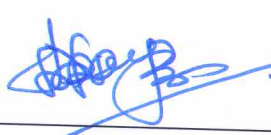


BEFORE THE HONOURABLE
KERALA STATE ELECTRICITY REGULATORY COMMISSION
At its office at C V Raman Pillai Road, Vellayambalam, Thiruvananthapuram

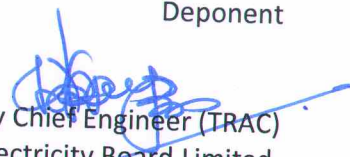
FILING No	
CASE No	
IN THE MATTER OF :	Truing up of Accounts of Generation, Transmission and Distribution Strategic Business Units of the Kerala State Electricity Board Limited (KSEBL) for the year 2021-22.
IN THE MATTER OF :	Kerala State Electricity Board Limited, Vydyuthi Bhavanam, Pattom, Thiruvananthapuram – 4
	APPLICANT 
	Deputy Chief Engineer (TRAC) 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 2021-22.

I, **Rajan M.P**, son of Sri. M.S. Podiyan, aged 50 years residing at Jayas, Hilltop Haven, NAD PO, Aluva, Ernakulam do solemnly affirm and say as follows:

I am working as Deputy Chief Engineer (TRAC), Kerala State Electricity Board Limited, Vidyuthi Bhavanam, Pattom, Thiruvananthapuram and the petitioner in the above matter and I am duly authorized by the Board to make this affidavit on its behalf. I solemnly affirm at Thiruvananthapuram on this the 23rd day of December 2022 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.

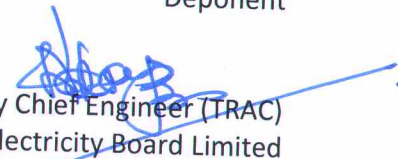
Deponent


Deputy Chief Engineer (TRAC)
Kerala State Electricity Board Limited,
Vidyuthi Bhavanam, Pattom
Thiruvananthapuram – 695 004



VERIFICATION

I, the above-named deponent, solemnly affirm at Thiruvananthapuram on this, the 23rd day of December 2022 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


Deputy Chief Engineer (TRAC)
Kerala State Electricity Board Limited
Vidyuthi Bhavanam, Pattom
Thiruvananthapuram – 695 004.

Solemnly affirmed and signed before me.



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



SN No 1377 / 2022
dt. 23. 12 2022
on page no 172
u/w

**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 2021-22.

Petitioner : Kerala State Electricity Board Limited,
Vidyuthi 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 second MYT Regulation for determination of Tariff in 2018 on 05.10.2018, after repealing the earlier MYT Tariff Regulation, 2014, with a four-year control period starting from FY 2018-19 till 2021-22. 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 and capital investment plan for the four-year control period from 2018-19 to 2021-22 in respect of its three SBUs along with tariff revision proposals for the years 2018-19 and 2020-21, before the Hon'ble Commission on 31.10.2018, in full compliance with the MYT Regulations 2018. Hon'ble Commission has issued orders on the MYT petition on 08.07.2019 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. Even though KSEBL had requested tariff revision for two years during the control period, (2018-19 and 2020-21) Hon'ble Commission issued tariff revision orders only for one year (2019-20). Subsequently, Hon'ble Commission, as per order dated 30.03.2020 in file no. 0476/DD(T)/2020/KSERC and order dated 19.03.2021 was pleased to issue orders extending the validity of the tariff order dated 08.07.2019 till 31.03.2021 and 31.03.2022 respectively.

1.4 The summary of the audited Annual statement of Accounts of KSEBL for the year 2021-22, the amount approved by Hon'ble Commission in the order on the MYT petition 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 2021-22 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 2021-22 (Rs. Cr.)				
No	Particulars	Approved*	Audited	Truing up
1	ARR	16575.43	16249.35	16635.94
2	ERC	15576.90	16985.62	16635.94
3	Revenue gap (1-2)	998.53	-736.27	0.00
<i>*Approved Vide Tariff Order dt.08.07.2019 in OP No. 15 / 2018</i>				

1.8 The difference between audited accounts and true-up values for 2021-22 are mainly due to difference in treatment of Return on Equity, claw back depreciation, actuarial liability etc. 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 2021-22 (Rs Cr)				
No	Particulars	SBU-G	SBU-T	SBU-D
1	ARR	423.84	1032.25	16303.32
2	ERC / Transfer Value	540.22	1152.24	16556.82
3	Revenue surplus (gap) (2-1)	116.38	119.99	253.50

1.9 Following chapters in this petition describe the Actual Expenses and Revenue of the petitioner in FY 2021-22 and the comparison with respective approved values.

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

2.1 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. The total installed capacity as on 31.03.2022 is **2258.63 MW** of which 91.48 % is Hydel, 7.08% is Thermal, 1.34 % 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 31.03.2022
Hydel	2066.36
Thermal	159.96
Wind	2.03
Solar	30.3
Total (Generation)	2258.65

2.2 Energy generated and purchased by the petitioner at Kerala periphery excluding auxiliary consumption and external loss is **28650.72 MU** Energy generated by the petitioner's Generation Business Unit was **9858.27 MU** (34.41%) out of which **9836.91 MU** was from own Hydro-electric Stations and remaining **21.36 MU** was generated from 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 2021-22 (MU)			
Source	KSERC approval	Audited Accounts	Difference
Gross Generation			
Hydro	7,074.51	9836.91	2762.4
BDPP	0	0	0
KDPP	0	0	0
Wind	2.08	1.159	-0.921
Solar	47.60	20.20	-27.40
Subtotal	7124.19	9858.27	2734.08
Aux consumption			
Hydro	72.64	94.06	21.42
BDPP	0	0.613	0.613
KDPP	0	0.543	0.543
Wind	0.5	0	-0.5
Solar		0	
Sub total	73.14	95.22	22.08
Net Generation			
Hydro	7001.87	9742.85	2740.98
BDPP	0	-0.613	-0.613
KDPP	0	-0.543	-0.543
Wind	49.18	1.159	-27.82
Solar		20.20	
Subtotal	7051.05	9763.05	2712.00

2.3 Hydro Generation:

2.3.1 Approved net hydro generation for the FY 2021-22 as per the MYT Order dated 08.07.2019 was **7001.87 MU** whereas the actual hydro generation was **9742.85 MU**, resulting an excess generation of **2740.98 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 2021-22 are given in the table- G 3 below:

