 nos) had been approved in the true up order for 2021-22.

5.35.3 Hon'ble Commission was pleased to re determine the allowable employee strength since 2009 for cost recovery at 30321 nos as per order dated 14.07.2022 in OA 63/2021 and ordered redetermined staff strength from 2022-23 onwards. Regulation 14 (3) of the Tariff Regulation, 2021, applicable from 2022-23 to 2026-27, specifies that expenses relating to pay revision, if any, during the Control Period, of the Generation business/ company or Transmission business/ licensee or distribution business/ licensee, will be considered for pass through after due prudence check.

5.35.4 It is humbly submitted that an amount of Rs. 511.89 Cr was disbursed during 2022-23. Based on the methodology adopted in 2021-22 for the arrears disbursed in that year, KSEBL prefers claim on pay revision arrears for 30321 employees for an amount of Rs.489.54 Cr as follows.

SL NO	PARTICULARS	Officers	Workmen	PTC	TOTAL
1	Commission approved Strength as per OA63/2021	4301	25557	463	30,321
2	Number of pay revision effected Employees- (324 workmen promoted to Officers)	5871	29023	287	35,181
3	Employees retired during 01/07/2018 - 28/02/2021	850	1952	31	2,833
4	No. of pay revision effected Employees excluding retired employees	5021	27071	256	32,348
5	Excess over approved and retired strength (4 - 1)	720	1514	-207	2027
6	Employees joined in service after 01/04/2009	923	12907	14	13,844
7	Total amount Credited to PF during the year (₹ in Cr.)	160.79	349.88	1.22	511.89
8	Amount Credited to employees joined after 01/04/2009 (₹ in Cr.)	14.18	96.24	0.04	110.46
9	Arrear salary of Excess employees (pro rata) (₹ in Cr.) - 8*5/6	11.06	11.29		22.35
10	PAY REVISION ARREAR CLAIM for the FY 2022-23 (₹ in Cr.) - (7 - 9)	149.72	338.59	1.22	489.54

5.35.5 It may kindly be noted that arrears were disbursed for 32348 serving employees for whom arrears disbursed, which was more than the approved limits by 2027 nos. Out of Rs. 511.89 Cr disbursed during the year for the serving employees, Rs 110.46 Cr pertains to the employees joined service after 01.04.2019. Since the additionally approved employees were in service before the pay revision, 2018, KSEBL is preferring pay revision expenses for 30321 employees in this petition. Thus, a sum of Rs. 22.35 Cr is attributable to the increased working strength of 2027 nos over the limit approved by the Hon'ble Commission on pro rata basis. Hon'ble Commission may kindly approve Rs. 489.54 Cr after excluding arrears for the increased staff strength of 2027 nos towards pay revision arrears disbursed during the year 2022-23 as part of truing up. SBU wise break up based on gross employee cost ratio is furnished below:

Item	SBU G	SBU T	SBU D	Total
Pay revision expenses	29.84	58.22	401.47	489.54
Gross pay	286.12	558.3	3849.61	4694.03
Proportion	6.1	11.89	82.01	100

5.36 **Return on Equity:** Return on equity is claimed @14% on the Government equity in KSEBL amounting (Rs.3499.05 Cr) to Rs.489.86 Cr. The function wise break up of equity is made based on equity allocation among SBUs in the Trifurcated Balance sheet as detailed below:

Particulars	SBU G	SBU T	SBU D	Total
Equity Capital	831.27	857.05	1810.73	3499.05
RoE @14% on above	116.38	119.99	253.50	489.87

- 5.37 **Gains on achievement of T&D loss reduction target:** As per Tariff Regulations, 2021, KSEBL is entitled to retain part of the gains on account of achieving loss reduction in excess of approved target. Share of KSEBL amounts to Rs.126.41 Cr as detailed in chapter 4. Hon'ble Commission may kindly approve the same.
- 5.38 **Incentive on transmission availability** (Rs. 8.43 Cr) and **amortization** of expenses incurred on compensation paid for Edamon - Kochi and Pugalur- Thrissur lines (Rs. 8.94 Cr) as detailed in chapter 3 may kindly be approved.
- 5.39 **Non- Tariff Income and Other income:** Hon'ble Commission approved Rs.891.59 Cr under Non-Tariff income & Other income for the year 2022-23. Actual income earned during the year as per accounts amounted to Rs.1217.49 Cr. It may kindly note that the disclosure in accounts and truing up petition regarding non-tariff income differ as the revenue from operations are depicted in accounts against revenue from tariff in truing up petition. Therefore, certain components of income disclosed under revenue from operations (Note 29 A) in accounts amounting to Rs.279.12 Cr are considered under non-tariff income in this petition. Out of Rs.1217.49 Cr, remaining Rs.468.59 Cr is disclosed under Other operating income (Note 29 B) and Rs. 469.69 Cr under other income (Note 30) of audited accounts as detailed below.

Table 5.49: Non-tariff income for 2022-23 (Rs. Cr)					
Sl. No	Particulars	SBU G	SBU T	SBU D	Total
A	Revenue booked under Note No. 29 A				
1	Miscellaneous receipts / charges from interstate trading of energy			72.61	72.61
2	Meter rent / service line rental			105.34	105.34
3	Recovery of theft / malpractices			1.22	1.22
4	Wheeling charges recoveries			1.65	1.65
5	Miscellaneous charges from consumers	0.00	0.03	98.27	98.30
	Revenue booked under Note No. 29 (Revenue from Operations) considered as Non-Tariff Income	0.00	0.03	279.09	279.12
B	Revenue booked under Note No 29 B				
6	Rebate received	0.10		131.55	131.65
7	Interest-Advance to suppliers / contractors	1.30	2.34	3.70	7.34
8	Income from sale of bulb, scrap, tender forms etc	10.98	24.28	79.05	114.31
9	Miscellaneous receipts	18.67	15.78	180.93	215.38
	Sub Total A	31.05	42.40	395.23	468.69
	Other income as per Note 30 of Annual accounts				
1	Interest on belated payment charges			110.37	110.37
2	Interest-Staff loans and advances			0.04	0.04
3	Interest from loans & others			0.58	0.58
4	Interest from banks	2.33	2.38	3.7	8.41
5	Claw back of grants	5.53	40.93	277.58	324.04
6	Other receipts	4.21	8.38	13.66	26.25
	Sub Total B	12.07	51.69	405.93	469.69
D= (A+B+C)	Income as per Accounts considered as non-tariff income	43.12	94.12	1080.25	1217.49

- 5.40 Miscellaneous charges from consumers (Note 29 A- Rs. 98.30 Cr) are detailed in **Appendix 7**. Misc receipts /charges from inter-state trading of energy (Note No 29. A- Rs. 72.61 Cr) are detailed in

Appendix 8. Miscellaneous receipts (Note 29 B- Rs.215.38 Cr) are detailed in **Appendix 9.** Income from sale of bulb, scrap/tender form (Note 29 B) amounting to Rs.114.32 Cr as detailed in **Appendix 10.**

- 5.41 KSEBL had submitted in truing up petition for 2018-19 that KWA dues till 30.09.2018 were taken over by the Government of Kerala, (to be settled with interest in 4 annual instalments commencing from 2019-20 onwards) and interest income on this count may be recognized on actual receipt basis. It was prayed that the revenue recognized in books during 2018-19 may not be trued up. It is respectfully submitted that GoK has released 2 instalments due for 2019-20 and 2020-21 during the year 2020-21 and interest earned on collection has duly been offered under non-tariff income for true up in 2020-21. Hon'ble Commission was pleased to true up the same as prayed by KSEBL.
- 5.42 During the year 2022-23, Rs. 100 Cr was received as part of fourth instalment of KWA arrear taken over by the Government and interest pertains to the receipt amounts to Rs.19.88 Cr, which may kindly be trued up in 2022-23.
- 5.43 Income from sale of scrap/tender form amounting to Rs.114.32 Cr includes Rs.2.30 Cr towards sale proceeds of LED bulbs. Further, the cost of LED bulbs amounting to Rs. 1.37 Cr has been accounted under A&G expenses. Hon'ble Commission may kindly note that while approving Non-Tariff Income for earlier years, Hon Commission was pleased to exclude the LED purchase value from NTI while truing up since the cost of bulb is not trued up under A&G expenses.
- 5.44 Details of income to be trued up on account of LED transaction are furnished below:

Table- 5.50: Details of income to be trued up in 2022-23		
Particulars		Rs Cr
Sale proceeds of LED bulbs (Note 29 B of Annual Accounts)	2.30	
Cost of LED bulbs (Note 35 of Annual Accounts)	1.37	0.93

- 5.45 Out of Rebate received Rs. 131.65 Cr, rebate allowed by CGS amounted to Rs. 131.55 Cr. As already submitted in para 5.33, KSEBL earned revenue of Rs. 13.08 Cr as revenue during the year 2022-23 and accounted under Miscellaneous receipts under Note 29 B. Since the expenses connected with the project are not fully captured in books, Hon'ble Commission may true up the same in 2023-24.
- 5.46 In view of the above submission, Hon'ble Commission may kindly approve Rs.1009.64 Cr, against Rs.681.88 Cr approved as per order dated 08.07.2019, as detailed below:
- 5.47 As already submitted, Annual Statement of Accounts discloses Revenue from operation, which is inclusive of certain items that are considered under non-tariff income in the Regulatory accounts. Segregation of revenue from tariff and NTI for regulatory purpose is furnished below:

Table 5.51: Non-tariff income for 2022-23 (Rs. Cr)					
Sl. No	Particulars	SBU G	SBU T	SBU D	Total
1	Income as per Accounts considered as non-tariff income as per Table 5.44	43.12	94.12	1080.25	1217.49
2	Less: Items sought to be excluded in TU				
i	Claw back of grant-Considered separately	5.53	40.93	277.58	324.04
ii	Cost of LED Bulbs booked under A&G expenses			1.37	1.37
iii	Income under Nilaavu Scheme			13.08	13.08
iv	Total exclusions (I to iii)	5.53	40.93	292.03	338.49
3	Add: Items sought to be considered in True up				
i	Interest on KWA arrears released by GoK			19.88	19.88
4	NT Income sought for TU 2022-23 (1-2+3)	37.59	53.19	808.10	898.88

5.48 **Revenue from Tariff:** Annual Statement of Accounts discloses Revenue from operation, which is inclusive of certain items that are considered under non-tariff income in the Regulatory accounts. Reconciliation of total income as per audited accounts and income considered in Truing up petition is furnished below:

Table 5.52: Revenue from tariff for 2022-23 (Rs. Cr)					
Sl No	Particulars	SBU G	SBU T	SBU D	Total
1	Revenue from Operation as per Accounts (Note No. 29)				18453.27
2	Less: Items considered under non-tariff income (Table 5.44 Subtotal A+B)	31.05	42.43	674.32	747.80
3= (1-2)	Revenue from Tariff and external sale as per Accounts				17705.47
4	Less: Power factor incentive accounted under A&G expenses			47.90	47.90
5= (3-4)	Revenue from tariff & external sale for truing up purpose				17657.57
	Break up				
8	Revenue from sale within the State including fuel surcharge			16533.53	16533.53
9	Less: Power factor incentive			47.90	47.90
10= (8-9)	Revenue domestic sale net of PFI			16485.63	16485.63
11	Add: Revenue from external sale			1171.93	1171.93
12= (10+11)	Total			17657.57	17657.57

5.49 Revenue from sale within the State including fuel surcharge amounts to Rs. 16533.53 Cr and external sales Rs. 1171.93 Cr as detailed in Chapter 4.

5.50 Amortization of past approved revenue gap: Hon'ble Commission had ordered to amortize past revenue gap to the tune of Rs. 850 Cr during the year. It is humbly submitted that in the absence of regulatory surplus during the year, KSEBL is not able to amortize past gap during the year as ordered by the Hon'ble Commission.

5.51 **Variation between audited accounts and truing up petition:** Loss as per audited accounts for 2022-23 has been Rs.1023.62 Cr (excluding RoE). The following table summarizes the variation between loss as per audited accounts and TU petition. Detailed information is furnished in **Appendix 14**.

Table 5.53: Comparison of Accounts and TU Petition (Rs Cr)				
Sl.No	Particulars	As per Accounts	TU Petition	Difference
1	Interest & Finance charges	1511.85	2328.49	-816.64
2	Additional contribution to Master Trust	0.00	400.00	-400.00
3	Depreciation	1919.11	737.66	1181.45
4	O&M Expenses	5069.34	4320.77	748.57
5	Pay revision provision	0	489.54	-489.54
6	Power purchase & PGCIL charges	11240.62	10979.68	260.94
7	RoE	0	489.87	-489.87
8	Others	191.85	65.02	126.83
9	Generation of power	0.64	0.64	0.00
10	Exceptional items	13.17	13.17	0.00
11	Gains out of T&D loss reduction and incentive	0	134.84	-134.84
12	Amortization of past gap	0	0	0.00
13	Amortization of compensation	0	8.94	
14	Repayment of Bond	0.00	407.22	
15	ARR (1 to 11)	19946.58	20375.84	-13.10
16	Revenue from tariff	17281.33	16485.63	795.70
17	External sale	1171.93	1171.93	
18	Non-tariff income	469.69	898.88	-429.19
19	ERC	18922.95	18556.43	366.52
20	Revenue (gap)/Surplus	-1023.62	-1819.41	379.62

5.52 **Comparison of approval and truing up sought:** The following table summarizes the variation between approval granted by the Hon'ble Commission as per order dated 25.06.2022 and truing up sought for the year 2022-23. Detailed information is furnished in **Appendix 15**.

Table 5.54: Comparison of Approval and TU Petition (Rs Cr)				
Sl.No	Particulars	As per MYT order	TU Petition	Difference
1	Fuel charges for generation	0	0.64	-0.64
2	POP & Interstate transmission	9833.64	10979.68	-1146.04
3	Interest & Finance charges	2100.97	2328.49	-227.52
4	Depreciation	644.29	737.66	-93.37
5	O&M Expenses	4121.19	4320.77	-199.58
6	Other expenses	0	65.02	-65.02
7	Gains on T&D loss reduction & incentive	0	134.84	-134.84
8	Master trust additional contribution	400.00	400.00	0.00
9	RoE	489.87	489.87	0.00
10	Amortization of past gap	850.00	0.00	850.00
11	Amortization and interest	10.48	8.94	1.54
12	Exceptional items	0	13.17	-13.17
13	Pay revision	0	489.54	-489.54
14	Repayment of Bond	407.22	407.22	
15	ARR (1 to 11)	18857.66	20375.84	-
				1518.180273
16	Revenue from tariff	15309.04	16485.63	-1176.59
17	External sale	729.83	1171.93	-442.10
18	Non-tariff income	891.59	898.88	-7.29
19	ERC	16930.46	18556.43	-1625.97
20	Revenue (gap)/Surplus	-1927.20	-1819.41	-107.79

5.53 The Next chapter summarises the expenses and revenues sought for true-up for the year.

APPENDICES

Appendix 1: Details of capital liabilities (2022-23)

SL NO	NAME OF THE FINANCIAL INSTITUTION	Net Loan - Opening	Current Financial Liability (OB)	Gross loan-Opening – 01/04/2022	Add: Drawal(s) during the Year	Less: Repayment (s) of Loans during the year	Gross loan – Closing – 31/03/2023	Current Financial Liability (CB)	Net loan – Closing – 31/03/2023	Average Net Loan	Rate of Interest on Loan on annual basis	Interest on loan
A) SECURED LOANS												
1	REC-Distriburion - 23 Circle Scheme	681.01	124.17	805.18	0	124.17	681.01	124.17	556.84	743.1	9.26% - 10.16%	73.94
3	REC-TRAN.Kattakkada -Pothencode Scheme	43	14.33	57.33	0	14.33	43	14.33	28.66	50.16	9.5% - 11.39%	5.17
4	REC-TRAN-Group I	55.65	10.31	65.96	0	10.31	55.65	10.31	45.33	60.8	9.01% - 9.75 %	5.96
5	Special Loan Assistance from REC	1,345.49	149.5	1494.99	0	149.5	1345.49	149.5	1,195.99	1,420.24	10% - 10.75%	152.58
6	REC - Peringalkuthu. Scheme	91.29		91.29	26.11	0	117.41		117.41	104.35	9.5% - 9.95%	8.82
7	REC – Bhoothathankettu Scheme	105.61	7.68	113.29	0	113.29	0		-	56.64	9.75% - 10.25%	2.66
8	R E C - RGGVY	6.85	1.78	8.63	0	1.78	6.85	1.78	5.07	7.74	10.25% - 11%	0.88
9	SOUTH INDIAN BANK-Barapole SHEP	54.58	7.2	61.78	0	7.2	54.58	9	45.58	58.18	9.15%	4.84
10	REC R-APDRP PART-B	302.21	65.16	367.37	0	65.16	302.21	65.16	237.04	334.79	9.26% - 10.16%	33.11
11	REC for the DDG Scheme	0.14		0.14	0	0.01	0.12	0.01	0.11	0.13	10.08%	0.01
12	RIDF of NABARD Banasurasagar SPVP	2.25		2.25	0	0	2.25		2.25	2.25	2.75% - 6.25%	0.08
13	RIDF of NABARD Upper Kallar SHEP	13.42		13.42	1.31	0	14.73		14.73	14.07	2.75% - 6.25%	0.5
14	SBI	1,024.36	145.08	1169.44	500	186.78	1482.66	195.12	1,287.54	1,326.05	9.40%	126.24
15	Special Loan Assistance from PFC	965.37	91.94	1057.31	0	91.94	965.37	91.94	873.43	1,011.34	9.08%	91.82
16	PFC R-APDRP	231.37		231.37	0	0	231.37		231.37	231.37	9.00%	20.82
17	PFC R-APDRP Part B	210.11		210.11	0	0.04	210.07		210.07	210.09	9.00%	0.12
18	PFC GEL Kakkayam	15.09	1.37	16.47	0	1.37	15.09	1.37	13.72	15.78	9.6% to 10.35%	1.61
19	PFC GEL Perumthenaruvi	26.91	2.56	29.48	0	2.56	26.91	2.56	24.35	28.2	9.6% to 10.25%	2.83
20	Kerala Financial Corporation	475.61	57.37	532.98	-	145.65	387.33	52.63	334.7	460.16	9.00%	37.7
21	MTL Kerala Financial Corporation	250	120	370	-	121.77	248.23	120	128.23	309.12	8.00%	25.2
22	Indian Bank	7.12	0.92	8.04	-	1.17	6.87	1.76	5.1	7.45	9.25%	0.57
23	NABARD-Solar Plant at Pothencode	8.47		8.47	-	-	8.47		8.47	8.47	2.75%	0.23
24	NABARD- Solar Plant at Thalikulathur	3.27		3.27	-	-	3.27		3.27	3.27	2.75%	0.09
25	NABARD-Peruvannamoozhi SHEP	23.98		23.98	18.88	5.66	37.19		37.19	30.59	2.75% to 5.25%	0.82
26	Kerala Financial Corporation - II			0	100	6.78	93.22	10.53	82.69	46.61	8.00%	7.69
27	Dhanlaxmi Bank			0	100	0	100	16.68	83.32	50	8.00%	7.19
28	Kerala Financial Corporation - III			0	400	6.35	393.65	42.11	351.55	196.83	8.35%	13.77
	TOTAL	5943.16	799.38	6742.54	1146.3	1055.84	6833	908.98	5924.03	6787.77		625.25
B) Unsecured Loan												
1	Short Term Loan from REC	500		500		500	0		-	250	7.75%	4.99
2	Short term loan from M/s IREDA	0	590	590	500	590	500	64.75	435.25	545	7.75%	13.7
	Total	500	590	1090	500	1090	500	64.75	435.25	795		18.69
	SEC+UNSEC	6443.16		7832.54	1646.3	2145.84	7333	973.73	6359.28	7582.77	8.49	643.94

Appendix 1A : Details of capital liabilities (2022-23)-SBU G

SL NO	NAME OF THE FINANCIAL INSTITUTION	Net Loan - Opening	Current Financial Liability (OB)	Gross loan-Opening – 01/04/2022	Add: Drawal(s) during the Year	Less: Repayment (s) of Loans during the year	Gross loan – Closing – 31/03/2023	Current Financial Liability (CB)	Net loan – Closing – 31/03/2023	Average Net Loan	Rate of Interest on Loan on annual basis	Interest on loan
A	SECURED LOANS TERM LOANS											
1	Special Loan Assistance from REC	243.60	27.07	270.66	0.00	33.48	237.18	26.35	210.83	253.92	10% - 10.75%	26.90
2	REC - Peringalkuthu. Scheme	91.29	0.00	91.29	26.11	0.00	117.41	0.00	117.41	104.35	9.5% - 9.95%	8.82
3	REC – Bhoothathankettu Scheme	105.61	7.68	113.29	0.00	113.29	0.00	0.00	0.00	56.64	9.75% - 10.25%	2.66
4	SOUTH INDIAN BANK-Barapole SHEP	54.58	7.20	61.78	0.00	7.20	54.58	9.00	45.58	58.18	9.15%	4.84
5	REC for the DDG Scheme	0.14	0.00	0.14	0.00	0.01	0.12	0.01	0.11	0.13	10.08%	0.01
6	RIDF of NABARD Banasurasagar SPVP	2.25	0.00	2.25	0.00	0.00	2.25	0.00	2.25	2.25	2.75% - 6.25%	0.08
7	RIDF of NABARD Upper Kallar SHEP	13.42	0.00	13.42	1.31	0.00	14.73	0.00	14.73	14.07	2.75% - 6.25%	0.50
8	SBI	185.46	26.27	211.72	82.56	32.93	261.36	34.40	226.96	236.54	9.40%	22.25
9	Special Loan Assistance from PFC	174.78	16.65	191.42	0.00	21.25	170.17	16.21	153.97	180.80	9.08%	16.19
10	PFC GEL Kakkayam	15.09	1.37	16.47	0.00	1.37	15.09	1.37	13.72	15.78	9.6% to 10.35%	1.61
11	PFC GEL Perumthenaruvi	26.91	2.56	29.48	0.00	2.56	26.91	2.56	24.35	28.20	9.6% to 10.25%	2.83
12	Kerala Financial Corporation	86.11	10.39	96.49	0.00	28.21	68.28	9.28	59.00	82.39	9.00%	6.65
13	Medium Term Loan Kerala Financial Corporation	45.26	21.73	66.99	0.00	23.22	43.76	21.15	22.60	55.37	8.00%	4.44
14	Indian Bank	1.29	0.17	1.46	0.00	0.25	1.21	0.31	0.90	1.33	9.25%	0.10
15	NABARD-Solar Plant at Pothencode	8.47	0.00	8.47	0.00	0.00	8.47	0.00	8.47	8.47	2.75%	0.23
16	NABARD- Solar Plant at Thalakulathur	3.27	0.00	3.27	0.00	0.00	3.27	0.00	3.27	3.27	2.75%	0.09
17	NABARD-Peruvannamoozhi SHEP	23.98	0.00	23.98	18.88	5.66	37.19	0.00	37.19	30.59	2.75% to 5.25%	0.82
	Kerala Financial Corporation - II	0.00	0.00	0.00	17.63	1.20	16.43	1.86	14.58	8.22	8.00%	1.36
	Dhanlaxmi Bank	0.00	0.00	0.00	17.63	0.00	17.63	2.94	14.69	8.81	8.00%	1.27
	Kerala Financial Corporation - III	0.00	0.00	0.00	70.51	1.12	69.39	7.42	61.97	34.70	8.35%	2.43
	SUB-TOTAL	1081.50	121.07	1202.57	234.63	271.76	1165.44	132.87	1032.58	1184.00		104.07
B	UNSECURED LOANS TERM LOANS											
1	Short Term Loan from REC	90.52	0.00	90.52	0.00	90.52	0.00	0.00	0.00	45.26	7.75%	0.88
2	Short term loan from M/s IREDA	0.00	106.82	106.82	85.33	104.00	88.14	11.41	76.72	97.48	7.75%	2.41
	SUB-TOTAL	90.52	106.82	197.34	85.32	194.52	88.14	11.41	76.72	142.74		3.29
	TOTAL	1172.02	227.89	1399.91	319.95	466.28	1253.58	144.28	1109.30	1326.74	8.09	107.36

Appendix 1B : Details of capital liabilities (2022-23) SBU T												
SL NO	NAME OF THE FINANCIAL INSTITUTION	Net Loan - Opening	Current Financial Liability (OB)	Gross loan-Opening – 01/04/2022	Add: Drawal(s) during the Year	Less: Repayment (s) of Loans during the year	Gross loan – Closing – 31/03/2023	Current Financial Liability (CB)	Net loan – Closing – 31/03/2023	Average Net Loan	Rate of Interest on Loan on annual basis	Interest on loan
A	SECURED LOANS TERM LOANS											
1	REC-TRAN-Group I	55.65	10.31	65.96	-	10.31	55.65	10.31	45.33	60.80	9.01% - 9.75 %	5.96
2	REC-TRAN.Kattakkada -Pothencode Scheme	43.00	14.33	57.33	-	14.33	43.00	14.33	28.66	50.16	9.5% - 11.39%	5.17
3	SBI	321.38	45.52	366.89	165.57	59.57	472.89	62.23	410.66	419.89	9.40%	40.26
4	Special Loan Assistance from PFC	302.87	28.84	331.71	5.51	29.32	307.90	29.32	278.58	319.81	9.08%	29.29
5	Special Loan Assistance from REC	422.13	46.90	469.03	7.80	47.68	429.14	47.68	381.46	449.09	10% - 10.75%	48.66
6	Kerala Financial Corporation	149.22	18.00	167.21	2.78	46.45	123.54	16.79	106.75	145.38	9.00%	12.02
7	Medium Term Loan Kerala Financial Corporation	78.43	37.65	116.08	1.93	38.84	79.17	38.27	40.90	97.63	8.00%	8.04
8	Indian Bank	2.24	0.29	2.52	0.04	0.37	2.19	0.56	1.63	2.36	9.25%	0.18
9	Kerala Financial Corporation - II	-	-	-	31.89	2.16	29.73	3.36	26.37	14.87	8.00%	2.45
10	Dhanlaxmi Bank	-	-	-	31.89	0.00	31.89	5.32	26.57	15.95	8.00%	2.29
11	Kerala Financial Corporation - III	-	-	-	127.58	2.02	125.56	13.43	112.13	62.78	8.35%	4.39
	SUB-TOTAL	1,374.90	201.84	1,576.75	375.00	251.08	1,700.67	241.62	1,459.05	1,638.71		158.73
B	UNSECURED LOANS TERM LOANS											
1	Short Term Loan from REC	156.87	-	156.87	2.61	159.47	-	-	-	78.43	7.75%	1.59
2	Short term loan from M/s IREDA	-	185.10	185.10	162.55	188.18	159.47	20.65	138.82	172.29	7.75%	4.37
	SUB-TOTAL	156.87	185.10	341.97	165.16	347.65	159.47	20.65	138.82	250.72		5.96
	TOTAL	1,531.77	386.95	1,918.72	540.16	598.74	1,860.14	262.27	1,597.88	1,889.43	8.72%	164.69

Appendix 1C: Details of capital liabilities (2022-23) SBU D

SL NO	NAME OF THE FINANCIAL INSTITUTION	Net Loan - Opening	Current Financial Liability (OB)	Gross loan-Opening – 01/04/2022	Add: Drawal(s) during the Year	Less: Repayment (s) of Loans during the year	Gross loan – Closing – 31/03/2023	CFL (CB)	Net loan – Closing – 31/03/2023	Average Net Loan	Rate of Interest on Loan on annual basis	Interest on loan
A	SECURED LOANS TERM LOANS											
1	REC-Distribution - 23 Circle Scheme	681.01	124.17	805.18	-	124.17	681.01	124.17	556.84	743.10	9.26% - 10.16%	73.94
3	Special Loan Assistance from REC	679.77	75.53	755.30	0.00	76.13	679.17	75.46	603.70	717.23	10% - 10.75%	77.02
4	R E C - RGGVY	6.85	1.78	8.63	-	1.78	6.85	1.78	5.07	7.74	10.25% - 11%	0.88
5	REC R-APDRP PART-B	302.21	65.16	367.37	-	65.16	302.21	65.16	237.04	334.79	9.26% - 10.16%	33.11
6	SBI	517.53	73.30	590.82	251.86	94.28	748.41	98.49	649.92	669.62	9.40%	63.72
7	Special Loan Assistance from PFC	487.72	46.45	534.17	0.00	46.88	487.29	46.41	440.89	510.73	9.08%	46.35
8	PFC R-APDRP	231.37	-	231.37	-	-	231.37	-	231.37	231.37	9.00%	20.82
9	PFC R-APDRP Part B	210.11	-	210.11	-0.00	0.04	210.07	-	210.07	210.09	9.00%	0.12
10	Kerala Financial Corporation	240.29	28.98	269.27	0.00	73.76	195.52	26.57	168.95	232.39	9.00%	19.03
11	MTL - Kerala Financial Corporation	126.31	60.63	186.93	0.00	61.63	125.30	60.57	64.73	156.12	8.00%	12.72
12	Indian Bank	3.60	0.46	4.06	-0.00	0.59	3.47	0.89	2.58	3.76	9.25%	0.29
13	Kerala Financial Corporation - II	-	-	-	50.48	3.42	47.05	5.31	41.74	23.53	8.00%	3.88
14	Dhanlaxmi Bank	-	-	-	50.48	0.00	50.48	8.42	42.06	25.24	8.00%	3.63
15	Kerala Financial Corporation - III	-	-	-	201.91	3.20	198.71	21.25	177.45	99.35	8.35%	6.95
	SUB-TOTAL	3,486.76	476.47	3,963.23	554.73	551.06	3,966.90	534.50	3,432.40	3,965.06		362.46
B	UNSECURED LOANS TERM LOANS											
1	Short Term Loan from REC	252.61		252.61		252.61	-	-	-	126.31	7.75%	2.52
2	Short term loan from M/s IREDA		298.08	298.08	252.12	297.82	252.39	32.68	219.70	275.23	8.90%	6.92
	SUB-TOTAL	252.61	298.08	550.69	252.12	550.42	252.39	32.68	219.70	401.54		9.43
	TOTAL	3,739.37	774.55	4,513.92	806.85	1,101.49	4,219.28	567.18	3,652.10	4,366.60	8.52%	371.90

Appendix-2: Details of the short-term loans availed for meeting capital liabilities (Rs Cr)														
No	Short term loans	Balance as at 31.03.13	Balance as at 31.03.14	Balance as at 31.03.15	Balance as at 31.03.16	Balance as at 31.03.17	Received in 2017-18	Repaid in 2017-18	Balance as at 31.03.18	Balance as at 31.03.19	Balance as at 31.03.20	Balance as at 31.03.21	Balance as at 31.03.22	Balance as at 31.03.23
1	State Bank Of India	300.00	300.00	500.00	750.00	500.00	1000.00	750.00	750.00					
2	Vijaya Bank	199.97	200.00	200.00	200.00	200.00	400.00	600.00		400.00				
3	Bank of India		199.98	350.00	450.00	387.50	1362.50	1550.07	199.93					
4	South Indian Bank	350.00	400.00	100.00	100.00	200.00	300.00	500.00						
5	Syndicate Bank		0.00	100.00	100.00	0.00								
6	Dhanalekshmi Bank		100.00											
7	Canara Bank						500.00	500.00						
8	REC - STL	150.00					500.00	0.00	500.00					
9	PFC - STL - 1	250.00												
10	PFC - STL - 2	250.00												
11	KSPIFC - STL	26.00	26.00											
12	Tamilnad Mercantile Bank			100.00										
13	Indian Overseas Bank		300.00	650.00										
14	Union Bank of India						401.47	401.47						
15	Andhra Bank				300.00	600.00	300.00	900.00						
16	Bank of Baroda									400.00	400.00	590.00	500.00	
17	M/s IREDA													
	Total	1525.97	1525.98	2000.00	1900.00	1887.50	4763.97	5201.54	1449.93	400.00	400.00	400.00	590.00	500.00

Appendix 3- Details of short-term loan Interest from 2017-18 to 2022-23.

No	Bank	2017-18		2018-19		2019-20		2020-21		2021-22		2022-23	
		Rate (%)	Amount (Rs.Cr)	Rate (%)	Amount (Rs.Cr)	Rate (%)	Amount (Rs.Cr)	Rate (%)	Amount (Rs.Cr)	Rate (%)	Amount (Rs.Cr)	Rate (%)	Amount (Rs.Cr)
1	SBI	8.00	56.69	8.42	39.08								
2	SBT												
3	Canara Bank												
4	Federal Bank												
5	Vijaya Bank	8.15	14.50	8.70	24.73	8.70	23.37						
6	South Indian Bank	8.25	13.46										
7	REC STL	8.20	5.05	8.20	11.91					7.75%	16.14	7.75%	4.99
8	PFC STL												
9	PFC STL												
10	KSPIFC STL												
11	Bank of India	8.15	25.02	8.15	0.25								
12	IOB												
13	Dhanalekshmi Bank												
14	Syndicate Bank												
15	TMB												
16	UBI												
17	Andhra Bank	8.85	19.05										
18	KGB												
19	Bank of Baroda					8.55	8.45	7.85	31.58	8.90%	5.73		
20	M/s IREDA									7.75%	19.99	7.75%	13.70
	Total		133.77		75.97		31.82		31.58		41.87		18.69

Appendix 4: PROJECT WISE ANALYSIS OF CAPITAL EXPENDITURE FOR THE YEAR ENDED 31/03/2023 (Rs. Cr)					
Project Code	Brief Description of Project	CWIP as on 01/04/2022	Cost Incurred during the year	Capitalised during the year	CWIP as on 31/03/2023
A	GENERATION				
14.02	Idamalayar H E Project	0.75	39.33	4.36	35.72
14.03	Solar Power Project.	-	13.27	13.27	-
14.07	Kakkad Scheme	-	3.21	-	3.21
14.08	LNG based Thermal power scheme	2.78	-2.78	-	-
14.09	Renovation of Sengulam Pump House	-	-0.35	-0.35	-
14.11	Kallada Low Head Scheme	-	0.88	-	0.88
14.12	Bhoothathankettu Small H.E Scheme	234.41	13.33	0.02	247.72
14.14	Mananthavady Multi Purpose Scheme	2.69	-2.69	-	-
14.15	Olikkal Small H.E Scheme	4.99	2.67	1.03	6.63
14.16	Lower Periyar Tunnel Works - Other than W B Aided Works	-	5.70	4.48	1.22
14.19	Uppen sengulam Hp	8.43	0.40	0.18	8.65
14.20	Western Kallar SHP	0.09	-	-	0.09
14.21	Malampuzha Power Gen. Scheme	-	3.44	3.44	-
14.25	RMU SHOLAYAR	62.93	3.54	1.89	64.58
14.27	Chimoney Small H E Scheme	-	0.10	0.10	-
14.28	Poringalkuthu Left Bank Diversion Scheme	0.18	6.87	5.76	1.30
14.29	Kuttiar Diversion Scheme	0.11	0.79	0.79	0.11
14.30	Wind Generator, Kottamala, Palakkad	4.16	15.51	-	19.67
14.32	Poringalkuthu Left Bank H E Project Extension Scheme	-	1.87	1.87	-
14.36	Anakkayam Small HE Scheme	15.91	1.33	0.58	16.67
14.37	Onipuzha Mini HE Scheme	0.00	-	0.00	-
14.38	Wanchiyam Small HE Scheme	0.02	1.44	-	1.46
14.39	Chathankottu Nada Small HE Scheme	-	1.03	0.84	0.19
14.40	DRIP Project	6.18	0.09	2.29	3.98
14.41	Renovation Division for Idukki H.E.P.	2.83	0.55	0.57	2.81
14.42	Valanthode SHEP	6.20	1.74	0.20	7.73
14.43	Roof Top Solar Power Plants	17.22	39.51	34.36	22.36
14.44	Sengulam Augmentation Scheme	82.73	4.83	0.11	87.46
14.45	Athirapally H E Project	15.57	-15.57	-	-
14.46	Chembukadavu Mini HEP Stage II	0.03	0.87	0.79	0.11
14.49	Poovaramthode Small H.E Scheme	7.37	2.47	1.02	8.82
14.61	Expenditure due to Natural Calamity	9.38	2.14	5.83	5.69
14.64	MARMALA SHEP	2.55	0.80	-	3.35
14.65	Kuttiadi Small Hydro Electric Project	0.10	0.99	1.10	-
14.66	Upper Kallar HE Scheme	35.23	2.16	37.37	0.02
14.68	Peechad Small Hydro Electric project	0.10	-	-	0.10
14.70	Vakkalar Hydro Electric Project	0.06	-	-	0.06
14.71	Peruvannamuzhi Small Hydro Electric Project	50.73	24.66	3.56	71.83
14.72	Chembukadavu III Small H.E Scheme	5.88	1.36	-	7.24
14.74	Chinnar HES	89.15	36.14	0.00	125.29