Table – G3: The anticipated and actual inflow during the year 2021-22					
Months	Anticipated Inflow (MU)	Actual Gross Inflow (MU)	Actual Spill (MU)	Actual Net Inflow (MU)	Surplus (+) / Deficit (-) (MU)
Apr-21	127.57	127.96	0	127.96	0.4
May-21	147.98	661.63	21.5	640.13	492.2
Jun-21	924.21	1124.51	23	1101.51	177.3
Jul-21	1434.15	1931.75	208.4	1723.35	289.2
Aug-21	1199.21	1261.78	42.7	1219.08	19.9
Sep-21	860.83	1108.67	33.9	1074.77	213.9
Oct-21	638.62	1869.31	460.9	1408.41	769.8
Nov-21	447.53	1520.68	440.6	1080.08	632.6
Dec-21	243.62	627.89	93	534.89	291.3
Jan-22	110.73	207.4	0	207.4	96.7
Feb-22	69.18	107.52	0	107.52	38.3
Mar-22	95.78	105.92	0	105.92	10.1
Total	6299.41	10655.02	1324	9331.02	3031.6

2.3.2 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 May, November, December has been more than double the approved level. This has caused spillage in the reservoir.

2.3.3 In addition to this, it may kindly note that, the spillage of major dams was 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.

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

Project Commissioned During the FY 2021-22

2.4 During the financial Year, 4 projects were commissioned. The commissioned project includes 2 hydel projects and 2 solar projects. The details of the project commissioned are listed below;

Chatahnkottunada SHEP Stage – II (6 MW, 14.76 MU)

2.4.1 The (3 x 2 MW) Chatahnkottunada SHEP Stage – II was dedicated to the nation on 20.02.2021 and commercial operation of the project started on 20.06.2021, after completion of balance works. The contract awarded during 2010 was foreclosed due to the issues originated due to delay in land acquisition.

2.4.2 The land acquisition could not be completed as anticipated as some of land owners were not agreed for negotiated purchase. The balance land then had to be acquired through L.A act and could be completed only by December 2011. The acquisition through L.A Act was delayed as the revenue authorities, had to attend other urgent engagements.

2.4.3 All efforts taken by the Board to get the works completed by the contractor were in vain. With no major progress in work even after three extensions of time of completion, KSE Board decided to foreclose the work. Government gave permission to foreclose this contract vide G.O.(MS)no.7/2013/FD dated. 4-03-2016. On the basis of this G.O, Board directed to foreclose the contract without any risk and cost liability to the contractor and issued foreclosure Order vide B.O (DB) No.3270/2016(DGC/AEEV1/CHKN/2014) dated 19-11-2016. The Board also accorded Administrative Sanction for the balance works and to re-arrange the balance Civil and E&M works separately through open tender. It was also directed to take action on the foreclosure activities only after getting clearance from the Cabinet Committee for reviewing the previous Government Orders. Immediately on getting clearance the foreclosure agreement was executed on 17.05.2017.

2.4.4 The balance civil work was tendered during May 2017 and the work commenced on 04.11.2017. The contract for E&M work was finalised during March 2019. The expected completion date as per the ARR order was 2020-21.

2.4.5 During the execution, the project had faced several hindrances such as Heavy rainfall and flood during 2018 and 2019, restriction in rock blasting operations due to public protest, mining ban imposed by Mining Department, outbreak of “Nipa” virus, Covid 19 pandemic and abnormal seepage into machine bay area due to heavy rainfall. The E&M contractor had completed their work within the agreement time except some finishing work. The team work of KSEBL and contractors helped spinning of one unit and the commissioning on the date declared by the government itself. The project was commissioned on 20.02.2021 and commercial operation of the project started on 20.06.2021. During the year 2021-22, 12.73 MU has been generated.

Upper Kallar (2 MW, 5.14 MU)

2.4.6 The Contract For the implementation of Upper Kallar Small Hydro Electric Scheme as a single package was awarded to M/s Power Mech - PentaFlo-Hydro Magus-SEW Consortium and agreement was executed on 06.08.2016. The date of commencement of work as per agreement was on 02.08.2016 and the period of completion of the project was 24 months which expired on 01.08.2018.

2.4.7 The time overrun / cost overrun was occurred during execution of the work, due to the formation of deep gullies and piping phenomena occurred in the rainy season in July 2017 and very high flood in August 2018, severe damages were occurred in the newly constructed Anchor Blocks and saddles, and all of them has to be replaced by providing deep foundation. Also, the penstock track got disturbed totally and has to be reformed. Based on the soil investigation reports, pile foundations were designed to support anchors saddles, Wye Block, Power House columns and Bend blocks.

Accordingly piling works were arranged by another contractor. In addition to this there were various hindrances encountered during the implementation of the scheme such as adverse climatic conditions, weak and slushy nature of soil, underground heavy seepage prevalent at this site, crisis developed in arranging men & machinery due to the spread of the pandemic COVID-19 and its ill effects in the economy sector, etc. By overcoming these hindrances, the project was commissioned on 30.09.2021. The project was dedicated to the nation on 30.09.2021 by the Hon'ble Minister for Electricity, Government of Kerala. As on date 2.716 MU has been generated from the Upper Kallar Power House.

Agali & Kanjikkode Solar Plant

2.4.8 Tender for establishing 8MWp SPV plant in the vacant land owned by KSEBL at Brahmapuram Diesel Power plant area (4 MW), Agali 33kV substation Area (1 MW) and 220 KV Substation premises at Kanjikkode (3 MW) was floated on 17.01.2019.

2.4.9 The PAC of the work is Rs. 45.54 Crore. The time of completion of work is 12 months from the date of handing over of location. The Pre-Qualification bids were subsequently opened on 29.4.2019 and following three bidders were provisionally admitted for Technical and Financial evaluation as part of Prequalification.

1. M/s KELTRON
2. M/s Inkel Limited, Kakkanad
3. M/s Godrej and Boyce Mfg Co Ltd.

2.4.10 Subsequently, the Pre-qualification committee held on 16.07.2019, decided to qualify M/s. Inkel Limited & M/s. Godrej and Boyce Mfg Co Ltd and reject the tender of M/s KELTRON as per prevailing terms and conditions of Bid. Consequently, the price bids of the two pre-qualified bidders were opened on 25.07.2019 and were provisionally admitted for financial evaluation. M/s Inkel Limited quoted the lowest amount and work was awarded to M/s Inkel Ltd. The LoA was awarded on 23.11.2019 and agreement was executed with the EPC Contractor on 20.01.2020 so as to complete the project by January 2021. However, Covid-19 pandemic, floods and associated supply-chain crisis adversely affected the project execution. Further, issues owing to tree cutting & afforestation had to be sorted with forest department.

2.4.11 The hurdles were cleared and the projects, at Agali 1 MW is completed and inaugurated on 22.01.2022 and Kanjikkode 3 MW is also completed and inaugurated on 19.02.2022. The project generated 0.78 MU during the financial year 2021-22. 4 MW plant at Brahmapuram is expected to be commissioned by December 2022.

Auxiliary Consumption:

2.5 As per Tariff regulation, 2018 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.

2.5.1 Hon'ble commission, in the truing up order for 2020-21 (OP. No 23/2022 dated 24.06.2022) observed that, 'there is laxity from the part of KSEB Ltd in not providing metering equipments at the point of evacuation of the each generating station'. In this matter, it is humbly submitted that, KSEBL is having metering arrangement at generator side, auxiliary panel, and power evacuation points from where the power is evacuated to transmission network. Normally power is generated from the generator at comparatively lower voltages (mostly at HT level) and this voltage is stepped up to higher voltages through power transformer, where KSEBL does not have separate metering arrangement to evaluate the Generator transformer (GT) loss. Also, from the generator outgoing terminal, there is a tapping arrangement for excitation transformer. In most of the stations, KSEBL does not have separate metering arrangement at excitation transformer side for measuring the excitation loss. But these losses can be captured with the new proposed method since KSEBL is having metering arrangement at generator terminal side, evacuation points and auxiliary supply panels.

2.5.2 In this method, the switch yard of the generating station is considered as a node and the sum of generation from the plant and feeder imports to the switch yard are considered as energy input. The feeder exports from the switch yard are considered as the energy output. The difference between these two ((Generation +Import)-Export) is considered as the auxiliary consumption. The above calculation accounts for the transformer loss and the switchyard loss of the generating station loss. The auxiliary consumption approved by the Hon'ble commission during the FY 2021-22 is 73.14 MU consisting 72.64 MU for hydel stations and 0.5 MU for solar stations. But as per the audited account, the actual auxiliary consumption is 95.22 MU, out of which 94.06 MU denotes auxiliary consumption for hydel stations.

2.5.3 It may kindly be noted that, as per the tariff regulation 2018, 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 G4 Comparison of Auxiliary consumption

Year	Auxiliary Consumption (Approved for Hydro)	Auxiliary Consumption (As per Reg for Hydro)	Auxiliary Consumption (Actual for Hydro)
FY 2021-22	72.64 MU	104.15 MU	94.06 MU

2.5.4 Hence it is humbly submitted that, the actual auxiliary consumption is below the regulatory norms.

2.5.5 Further, it is submitted that, the approved generation for the FY 2021-22 was 7,074.51 MU whereas the actual generation has been 9836.91 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 2021-22.

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, 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:

Month	Generation	Aux Consumption	Net hydro Generation	Month	Generation	Aux Consumption	Net hydro Generation
Apr-21	646.09	7.77	638.32	Oct-21	1049.99	8.77	1041.22
May-21	728.9	8.43	720.47	Nov-21	1131.16	8.1	1123.06
Jun-21	737.4	8.9	728.5	Dec-21	763.23	7.05	756.18
Jul-21	971.94	8.86	963.08	Jan-22	657.61	6.4	651.21
Aug-21	1004.74	8.37	996.37	Feb-22	603.39	6.33	597.06
Sep-21	726.49	7.24	719.25	Mar-22	815.97	7.84	808.13
				Total	9836.91	94.06	9742.85

No	Hydro Electric Stations	Generation (MU)	No	Hydro Electric Stations	Generation (MU)
1	Idamalayar	381.21	25	Chembukadavu- II	7.81
2	Idukki	3709.68	26	Urumi - I	8.86
3	Kakkad	272.69	27	Urumi - II	5.76
4	Kallada	59.89	28	Poozhithode	13.64
5	Kuttiyadi+KES+KAES	751.36	29	Ranni-Perinadu	10.28
6	KuttiyadiTail Race	7.49	30	Peechi	0
7	Kakkayam SHEP	9.95	31	Vilangadu	19.13
8	Lower Meenmutty	6.94	32	Chimmony	8.34
9	Lower Periyar	811.91	33	Addyanpara	11.95
10	Maduppatty	6.52	34	Barapole	49.23
11	Malampuzha	3.88	35	Perunthenaruvi	7.31
12	Malankara	28.07	36	Chathankottunada	12.73
13	Neriamangalam	275.59	37	Upper Kallar	1.14
14	Neriamangalam Extention	169.85	38	Poringal screw generation	0.05
15	Pallivasal	144.50		KSEB Hydro (TOTAL)	9836.91
16	Panniyar	213.17		Aux Consumption (MU)	94.06
17	Peppara	10.52		Auxiliary consumption %	0.956%
18	Poringalkuthu	194.62			
19	PLBE	114.80			
20	Sabarigiri	2047.69			
21	Sengualm	182.72			
22	Vellathooval	10.01			
23	Sholayar	262.62			
24	Chembukadavu - I	5.03			
				Net Hydel Generation 9742.85 MU	

2.6 Thermal Generation:

2.6.1 Due to high variable cost, no generation has been approved from the thermal power plants of KSEBL viz. BDPP & KDPP for the year 2021-22. Due to higher hydro inflow received during the financial year than anticipated, 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.

2.7 Solar & Wind projects:

2.7.1 Hon'ble Commission has approved energy generation of 49.68 MU from wind and solar projects for the FY 2021-22. But the actual generation was only 21.36 MU. Due to technical constraints and maintenance activities in the case of solar generation, the anticipated quantum of power could not be generated. The reasons for reduction in solar generation is furnished below.

Sl. No	Name of the Plant	Capacity (KWp)	Remarks
1	Barapole Grid connected Canal Top	3000	Evacuation Transformer failure
2	Kanjikode GM 1 MW	1000	Inverter faulty
3	Poozhithode SHEP	30	Inverter faulty
4	Barapole Grid connected Canal Top	1000	Evacuation Transformer failure
5	66 kV Substation Vattiyookavu	15	Plant DC failure due to S/s maintenance
6	Banasurasagar reservoir/Kakkayam Grid connecting floating	500	Maintenance
7	Dam Safety, Pallom	50	Maintenance

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. The detailed explanation on prudence of various expenses and segregation of various costs among the three Strategic Business Units is submitted in chapter -5 of this petition. Accordingly, a gist of reasoning is provided hereunder.