14.75	Pazhassi Sagar Small H.E Scheme	26.82	9.72	2.54	34.00
14.76	CWIP - Implementation of SCADA under RDSS	-	0.54	0.00	0.54
14.77	Pallivasal Extension Scheme	421.13	71.14	0.02	492.26
14.78	Barapole S.H. Scheme	0.00	0.66	0.25	0.41
14.79	Mangulam Hydroelectric Scheme	51.68	12.10	0.14	63.64
14.80	Achencoil SHEP	4.57	-4.57	-	-
14.83	Peechi SHEP	0.65	4.60	0.91	4.34
14.84	Maripuzha SHEP(2 X 3 MW)	3.38	1.05	0.29	4.15
14.86	120 MW DGPP Kozhikode	-	0.15	0.11	0.04
14.88	Kuttiady Addl. Extention Scheme	-	0.00	0.00	-
14.89	LADNUM SHEP	3.57	0.57	-	4.14
14.90	CWIP - General	312.17	-57.66	29.66	224.85
14.93	Vilangad Small Hydro Project	-	0.07	0.03	0.04
14.95	Perunthenaruvi- SHE scheme	-	0.02	0.02	-
14.96	Thottiyar HES	184.42	45.27	3.08	226.61
14.97	CWIP - Closed Projects	1.79	10.12	11.17	0.74
14.98	Poringalkuthu Addl.Extn. Scheme	164.98	24.57	82.56	107.00
	SUB TOTAL (A)	1,843.96	329.99	256.24	1,917.71
B	TRANSMISSION LINES & SUB STATIONS				
14.01	Electrical Transmission Schemes	305.08	461.52	318.90	447.69
14.18	Power System Development Fund	8.82	55.55	62.18	2.18
14.56	Load Despatch & Communication Schemes	2.01	5.18	5.46	1.74
14.61	Expenditure due to Natural Calamity	0.08	0.05	0.90	-0.76
14.90	CWIP - General	192.16	-7.97	9.69	174.50
14.94	TRANSGRID 2.0 PROJECT	449.63	518.40	732.51	235.52
	SUB TOTAL (B)	957.78	1,032.73	1,129.64	860.86
C	DISTRIBUTION				
14.05	Deen Dayal Upadhyay Gram Jyothi Yojana (DDU GJY)	2.24	4.01	0.54	5.70
14.10	Emobility Promotion Fund FamelIndia Scheme PhaseII	0.22	3.49	3.27	0.44
14.13	Integrated Power Development Scheme (IPDS)	2.87	-2.35	0.52	-
14.35	Dyuthi 2.0	-	77.10	66.14	10.96
14.50	Rural Electrification Scheme	0.02	0.29	0.31	-0.00
14.51	Distribution Line Extension	0.64	152.85	148.87	4.62
14.52	Distribution Service Connection	2.62	261.92	212.96	51.58
14.53	Distribution System Improvement	12.22	770.45	770.14	12.53
14.54	Electrification of Harijan Colonies	-	0.05	0.05	-
14.55	Electrification of Tribal Colonies	-	0.38	0.38	-
14.57	Punja Package	-	0.04	0.04	-
14.58	System Improvement in other areas	0.01	6.32	6.27	0.06
14.59	Distbn. Capacitor Installation Scheme	3.93	6.87	0.11	10.69
14.60	Street Lights	0.46	35.66	35.22	0.91
14.61	Expenditure due to Natural Calamity	0.07	4.63	5.00	-0.30
14.62	RGGVY-Village electrification Infrastructure	-	0.05	0.05	-
14.63	RGGVY-For effecting BPL Service Connection	-	0.00	0.00	-

14.67	Part B Projects of R-APDRP	13.17	3.32	3.32	13.17
14.82	R- APDRP Scheme	202.66	1.04	1.04	202.66
14.90	CWIP - General	485.87	250.47	183.17	553.16
14.91	Innovation fund	0.02	0.95	1.99	-1.03
14.99	Projects not Identified	1.06	-	0.42	0.64
	SUB TOTAL (C)	728.08	1,577.53	1,439.81	865.80
	GRAND TOTAL (A+B+C)	3,529.81	2,940.24	2,825.71	3,644.37

Appendix 4A – SBU G - DETAILS OF PART CAPITALISATION - FY 2022-23															
Break-up of Project Cost															
Sl.No	Name of Project	10-Group Break-up (in Rs. Cr)									Total (in Rs. Cr)	Components of Cost			
		Land	Buildings	Hydraulic Works	Other Civil Works	Plant & machines	Lines, Cable Network, etc	Vehicles	Furniture & Factures	Office Equipment		Materials	Labour	Expenses Capitalised	Others if any
1	Pallivasal Extension Scheme (1477)					0.01			0.00	0.01	0.02			0.02	
2	Mankulam HES (1479)					0.11			0.01	0.02	0.14			0.14	
3	Closed project (1497)					0.34					0.34			0.34	
	TOTAL	0.00	0.00	0.00	0.00	0.46	0.00	0.00	0.01	0.02	0.49			0.49	
1	Thottiyar HEP		0.01		3.40				0.00	0.00	3.41			3.41	
2	Bhoothathankettu SHEP				0.01						0.01			0.01	
3	Sengulam Augmentation Scheme		0.04		0.10						0.14			0.14	
4	Upper Sengulam HEP		0.08		0.02				0.02	0.03	0.15			0.15	
5	Penstock Replacement Sengulam HEP									0	0			0.00	
	TOTAL	0.00	0.13	0.00	3.53	0.00	0.00	0.00	0.02	0.03	3.71			3.71	
	GRAND TOTAL	0.00	0.13	0.00	3.53	0.46	0.00	0.00	0.03	0.05	4.20			3.71	0.49

Appendix 4B GENERATION SBU - Details of part capitalisation in earlier years considered in 2022-23 (Rs Cr)												
Sl.No	Name of Project & project code	10-Group Break-up (in Rs. Cr)									Total	
		Land	Buildings	Hydraulic Works	Other Civil Works	Plant and Machinery	Lines, Cable	Vehicles	Furniture & fixtures	Office Equipment		

									Network, etc						
1	Poringalkuthu-17-18		0.02												0.02
2	Poringalkuthu-19-19			0.02		0.56	0.03								0.61
3	Poringalkuthu-19-20			0.64											0.64
4	Poringalkuthu-21-22			1.62		0.19									1.81
	Total	0	0.02	2.28		0.75	0.03			0	0	0	0		3.08

Appendix 4C: SBU T - DETAILS OF PART CAPITALISATION - FY 2022-23																
Break-up of Project Cost																
Sl.No	Name of Project	10-Group Break-up (in Rs. Cr)									Total (in Rs. Cr)	Components of Cost				Remarks
		Land	Buildings	Hydraulic Works	Other Civil Works	Plant and Machinery	Lines, Cable Network, etc	Vehicles	Furniture & Fictures	Office Equipments		Materials	Labour	Expenses Capitalised	Others if any	
1	Construction of 66 kV GIS Gandhi Road, value of material omitted to be capitalised in previous year	0.00				7.65						7.65	7.65	0.00		
2	Renovation work of D11 quarters at 220kV SS Nallalam		0.04									0.04	0.00	0.04		
3	Up gradation of Kunnamangalam substation - Down Stream Work - Value addition		0.03		0.19	2.68						2.89	1.51	1.39		
4	Renovation of compound wall,increasing height,providing barbed wire protection etc at110kv substation Mankavu	0.07										0.07	0.00	0.07		
5	Providing foundation for cable support structures for new 8 MVA Transformers - at 33kv SS Feroke					0.00						0.00	0.00	0.00		
6	Providing 220 kV double bus at 220 kV SS Nallalam - Providing CCTV camera as part of strengthening security at 220 kV SS Nallalam									0.04		0.04	0.00	0.04		
7	Supply, installation, testing and commissioning of CCTV and automated gate at 110 kV SS Mankavu									0.05		0.05	0.00	0.05		
8	Construction of compound wall at 110 kV SS Kuttikkattur - Up gradation og 66 kV SS Kuttikkattur to 110 kV level and providing garden infront of 11 kV Yard	0.24										0.24	0.00	0.24		

9	Supplying and installing CCTV surveillance in the compound - upgradation of 66 kV SS Sulthanbathery									0.02	0.02		0.02			
10	Modification work of old control room for office purpose at 110 kV SS Mankavu		0.12								0.12	0.00	0.12			
11	Installation of CCTV camera at 66 kV SS Kuthumunda in connection with up gradation works									0.00	0.00	0.00	0			
12	Construction of 66 kV SS Cyber park -Aluminium fabrication work in control room building at 66 kV SS Cyber park-		0.02								0.02	0.00	0.02			
13	Providing 220 kV double bus at 220 kV SS Nallalam - IInd phase Value addition				0.42	0.04					0.46	0.30	0.16			
14	Upgradation of Mankavu -value addiiton		0.01		0.04	1.34					1.39	0.45	0.94			
15	Upgradation of Kuttikkattur -value addiiton					2.31					2.31	2.03	0.28			
	TOTAL	0.30	0.20	0.00	0.65	14.02	0.00	0.00	0.00	0.11	15.29	11.94	3.35	0.00		
1	Capitalisation of Construction of compound wall , cable trench, yard concreting and metalling for constructing 110 KV Feeder bay for MES at 110 KVSS W.Island	0.03									0.03		0.03			Deposit Work-MES
2	Capitalisation of Providing additional 11 kV feeder panel and RMU				0.00						0.00		0.00			Deposit Work-Thomson Realtors
3	Capitalisation of Providing yard lighting at 110kV S/s W.Island in connection with the construction of 110kV feeder bay to M/S MES at 110kV S/s w.Island				0.03						0.03		0.03			Deposit Work-MES
4	Capitalisation of Supply and installation of 4 MW Grid tied ground mounted solar P V power plants at the premises of BDPP by INKEL LTD					2.82					2.82	2.82	0.00			Supply part of 4 MW Grid tied ground mounted solar P V power plants by INKEL LTD
5	Capitalisation of Supply and installation of 4 MW Grid tied ground mounted solar P V power plants at the premises of BDPP by INKEL LTD					0.55					0.55	0.55	0.00			Supply part of 4 MW Grid tied ground mounted solar P V power plants by INKEL LTD
6	Capitalisation of Installing one 10 MVA 110/11 KV transformer at 110 KVSS Kizhakkambalam under deposit work basis					1.50					1.50	1.48	0.02			Deposit Work under 110 kvss, Kizhakkambalam
7	Capitalisation of Providing HT SOP to M/S coast gaurd Hoisting and positioning of 110 KV panel, 11 KV power cableing and shifting of LT panel at 66 KV GIS S/s Fort Kochi					0.04					0.04	0.04				Deposit Work-Cosat Guard
8	Capitalisation of Enhancement of contract demand of BPCL Kochi Refinery, modification works to be carried out at 220 KVSS Ambalamughal under Deposit Work basis-					0.02					0.02		0.02			Deposit Work-BPCL-KRL
9	Capitalisation of Installing one number 10 MVA 110/11 KV Transformer at 110 KVSS Kizhakkambalam for providing new feeder outlet for supply of power to Kitex Garments Ltd ETP and Boiler house - deposit work basis					0.12					0.12	0.12	0.00			Deposit work-Kitex Garments Ltd

10	Capitalisation of Installing one number 10 MVA 110/11 KV Transformer at 110 KVSS Kizhakkambalam for providing new feeder outlet for supply of power to Kitex Garments Ltd ETP Carton Manufacturing Unit Kizhakkambalam - deposit work					0.12						0.12	0.12	0.00			
11	Capitalisation of Construction and erection etc for installing of one number 12.5 MVA 110/11 KV Transformer at 110 KVSS Kizhakkambalam					0.01						0.01		0.01			Deposit Work under 110 kvss, Kizhakkambalam
12	Capitalisation of installing one number 10 MVA 110/11 KV Transformer at 110 KVSS Kizhakkambalam for providing new feeder outlet for supply of power to Anna Aluminium Company Ltd under prorata deposit work basis					0.09						0.09	0.09	0.00			Deposit Work-Anna Aluminium Co.Ltd.
13	Capitalisation of Providing new 11 KV feeder outlet at 110 KVSS Aluva for the Grid Connectivity of 2 MW Solar Power Plant at NAD for Garrison Engineer					0.17						0.17	0.14	0.03			Deposit Work-Garrison Engineers
14	Capitalisation of Dismantling 220 KV Ambalamugal - Brahmapuram Over head Transmission line passing through BPCL premises under Deposit work scheme.					0.31						0.31		0.31			Deposit Work-BPCL-KRL
15	Capitalisation of Shifting Terminal span of 66 kv Edamula Tap feeder from existing gantry to new gantry of the new GIS S/s					0.01						0.01	0.00	0.01			Deposit Work-BPCL-KRL
16	Capitalisation of Increasing the height of beam near 110kV EPKA feeder													0.00			Deposit Work-AIMS
17	Capitalisation of Replacement of 220 kv Ambalamughal-Brahmapuram overhead line passing through BPCL premises with UG cable					0.01						0.01	0.01	0.00			Deposit Work-BPCL-KRL
18	Capitalisation of Enhancement of contract demand of M/s BPCL Kochi -Refinery, modification work providing 220KV cable feeder outlets, MODIFYING BAY (207)-by Dismantling metering CT & PT and Erecting BPI and Inter connecting with AL Pipe at 220 KV S/s Ambalamugal.					0.03						0.03	0.01	0.02			
19	Capitalisation of Providing additional 11kV feeder panel and RMU erection and commissioning (Part C), 110 kv ss, Vyttila					0.10						0.10	0.10	0.00			Deposit Work-Thomson Realtors
20	Capitalisation of SCADA adaption work in connection with the construction of 110 kv feeder bay for M/s.MES at 110 kv S/s W. Island																Deposit Work-MES
21	Capitalisation of work of Providing additional 11kV feeder panel and RMU- SCADA Adaption works at 110 KVSS, Vyttila																Deposit Work-Thomson Realtors
22	Capitalisation of Replacement of 220 kv Ambalamughal-Brahmapuram overhead line passing through BPCL premises with UG cable						0.04					0.04		0.04			Deposit Work-BPCL-KRL

23	Capitalisation of Providing additional 11kV feeder panel and RMU Realtors erection and commissioning (Part C), 110 kv ss, Vyttila															Deposit Work- Thomson Realtors
24	Capitalisation of Providing HT SOP to M/S coast gaurd Hoisting and positioning of 110 KV panel, 11 KV power cableing and shifting of LT panel at 66 KV GIS S/s Fort Kochi						0.01				0.01		0.01			Deposit Work- Coast Guard
25	Capitalisation of Replacement of 220KV Ambalamugal - Brahmapuram overhead line passing through BPCL-KR premises with UG cable(Supply and supervision of 245 KV Isolator) under 220 kv ss, Brahmapuram															Deposit Work- BPCL
	TOTAL	0.03	0.00	0.00	0.03	5.90	0.05	0.00	0.00	0.00	6.01	5.48	0.53	0.00		
1	Upgradation of 66 kV SS Nilambur					0.01	1.95				1.96		0.01	1.95		
2	Manjeri - Nilambur Line					1.23	0.08				1.31		0.26	0	1.05	
3	Upgradation of 110 kV SS Mankada					0.06	0.01				0.07	0.02	0.05			
4	SHANTHINAGAR - POOKOTTUMPADAM LINE					0.03	0.07				0.10				0.1	
5	ADYANPARA-POTHUKALLU LINE						0.05				0.05				0.05	
6	NILAMBUR-EDAKKARA LINE						0.02				0.02				0.02	
7	Construction of 33 kV SS Pothukallu				0.01	0.54					0.55		0.03		0.52	
8	Construction of 110 kV DC line from Edarikkode Tirur line from 110 kV SS Parappanagadi					0.01					0.01		0.01			
9	VALAMBUR-ELACHOLA LINE					0.38					0.38		0.01		0.37	
10	Being the payment towards clearing light jungles and over growth vegetations at venniur site - TC section Edarikkode Capitalised					0.12					0.12		0.03	0.09		
11	Installation of 25MVA transformer at 110 kV SS Edarikkode					3.00					3.00	2.5	0.5			
12	Capacity Enhancement at 110 kV SS Melattur					1.65	0.01				1.66	1.00	0.01	0.65		
13	Being capacity enhancement of PGCIL on transmission lines Capitalised						0.36				0.36		0.36			
14	Capacity Enhancement at 220 kV SS Areacode					0.26					0.26		0	0.26		
15	Capacity Enhancement at 33 kV SS Valluvambrum					2.28					2.28	1.8	0.35	0.13		
16	Installation of 8MVA transformer at 33 kV SS Valluvambrum					0.44					0.44	0.44				
17	erection of 1 number outdoor 11 KV VCB at 33 KV s/s Pulamanthole					0.02					0.02	0.02	0			
18	Electrification of control room building at 110 kv ss Parappanagadi		0.29								0.29		0.28		0.01	
19	Tree marking - construction of 16 km 110 KV DC LILO Line from 110 KV SS Edarikkode - Tirur Feeder To 110 KV SS Parappanagadi					1.23	0.02				1.25	0.02	1.23			
20	Erecting 11 KV indoor control panel with VCB unit ,Laying 3 X300sqmm XLPE cable end and erecting DP structure -Providing 11 KV feeder From 33 KV SS						0.01				0.01		0.01			

	Kooyad to M/S Super Sand Crusher ,Vengalpa under deposit work																	
21	extension of control room building		0.07							0.07		0.07						
22	Construction of control room building at 110 kV SS Perinthalmanna		0.10							0.10		0.09	0.01					
23	renovation & Balance portion of compound wall at 110 kV SS Perinthalmanna				0.07					0.07		0.07						
24	CAPACITY ENHANCEMENT AT 110 KV SS PONNANI					0.26				0.26		0	0.26					
25	Capacity Addition at 66 kV SS Edakkara					0.60				0.60	0.44		0.16					
26	Providing 11 kV Chattiparamba feeder at 110 kV SS Malappuram						0.06			0.06		0.06						
27	Capacity Enhancement at 110 kV SS Manjeri					0.38				0.38			0.38					
28	Extension of control room building at 33 kv SS Edavanna					0.73				0.73	0.5	0.23						
29	KIZHISSERY-PARAPPANANGADI LINE						0.01			0.01						0.01		
30	electric vehicle charging station					0.30				0.30		0.30						
31	Construction of GIS building																	
32	CAPACITY ENHANCEMENT at Makkaraparamba	0.13				1.50				1.63		1.63						
33	Transformer Erection at 220 kV SS Malapparamba					1.35				1.35	1.35							
34	Construction of Valambur-Perinthalmanna 110 kV line					0.02				0.02		0	0.02					
35	Upgradation of 66 kV SS Nilambur									0		0						
36	Capacity addition of 33 kV SS Kalikavu					0.51				0.51	0.03	0.02	0.46					
	TOTAL	0.13	0.46	0	0.08	16.91	2.65	0	0	0	20.23	8.12	5.61	4.37	2.13			
2	220 KV SS Palakkad																	
	Levelling site, road work , Fencing work for proposed bay extension work for Kairali Feeder at 220 KV SS Palakkad.					0.21						0.21	0.21					
	construction of foundation for yard equipments at 220 KV S/S Palakkad in connection with the Deposit Work of providing dedicated 110 KV single circuit connectivity to M/s.Kairali Steels & Alloys Pvt.Ltd. for drawing 32 MVA power from 220 KV S/S Palakkad using UG cable					0.20						0.20	0.20					
	construction of earth mat for providing 110 KV supply through dedicated UG Cable feeder to Kairali Steels (P) Ltd at 220 KV SS Palakkad.					0.09						0.09	0.05	0.04				
	Providing 110 KV single circuit connectivity from 220KV SS Palakkad to M/s Kairali Steels & Alloys - Erection of yard structure & bus extension at 220 KV SS Palakkad					0.24						0.24	0.21	0.03				
	Revamping of 22KV system at 220Kv SS Palakkad-Construction of DP structure shifting OH line to UG cable under 220Kv sub station, Palakkad					0.07						0.07	0.05	0.02				
																		Deposit Work - completed and line charged on 23-05-2023
																		Work under progress

	Fabrication of oil storage tank for use of 220 KV SS Palakkad in connection with the Overhauling of 22/110 KV transformer					0.05						0.05		0.05			Work under progress
3	220 KV SS Shoranur																
	Construction of transformer plinth for 2x20 MVA transformers, Mac road to 220KV yard to 220KV yard and modification of existing transformer plinth for 200 MVA Tfr.No.II at 220KV SS,Shoranur					0.43						0.43		0.43			2 x 20 MVA and 1x 200 MVA Transformer not yet received and hence not put into use
	Rerouting and rearrangement of earthmat in connection with the construction of 110 KV cable trenches transformer plinth& 110KV LA foundations at 220KV S/S Shornur					0.09						0.09	0.04	0.05			110kV GIS work under progress - Test charged on 21-08-2023
	Construction of 110KV GIS at 220KV Sub station Shornur. design manufacture, supply, erection, testing and commissioning of single girder EOT Crane of 5 MT capacity at 220KV SS Shoranur.					0.23						0.23		0.23			
	Construction of 11 KV Cable trench at 220 KV Substation shornur and 110 KV GIS at 220 KV substation Shoranur.										0.25			0.25			
	Cutting control cable trench wall to line and level at 220 KV Substation shornur.											-		-			
4	66KV S/s Chandranagar																
	Erection of new 11 KV indoor feeder panel and laying & termination 3x330 XLPE cable new at Palakkad Medical College feeder					0.09						0.09	0.08	0.01			Not yet commissioned. Waiting for request from Distribution wing.
	Electrical Installation initial inspection fee paid to Electrical Inspectorate for the newly installed 11kV feeder panel and connected electric devices for the month of October 2022					0.00						0.00				-	Not yet commissioned. Waiting for request from Distribution wing.
5	66Kv SS Kannampully																
	Construction of retaining wall and chain link fencing for yard extension Upgradation of 66 Kv SS Kannampully to 110 KV level.					0.08						0.08		0.08			Upgradation work of 66kV Substation to 110 kV is in progress
	Enhancement of existing 6.03 MVA 66/11 KV transformer to 10 MVA at 66 KV SS Kannampully in connection with upgradation work					0.02						0.02	0.00	0.02			
	Upgradation of 66 KVS/S Kannampully to 110 KV providing													0.00			

	and fixing equipment boards at bay-1 at 66 KV S/S Kannampully.																
	Cable pulling and doing end termination for the 10 MVA transformer - Capacity enhancement of existing 6.3 MVA 66/11 KV with 10 MVA transformer at 66 KV SS Kannampully.																
	TOTAL	0.00	0.00	0.00	1.10	0.70	0.25	0.00	0.00	0.00	2.05	0.43	1.62	0.00	0.00		
1	Up gradation of 33 KV S/S Palakkal to 110 KV S/S		0.70								0.70		0.50	0.20			
					0.08						0.08		0.08	0.00			
					0.04						0.04		0.04				
						0.07					0.07		0.07	0.00			
						0.36					0.36		0.32	0.04			
						0.01					0.01			0.00	0.01		
2	Up gradation works at 110 KV S/S Kodungallur - second phase				0.73						0.73	0.57	0.13	0.03			
						0.26					0.26	0.24	0.02				
						0.04					0.04	0.02	0.02				
							0.35				0.35	0.29	0.04	0.02			
					0.62				0.62	0.22	0.09	0.31					
3	Construction of 33KV SC line from 110KV S/S,Kodungallur to 33 KV S/S Methala						1.00				1.00	0.29	0.20	0.51			
4	Providing alternate feeding arrangements to 33 KV Sbstation Chelakkara by constructing 33 KV SC Line from 110 KV Substation,Pazhayannur and construction of feeder bay at 33 KV Substation Chelakara.									0.60							
							0.60						0.29	0.31			
5	Construction of 33 KV S/S at Thumboor	0.48									0.48					0.48	
					0.08						0.08		0.07	0.01			
					0.04						0.04	0.00	0.02	0.02			
				0.06						0.06		0.01	0.05				
6	Construction of 33 KV S/S at Thumboor - 33KV Dc line from Ongichira- Thumboor						2.18				2.18	0.73	0.30	1.15			
7	Renovation of office of the Deputy chief Engineer ,Transmission Circle ,Thrissur and common wash room of second floor of Vydhyuthi Bhavanam building.		0.20								0.20						
8	Extension of control room and allied works at 33 KV Substation,Mundur.		0.06								0.06		0.05	0.01			
9	Rebuilding of 110kV Substation Kunnamkulam in connection with the upgradation to 220 kV Substation		0.14								0.14		0.10	0.04			
		0.03									0.03		0.03				
			0.01									0.01		0.01	0.00		
					0.50							0.50		0.50	0.00		
					1.56							1.56		1.56			
						0.17						0.17		0.17			
						0.08						0.08		0.08	0.00		
				0.56						0.56		0.53	0.03				

						0.08					0.08	0.01	0.05	0.02		
						0.01					0.01			0.00	0.01	
						0.04					0.04	0.00		0.04		
						0.06					0.06		0.06			
						0.00					0.00	0.00		0.00		
						0.04					0.04		0.02	0.02		
									0.00		0.00	0.00				
									0.00		0.00	0.00				
						0.16					0.16					0.16
	TOTAL	0.51	1.11	0.00	3.03	2.03	4.75	0.00	0.00	0.00	11.43	2.37	5.56	2.83	0.67	
1	TCS Kelakam-Construction of new 110kV Substation at KINFRA Industrial Park, Velliyamparamba.															SL No. 1 in FULLY CAPITALISED ASSET [PART (a) and (b)].
	TOTAL	0.00	1.15	0.00	1.39	7.11	0.94	0.00	0.00	0.04	10.62	6.08	4.54	0.00	0.00	
1	Upgradation of Sasthamcottah-Karunagappally 66kV Double Circuit line to 110kV Double Circuit line using ACSR-Wolf conductor and Upgradation of 66kV Sub Station Karunagappally to 110kV level															
	TOTAL	0.00	0.00	0.00	0.00	0.06	0.06	0.00	0.00	0.00	0.12	0.00	0.12	0.00	0.00	
	GRAND TOTAL	0.97	2.92	0.00	6.28	46.73	8.70	0.00	0.00	0.15	65.75	34.42	21.33	7.20	2.80	

Appendix 4D SBU T - DETAILS OF PART CAPITALISATION - FY 2019-20 (Rs Cr) Commissioned during 2022-23

Name of Project	Break-up of Project Cost										Total (in Rs. Cr)
	10-Group Break-up (in Rs. Cr)										
	Land	Buildings	Hydraulic Works	Other Civil Works	Plant and Machinery	Lines, Cable Network, etc	Vehicles	Furniture & Factures	Office Equipment		
110 KV SS Malampuzha					0.26						0.26

Appendix 4E SBU T - DETAILS OF PART CAPITALISATION - FY 2020-21 (Rs Cr) Commissioned during 2022-23

Name of Project	10-Group Break-up (in Rs. Cr)										Total (in Rs. Cr)
	Land	Buildings	Hydraulic Works	Other Civil Works	Plant and Machinery	Lines, Cable Network, etc	Vehicles	Furniture & Factures	Office Equipment		
Capacity Enhancement 110 KVSS Vyttila	0	0	0	0	1.79	0	0	0	0	0	1.79
Capacity Enhancement 110 KVSS Edappally	0	0	0	0	1.84	0	0	0	0	0	1.84
UP gradation of 66 kV Mankavu Substation to 110 kV Substation	0.34	0.74	0	0.08	7.23	0	0	0	0	0	8.39

Installation of 110 kV 20 MVAR capacitor bank at 110 kV SS Meppayyur	0	0	0	0	0.21	0	0	0	0	0.21
Construction of additional bay for evacuating power from Chathangottunada Stage II SHEP - construction of foundation and erection of yard structure at 110 kV SS Kuttiady	0	0	0	0	0.07	0	0	0	0	0.07
TOTAL										12.30

Appendix 4F TRANSMISSION SBU - DETAILS OF PART CAPITALISATION OF PROJECTS FOR THE FY 2021-22, commissioned during 2022-23											
Sl.No	Name of Project	10-Group Break-up (in Rs. Cr)									Total (in Rs. Cr)
		Land	Buildings	Hydraulic Works	Other Civil Works	Plant and Machinery	Lines, Cable Network, etc	Vehicles	Furniture & Fictures	Office Equipments	
1	Renovation work of store building at 110kV Substation Mankavu.	0.07	0	0	0	0	0	0	0	0	0.07
2	Up gradation of Thambalamanna SS to 110 kV Level balance work	0.05	0	0	0	0.31	0	0	0	0	0.36
3	Upgradation of 66 kV Substation Kuttikattoor to 110kv level yard metalling and fencing	0	0.03	0	0.12	1.48	0	0	0	0	1.63
4	110 KVSS W.Island.	0	0	0	0.04	0.05	0	0	0	0	0.09
5	110 KVSS Vyttila.	0	0	0	0	2.14	0	0	0	0	2.14
6	220 KVSS Ambalamughal	0	0	0	0	5.58	0.18	0	0	0	5.75
7	110 KV SS PAYYANNUR- works in connection with power evacuation to 10MW Solar Plant by M/s. CIAL	0	0.1	0	0.29	0.67		0			1.06
8	construction of 2 nos 11 kv feeder bay at 110 kv s/s Edarikode	0	0	0	0.03	0.21	0	0	0	0.02	0.27
9	Valambur-Elachola 66 KV line to 110KV	0	0	0	0	0	1.6	0	0	0	1.6
10	Malaparamba-Ramapuram line	0	0	0	0	0	0.84	0	0	0	0.84
11	Providing 11 KV feeder to Kottakkal Arya vaidya sala	0	0	0	0	0.04	0	0	0	0	0.04
12	Deviated line route of Adyampara to Erumamunda	0	0	0	0	0	0.02	0	0	0	0.02
13	33 KV SC line Adyampara to Pothukallu	0	0	0	0	0	0.1	0	0	0	0.1

14	Inter linking wandoor s/s and Pookkottumpadam s/s at Santhinagar	0	0	0	0	0	0.9	0	0	0	0.9
15	Construction of 33 KV feeder bay at 33 KV s/s Pookkottumpadam	0	0	0	0	0.25	0	0	0	0	0.25
16	Extension of control room building and construction of internal road and vehicle shed at 33 KV s/s Valluvambram	0	0	0	0.19	0.01	0	0	0	0	0.2
17	110 KV SS Kizhissery	0	0	0	0	0	1.49	0	0	0	1.49
18	Edakkara 66 KV-Erection of yard equipment	0	0	0	0	0	0.28	0	0	0	0.28
19	Installing 2nd 33/11 kv transformer and 2 nos 11 KV feeder outlet at 33 KV s/s Thavanur	0	0	0	0	0	0.85	0	0	0	0.85
20	Construction of fencing and metal spreading at 66 KV s/s Mankada	0	0	0	0.01	0.42	0.02	0	0	0	0.45
21	Construction of foundation of transformer bay and equipment at 33 Kv s/s pulamanthole	0	0	0	0	0.15	0.19	0	0	0	0.34
22	Construction iof cable trench ,loop well and equipment structure at 110 KV s/s Chelari	0	0	0	0	0	0.1	0	0	0	0.1
23	Erection of 11 Kv panel at 33 Kv s/s Kooriyad	0	0	0	0	0.03	0.04	0	0	0	0.07
24	Construction of transformer plinth at 33 Kv s/s Edavanna	0	0	0	0	0.02	0	0	0	0	0.02
	TOTAL	0.12	0.13	0	0.68	11.36	6.61	0	0	0.02	18.92

Appendix 4G: SBU T- PROJECT CODE WISE ASSET ADDITION DURING 2022-23

14.01 - TRANSMISSION SCHEMES

ARU	SUBSTATION/PROJECT	Land(1)	Buildings(2)	Hydraulic Works(3)	Other Civil Works(4)	Plant and Machinery(5)	Lines, Cable Network, etc(6)	Vehicles(7)	Furniture & Fictures(8)	Office Equipments(9)	TOTAL
Tr. Circle Kottarakkara	110kV SS Ayur	0	0	0	0.04	0	0.01	0	0	0	0.05
	66kV SS Karunagappally	0	0	0	0	0.02	0.06	0	0	0	0.08
	110kV SS Chavara	0	0	0	0	0.01	0	0	0	0	0.01
	Intrest & Finance Charges & Employee Cost	0	0	0	0	2.51	-	0	0	0	2.51
	110kV SS Anchal	0	0	0	0	0.66	0	0	0	0	0.66
	220kV SS Kundara	0.02	0	0	0.27	0.78	0.02	0	0	0	1.09
	220kV SS Edamon	0.1	0.17	0.14	0	0.83	-	0	0	0	1.24
	110kV SS Kottarakkara	0	0.02	0	0	0	0	0	0	0	0.02
	110kV SS Kavanad	0	0.03	0	0	4.02	-	0	0	0	4.05
	110kV SS Punalur	0	0	0	0	0.68	0	0	0	0	0.68
	66kV SS Thenmala	0	0	0	0	0.02	0	0	0	0	0.02
	LMS Edamon	0	0	0	0	-	0.21	0	0	0	0.21
	110kV SS Sasthamcottah	0	0	0	0	0.16	0	0	0	0	0.16
	110kV SS Ambalappuram	0	0	0	0	0.02	-	0	0	0	0.02
	LMS Punalur	0	0	0	0	0	0.05	-	0	0	0.05
	110kV SS Parippally	0	0.01	0	0	0.08	0	0	0	0	0.09
	33kV SS Puthoor	0.02	0	0	0	-	0	0	0	0	0.02
	TCS Karunagappally	0	0	0	0	0	0.01	0	0	0	0.01
	110kV SS Kottiyam	0	0	0	0	0.16	0	0	0	0	0.16
	33kV SS Ezhukone	0	0	0	0	0.01	0	0	0	0	0.01
	110kV SS Perinadu	0	0.12	0	0	-	0	0	0	0	0.12
All sub stations	0	0	0	1	0.90	0.60	0	0	0	2.5	
All sub stations					18.24						18.24
TOTAL(A)		0.14	0.35	0.14	1.31	29.1	0.96	0	0	0	32
Pvnth	110 KV Substation, Vazhoor	0.05	0	0	0.08	0.09	0	0	0	0	0.22
	66 kV S/S, Ettumannoor	0	0.04	0	0	0.15	0	0	0	0	0.19
	110 KV Substation, Mundakayam	0	0.08	0	0.06	0.15	0	0	-	0	0.29
	220 KV SS PALLOM	0.11	0.04	0	0.07	1.54	0.41	0	-	0	2.17
	110 KV SS Kanjirappally	0	0.05	0	0	0.26	0.11	0	0	0	0.42
	110 KV S/S, Koothattukulam	0	0.05	0	0.05	0.20	0.2	0	0	0	0.5
	110 KV SS Vaikom	0	0.06	0	0.06	0.19	0	0	0	0	0.31

	66 KV SS Kuravilangadu	0	0.06	0	0.05	0.27	0.2	0	0.02	0	0.6
	110 KV Erattupetta	0	0.06	0	0	0.18	0	0	-	0	0.24
	33kV S/S,Kaduthuruthy	0	0	0	0.05	0.21	0	0	0	0	0.26
	110kVS/S, Ayarkunnam	0	0.07	0	0.06	0.24	0.15	0	-	0	0.52
	110 kv S/S Pala	0	0.05	0	0.03	0.94	0.12	0	0	0	1.14
	66 kv S/S,Gandhinagar	0	0.05	0	0.04	0.20	0	0	0	0	0.29
	110 kv S/S,Pampady	0	0.06	0	0.04	0.19	-	0	-	0	0.29
	T C Section, Erumely	0	0.02	0	0	0	0	0	0	0	0.02
	66 KV SS Changanasserry	0	0.06	0	0.03	0.06	0	0	-	-	0.15
	110 kv Substation, Thrikkodithanam	0	0.05	0	0.03	0.09	0	0	-	-	0.17
	All Substations						0.9			0.03	0.93
	All sub stations						0.32				0.32
	TOTAL(B)	0.16	0.8	0	0.65	4.96	2.41	0	0.02	0.03	9.03
TSR	110 kv SS Angamaly	0	0.02	0	0	0.34	0	0	0	0	0.36
	Ayyampuzha 110kV S/S	0	0.09	0	0	0	0	0	0	0	0.09
	Guruvayoor	0	0	0	0.01	0.01	0	0	0	0	0.02
	Kattoor	0	0.22	0	0.01	0.07	0	0	0	0	0.3
	Mannuthy	0	0.05	0	0.08	0.29	0	0	0	0	0.42
	Pudukkad	0	0.17	0	0.1	0	0	0	0	0	0.27
	Wadakkancherry	0	0.04	0	0	1.18	0	0	0	0	1.22
	Athani	0	0.01	0	0.41	0.04	0	0	0	0	0.46
	Irinjalakuda	0	0	0	0.18	0.36	0	0	0	0	0.54
	220 kv SS Chalakudy	0	1.27	0	0.13	2.43	0	0	0.01	0	3.84
	110kv SS Kandassankadav	0	0.23	0	0.16	0.32	0	0	0	0	0.71
	400 k v MADAKKATHARA	0	0.42	0	0.8	1.12	0	0	0.00	0	2.34
	Palakkal	0	0.7	0	0.13	0.47	0	0	0	0	1.3
	Kunnamkulam	0.02	0.2	0	2.04	1.04	0	0	0.00	0.00	3.3
	Pullazhi	0	0	0	0	0.06	0	0	0	0.00	0.06
	Anchangady	0	0	0	0.09	0	0	0	0	0	0.09
	Cherpu	0	0	0	0.06	0	0	0	0	0	0.06
	Karukutty	0	0.02	0	0	0.08	0	0	0.00	0	0.1
Kodakara	0	0	0	0.08	0	0	0	0.00	0	0.08	
Kodungalloor	0	0	0	0.73	0.74	0	0	0	0	1.47	
Koratty (Vaigai)	0	0	0	0.06	0.45	0	0	0	0	0.51	

Mundur	0	0.07	0	0.01	0.10	0	0	0	0	0.18	
Ollur	0	0.06	0	0.35	0.33	0	0	0	0	0.74	
Pattikkad	0	0	0	0.09	0.36	0	0	0	0	0.45	
Puthur	0	0	0	0	0.33	0	0	0	0	0.33	
Vadanappilly	0	0	0	0.02	0	0	0	0	0	0.02	
Viyyur	0	0.03	0	0	0	0	0	0	0	0.03	
Valappad	0	0.05	0	0.09	0.17	0	0	0.00	0.00	0.31	
Mullassery	0	0	0	0.04	0	0	0	0	0	0.04	
PAZHAYANNUR	0	0.01	0	0.15	0.06	0	0	0.01	0.04	0.27	
arangottukara sub stn	0	0	0	0	0.01	0	0	0.00	0	0.01	
Kaipamangalam	0	0	0	0.06	0.04	0	0	0	0	0.1	
Punnayurkulam	0	0	0	0	0.04	0	0	0.00	0	0.04	
33 KV SS Mulloorkara	0	0	0	0.01	0	0	0	0	0	0.01	
33 KV SS Pariyaram	0	0	0	0.11	0.05	0	0	0	0	0.16	
33 KV SS Poomala	0	0	0	0.08	0.26	0	0	0	0	0.34	
33 KV SS Varandarappilly	0.02	0	0	0.07	0.00	0	0	0	0	0.09	
33 KV SS Parappur	0	0	0	0	0.06	0	0	0	0	0.06	
33 KV SS Chelakkara	0	0.03	0	0.02	0	0	0	0	0	0.05	
33 KV SS Kongannur	0	0.13	0	0	0	0	0	0	0	0.13	
33 KV SS Anthikkad	0	0	0	0	0.06	0	0	0	0	0.06	
All sub stations				0	2.44	7.54				9.98	
TOTAL©	0.04	3.82	0	6.17	13.31	7.54	0	0.02	0.04	30.94	
Tr Circle Kozhikkode	220KV SS Nallalam	0	0.48	0	1.1	4.5	0	0	0	6.08	
	110 kv SS Kuttiady	0	0.06	0	0.85	2.3	0	0	0	3.21	
	220KV SS Kaniambetta	0	0.23	0	0.22	3.6	0	0	0	4.05	
	66KV SS Mankave	0	0.22	0	0	0.9	0	0	0	1.12	
	33kv SS, Padinjarathara	0	0.43	0	0	0.8	0	0	0	1.23	
	66 KV S/S Cyber Park	0	0.02	0	0	1.4	0	0	0	1.42	
	66 KV SS kuttikkattor		0	0	0	1.35	0	0	0	1.35	
	66 KVSS AMBALAVAYAL	0	0.02	0	0	0.88	0	0	0	0.9	
	Kunnamangalam SS	0	0.03	0	0	0.85	0	0	0	0.88	
	110KV SS Meppayur	0	0.02	0	0.9	2.6	0	0	0	3.52	
	110KV SS Kunnamangalam	0	0.01	0	0.9	2.4	0	0	0	3.31	
	110KV SS Koyilandy	0	0.03	0	0.18	2.1	0	0	0	2.31	
	220 kv SS Orkkattery	0	0.15	0	0	3.9	0	0	0	4.05	
	110KV SS Kuttikattoor	0	0.03	0	0	2.4	0	0	0	2.43	
	All sub stations					0.62	3.53		0.07	0.12	4.34
	All sub stations						0.07				0.07
TOTAL(D)	0	1.73	0	4.15	30.6	3.6	0	0.07	0.12	40.27	

Tr Circle Palakkad	Trans. Circle Palakkad	0	0.01	0	0	-	0	0	0.01	-	0.02
	220KV S/s Kanjikode	0.08	0.1	0.09	1.13	2.12	0.35	0	0.01	0.01	3.89
	220KV S/s Shornur	0	0.03	0	0.62	2.24	0.48	0	0	0	3.37
	110KV S/s Vennakkara	0	0.01	0.04	0.25	0.33	0.07	0	0	-	0.7
	110KV S/s Kanjikode	0	0.01	0	0.02	0.24	0.07	-	0	0	0.34
	110KV S/s, Walayar	0	0.01	0	0.02	0.19	0.07	0	0	0	0.29
	110KV S/s Parli	0	0.01	0	0.25	0.27	0.07	0	0.02	0.01	0.63
	110KV S/s Mannarkkad	0.12	0.01	0	0.03	0.26	0.07	0	0	0	0.49
	110KV S/s Malampuzha	0	0.03	0	0.19	1.77	2.02	0	0	0	4.01
	110KV S/s, Kalladikode	0	0.01	0	0.02	0.12	0.07	0	-	-	0.22
	110KV S/s, Pathiripala	0	0.02	0	0.03	0.12	0.07	0	-	0	0.24
	110KV S/s Ottapalam	0	0.01	0	0.02	1.53	0.07	0	0	0	1.63
	110KV S/s Cherpulassery	0	0.03	0.01	0.02	0.18	0.07	0	-	0	0.31
	110KV S/s Koppam	0	0.01	0	0.02	0.19	0.07	0	-	0	0.29
	110KV S/s Koottanad	0	0.01	0	0.11	0.18	0.07	0	0	0	0.37
	110KV S/s Vadakkenchery	0	0.01	0	0.03	0.2	0.13	0	0	0	0.37
	110KV S/s Kollengode	0	0.01	0	0.02	0.33	0.07	0	0	-	0.43
	110KV S/s Kozhinjampara	0	0.02	0	0.02	0.15	0.07	0	0	0	0.26
	110KV SS Pattambi	0	0.02	0	0.06	12.47	1.44	0	-	-	13.99
	110KV S/S Nemmara	0	0.01	0	0.02	0.91	0.07	0	0	0	1.01
	66KV S/s Chittur	0	0.01	0.03	0.18	0.1	0	0	0	0	0.32
	66KV S/s Kannampully	0	0.01	0.01	0.19	0.19	0.1	0	-	0	0.5
	66KV S/s Chandranagar	0	0.01	0	0.03	0.28	0.1	0	0	0	0.42
	33KV S/s Vydyuthi Bhavanam	0	0.01	0	0.01	0.07	0.04	0	0	0	0.13
	33KV S/s Olavakkode	0	0.01	0	0.06	0.07	0.06	0	0	0	0.2
	33KV S/s Agali	0	0.01	0	0.01	0.08	0.04	0	0	0	0.14
	33KV S/s Alanellur	0	0.01	0	0.01	0.07	0.04	0	0	0	0.13
	33KV S/s Kongad	0	0.01	0	0.01	0.09	0.04	0	0	0	0.15
	33KV S/s Maniampara	0	0.01	0	0.01	0.07	0.04	0	0	0	0.13
	33KV S/s Sreekrishnapuram	0	0.01	0	0.01	0.07	0.04	0	0	0	0.13
	33KV S/s Pallassana	0	0.01	0	0.01	0.07	0.04	0	0	0	0.13
	33KV S/s Koduvayur	0	0.01	0	0.01	0.15	0.04	0	0	0	0.21
	33KV S/s Nelliampathy	0	0.04	0	0.01	0.07	0.04	0	0	0	0.16
	33KV S/S Maruthur	0	0.01	0	0.08	0.14	0.04	0	0	0	0.27
33KV S/s Muthalamada	0	0.01	0	0.01	0.16	0.04	0	0	0	0.22	
33KV S/s, Vannamada	0	0.01	0	0.01	0.07	0.04	0	0	0	0.13	
33 KV S/s, Velanthavalam	0	0.01	0	0.01	0.16	0.04	0	0	0	0.22	
33KV S/s, Meenakshipuram	0	0.01	0	0.01	0.07	0.04	0	0	0	0.13	

33KV S/S Alathur	0	0.01	0	0.01	0.07	0.04	0	0	0	0.13
33KV S/s Tarur	0	0.01	0	0.01	0.07	0.04	0	0	0	0.13
33KV S/s Chittadi	0	0.01	0	0.01	0.07	0.04	0	0	0	0.13
33KV S/s Chalissery	0	0.01	0	0.01	0.07	0.04	0	0	0	0.13
33KV S/s Thirthala	0	0.01	0	0.01	0.09	0.04	0	0	0	0.15
33KV S/s,Thiruvegappura	0	0.01	0	0.03	0.11	0.04	0	0	-	0.19
SSSD Medical College Palakkad	0	0	0	0	0	0.09	0	0	0	0.09
All sub stations				0.24			0			0.24
TOTAL(E)	0.2	0.65	0.18	3.87	26.26	6.55	0	0.04	0.02	37.77
110KV Sub Station KUBANOOR	0	0	0	0.19	0.24	0.05	0	0	0	0.48
110 KV Sub Station PAYYANNUR	0	0.05	0	0.05	1.07	0	0	0	0	1.17
110 KV Sub Station Thalassery	0	0	0	0.12	0.03	0	0	0.02	0	0.17
110 KV Sub Station Manjeswaram	0	0	0	0.09	0.21	0.12	0	0	0.03	0.45
220 KV SS MYLATTY	0	0	0	0.01	5.80	0.1	0	0	0.01	5.92
Solar SS,Ambalathara	0	0	0	0	0	0	0	0	0	0
110 KV SS MANGAD	0	0	0	0.04	0.45	0	0	0	0	0.49
110 KV SS Mundayad	0	0	0	0.05	0.54	0	0	0	0	0.59
110 KV SS MULLERIA	0	0	0	0	0	0	0	0	0	0
220 KV Sub Station KANHIRODE	0	0.03	0	0.02	1.25	0	0	0	0.04	1.34
110 KV Sub Station KANHANGAD	0	0	0	0	8.01	0.65	0	0	0	8.66
110 KV Sub Station KASARAGOD	0	0	0	0.09	1.02	0.13	0	0	0.05	1.29
110 KV Sub Station CHERUVATHUR	0	0	0	0.1	1.60	0	0	0.01	0.04	1.75
110 KV Sub station CHOVA	0	0	0	0	2.75	0	0	-	0	2.75
110 KV Sub Station AZHIKODE	0	0.04	0	0.07	0	0.22	0	-	-	0.33
220 KV SubStation THALIPARAMBA	0	0	0	0.03	1.98	0.01	0	0	0	2.02
220 KV SubStation Ambalathara Solar Park	0	0.04	0	0.17	1.38	0.01	0	0	0.02	1.62
110 KV Sub Station PINARAYI	0	0	0	0.12	0.22	0	0	0	0	0.34
110 KV Sub Station PANOOR	0	0.08	0	0.16	0.37	0	0	0	0	0.61
110 KV SS NEDUMPOYIL	0	0.03	0	0	0	0.02	0	-	0	0.05
110 KV SS VALIYAVELICHAM	0	0	0	0.07	0.72	0	0	0	0.01	0.8
110 KV S/S PAZHAYANGADI	0	0	0	0	0.01	0	0	0	0	0.01
110 KV SS SREEKANDAPURAM	0	0	0	0	0.15	0.01	0	0	-	0.16
110 KV SS KINFRA PARK MATTANNUR	0	1.15	0	1.39	7.11	0.94	0	-	0.04	10.63
All sub stations	0				0.62					0.62

	SUB TOTAL(F)	0	1.42	0	2.76	35.52	2.24	0	0.04	0.25	42.23
Tr Circle Malappuram	33KV Substation,Makkaraparamba	0	0	0	0	1.59	0	0	0	0	1.59
	33KV Substation, Edavanna	0	0	0	0	0.72	0	0	0	0	0.72
	33KV Substation,Kalpakamcherry	0	0.16	0	0	0	0	0	0	0	0.16
	33KV Substation, Valluvambram	0	0	0	0.02	2.73	0.01	0	0	0	2.76
	33KV Substation, Othukkungal	0	0	0	0	0	0.51	0	0	0	0.51
	33KV Substation,Kalikavu	0	0	0	0	0.25	0	0	0	0	0.25
	33KV Substation,Thirunavaya.	0	0	0	0.03	0	0	0	0	0	0.03
	33KV Substation, Pookkottumpadam	0	0	0	0	0.02	0.01	0	0	0	0.03
	33KV Substation,Pothukallu	0	0	0	0.01	0.01	0.46	0	0	0	0.48
	66 KVS SS,Edakkara	0	0	0	0.04	0.59	0	0	0	0	0.63
	66KV Substation,Nilambur	0	0	0	0.03	1.9	1.14	0	-	-	3.07
	110 KV Substation, Perinthalmanna	0	0.05	0	0.15	0.02	0	0	0	0	0.22
	66KV Substation Manjeri	0	0	0	0	0	0.30	0	-	0	0.3
	110KV Substation,Kuttippuram	0	0	0	0	0.01	0	0	0	0	0.01
	110KV Substation,Malappuram	0	0	0	0.02	0.08	0.06	0	0	0	0.16
	110KV Substation,Mankada	0	0	0	0	0.01	0.06	0	0	0	0.07
	110KV Substation Melattur	0	0	0	0.01	1.66	0.01	0	-	0	1.68
	110KV Substation, Edarikode	0	0	0	0.01	0.99	2.37	0	0	0	3.37
	110KV Substation, Parappanangadi	0	0.28	0	0.08	1.22	0.06	0	0	-	1.64
	110KV Substation, Ponnani	0	0.26	0	0	0	0	0	0	-	0.26
	110KV Substation Tirur	0	0.76	0	0	-	0	0	0	0	0.76
	110KV Substation Kizhissery	0	0	0	0	1.78	0.40	0	0	0	2.18
	220KV Substation Malaparamba	0	0	0	0.03	1.52	-	0	0	0	1.55
	220KV Substation Elamkur	0	0	0	0.02	0.03	-	0	0.01	-	0.06
	220KV Substation, Areacode	0	0	0	0	0.67	0	0	0	0	0.67
	Transmission Section, Ramapuram	0	0	0	0	-	0.10	0	0	0	0.1
	Transmission Division, Tirur	0	0	0	0	0	0	0	0.01	0	0.01
	33KV Substation,Kooriyad	0	0	0	0.07	0	0.01	0	0	0	0.08
	Transmission Subdivision,Tirur	0	0	0	0	-	0.28	0	0	0	0.28
	Transmission Division,Malappuram.	0	0	0	0	0.01	-	0	0	0	0.01
TC Nilambur	0	0	0	0	-	0.24	0	0	0	0.24	
SUB TOTAL(G)	0	1.51	0	0.48	15.81	6.02	0	0.03	0.03	23.88	
KLMY	66 KV GIS SS MARINE DRIVE	0.01	0.01	0	0	0.01	0	0	0	0	0.03
	66 KV SS Puthencruz	0	0	0	0	0.04	0	0	0	0	0.04

	110 KVSS Kaloor	0	0	0	0	2.3	0	0	0.01	0	2.31
	110 kv S/S, Aluva	0	0	0	0.04	0.17	0	0	0.01	0	0.22
	220 KVSS Kalamassery	0.1	0.12	0	1.1	6.16	1.56	0	0.01	0.06	9.11
	110 KVSS,W.ISLAND	0.03	0	0	0.15	0.02	0.04	0	0	0	0.24
	220 KVSS Ambalamughal	0	0	0	0.12	0.09	0	0	0	0.02	0.23
	110 KVSS Kadavantra	0.38	0	0	0	0	0	0	0	0	0.38
	66KV S/s,Perumanoor	0	0	0	0.31	0	0	0	0	0	0.31
	110KV S/s,N.Parur	0	0	0	0	0.09	0	0	0	0	0.09
	66KV SS KAKKANAD	0	0	0	0.05	-	0	0	-	-	0.05
	110 kv S/S, Ekm North	0	0	0	0	0	0	0	-	0.04	0.04
	110 kv S/S, Vyttila	0.05	0	0	0.3	1.9	0.03	0	-	0	2.28
	110 kv S/S, Edayar	0	0	0	0	0.03	0.01	0	0	0	0.04
	110 kv S/S,Mattanchery	0	0	0	0	0.11	-	0	-	0	0.11
	110kv S/S, Edathala	0	0	0	0.2	3.35	-	0	-	0.02	3.57
	66KV s/s Thrikkakara	0	0	0	0	0.01	0	0	0	-	0.01
	110 KV S/s ,Kizhakambalam	0	0	0	0.09	1.85	0	0	0	0	1.94
	110 kv S/S, Kandanadu	0	0	0	0	0	0.02	0	-	0	0.02
	220 kv S/S Brahmapuram	0	0	0	0.12	3.8	0.05	0	-	-	3.97
	110 kv Substation, Cherai	0	0	0	0	0	0.17	0	-	0.02	0.19
	110 KV S/S Edappally	0	0	0	0.07	1.63	0	0	-	0	1.7
	66 KV GIS SS, Fortkochi	0	0	0	0	0.05	0.01	0	0	0	0.06
	33 kv SS, VARAPUZHA	0	0	0	0	1.61	0	0	0	0	1.61
	33 kv Sub station, Alangad	0	0	0	0.04	0	0	0	-	0	0.04
	66 KVSS Njarakkal	0	0.01	0	0	0.03	-	0	0	0	0.04
	All Substations			0		0.95					0.95
	TOTAL(H)	0.57	0.14	0	2.59	24.2	1.87	0	0.05	0.16	29.58
Tr Circle	110KV S/s ,paruthippara	0	0	0.03	0.29	2.70	0	0	0	0	3.02
	110KV S/s ,Kilimannoor	0.02	0.03	0	0.1	0.03	0	0	0	0	0.18

	66 KV SS ,PALODE	0	0	0	0	0.13	0	0	0	0	0.13
	66 KV SS ,GIS LA	0	0	0	0	0.07	0	0	0	0	0.07
	110KV SS NEYATTINKARA	0	0	0	0.1	0.39	0	0	0	0	0.49
	110KV S/s ,Thirumala	0	0	0	0.06	0.09	0	0	0	0	0.15
	110KV S/s ,kattakada	0	0	0	0.08	0.19	0	0	0	0	0.27
	110KV Subststion,Varkala	0	0.02	0	0	0	0	0	0	0	0.09
	110 KV S/sBalaramapuram	3.81	0.02	0	0	0.04	0	0	0	0	3.87
	66 KV SS GIS POWER HOUSE	0	0	0	0	0.82	0	0	0	0	0.82
	110KVS/s,Medical College	0	0	0	0.06	2.32	0	0	0	0	2.38
	LMS 2 Paruthippara	0	0	0	0.02	0	0	0	0	0	0.02
	TC,TVM	0	0	0	0	0	0	0	0	0.02	0.02
	110KVS/s,Attingal	0	0	0	0	2.61	0	0	0	0	2.61
	110KVS/sNedumangad	0	0.04	0	0.09	0.45	0	0	0	0	0.55
	110KVs/s,Terls	0	0	0	0	4.70	0	0	0	0	4.7
	110 KV S/s,veli	0	0.04	0	0	0.12	0	0	0	0	0.16
	TC Section Veli	0	0	0	0	0.69	0	0	0	0	0.69
	66 KV Subststion Vattiyookavu	0	0	0	0	0	0	0	0	0	0.04
	220 KV Substation,Kattakada	0.24	0.02	0	0.14	0.38	0	0	0	0	0.78
	TD Kazhakkootam & Tvpn	0	0	0	0	0	0	0	0.03	0	0.03
	110KV S/S Kazhakoottom	0	0	0	0.12	3.92	0	0	0	0	4.06
	33kV Subststion Vithura	0	0	0	0	0	0	0	0	0	0.08
	33kV Subststion Vellarada	0	0	0	0	0	0	0	0	0	0.08
	33kV Subststion Kadakkal	0	0	0	0	0	0	0	0	0	0
	33kV Subststion Poovar	0	0	0	0	0	0	0	0	0	0.08
	220KVS/s,Pothencode	0	0.04	0.01	0.45	3.70	0	0	0	0.02	4.22
	33 KVS/s,Vilakulam	0	0	0	0	0.94	0	0	0	0	0.94
	66 KV S/s,Vizhinjam	0	0	0	0	2	0	0	0	0	2
	33 KV SS PATTUR	0	0	0	0	0	0	0	0	0	0.01
	33 SS Chullimannoor	0	0	0	0.04	0	0	0	0	0	0.04
	Attingal-Parippalli Line &110 KV ATL	0	0	0	0	0	0.09	0	0	0	0.09
	Kattkkada-Balaramapuram-VISL LINE	0	0	0	0	0	6.41	0	0	0	6.41
	LCS IBLPM	0	0	0	0	0	0.07	0	0	0	0.07
	Neyyattinkara-Parassala Line	0	0	0	0	0	0.02	0	0	0	0.02
	Pothencodu Kattakkada Line	0	0	0	0	0	0.28	0	0	0	0.28
	Parassala-Kuzhitua Line	0	0	0	0	0	0.2	0	0	0	0.2
	SUB TOTAL(I)	4.07	0.21	0.04	1.55	26.65	7.07	0	0	0.06	39.65
Tr Circle Alappuz	110kv S/S Chellanam	0	0	0	0	0.29	0	0	0	0	0.29
	110 KV S/s, kayamkulam	0	0	0	0.02	0.15	0	0	-	0	0.17

	66kV SS Kuttanadu	0	0	0	0	0.01	0	0	0.01	0	0.02
	66kV SS Kattanam	0	0.01	0	0.01	0.05	0	0	0	0	0.07
	110 KV S/s, Chengannoor	0	0.02	0	0	0.11	0	0	0	0	0.13
	66 KV S/s,Nangiarkulangara	0	0.05	0	0	-	0	0	0	0	0.05
	220 kv S/S .Punnapra	0	0	0	0	0.33	0	0	-	0	0.33
	110 KV S/s, S L Puram	0	0	0	0	0.01	0	0	-	0	0.01
	110 KV S/s, Aroor	0	0	0	0.32	3.38	0	0	0	0	3.7
	33 KV S/s, Vallikunnam	0	0	0	0	0.02	0	0	0	0	0.02
	110kV Thycattusserry	0	0	0	0	-	0	0	0	0	0
	110 KV S/s, Mavelikkara	0	0.01	0	0.01	0.13	0	0	-	0	0.15
	110Kv S/s Eramalloorr	0	0	0	0	0.15	-	0	0	0	0.15
	TCS Chengannoor	0	0	0	0	0	0.02	0	0	0	0.02
	LMS Cherthala	0	0	0	0	0.14	0.04	0	-	0	0.18
	66kV SS Karuvatta	0	0	0	0	0.03	0	0	-	0	0.03
	LMS Edappon	0	0	0	0.03	0.08	0.04	0	0	0	0.15
	66 KV S/s, Cherthala	0	0	0	0	0.13	0	0	0	0	0.13
	Trans. Circle, Alappuzha	0	0.32	0	0.28	1.29	0.30	0	0.03	0	2.22
	LMS Alappuzha	0	0	0	0	0	0.07	0	0	0	0.07
	33 KV SS MANNAR	0	0	0	0	0.02	0	0	0	0	0.02
	Adj.	0					1.5				1.5
	SUB TOTAL(J)	0	0.41	0	0.67	6.3	1.97	0	0.06	0	9.41
Tr Division Pathanamthitta	66kV S/s Kochupampa	0.01	0	0	0.13	0.75	-	0	-	0	0.89
	110 kv S/s Thiruvalla	0.05	0	0	0	0.06	-	0	0	0	0.11
	LMS Moozhiyar	0	0.03	0	0.02	0	0	0	-	0	0.05
	110 kv S/s Pathanamthitta	0	0.04	0	0.11	0.7	0.02	0	0	-	0.87
	110 kv S/s, Koodal	0	0	0	0	0.02	0	0	-	0.01	0.03
	110 kv Kozhencherry	0.04	0.07	0	0	1.71	0.21	0	0	0.01	2.04
	66kV S/s Triveni	0	0.18	0	0.01	0.02	0	0	0	0	0.21
	66kV S/s Adoor	0.01	0.03	0	0.01	0.94	0.16	0	-	-	1.15
	TC Section,Pathanamthitta	0	0	0	0	0	0.06	0	0	-	0.06
	TC.Sn.Pandalam	0	0	0	0	0	0.02	0	0	-	0.02

	66 KV S/S, Enathu	0	0	0	0.11	0.27	0.17	0	-	0	0.55
	110 kv S/s Ranny	0	0.03	0	0.01	0.17	0.04	0	0	-	0.25
	33 kv S/s,Ranny Perinadu	0	0	0	0	0.01	0	0	0	0	0.01
	LMS,Moozhiyar	0	0	0	0	0	0	0	0	0.01	0.01
	Line Maintanance Section, Pathanamthitta	0	0	0	0	0.02	0.26	0.1	0.01	0	0.39
	66 KV S/S, Chumathra	0	0.01	0	0	0	0.01	0	0	0	0.02
	All sub stations (Fin & Interest Charges)	0	0.03	0	0.08	0.71	0.71	0	0	0	1.53
	All sub stations			0		0.06					0.06
	SUB TOTAL(K)	0.11	0.42	0	0.48	5.44	1.66	0.1	0.01	0.03	8.25
Tr Circle Thodupuzha	110kv S/s Adimaly	0	0.02	0	0.25	0.98	2.24	0	0.01	0	3.5
	110 kv S/s Perumbavoor	0	0	0	0.38	0.02	0	0	0	0	0.4
	33kv S/s Kumily	0	0	0	0	0.90	0	0	0	0	0.9
	110kv S/s Piravom	0	0	0	0	0.24	0	0	0	0	0.24
	33kv S/s Kalloorkkadu	0	0	0	0.24	0.05	0	0	0	0	0.29
	33kv S/s Vengola	0	0.28	0	0.11	3.51	0.01	0	0	0	3.91
	110kv S/s Marady	0.03	0	0	0	0	0	0	0	0	0.03
	110 kv S/s Malayattoor	0	0.02	0	0	0	0.04	0	0	0	0.06
	110 kv S/s Udumbannoor	0	0	0	0.01	0	0	0	0	0	0.01
	66kv S/s Thodupuzha	0	0	0	0	0.03	0	0	0	0.01	0.04
	66kv S/s Vazhathope	0	0	0	0	0	0.39	0	0.01	0	0.4
	33 kv S/s Vandanmade	0	0	0	0	0	0.01	0	0	0	0.01
	110 kv S/s Muvattupuzha	0	0.02	0	0.09	0.01	0.84	0	0	-	0.96
	66kv s/s Vandiperiyar	0	0	0	0	0	0	0	0.01	0	0.01
	66kv S/s Nedumkandom	0	0.01	0	0.04	0.9	1.18	0	0	0	2.13
	66 Kv SS Kothamangalam	0	0.02	0.01	0	0.1	0.01	0	0	-	0.14
	33 kv S/s Mazhuvannoor	0	0	0	0	0.93	0	0	0	0	0.93
	33 kv S/s Vannapuram	0	0	0	0.01	0	0	0	0	0	0.01
	110 kv S/s Muttom	0	0.06	0	0.02	-	0	0	0	0	0.08
	66 Kv Karimanal	0	0	0	0	0	0.02	0	0	-	0.02
66kv S/s Odakkali	0	0	0	0.04	0	0	0	0	0	0.04	
66 kv S/s Kattappana	0	0	0	0.01	0.09	0	0	0	0	0.1	
	Adj.(All Substations)				1.65			0			1.65
	TOTAL(L)	0.03	0.43	0.01	2.83	7.76	4.74	0	0.04	0.02	15.86
CE,Tr ans(IN	o/o the CE,Trans(N)	0	0.03	0	0	0	0	0	0	0	0.03
	TOTAL(M)	0	0.03	0	0	0	0	0	0	0	0.03
	14.01 - TRANSMISSION SCHEMES - GRAND TOTAL	5.32	11.92	0.37	27.51	225.91	46.63	0.1	0.38	0.76	318.9
	14.03-SOLAR POWER PROJECTS										

208	Transmission Circle Palakkad	0	0	0	0	0.00	0	0	0	0	0.00
	14.03-SOLAR POWER PROJECTS-TOTAL	0	0	0	0	0.00	0.00	0.00	0.00	0.00	0.00
14.18- POWER SYSTEM DEVELOPMENT FUND											
101	GEN CIRCLE MEENCUT	0	0	0	0	0.08	0.00	0.00	0.00	0	0.08
102	GEN CIRCLE THRISSUR	0	0	0	0	0.04	0.00	0.00	0.00	0	0.04
103	GEN CIRCLE MOOIAMATTOM	0	0	0	0	2.89	0	0	0.00	0.00	2.89
104	GEN CIRCLE MOOZHAYAR	0	0	0	0	0.19	0.00	0	0.00	0.00	0.19
207	GEN CIRCLE KOTHAMANGALAM	0	0	0	0	0.00	0	0	0.00	0.00	0.00
960	CE TRANSGRID SHORNUR	0	0	0	0	1.69	57.29	0.00	0.00	0.00	58.98
	14.18 - POWER SYSTEM DEVELOPMENT FUND - GRAND TOTAL	0	0	0	0	4.89	57.29	0.00	0.00	0.00	62.18
14.56- LOAD DESPATCH & COMMUNICATION SCHEMES											
217	SYS OPERATION CIRCLE TVPM	0	0	0	0	0.83	0	0	0	0	0.83
218	SYS OPERATION CIRCLE KLMSRY	0	0	0	0	2.97	0	0	0	0	2.97
219	SYS OPERATION CIRCLE KANNR	0	0	0	0	1.66	0	0	0	0	1.66
	14.56 - LOAD DESPATCH & COMMUNICATION SCHEMES - GRAND TOTAL	0	0	0	0	5.46	0	0	0	0	5.46
14.61- EXPENDITURE DUE TO NATURAL CALAMITY											
	VARIOUS ARUs	0	0	0	0	0.9	0	0	0	0	0.9
	14.61- EXPENDITURE DUE TO NATURAL CALAMITY - GRAND TOTAL	0	0	0	0	0.90	0	0	0	0	0.9
14.90- CWIP-GENERAL											
	VARIOUS ARUs	0	0	0.3	2	6	1.2	0	0	0.19	9.69
	14.90- CWIP-GENERAL - GRAND TOTAL	0	0	0.3	2	6	1.2	0	0	0.19	9.69
14.94- TRANSGRID 2.0 PROJECT											
960	CE TRANSGRID SHORNUR	0	0.05	0	1.87	20.04	709.07	1.41	0.04	0.03	732.51
	14.94- TRANSGRID 2.0 PROJECT TOTAL	0	0.05	0	1.87	20.04	709.07	1.41	0.04	0.03	732.51
	SBU -T TOTAL ASSET ADDITION DURING 2021-22	5.32	11.97	0.67	31.38	263.2	814.19	1.51	0.42	0.98	1129.64

Appendix 5 SBU DETAILS OF CONTRIBUTIONS, GRANTS AND SUBSIDIES TOWARDS COST OF CAPITAL ASSETS (GROSS) (Rs. Cr)													
SL No.	PARTICULARS	2021-22				2022-23				Addition during 2022-23			
		GEN	TRANS	DIST	TOTAL	GEN	TRANS	DIST	TOTAL	GEN	TRANS	DIST	TOTAL
1	Consumer contribution	0.05	178.42	2,606.07	2784.54	0.15	189.69	2,982.68	3,172.51	0.09	11.27	376.61	387.97
2	Subsidies	91.80	-	93.55	185.36	72.60	-	93.55	166.16	19.20	-	-	-19.20
3	Grants Recd. Towards Cost Of Fixed Assets	19.83	491.70	1,397.88	1909.41	19.83	503.45	1,638.91	2,162.20	-	11.76	241.03	252.79
4	Others	0.03	65.66	535.84	601.52	0.03	66.47	657.94	724.43	-	0.81	122.10	122.91
5	Gross Total	111.72	735.78	4633.33	5480.83	92.61	759.61	5373.08	6225.30	-19.11	23.83	739.75	744.47
6	Add: Concessional loan				0.00				-	-	-	-	-
7	Add: Decommissioning liability	5.54	7.51	15.95	29.01	1.34	3.08	5.30	9.73	4.20	4.43	-10.65	-19.28
8	Less: Subsidies & grants amortization	35.19	150.85	962.55	1148.59	40.73	187.54	1,244.36	1,472.63	5.54	36.68	281.82	324.04
9	Transfer from deposit to grant based on audit observation						8.80	2.32	11.12	-	8.80	2.32	11.12
i	R APDRP Grant amount accounted at HO in 2021-22 and the same accounted again at ARU in 2022-23.												
ii	Grant received on assets lost due to natural calamities												
iii	Claw back of grant reversed												
10	As per Accounts	82.07	592.44	3686.74	4361.24	53.22	583.96	3,678.23	4,315.40	28.85	8.48	-8.51	-45.84

- The amount has been accounted as grant during 2021-22. The amount has been reimbursed to the roof top solar contractor and therefore reversed.

Appendix 6 : Employee Cost for the period from 2015-16 to 2022-23 (Rs. Cr)									
Sl. No	Particulars	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
1	Basic Pay	811.43	1755.52	1806.86	1828.35	1827.45	1,944.84	2,579.19	2,494.19
	Pension fund -Actuarial valuation			509.42	498.37	435.64	2,099.90	1,036.68	1,273.34
	Add: Provision for pay revision	339	0	0	176	250.00	585.00		
2	Overtime / Holiday wages	0.2	0.41	0.34	0.29	0.36	0.37	0.38	0.22
3	D.A.	930.41	378.1	443.35	547.44	684.99	711.29	394.02	473.77
	Add: Provision for DA revision	0	0	9		22.89	19.10	19.40	173.91
		2081.04	2134.03	2768.97	3050.45	3221.33	5,360.50	4,029.66	4,415.44
4	Other Allowances								
	a) HRA	18.71	44.75	44.72	45.01	44.46	47.38	129.12	125.58
	b) Spread over allowances	3.66	4.88	4.98				11.61	12.07
	c) Incentive allowances	0.34	0.3	0.27	32.39	28.37	29.79	0.01	0.01
	d) Local and other allowances	18.88	28.76	27.67				29.39	28.33
5	Bonus	8.25	9.1	9.83	9.44	9.73	9.75	9.06	8.72
6	Medical Reimbursement	8.52	10.35	10.83	12.88	12.85	11.72	13.90	14.54
7	a) Earned Leave encashment	124.15	145.67	153.1	181.1	160.46	169.64	144.35	41.49
	b) Terminal Surrender	22.61						0.12	
	LTA			0.21	0.22	0.26	0.02	0.05	0.35
8	Payment under workmen compensation Act	0.08	0.5	0.14	0.54	0.22	0.31	0.37	0.69
9	Leave Salary and Pension Contribution	0.18	13.78	13.28					-0.18
	NPS Contribution				17.87	21.84	25.02	45.52	41.32
10	Staff welfare expenses			0.11	0.43	4.52	0.44	0.44	0.47
	a) Uniform & Livery expenses	1.82	4.28	4.24	4.29	4.37	4.39	4.86	4.48
	b) Cash award for meritorious service etc	0.07	0.05	0.05				0.01	0.04
	Other Terminal benefits							0.36	0.67
		207.27	262.42	269.43	304.18	287.08	298.46	389.17	278.59
11	Gross employee cost (before capitalization)-As per accounts	2288.32	2396.47	3038.4	3354.63	3508.41	5,658.96	4,418.84	4,694.03
18	YOY increase %								6.23

Appendix -7: Miscellaneous charges from consumers					
NO	PARTICULARS	SBU G	SBU T	SBU D	Total
1	TF/RF			19.26	19.26
2	LE/SC Minimum			0.02	0.02
3	Processing fee power allocation			3.75	3.75
4	STOA Registration and application			0.19	0.19
5	STOA Open access charges			9.78	9.78
6	Energization charges			0.45	0.45
7	Misc charges-PF penalty			49.87	49.87
8	Application fee & Registration fee for grid connectivity to solar plants			14.48	14.48
9	SLDC charges		0.48	0.02	0.50
	TOTAL	-	0.48	97.83	98.30

Appendix 8 Misc receipts /charges from inter-state trading of energy					
NO	PARTICULARS	SBU G	SBU T	SBU D	Total
1	Deviation settlement charges for lower injection of power for Interstate open Access M/s Philip Carbon Black Ltd			0.38	0.38
2	Income from POSOCO towards UI Charges from Pool Account			53.52	53.52
3	Incom from POSOCO towards Reactive Energy charges from Pool Account			2.88	2.88
4	Fixed charges from the provider of Reserves Regulation Ancillary Services RRAS Settlement Account			7.91	7.91
5	Income from POSOCO towards National Pool Account SCED			7.92	7.92
	TOTAL	-	-	72.61	72.61

Appendix-9: MISCELLANEOUS RECEIPTS (Rs Cr)					
No	Particulars	SBU G	SBU T	SBU D	Total
1	Rental from staff quarters	0.2	0.06	0.13	0.39
2	Rental from contractors	0.15	0.02	0.05	0.23
3	Rent from others	0.76	0.11	0.62	1.5
4	Excess Found on Phy. Veri. Of Stock	-	-	0.03	0.03
5	Pole rent Cable TV Operators	-	0.01	65.84	65.86
6	Infra dev charges and supervision charges	-	0.21	16.87	17.08
7	SD Forfeited	0.25	0.43	22.55	23.23
8	Sale of trees	0.01	0.04	0.03	0.09
9	Usufructs	0.04	0.03	0	0.07
10	Penalty/LD from contractors/suppliers	1.82	6.31	42.97	51.1
11	Revenue share of KSEB Ltd- Utilisation of land and premises by KHTC.	0.08	-	-	0.08
12	Interest/penalty on pole rent SD	-	-	4.16	4.16
13	Outside students-project	0.03	0.06	0.53	0.62
14	Fee for providing information	0	0	0.19	0.2
15	Receipt of cost of DPR/DIR from Allottee of private SHPs developers	0	0	0.01	0.01
16	Revenue Energy audit consultancy	-	-	0.02	0.02
17	Rent from office cum complex	0.02	0.01	0.44	0.47
18	Optical fibre cable leasing	-	7.79	-	7.79
19	Entry fee collected from visitors for visiting Power stations of KSEBL	0.04	0	0.02	0.06
20	Registration and Application fee-Roof Top Solar Power Plants	2.4	-	0.11	2.5
21	Service charge from consumers under Soura Project	-	-	0.01	0.01
22	Appeal fee deposited in respect of Appellate Authority	-	-	0.19	0.19
23	Other Income from EV charging stations	-	-	0.31	0.31
24	Testing fee from contractors	0.04	0.52	0.95	1.5
25	Centage from Govt deptt/ agencies	0.03	0.05	0.46	0.54
26	Course fee received from training institution as reimbursement	0.05	-	-	0.05
27	LED Street Light Installation charges- NILAAVU scheme	-	-	13.08	13.08
28	Other Income- Annual Maintenance Charges	-	0.14	-	0.14
29	Other Income-Performance Incentive from MNRE	12.75	-	-	12.75
30	Commission for collection of electricity duty	-	-	11.17	11.17
31	Commission Inspection Fees	-	-	0.15	0.15
	Total	18.67	15.78	180.93	215.38

Appendix 10: INCOME FROM SALE OF BULB, SCRAP, TENDER FORM ETC (Rs. Cr)					
No	Particulars	SBU G	SBU T	SBU D	Total
1	Sale of scrap	10.34	23.37	75.06	108.77
2	Sale of tender forms	0.64	0.89	1.69	3.22
3	Sales of Store		0.02		0.02
4	Sale of LED Bulbs			2.30	2.30
5	Hire charge	-	-	0.01	0.01
	Total	10.98	24.28	79.05	114.31