No	Particulars	ARR Approval	Actuals	TU Sought	Difference over approval
1	Cost of Generation of Power		1.17	1.17	-1.17
2	Interest & Finance Charges	186.12	32.97	122.17	63.95
3	Depreciation	196.26	180.23	132.24	64.02
4	O&M Expenses	172.01	289.05	150.52	21.49
5	RoE (14%)	116.38	154.45	116.38	0.00
6	Other Expenses & PP expenses		0.01	0.01	-0.01
7	Exceptional Items - Flood		0.33	0.33	-0.33
8	Pay revision expenses			33.69	-33.69
10	Additional contribution to Master Trust	10.26		15.12	-4.86
11	ARR	681.03	658.21	571.63	109.40
12	Less Non-Tariff Income	41.17	11	31.41	9.76
13	Net ARR (Transferred to SBU-D)	639.86	647.21	540.22	99.64

2.8.2 It may kindly be seen that the actual net ARR is more than approval by Rs. 7.35 Cr and whereas the amount sought for true up is less by Rs. 99.64 Cr from the approved figure.

2.9 Cost of generation of power

2.9.1 Rs 1.17 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				
HSD oil	0.0039			0.0039
Lub oil	.088		0.125	0.2136
Lubricants and consumable stores	0.0019		0.95	0.9519
Station supplies				
Total				1.17

2.10 Interest and Finance charges:

2.10.1. Actual Interest and finance charges (gross) for the year 2021-22 has been Rs. 177.29 Cr as against the approved figure of Rs 186.12 Cr. An amount of Rs.122.17 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	133.90	128.22	73.27	60.63
2	Interest on GPF	11.21	8.97	8.97	2.24
3	Other Interests		1.06	1.06	-1.06
4	Interest on Master Trust Bonds	33.41	32.84	32.84	0.57
5	Interest on Working capital	7.60	6.20	6.03	1.57
6	Sub Total	186.12	177.29	122.17	63.95
7	Less: Capitalized		144.32		
8	Balance	186.12	32.97	122.17	63.95

- 2.10.2 **Interest on normative loan:** Regulation 26 of Tariff Regulation 2018 specifies the approval of loan Interest on normative basis. Based on this, while issuing orders on MYT petition, Hon'ble Commission approved Rs.1456.13 Cr as opening normative loan as at 01.04.2021 after considering provisional asset addition, contributions and grants etc. Considering interest rate at 9.33% Hon'ble Commission approved normative interest at Rs.133.90 Cr for 2021-22. Hon'ble Commission, as per true up order for 2020-21 has approved normative loan at Rs. 531.97 Cr as on 31.03.2021 and the actual weighted average interest rate for 2021-22 had been 9.32% for SBU G. Actual entitlement of normative interest amounts to Rs.73.27 Cr as per Tariff regulation is explained in chapter 5. Hon'ble Commission may kindly approve an amount of Rs.73.27 Cr towards interest on normative loan for the year 2021-22.
- 2.10.3 **Interest on PF:** Hon'ble Commission approved Rs 11.21 Cr towards interest on PF. But as per the audited accounts, the actual interest paid on PF was Rs.8.97 Cr, which is less than the approval by Rs.2.24 Cr. The actual interest for SBU- G amounting to Rs.8.97 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 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.33.41 Cr towards interest on Master Trust bonds. As detailed in chapter 5, actual share of expenses for SBU G has been Rs. 32.84 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.200 Cr (Rs. 10.26 Cr for SBU G) has been provisionally approved towards unfunded liability. Hon'ble Commission may kindly true up the provisional amount of Rs.15.12 Cr as detailed in chapter 5.
- 2.10.6 **Interest on working capital:** As per Tariff regulation, 2018 KSEBL is eligible to claim Rs. 6.03 Cr as detailed below, which may kindly be approved against Rs. 7.60 Cr approved in the MYT order dated 08.07.2019.

Table G11-Interest on working capital – SBUG (Rs Cr)		
Sl.No	Particulars	Amount
1	Cost of fuel for FY 2021-22	1.17
2	Cost of fuel for one month	0.10
	O&M expenses	
i	As per norms	142.63
ii	O&M Expenses for new stations	7.89
iii	Pay revision expenses	33.69
iv	Additional contribution to Master Trust	15.12
3	Total (I to iv)	199.33
4	O&M Expenses for one month	16.61
5	Opening GFA - Plants and Equipment for FY 2021-22	5028.07
6	Cost of maintenance of spares at 1% of historical cost	50.28
7	Total requirement of working Capital	66.99
8	Base rate as on 01-04-2021 (%)	7.00
9	Interest rate on working capital (%)	9.00
10	Interest on working capital	6.03

2.10.7 In view of the above, the Hon'ble Commission may kindly true up interest and finance charges of Rs. 122.17 Cr as detailed above.

2.11 O&M of SBU-G:

2.11.1 The Hon'ble commission had approved 29.38 Cr as O&M expense for new and ongoing hydro and solar projects for 2021-22. The Perunthenaruvi SHEP was commissioned on 24.10.2017 but as per the account, the same is capitalised only on 2018-19, hence the same is not considered for finalising the operation and maintenance cost of existing station of KSEBL under SBUG. Hence the same may be considered as new project with O&M expense. The O&M expense of Perunthenaruvi SHEP become Rs. 1.57 Cr for the period 2021-22. For Kakkayam (3 MW), the O&M expense for the financial year 2021-22 as per the approved base level and escalation factor become Rs. 1.09 cr.

2.11.2 As submitted earlier, two hydel projects were commissioned during the FY 2021-22, (1) Chatahnikottunada SHEP Stage – II (6 MW) and (2) Upper Kallar (2 MW). The Chatahnikottunada SHEP Stage – II was commissioned on 20.06.2021, the O&M expense for the financial year 2021-22 as per the RE regulation 2020 is Rs. 1.18 Cr. The Upper Kallar (2 MW) SHEP was commissioned on 30.09.2021, the O&M expense for the financial year 2021-22 as per the RE regulation is 0.26 Cr.

2.11.3 Further, solar projects have been added in the financial year 2018-19 to FY 2021-22. The O&M expense for Solar Project commissioned during FY 2018-19 (3.315 MW) become Rs. 0.31Cr, for the project commissioned during FY 2019-20 become Rs.0.04 Cr. For the Soura Solar project commissioned during FY 2020-21, FY 2021-22 become Rs. 0.14 Cr, Rs. 0.45 Cr respectively. Also availing O&M expense for the project Banasurasagar floating solar, Nellyampathi & Parambikulam Off Grid Solar Project commissioned during 2017-18 and are not considered during previous truing up petitions and in the ARR order OA No. 15/2018 dated 08.07.2019 are also considered with O&M cost during FY 2021-22 become Rs.0.05Cr, 0.01Cr respectively. The O&M cost for the solar projects Agali and Kanjikode commissioned during FY 2021-22, works out to Rs. 1.12 Cr. Rs 1.68 Cr respectively. Hence the O&M cost for new projects under SBUG for the FY 2021-22 amounts to Rs.7.89 Cr.