Appendix 11: Details of withdrawal of credit to revenue account during the year 2022-23 (Rs. Cr)					
sl no.	Con. Name	Con.No	Amount	Order number	
1	M/Central Avenue	LCN-1/6118	0.02	SOR/HTB-1/6118/2022-23 dtd 20.1.2023 of SoR	
2	M/s V.K stone crushers	LCN.1/7205	0.29	SOR/HTB-1/7205/billing/22-23dtd.28.2.23 of SoR	
3	M/s Uttam Towers pvt ltd	LCN.1/8587	0.03	SOR/HTB-18587/2022-23/28 dtd.22.3.2023 of SoR	
4	M/s Kerala water authority chittoor	LCN12/1232	0.08	SOR/GCB3/HTB/12/1232/2022-23 dtd.11.2022	
5	m/s Greenfield	HTB.12/5640	0.01	SOR/CU/RENAI/2022-23 dtd20.5.2022	
6	M/s star industries	LCN12/6765	0.41	SOR/HTB.12/6765/2022-23dtd18.3.2023	
7	M/s Thomson graphite's and Mines	LCN.12/8314	0.09	SOR/HTB.12/8314/2022-23 dtd22.9.2022	
8	M/s Asha Hospital	LCN.12/8985	0.02	SOR/HTB.12/8985/2022/54 dtd.16-2-2023of SoR	
9	M/s Ahammmad Roller Flour Mills	LCN13/1331	0.08	SOR/AMU.5/HTB.13/1331/updationof arrears/2022-23dtd.2.6.22 of SoR	
10	M/s Milma Chilling Plant	LCN.13/1727	0.01	SOR/AMU.5HTB.13/1727/withdrawal of bogus demand/2022 dtd.8.4.22	
11	M/s. K.E Agro Products	LCN 13/8258	0.11	No.SOR/HTB.13/82582022-23 dtd.27-10-2022ofSOR	
12	M/s Radhas Textiles	HTB 15/7160	0.09	No.SOR/HTB.15/7160/billing/2022-23/33 dtd.13.4.2022 of SoR	

13	M/s Chidambaram Estate	LCN.16/1607	0.01	SOR/HTB16/1607/2022-23 dtd23.3.2023
14	M/s Garrison Engineers	LCN16/1616	0.13	SOR/HTB16/1616/2022-23 dtd12.1.2023 of SoR
15	M/s Season Rubbers(P)Ltd	LCN16/1668	0.01	SOR/AMU.5/HTB16/1668/2022/50 dtd 8.4.2022
16	M/s.Ayyappas Textiles	LCN16/4223	0.02	SoR/HTB 16/4223/2022-23/ dtd.25.1.2023
17	M/s Renai group (group of hotels)		0.03	SOR/CU/RENAI/2022-23 dtd 20.05.2022
18	M/s. Kannur Medical College	HTB 18/4587	0.18	No.SOR/HTB 18/4587/Arrear/2022-23 Dtd.04.01.2023
19	M/s Garrison Engineers	LCN2/207	0.12	No.SOR/HTB-2/207/2022-23 dated.12.01.2023 of SoR
20	M/s Govt of India Press	LCN 2/219	0.01	No.SOR/HTB/2/219/2022 dtd 07.12.2022 of SOR
21	M/s Neyyattinkara Taluk integrated power loom village coop society	LCN2/4794	0.07	SOR/HTB/2/4794/2022 dtd .10.2022
22	M/s White line polymers	LCN2/6564	0.02	No.SOR/HTB/2/6565/2022 dtd.17.12.2022
23	M/s Aron International	LCN 2/7738	0.11	SOR/HTB/2/7738/2022 dtd .15.09.2022
24	M/s CPS Steel (P)limited	LCN 23/4160	1.12	SOR/HTB 23/4160/2022 dtd 10.2022
25	M/s CPI(M) Party congress held at Nayanar academy	LCN 23/9958	0.01	SOR/HTB23/9958/2022-23/ dtd.11.2022
26	Ocean Wealth Exports	LCN 24/5121	0.84	SOR/HTB.24/5121/billing/2022-23 dtd.25.11.2022
27	M/s Silver Castle Holiday &Resorts Pvt Ltd	LCN24/5859	0.03	SOR/HTB.24/5859/billing/2022-23 dtd 25.11.2022.
28	M/s Aiyappas Silk House	HTB 254911	0.01	SOR/HTB.25/4911/2022-23 dtd .30.05.2022
29	M/s Asma Towers	HTB 27/3817	0.02	SOR/HTB 27/3817/Withdrawal/2022-23 dtd.0011.2022
30	M/s.Infopark	HTB 13/5910	0.02	SOR/GB1/infopark/2022-23 dtd 14.2.2023
31	M/s Babas Metal Crusher and M sand	HTB 28/7304	0.02	SOR/HTB 28/7304/2022 Dtd 04.06.2022
32	M/s Sreekumar Theatre	LCN 29/2972	0.01	SOR/AMU VI/HTB.29/2972/2022-23 Dtd.25.04.2022
33	M/s Central Travancore Hospital	LCN 32/3534	0.04	SOR/32/3534/B.I.Charges/Withdrawal/2022-23 Dtd 27.02.2023
34	M/s Poyilakkada Fisheries	LCN 4/428	0.04	SOR/HTB-4/428/B.I.Charges/20233-23 Dtd 14.09.2022
35	M/s.PV Granites	LCN 4/6593	0.03	SOR/HTB-4/6593/2022-23 Dtd .14.09.2022
36	M/s.Tripenta Hotels(p) Ltd	LCN 5/5633	0.02	SOR/HTB-5/5633/Arr/2022-23 Dtd .12.08.2022
37	M/s RF Exports	LCN 5/9214	0.01	HTB-5/9214/2023/27 Dtd.14.02.2023
38	M/s Hotel Chakys	LCN 6/5239	0.02	SOR/Biliing/Order.No.HTB-6/5239/2022-2023 Dtd.14.02.2023
39	M/s St.Marys Crusher	LCN 6/7563	0.01	SOR/Billing/Order.No..HTB-6/7563/2022-23 Dtd.15.03.2023
40	M/s Saramma Abraham	LCN 7/4741	0.01	SoR/HTB-7/4741/2022 Dtd 00.12.2022
41	M/s. Ilex Industries	LCN7/6640	0.02	SOR/HTB-7/6640/2022 Dtd.00.01.2023
42	M/s Vasan Eye Care Limited	LCN8/5170	0.03	SOR/HTB-8/5170/2022-2023 Dtd 27.05.2022
43	M/s Good Shepherd Public school	HTB 9/7059	0.01	SOR/HTB-9/7059/CGRF/2022-23 Dtd .13.09.2022.
44	M/s Hilite Mall	HTB 9/7786	0.11	SOR/CU/HTB-9/7786/arrear/2022-23/201 Dtd .16.12.2022
45	Small write offs		0.02	
TOTAL			4.36	

Appendix 12 EXISTING NORMS AS PER TARIFF REGULATION 2021									
Particulars	SBU-G	SBU-T	SBU-D	Total	ESCALATION 4.84% till 2021-22				
	Rs. Crore	Rs. Crore	Rs. Crore	Rs. Crore	ESCALATION 4.454% thereafter				
Employee expenses	124.15	363.23	1,979.83	2,713.46					
A&G Expenses			246.25						
R&M Expenses									
Prov. For pay revision	11.36	33.15	203.96	248.47					
Total	135.51	396.38	2,430.04	2,961.93					
Current Control period (Indicative only)					Control period (Provisional)				
Year	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27
SBU-G	135.51	142.07	148.95	156.16	163.12	170.38	177.97	185.9	194.18
	Ratio	Notional O&M Cost for 2018-19 (Rs. Crore)		No. of Bays /No of power transformers/ Circuit km		Rs. lakh/bay, Rs. lakh/ MVA & Rs. lakh/circuit km			
Bay	40%	158.56		2564		6.18			
MVA capacity of Power Transformers	30%	118.91		17378.8		0.684			
Lines	30%	118.91		9529.59		1.248			
Total	100%	396.38							
Current Control Period (indicative only)					Control Period (Provisional)				
	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27
Rs.lakh per Bay	6.18	6.479	6.793	7.121	7.439	7.77	8.116	8.478	8.855
Rs. lakh per MVA	0.684	0.717	0.752	0.788	0.823	0.86	0.898	0.938	0.98
Rs.lakh per circuit km	1.248	1.308	1.372	1.438	1.502	1.569	1.639	1.712	1.788
Particulars	Ratio		2018-19 Rs. crore	Normative Value	Unit				
No. of consumers (Nos)	12276321	20%	436.76	3.558	Rs.lakh/1000 consumers				
No. of Distribution Transformers (Nos)	77724	25%	545.95	0.702	Rs.lakh/transformer				
Length of HT lines (km)	62835	20%	436.76	0.695	Rs.lakh/km line				
Length of LT lines (km)	286784	20%	436.76	0.152	Rs.lakh/km line				
Energy Sales (MU)	20880.7	15%	327.57	0.157	Rs./unit				
Employee cost & A&G expenses	100%		2,183.79						
Particulars	Current Control Period indicative only				Control period (Provisional)				
	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27
Rs. lakh /1000 consumers	3.558	3.73	3.91	4.1	4.282	4.473	4.672	4.88	5.098
Rs. lakh/ transformer	0.702	0.736	0.772	0.809	0.845	0.883	0.922	0.964	1.006
Rs. lakh/km HT line	0.695	0.729	0.764	0.801	0.837	0.874	0.913	0.954	0.996
Rs.lakh/LT line	0.152	0.16	0.167	0.175	0.183	0.191	0.2	0.209	0.218
Rs./unit	0.157	0.164	0.172	0.181	0.189	0.197	0.206	0.215	0.225

Appendix 13 PROPOSED NORMS FOR THE CONTROL PERIOD									
Particulars	SBU-G	SBU-T	SBU-D	Total	ESCALATION 4.84% till 2021-22				
	Rs. Crore	Rs. Crore	Rs. Crore	Rs. Crore	ESCALATION 4.454% thereafter				
Employee expenses	130.41	379.49	2,097.52	2,607.43					
A&G Expenses									
R&M Expenses			251.54	251.54					
Prov. For pay revision	12.24	33.8	239.37	285.4					
Total	142.65	413.29	2588.43	3144.37					
ESCALATION 4.84%									
Current Control period (Indicative only)					Control period Revised				
Year	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27
SBU-G	142.65	149.56	156.79	164.38	171.7	179.35	187.34	195.68	204.4
	Ratio	Notional O&M Cost for 2018-19 (Rs. Crore)		No. of Bays /No of power transformers/ Circuit km		Rs. lakh/bay, Rs. lakh/MVA & Rs. lakh/circuit km			
Bay	40%	165.32		2564		6.448			
MVA capacity of Power Transformers	30%	123.99		17378.8		0.713			
Lines	30%	123.99		9529.59		1.301			
Total	100%	413.29							
Current Control Period (indicative only)					Control Period Revised				
	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27
Rs.lakh per Bay	6.448	6.76	7.087	7.43	7.761	8.106	8.468	8.845	9.239
Rs. lakh per MVA	0.713	0.748	0.784	0.822	0.859	0.897	0.937	0.979	1.022
Rs.lakh per circuit km	1.301	1.364	1.43	1.499	1.566	1.636	1.709	1.785	1.864
Particulars	Ratio	2018-19 Rs. crore	Normative Value	Unit					
No. of consumers (Nos)	12276321	20%	467.38	3.807	Rs. Lakh/1000 consumers				
No. of Distribution Transformers (Nos)	77724	25%	584.22	0.752	Rs. Lakh/transformer				
Length of HT lines (km)	62835	20%	467.38	0.744	Rs. Lakh/km line				
Length of LT lines (km)	286784	20%	467.38	0.163	Rs. Lakh/km line				
Energy Sales (MU)	20880.7	15%	350.53	0.168	Rs. /Unit				
Employee cost & A&G expenses		100%	2,336.89						
Particulars	Current Control Period indicative only				Control period Revised				
	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27
Rs. lakh /1000 consumers	3.807	3.991	4.185	4.387	4.583	4.787	5	5.223	5.455
Rs. lakh/ transformer	0.752	0.788	0.826	0.866	0.905	0.945	0.987	1.031	1.077
Rs. lakh/km HT line	0.744	0.78	0.818	0.857	0.895	0.935	0.977	1.02	1.066
Rs. Lakh /LT line	0.163	0.171	0.179	0.188	0.196	0.205	0.214	0.224	0.234
Rs/unit	0.168	0.176	0.185	0.193	0.202	0.211	0.22	0.23	0.241

Appendix 14 Rate of inflation

As per Tariff Regulation					
Sl. No	Escalation factors/ year	2017-18	2018-19	2019-20	2020-21
1	CPI (Industrial Workers) 2001=100	284.42	299.9	322.5	338.69
2	Annual CPI increase %	3.08	5.44	7.54	5.02
3	WPI (2011-12) series	114.9	119.8	121.8	123.4
4	Annual WPI increase %	2.96	4.26	1.67	1.31
5	CPI: WPI (70:30) weightage (%)	3.04	5.09	5.78	3.91
Average 4 Year annual increase @ 70:30 weightage (%)		4.454%			

ACTUALS		
2021-22	2022-23	2023-24
356.06	377.62	
5.13	6.05	
139.4	152.5	
12.97	9.40	
7.48	7.06	

Month	CPI IW INDEX NOS			
	2020-21	2021-22	2022-23	2023-24
April	329	120.1	127.7	134.2
May	330	120.6	129	134.7
June	332	121.7	129.2	136.4
July	336	122.8	129.9	139.7
August	338	123	130.2	139.2
September	118	123.3	131.3	
October	120	124.9	132.5	
November	120	125.7	132.5	
December	119	125.4	132.3	
January	118	125.1	132.8	
February	119	125	132.7	
March	120	126	133.3	

2020-21	With Conversion factor		
	2021-22	2022-23	2023-24
329	346	368	386
330	347	372	388
332	350	372	393
336	354	374	402
338	354	375	401
340	355	378	
344	360	382	
345	362	382	
342	361	381	
340	360	382	
343	360	382	
344	363	384	
4064	4273	4531	
338.69	356.06	377.62	

CONVERSION FACTOR 2.88

Total Average

Financial Year	WPI Index	YoY Change	YoY %
INDEX20172018	114.9	3.3	2.96
INDEX20182019	119.8	4.9	4.26
INDEX20192020	121.8	2	1.67
INDEX20202021	123.4	1.6	1.31
INDEX20212022	139.4	16	12.97
INDEX20222023	152.5	13.1	9.40

Appendix 15 Comparison of SBU wise break up of ARR, ERC and Revenue gap Accounts vs TU for 2022-23 (Rs Cr)

No	Particulars	As per Accounts				As per TU				Variation Accounts Vs TU Claim			
		2022-23				2022-23				2022-23			
		SBU G	SBU T	SBU D	Total	SBU G	SBU T	SBU D	Total	SBU G	SBU T	SBU D	Total
1	Cost of Generation (SBU-G)			1199.75			654.69					545.06	0.00
2	Cost of Power Purchase			11240.62	11240.62		10979.68	10979.68				260.94	260.94

3	Cost of Intra-State Transmission (SBU-T)			1339.50				1517.74				-178.24	
4	Cost of generation of power	0.64			0.64	0.64			0.64				
5	Interest & Financial Charges												
6	Interest on loans	107.36	164.69	371.9	643.95					107.36	164.69	371.90	643.95
7	Less: Capitalized	194.69	70.72	24.95	290.36					194.69	70.72	24.95	290.36
8	Net interest	-87.33	93.97	346.95	353.58	91.21	318.43	459.71	869.36	-178.54	-224.46	-112.76	-515.78
9	Interest on GPF	9.95	19.31	168.53	197.78	9.95	19.31	168.53	197.79	0.00	0.00	0.00	-0.01
10	Other interest	0.36	0.48	76.09	76.93	0.26	0.23	75.68	76.17	0.10	0.25	0.41	0.76
11	Master Trust interest	30.83	59.83	522.25	612.91	30.73	59.62	520.45	610.80	0.10	0.21	1.80	2.11
12	Int on SD			137.43	137.43			128.74	128.74	0.00	0.00	8.69	8.69
13	Working capital interest	6.70	13.00	113.51	133.22	6.37	22.90		29.27	0.33	-9.90	113.51	103.95
14	Carrying cost							416.36	416.36	0.00	0.00	-416.36	-416.36
15	Total I&F	-39.50	186.59	1364.76	1511.85	138.52	420.49	1769.47	2328.49	-178.02	-233.90	-404.71	-816.64
16	Depreciation	758.79	373.51	786.81	1919.11	150.69	275.15	311.83	737.66	608.10	98.36	474.98	1181.45
17	O&M Expenses												
18	Employee cost	286.12	558.3	3849.61	4694.03					286.12	558.30	3849.61	4694.03
19	Less: Capitalized	58.27	105.10	382.67	546.04					58.27	105.10	382.67	546.04
20	Balance	227.85	453.20	3466.94	4147.99					227.85	453.20	3466.94	4147.99
21	R&M expenses	22.78	35.43	220.08	278.29			573.70		22.78	35.43	-353.62	278.29
22	A&G expenses	47.34	128.23	468.57	644.14					47.34	128.23	468.57	644.14
23	Less: Capitalized	0	0.36	0.72	1.08					0.00	0.36	0.72	1.08
24	A&G expenses	47.34	127.87	467.85	643.06	167.18		2978.97		-119.84	127.87	-2511.12	643.06
25	O&M New stations					10.92		1.59		-10.92	0.00	-1.59	0.00
26	Total O&M Expenses	297.97	616.50	4154.87	5069.34	178.10	588.41	3554.26	4320.77	119.87	28.09	600.61	748.57
27	Others	34.48	0.49	156.87	191.85	34.48	0.49	30.05	65.02	0.00	0.00	126.82	126.83
28	Exceptional items	0.04	0.01	13.12	13.17	0.04	0.01	13.12	13.17	0.00	0.00	0.00	0.00
29	Pay revision					29.84	58.22	401.47	489.54	-29.84	-58.22	-401.47	-489.54
30	Return on equity (14%)	159.48	214.08			116.38	119.99	253.50	489.87	43.10	94.09	-253.50	-489.87
31	Amortization						8.94		8.94	0.00	-8.94	0.00	-8.94
32	Master Trust-Additional contribution					21.60	44.98	333.42	400.00	-21.60	-44.98	-333.42	-400.00
33	Repayment of Bond					21.99	45.81	339.42	407.22	-21.99	-45.81	-339.42	-407.22
34	Share of gain on T&D loss reduction						8.43	126.41	134.84	0.00	-8.43	-126.41	-134.84
35	Total ARR	1211.90	1391.19	20256.30	19946.58	692.28	1570.93	20285.06	20375.84	519.62	-179.74	-28.76	-429.26
36	Tariff Income/ Rev from operation			17281.33	17281.33			16533.53	16533.53	0.00	0.00	747.80	747.80
37	Less: PF incentive							47.90	47.90	0.00	0.00	-47.90	-47.90
38	Revenue from external sale			1171.93	1171.93			1171.93	1171.93	0.00	0.00	0.00	0.00
39	Non-Tariff Income	12.15	51.69	405.85	469.69	37.59	53.19	808.10	898.88	-25.44	-1.50	-402.25	-429.19
40	Total ERC/ Transfer price	1199.75	1339.50			654.69	1517.74			545.06	-178.24	0.00	0.00
41	Net Revenue Gap			1397.18	1023.62			1819.41	1819.41			-422.24	-795.79

Appendix 16 Comparison of SBU wise break up of ARR, ERC and Revenue gap approval and TU requirement for 2022-23 (Rs Cr)

No	Particulars	As per KSERC order dated 25.06.2022				As per TU				Variation Approval Vs TU Claim			
		2022-23				2022-23							
		SBU G	SBU T	SBU D	Total	SBU G	SBU T	SBU D	Total				
1	Cost of Generation (SBU-G)			613.86			654.69					-40.83	0.00
2	Cost of Power Purchase			9833.64	9833.64			10979.68	10979.68			-1146.04	-1146.04
3	Cost of Inter-State Transmission												
4	Cost of Intra-State Transmission (SBU-T)			1310.51			1517.74					-207.23	0.00
5	Cost of generation of power					0.64		0.64		-0.64			-0.64
6	Interest & Financial Charges												
7	Net interest	75.76	213.61	482.67	772.04	91.21	318.43	459.71	869.36	-15.45	-104.82	22.96	-97.32
8	Interest on GPF	11.75	24.46	181.3	217.51	9.95	19.31	168.53	197.79	1.80	5.15	12.77	19.72
9	Other interest					0.26	0.23	75.68	76.17	-0.26	-0.23	-75.68	-76.17
10	Master Trust interest	32.98	68.72	509.13	610.83	30.73	59.62	520.45	610.80	2.25	9.10	-11.32	0.03
11	Int on SD			151.46	151.46			128.74	128.74	0.00	0.00	22.72	22.72
12	Working capital interest	5.54	18.54		24.08	6.37	22.90		29.27	-0.83	-4.36	0.00	-5.19
13	Carrying cost			325.05	325.05			416.36	416.36	0.00	0.00	-91.31	-91.31
14	Total I&F	126.03	325.33	1649.61	2100.97	138.52	420.49	1769.47	2328.49	-12.49	-95.16	-119.86	-227.52
15	Carrying cost									0.00	0.00	0.00	0.00
16	Depreciation	146.8	231.4	266.09	644.29	150.69	275.15	311.83	737.66	-3.89	-43.75	-45.74	-93.37
17	O&M Expenses												
18	R&M expenses			500.62	500.62			573.70	573.70	35.69	128.07	-73.08	664.38
19	As per norms	163.12	584.79	2844.43	3590.50	167.18	588.41	2978.97	3734.56	-158.91	30.18	-2826.79	190.63
20	O&M New stations	30.07			30.07	10.92		1.59	12.51	19.15	0.00	-1.59	17.56
21	Total O&M Expenses	191.35	584.79	3345.05	4121.19	178.10	588.41	3554.26	4320.77	13.25	-3.62	-209.21	-199.58
22	Others					34.48	0.49	30.05	65.02	-34.48	-0.49	-30.05	-65.02
23	Exceptional items					0.04	0.01	13.12	13.17	-0.04	-0.01	-13.12	-13.17
24	Pay revision					29.84	58.22	401.47	489.54	-29.84	-58.22	-401.47	-489.54
25	Return on equity (14%)	116.38	119.99	253.5	489.87	116.38	119.99	253.50	489.87	0.00	0.00	0.00	0.00
26	Amortization		10.48		10.48		8.94		8.94	0.00	1.54	0.00	1.54
27	Master Trust-Additional contribution	21.6	44.98	333.42	400.00	21.60	44.98	333.42	400.00				
28	Repayment of Bond	21.99	45.81	339.42	407.22	21.99	45.81	339.42	407.22				
29	Recovery of past approved gap			850	850					0.00	0.00	850.00	850.00
30	Share of gain on T&D loss reduction						8.43	126.41	134.84	0.00	-8.43	-126.41	-134.84
31	Total ARR	624.16	1362.76	18795.11	18857.66	692.28	1570.93	20285.06	20375.84	-68.12	-208.17	-1489.95	-1518.18
32	Tariff Income/ Rev from operation			15337.64	15337.64			16533.53	16533.53	0.00	0.00	-1195.89	-1195.89
33	Less: PF incentive			28.6	28.6			47.90	47.90	0.00	0.00	-19.30	-19.30
34	Revenue from external sale			729.83	729.83			1171.93	1171.93	0.00	0.00	-442.10	-442.10
35	Non-Tariff Income	10.3	52.25	829.04	891.59	37.59	53.19	808.10	898.88	-27.29	-0.94	20.94	-7.29
36	Total ERC/ Transfer price	613.86	1310.51	16867.91	16930.46	654.69	1517.74			-40.83	-207.23	16867.91	16930.46
43	Net Revenue Gap			1927.20	1927.20			1819.41	1819.41			107.79	107.79

----- End of Chapter 5 -----

CHAPTER- 6 : SUMMARY OF TRUE-UP AND PRAYER

6.1 An item wise comparison of the ARR, ERC and Revenue gap approved by the Hon'ble Commission, actual as per audited accounts and the true up Sought by KSEBL are given in the Table below.

Table 6.1 SUMMARY OF TRUE-UP FOR FY 2022-23				
Particulars	Approved	Actual	Sought for TU	Deviation from approval
Generation Of Power	0	0.64	0.64	-0.64
Purchase of power	9833.64	11240.62	10979.68	-1146.04
Interest & Finance Charges	2100.97	1511.85	2328.49	-227.52
Depreciation	644.29	1919.11	737.66	-93.37
O&M cost	4121.19	5069.34	4320.77	-199.58
Other Expenses	0	191.85	65.02	-65.02
Additional contribution to Master Trust	400.00	0.00	400.00	0.00
Gains on T&D loss reduction & Incentive for transmission availability	0	0	134.84	-134.84
Amortization of past gap	850	0	0	850.00
RoE	489.87	0	489.87	0.00
Amortization and interest	10.48	0	8.94	1.54
Exceptional item	0	13.17	13.17	-13.17
Pay revision expenses	0	0	489.54	-489.54
Repayment of bond	407.22	0.00	407.22	0.00
Net Expenditure (A)	18857.66	19946.58	20375.84	-1518.18
Non-Tariff Income	891.59	469.69	898.88	-7.29
Revenue from tariff & external sale	16038.87	18453.26	17657.56	-1618.69
Total Income (B)	16930.46	18922.95	18556.44	-1625.98
Revenue surplus (Gap) (B-A)	-1927.20	-1023.62	-1819.41	-107.79

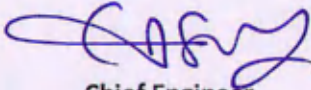
6.2 The Statutory Auditors have audited and certified the accounts for the year 2022-23. This trueing up petition is prepared on the basis of the audited accounts. The petitioner is furnishing the details of accounts as per formats prescribed in the Tariff regulation, 2021. However, should the Hon'ble Commission require any further details or information; the petitioner will be furnishing them as and when required.

Prayer

KSEBL humbly requests before the Hon'ble Commission that:

- (1) Truing up of Expenses and Revenue as per the Audited Accounts of KSEBL for the year 2022-23 as explained in this petition may kindly be approved, in view of the care and caution taken by the KSEBL for carrying out the functions of the Board as a public utility as per the statutory provisions under the Electricity Act, 2003 and also as per the directions, orders and regulations issued by the Hon'ble Commission, policies and directions issued by the State and Central Government and other statutory bodies within the provisions of the Electricity Act-2003.
- (2) O&M norms may kindly be revised based on trued up values for 2018-19, approved pay revision expenses for 2018-19 and additional employee cost for the approved employee strength, as envisaged in Tariff Regulation, 2021.
- (3) Final true up orders may kindly be issued after considering eligible O&M cost based on revised O&M norms.
- (4) The revenue gap as per the petition may be accounted as regulatory asset or any other appropriate means deemed fit by the Hon'ble Commission according to the provisions of law.

On Behalf of KSEB Limited



Chief Engineer
Commercial & Tariff

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Data Forms

Sl.No	SBU	Pages
1	SBU - G	223 - 253
2	SBU - T	254 - 277
3	SBU - D	278 - 321

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ARR and Tariff Formats
Generation Business
INDEX

S.No.	Form No.	Title of Form
1	2	3
1	Form G 1.1	Summary of Tariff Proposal
2	Form G 1.2	Aggregate Revenue Requirement
3	Form G 2.1	Deleted as not applicable
4	Form G 2.2	Operational Parameters - Generation
5	Form G 3.1	Revenue from Sale of Power
6	Form G 3.2	Non-Tariff Income
7	Form G 3.3	Capital Subsidies and Grants
8	Form G 4	O&M Expenses
9	Form G 4a	Employee Expenses
10	Form G 4b	Administrative & General Expenses
11	Form G 4c	Repair & Maintenance Expenses
12	Form G 5.1	Energy Charges for Thermal Generation
13	Form G 5.2	Fuel Cost Details for Thermal Generation
14	Form G 6.1	Fixed assets & provisons for depreciation
15	Form G 6.2a	Calculation of Weighted Average Rate of Interest on Actual Loans
16	Form G 6.2b	Calculation of Interest on Normative Loan
17	Form G 6.3	Deleted as not applicable
18	Form G 6.4	Consolidated report on additions to Fixed Assets during the year
19	Form G 6.5	Abstract of Capital Cost Estimates and Schedule of Commissioning for the New projects
20	Form G 6.6	Deleted as not applicable
21	Form G 6.7	Deleted as not applicable
22	Form G 6.8	Deleted as not applicable
23	Form G 6.9	Return on Equity/Return on Net Fixed Assets
24	Form G 6.10	Deleted as not applicable
25	Form G 6.11	Interest on Working Capital
26	Form G 6.12	Deleted as not applicable
27	Form G 6.13	Net Inflow Review (Financial Year)
28	Form G 6.14	Deleted as not applicable
29	Form G 6.15	Deleted as not applicable
30	Form G 7.1	Deleted as not applicable
31	Form G 8	Deviation Analysis
Other Information/Documents		
1	Form G P&L	Profit & Loss Account
2	Form G BS	Balance Sheet at the end of the year
3	Form G CF	Cash Flow for the year

4. Corporate audited/unaudited Balance Sheet and Profit & Loss Accounts with all the Schedules & annexures for the relevant years.

Note : Spread sheet financial models (in CD) shall also be submitted along with the application.

**Form G 1.1
Summary of Tariff Proposal**

Name of the Generating Business/Company

KERALA STATE ELECTRICITY BOARD LTD.

Name of the Generating Station /Unit :

S.No.	Particulars	Ref.of Form No	2022-23				Remarks
			Approved in Tariff Order	Audited	Normative	Truing Up requirement	
1	2	3	4	5	6	7	14
1	Capacity Charge						
1.1	Annual Fixed Charges						
1.1.1	O & M Expenses	4	191.35	297.97		178.1	
1.1.2	Depreciation	6.1	146.8	758.78		150.69	
1.1.3	Interest on Loan Capital	6.2	75.76	-87.33		91.21	
1.1.4	Interest on Bonds to meet Terminal Liabilities	6.2 ©	32.98	30.83		30.73	
1.1.5	Interest on Working Capital	6.11	5.54	6.70		6.37	
1.1.6	Return on Equity	6.9	116.38	159.48		116.38	
1.1.7	Bond repayment	6.12	21.99			21.99	
1.1.8	Others			34.52		64.36	
	Additional contribution to Master Trust		21.6	0.00		21.6	
	Other interest		11.75	10.31		10.21	
1.1.9	Less: Non-Tariff income	3.2	10.3	12.15		37.59	
	Total (1.1) Annual Fixed Charges		613.85	1199.11		654.05	
2	Total- Energy (variable) charges			0.64		0.64	
3	Units sold to Discoms (MU)		7034.33	8568.801		8568.801	
4	Rate of Variable Charges						
4.1	Rate of Energy Charge from Primary Fuel (REC) _p	5.3					
4.2	Total-(2) Rate of Energy Charge ex-bus(REC) ^{3A,3B}	5.1					

Form G 1.2
Aggregate Revenue Requirement
KERALA STATE ELECTRICITY BOARD LTD.

Name of the Generating Business/Company

Name of the Generating Station/Unit : _____

(Rs. Crore)

S.No.	Particulars	Reference Form	2022-23				Remarks
			Approved in Tariff Order	Audited	Normative	Truing Up requirement	
1	2	3	4	5	6	7	14
A	Expenditure						
1	Variable Costs, including Fuel Cost	5.1		0.64		0.64	
2	Depreciation	6.1	146.8	758.79		150.69	
3	Interest and Finance charges	6.2	126.03	-39.50		138.52	
4	Return on Equity	6.9	116.38	159.48		116.38	
5	Tax on ROE	6.12					
6	Repayment of master trust bond		21.99			21.99	
	Addl. Contribution to master trust		21.6			21.60	
	Exceptional item			0.04		0.04	
7	O & M Expenses	4	191.35	297.97		178.10	
9	Any other item (to be specified)			34.48		34.48	
	Pay revision					29.84	
	Other interest						
	Total- (A) Expenditure		624.15	1211.90		692.28	
B	Receipts						
1	Revenue from Sale of Power (Tariff income)	3.1					
2	Non Tariff income	3.2	10.30	12.15		37.59	
3	Revenue Subsidies, Grants & Subvention from State Govt.						
	Total- (B)						
C	ARR (A-B(2)-B(3))		613.85	1199.75		654.69	

Form G 2.2
Operational Parameters - Generation

Name of the Generating Business/Company

KERALA STATE ELECTRICITY BOARD LTD.

Name of the Generating Station /Unit : _____

S. No.	Particulars	Units	2022-23			Remarks
			Approved in Tariff Order	Audited	Truing Up requirement	
1	2	3	4	5	6 = 5 - 4	13
1	Operational Parameters - Hydel					
1.1	Total Capacity	MW				
	AFC					
	Capacity Charge					
	Energy charge rate					
1.2	NAPAF	%				
1.3	Actual/Projected Annual Plant Availability Factor	%				
1.4	Design Energy	MU				
1.5	Gross Generation	MU	7119.03	8667.852	8667.852	
1.6	Auxiliary Energy Consumption	%	1.19%	1.14%	1.14%	
1.7	Auxiliary Energy Consumption	MU	84.69	99.049	99.049	
1.8	Net Generation	MU	7034.33	8568.801	8568.801	

Form G 3.1
Revenue from Sale of Power

Name of the Generating Business/Company **KERALA STATE ELECTRICITY BOARD LTD.**

Name of the Generating Station : _____

Year (n-1)*

Rs. Crore

S.No.	Particulars	Allocation (in %) /contract demand	Unit Sold (MU)	% of total Unit Sold	Fixed Charges	Energy Charges	Others, if any	Total (6+7+8)	Average rate/kWh (paise/kWh)	Remarks
1	2	3	4	5	6	7	8	9	10	11
A)	Revenue from sale of Electricity (as per approved tariff)									
1	Dist.Licensee/trader/ consumers									
(a)										
(b)										
(c)										
(d)										
(e)										
(f)										
2	Other recoveries									
3								1199.75		

**Form G 3.2
Non-Tariff Income**

Name of the Generating Business/Company

KERALA STATE ELECTRICITY BOARD LTD.

Name of the Generating Station /Unit :

Rs. Crore

Sr. No	Particulars	2022-23			Remarks
		Approved in Tariff Order	Audited	Truing Up requirement	
1	2	3	4	5 = 4 - 3	12
	Non-tariff income				
1	Interest on staff loans and advances				
2	Income from statutory investments				
3	Income from sale of ash/rejected coal				
4	Income from rent of land or buildings	0.67			
5	Income from sale of scrap	4.08		10.98	
6	Income from staff welfare activities				
7	Rental from staff quarters	0.05			
8	Excess found on physical verification				
9	Interest on investments, fixed and call deposits and bank balances	2.6	2.33	2.33	
10	Interest on advances to suppliers/contractors	-0.04		1.30	
11	Income from hire charges from contractors and others	0.01			
12	Income from advertisements, etc.				
13	Miscellaneous receipts	2.92	4.29	22.98	
14	Interest on delayed or deferred payment on bills				
15	Rebate from fuel suppliers				
16	Clawback of Grant		5.53		
	Total non-tariff income	10.30	12.15	37.59	

Form G 3.3
Capital Subsidies and Grants

Name of the Generating Business/Company **KERALA STATE ELECTRICITY BOARD LTD.**

Name of the Generating Station/Unit : _____

Rs. Crore

S. No.	Particulars	2022-23			Remarks
		Approved in Tariff Order	Audited	Truing Up requirement	
1	2	3	4	5 = 4 - 3	12
1	Consumer contribution		0.09	0.09	
2	Subsidies				
3	Grants Recd. Towards Cost of Fixed Assets		0		
4	Others		0		
5	Adjustments				
	Total	0	0.09	0.09	

Form G 4
O&M Expenses

Name of the Generating Business/Company

KERALA STATE ELECTRICITY BOARD LTD.

Name of the Generating Station /Unit :

----- (Rs. Crore)

S.No.	Particulars	2022-23				Remarks
		Approved in Tariff Order	Audited	Normative	Truing Up requirement	
1	2	3	4	5	6	13
1	Employee Expenses (as per norms)		227.85			
2	Annual Contribution for Terminal Liabilities based on actuarial valuation					
3	Repair & Maintenance Expenses (as per norms)		22.78			
4	Administrative & General Expenses (as per norms)		47.34			
5	Total O&M Expenses (as per Norms)	191.35				
6	Total O&M Expenses (actuals)		297.97		178.1	

Form G 4(a)
Employee Expenses

Name of Generating Business/Licensee

KERALA STATE ELECTRICITY BOARD LTD.

Rs. Crore

S. No.	Particulars	Reference	2022-23			Remarks
			Approved in Tariff Order	Audited	Truing Up requirement	
1	2	3	4	5	6 = 5 - 4	13
1	Basic Salary			228.53		
2	Dearness Allowance (DA)			40.14		
3	House Rent Allowance			6.46		
4	Conveyance Allowance			0.00		
5	Leave Travel Allowance			0.05		
6	Earned Leave Encashment			3.24		
7	Other Allowances			4.07		
8	Medical Reimbursement			0.78		
9	Overtime Payment			0.22		
10	Bonus/Ex-Gratia Payments			0.40		
11	Interim Relief / Wage Revision			0.00		
12	Staff welfare expenses			0.14		
13	VRS Expenses/Retrenchment Compensation			0.00		
14	Commission to Directors			0.00		
15	Training Expenses			0.00		
16	Payment under Workmen's Compensation Act			0.00		
17	Net Employee Costs			284.04		
18	Terminal Benefits			0.00		
18.1	Provident Fund Contribution			0.00		
18.2	Provision for PF Fund			0.00		
18.3	Pension Payments			0.00		
18.4	Gratuity Payment			0.00		
18.5	Annual Contribution for Terminal Liabilities based on actuarial valuation			0.00		
	Contribution of KSEB Ltd towards National Pension Scheme			2.08		
19	Others			0.00		
20	Gross Employee Expenses			286.12		
21	Less: Expenses Capitalised			58.27		
22	Net Employee Expenses			227.85		

Form G 4(b)
Administrative & General Expenses

Name of Generating Busi **KERALA STATE ELECTRICITY BOARD LTD.**

Rs. Crore

S. No.	Particulars	Reference	2022-23			Remarks
			Approved in Tariff Order	Audited	Truing Up requirement	
1	2	3	4	5	6 = 5 - 4	13
1	Rent Rates & Taxes			1.43		
2	Insurance			0.63		
3	Telephone & Postage, etc.			0.15		
4	Legal charges			0.33		
5	Audit Fees			0.06		
6	Consultancy charges			0.01		
7	Other Professional charges			2.09		
8	Conveyance			4.35		
9	Vehicle Running Expenses Truck / Delivery Van			0.06		
10	Vehicle Hiring Expenses Truck / Delivery Van			0.01		
11	Electricity charges			0.00		
12	Water charges			0.04		
13	Entertainment			0.16		
14	Fees & subscription			0.37		
15	Printing & Stationery			0.54		
16	Advertisements, exhibition publicity			0.70		
17	Contribution/Donations			0.18		
18	Training expenses			0.40		
19	Miscellaneous Expenses			0.35		
20	DSM activities			0.00		
21	SRPC expenses			0.13		
22	Sports and related activities			0.11		
23	Freight			3.72		
24	Purchase Related Advertisement Expenses			0.82		
25	Bank Charges			0.00		
26	Office Expenses			25.16		
27	License Fee and other related fee			3.43		
28	Cost of services procured			0.00		
29	Outsourcing of metering and billing system			0.00		
30	V-sat, Internet and related charges			0.04		
31	Security arrangements			0.00		
32	Books & periodicals			0.03		
33	Computer Stationery			0.00		
34	Others			0.49		
35	Others- Other Purchase related Expenses			0.18		
36	Expenditure in Connection with COVID19			1.38		
37	Expenditure in Connection with defend COVID19			0.00		
35	Gross A&G Expenses			47.34		
36	Ele. Duty u/s 3(I), KED Act			0.00		
37	Less: Expenses Capitalised			0.00		
38	Net A&G Expenses			47.34		

G4(c)

Form G 4(c)
Repair & Maintenance Expenses

Name of Generating Bus **KERALA STATE ELECTRICITY BOARD LTD.**

Rs. Crore

Particulars	Reference	2022-23				Remarks
		Approved in Tariff Order	Audited	flood (Exceptional Items)	Truing Up requirement	
2	3	4	5		6 = 5 - 4	13
Plant & Machinery			13.00	0.01	13.01	
Buildings			1.95	0.00	1.95	
Civil Works			2.17	0.03	2.20	
Hydraulic Works			4.20	0.01	4.21	
Lines & Cable Networks			0.16	0.00	0.16	
Vehicles			0.91		0.91	
Furniture & Fixtures			0.05		0.05	
Office Equipment			0.33		0.33	
Gross R&M Expenses			22.78	0.04	22.83	
Less: Expenses Capitalised						
Net R&M Expenses			22.78	0.04	22.83	

Form G 5.1
Energy Charges for Thermal Generation

Name of the Generating Business/Company

KERALA STATE ELECTRICITY BOARD LTD.

Name of the Generating Station/Unit : _____

S.No.	Particulars	Units	2022-23				Remarks
			Approved in Tariff Order	Audited	Normative	Truing Up requirement	
1	2	3	4	5	6	7	14
1	Operational Parameters						
1.1	Total Capacity	MW					
1.2	Availability	%					
1.3	PLF	%					
1.4	Gross Generation	MU	0.12				
1.5	Auxiliary Energy Consumption	%					
1.6	Auxiliary Energy Consumption	MU	0.558				
1.7	Net Generation	MU	-0.438				
1.8	Heat Rate	kcal/kWh					
2	Fuel Parameters (for each primary and secondary fuel)						
2.1	Gross Calorific Value						
2.1.1	Fuel 1-----	kcal/unit					
2.2	Landed Fuel Price per unit (Please specify the fuel)						
2.2.1	Fuel 1-----	Rs/unit					
3	Fuel Consumption and Heat Contribution (for each fuel)						
3.1	Specific Fuel Consumption						
3.1.1	Fuel 1-----	unit/kWh					
3.2	Total Fuel Consumption						
3.2.1	Fuel 1-----	unit					
3.3	Heat Content (each fuel separately)						
3.3.1	Fuel 1 (2.1.1 x 3.1.1)	Million					

S.No.	Particulars	Units	2022-23				Remarks
			Approved in Tariff Order	Audited	Normative	Truing Up requirement	
1	2	3	4	5	6	7	14
	Total Heat Content						
4	Total Fuel Cost						
4.1.1	Fuel 1----- (2.2.1 x 2.2.1)	Rs Crore					
	Total Fuel Cost	Rs Crore					
5	Other Charges and						
5.1.1	Other Charges (pl. specify	Rs Crore					
5.1.2	Other Adjustments (Pl. specify	Rs Crore					
	Total Other Charges and Adjustments	Rs Crore					
6	Total Cost (4+5)	Rs Crore		0.64		0.64	
7	Cost of Generation per unit (at Generation Terminal) (6/1.4)	Rs/kWh					
8	Energy Charge per unit (ex-						
8.1.1	Fuel 1-----	Rs/kWh					
	Total--(9)	Rs/kWh					

Form G 5.2**Fuel Cost Details for Thermal Generation**Name of the Generating Business/Company **KERALA STATE ELECTRICITY BOARD LTD.**

Name of the Generating Station/Unit : _____

S. No.	Particulars	Units	2022-23			Remarks
			Approved in Tariff Order	Audited	Truing Up requirement	
1	2	3	4	5	6 = 5 - 4	13
1	Basic Cost	Rs/unit				
2	Freight	Rs/unit				
3	Freight Surcharge, if applicable	Rs/unit				
4	Fuel Handling Charges	Rs/unit				
5	Taxes and Duties (pl. specify details)	Rs/unit				
6	Any other charges	Rs/unit				
7	Total Price excluding Transit Loss	Rs/unit				
	Transit Loss	%				
	Total Price including Transit Loss	Rs/unit	0	0.64	0.64	

Form G 6.1
Fixed assets & provisions for depreciation

Name of the Generating Business/Company

KERALA STATE ELECTRICITY BOARD LTD.

Name of the Generating Station :

Year (n-1)*

(Rs Crore)

S. No.	Particular	Rate of depreciation %	Gross fixed assets for 2022-23				Provisions for depreciation				Net fixed assets at the beginning of the year	Net Fixed Asset at the end of the year
			At the beginning of the year	Additions during the year	Decom. Liability provided for the year	At the end of the year	Cumulative upto the beginning of the year	Additions during the year	Adjustment during the year	Cumulative at the end of the year		
1	2	3	4	5	6	7	8	9	10	11	12	13
1	Land & land rights		1518.51	0.66	0.00	1519.17		0.00		0.00	1518.51	1519.17
1A	Hydraulic works		1592.18	110.62	-1.29	1701.51	904.45	66.83	-0.49	970.79	687.73	730.71
2	Building & Civil works of Power plant		677.20	64.16	-6.83	734.53	317.33	22.49	-4.13	335.68	359.87	398.84
3	Plant & machinery including sub-station equipments		13725.96	78.42	-2.52	13801.86	2181.25	665.94	4761.22	7608.42	11544.70	6193.44
4	Communication equipment		3.93	0.21	0.00	4.14	3.56	0.07		3.63	0.37	0.50
5	Vehicles		15.87	0.38	0.00	16.26	8.60	1.08		9.68	7.28	6.58
6	Furniture & fixtures		13.16	0.42	0.00	13.58	4.51	0.99		5.51	8.65	8.07
7	Office Equipments		5.89	0.65	0.01	6.55	4.08	0.50		4.58	1.81	1.98
8	Capital spares		0.00		0.00	0.00	0.00	0.00		0.00	0.00	0.00
9	IT Equipments		9.05	0.16	0.00	9.21	6.44	0.40		6.85	2.61	2.37
11	Any other items (Lines, Cable Network etc.)		10.32	0.52	-0.01	10.83	6.24	0.48		6.72	4.07	4.11
	Total (1) to (11)		17572.07	256.21	-10.65	17817.63	3436.47	758.79	4756.59	8951.85	14135.60	8865.77

Form G 6.2(a)**Calculation of Weighted Average Rate of Interest on Actual Loans**Name of Generating Business/Company
Licensed Area of Supply

KERALA STATE ELECTRICITY BOARD LTD

(Rs. Cr)

S.No.	Particulars (specify items)	2022-23			Remarks
		Approved in Tariff Order	Audited	Truing Up requirement	
1	2	3	4	5 = 4 - 3	12
1	Loan 1		SEPARATE SHEET ATTACHED		
i.	Gross Loan -Opening				
ii.	Cumulative repayments of Loans upto previous year				
iii.	Net loan-Opening				
iv.	Add: Drawal(s) during the Year				
v.	Less: Repayment (s) of Loans during the year				
vi.	Net loan - Closing				
vii.	Average Net Loan				
viii.	Rate of Interest on Loan on annual basis				
ix.	Interest on loan				
x.	<i>Loan repayment effective from (date to be indicated)</i>				
2	Loan 2				
i.	Gross Loan -Opening				
ii.	Cumulative repayments of Loans upto previous year				
iii.	Net loan-Opening				
iv.	Add: Drawal(s) during the Year				
v.	Less: Repayment (s) of Loans during the year				
vi.	Net loan - Closing				
vii.	Average Net Loan				
viii.	Rate of Interest on Loan on annual basis				
ix.	Interest on loan				
x.	<i>Loan repayment effective from (date to be indicated)</i>				
3	Loan 3				
..	...				
4	Total Loan				
i.	Gross Loan -Opening				
ii.	Cumulative repayments of Loans upto previous year				
iii.	Net loan-Opening		1399.91	1399.91	
iv.	Add: Drawal(s) during the Year		319.95	319.95	
v.	Less: Repayment (s) of Loans during the year		466.28	466.28	
vi.	Net loan - Closing		1253.58	1253.57	
vii.	Average Net Loan		1326.74	1326.74	
viii.	Interest on Loan		107.36	107.36	
ix.	Weighted average Rate of Interest on Loans		8.09%	8.09	

Note: In case of Foreign Loans, the calculations in Indian Rupees is to be furnished. However, the

Note: nth year = FY 2014-15, n+1th year = FY 2022-23, and so on, for the first filing under the KSERC (Terms

TERM-LOAN

SL NO	NAME OF THE FINANCIAL INSTITUTION	Net Loan - Opening	Current Financial Liability (OB)	Gross loan-Opening - 01/04/2022	Add: Drawal(s) during the Year	Less: Repayment (s) of Loans during the year	Gross loan - Closing - 31/03/2023	Current Financial Liability (CB)	Net loan - Closing - 31/03/2023	Average Net Loan	Rate of Interest on Loan on annual basis	Interest on loan	Loan repayment effective from (date to be indicated)
A	SECURED LOANS TERM LOANS												
1	Special Loan Assistance from REC	243.60	27.07	270.66	0.00	33.48	237.18	26.35	210.83	253.92	10% - 10.75%	26.90	31-10-2019
2	REC - Peringalkuthu. Scheme	91.29	0.00	91.29	26.11	0.00	117.41	0.00	117.41	104.35	9.5% - 9.95%	8.82	Repayment not yet started
3	REC – Bhoothathankettu Scheme	105.61	7.68	113.29	0.00	113.29	0.00	0.00	0.00	56.64	9.75% - 10.25%	2.66	Closed
4	SOUTH INDIAN BANK-Barapole SHEP	54.58	7.20	61.78	0.00	7.20	54.58	9.00	45.58	58.18	9.15%	4.84	30-04-2017
5	REC for the DDG Scheme	0.14	0.00	0.14	0.00	0.01	0.12	0.01	0.11	0.13	10.08%	0.01	
6	RIDF of NABARD Banasurasagar SPVP	2.25	0.00	2.25	0.00	0.00	2.25	0.00	2.25	2.25	2.75% - 6.25%	0.08	Repayment not yet started
7	RIDF of NABARD Upper Kallar SHEP	13.42	0.00	13.42	1.31	0.00	14.73	0.00	14.73	14.07	2.75% - 6.25%	0.50	Repayment not yet started
8	SBI	185.46	26.27	211.72	82.56	32.93	261.36	34.40	226.96	236.54	9.40%	22.25	01-11-2020
9	Special Loan Assistance from PFC	174.78	16.65	191.42	0.00	21.25	170.17	16.21	153.97	180.80	9.08%	16.19	15-10-2018
10	PFC GEL Kakkayam	15.09	1.37	16.47	0.00	1.37	15.09	1.37	13.72	15.78	9.6% to 10.35%	1.61	15-04-2019
11	PFC GEL Perumthenaravi	26.91	2.56	29.48	0.00	2.56	26.91	2.56	24.35	28.20	9.6% to 10.25%	2.83	15-10-2018
12	Kerala Financial Corporation	86.11	10.39	96.49	0.00	28.21	68.28	9.28	59.00	82.39	9.00%	6.65	31-03-2021
13	Medium Term Loan Kerala Financial Corp	45.26	21.73	66.99	0.00	23.22	43.76	21.15	22.60	55.37	8.00%	4.44	31-03-2021
14	Indian Bank	1.29	0.17	1.46	0.00	0.25	1.21	0.31	0.90	1.33	9.25%	0.10	10-03-2022
15	NABARD-Solar Plant at Pothencode	8.47	0.00	8.47	0.00	0.00	8.47	0.00	8.47	8.47	2.75%	0.23	Repayment not yet started
16	NABARD- Solar Plant at Thalakulathur	3.27	0.00	3.27	0.00	0.00	3.27	0.00	3.27	3.27	2.75%	0.09	Repayment not yet started
17	NABARD-Peruvannamoozhi SHEP	23.98	0.00	23.98	18.88	5.66	37.19	0.00	37.19	30.59	2.75% to 5.25%	0.82	Repayment not yet started
18	Kerala Financial Corporation - II	0.00	0.00	0.00	17.63	1.20	16.43	1.86	14.58	8.22	8.00%	1.36	30-09-2022
19	Dhanlaxmi Bank	0.00	0.00	0.00	17.63	0.00	17.63	2.94	14.69	8.81	8.00%	1.27	31-05-2023
20	Kerala Financial Corporation - III	0.00	0.00	0.00	70.51	1.12	69.39	7.42	61.97	34.70	8.35%	2.43	31-03-2023

TERM-LOAN

SL NO	NAME OF THE FINANCIAL INSTITUTION	Net Loan - Opening	Current Financial Liability (OB)	Gross loan-Opening - 01/04/2022	Add: Drawal(s) during the Year	Less: Repayment (s) of Loans during the year	Gross loan - Closing - 31/03/2023	Current Financial Liability (CB)	Net loan - Closing - 31/03/2023	Average Net Loan	Rate of Interest on Loan on annual basis	Interest on loan	Loan repayment effective from (date to be indicated)
	SUB-TOTAL	1081.50	121.07	1202.57	234.63	271.76	1165.44	132.87	1032.58	1184.00	0.94	104.07	
B	UNSECURED LOANS TERM LOANS												
1	Short Term Loan from REC	90.52	0.00	90.52	0.00	90.52	0.00	0.00	0.00	45.26	7.75%	0.88	
2	Short term loan from M/s IREDA	0.00	106.82	106.82	85.33	104.00	88.14	11.41	76.72	97.48	7.75%	2.41	
	SUB-TOTAL	90.52	106.82	197.34	85.32	194.52	88.14	11.41	76.72	142.74		3.29	
	TOTAL	1172.02	227.89	1399.91	319.95	466.28	1253.58	144.28	1109.30	1326.74		107.36	
C	BOND	8371.74	757.99	9129.73		1500.26	7629.47	47.29	7582.18				

Form G 6.2(b)**Calculation of Interest on Normative Loan**

Name of Generating Business/Company
Licensed Area of Supply

KERALA STATE ELECTRICITY BOARD LTD.

(Rs. Cr)

S.No.	Particulars (specify items)	2022-23			Remarks
		Approved in Tariff Order	Normative	Truing Up requirement	
1	2	3	4	5 = 4 - 3	12
1	Gross Normative loan - Opening				
2	Cumulative repayment of Normative Loan upto previous year				
3	Net Normative loan - Opening	497.97	1399.91	926.54	
4	Increase/Decrease due to ACE/ de-capitalization during the Year	686.11	319.95	254.99	
5	Repayments of Normative Loan during the year	146.8	466.28	150.69	
6	Net Normative loan - Closing	1037.28	1253.58	1030.84	
7	Average Normative Loan	767.58	1326.74	978.69	
8	Weighted average Rate of Interest of actual Loans	9.87	8.09%	9.32%	
9	Interest on Normative loan	75.76	107.36	91.21	

Form G 6.2 (c)

Interest on Bonds to meet Terminal Liabilities

Name of Generating Business/ KERALA STATE ELECTRICITY BOARD LTD.

(Rs. Cr)

S.No	Particulars (specify items)	2022-23			Remarks
		Approved in Tariff Order	Normative	Truing Up requirement	
1	2	3	4	5 = 4 - 3	12
A	Bond Series 1				
1	Value of Bond				
2	Rate of Interest on Bond		10%	10%	
3	Interest on Bond	32.98	30.73	30.73	
B	Bond Series 2				
4	Value of Bond				
5	Rate of Interest on Bond				
6	Interest on Bond				
C	Bond Series 3				
	...				

Form G 6.4

Consolidated report on additions to Fixed Assets during the year

Name of the Generating Business/Company :

KERALA STATE ELECTRICITY BOARD LTD.

Name of the Generating Station : _____

Sr. No.	Asset Description	Asset Code	2022-23						
			(Actuals/audited)						
			Cost	Interest	Finance Charges	Pre-Operative expenses	Exchange fluctuations	Total	Date of commissioning
1	2	3	4	5	6	7	8	9	10
01.	Land & Land Rights	10.1	0.66					0.66	
02.	Buildings	10.2	32.43					32.43	
03.	Hydraulic Works	10.3	110.62					110.62	
04.	Other Civil Works	10.4	31.73					31.73	
05.	Plant & Machinery	10.5	78.63					78.63	
06.	Lines, Cable, Network etc.	10.6	0.52					0.52	
07.	Vehicles	10.7	0.38					0.38	
08.	Furniture & Fixtures	10.8	0.42					0.42	
09.	Office Equipments	10.9	0.81					0.81	
	TOTAL		256.21					256.21	

Form G 6.5

Abstract of Capital Cost Estimates and Schedule of Commissioning for the New projects

Name of the Generating Business/Company : KERALA STATE ELECTRICITY BOARD LTD.

Name of the Power Station : Peringalkuthu Addl Ext SHEP

New Projects

Capital Cost Estimates

Board of Director/ Agency approving the Capital cost estimates:						
Date of approval of the Capital cost estimates:						
	Present Day Cost			Completed Cost		
Price level of approved estimates	As of End of _____ Qtr. Of the year			As on Scheduled COD of the Station		
Foreign Exchange rate considered for the Capital cost estimates						
Capital Cost excluding IDC & FC						
Foreign Component, if any (In Million US \$ or the relevant Currency)						
Domestic Component (Rs. Cr.)						
Capital cost excluding IDC & FC (Rs. Cr)						
IDC & FC						
Foreign Component, if any (In Million US \$ or the relevant Currency)						
Domestic Component (Rs. Cr.)						
Total IDC & FC (Rs.Cr.)						
Rate of taxes & duties considered						
Capital cost Including IDC & FC						
Foreign Component, if any (In Million US \$ or the relevant Currency)						
Domestic Component (Rs. Cr.)						
Capital cost Including IDC & FC (Rs. Cr)					107	
Schedule of Commissioning						
COD of Unit-I/Block-I					07.06.2022	
COD of Unit-II/Block-II						
COD of last Unit/Block						

Form G 6.9

Return on Equity/Return on Net Fixed Assets

Name of the Generating Business/Company:

KERALA STATE ELECTRICITY BOARD LTD.

Name of the Generating Station :

Rs. Crore

S.No.	Particulars	Reference	2022-23				Remarks
			Approved in Tariff Order	Audited	Normative	Truing Up requirement	
1	2	3	4	5	6	7	14
1	Equity at the beginning of the year			831.27			
2	Capitalisation						
3	Equity portion of capitalisation						
4	Equity at the end of the year			831.27			
	Return Computation						
5	Return on Equity at the beginning of the year	14%*(1)		159.48			
6	Return on Equity portion of capitalisation (on pro-rata basis)	14%*(3)/2		0			
7	Total Return on Equity	(5)+(6)	116.38	159.48	116.38	116.38	

Form G 6.11
Interest on Working Capital

Name of the Generating Business/Company **KERALA STATE ELECTRICITY BOARD LTD.**

Name of the Generating Station : _____

Rs. Crore

S. No.	Particulars	2022-23				Remarks
		Approved in Tariff Order	Audited	Normative	Truing Up requirement	
1	2	3	4	5	6	13
1	Fuel cost (as per norms)		0.64		0.64	
2	Liquid fuel stock (as per norms)		73.07			
3	O & M expenses (as per norms)		297.97		229.54	
4	Maintenance Spares (as per norms)				54.41	
5	Receivables (as per norms)		0.00			
	Total Working Capital		371.68		73.59	
	Rate of Interest (as per norms)				8.65	
	Interest on Working Capital	5.54	6.70		6.37	

Form G 6.13
Net Inflow Review (Financial Year)

Name of the Generating Business/Company KERALA STATE ELECTRICITY BOARD LTD. MU

Sr. No.	Year	Apr	May	June	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Total
1	2	3	4	5	6	7	8	9	10	11	12	13	14	
20	2022-23	215.14	495.49	461.29	1951.93	1674.5	7554.57	678.85	386.03	267.67	124.35	86.24	91.45	7188.51

Form G 8

Deviation Analysis

Name of Generation Business/Company **KERALA STATE ELECTRICITY BOARD LTD.**

Year : 2022-23

(Rs. Crore)

S. No.	Particulars	Approved	Actual	Deviation	Reason for Deviation	Controllable	Uncontrollable
1	2	3	4	5	6	7	8
A	Expenditure				EXPLAINED IN PETITION		
1	Variable Costs, including Fuel Cost		0.64	-0.64			
2	1) Depreciation	146.8	758.78	-611.98			
3	Interest on term Loan & Finance charges	120.49	-46.20	166.69			
4	Return on Equity	116.38	159.48	-43.10			
5	Tax on ROE			0.00			
6	Interest on Working Capital	5.54	6.70	-1.16			
7	O & M Expenses	191.35	298.01	-106.66			
9	Any other item (to be specified)		34.48	-34.48			
	Amortisation of Intangible Assets		0.01	-0.01			
	Prior Period Expenditure		0.00	0.00			
	Total (A) Expenditure	624.15	1211.90	-587.75			
B	Receipts			0.00			
1	Revenue from Sale of Power (Tariff income)			0.00			
2	Non Tariff income	10.3	12.15	-1.85			
3	Revenue Subsidies, Grants & Subvention from State Govt.						

Form G P&L

Profit & Loss Account

Name of Generation Business/Co: **KERALA STATE ELECTRICITY BOARD L**

S.No.	Particulars	Ref	Previous Year	Previous Year	Remarks
			2022-23	2020-21	
1	2	3	4	5	6
	I. INCOME				
	a. Revenue from Sale of Power		1199.75	620.11	
	b. Revenue Subsidies and Grants				
	c. Other Income		12.15	38.09	
	Total (a+b+c)		1211.90	658.20	
	II. EXPENDITURE				
	a. Repairs and Maintenance.		22.78	30.49	
	b. Employee Cost		286.12	278.63	
	c. Administration and General Expenses		47.34	53.97	
	d. Depreciation		758.78	180.22	
	1). Amortisation of Intangible Assets		0.01	0.01	
	e. Interest and Finance charges		155.19	177.28	
	f. Subtotal (a+b+c+d+e)		1270.22	720.60	
	g. Less Capitalised Expenses:				
	- Interest & Finance Charges		194.69	144.32	
	- Other Expenses		58.27	74.03	
	h. Other Debits		34.48	0.01	
	Change in fair valuation and other adjustments				
	I. Extra Ordinary Items		0.04	0.33	
	j. Fuel cost (Generation of Power)		0.64	1.17	
	Total Expenditure (f-g+h+i+j)		1052.42	503.75	
	III. Profit/(Loss) before Tax (I-II)		159.48	154.45	
	IV. Provision for Income Tax				
	V. Net Prior period credits (Charges)				
	V.(a). Other Comprehensive Income		-203.46	-45.65	
	VI. Surplus (Deficit)		-43.98	108.80	
	VII. Net Assets at the beginning of the year (Less consumer's Contribution)		14135.60	13954.19	
	VIII. Rate of Return (VI/ VII)				

Note: Reconciliation between audited accounts and amounts for generation business should be furnished.

Form G BS

Balance Sheet at the end of the year

Name of Generation Business, **KERALA STATE ELECTRICITY BOARD LTD.**

S.No.	Particulars	Ref	Previous Year	Previous Year		Remarks
			2022-23	2021-22	2020-21	
1	2	3	4	5	5	6
	Sources of Funds:					
	(A)Capital Funds:					
	Share Capital (Govt. equity)		831.27	831.27	831.27	
	Reserves & Surplus		-3511.33	736.92	839.03	
	Total (A)		-2680.06	1568.19	1670.30	
	(B) Loan from State Government					
	Loan from others :					
	-Secured		8614.76	9453.24	10290.82	
	-Unsecured		76.72	90.52	75.34	
	Total (B)		8691.48	9543.76	10366.15	
	(C) Contribution, grants & subsidies towards cost of capital assets		45.18	76.52	62.24	
	Provident Fund		150.89	140.29	114.79	
	Terminal Benefit Fund		998.46	745.34	375.51	
	Borrowings for working capital					
	Long term provision & Other non current Liabilities		8003.26	-37.87	-852.58	
	Grand total of sources of funds (A+B+C)		15209.21	12036.24	11736.41	
	*Application of Funds:					
	A) Fixed assets					
	a) Gross fixed assets		17817.63	17572.07	17210.44	
	b) Less accumulated depreciation		8951.85	3436.47	3256.25	
	c) Net Fixed assets((a)-(b))		8865.77	14135.60	13954.19	
	d) Capital works in progress		1917.71	1843.96	1722.30	
	e) Assets not in use					
	f) Deferred costs		0.00	0.00	0.00	
	g) Intangible assets		2.24	2.31	1.42	
	h) Investments		16.11	12.30	8.85	
	Other Non current assets		310.33	242.84	145.10	
	Total (c) +(d)+(e)+(f)+(g)+(h)		11112.16	16237.01	15831.86	

S.No.	Particulars	Ref	Previous Year	Previous Year	2020-21	Remarks
			2022-23	2021-22		
1	2	3	4	5	5	6
	B)Subsidy receivable from Government					
	Contribution receivable from State Government towards pension liability		22.55	120.84	98.87	
	C) Net Current Assets					
	(1) Current assets, loans and advances					
	a) Inventories*		73.07	37.56	-14.44	
	b) Receivables against Sale of Power					
	c) Cash & bank balances		47.73	37.72	18.39	
	d) Loans and advances					
	e) Sundry receivables		5065.30	-2640.08	-2630.82	
	Total (C)(1)		5186.10	-2564.80	-2626.87	
	(2) Current liabilities & provisions					
	a) Borrowings for working capital		276.19	271.68	239.61	
	b) Payments due on Cap. liabilities					
	c) Other current liabilities		835.41	1485.13	1327.84	
	Total (C)(2)		1111.60	1756.81	1567.45	
	Net Current Assets (C) [(C(1)) - (C(2))]		4074.50	-4321.61	-4194.32	
	Grand Total of Application of funds (A)+(B)+(C)		15209.21	12036.25	11736.41	
			0.00	0.00	0.00	

Note: For the projection of current assets and current liabilities, working sheets showing the calculations along with assumptions upon which they are based should be furnished

Note: Reconciliation between audited accounts and amounts for generation business should be furnished.

Form G CF

Cash Flow for the year

Name of Generation Business/Company

KERALA STATE ELECTRICITY BOARD

S.No.	Particulars	Ref	Previous Year	Previous Year	Remarks
			2022-23	2020-21	
1	2	3	4	5	6
I	Net Funds from Operations				
1a	Net Funds from Earnings :				
	a) Profit before tax and before revenue subsidies and grants		-43.98	108.80	
	Less : Income Tax Payment during the year				
	: Other Comprehensive Income		-203.46	-45.65	
	Total of (a)		159.48	154.45	
	b. Add: Debits to rev. account not requiring cash Flow:				
	i) a) Depreciation		758.78	180.22	
	b) Depreciation on IND As Adj		4756.60	0.00	
	ii) Amortisation of Deferred costs				
	iii) Amortisation of Intangible Assets		0.01	0.01	
	iv) Investment Allowance Reserve				
	v) Others, if any		8041.12	814.71	
	Total of (b)		13556.51	994.94	
	c. Less : Credits to revenue Account not involving cash receipts				
	i) Depreciation				
	ii) Subsidies receivables				
	iii) Revenue gap				
	Total of (c)		0.00	0.00	
	Net Funds from Earnings (a)+(b)-(c)		13715.99	1149.39	
2	Contributions, Grants & Subsidies to cost of Capital Assets		-31.34	14.28	
4	Proceeds from disposal of fixed Assets				
5	Total Funds from Operations (1+2+3)		13684.65	1163.67	
6	Net Increase/(Decrease) in working Capital				
	(a) Increase/(Decrease) in Current Assets				
	i) Inventories		35.51	52.00	
	ii) Receivables against sale of power				
	iii) Loans and Advances		0.00	0.00	
	iv) Sundry receivables		7705.38	-9.26	
	Total of (a)		7740.89	42.74	

S.No.	Particulars	Ref	Previous Year	Previous Year	Remarks
			2022-23	2020-21	
1	2	3	4	5	6
	(b) Increase/(Decrease) in Current liabilities				
	i) Borrowings for working Capital		4.51	32.07	
	ii) Other current liabilities		-649.72	157.29	
	iii) Others (Increase in Reserve + payment due on cap.liab)		-4407.73	-256.56	
	Total of (b)		-5052.94	-67.20	
	Net Increase/(Decrease) in working Capital (a)- (b)		12793.83	109.94	
7	Net Funds from operations before subsidies and Grants (5-6)		890.83	1053.72	
8	Receipts from revenue subsidies and Grants		98.29	-21.97	
	Total Net Funds from operations including subsidies & Grants (7+8)		989.12	1031.75	
II.	Net increase/ decrease in Capital liabilities				
	a). Fresh borrowings				
	i) State Loans				
	ii) Foreign currency Loans / Credits				
	iii) Other borrowings		319.95	315.70	
	Total of (a)		319.95	315.70	
	b) Repayments :				
	i) State Loans				
	ii) Foreign currency Loans / Credits				
	iii) Other borrowings		1172.23	1138.09	
	Total of (b)		1172.23	1138.09	
	Net Increase/(Decrease) in Capital liabilities (a) - (b)		-852.28	-822.39	
III.	Increase/(Decrease) in equity Capital		0.00	0.00	
IV.	Total Funds available for Capital Expenditure (I+II+III)		136.84	209.36	
V	Funds utilised on Capital Expenditure				
	a) On projects		319.31	483.29	
	b) Advance to Suppliers & Contractors				
	c) Intangible Assets		-0.06	0.90	
	d) Deferred Cost		0.00	0.00	
	e) Long Term Loans and Advances		67.49	97.74	
	Total of V (a+b+c+d)		386.73	581.93	
VI	Net Increase/(Decrease) in Government contribution				
VII	Net Increase/(Decrease) in Terminal benefit fund		253.12	369.83	
VIII	Net Increase/(Decrease) in Provident fund		10.60	25.50	
IX	Net Increase/(Decrease) in investments		3.81	3.45	
X	Net Increase/(Decrease) in cash / bank balance (IV - V- VI-IX)+ (VII+VI		10.01	19.32	
XI	Add opening cash & Bank balance		37.72	18.39	
XII	Closing Cash & Bank balance		47.73	37.72	

**ARR and Tariff Formats
Transmission Business
INDEX**

S.No.	Form No.	Particulars
1	2	3
1	Form T 1	Summary of Aggregate Revenue Requirement
2	Form T 2	Operation and Maintenance Expenses
3	Form T 2(a)	Employee Expenses
4	Form T 2(b)	Administrative & General Expenses
5	Form T 2(c)	Repair & Maintenance Expenses
6	T3	Fixed assets & Depreciation
7	Form T 4(a)	Calculation of Weighted Average Rate of Interest on Actual Loans
8	Form T4(b)	Calculation of Interest on Normative Loan
9	Form T 5	Interest on working capital requirement
10	Form T 6	Other items (Other debits or any other items)
11	Form T 7	Return on Equity/Return on Net Fixed Assets
12	Form T 10	Non-tariff Income
13	Form T 12	Revenue Subsidy and Grant
14	Form T 13	Consumer Contribution, Capital Subsidy and Grant
15	Form T 14	Proposed improvement in performance
16	#REF!	#REF!
17	Form T17	Deviation Analysis

Other Information/Documents		
1	Form T P&L	Profit & Loss Account
2	Form T BS	Balance Sheet at the end of the year
3	Form T CF	Cash Flow for the year
4. Corporate audited/ unaudited Balance Sheet and Profit & Loss Accounts with all the Schedules & annexures for the relevant years.		

Note : Form T8,T9 ,T11 & T16 are deleted, since it is not applicable

Form T 1

Summary of Aggregate Revenue Requirement

Name of Transmission Business/Licensee

KERALA STATE ELECTRICITY BOARD LTD.

Rs. Crore

S. No.	Particulars	Reference Form No.	Current year			
			2022-23			
			Approved in Tariff Order	Audited	Normative	Truing Up requirement
1	2	3	4	5	6	7
1	Operation & Maintenance Expenses	Form T 2	584.79	616.50		588.41
2	Interest and finance charges on long-term loans	Form T4(b)	213.61	93.97		318.43
3	Interest on Bonds to meet Terminal Liabilities	Form T4 (c)	68.72	59.83		59.62
4	Depreciation	T3	231.4	373.51		275.15
5	Interest on Working Capital and deposits from Users of the transmission system	Form T 5	18.54	13.00		22.90
6	Additional contribution to Master Trust		44.98			44.98
7	Other items - Other finance charges		24.46	19.79		19.54
8	Bond repayment		45.81			45.81
9	Other items	Form T 6		0.49		8.92
	Amortisation		10.48	0.01		8.95
	Pay revision			0.00		58.22
10	Total Revenue Expenditure		1242.79	1177.10		1450.93
11	Return on Equity	Form T 7	119.99	214.08		119.99
12	Tax on RoE					
13	Aggregate Revenue Requirement (9+10+11)		1362.76	1391.19		1570.93
14	Less: Non Tariff Income	Form T 10	52.25	51.69		53.19
14	Less: Revenue from Short Term/Medium Term Open Access					
15	Less: Income from Other Business					
16	Aggregate Revenue Requirement from Transmission Tariff		1310.51	1339.50		1517.74

Form T 2

Operation and Maintenance Expenses

Name of Transmission Business/Licensee

KERALA STATE ELECTRICITY BOARD LTD.

Rs. Crore

S. No.	Particular	Current Year			
		2022-23			
		Approved in Tariff Order	Audited	Normative	Truing Up requirement
1	2	4	5	6	7
1	Bay Basis				
a	Op. Balance of no. of Bays	2933			2842
b	Addition of no. of Bays during year	132			63
c	Deletion of no. of Bay during year				
d	Cl. Balance of no. of Bays	3065			2905
e	Average no. of Bays during Year				
f	Applicable O&M cost Norm for Bay :- Rs _____Lakh/Bay	7.439			7.624
A	O&M Expense per Bay, Rs L				
2	ckt-km Basis				
a	Op. Balance of ckt-km	11025			10384.51
b	Addition of ckt-km during year	748			249.42
c	Deletion of ckt-km during year				
d	Cl. Balance of ckt-km	11773			10633.93
e	Average ckt-km during Year				
f	Applicable O&M cost Norm - Rs _____ Lakh / ckt-km	1.502			1.54
B	O&M Expense Rs. Lakh				
3	MVA Basis				
a	Op. Balance of MVA	22055			23824
b	Addition of MVA during year	2304.5			1520.5
c	Deletion of MVA during year				
d	Cl. Balance of ckt-km	24359.5			25344.5
e	Average cMVA during Year				
f	Applicable O&M cost Norm - Rs _____ Lakh / MVA	0.86			0.844
A	O&M Expense per MVA, Rs L				
3	Total O&M Expenses (as per norms) (A+B+C)				
4	Total O&M Expenses (actual)	584.79	616.5	588.41	588.41

Form T 2(a)

Employee Expenses

Name of Transmission Business/Licensee

KERALA STATE ELECTRICITY BOARD LTD.

Rs. Crore

S. No.	Particulars	Reference	Current Year - 2022-23		
			Approved in Tariff Order	Audited	Truing Up requirement
1	2	3	4	5	6 = 5 - 4
1	Basic Salary			448.72	
2	Dearness Allowance (DA)			78.60	
3	House Rent Allowance			16.49	
4	Conveyance Allowance			0.00	
5	Leave Travel Allowance			0.06	
6	Earned Leave Encashment			6.00	
7	Other Allowances			1.52	
8	Medical Reimbursement			1.83	
9	Overtime Payment			0.00	
10	Bonus/Ex-Gratia Payments			0.88	
11	Interim Relief / Wage Revision			0.00	
12	Staff welfare expenses			0.16	
13	VRS Expenses/Retrenchment Compensation			0.00	
14	Commission to Directors			0.00	
15	Training Expenses			0.00	
16	Payment under Workmen's Compensation Act			0.00	
17	Net Employee Costs			554.25	
18	Terminal Benefits			0.03	
18.1	Provident Fund Contribution			0.00	
18.2	Provision for PF Fund			0.00	
18.3	Pension Payments			0.00	
18.4	Gratuity Payment			0.00	
18.5	Annual Contribution for Terminal Liabilities based on actuarial valuation			0.00	
18.6	Contribution of KSEB Ltd towards National Pension Scheme			4.03	
19	Others			-0.02	
20	Gross Employee Expenses			558.29	
21	Less: Expenses Capitalised			105.10	
22	Net Employee Expenses			453.20	

Form T 2(b)

Administrative & General Expenses

Name of Transmission Business/Licensee

KERALA STATE ELECTRICITY BOARD LTD.