Table – G 12 O&M expense of New Generating stations Commissioned				
Project	CoD	Capacity-MW	Energy-MU	Addl. O&M cost (Cr)
Perunthenaruvi	23.10.2017	6	12.17	1.57
Kakkayam	16.07.2018	3	10.39	1.09
Chatahnikottunada SHEP Stage – II	20.06.2021	6		1.18
Upper Kallar	30.09.2021	2		0.26
Solar Projects				
Solar Project (Annexure G1)	FY 2018-19	3.315		0.31
Solar Project commissioned FY 2019-20 (Annexure G2)	FY 2019-20	0.65		0.04
Banasurasagar Floating solar	04-12-2017	0.5		0.05
Nellyampathi & Parambikulam Off Grid Solar Project	04-04-2017	0.0836		0.01
Soura Solar	FY 2020-21	2.13		0.14
Soura Solar	FY 2021-22	6.64		0.45
Agali	22.01.2022	1		1.12
Kanjikode	19.02.2022	3		1.68
Total		13.195		7.89

2.11.4 The approved O&M expense for existing station is Rs. 142.63 Cr. Hence the O&M expenses for the existing station and new stations for the year 2021-22 is Rs. 150.52Cr (Rs. 142.63 Cr + Rs. 7.89 Cr)

2.11.5 Actual O&M expenses of the generation Business Unit was **Rs. 289.05 Cr.** Component wise details are given in the **Table-G12** and detailed in Form G4. Hon'ble Commission had approved **Rs 172.01 Cr** towards O&M expenses based on the norms specified in the Tariff Regulation, 2018. However, based on the commissioning of the new generating stations, a claim of Rs. 150.52 Cr is sought for true up for the year 2021-22. It is humbly submitted that the claim towards pay revision and additional contribution to Master trust are claimed separately as detailed in chapter 5.

Table G 13 Details of O&M expenses for 2021-22 (Rs Cr)					
No	Particulars	Approved	Actual	TU requirement	Difference
1	Employee Cost		214.78		
2	A&G Expenses		43.79		
3	R&M Expenses		30.48		
4	Total	172.01	289.05	150.52	21.49

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 2021-22 was Rs 196.06 Cr whereas the actual amount was Rs.180.23 Cr and the amount sought for truing up is Rs. 132.24 Cr.

2.12.2. Hon'ble Commission may kindly note that depreciation as per accounts has been worked out in line with IND AS and claw back depreciation has been determined and credited to other Income under Note 25(b) of Annual accounts. But, as per MYT Regulation for the control period 2018-22, depreciation is allowable as per the provisions contained in the Tariff Regulations, 2018 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. 132.24 Cr** as detailed in Chapter 5. Hon'ble Commission may kindly approve the same.

2.13 Return on Equity:

2.13.1 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. 154.45 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.41.17 Cr under this head. Actual income earned as per accounts has been Rs.11.00 Cr. SBU G seeks to true up Rs.31.41 Cr under the head non-tariff income as detailed in chapter 5 after excluding income booked under claw back depreciation. 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.31.41 Cr under this head.

2.15 Other items and Prior period expenditure:

2.15.1 Other expenses amounted of Rs.0.01 Cr for the year 2021-22 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.0.33 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. 571.63 Cr** and Non-tariff income earned is **Rs. 31.41 Cr**. The net ARR of SBU G transferred to SBU-D are **Rs. 540.22 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 G1

Sl.No	Type	Project	MW
1	GM	Kuttippuram-500kW COD(28/11/2017)	0.5
2	Roof top	220kV S/Sn Kundara -30kW DOC -20.09.2017	0.03
3	Roof top	110kV S/Sn Kanjikode -25kW DOC -12.05.2017	0.025
4	Roof top	220kV S/Sn Palakkad -35kW DOC -10.07.2017	0.035
5	Roof top	220kV S/Sn Edappon -30kW DOC -25.08.2017	0.03
6	Roof top	220kV S/Sn Edappon -45kW DOC -21.12.2017	0.045
7	Roof top	110kV S/Sn Kunnamangalam -20kW DOC -18.04.2017	0.02
8	Roof top	220kV S/Sn Orkattery -35kW DOC -06.09.2017	0.035
9	Roof top	220kV S/Sn Nallalam -35kW DOC -05.05.2017	0.035
10	Roof top	220kV S/Sn Brahmapuram -55kW DOC -26.04.2017	0.055
11	Roof top	110kV S/Sn Thycattusery -20kW DOC -15.12.2016	0.02
12	Roof top	220kV S/Sn Kattakkada -20kW DOC -27.09.2017	0.02
13	Roof top	110kV S/Sn Paruthippara -30kW DOC -07.10.2017	0.03
14	Roof top	220kV S/Sn Pothencode-35kW DOC -18.07.2017	0.035
15	Roof top	66kV S/Sn GIS LA Complex-25kW DOC -03.08.2017	0.025
16	Roof top	66kV S/Sn GIS Power house-25kW DOC -02.08.2017	0.025
17	Roof top	66KV S/SnVeli -20kW DOC -16.02.2018	0.02
18	Roof top	TMR Thirumala-35kW-DOC-10.07.2017	0.035
19	Roof top	VB Pathanamthita-45kW- DOC-22.06.2017	0.045
20	Roof top	220kV S/Sn Malaparamba-20kW DOC -11.12.2017	0.02
21	Roof top	VB Manjeri-30kW DOC-20.01.2018	0.03
22	Roof top	220kV S/Sn Areacode -30kW DOC -03.01.2018	0.03
23	Roof top	PTRU-Kalamassery -40kW -DOC-14.03.2018	0.04
24	Roof top	220kV S/Sn Mylatty -30kW DOC -08.02.2018	0.03
25	Roof top	220kV S/Sn Kanhirode -35kW DOC -15.02.2018	0.035
26	Roof top	110kV S/Sn Viyyur -20kW DOC -12.01.2018	0.02
27	Roof top	110kV S/Sn Pathanamthitta -25kW DOC -13.07.2017	0.025
28	Roof top	Mini Control room & Workshop Madakkathara- 45kW DOC-12.01.2018	0.045
29	Roof top	Main Control room & Workshop Madakkathara-150kW DOC-09.07.2018	0.15
30	Roof top	Ele Dvn Kollam-35kW DOC-19.03.2018	0.035
31	Roof top	Ele Dvn Kundara-25kW DOC-08.12.2017	0.025
32	Roof top	Vaidyuthi bhavanam Chathnnoor-25KW COD(27.02.2018)	0.025
33	Roof top	Vaidyuthi bhavanam Kottarakkara-80KW COD(20.02.2017)	0.08
34	Roof top	220kV S/Sn New pallom -20kW DOC -15.01.2017	0.02
35	Roof top	220kV S/Sn Ambalamughal-20kW DOC -31.07.2017	0.02
36	Roof top	Vaidyuthi bhavanam Thodupuzha-50KW COD(25.02.2017)	0.05
37	Roof top	Ele Sn.Beach-20kW DOC-06.10.2017	0.02
38	Roof top	Vaidyuthi bhavanam Thrissur-45KW COD(23.09.2017)	0.045
39	Roof top	SLDC Building-35kW- DOC	0.035
40	Roof top	Ele Sn.Kesavadasapuram-25kW DOC-06.10.2017	0.025
41	Rooftop	110kV S/S Ponnani -500 kW DOC -16.1.2019	0.5
42	Rooftop	Peerumedu	0.5
43	Rooftop	IPDS at various locations	0.445
		Total	3.315

Annexure G2

Sl.No	Type	Project	MW
1		Kottiyam,COD 27.1.2020	0.6
2		Dam safety,Pallom	0.05

**ARR and Tariff Formats
Generation Business
INDEX**

S.No.	Form No.	Title of Form
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2	Form G 1.2	Aggregate Revenue Requirement
3	Form G 2.1	NA
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
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11	Form G 4c	Repair & Maintenance Expenses
12	Form G 5.1	Energy Charges for Thermal Generation
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15	Form G 6.2a	Calculation of Weighted Average Rate of Interest on Actual Loans
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18	Form G 6.4	Consolidated report on additions to Fixed Assets during the year
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22	Form G 6.8	NA
23	Form G 6.9	Return on Equity/Return on Net Fixed Assets
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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	2021-22				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	172.01	289.05		150.52	
1.1.2	Depreciation	6.1	196.26	180.22		132.24	
1.1.3	Interest on Loan Capital	6.2	133.9	-16.10		73.27	
1.1.4	Interest on Bonds to meet Terminal Liabilities	6.2 ©	33.41	32.84		32.84	
1.1.5	Interest on Working Capital	6.11	7.6	6.20		6.03	
1.1.6	Return on Equity	6.9	116.38	154.45		116.38	
1.1.7	Tax on ROE	6.12					
1.1.8	Any other item (to be specified)			0.01			
1.1.9	GPF & Other interest		11.21	8.97		8.97	
1.1.10	Prior Period Expenditure						
1.1.11	Interest on unfunded liability		10.26			15.12	
1.1.12	Pay revision					33.69	
1.1.13	Other interests			1.06		1.06	
1.1.14	Other Expenses					0.01	
1.1.15	Exceptional items			0.33		0.33	
1.1.16	Less: Non-Tariff income	3.2	41.17	11.00		31.41	
	Total (1.1) Annual Fixed Charges		639.86	646.03		539.05	
2	Total- Energy (variable) charges		0	1.17		1.17	
3	Units sold to Discoms (MU)		7051.05	9763.05		9763.05	
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							
Name of the Generating Business/Company		KERALA STATE ELECTRICITY BOARD LTD.					
Name of the Generating Station /Unit :							
							(Rs. Crore)
S.No.	Particulars	Reference Form	2021-22			Truing Up requirement	Remarks
			Approved in Tariff Order	Audited	Normative		
1	2	3	4	5	6	7	14
A	Expenditure						
1	Variable Costs, including Fuel Cost	5.1	0.00	1.17		1.17	
2	Depreciation	6.1	196.26	180.22		132.24	
3	Interest on term Loan & Finance charges	6.2	133.90	-16.10		73.27	
4	Return on Equity	6.9	116.38	154.45		116.38	
5	Tax on ROE	6.12					
6	Interest on Working Capital	6.11	7.60	6.20		6.03	
7	O & M Expenses	4	172.01	289.05		150.52	
9	Any other item (to be specified)			0.01		0.01	
	Master trust interest		33.41	32.84		32.84	
	Interst on unfunded liability		10.26			15.12	
	Prior Period Expenditure						
	GPF & Other interest		11.21	8.97		8.97	
	Pay Revision					33.69	
	Other interest			1.06		1.06	
	Other Expense			0.01		0.01	
	Exceptional item			0.33		0.33	
	Total- (A) Expenditure		681.03	658.21		571.63	
B	Receipts						
1	Revenue from Sale of Power (Tariff income)	3.1					
2	Non Tariff income	3.2	41.17	11.00		31.41	
3	Revenue Subsidies, Grants & Subvention from State Govt.						
	Total- (B)						
C	ARR (A-B(2)-B(3))		639.86	647.21		540.22	

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	2021-22			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	7124.19	9858.27	9858.27	
1.6	Auxiliary Energy Consumption	%				
1.7	Auxiliary Energy Consumption	MU	73.14	95.22	95.22	
1.8	Net Generation	MU	7051.05	9763.05	9763.05	

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 (paisa/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	Revenue From Sale of Power		9763.05		646.04	1.17		647.21	66.29	

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	2021-22			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		0.00	0.00	
2	Income from statutory investments		0.00	0.00	
3	Income from sale of ash/rejected coal		0.00	0.00	
4	Income from rent of land or buildings		0.87	0.87	
5	Income from sale of scrap		7.46	7.46	
6	Income from staff welfare activities		0.00	0.00	
7	Rental from staff quarters		0.07	0.07	
8	Interest on investments, fixed and call deposits and bank balances		2.06	2.06	
9	Interest on advances to suppliers/contractors		3.70	3.70	
10	Income from hire charges from contractors and others		0.01	0.01	
11	Miscellaneous receipts		17.24	17.24	
12	Clawback of Grant		6.67		
	Total non-tariff income	41.17	38.09	31.41	

Form G 3.3
Capital Subsidies and Grants

Name of the Generating Business/Company

KERALA STATE ELECTRICITY BOARD I

Name of the Generating Station/Unit :