Rs. Crore

S. No.	Particulars	Reference	Current Year - 2022-23		
			Approved in Tariff Order	Audited	Truing Up requirement
1	2	3	4	5	6 = 5 - 4
1	Rent Rates & Taxes			0.85	
2	Insurance			1.14	
3	Telephone & Postage, etc.			2.09	
4	Legal charges			0.50	
5	Audit Fees			0.16	
6	Consultancy charges			0.01	
7	Other Professional charges			1.16	
8	Conveyance			7.48	
9	Vehicle Running Expenses Truck / Delivery Van			0.22	
10	Vehicle Hiring Expenses Truck / Delivery Van			0.19	
11	Electricity charges			0.00	
12	Water charges			0.19	
13	Entertainment			0.30	
14	Fees & subscription			0.58	
15	Printing & Stationery			1.36	
16	Advertisements, exhibition publicity			0.72	
17	Contribution/Donations			0.33	
18	Training expenses			0.20	
19	Miscellaneous Expenses			0.54	
20	DSM activities			0.00	
21	SRPC expenses			0.14	
22	Sports and related activities			0.11	
23	Freight			0.95	
24	Purchase Related Advertisement Expenses			0.73	
25	Bank Charges			0.00	
26	Office Expenses			104.60	
27	License Fee and other related fee			1.83	
28	Cost of services procured			0.00	
29	Outsourcing of metering and billing system			0.00	
30	V-sat, Internet and related charges			0.07	
31	Security arrangements			0.00	
32	Books & periodicals			0.02	
33	Computer Stationery			0.00	
34	Others			0.31	
34.1	Others- Other Purchase related Expenses			1.39	
34.2	Expenditure in Connection with COVID19			0.08	
34.3	Expenditure in Connection with defend COVID19			0.02	
35	Gross A&G Expenses			128.24	
36	Ele. Duty u/s 3(I), KED Act			0.00	
37	Less: Expenses Capitalised			0.36	
38	Net A&G Expenses			127.87	

Form T 2(c)

Repair & Maintenance Expenses

Name of Transmission Business **KERALA STATE ELECTRICITY BOARD LTD.**

Rs. Crore

S. No.	Particulars	Reference	Current Year- 2022-23			
			Approved in Tariff Order	Audited	flood (Exceptional Items)	Truing Up requirement
1	2	3	4	5		6 = 5 - 4
1	Plant & Machinery			20.33	0.00	
2	Buildings			1.25	0.00	
3	Civil Works			5.88	0.00	
4	Hydraulic Works			0.14	0.00	
5	Lines & Cable Networks			6.28	0.01	
6	Vehicles			0.79		
7	Furniture & Fixtures			0.15		
8	Office Equipment			0.60		
9	Gross R&M Expenses			35.43	0.01	
10	Less: Expenses Capitalised					
11	Net R&M Expenses			35.43	0.01	

Form T 3

Fixed assets & Depreciation

Name of Transmission Business/Licensee **KERALA STATE ELECTRICITY BOARD LTD.**
Year (n-1)* **2022-23**

Rs. Crore

S.No.	Assets Group (as per notification in respect of depreciation)	Rate of depreciation	Gross fixed assets				Provisions for depreciation				Net fixed assets at the beginning of the year	Net fixed assets at the end of the year
			At the beginning of the year	Additions during the year	Decom. Liability for the year	At the end of the year	Cumulative upto the beginning of year	Additions during the year	Adjustment during the year	Cumulative at the end of year		
1	2	3	4	5	6	7	8	9	10	11	12	13
1	Land & land rights		505.96	11.26	-14.61	502.62	0.00	0.00		0.00	505.96	502.62
2	Other Civil works		518.08	23.35	-0.49	540.94	193.77	17.80	-0.09	211.48	324.31	329.46
3	EHV		0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00
a)	Transmission lines		2573.84	626.38	0.16	3200.38	935.35	143.48		1078.82	1638.49	2121.55
b)	Sub-station equipments		1598.28	36.48	0.01	1634.76	696.54	81.84		778.38	901.74	856.39
i)	Transformers		1027.94	268.08	-2.52	1293.50	646.91	53.03	-0.52	699.42	381.03	594.08
ii)	Switchgears, Control gear & Protecton		63.59	0.45	0.00	64.04	35.44	2.61		38.05	28.15	25.99
iii)	Batteries		38.07	6.47	0.00	44.55	25.87	1.38		27.25	12.20	17.30
iv)	Others		281.73	22.81	0.00	304.55	197.22	8.13		205.35	84.51	99.19
4	HV & LT		0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00
a)	Transmission lines		1020.90	23.00	-2.23	1041.66	555.32	41.40	-0.75	595.97	465.58	445.70
b)	Sub-station equipments		0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00
i)	Transformers		162.20	6.62	0.00	168.82	118.33	4.24		122.57	43.87	46.25
ii)	Switchgears, Control gear & Protecton		0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00
iii)	Batteries		0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00
iv)	Others		0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00
5	Communication equipment		92.22	1.23	0.00	93.45	67.39	2.69		70.08	24.82	23.37
6	Meters		12.88	3.55	0.00	16.43	11.67	0.07		11.74	1.20	4.69
7	Vehicles		11.40	1.04	0.00	12.44	6.64	0.79		7.43	4.76	5.02
8	Furniture & fixtures		10.16	0.61	0.00	10.76	5.69	0.57		6.26	4.47	4.51
9	Office Equipments		8.03	0.64	0.00	8.66	3.42	0.39		3.81	4.61	4.86
10	Assets of Partnership projects etc.		0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00
11	Capital spares of		0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00
a)	EHV transmission		0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00
b)	HV & LT transmission		0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00
12	Assets taken over & pending final valuation		0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00
13	IT equipments		10.94	0.37	0.00	11.31	8.94	0.55		9.49	2.00	1.82
	Buildings		417.53	96.60	-1.20	512.93	197.37	13.97	-0.25	211.09	220.16	301.84
14	Any other items (Hydraulic Works)		11.43	0.45	-0.01	11.87	17.04	0.60		17.64	-5.61	-5.76
15	Gross Asset (Total (1) to (14))		8365.18	1129.38	-20.89	9473.68	3722.92	373.51	-1.61	4094.82	4642.26	5378.85
16	Less: Consumer contribution		130.51	11.27	13.78	128.00					130.51	128.00
17	Less: Government grants		402.62	11.76	42.92	371.46					402.62	371.46
18	Less: Deposit Works		0.00			0.00					0.00	0.00
19	Less: Capital Subsidies		50.86	0.00	7.61	43.25					50.86	43.25
	Less: Contribution from Public		0.92	0.81	0.24	1.49					0.92	1.49
20	Net Asset considered for depreciation (15-16-17-18-19)		7780.26	1105.55	-85.45	8929.47					4057.34	4834.65

TERM LOAN

SL NO	NAME OF THE FINANCIAL INSTITUTION	Net Loan - Opening	Current Financial Liability (OB)	Gross loan-Opening - 01/04/2022	Add: Drawal(s) during the Year	Less: Repayment (s) of Loans during the year	Gross loan - Closing - 31/03/2023	Current Financial Liability (CB)	Net loan - Closing - 31/03/2023	Average Net Loan	Rate of Interest on Loan on annual basis	Interest on loan	Loan repayment effective from (date to be indicated)
A	SECURED LOANS TERM LOANS												
1	REC-TRAN-Group I	55.65	10.31	65.96	0.00	10.31	55.65	10.31	45.33	60.80	9.01% - 9.75 %	5.96	31-10-2017
2	REC-TRAN.Kattakkada -Pothencode Scheme	43.00	14.33	57.33	0.00	14.33	43.00	14.33	28.66	50.16	9.5% - 11.39%	5.17	30-04-2016
3	SBI	321.38	45.52	366.89	165.57	59.57	472.89	62.23	410.66	419.89	9.40%	40.26	01-11-2020
4	Special Loan Assistance from PFC	302.87	28.84	331.71	5.51	29.32	307.90	29.32	278.58	319.81	9.08%	29.29	15-10-2018
5	Special Loan Assistance from REC	422.13	46.90	469.03	7.80	47.68	429.14	47.68	381.46	449.09	10% - 10.75%	48.66	31-10-2019
6	Kerala Financial Corporation	149.22	18.00	167.21	2.78	46.45	123.54	16.79	106.75	145.38	9.00%	12.02	31-03-2021
7	Medium Term Loan Kerala Financial Corporation	78.43	37.65	116.08	1.93	38.84	79.17	38.27	40.90	97.63	8.00%	8.04	31-03-2021
8	Indian Bank	2.24	0.29	2.52	0.04	0.37	2.19	0.56	1.63	2.36	9.25%	0.18	10-03-2022
9	Kerala Financial Corporation - II	0.00	0.00	0.00	31.89	2.16	29.73	3.36	26.37	14.87	8.00%	2.45	30-09-2022
10	Dhanlaxmi Bank	0.00	0.00	0.00	31.89	0.00	31.89	5.32	26.57	15.95	8.00%	2.29	31-05-2023
11	Kerala Financial Corporation - III	0.00	0.00	0.00	127.58	2.02	125.56	13.43	112.13	62.78	8.35%	4.39	31-03-2023
	SUB-TOTAL	1374.90	201.84	1576.75	375.00	251.08	1700.67	241.62	1459.05	1638.71		158.73	
B	UNSECURED LOANS TERM LOANS												
1	Short Term Loan from REC	156.87	0.00	156.87	2.61	159.47	0.00	0.00	0.00	78.43	7.75%	1.59	
2	Short term loan from M/s IREDA	0.00	185.10	185.10	162.55	188.18	159.47	20.65	138.82	172.29	7.75%	4.37	
	SUB-TOTAL	156.87	185.10	341.97	165.16	347.65	159.47	20.65	138.82	250.72		5.96	
	TOTAL	1531.77	386.95	1918.72	540.16	598.74	1860.14	262.27	1597.88	1889.43	8.72	164.69	

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Name of Transmission Business/Licensee Licensed Area of Supply

KERALA STATE ELECTRICITY BOARD LTD.

(Rs. Cr)

S.No	Particulars (specify items)	Current Year		
		Approved in Tariff Order	Normative	Truing Up requirement
1	2	4	5	6 = 5 - 4
1	Gross Normative loan - Opening			
2	Cumulative repayment of Normative Loan upto previous year			
3	Net Normative loan - Opening		1918.72	
4	Increase/Decrease due to ACE/de-capitalization during the Year		540.16	
5	Repayments of Normative Loan during the year		598.74	
6	Net Normative loan - Closing		1860.14	
7	Average Normative Loan		1889.43	
8	Weighted average Rate of Interest of actual Loans		8.72%	
9	Interest on Normative loan	213.61	164.69	

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Name of Transmission Business/Licensee
Licensed Area of Supply

KERALA STATE ELECTRICITY BOARD LTD.

Rs. Crore

S.No	Particulars (specify items)	Current Year (n)		
		Approved in Tariff Order	Normative	Truing Up requirement
1	2	3	4	5 = 4 - 3
A	Bond Series 1			
1	Value of Bond	45.81		45.81
2	Rate of Interest on Bond			
3	Interest on Bond	68.72	59.83	59.62
B	Bond Series 2			
4	Value of Bond			
5	Rate of Interest on Bond			
6	Interest on Bond			
C	Bond Series 3			
	...			

Form T 5

Interest on working capital requirement

Name of Transmission Business/Licensee

KERALA STATE ELECTRICITY BOARD LTD.

Rs. Crore

Sl. No.	Particulars	Current year			
		2022-23			
		Approved in Tariff Order	Audited	Normative	Truing Up requirement
1	2	3	4	5	6
1	O&M expenses (as per norms)	48.73			57.63
2	Maintenance Spares (as per norms)	57.38			81.31
3	Receivables calculated on target availability (as per norms)	108.27			125.71
	Less				
4	Amount, if any, held as security deposits except security deposits held in the form of Bank Guarantees from Users of the transmission system				
5	Total Working Capital	214.37			264.64
6	Interest Rate (as per norms)	8.65			8.65
7	Interest on Working Capital	18.54	13.00		22.90

Form T 6

Other items (Other debits or any other items)

Name of Transmission Business/Licensee

KERALA STATE ELECTRICITY BOARD LTD.

Rs. Crore

S. No.	Particulars (specify items)	Current year		
		2022-23		
		Approved in Tariff Order	Audited	Truing Up requirement
1	2	3	4	5 = 4 - 3
A1	Material Cost Variance			-
2	Research and Development Expenses			-
3	Cost Of Trading/Manufacturing Activity			-
3	Miscellaneous Losses and Write Offs		0.49	0.49
4	Loss/(compensation) on account of flood cyclone etc			-
				-
	Total		0.49	0.49
				-
				-
	Less			
B	Chargeable to Capital Expenses			
	Net chargeable to revenue(A-B)		0.49	0.49

Form T 7

Return on Equity/Return on Net Fixed Assets

Name of Transmission Business/Licensee

KERALA STATE ELECTRICITY BOARD LTD.

Rs. Crore

S.No.	Particulars	Ref.	Current year			
			2022-23			
			Approved in Tariff Order	Audited	Normative	Truing Up requirement
1	2	3	4	5	6	7
1	Equity at the beginning of the year		857.05	857.05		857.05
2	Capitalisation					
3	Equity portion of capitalisation			0.00		
4	Equity at the end of the year			857.05		
	Return Computation					
5	Return on Equity at the beginning of the year	14%*(1)		214.08		
6	Return on Equity portion of capitalisation	14%*(3)/2		0.00		
7	Total Return on Equity	(5)+(6)	119.99	214.08		119.99

Form T 10

Non-tariff Income

Name of Transmission Business/Licensee

KERALA STATE ELECTRICITY BOARD LTD.

Rs. Crore

S.No	Particulars	Current year		
		2022-23		
		Approved in Tariff Order	Audited	Truing Up requirement
1	2	3	4	5
	Non Tariff Income			
1	Interest on staff loans and advances	0.01		
2	Income from statutory investments			
3	Income from rent of land or buildings	0.66		
4	Income from sale of scrap	25.52		24.28
5	Income from staff welfare activities			
6	Rental from staff quarters	0.07		
7	Excess found on physical verification			
8	Interest on investments, fixed and call deposits and bank balances	2.57	2.38	2.38
9	Interest on advances to suppliers/contractors	0.01		2.34
10	Income from hire charges from contractors and others			0.03
11	Income due to right of way granted for paying fibre optic cables/co-axial cables on transmission system			
12	Income from advertisements, etc.			
13	Miscellaneous receipts	23.41	8.38	24.16
14	Interest on delayed or deferred payment of bills			
15	Clawback of Grant		40.93	
	...			
	Total Non-Tariff Income	52.25	51.69	53.19

Form T 12

Revenue Subsidy and Grant

Name of Transmission Business/Licensee

KERALA STATE ELECTRICITY BOARD LTD.

Rs. Crore

S.No	Particulars	Current year		
		n		
		Approved in Tariff Order	Audited	Truing Up requirement
1	2	3	4	5 = 4 - 3
	Revenue Subsidies & Grants			
1	Subvention from the State Government			
2	The State Govt. Grant			
3	Any Other item			
	Total	NIL	NIL	NIL

Form T 13

Consumer Contribution, Capital Subsidy and Grant

Name of Transmission Business/Licensee

KERALA STATE ELECTRICITY BOARD LTD.

Rs. Crore

S. No.	Particulars	Current year		
		n		
		Approved in Tariff Order	Audited	Truing Up requirement
1	2	3	4	5 = 4 - 3
1	Consumer's Contribution for service connection lines and associated wiring		20.07	
2	Any other Contribution by consumers or for consumers under any scheme.			
a)	from public			
b)				
c)				
3	Sub-Total		20.07	
4	Subsidies towards cost of Capital Asset		0.81	
5	Grant towards cost of Capital Assets		11.76	
6	Amount received from State Govt. under any scheme as grant /subsidy			
7	Total	160.16	32.63	32.63

Form T 14

Proposed improvement in performance

Name of Transmission Business/Licensee

KERALA STATE ELECTRICITY BOARD LTD.

S.No.	Paritculars	Performance parameters (%)	
		Actual for the previous year	Current year
		n-1	n
1	2	3	4
1	EHV Trransmission losses		2.58
2	System availability		
a)	400 kV System		99.55
b)	220 kV System		98.7
c)	110 kV System		99.32
d)	66 kV System		99.28
	Total System Availability		99.05

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Name of Transmission Business/Licensee
Year

KERALA STATE ELECTRICITY BOARD LTD.
2022-23

S.no.	Particulars	Unit	Current year		
			Approved in Tariff Order	Audited	Truing Up requirement
1	2	3	4	5	6 = 5 - 4
1	Energy input into the sysrtem				
(a)	Net Energy Available in the the SBUT for the State including Open access Consumer after adjusting auxiliary Consumption (T-G interface)	MU			27977.167
2	Energy Transmitted to Discom	MU			27254.927
3	Intra-State transmission losses		3.40%		2.582

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Name of Transmission Business/Licensee Licensed Area of Supply	KERALA STATE ELECTRICITY BOARD LTD.

Year : 2022-23

(Rs. Crore)

S. No.	Particulars	Approved	Actual	Deviation	Reason for Deviation	Controllable	Uncontrollable
1	2	3	4	5	6	7	8
1	Operation & Maintenance Expenses	584.79	616.50	-31.71	EXPLAINED IN THE PETITION		
2	Interest and finance charges on long-term loans	213.61	93.97	119.64			
3	Interest on Bonds to meet Terminal Liabilities	68.72	59.83	8.89			
4	Depreciation	231.4	373.51	-142.11			
5	Interest on Working Capital and deposits from Users of the transmission system	18.54	13.00	5.54			
6	Contribution to contingency reserves			0.00			
7	Additional contribution to Master Trust	44.98		44.98			
8	Adjustment for profit/loss on account controllable/uncontrollable factors			0.00			
9	Bond repayment	45.81	0.49	45.32			
	Amortisation of Intangible Assets	10.48	0.01	10.47			
	Other Finance Charges	24.46	19.79	4.67			
	Prior period expenditure		0.00	0.00			
10	Total Revenue Expenditure	1242.79	1177.10	65.69			
11	Return on Equity	119.99	214.08	-94.09			
12	Tax on RoE			0.00			
13	Aggregate Revenue Requirement (9+10+11)	1362.76	1391.19	-28.43			
D	Revenue			0.00			
1	Transfer price	1310.51	1339.50	-28.99			
2	Less: Non Tariff Income	52.25	51.69	0.56			
3	Less: Revenue from Short Term/Medium Term Open Access						
4	Less: Income from Other Business						

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Name of Transmission Business/Li KERALA STATE ELECTRICITY BOARD LTD.

S.No.	Particulars	Ref	Current Year	Previous Year	Remarks
			2022-23	2021-22	
1	2	3	4	5	6
	I.INCOME				
	a. Revenue from Sale of Power		1339.50	1166.82	
	b. Revenue Subsidies and Grants				
	c. Other Income		51.69	85.27	
	d. Claw back of Grant				
	Total (a+b+c)		1391.19	1252.09	
	II. EXPENDITURE				
	a. Repairs and Maintenance.		35.43	34.38	
	b. Employee Cost		558.29	523.00	
	c. Administration and General Expenses		128.24	129.01	
	d. Depreciation		373.51	276.65	
	1). Amortisation of Intangible Assets		0.01	0.01	
	e. Interest and Finance charges		257.51	268.10	
	Purchase of Power				
	f. Subtotal (a+b+c+d+e)		1352.99	1231.15	
	g. Less Capitalised Expenses:				
	- Interest & Finance Charges		70.92	66.55	
	- Other Expenses		105.46	112.04	
	h. Other Debits		0.49	-5.70	
	Change in fair valuation and adjustmetns				
	I. Extra Ordinary Items		0.01	0.00	
	Total Expenditure (f-g+h+i)		1177.11	1046.86	
	III. Profit/(Loss) before Tax (I-II)		214.08	205.23	
	IV. Provision for Income Tax				
	V. Net Prior period credits (Charges)				
	V.(a). Other Comprehensive Income		-394.90	-94.07	
	VI. Surplus (Deficit)		□□□□□□	□□□□□□	
	VII. Net Assets at the beginning of the year (Less consumer's Contribution)		4057.34	2551.68	
	VIII. Rate of Return (VI/ VII)				

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Name of Transmission Business/Licensee KERALA STATE ELECTRICITY BOARD LTD.

S.No.	Particulars	Ref	Current Year	Previous Year	Remarks
			2022-23	2021-22	
1	2	3	4	5	6
	Sources of Funds:				
	(A)Capital Funds:				
	Share Capital (Govt. equity)		857.05	857.05	
	Reserves & Surplus		-37.37	181.25	
	Total (A)		819.68	1038.30	
	(B) Loan from State Government				
	Loan from others :				
	-Secured		1459.05	1374.90	
	-Unsecured		138.82	156.87	
	Total (B)		1597.88	1531.77	
	(C) Contribution, grants & subsidies towards cost of capital assets		544.20	584.93	
	Provident Fund		292.86	253.58	
	Terminal Benefit Fund		1937.92	1347.22	
	Borrowings for working capital				
	Long term Provision & Other Non current Liabilities		737.47	-1676.21	
	Grand total of sources of funds (A+B+C)		5930.01	3079.59	
	*Application of Funds:				
	A) Fixed assets				
	a) Gross fixed assets		9473.68	8365.18	
	b) Less accumulated depreciation		4094.82	3722.92	
	c) Net Fixed assets((a)-(b))	*	5378.85	4642.26	
	d) Capital works in progress		860.86	957.78	
	e) Assets not in use				
	f) Deferred costs				
	g) Intangible assets		59.15	42.63	
	h) Investments		6.26	6.08	
	Other Non current assets		247.57	367.44	
	Total (c) +(d)+(e)+(f)+(g)+(h)		□□□□□□	□□□□□□	
	B)Subsidy receivable from Government		3.70		
	Contribution receivable from State Government towards pension liability		43.76	120.84	
	C) Net Current Assets				
	(1) Current assets, loans and advances				
	a) Inventories*		163.05	169.58	
	b) Receivables against transmission charges				
	c) Cash & bank balances		31.51	1.85	
	d) Loans and advances				
	e) Sundry receivables		856.16	-1496.40	
	Total (C)(1)		□□□□□□	□□□□□□	
	(2) Current liabilities & provisions				
	a) Security Deposits from Consumers				
	b) Borrowings for working capital		499.73	470.80	
	c) Payments due on Cap. liabilities				
	d) Other current liabilities		1221.14	1261.67	
	Total (C)(2)		□□□□□□	□□□□□□	
	Net Current Assets (C) [(C(1)) - (C(2))]		□□□□□□	□□□□□□	
	Grand Total of Application of funds (A)+(B)+(C)		□□□□□□	□□□□□□	

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Name of Transmission Business/Licensee _____

S.No.	Particulars	Ref	Current Year	Previous Year	Remarks
			2022-23	2021-22	
1	2	3	4	5	6
I	Net Funds from Operations				
1a	Net Funds from Earnings :				
	a) Profit before tax and before revenue subsidies and grants		-180.82	111.16	
	Less : Income Tax Payment during the year				
	: Other Comprehensive Income		-394.90	-94.07	
	Total of (a)		214.08	205.23	
	b. Add: Debits to rev. account not requiring cash Flow:				
	i) a) Depreciation		373.51	276.65	
	b) Depreciation on Assets capitalised in the initial BS of the IND As Accounts		-1.61	0.01	
	ii) Amortisation of Deferred costs				
	iii) Amortisation of Intangible Assets		0.01	0.01	
	iv) Investment Allowance Reserve				
	v) Others, if any		2413.68	838.02	
	Total of (b)		2785.59	1114.69	
	c. Less : Credits to revenue Account not involving cash receipts				
	i) Depreciation				
	ii) Subsidies receivables				
	iii) Revenue gap				
	Total of (c)		0.00	0.00	
	Net Funds from Earnings (a)+(b)-(c)		2999.67	1319.92	
2	Contributions, Grants & Subsidies to cost of Capital Assets		-40.73	-19.48	
3	Security Deposit from consumers				
4	Proceeds from disposal of fixed Assets				
5	Total Funds from Operations (1+2+3+4)		2958.94	1300.44	
6	Net Increase/(Decrease) in working Capital				
	(a) Increase/(Decrease) in Current Assets				
	i) Inventories		-6.53	47.55	
	ii) Receivables against transmission charges				
	iii) Loans and Advances		0.00	0.00	
	iv) Sundry receivables		2352.56	482.58	
	v) Subsidy receivables				
	Total of (a)		2346.03	530.13	
	(b) Increase/(Decrease) in Current liabilities				
	i) Borrowings for working Capital		28.93	73.56	
	ii) Other current liabilities		-40.53	94.79	
	iii) Others (Increase in Reserve + payment due on cap.liab)		-432.70	-483.95	
	Total of (b)		-444.30	-315.60	
	Net Increase/(Decrease) in working Capital (a)- (b)		2790.33	845.73	
7	Net Funds from operations before subsidies and Grants (5-6)		168.61	454.70	
8	Receipts from revenue subsidies and Grants		73.38	82.89	
	Total Net Funds from operations including subsidies & Grants (7+8)		241.99	537.59	

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Name of Transmission Business/Licensee _____

II.	Net increase/ decrease in Capital liabilities			
	a). Fresh borrowings			
	l) State Loans			
	ii) Foreign currency Loans / Credits			
	iii) Other borrowings	540.16		
	Total of (a)	540.16		
	b) Repayments :			
	l) State Loans			
	ii) Foreign currency Loans / Credits			
	iii) Other borrowings	474.06	#VALUE!	
	Total of (b)	474.06	#VALUE!	
	Net Increase/(Decrease) in Capital liabilities (a) - (b)	66.11	#VALUE!	
III.	Increase/(Decrease) in equity Capital	0.00	0.00	
IV.	Total Funds available for Capital Expenditure (I+II+III)	308.10	#VALUE!	
V	Funds utilised on Capital Expenditure			
	a)On projects	1011.57	1024.20	
	b)Advance to Suppliers & Contractors			
	c) Intangible Assets	16.53	23.03	
	d) Deferred Cost	0.00	0.00	
	e) Long Term Loans and Advances	-119.87	-42.92	
	Total of V (a+b+c+d)	908.23	1004.30	
VI	Net Increase/(Decrease) in Government contribution			
VII	Net Increase/(Decrease) in Terminal benefit fund	590.70	573.48	
VIII	Net Increase/(Decrease) in Provident fund	39.28	17.04	
IX	Net Increase/(Decrease) in investments	0.18	-3.33	
X	Net Increase /(Decrease) in cash / bank balance (IV - V- VI-IX)+ (VII+VIII)	29.66	#VALUE!	
XI	Add opening cash & Bank balance	1.85	4.67	
XII	Closing Cash & Bank balance (X+XI)	31.51	#VALUE!	

ARR and Tariff Formats
Distribution Business
INDEX

S.No.	Form No.	Particulars
1	2	3
1	Form D 1.1	Summary of Aggregate Revenue Requirement
2	Form D 2.1	#REF!
3	Form D 2.2	Income from Wheeling Charges
4	Form D 2.3	Income from sale of surplus power
5	Form D 2.4	Non-tariff Income
6	Form D 2.5	Subsidy provided by the State Govt under Section 65 of EA 2003
7	Form D 2.6	Revenue Subsidy and Grant
8	Form D 2.7	Consumer Contribution, Capital Subsidy and Grant
9	Form D 3.1	Power Purchase Expenses
10	Form D 3.2	#REF!
11	Form D 3.3	#REF!
12	Form D 3.4	Operations and Maintenance Expenses
13	Form D 3.4(a)	Employee Expenses
14	Form D 3.4(b)	Administrative & General Expenses
15	Form D 3.4(c)	Repair & Maintenance Expenses
16	Form D 3.5	Fixed assets & depreciation
17	Form D 3.6(a)	#REF!
18	Form D 3.6(b)	Calculation of Interest on Normative Loan
19	Form D 3.6(c)	Interest on Bonds to meet Terminal Liabilities
20	Form D 3.7	Interest on Working Capital
21	Form D 3.8	Return on Equity/Return on Net Fixed Assets
22	Form D 3.9	Tax on R.O.E.
23	Form D 4.1	Project-wise / Scheme-wise Capital Expenditure
24	Form D 4.2	Consolidated report on additions to Fixed Assets during the year
25	Form D 4.3	General (Other debits, write offs or any other items)
26	Form D 5.1	#REF!
27	Form D 5.2	#REF!
28	Form D 5.3	#REF!
29	Form D 6.1	Improvement in performance
30	Form D 6.2	Appropriation of Distribution loss
31	Form D 7.1	#REF!
32	Form D 7.2	#REF!
33	Form D 7.3	Collection Efficiency
34	Form D 8	Deviation Analysis
35	Form D 9	Consumer category-wise cross-subsidy

Other Information/Documents		
1	Form D P&L	Profit & Loss Account
2	Form KSEBL SBU-wise P&L	KSEB Limited SBU-wise Profit & Loss Account
3	Form Small Lic Distr P&L	Small Distribution Licensees - Distribution business Profit & Loss Account
4	Form D BS	Balance Sheet at the end of the year
5	Form D CF	Cash Flow for the year

6. Corporate audited/unaudited Balance Sheet and Profit & Loss Accounts with all the Schedules & annexures for the relevant years.

Note : Spread sheet financial models (in CD) shall also be submitted along with the application.

Form D 1.1

Summary of Aggregate Revenue Requirement

Name of Distribution Business/Licensee
Licensed Area of Supply

KERALA STATE ELECTRICITY BOARD LTD.

S.No.	Particulars	Referenc e form no.	Previous Year (n-1) -2022-23				Remarks
			Approved in Tariff Order	Audited	Normative	Truing Up requiremen t	
1	2	3	4	5	6	7	14
1	Cost of own power generation/power purchase	3.1	10444.5	12440.37		11634.37	
2	Transmission Charges	3.2	1310.51	1339.5		1517.74	
3	NLDC/RLDC/SLDC Charges	3.3	3				
4	Operation & Maintenance Expenses	3.4	3345.05			3554.26	
4.1	Employee Expenses	3.4	2692.25	3466.95			
4.2	Administration & General Expenses	3.4	152.18	467.83			
4.3	Repair & Maintenance Expenses	3.4	500.62	233.19			
5	Annual Contribution for Terminal Liabilities based on actuarial valuation		333.42			333.42	
6	Depreciation	3.5	266.09	786.79		311.83	
7	Interest and finance charges on long term loans	3.6	482.67	346.95		459.71	
7.1	Interest on consumer security deposits and deposits from Users of the distribution system		151.46	137.43		128.74	
8	Interest on Bonds to meet Terminal Liabilities	3.6	509.13	522.25		520.45	
9	Interest on Working Capital	3.7	0	113.51		0	
10	Principal repayment of Bond		339.42			339.42	
	Others		0	156.92		571.05	
	Amortisation of PAST GAP		850				
	Other Interest and finance Charges		506.35	244.62		660.57	

S.No.	Particulars	Reference form no.	Previous Year (n-1) -2022-23				Remarks
			Approved in Tariff Order	Audited	Normative	Truing Up requirement	
1	2	3	4	5	6	7	14
	Prior Period Expenditure		0	0.00			
11	Contribution to contingency reserves		0				
12	Provisioning for Bad debts, if any		0				
13	Adjustment for profit/loss on account of controllable/uncontrollable factors		0				
14	Total Revenue Expenditure		18541.61	20256.31		20031.56	
15	Return on Equity /Net Fixed Assets	3.8	253.5			253.5	
16	Tax on ROE	3.9					
17	Aggregate Revenue Requirement (13+15)		18795.11	20256.30		20285.06	
18	Less: Non Tariff Income	2.4	829.04	405.85		808.10	
19	Less: Income from wheeling charges	2.2	0				
20	Less: Income from Other Business (to be specified)		0				
21	Less: Receipt on account of Cross Subsidy Surcharge on wheeling charges		0				
22	Less: Receipt on account of additional surcharge on charge of wheeling		0				
23	Aggregate Revenue Requirement from Retail Tariff		17236.24	18678.52		18305.03	

Form D 2.1

Revenue from Sale of Power

Name of Distribution Business/Licensee
Licensed Area of Supply
Year (n-1)*KERALA STATE ELECTRICITY BOARD LTD.
2022-23

KERALA STATE ELECTRICITY BOARD LTD.

S.No.	Particulars	Number of consumers	Number of consumers billed	Connected Load of consumers	Units Sold (MU)	% of total Unit sold	Demand/ fixed charges@	Energy Charges @	Fuel Adjustment charges@	Total	Average rate/kwh	Excess Load/ excess demand charges@	Adjustment of past billing	Power factor surcharge/ incentive	voltage rebate	load factor penalty/ incentive	Other charges if any@	DPS/ LPS @	Sub-total	Other Rentals	Misc. recoveries@ (Net provision for unbilled revenue)	Sub-total	Avg. realisation per KWh (Excluding ED & Govtlevies@)	Remarks	
				KW	MU					8+9+10	paisa/kwh							(13) to (19)				(11)+(20)+(21)+(22)			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	
A)	Revenue from sale of Electricity to consumers (categories as per Tariff for supply of Electricity)																								
	LT Categories																								
1	Domestic	10376078.00		20942.79	12381.03		778.36	5273.23	7.86	6059.44							0.01		0.01		53.50	6112.95			
2	Commercial	2536214.00		5199.66	4061.72		807.20	3250.83	2.87	4060.89							0.05		0.05		26.28	4087.21			
3	Public Lighting	64375.00		208.98	362.30		4.83	176.72	0.30	181.85							0.00		0.00		0.55	182.40			
4	Irrigation and Dewatering	518337.00		1018.02	382.46		71.94	47.15	0.86	119.95							0.03		0.03		-2.17	117.81			
6	Industrial LT	146586.00		1914.09	1262.01		209.83	750.46	0.87	961.16							-0.03		-0.03		2.21	963.34			
7	Railway Traction	13.00		111.00	402.32		49.15	204.37	0.27	253.79									0.00		13.86	267.66			
8	Miscellaneous							3.55		3.55									0.00		0.06	3.61			
9	HT Categories	7194.00		1781.97	4252.30		675.72	2802.89	2.72	3481.32							2.06		2.06		44.32	3527.70			
10	Extra High Tension (EHT)	56.00		440.01	1240.24		129.32	701.70	1.10	832.11							15.44		15.44		15.66	863.21			
11	Bulk Consumers/ Licensees	11.00		114.27	579.13		54.03	339.77	2.08	395.88									0.00		20.49	416.37			
12	Revenue from sale of power outside the																								
	Sale through power exchange				1813.11			1171.93		1171.93										0.00			1171.93		
	Sale to other States							0.00		0.00										0.00			0.00		
	Sale through Traders																72.61		72.61				72.61		
	Energy supplied to RGCCPP				6.57																				
	Energy supplied to captive consumers/solar prosumers against banked energy				324.70																				
13	Total of items not shown categorywise																								
a)	Reactive Energy Charges									0.00										0.00			0.00		
b)	Electricity Duty Recovery																1101.87		1101.87				1101.87		
c)	Other state Levies Recovery																20.07		20.07				20.07		
	Total Duty & Levies																								
d)	Wheeling charges Recoveries																1.65		1.65				1.65		
e)	Miscellaneous Charges from consumers																								
1	UCM																0.00		0.00				0.00		
2	SC Fee, etc.																0.00		0.00				0.00		
3	Other Items																59.09		59.09				59.09		
4	TF/RF																19.26		19.26				19.26		
5	Other Levies On Fee																51.28		51.28				51.28		
6	LE/SC Minimum																0.02		0.02				0.02		
7	Meter Box Charges																0.00		0.00				0.00		
8	Processing Fee for Allocation of Power																3.75		3.75				3.75		
9	SLDC Charges																0.50		0.50				0.50		
10	STOA - Registration and Application fee																0.19		0.19				0.19		
11	STOA - Open Access charges				128.98												9.78		9.78				9.78		
12	Application fee & registration fee for grid connectivity to solar panels																14.48		14.48				14.48		
13	Penal charge for making the meter inaccessible for billing																0.00		0.00				0.00		
14	Energisation charges																0.45		0.45				0.45		
15	Power factor penalty																49.87		49.87				49.87		
	Captive adjustments																								
14	Gross Revenue From Sale of Power						2780.37	14722.59	18.92	17521.88							1422.43		1422.43		174.76	19119.07			
	Less: i) Electricity Duty Payable to Govt. (Contra)																1101.87		1101.87		0.00	1101.87			
	ii) Other State Levies Payable to Govt. (Contra)																20.07		20.07		0.00	20.07			
	iii) Board Consumption																8.73		8.73		0.00	8.73			
15	Net Revenue from Sale of Power (A29-A30)						2780.37	14722.59	18.92	17521.88							291.77		291.77			17988.41			
	Energy sale including external sales by KSEBL				26736.61																				
	Energy consumption from grid				25383.76																				

Notes:

* Note : To be furnished separately for each year commencing from (n-1)th year to (n+3)th year.

1. Information at Column 3,4 & 5 will be for the end of the year.

7. Detailed data should be submitted for all categories, sub-categories, and consumption slabs, as applicable

Form D 2.2

Income from Wheeling Charges

Name of Distribution Business/Licensee **KERALA STATE ELECTRICITY BOARD LTD.**
 Licensed Area of Supply _____

Year (n-1)*

2022-23

(Rs Cr)

S.No	Open Access Consumer	Open Access Contracted Capacity (kW)	Fixed Charge (Rs/kW/month)	Energy Wheeled at Kerala periphery	Energy Charge (Rs/kWh)		Any Other Charge as approved by Commission (Please specify)	Revenue from Fixed Charge	Revenue from Energy Charge		Revenue from Other Charge	Total Revenue
					Transmission Charge	Wheeling Charge			Transmission Charge	Wheeling Charge		
	<u>1</u>	2	3	4	5	5	6	7	8	8	9	10=7+8+9
1	Alagappa Textiles (Cochin) Mills	1.45		0	390 / 440	550 / 610	1000/Day		0.00	0.00	0.00	
2	Amrita Institute Of Medical Science And Research Centre	4.75		1.391	390 / 440	550 / 610	1000/Day		635008.00	880352.00	172000.00	1687360.00
3	Apollo Tyres Ltd	10		7.768	390 / 440	550 / 610	1000/Day		3465454.75	0.00	414000.00	3879454.75
4	Aster DM Healthcare Pvt Ltd South	2.4		0.847	390 / 440	550 / 610	1000/Day		374560.00	521345.00	148000.00	1043905.00
5	AVT Natural Products Ltd	1.5		0.000	390 / 440	550 / 610	1000/Day		0.00	0.00	0.00	0.00
6	BPCL Kochi Refinery	50		6.807	390 / 440	550 / 610	1000/Day		3056747.00	0.00	299000.00	3355747.00
7	BPCL Kochi Refinery	3.33		0.006	390 / 440	550 / 610	1000/Day		2340.00	3300.00	2000.00	7640.00
8	Cannanore Spinning & Weaving Mills	4.6		0.000	390 / 440	550 / 610	1000/Day		0.00	0.00	0.00	0.00
9	Carborundum Universal Ltd Koratty	7.5		7.280	390 / 440	550 / 610	1000/Day		3260524.50	0.00	551000.00	3811524.50
10	Carborundum Universal Ltd Kalamassery	18		17.042	390 / 440	550 / 610	1000/Day		7581320.90	0.00	598000.00	8179320.90
11	Classic Industries and Exports Ltd Rubber Park	2.8		0.000	390 / 440	550 / 610	1000/Day		0.00	0.00	0.00	0.00

S.No	Open Access Consumer	Open Access Contracted Capacity (kW)	Fixed Charge (Rs/kW/month)	Energy Wheeled at Kerala periphery	Energy Charge (Rs/kWh)		Any Other Charge as approved by Commission (Please specify)	Revenue from Fixed Charge	Revenue from Energy Charge		Revenue from Other Charge	Total Revenue
					Transmission Charge	Wheeling Charge			Transmission Charge	Wheeling Charge		
	<u>1</u>	2	3	4	5	5	6	7		8	9	10=7+8+9
12	Cochin Shipyard Ltd	8.5		1.227	390 / 440	550 / 610	1000/Day		548390.00	0.00	275000.00	823390.00
13	EICL Limited TC 79/4 Pothencode	3		0.000	390 / 440	550 / 610	1000/Day		0.00	0.00	0.00	0.00
14	EICL Limited TC 79/4 Veli	2.5		0.000	390 / 440	550 / 610	1000/Day		0.00	0.00	0.00	0.00
15	FCI OEN Connectors Ltd	2.65		0.000	390 / 440	550 / 610	1000/Day		0.00	0.00	0.00	0.00
16	Gasha Steels Private Ltd NIDA Kanjikode Palakkad	2.6		0.000	390 / 440	550 / 610	1000/Day		0.00	0.00	0.00	0.00
17	Glenrock Rubber Products Private Limited	2.5		0.017	390 / 440	550 / 610	1000/Day		7020.00	9900.00	2000.00	18920.00
18	GTN Textiles Ltd	4.5		0.000	390 / 440	550 / 610	1000/Day		0.00	0.00	0.00	0.00
19	Hindalco Industries Limited, Kalamassery	5		0.490	390 / 440	550 / 610	1000/Day		219518.40	0.00	241000.00	460518.40
20	Hindustan Organic Chemicals Ltd	9		5.470	390 / 440	550 / 610	1000/Day		2470605.55	0.00	373000.00	2843605.55
21	Indsil Electrosmelts Ltd Palakkad	14		0.000	390 / 440	550 / 610	1000/Day		0.00	0.00	0.00	0.00
22	INOX Air Products Private Ltd	6.2		5.086	390 / 440	550 / 610	1000/Day		2276828.23	0.00	258000.00	2534828.23
23	Kairali Steels & Alloys Pvt Ltd	4.95		0.000	390 / 440	550 / 610	1000/Day		0.00	0.00	0.00	0.00
24	Kerala Lakshmi Mills Thrissur	2		0.000	390 / 440	550 / 610	1000/Day		0.00	0.00	0.00	0.00
25	LULU Convention And Exhibition	3.5		1.397	390 / 440	550 / 610	1000/Day		620485.00	863236.00	235000.00	1718721.00
26	LULU International Shopping Mall Pvt Ltd 34 1000 NH 47 Edappally	4.8		3.509	390 / 440	550 / 610	1000/Day		1557281.50	2165319.50	457000.00	4179601.00
27	LULU International Shopping Malls Pvt. Ltd - Thiruvananthapuram	4.75		0.916	390 / 440	550 / 610	1000/Day		1089681.50	1514635.00	375000.00	2979316.50
28	LULU International Shopping Mall Pvt Ltd Marriott Kochi HTB	2		2.418	390 / 440	550 / 610	1000/Day		412483.00	572445.00	239000.00	1223928.00

S.No	Open Access Consumer	Open Access Contracted Capacity (kW)	Fixed Charge (Rs/kW/month)	Energy Wheeled at Kerala periphery	Energy Charge (Rs/kWh)		Any Other Charge as approved by Commission (Please specify)	Revenue from Fixed Charge	Revenue from Energy Charge		Revenue from Other Charge	Total Revenue
					Transmission Charge	Wheeling Charge			Transmission Charge	Wheeling Charge		
	<u>1</u>	2	3	4	5	5	6	7		8	9	10=7+8+9
29	Malabar Cements Limited	10		2.281	390 / 440	550 / 610	1000/Day		1030706.50	0.00	213000.00	1243706.50
30	MFAR Hotels & Resorts Pvt Ltd	1.3		0.000	390 / 440	550 / 610	1000/Day		0.00	0.00	0.00	0.00
31	Minar Castings Pvt Ltd NIDA	2.5		0.000	390 / 440	550 / 610	1000/Day		0.00	0.00	0.00	0.00
32	MRF Limited Kottayam	10		6.507	390 / 440	550 / 610	1000/Day		2899020.50	0.00	349000.00	3248020.50
33	Nitta Gelatin India Ltd Gelatin Division Info Park	2.2		0.183	390 / 440	550 / 610	1000/Day		78097.50	109215.00	57000.00	244312.50
34	Nitta Gelatin India Ltd Thrissur	2.25		0.012	390 / 440	550 / 610	1000/Day		4680.00	6600.00	3000.00	14280.00
35	Patspin India Limited Palakkad	4.4		0.607	390 / 440	550 / 610	1000/Day		267312.00	0.00	166000.00	433312.00
36	Peekay Rolling Mills (P) Ltd	4.5		0.149	390 / 440	550 / 610	1000/Day		66810.00	92800.00	38000.00	197610.00
37	Precot Meridian Ltd A Unit	4.5		1.904	390 / 440	550 / 610	1000/Day		21144294.80	0.00	600000.00	21744294.80
38	Precot Meridian Ltd C&D Unit	2.7		1.293	390 / 440	550 / 610	1000/Day		836177.53	0.00	256000.00	1092177.53
39	Premier Tyres Ltd Kalamassery	4.75		1.727	390 / 440	550 / 610	1000/Day		571716.55	0.00	246000.00	817716.55
40	Saint Gobain India Pvt Ltd	12		3.300	390 / 440	550 / 610	1000/Day		1472013.00	0	264000	1736013.00
41	Synthite Industries Private Limited	1.6		0.000	390 / 440	550 / 610	1000/Day		0	0	0	0.00
42	Tata Consultancy Services Ltd TCS	2.5		0.000	390 / 440	550 / 610	1000/Day		0	0	0	0.00
43	Terumo Penpol Private Limited	1.8		0.000	390 / 440	550 / 610	1000/Day		0	0	0	0.00
44	The Fertilisers and Chemicals	12		8.140	390 / 440	550 / 610	1000/Day		3664412.38	0	309000	3973412.38
45	The Kerala Minerals and Metals Ltd	15		11.319	390 / 440	550 / 610	1000/Day		5064274	0	455000	5519274.00
46	The Travancore Cochin Chemicals	26.3		35.616	390 / 440	550 / 610	1000/Day		15926734.4	0	688000	16614734.35
47	Thieh Ingots Pvt Ltd	3		0.026	390 / 440	550 / 610	1000/Day		11858	16439.5	4000	32297.50
48	Travancore Titanium Products	3.5		0.583	390 / 440	550 / 610	1000/Day		258178	0	110000	368178.00
49	Vijaya Mohini Mills Thirumala PO	1.7		0.000	390 / 440	550 / 610	1000/Day		0	0	0	0.00
				135.318					80874533.43	6755587.00	8397000.00	96027120.43

Form D 2.3

Income from sale of surplus power

Name of Distribution Business/Licer **KERALA STATE ELECTRICITY BOARD LTD.**

Licensed Area of Supply

2022-23

(Rs Cr)

Month	Name of buyer	Transaction No.	Nature of transaction- Bilateral /Exchange	Volume of trading in		Sale Price Rs/Unit	Income Rs Cr
				MU	Contracted MW		
1	2	3	4	5	6	7	8
April		...	Exchange	139.89		10.87	152.02
		...					
May		...	Exchange	137.53		6.69	92.04
		...					
June		...	Exchange	71.85		9.47	68.07
		...					
July		...	Exchange	262.25		5.71	149.87
		...					
August		...	Exchange	507.72		5.30	269.24
		...					
September		...	Exchange	385.69		5.41	208.57
		...					
October		...	Exchange	58.75		3.98	23.41
		...					
November		...	Exchange	7.12		5.43	3.87
		...					
December		...	Exchange	36.83		8.73	32.16
		...					
January		...	Exchange	55.03		9.28	51.04
		...					
February		...	Exchange	74.22		9.19	68.18
		...					
March		...	Exchange	76.22		7.01	53.46
		...					
TOTAL				1813.11		6.46	1171.93

Form D 2.4

Non-tariff Income

Name of Distribution Business/Licensee

KSEBL

Licensed Area of Supply

(Rs Cr)

S. No.	Particulars	Previous Year (n-1)			Remarks
		2022-23			
1	2	3	4	5 = 4 - 3	12
		Approved in Tariff Order	Audited	Truing Up requirement	
1	Interest on staff loans and advances	0.06		0.04	
2	Income from statutory investments	0.01		8.99	
3	Income from trading				
4	Income from rent of land or buildings	1.54			
5	Income from sale of scrap	43.4		71.99	
6	Income from staff welfare activities				
7	Rental from staff quarters	0.14			
8	Excess found on physical verification	0.06			
9	Interest on investments, fixed and call deposits and bank balances	4.21		7.34	
10	Interest on advances to suppliers/contractors	0.21			
11	Income from hire charges from contractors and others			0.01	
12	Income due to right of way granted for laying fibre optic cables/co-axial cables on distribution system	56.35		72.61	
13	Income from advertisements, etc.				
14	Miscellaneous receipts	100.59		180.93	
15	Commission for collection of electricity duty				
16	Others	83.56		47.96	
17	Rebate from Central Generating Stations	164.99		131.55	
18	Revenue from late payment surcharge	152.27		130.25	
19	Recovery for theft and pilferage of energy	11.16		1.22	
20	Meter/metering equipment/service line rentals	154.67		105.34	
21	Clawback of Grant		277.58	0.00	
22	PF Penalty	55.81		49.87	
	Total	829.04	405.85	808.10	

Form D 2.5

Subsidy provided by the State Govt under Section 65 of EA 2003

Name of Distribution Business/Licensee

KERALA STATE ELECTRICITY BOARD LTD.

Licensed Area of Supply

S.No.	Consumer Category	Previous Year (n-1) - 2022-23					
		Tariff approved by Commission	Reference of Government directives	Relaxtion/ Subsidy committed by Government	Subsidy assessed	Reference of finance department order releasing subsidy amount	Subsidy actually received
1	2	3	4	5	6	7	8
1	Domestic Category (LT - 1(a))				378.32		378.32
2	Tariff Revision 2012 Subsidy from Govt. For providing free supply of electricity to patients surviving on life support system				0.46		0.46
3	Subsidy receivable from Govt. for exempting hike for Agri. consumers in Tariff Revision				23.46		23.46

Form D 2.6**Revenue Subsidy and Grant**

Name of Distribution Business/Licensee

Licensed Area of Supply

Sr. No.	Particulars	Previous Year (n-1)			Remarks
		2022-23			
		Approved in Tariff Order	Actually received	Balance Receivable	
1	2	3	4	5 = 4 - 3	12
A)	Revenue Subsidies & Grants				
1	Revenue Subsidy from State Government other than S.65 subsidy	402.59	402.59	0	
2	State Govt. Grant		NIL		
3	Any Other item		NIL		
	Total				

Form D 2.7

Consumer Contribution, Capital Subsidy and Grant

Name of Distribution Business/Licensee
Licensed Area of Supply

KERALA STATE ELECTRICITY B

(Rs. Cr)

S. No.	Particulars	Previous Year (n-1)			Remarks
		2022-23			
		Approved in Tariff Order	Actually received	Balance Receivable	
1	2	3	4	5 = 4 - 3	12
1	Consumers Contribution for service connection lines and associated works		376.61		
2	Any other contribution by consumers under any scheme.				
	Sub-Total		376.61		
3	Capital Subsidies from appropriate Government towards cost of Capital Assets		122.10		
4	Receipts from appropriate Government under any scheme as Grants		241.03		
5	Any Other item(to be specified)		2.32		
	Total	210.96	365.45		
	TOTAL	210.96	742.07		

Form D 3.1

Power Purchase Expenses

Name of Distribution Business/Licensee **KERALA STATE ELECTRICITY BOARD LTD.**

Licensed Area of Supply

Year (n-1)*

2022-23

S. No.	Source of Power (Station wise)	Installed Capacity	Utility share (%)	Utility share (MW)	Total Energy Sent Out (ESO) from the station (MU)	External Losses outside the State (%)	Energy Received at State boundary (MU)	Losses within the State (%)	Energy received by licensee (%)	Total Annual Fixed charges (Rs Crore)	Capacity Charges paid/ payable by Utility (Rs Crore)	Variable Cost per unit including Fuel Price Adjustment (Rs/kWh)	Total Variable Charges (Rs Crore)	Incentive (Rs Crore)	Any Other Charges (Please specify the type of charges)	Total Cost of Energy Received (Rs Crore)	Avg cost of energy received (Rs/kWh)
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
	CENTRAL GENERATING STATIONS																
	RSTPS I & II	2100	12.10	254.1	1398.03	4%	1343.74	2.58%	1309.07	1057.69	119.04	3.97	555.07	0.33	9.18	683.62	4.89
	RSTPS III	500	12.64	63.2	355.73	4%	341.66	2.58%	332.85	290.82	33.89	3.65	129.97	0.69	1.80	166.34	4.68
	Talcher Stage-II	2000	21.52	430.4	3189.84	4%	3065.48	2.58%	2986.39	1112.65	276.18	1.94	618.71	11.23	117.14	1023.26	3.21
	Simhadri TPS Stg II	1000	8.30	83	505.57	4%	485.73	2.58%	473.19	1017.91	86.72	4.32	218.25	0.19	25.54	330.70	6.54
	NLC Stage-I	630	10.34	65.142	291.54	4%	280.37	2.58%	273.14	346.89	35.28	3.86	112.50	0.00	16.63	164.41	5.64
	NLC Stage-II	840	11.05	92.82	458.44	4%	440.83	2.58%	429.45	476.07	54.76	3.72	170.69	0.00	2.55	228.00	4.97
	NLC I Expansion	420	14.53	61.026	434.84	4%	418.22	2.58%	407.43	283.21	46.64	3.55	154.27	0.31	27.48	228.69	5.26
	NLC II Expansion	500	14.53	72.65	270.88	4%	260.53	2.58%	253.81	672.59	42.90	3.51	94.96	0.00	-8.03	129.84	4.79
	MAPS	440	5.37	23.628	76.43	4%	73.43	2.58%	71.54			2.61	19.91		0.00	19.91	2.61
	KAIGA	880	8.83	77.704	577.23	4%	554.73	2.58%	540.42			3.53	203.96		0.00	203.96	3.53
	Kudankulam	2000	13.39	267.8	1789.39	4%	1719.18	2.58%	1674.83			4.41	789.93		0.00	789.93	4.41
	Vallur	1500	3.59	53.85	317.96	4%	305.51	2.58%	297.63	1808.3024	64.58	3.51	111.54	0.37	0.11	176.60	5.55
	NTPL	1000	7.67	76.7	407.03	4%	390.86	2.58%	380.78	1090.17	77.27	4.16	169.47	0.00	5.35	252.09	6.19
	Kudgi	2400	4.81	115.44	504.57	4%	484.83	2.58%	472.32	2795.25	134.18	5.52	278.69	0.00	1.76	414.63	8.22
	NNTPS	1000	3.26	32.6	229.85	4%	220.93	2.58%	215.23	1259.60	40.94	2.79	64.17	0.27	-2.07	103.31	4.49
	Aravally Power Ltd										4.42					4.42	
	Sub Total	17210		1770	10807.33		10386.03		10118.07		1016.80	3.42	3692.09	13.38	197.43	4919.71	4.55
	RGCCPP, Kayamkulam	359.58									100.00				-1.82	98.16	
	Renewable Energy																
	Wind IPP																
	Wind-Agali	13.8			24.87		24.87	2.58%	24.23								
	Wind-Koundical	4.8			8.73		8.73	2.58%	8.51				17.88			17.88	3.13
	Wind-Ramakkelmedu, Wind	14.25			23.61		23.61	2.58%	23.00								

S. No.	Source of Power (Station wise)	Installed Capacity	Utility share (%)	Utility share (MW)	Total Energy Sent Out (ESO) from the station (MU)	External Losses outside the State (%)	Energy Received at State boundary (MU)	Losses within the State (%)	Energy received by licensee (%)	Total Annual Fixed charges (Rs Crore)	Capacity Charges paid/ payable by Utility (Rs Crore)	Variable Cost per unit including Fuel Price Adjustment (Rs/kWh)	Total Variable Charges (Rs Crore)	Incentive (Rs Crore)	Any Other Charges (Please specify the type of charges)	Total Cost of Energy Received (Rs Crore)	Avg cost of energy received (Rs/kWh)
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
	Wind -Ahalya	8.40			17.59		17.59	2.58%	17.13				8.92			8.92	5.07
	Wind-INOX	16.00			34.86		34.86	2.58%	33.96				14.26			14.26	4.09
	Wind-Kosamattam	1.00			1.23		1.23	2.58%	1.20				0.48			0.48	3.93
	Wind Sub total	58.25			110.88		110.88		108.02				41.54			41.54	3.75
	SHEP																
	Ullunkal(EDCL)	7.00			20.91		20.91	2.58%	20.37				5.05			5.05	2.41
	Iruttukanam Stage-I & II(Viyyat)	4.50			27.38		27.38	2.58%	26.67				7.00			7.00	2.56
	Karikkayam HEP(AHPL)	15.00			48.20		48.20	2.58%	46.95				20.05			20.05	4.16
	Meenvallom(PSHCL)	3.00			9.87		9.87	2.58%	9.61				4.43			4.43	4.48
	Minar Renewable energy project Ltd	8.00			20.89		20.89	2.58%	20.35				7.29			7.29	3.49
	Deviar micro	0.05			0.00		0.00	2.58%	0.00				0.00			0.00	
	Anakkampoil	8.00			25.01		25.01	2.58%	24.36				10.00			10.00	4.00
	Arippara	4.50			12.29		12.29	2.58%	11.97				0.00			0.00	0.00
	SHEP subtotal	50.05			164.54		164.54	2.58%	160.30				53.82			53.82	3.27
	Solar																
	Solar IREDA	50.00			71.68		71.68	2.58%	69.83				27.45			27.45	3.83
	Solar IPP ANERT	2			2.31		2.31	2.58%	2.25				0.10			0.10	0.41
	THDCIL	50			93.10		93.10	2.58%	90.70				28.86			28.86	3.10
	NTPC Solar	92			167.54		167.54	2.58%	163.22				49.29			49.29	2.94
	CIAL Ettukudukka	10			12.43		12.43	2.58%	12.11				2.95			2.95	2.37
	Solar IPP sub total	204.00			345.75		345.75	2.58%	336.83				108.65			108.65	3.14
	Sub Total IPPs	671.88	0.00	0.00	621.18	0.00	621.18	2.58%	605.15	0.00	100.00	0.00	302.18	0.00	-1.82	302.18	4.86
	Grid connected -captive prosumer/solar prosumer (settlement)																
1	grid connected solar injection				309.18		309.18						8.54			8.54	
2	captive consumer SHEP and wind injection				137.65		137.65										0.00
	Wind Power through SECI				247.3		247.3						71.49			71.48	2.89
	Sub Total				1315.30522		1315.31						382.21			382.20	2.91
	Maithon Power Ltd-I				1066.65	34.73	1031.92	2.58%	1005.29		155.23		291.90	1.60	7.68	456.40	4.42
	Maithon Power Ltd-II				1066.63	34.73	1031.90	2.58%	1005.28		155.22		291.88	1.60	7.68	456.38	4.42
	DVC Mejia				659.63	22.12	637.50	2.58%	621.06		137.66					388.94	6.10
	DVC RTPS				229.46	7.53	221.93	2.58%	216.20		40.99					129.78	5.85
	Jindal Power Ltd-Bid I*				1496.66	49.54	1447.12	2.58%	1409.79		375.59		243.25		-74.26	544.58	3.76
	Jhabua Power Ltd-Bid I				834.93	27.51	807.42	2.58%	786.59							327.80	4.06
	Jindal Power Ltd-Bid II*				1122.49	37.15	1085.34	2.58%	1057.34							479.42	4.42

S. No.	Source of Power (Station wise)	Installed Capacity	Utility share (%)	Utility share (MW)	Total Energy Sent Out (ESO) from the station (MU)	External Losses outside the State (%)	Energy Received at State boundary (MU)	Losses within the State (%)	Energy received by licensee (%)	Total Annual Fixed charges (Rs Crore)	Capacity Charges paid/ payable by Utility (Rs Crore)	Variable Cost per unit including Fuel Price Adjustment (Rs/kWh)	Total Variable Charges (Rs Crore)	Incentive (Rs Crore)	Any Other Charges (Please specify the type of charges)	Total Cost of Energy Received (Rs Crore)	Avg cost of energy received (Rs/kWh)
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
	Jhabua Power Ltd-Bid II				725.94	23.92	702.02	2.58%	683.91							327.05	4.66
	JITPL				695.83	23.02	672.81	2.58%	655.45							273.25	4.06
	BALCO				244.56	9.44	235.13	2.58%	229.06		77.31		28.75	-35.58	-27.79	42.70	1.82
	Purchase from JITPL through PTC				841.31	31.26	810.05	2.58%	789.15				289.65			289.65	3.58
	DEEP purchase from NBVL through TPTCL				31.01	1.21	29.80	2.58%	29.03				18.33			18.33	6.15
	DEEP purchase from JPL				37.91	1.48	36.43	2.58%	35.49				22.40			22.40	6.15
	Purchase from NVVN/IL&FS				67.98	2.51	65.47	2.58%	63.79				52.58			52.58	8.03
	Purchase from TPTCL/PPGCL				13.40	0.49	12.91	2.58%	12.57				9.27			9.27	7.18
	Purchase from PTC/JNSTPP				14.44	0.54	13.91	2.58%	13.55				9.98			9.98	7.18
	Sub Total Long term /medium term short term				9148.81	307.16	8841.65		8613.54							3828.48	4.33
	Exchanges																
	IEX/PXIL																
	IEX DAM				145.09	5.52	139.57	2.58%	135.97				62.03			62.03	4.44
	IEX TAM				19.48	0.69	18.79	2.58%	18.30				21.02			21.02	11.19
	PXIL TAM				30.81	1.02	29.78	2.58%	29.02				42.72			42.72	14.34
	HPX TAM				14.11	0.58	13.54	2.58%	13.19				14.19			14.19	10.48
	IEX RTM				86.13	3.17	82.97	2.58%	80.83				35.69			35.69	4.30
	IEX GDAM				47.11	1.70	45.41	2.58%	44.24				22.09			22.09	4.87
	IEX GTAM				14.68	0.57	14.11	2.58%	13.74				7.61			7.61	5.39
	PXIL GTAM				6.42	0.25	6.17	2.58%	6.01				3.34			3.34	5.42
	HPX GTAM				13.37	0.52	12.85	2.58%	12.52				6.85			6.85	5.33
	Deviation Settlement Mechanism*(net)				-3.86	0.00	-3.86	2.58%	-3.76				14.60			14.60	
	Swap Purchase				232.15	1.16	230.99	2.58%	225.03				0.72			0.72	
	Total LTA /MTOA/STOA				9754.29	322.33	9431.96	2.58%	9188.62				230.87			230.87	
	Transmission charges payable to PGCIL												1788.40			1788.40	#DIV/0!
	Total Power Purchase				21876.93		21133.30						6013.53			11149.66	
	Power returned through banking arrangements				19.14		19.14										
	Sale through IEX				1686.09		1686.09									4.55	
	Sale through PXIL				125.53		125.53										
	Sale through HPX				1.48		1.48										
	Provisions for energy availed through banking transactions from outside the State which was not returned during FY 2021-22															86.40	
	Total Power Purchase				21876.93	0.00	21133.30	0.00	0.00	0.00	0.00	0.00	6013.53	0.00	0.00	11240.62	5.32
	Net Power Purchase (after deducting external sale and swa return)				20044.69		19301.06									11240.62	

Operations and Maintenance Expenses

A Name of Distribution Business/Licensee **KERALA STATE ELECTRICITY BOARD LTD.**
Licensed Area of Supply _____

1 Employee Expenses and A&G Expenses

S. No.	Particulars	Reference	Previous Year (n-1) - 2022-23			Remarks
			Approved in Tariff Order	Audited	Truing Up requirement	
1	2	3	4	5	6 = 5 - 4	13
1	Number of Consumers ('000)		13405768		13422642	
	Norms (Rs. Lakh/'000 consumers)		4.282		4.389	
2	Distribution Transformers (no.)		85067		85594	
	Norms (Rs. Lakh/Distribution Transformer)		0.845		0.866	
3	HT line (km)		67997		68973	
	Norms (Rs. Lakh/km of HT line)		0.837		0.858	
4	LT line (km)		297175		299538	
	Norms (Rs. Lakh/km of LT line)		0.183		0.187	
4	Sales mu		23207.24		25602	
	Norms (Rs./unit of sales)		0.189		0.194	
5	Employee Expense (as per norms)		2844.43		2978.97	
6	Employee Expense (actuals)	3.4(a)		3466.95		

2 Administrative and General Expenses

S. No.	Particulars	Reference	Previous Year (n-1) - 2022-23			Remarks
			Approved in Tariff Order	Audited/ Normative	Truing Up requirement	
1	2	3	4	5	6 = 5 - 4	13
1	Number of Consumers ('000)					
	Norms (Rs. Lakh/'000 consumers)					
2	Distribution Transformers (no.)					
	Norms (Rs. Lakh/Distribution Transformer)					
3	HT line (km)					
	Norms (Rs. Lakh/km of HT line)					
4	Sales (kWh)					
	Norms (Rs./unit of sales)					
4	A&G Expense (as per norms)				1.59	
5	A&G Expense (actuals)	3.4(b)		467.83		

3 Repair and Maintenance Expense

S. No.	Particulars	Reference	Previous Year (n-1) - 2022-23			Remarks
			Approved in Tariff Order	Audited/ Normative	Truing Up requirement	
1	2	3	4	5	6 = 5 - 4	13
1	Opening GFA (Rs. Crore)		1251.53	14365.04		
	Norms (% of opening GFA)					
2	R&M Expense (as per norms)		500.62		573.7	
3	R&M Expense (actuals)	3.4(c)		233.19		

1 O&M Expenses

S. No.	Particulars	Reference	Previous Year (n-1) - 2022-23			Remarks
			Approved in Tariff Order	Audited/ Normative	Truing Up requirement	
1	2	3	4	5	6 = 5 - 4	13
1	Employee Expenses (as per norms)			3466.95		
2	R&M Expenses (as per norms)			233.19		
3	A&G Expenses (as per norms)			467.83		
4	O&M Expense (as per norms) (1+2+3)		3345.05	4167.97	3554.26	
2	O&M Expense (actuals)	3.4(a),3.4(b), 3.4(c)		4167.97		

Form D 3.4(a)

Employee Expenses

Name of Licensee

KERALA STATE ELECTRICITY BOARD I

Rs. Crore

S. No.	Particulars	Reference	Previous Year (n-1) 2022-23	Remarks
			Audited	
1	2	3	4	11
1	Basic Salary		3090.28	
2	Dearness Allowance (DA)		528.94	
3	House Rent Allowance		102.62	
4	Conveyance Allowance		0.00	
5	Leave Travel Allowance		0.24	
6	Earned Leave Encashment		32.25	
7	Other Allowances		34.82	
8	Medical Reimbursement		11.93	
9	Overtime Payment		0.00	
10	Bonus/Ex-Gratia Payments		7.45	
11	Interim Relief / Wage Revision		0.00	
12	Staff welfare expenses		4.60	
13	VRS Expenses/Retrenchment Compensation		0.00	
14	Commission to Directors		0.00	
15	Training Expenses		0.00	
16	Payment under Workmen's Compensation Act		0.69	
17	Net Employee Costs		3813.83	
18	Terminal Benefits		0.64	
18.1	Provident Fund Contribution		0.00	
18.2	Provision for PF Fund		0.00	
18.3	Pension Payments		0.00	
18.4	Gratuity Payment		0.00	
18.5	Annual Contribution for Terminal Liabilities based		0.00	
18.6	Contribution of KSEB Ltd towards National Pension		35.21	
19	Others		-0.06	
20	Gross Employee Expenses		3849.62	
21	Less: Expenses Capitalised		382.67	
22	Net Employee Expenses		3466.95	

Form D 3.4(b)

Administrative & General Expenses

Name of Licensee

KERALA STATE ELECTRICITY B

Rs. Crore

S. No.	Particulars	Reference	Previous Year (n-1) 2022-23	Remarks
			Audited	
1	2	3	4	11
1	Rent Rates & Taxes		12.46	
2	Insurance		1.80	
3	Telephone & Postage, etc.		9.90	
4	Legal charges		1.61	
5	Audit Fees		0.46	
6	Consultancy charges		0.03	
7	Other Professional charges		0.86	
8	Conveyance		59.26	
9	Vehicle Running Expenses Truck / Delivery Van		0.63	
10	Vehicle Hiring Expenses Truck / Delivery Van		4.83	
11	Electricity charges		0.00	
12	Water charges		0.75	
13	Entertainment		1.10	
14	Fees & subscription		0.09	
15	Printing & Stationery		6.45	
16	Advertisements, exhibition publicity		1.53	
17	Contribution/Donations		3.11	
18	Training expenses		2.21	
19	Miscellaneous Expenses		2.43	
20	DSM activities		0.06	
21	SRPC expenses		0.13	
22	Sports and related activities		0.12	
23	Freight		-0.18	
24	Purchase Related Advertisement Expenses		0.51	
25	Bank Charges		9.21	

S. No.	Particulars	Reference	Previous Year (n-1) 2022-23	Remarks
			Audited	
1	2	3	4	11
26	Office Expenses		141.04	
27	License Fee and other related fee		-1.63	
28	Cost of services procured		0.00	
29	Outsourcing of metering and billing system		0.00	
30	V-sat, Internet and related charges		2.17	
31	Security arrangements		0.00	
32	Books & periodicals		0.06	
33	Computer Stationery		0.00	
34	Others		8.75	
34.1	Others- Other Purchase related Expenses		1.97	
34.2	Power Factor Incentive given to consumers		47.90	
34.3	Expenditure in connection with distribution of LED		1.37	
34.4	Expenditure NILLAVU Scheme		2.60	
34.5	Expenditure in Connection with COVID19		0.08	
34.6	Expenditure in Connection with defend COVID19		0.03	
34.7	Expenditure Ujjwal Bharat Ujjwal Bhavishya		0.03	
34.8	Expenditure in connection with EV charging stations		0.03	
34.9	Electricity Charge-EV charging stations		1.07	
35	Gross A&G Expenses		324.83	
36	Ele. Duty u/s 3(I), KED Act		143.73	
37	Less: Expenses Capitalised		0.72	
38	Net A&G Expenses		467.83	

Form D 3.4(c)

Repair & Maintenance Expenses

Name of Licensee

KERALA STATE ELECTRICITY BOARD LTD.

Rs. Crore

S. No.	Particulars	Reference	Previous Year (n-1) 2022-23(Audited)		Remarks
			Normal	Flood	
1	2	3	4		10
1	Plant & Machinery		4.24	0.18	
2	Buildings		2.15	0.01	
3	Civil Works		0.70	0.03	
4	Hydraulic Works		0.09	0.00	
5	Lines & Cable Networks		194.39	12.90	
6	Vehicles		0.64		
7	Furniture & Fixtures		0.40		
8	Office Equipment		17.45		
9	Gross R&M Expenses		220.07	13.11	
10	Less: Expenses Capitalised				
11	Net R&M Expenses		220.07	13.11	

Form D 3.5

Fixed assets & depreciation

Name of Distribution Business/Licensee

KERALA STATE ELECTRICITY BOARD LTD.