Rs. Crore

S. No.	Particulars	2021-22			Remarks
		Approved in Tariff Order	Audited	Truing Up requirement	
1	2	3	4	5 = 4 - 3	12
1	Subsidy towards cost of Capital Asset				
2	Grant towards cost of Capitals Assets		82.07		
3	Receipts from State Govt. under any scheme as grant/subsidy				
	Total		82.07		

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	2021-22				Remarks
		Approved in Tariff Order	Audited	Normative	Truing Up requirement	
1	2	3	4	5	6	13
1	Employee Expenses (as per norms)		214.78			
2	Annual Contribution for Terminal Liabilities based on actuarial valuation					
3	Repair & Maintenance Expenses (as per norms)		30.48			
4	Administrative & General Expenses (as per norms)		43.79			
5	Total O&M Expenses (as per Norms)					
6	Total O&M Expenses (actuals)	172.01	289.06		150.52	

Form G 4(a)
Employee Expenses

Name of Generating Business/Licensee

KERALA STATE ELECTRICITY BOARD LTD.

Rs. Crore

S. No.	Particulars	Reference	2021-22			Remarks
			Approved in Tariff Order	Audited	Truing Up requirement	
1	2	3	4	5	6 = 5 - 4	13
1	Basic Salary			227.83		
2	Dearness Allowance (DA)			27.87		
3	House Rent Allowance			6.49		
4	Conveyance Allowance			0.00		
5	Leave Travel Allowance			0.00		
6	Earned Leave Encashment			8.36		
7	Other Allowances			4.27		
8	Medical Reimbursement			0.64		
9	Overtime Payment			0.32		
10	Bonus/Ex-Gratia Payments			0.41		
11	Interim Relief / Wage Revision			0.00		
12	Staff welfare expenses			0.12		
13	VRS Expenses/Retrenchment Compensation			0.00		
14	Commission to Directors			0.00		

S. No.	Particulars	Reference	2021-22			Remarks
			Approved in Tariff Order	Audited	Truing Up requirement	
1	2	3	4	5	6 = 5 - 4	13
15	Training Expenses			0.00		
16	Payment under Workmen's Compensation Act			0.00		
17	Net Employee Costs			276.32		
18	Terminal Benefits			0.01		
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			2.29		
19	Others			0.01		
20	Gross Employee Expenses			278.63		
21	Less: Expenses Capitalised			63.84		
22	Net Employee Expenses			214.78		

Form G 4(b)
Administrative & General Expenses

Name of Generating Business/Licensee

KERALA STATE ELECTRICITY BOARD LTD.

Rs. Crore

S. No.	Particulars	Reference	2021-22			Remarks
			Approved in Tariff Order	Audited	Truing Up requirement	
1	2	3	4	5	6 = 5 - 4	13
1	Rent Rates & Taxes			1.02		
2	Insurance			0.66		
3	Telephone & Postage, etc.			0.02		
4	Legal charges			0.91		
5	Audit Fees			0.03		
6	Consultancy charges			0.01		
7	Other Professional charges			2.02		
8	Conveyance			4.09		
9	Vehicle Running Expenses Truck / Delivery Van			0.04		
10	Vehicle Hiring Expenses Truck / Delivery Van			0.00		
11	Electricity charges			0.00		
12	Water charges			0.02		
13	Entertainment			0.12		
14	Fees & subscription			0.24		

S. No.	Particulars	Reference	2021-22			Remarks
			Approved in Tariff Order	Audited	Truing Up requirement	
1	2	3	4	5	6 = 5 - 4	13
15	Printing & Stationery			0.32		
16	Advertisements, exhibition publicity			0.27		
17	Contribution/Donations			0.21		
18	Training expenses			1.10		
19	Miscellaneous Expenses			0.24		
20	DSM activities			0.00		
21	SRPC expenses			0.16		
22	Sports and related activities			0.09		
23	Freight			2.80		
24	Purchase Related Advertisement Expenses			0.79		
25	Bank Charges			0.00		
26	Office Expenses			18.66		
27	License Fee and other related fee			2.89		
28	Cost of services procured			0.00		
29	Outsourcing of metering and billing system			0.00		
30	V-sat, Internet and related charges			0.01		
31	Security arrangements			0.00		
32	Books & periodicals			0.04		

S. No.	Particulars	Reference	2021-22			Remarks
			Approved in Tariff Order	Audited	Truing Up requirement	
1	2	3	4	5	6 = 5 - 4	13
33	Computer Stationery			0.00		
34	Others			8.01		
	Others- Other Purchase related Expenses			9.21		
	Others - Expenditure inconnection with distribution of LED					
35	Gross A&G Expenses			53.97		
36	Ele. Duty u/s 3(I), KED Act			0.00		
37	Less: Expenses Capitalised			10.19		
38	Net A&G Expenses			43.79		

G4(c)

Form G 4(c)
Repair & Maintenance Expenses

Name of Generating Busi **KERALA STATE ELECTRICITY BOARD LTD.**

Rs. Crore

Particulars	Reference	2021-22				Remarks
		Approved in Tariff Order	Audited	flood (Exceptional Items)	Truing Up requirement	
2	3	4	5		6 = 5 - 4	13
Plant & Machinery			15.74	0.18		
Buildings			3.05	0.00		
Civil Works			6.72	0.14		
Hydraulic Works			3.87	0.01		
Lines & Cable Networks			0.12	0.00		
Vehicles			0.71			
Furniture & Fixtures			0.04			
Office Equipment			0.25			
Gross R&M Expenses			30.49	0.33		
Less: Expenses Capitalised						
Net R&M Expenses			30.48	0.33		

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	2021-22				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					
1.5	Auxiliary Energy Consumption	%					
1.6	Auxiliary Energy Consumption	MU					
1.7	Net Generation	MU					
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 separately)						
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 kcal					
	Total Heat Content						

S.No.	Particulars	Units	2021-22				Remarks
			Approved in Tariff Order	Audited	Normative	Truing Up requirement	
1	2	3	4	5	6	7	14
4	Total Fuel Cost						
4.1.1	Fuel 1----- (2.2.1 x 3.2.1)	Rs Crore					
	Total Fuel Cost	Rs Crore					
5	Other Charges and Adjustments						
5.1.1	Other Charges (pl. specify details)	Rs Crore					
5.1.2	Other Adjustments (Pl. specify details)	Rs Crore					
	Total Other Charges and Adjustments	Rs Crore					
6	Total Cost (4+5)	Rs Crore		1.17		1.17	
7	Cost of Generation per unit (at Generation Terminal) (6/1.4)	Rs/kWh					
8	Energy Charge per unit (ex-bus) (6/1.7)						
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	2021-22			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				
	Fuel cost	Cr		1.17	1.17	

Form G 6.1
Fixed assets & provisions for depreciation

Name of the Generating Business/Company
Name of the Generating Station :

KERALA STATE ELECTRICITY BOARD LTD.