Licensed Area of Supply

Year (n-1)*

(Figures in Rs Cr)

S. No.	Asset Group (as per notification in respect of depreciation)	Rate of depreciation (%)	Gross fixed assets (2022-23)				Provision for depreciation				Net fixed assets at the beginning of the year	Net Fixed Assets at the end of the year
			At the beginning of the year	Additions during the year	Decom. Liability for year	At the end of the year	Cumulative upto the beginning of the year	Additions during the year	Adjustment during the year	Cumulative at the end of the year		
1	2	3	4	5	6	7	8	9	10	11	12	13
1	Land & land rights		22.42	0.10	0.00	22.52	0.00	0.00		0.00	22.42	22.52
2	Other Civil works		9.31	2.93	-0.01	12.23	3.34	0.35		3.69	5.98	8.55
3	HV Distribution system		0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00
a)	Distribution lines		121.28	12.89	0.00	134.17	24.04	1.71		25.76	97.24	108.42
b)	Sub-station equipments		76.55	2.52	0.00	79.07	39.37	3.50		42.87	37.19	36.21
i)	Transformers		677.89	33.86	-0.83	710.92	452.61	29.59		482.20	225.27	228.72
ii)	Switchgears, Control gear & Protection		0.19	0.00	0.00	0.19	0.10	0.01		0.11	0.09	0.08
iii)	Batteries		0.97	6.09	0.00	7.06	0.21	0.16		0.37	0.76	6.69
iv)	Others		0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00
4	LT Distribution system		0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00
a)	Distribution lines		10946.96	1326.71	-815.31	11458.36	4525.10	615.58	-512.78	4627.90	6421.86	6830.46
b)	Sub-station equipments		0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00
i)	Transformers		161.02	12.34	0.00	173.36	48.75	7.77		56.53	112.27	116.83
ii)	Switchgears, Control gear & Protection		0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00
iii)	Batteries		0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00
iv)	Others		148.70	5.78	0.00	154.49	75.50	5.90	-0.26	81.14	73.20	73.35
5	Communication equipment		0.41	0.01	0.00	0.42	0.27	0.00		0.27	0.14	0.15
6	Meters		1601.81	5.22	0.00	1607.03	1015.85	66.85	-0.11	1082.60	585.95	524.43
7	Vehicles		11.50	0.42	0.00	11.92	7.52	0.60		8.12	3.98	3.80
8	Furniture & fixtures		50.29	2.03	0.00	52.31	23.26	2.83		26.09	27.03	26.22
9	Office Equipments		41.83	2.21	0.00	44.04	29.33	2.71		32.04	12.51	12.00

S. No.	Asset Group (as per notification in respect of depreciation)	Rate of depreciation (%)	Gross fixed assets (2022-23)				Provision for depreciation				Net fixed assets at the beginning of the year	Net Fixed Assets at the end of the year
			At the beginning of the year	Additions during the year	Decom. Liability for year	At the end of the year	Cumulative upto the beginning of the year	Additions during the year	Adjustment during the year	Cumulative at the end of the year		
10	Assets of Partnership projects etc.		0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00
11	Capital spares of HV & LT transmissison		0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00
12	Assets taken over & pending final valuation		0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00
13	IT Equipments		376.99	2.10	0.00	379.09	129.13	45.25		174.38	247.86	204.71
	Buildings		116.84	24.25	-19.67	121.43	45.65	4.02	-3.68	45.99	71.19	75.43
15	Any other items (Hydrualic Works)		0.08	0.00	0.00	0.08	0.05	0.00		0.05	0.03	0.03
16	Gross Asset (Total (1) to (15))		14365.04	1439.46	-835.81	14968.69	6420.08	786.84	-516.83	6690.09	7944.96	8278.60
17	Less: Consumer contribution		1970.57	376.61	352.94	1994.24					1970.57	1994.24
18	Less: Government grants		1258.54	241.03	606.09	893.49					1258.54	893.49
19	Less: Deposit Works		0			0.00						
20	Less: Capital Subsidies		441.67	122.10	77.79	485.99					441.67	485.99
21	Net Asset considered for depriciation (16-17-18-19-20)		10694.25	699.72	-1872.63	11594.98					4274.17	4904.88

Form D 3.6 (a)**Calculation of Weighted Average Rate of Interest on Actual Loans**Name of Distribution Licensee
Licensed Area of Supply

KERALA STATE ELECTRICITY BOARD

(Rs. Cr)

S.No	Particulars (specify items)	Previous Year (n-1)		2020-21	Remarks
		Approved in Tariff Order	audited	Audited	
1	2	3		4	12
1	Loan 1				
i.	Gross Loan -Opening				
ii.	Cumulative repayments of Loans upto previous year				
iii.	Net loan-Opening				
iv.	Add: Drawal(s) during the Year				
v.	Less: Repayment (s) of Loans during the year				
vi.	Net loan - Closing				
vii.	Average Net Loan				
viii.	Rate of Interest on Loan on annual basis				
ix.	Interest on loan				
x.	<i>Loan repayment effective from (date to be indicated)</i>				
2	Loan 2				
i.	Gross Loan -Opening				
ii.	Cumulative repayments of Loans upto previous year				
iii.	Net loan-Opening				
iv.	Add: Drawal(s) during the Year				
v.	Less: Repayment (s) of Loans during the year				
vi.	Net loan - Closing				
vii.	Average Net Loan				
viii.	Rate of Interest on Loan on annual basis				
ix.	Interest on loan				
x.	<i>Loan repayment effective from (date to be indicated)</i>				
3	Loan 3				
..	...				
4	Total Loan				
i.	Gross Loan -Opening				
ii.	Cumulative repayments of Loans upto previous year				
iii.	Net loan-Opening			4513.92	
iv.	Add: Drawal(s) during the Year			806.85	
v.	Less: Repayment (s) of Loans during the year			1101.49	
vi.	Net loan - Closing			4219.28	
vii.	Average Net Loan			4366.60	
viii.	Interest on Loan			0.00	
ix.	Weighted average Rate of Interest on Loans			0.00%	

SEPARATE SHEET ATTACHED

Note: In case of Foreign Loans, the calculations in Indian Rupees is to be furnished. However,
Note: nth year = FY 2014-15, n+1th year = FY 2020-21, and so on, for the first filing under the KSERC

Term Loan

SL NO	NAME OF THE FINANCIAL INSTITUTION	Net Loan - Opening	Current Financial Liability (OB)	Gross loan-Opening – 01/04/2022	Add: Drawal(s) during the Year	Less: Repayment (s) of Loans during the year	Gross loan – Closing – 31/03/2023	Current Financial Liability (CB)	Net loan – Closing – 31/03/2023	Average Net Loan	Rate of Interest on Loan on annual basis	Interest on loan	Loan repayment effective from (date to be indicated)
1	2	3	4	5	6	7	8	9	10	11	12	13	14
A	SECURED LOANS TERM LOANS												
1	REC-Distriburion - 23 Circle Scheme	681.01	124.17	805.18	0.00	124.17	681.01	124.17	556.84	743.10	9.26% - 10.16%	73.94	31-05-2017
2	REC- Distriburion - Meter Scheme	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.75%	0.00	Closed
3	Special Loan Assistance from REC	679.77	75.53	755.30	0.00	76.13	679.17	75.46	603.70	717.23	10% - 10.75%	77.02	31-10-2019
4	R E C - RGGVY	6.85	1.78	8.63	0.00	1.78	6.85	1.78	5.07	7.74	10.25% - 11%	0.88	15-03-2013
5	REC R-APDRP PART-B	302.21	65.16	367.37	0.00	65.16	302.21	65.16	237.04	334.79	9.26% - 10.16%	33.11	30-01-2017
6	SBI	517.53	73.30	590.82	251.86	94.28	748.41	98.49	649.92	669.62	9.40%	63.72	01-11-2020
7	Special Loan Assistance from PFC	487.72	46.45	534.17	0.00	46.88	487.29	46.41	440.89	510.73	9.08%	46.35	15-10-2018
8	PFC R-APDRP	231.37	0.00	231.37	0.00	0.00	231.37	0.00	231.37	231.37	9.00%	20.82	
9	PFC R-APDRP Part B	210.11	0.00	210.11	0.00	0.04	210.07	0.00	210.07	210.09	9.00%	0.12	
10	Kerala Financial Corporation	240.29	28.98	269.27	0.00	73.76	195.52	26.57	168.95	232.39	9.00%	19.03	31-03-2021
11	Medium Term Loan Kerala Financial Corporation	126.31	60.63	186.93	0.00	61.63	125.30	60.57	64.73	156.12	8.00%	12.72	31-03-2021
12	Indian Bank	3.60	0.46	4.06	0.00	0.59	3.47	0.89	2.58	3.76	9.25%	0.29	10-03-2022
13	Kerala Financial Corporation - II	0.00	0.00	0.00	50.48	3.42	47.05	5.31	41.74	23.53	8.00%	3.88	30-09-2022
14	Dhanlaxmi Bank	0.00	0.00	0.00	50.48	0.00	50.48	8.42	42.06	25.24	8.00%	3.63	31-05-2023
15	Kerala Financial Corporation - III	0.00	0.00	0.00	201.91	3.20	198.71	21.25	177.45	99.35	8.35%	6.95	31-03-2023
	SUB-TOTAL	3486.76	476.47	3963.23	554.73	551.06	3966.90	534.50	3432.40	3965.06		362.46	
B	UNSECURED LOANS TERM LOANS												
1	Short Term Loan from REC	252.61	0.00	252.61	(0.00)	252.61	0.00	0.00	0.00	126.31	7.75%	2.52	
2	Short term loan from M/s IREDA		298.08	298.08	252.12	297.82	252.39	32.68	219.70	99.89	8.90%	6.92	
	SUB-TOTAL	252.61	298.08	550.69	252.12	550.42	252.39	32.68	219.70	401.54	852%	371.90	
	TOTAL	3739.37	774.55	4513.92	806.85	1101.49	4219.28	567.18	3652.10	4366.60			

Form D 3.6 (b)

Calculation of Interest on Normative Loan
--

Name of Distribution Licensee
Licensed Area of Supply

KERALA STATE ELECTRICITY BOARD LTD

(Rs. Cr)

S.No	Particulars (specify items)	Previous Year (n-1) - 2022-23			Remarks
		Approved in Tariff Order	Normative	Truing Up requirement	
1	2	3	4	5 = 4 - 3	12
1	Gross Normative loan - Opening	4772.40			
2	Cumulative repayment of Normative Loan upto previous year				
3	Net Normative loan - Opening		4513.92	4556.32	
4	Increase/Decrease due to ACE/de-capitalization during the Year		806.85	697.40	
5	Repayments of Normative Loan during the year		1101.49	311.83	
6	Net Normative loan - Closing	4978.50	4219.28	4941.89	
7	Average Normative Loan	4875.45	4366.60	4749.11	
8	Weighted average Rate of Interest of actual Loans	9.90	8.52	9.68	
9	Interest on Normative loan	482.67	0.00	459.71	

Form D 3.6 (c)

Interest on Bonds to meet Terminal Liabilities

Name of Distribution Licer **KERALA STATE ELECTRICITY BOARD LTD.**

Licensed Area of Supply

(Rs. Cr)

S.No	Particulars (specify items)	2022-23			Remarks
		Approved in Tariff Order	Normative	Truing Up requirement	
1	2	3	4	5 = 4 - 3	12
A	Bond Series 1				
1	Value of Bond	8144.4		8144.4	
2	Rate of Interest on Bond	10		10	
3	Interest on Bond	509.13	522.25	520.45	

Form D 3.7						
Interest on Working Capital						
Name of Distribution Business/Licensee		KERALA STATE ELECTRICITY BOARD LTD.				
Licensed Area of Supply						
Sl.No.	Particulars	Previous Year (n-1) - 2022-23				Remarks
		Approved in Tariff Order	Audited	Normative	Truing Up requirement	
1	2	3	4	5	6	13
1	O&M expenses (as per norms)			3552.67		
	Pay revision expenses			401.47		
	Additional contribution to Master Trust			333.42		
	Total O&M Expenses(as per norms)			4287.56		
	O&M Exp for 1 month			357.30		
2	Maintenance Spares (as per norms)			833.54		
3	Expected Revenue			16533.53		
	Receivables (as per norms)			2755.59		
	Less:					
4	Security deposits except security deposits held in the form of Bank Guarantee from Users			3235.94		
	Less:					
5	Cost of Power Purchase (as per norms)					
6	Total Working Capital			-53.59		
7	Interest Rate (as per norms)					
8	Interest on Working Capital (actual)		113.51	0.00		

Form D 3.8

Return on Equity/Return on Net Fixed Assets
--

Name of Distribution Business/Licensee

KERALA STATE ELECTRICITY BOARD LTD.

Licensed Area of Supply _____

Rs. Crore

S.No.	Particulars	Ref.	Previous Year (n-1)				Year
			2022-23				n+3
			Approved in Tariff Order	Audited	Normative	Truing Up requirement	(Projected)
1	2	3	4	5	6	7	13
1	Equity at the beginning of the year		1810.74	1810.74		1810.74	
2	Capitalisation						
3	Equity portion of capitalisation						
4	Equity at the end of the year						
	Return Computation		1810.74	1810.74		1810.74	
5	Return on Equity at the beginning of the year	14%*(1)	253.50			253.50	
6	Return on Equity portion of capitalisation	14%*(3)/2					
7	Total Return on Equity	(5)+(6)				253.50	
	In case equity invested in the regulated Business is not clearly identifiable						
8	Net Fixed Assets net of Consumer Contribution & Grants (at the beginning of the year)	(8)					
9	Rate of return	3%					
10	Total return on net fixed assets	3% * (8)					

Form D 3.9

Tax on R.O.E.

Name of Distribution Business/Licensee
Licensed Area of Supply

KERALA STATE ELECTRICITY B

S. No.	Particulars	Previous Year (n-1) 2022-23			Remarks
		Approved in Tariff Order	Audited/ Normative	Truing Up requirement	
1	2	3	4	5 = 4 - 3	10
A)	Advance Tax assessed & deposited on-----				
a)	for Quarter I & deposited on 15 th June.				
b)	for Quarter II & deposited on 15 th Sept.				
c)	for Quarter III & deposited on 15 th Dec.				
d)	for Quarter IV & deposited on 15 th March.				
	Total---(A)	NIL	NIL	NIL	

Form D 4.1

Project-wise / Scheme-wise Capital Expenditure

KERALA STATE ELECTRICITY BOARD LTD.

Name of Distribution Business/Licensee

Licensed Area of Supply

Year (n-1)*

2022-23

(Rs Crore)

S. No.	Description of the project/Scheme	Capital Expenditure					Remark
		Opening Balance as on 01.04.2022	Exp. During the year	Interest During Const.	Transfer to fixed Assets	Closing Balance of WIP as on	
1	2	3	4	5	6	7	12
1	Deen Dayal Upadhyay Gram Jyothi Yojana (DDU	2.24	4.01		0.54	5.70	
2	Emobility Promotion Fund Pameindia Scheme Phase II	0.22	3.49		3.27	0.44	
3	Integrated Power Development Scheme (IPDS)	2.87	-2.35		0.52	0.00	
4	Dyuthi 2.0	0.00	77.10		66.14	10.96	
5	Rural Electrification Scheme	0.02	0.29		0.31	0.00	
6	Distribution Line Extension	0.64	152.85		148.87	4.62	
7	Distribution Service Connection	2.62	261.92		212.96	51.58	
8	Distribution System Improvement	12.22	745.50	24.95	770.14	12.53	
9	Electrification of Harijan Colonies	0.00	0.05		0.05	0.00	
10	Electrification of Tribal Colonies	0.00	0.38		0.38	0.00	
11	Punja Package	0.00	0.04		0.04	0.00	
12	System Improvement in other areas	0.01	6.32		6.27	0.06	
13	Distbn. Capacitor Installation Scheme	3.93	6.87		0.11	10.69	
14	Street Lights	0.46	35.66		35.22	0.91	
15	Expenditure due to Natural Calamity	0.07	4.63		5.00	-0.30	
16	RGVY-Village electrification Infrastructure	0.00	0.05		0.05	0.00	
17	RGVY-For effecting BPL Service Connection	0.00	0.00		0.00	0.00	
18	Part B Projects of R-APDRP	13.17	3.32		3.32	13.17	
19	R- APDRP Scheme	202.66	1.04		1.04	202.66	
20	CWIP - General	485.87	250.47		183.17	553.16	
21	Innovation fund	0.02	0.95		1.99	-1.03	
22	Projects not Identified	1.06	0.00		0.42	0.64	
	TOTAL	728.08	1552.58	24.95	1439.81	865.80	

Form D 4.2

olidated report on additions to Fixed Assets during the
--

Name of Distribution Business/Licensee

KERALA STATE ELECTRICITY BOARD LTI

Licensed Area of Supply

Year (n-1)*

2022-23

(Rs Cr)

S.No.	Asset Description	Asset Code	Total Addition to Assets	Date of commissioning
1	2	3	4	5
01.	Land & Land Rights	10.1	0.10	
02.	Buildings	10.2	24.25	
03.	Hydraulic Works	10.3	0.00	
04.	Other Civil Works	10.4	2.93	
05.	Plant & Machinery	10.5	60.61	
06.	Lines, Cable, Network etc.	10.6	1344.82	
07.	Vehicles	10.7	0.42	
08.	Furniture & Fixtures	10.8	2.03	
09.	Office Equipments	10.9	4.31	
	TOTAL		1,439.81	

Form D 4.3

General (Other debits, write offs or any other items)

Name of Distribution Business/Licensee

KERALA STATE ELECTRICITY BOARD LTD.

Licensed Area of Supply

(Rs. Cr)

S.No.	Particulars (specify items)	Previous Year (n-1)			Remarks
		2022-23			
		Approved in Tariff Order	Audited	Truing Up requirement	
1	2	3	4	5 = 4 - 3	12
1	Material Cost Variance				
2	Research and Development Expenses		-		
3	Cost Of Trading/Manufacturing Activity		-		
4	Bad and Doubtful Debts Written off / Provided/demand withdrawal of consumers		145.82	18.97	
5	Miscellaneous Losses and Write Offs		7.25	7.28	
6	Sundry Expenses		-		
7	Loss/(compensation) on account of flood cyclone etc.		-		
8	Rebate allowed for online payment consumers		-		
9	Rebate on fixed charges		-		
10	Discount to Consumers		3.79	3.8	
	Total		156.86	30.05	
	Less				
	Chargable to Capital Expenses				
	Net chargable to revenue		156.86	30.05	

Form D 6.1

Improvement in performance

Name of Distribution Business/Licensee _____

KERALA STATE ELECTRICITY BOAI

Licensed Area of Supply _____

S.No.	Particulars	Ref	Previous Year	Remarks
			(n-1)	
1	2	3	4	11
1	Distribution Losses, (%)		6.87	
2	Collection Efficiency, (%)		7.55	
3	Distribution losses for (%)			
(a)	Urban areas with population exceeding 1 lakh			
(b)	Industrial areas of load exceeding 5MVA#			
(c)	Rural areas			
4 (a)	Percentage of consumers billed		100	
4 (b)	Revenue realisation , (Rs Cr)		6.63	
5	Stopped Meters %			
6 (a)	Defective meters/metering arrangement%		0.60%	
6 (b)	Replacement of Defective meters, %		98.17%	
7	Supply availability %			
(1)	Base Load supply availability			
(a)	Actual contracted Base Load supply in MW		2931.78	
(b)	Base Load in MW		2792.17	
(c)	Base Load supply availability (%) (c=a/b)		1.05	
(2)	Peak Load supply availability			
(d)	Actual Contracted Peal Load Supply in MW		4092.08	
(e)	Peak load in MW		4002.25	
(f)	Peak Load Supply Availability (%) (c=a/b)		1.02	
	Supply availability % (0.75*c + 0.25*f)		1.04	
8	Transformer failure rate			
a.	Distribution transformers (%)		1.28%	
b.	Power transformers (%)			

Form D 6.2

Appropriation of Distribution loss

Name of Distribution Business/Licensee **KERALA STATE ELECTRICITY BOARD LTD.**

Licensed Area of Supply _____

Year (n-1)*

S.No.	Particulars	2022-23				
		(Actual/Audited)				
		Energy Input	Energy consumption from grid	Energy sent to lower voltage	Distribution Loss	
		MU	MU	MU	Percent	MU
1	2	3	4	5	6	7
	Voltage-wise Apportionment of Distribution losses					
1	33 kV					
2	11 kV					
3	LT					
		27254.93	25383.76557		6.87	1871.16
	Overall Distribution Loss					

Form D 7.1
Category-wise Sales

Name of Distribution

Business/Licensee

KERALA STATE ELECTRICITY BOARD LTD.

Licensed Area of Supply Kerala

MU

	April	May	June	July	August	September	October	November	December	January	February	March	Total
LT-1 Domestic	1192.69	1100.92	1013.40	962.20	977.32	999.72	1002.89	981.46	990.62	995.31	1006.85	1156.82	12380.21
LT-2 Colonies	0.29	0.28	0.24	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.82
LT-3A Temporary	0.06	0.03	0.02	0.03	0.08	0.03	0.05	0.12	0.36	0.20	0.23	0.17	1.39
LT-3B Temporary	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LT-4B-Industrial	0.86	0.78	0.80	0.75	0.80	0.80	0.83	0.86	0.86	0.85	0.85	1.07	10.11
LT-5A-Agriculture	25.44	15.97	18.53	14.93	9.55	11.38	12.90	16.53	25.49	39.59	46.14	49.94	286.38
LT-5B-Agriculture	7.89	7.97	8.15	8.49	7.90	7.47	7.18	7.95	8.43	8.62	7.73	8.30	96.07
LT-6A-General	20.48	18.27	18.16	17.41	17.64	18.60	19.41	20.17	19.94	20.44	20.07	22.90	233.49
LT-6B General	11.16	10.81	10.87	9.96	9.71	9.71	10.25	10.73	10.61	10.51	10.27	11.91	126.51
LT-6C General	22.44	20.77	21.11	18.74	19.07	19.40	19.98	20.75	21.34	20.57	20.33	25.02	249.53
LT-6D General	2.15	2.02	2.13	1.98	2.02	2.11	2.20	2.22	2.25	2.15	2.19	2.39	25.82
LT-6E General	0.26	0.28	0.25	0.26	0.26	0.29	0.27	0.32	0.30	0.30	0.28	0.30	3.37
LT-6F General	89.33	85.37	88.39	86.17	87.90	88.95	88.97	89.51	92.20	90.11	86.58	96.04	1069.52
LT-6G General	7.62	7.09	7.31	6.83	7.00	7.32	7.42	7.31	7.52	7.34	7.41	9.06	89.38
LT-7A Commercial	175.23	168.91	165.52	156.96	163.51	168.84	172.09	174.90	182.56	179.88	175.50	196.09	2079.98
LT-7B Commercial	13.03	12.95	12.18	11.91	12.05	12.66	12.44	12.82	12.74	12.93	12.28	13.42	151.40
LT-7C Commercial	2.70	2.11	2.06	1.86	2.26	2.12	2.44	2.21	2.24	2.51	2.37	2.12	26.99
LT-8A Public Lighting	18.62	15.82	18.54	21.34	18.86	18.50	18.35	18.49	18.21	18.28	15.19	18.45	218.64
LT-8B Public Lighting	11.62	11.11	11.37	11.51	11.42	11.78	11.80	12.30	12.98	12.96	11.88	12.92	143.66
LT-9 Advertisement and Hoardings	0.16	0.11	0.15	0.11	0.19	0.13	0.18	0.13	0.18	0.14	0.17	0.13	1.78
LT 10 Electric vehicle charging stations	0.10	0.11	0.12	0.19	0.17	0.17	0.22	0.25	0.29	0.26	0.32	0.36	2.56
LT Total	1704.35	1579.98	1499.82	1428.32	1458.10	1482.63	1498.45	1487.42	1518.19	1527.28	1527.06	1737.92	18449.52
EHT GENERAL (A)	0.38	0.37	0.36	0.34	0.36	0.36	0.39	0.38	0.38	0.35	0.35	0.42	4.45
EHT GENERAL (B)	2.84	3.06	3.20	2.85	2.88	2.95	2.99	3.16	3.09	3.08	2.93	3.65	36.70
EHT GENERAL (C)	2.29	2.23	2.19	2.18	2.19	2.13	2.18	2.15	2.43	2.24	2.10	2.46	26.76
EHT I (66 kV) INDUSTRIAL	25.92	19.10	24.27	14.04	13.12	14.54	14.39	17.50	18.83	23.56	21.78	24.02	231.07
EHT II (110 kV) INDUSTRIAL	62.20	59.17	55.59	51.24	53.81	52.69	49.08	56.29	63.06	68.33	65.13	78.97	715.56
EHT II (110 kV) RT	30.54	30.74	30.43	32.75	33.09	32.33	33.27	31.86	33.95	34.84	30.38	34.73	388.90
EHT III (220 kV) INDUSTRIAL	17.28	7.62	11.28	10.15	12.48	14.03	16.53	21.53	30.12	30.07	29.09	25.51	225.70
HT I (A) INDUSTRIAL	206.56	204.08	204.25	201.04	207.37	197.28	208.76	205.77	211.96	206.60	195.62	221.67	2470.95
HT I (B) INDUSTRIAL	1.18	1.16	1.14	1.06	1.20	1.21	1.27	1.33	1.35	1.31	1.27	1.55	15.04
HT II (A) GENERAL	19.25	19.03	19.04	19.17	20.64	20.53	20.58	20.75	21.10	20.29	20.22	24.10	244.69
HT II (B) GENERAL	57.44	57.24	57.00	54.41	55.54	54.22	56.69	56.27	56.70	55.93	53.43	63.06	677.94
HT III (A) AGRICULTURE	0.63	0.44	0.42	0.38	0.38	0.39	0.48	0.51	0.53	0.76	0.86	0.97	6.75
HT III (B) AGRICULTURE	0.19	0.21	0.22	0.22	0.23	0.20	0.17	0.17	0.16	0.18	0.16	0.20	2.30
HT IV (A) COMMERCIAL	27.89	25.71	24.96	24.47	24.90	24.42	25.68	26.14	27.67	26.88	24.37	30.30	313.38

HT IV (B) COMMERCIAL	42.20	42.37	39.33	37.87	40.74	40.83	40.43	41.93	44.73	43.89	40.71	46.30	501.33
HT V DOMESTIC	1.62	1.52	1.57	1.63	1.58	1.40	1.58	1.58	1.68	1.64	1.53	1.75	19.07
HT VI ELECTRIC VEHICLES CHARGING STATIONS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.10	0.13	0.12	0.15	0.53
HT VII TEMPORARY	0.26	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.30
KMRL(Kochi Metro Rail Ltd)	1.00	1.32	1.20	1.38	1.31	1.03	1.09	1.16	1.21	1.04	0.96	0.73	13.43
KMRL(Kochi Metro Rail Ltd)-HT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Licensee: CPT	3.75	3.47	2.82	2.70	2.62	2.75	2.99	2.94	3.01	2.89	2.83	3.45	36.20
Licensee: CSEZ	4.76	4.82	4.84	4.59	4.68	4.53	4.70	4.92	4.83	4.52	4.27	4.53	56.00
Licensee: Karnataka Electricity Department	0.08	0.07	0.07	0.06	0.07	0.06	0.07	0.06	0.07	0.10	0.10	0.13	0.94
Licensee: KDHPCL	4.44	5.63	4.79	4.10	3.67	4.57	4.59	4.68	4.70	4.31	3.96	4.69	54.12
Licensee: KPUPL	6.56	6.86	6.71	6.91	7.02	6.80	7.02	7.14	7.33	7.07	6.72	8.04	84.20
Defence Installations and Combined usage including Housing colonies(MES)	6.24	5.70	6.15	6.09	6.23	7.01	5.67	6.49	6.26	6.04	5.78	6.86	74.52
Licensee: RPL	2.52	2.60	2.55	3.01	2.96	2.39	2.77	2.78	2.56	2.61	2.52	2.69	31.96
Licensee: Technopark	5.12	5.56	5.53	5.32	5.49	5.33	5.53	5.69	5.64	5.56	5.24	6.35	66.34
Licensee: ThrissurCorporation	14.49	13.28	12.87	12.08	12.68	12.23	13.21	13.14	13.48	13.13	12.56	15.44	158.61
Licensee:Infopark, Cherthala	0.78	0.81	0.82	0.82	0.85	0.84	0.86	0.88	0.88	0.87	0.83	0.96	10.20
Licensee:SMART CITY	0.42	0.45	0.50	0.51	0.50	0.51	0.52	0.56	0.51	0.51	0.50	0.56	6.04
HT EHT and Bulk licensees/consumers total	548.81	524.62	524.11	501.36	518.58	507.55	523.48	537.77	568.35	568.76	536.35	614.24	6473.99
Total	2253.16	2104.60	2023.93	1929.68	1976.69	1990.18	2021.93	2025.20	2086.54	2096.03	2063.41	2352.15	24923.51
External sale	139.89	137.53	71.85	262.25	507.72	385.69	58.75	7.12	36.83	55.03	74.22	76.22	1813.11
Total energy sales by KSEBL	2393.05	2242.13	2095.78	2191.93	2484.41	2375.87	2080.68	2032.32	2123.37	2151.06	2137.63	2428.37	26736.61

Energy availed by embedded open access consumers through wheeling for FY 2022-23

	April	May	June	July	August	September	October	November	December	January	February	March	Total
EHT I (66 kV) INDUSTRIAL	0.43	3.40	3.16	4.62	3.69	4.11	6.21	2.26	1.83	1.62	1.19	1.38	33.91
EHT II (110 kV) INDUSTRIAL	0.78	6.82	6.33	10.64	9.07	9.55	15.88	4.85	4.87	3.99	2.52	3.25	78.57
EHT III (220 kV) INDUSTRIAL	0.12	0.56	0.32	0.53	0.48	0.62	0.74	0.24	1.00	0.75	0.56	0.64	6.56
HT I (A) INDUSTRIAL	0.00	0.02	0.02	0.01	0.04	0.03	0.03	0.00	0.00	0.01	0.00	0.00	0.17
HT II (B) GENERAL	0.01	0.09	0.12	0.39	0.37	0.06	0.12	0.23	0.19	0.11	0.10	0.25	2.04
HT IV (A) COMMERCIAL	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
HT IV (B) COMMERCIAL	0.13	0.66	0.63	1.03	0.94	0.92	1.47	0.53	0.49	0.38	0.36	0.00	7.55
Licensee: KPUPL	0.00	0.06	0.03	0.02	0.03	0.01	0.02	0.00	0.00	0.00	0.00	0.00	0.18
Licensee: RPL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	1.49	11.62	10.61	17.23	14.63	15.30	24.47	8.12	8.39	6.87	4.73	5.52	128.98

Energy adjusted against energy injected by captive consumers to grid through banking for FY 2022-23

	April	May	June	July	August	September	October	November	December	January	February	March	Total
EHT 110	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.29	0.06	0.00	0.00	0.00	0.34
EHT 66	5.48	8.33	3.64	9.29	9.54	10.99	8.55	10.04	6.99	5.69	5.34	6.28	90.15
HT IA Industrial	0.86	1.25	1.36	1.19	1.25	1.27	1.24	1.35	1.24	1.36	1.26	1.26	14.89
HT II (B) GENERAL	0.10	0.01	0.09	0.07	0.08	0.10	0.10	0.10	0.10	0.12	0.11	0.12	1.10
HT IV A Commercial	0.14	0.24	0.24	0.22	0.23	0.23	0.22	0.27	0.23	0.22	0.24	0.22	2.71
Sub total captive consumers	6.58	9.83	5.33	10.76	11.10	12.59	10.12	12.04	8.62	7.39	6.95	7.89	109.20

Energy adjusted against energy injected by solar prosumers to grid for FY 2022-23													
	April	May	June	July	August	September	October	November	December	January	February	March	Total
CIAL-EHT General	2.30	2.41	2.02	2.07	2.14	2.14	2.20	2.20	2.22	2.18	2.02	2.32	26.22
HINDALCO-EHT 110	0.04	0.02	0.05	0.03	0.04	0.07	0.05	0.04	0.04	0.07	0.06	0.07	0.58
KMRL-EHT 110	0.36	0.28	0.32	0.26	0.30	0.41	0.41	0.34	0.37	0.43	0.38	0.47	4.33
Other solar prosumers(HT & EHT)	12.12	10.28	11.74	11.16	12.94	14.31	15.07	14.88	16.86	17.34	20.71	26.97	184.37
Sub total solar prosumers	14.82	13.00	14.12	13.53	15.43	16.92	17.73	17.46	19.48	20.02	23.17	29.83	215.50
Sub total captive and solar	21.40	22.83	19.45	24.29	26.53	29.51	27.85	29.50	28.10	27.41	30.12	37.72	324.70
Energy given to RGCCPP power plant for meeting its auxiliary during non operative periods	0.50	0.55	0.55	0.57	0.59	0.53	0.55	0.61	0.55	0.54	0.48	0.53	6.57
Total energy consumption from grid	2276.55	2139.61	2054.54	1971.78	2018.43	2035.52	2074.79	2063.43	2123.58	2130.86	2098.75	2395.92	25383.77

Form D 8

Deviation Analysis							
	Name of Distribution Business/Licensee	KERALA STATE ELECTRICITY BOARD LTD.					
	Licensed Area of Supply						
Year		2022-23					
S. No.	Particulars	Approved	Actual	Deviation	Reason for Deviation	Controllable	Uncontrollable
1	2	3	4	5	6	7	8
1	Cost of own power generation/power purchase	10447.5	12440.37	-1992.87	Explained in the petition		
2	Transmission Charges	1310.51	1339.5	-28.99			
3	NLDC/RLDC/SLDC Charges						
4	Operation & Maintenance Expenses	3345.05	4167.97	-822.92			
4.1	Employee Expenses		3466.95				
4.2	Administration & General Expenses		467.83				
4.3	Repair & Maintenance Expenses		233.19				
5	Interest and finance charges on long term loans	482.67	346.95	135.72			
6	Depreciation	266.09	786.79	-520.70			
7	Interest on Working Capital	0	113.51	-113.51			
8	Interest on consumer security deposits and deposits from Users of the distribution system	151.46	137.43	14.03			
9	Principal repayment of Bond	339.42		339.42			
	Others		156.86	-156.86			
	Amortisation of Intangible Assets		0.06	-0.06			
	Other Interest and Finance Charges	1015.48	766.87	248.61			
	Prior period expenditure						
10	Amortization of past gap	850		850			
11	Additional contribution to Master Trust	333.42		333.42			
A	Total Expenditure	18541.61	20256.29	-1714.68			
B	Return on Equity	253.50	0.00	253.50			
C	Tax on ROE						
D	Revenue						
1	Revenue from sale of electricity	16038.87	18453.26	-2414.39			
2	Other Income	829.04	405.85	423.19			

Form D P&L
Profit & Loss Account

Name of Distribution Business/ **KERALA STATE ELECTRICITY BOARD**
 Licensed Area of Supply _____

S.No.	Particulars	Ref	Previous Year	Previous Year	Remarks
			2022-23	2021-22	
1	2	3	4	5	6
	I. INCOME				
	a. Revenue from Sale of Power		18453.26	16085.77	
	b. Revenue Subsidies and Grants				
	c. Other Income		405.85	776.52	
	Total (a+b+c)		18859.11	16862.29	
	II. EXPENDITURE				
	a. Repairs and Maintenance.		220.07	230.71	
	b. Employee Cost		3849.62	3617.21	
	c. Administration and General Expenses		468.56	447.79	
	d. Depreciation		786.79	682.79	
	1). Amortisation of Intangible Assets		0.06	0.05	
	e. Interest and Finance charges		1389.71	1402.15	
	f. Subtotal (a+b+c+d+e)		6714.81	6380.69	
	g. Less Capitalised Expenses:				
	- Interest & Finance Charges		24.95	18.41	
	- Other Expenses		383.39	383.17	
	h. Other Debits		156.86	169.89	
	I. Extra Ordinary Items		13.11	17.58	
	j. Purchase of power		13779.87	10319.13	
	k. Generation of Power				
	Total Expenditure (f-g+h+i+j+k)		20256.29	16485.71	
	III. Profit/(Loss) before Tax (I-II)		-1397.18	376.58	
	IV. Provision for Income Tax				
	V. Net Prior period credits (Charges)				
	V.(a). Other Comprehensive Income		-4045.33	-826.94	
	VI. Surplus (Deficit)		-5442.51	-450.36	
	VII. Net Assets at the beginning of the year (Less consumer's Contribution)		4274.17	4096.26	
	VIII. Rate of Return (VI/ VII)				

Form D BS

Balance Sheet at the end of the year

Name of Distribution Business/Licensee
Licensed Area of Supply

KERALA STATE ELECTRICITY BOARD LTD

S.No.	Particulars	Ref	Previous Year	Previous Year	Remarks
			2022-23	2021-22	
1	2	3	4	5	6
	Sources of Funds:				
	(A) Capital Funds:				
	Share Capital (Govt. equity)		1,810.74	1,810.74	
	Reserves & Surplus		(25,786.09)	(20,118.57)	
	Total (A)		(23,975.35)	(18,307.83)	
	(B) Loan from State Government				
	Loan from others :				
	-Secured		3,432.40	3,486.76	
	-Unsecured		219.70	252.61	
	Total (B)		3,652.10	3,739.37	
	(C) Contribution, grants & subsidies towards cost of capital assets		3,373.71	3,670.79	
	Provident Fund		2,556.37	2,389.74	
	Terminal Benefit Fund		16,915.53	12,695.99	
	Borrowings for working capital				
	Other Non current Liabilities		328.26	330.03	
	Long term Provision		(6,799.05)	3,489.31	
	Grand total of sources of funds (A+B+C)		(3,948.43)	8,007.39	
	Application of Funds:				
	A) Fixed assets				
	a) Gross fixed assets		14,968.69	14,365.04	
	b) Less accumulated depreciation		6,690.09	6,420.08	

S.No.	Particulars	Ref	Previous Year	Previous Year	Remarks
			2022-23	2021-22	
1	2	3	4	5	6
	c) Net Fixed assets((a)-(b))		8,278.60	7,944.96	
	d) Capital works in progress		865.80	728.08	
	e) Assets not in use				
	f) Deferred costs				
	g) Intangible assets		17.95	18.49	
	h) Investments		19.42	2.11	
	Other Non current assets-Other Financial Assets		(221.94)	(170.74)	
	Total (c) +(d)+(e)+(f)+(g)+(h)		8,959.83	8,522.89	
	B)Subsidy receivable from Government				
	Contribution receivable from State Government towards pension liability		381.96	1,138.83	
	C) Net Current Assets				
	(1) Current assets, loans and advances				
	a) Inventories*		707.85	515.97	
	b) Receivables against Sale of Power		2,383.23	2,462.36	
	c) Cash & bank balances		464.18	407.09	
	d) Loans and advances			0.50	
	e) Sundry receivables		(4,556.52)	5,345.28	
	Total (C) (1)		(1,001.26)	8,731.20	
	(2) Current liabilities & provisions				
	a) Security Deposits from Consumers		3,941.69	3,235.94	
	b) Borrowings for working capital		790.88	758.15	
	c) Payments due on Cap. liabilities				
	d) Other current liabilities		7,556.39	6,391.44	
	Total (C) (2)		12,288.96	10,385.53	
	Net Current Assets (C(1)) - (C(2))		(13,290.22)	(1,654.33)	
	Grand Total of Application of funds (A)+(B)+(C)		(3,948.43)	8,007.39	
			(0.00)	0.00	

Form D CF
Cash Flow for the year

Name of Distribution Business/Licensee

KSEBL

Licensed Area of Supply

S.No.	Particulars	Ref	Previous Year	Previous Year	Remarks
			2022-23	2021-22	
1	2	3	4	5	6
I	Net Funds from Operations				
1a	Net Funds from Earnings :				
	a) Profit before tax and before revenue subsidies and grants		-5442.51	-450.36	
	Less : Income Tax Payment during the year				
	: Other Comprehensive Income		-4045.33	-826.94	
	Total of (a)		-1397.18	376.58	
	b. Add: Debits to revenue account not requiring cash Flow:				
	I) a) Depreciation		786.79	682.79	
	b) Depreciation on IND As Adj		-516.78	0.00	
	ii) Amortisation of Deferred costs				
	iii) Amortisation of Intangible Assets		0.06	0.05	
	iv) Investment Allowance Reserve				
	v) Others, if any		-10290.14	-2712.02	
	Total of (b)		-10020.07	-2029.18	
	c. Less : Credits to revenue Account not involving cash receipts				
	I) Depreciation				
	ii) Subsidies receivables				
	iii) Revenue gap				
	Total of (c)		0	0	
	Net Funds from Earnings (a)+(b)-(c)		-11417.25	-1652.60	
2	Contributions, Grants & Subsidies to cost of Capital Assets		-297.07	786.53	
3	Security Deposit from consumers		705.75	27.96	
4	Proceeds from disposal of fixed Assets				
5	Total Funds from Operations (1+2+3+4)		-11008.57	-838.11	
6	Net Increase/(Decrease) in working Capital				
	(a) Increase/(Decrease) in Current Assets				
	I) Inventories		191.88	-61.40	
	ii) Receivables against sale of power		-79.13	-64.34	
	iii) Loans and Advances		-0.50	149.65	
	iv) Sundry receivables		-9901.80	-471.96	
	Total of (a)		-9789.55	-448.05	

S.No.	Particulars	Ref	Previous Year	Previous Year	Remarks
			2022-23	2021-22	
1	2	3	4	5	6
	(b) Increase/(Decrease) in Current liabilities				
	i) Borrowings for working Capital		32.73	122.78	
	ii) Other current liabilities		1164.95	-186.93	
	iii) Others (Increase in Reserve + payment due on cap.liab)		-4270.34	-4607.56	
	Total of (b)		-3072.66	-4671.72	
	Net Increase/(Decrease) in working Capital (a)- (b)		-6716.89	4223.66	
7	Net Funds from operations before subsidies and Grants (5-6)		-4291.68	-5061.77	
8	Receipts from revenue subsidies and Grants		756.87	652.17	
	Total Net Funds from operations including subsidies & Grants (7+8)		-3534.81	-4409.60	
II.	Net increase/ decrease in Capital liabilities				
	a). Fresh borrowings				
	i) State Loans				
	ii) Foreign currency Loans / Credits				
	iii) Other borrowings		806.85	748.13	
	Total of (a)		806.85	748.13	
	b) Repayments :				
	i) State Loans				
	ii) Foreign currency Loans / Credits				
	iii) Other borrowings		894.12	1097.63	
	Total of (b)		894.12	1097.63	
	Net Increase/(Decrease) in Capital liabilities (a) - (b)		-87.27	-349.50	
III.	Increase/(Decrease) in equity Capital		0.00	0.00	
IV.	Total Funds available for Capital Expenditure (I+II+III)		-3622.08	-4759.10	
V	Funds utilised on Capital Expenditure				
	a) On projects		741.38	1631.31	
	b) Advance to Suppliers & Contractors				
	c) Intangible Assets		-0.48	7.20	
	d) Deferred Cost		0.00	0.00	
	e) Long Term Loans and Advances		-51.20	-191.83	
	Total of V (a+b+c+d)		689.70	1446.68	
VI	Net Increase/(Decrease) in Government contribution				
VII	Net Increase/(Decrease) in Terminal benefit fund		4219.55	5894.09	
VIII	Net Increase/(Decrease) in Provident fund		166.63	310.35	
IX	Net Increase/(Decrease) in investments		17.31	-0.12	
X	Net Increase/(Decrease) in cash / bank balance (IV - V- VI - IX)+ (VII+VIII)		57.09	-1.22	
XI	Add opening cash & Bank balance		407.09	408.31	
XII	Closing Cash & Bank balance (X+XI)		464.18	407.09	