Year (n-1)*

(Rs Crore)

S. No.	Particular	Rate of depreciation %	Gross fixed assets for 2021-22				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	10.1	1510.51	8.00	0.00	1518.51	0.00	0.00			1510.51	1518.51
1A	Hydraulic works	10.3	1404.32	187.84	0.02	1592.18	840.92	63.53		904.45	563.40	687.73
2	Building & Civil works of Power plant	10.2+10.4	623.01	53.98	0.21	677.20	297.15	20.18		317.33	325.87	359.87
3	Plant & machinery including sub-station equipments	10.5	13630.87	94.97	0.11	13725.96	2086.87	94.38		2181.25	11544.00	11544.70
4	Communication equipment	10.571,10.572	3.86	0.07	0.00	3.93	3.50	0.07		3.56	0.37	0.37
5	Vehicles	10.7	10.35	5.53	0.00	15.87	8.19	0.41		8.60	2.16	7.28
6	Furniture & fixtures	10.8	6.36	6.80	0.00	13.16	4.02	0.49		4.51	2.34	8.65
7	Office Equipments	10.9	5.44	0.43	0.02	5.89	3.61	0.47		4.08	1.84	1.81
8	Capital spares		0.00		0.00	0.00	0.00	0.00		0.00	0.00	0.00
9	IT Equipments	10.905	7.07	1.98	0.00	9.05	6.17	0.28		6.44	0.91	2.61
11	Any other items (Lines, Cable Network etc.)	10.6	8.64	1.68	0.00	10.32	5.84	0.40		6.24	2.80	4.07
	Total (1) to (11)		17210.44	361.27	0.36	17572.07	3256.25	180.22	0.00	3436.47	13954.19	14135.60

Form G 6.2(a)**Calculation of Weighted Average Rate of Interest on Actual Loans**

Name of Generating Business/Company

KERALA STATE ELECTRICITY BOARD LTD.

Licensed Area of Supply

(Rs. Cr)

S.No.	Particulars (specify items)	2021-22			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					

S.No.	Particulars (specify items)	2021-22			Remarks
		Approved in Tariff Order	Audited	Truing Up requirement	
1	2	3	4	5 = 4 - 3	12
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	1456.13	1352.87		
iv.	Add: Drawal(s) during the Year	153.76	315.70		
v.	Less: Repayment (s) of Loans during the year	196.26	268.65		
vi	Net loan - Closing	1413.64	1399.91		
vii	Average Net Loan	1434.88	1376.39		
viii	Interest on Loan	133.9	128.23		
ix	Weighted average Rate of Interest on Loans	9.33%	9.32%		

TERM-LOAN

SL NO	NAME OF THE FINANCIAL INSTITUTION	Net Loan - Opening	(IND Adj) 2019-20	Gross loan-Opening - 01/04/2020	Add: Drawal(s) during the Year	Less: Repayment (s) of Loans during the year	Gross loan - Closing - 31/03/2021	CFL	Net loan - Closing - 31/03/2021	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	281.57	28.16	309.72	0.00	39.07	270.66	27.07	243.60	290.19	10% - 10.9%	30.26	
2	REC - Peringalkuthu. Scheme	81.87	0.00	81.87	16.89	7.46	91.29	0.00	91.29	86.58	9.75% - 10.25%	8.87	
3	REC - Bhoothathankettu Scheme	114.70	0.00	114.70	0.51	1.92	113.29	7.68	105.61	113.99	9.75% - 10.25%	11.73	
4	SOUTH INDIAN BANK-Barapole SHEP	61.79	7.20	68.99	0.00	7.21	61.78	7.20	54.58	65.39	8.00%	6.39	
5	REC for the DDG Scheme	0.14	0.00	0.14	0.00	0.00	0.14	0.00	0.14	0.14	11.00%	0.01	
6	RIDF of NABARD Banasurasagar SPVP	0.45	0.00	0.45	1.80	0.00	2.25	0.00	2.25	1.35	2.75% - 6.25%	0.06	
7	RIDF of NABARD Upper Kallar SHEP	3.61	0.00	3.61	9.81	0.00	13.42	0.00	13.42	8.52	2.75% - 6.25%	0.41	
8	SBI	218.76	27.32	246.08	0.00	34.36	211.72	26.27	185.46	228.90	7.95%	17.79	
9	Special Loan Assistance from PFC	199.13	17.32	216.45	0.00	25.03	191.42	16.65	174.78	203.93	9.08%	18.19	
10	PFC GEL Kakkayam	16.47	1.37	17.84	0.00	1.37	16.47	1.37	15.09	17.15	10% to 10.35%	1.74	
11	PFC GEL Perumthenarui	29.48	2.56	32.04	0.00	2.56	29.48	2.56	26.91	30.76	10.25%	3.13	
12	Kerala Financial Corporation	83.43	9.91	93.34	12.68	9.53	96.49	10.39	86.11	94.92	9.00%	7.68	
13	Medium Term Loan Kerala Financial Corporation	69.69	22.60	92.29	0.00	25.30	66.99	21.73	45.26	79.64	8.00%	6.30	
14	Indian Bank			0.00	2.94	1.48	1.46	0.17	1.29	0.73	6.75%	0.02	
15	NABARD-Solar Plant at Pothencode			0.00	8.47	0.00	8.47	0.00	8.47	4.23	2.75%	0.16	
16	NABARD- Solar Plant at Thalikulathur			0.00	3.27	0.00	3.27	0.00	3.27	1.63	2.75%	0.06	
17	NABARD-Peruvannamoozhi SHEP			0.00	23.98	0.00	23.98	0.00	23.98	11.99	2.75%	0.42	
	SUB-TOTAL	1161.09	116.44	1277.53	80.33	155.29	1202.57	121.07	1081.50	1240.05		113.22	

TERM-LOAN

SL NO	NAME OF THE FINANCIAL INSTITUTION	Net Loan - Opening	(IND Adj) 2019-20	Gross loan-Opening - 01/04/2020	Add: Drawal(s) during the Year	Less: Repayment (s) of Loans during the year	Gross loan - Closing - 31/03/2021	CFL	Net loan - Closing - 31/03/2021	Average Net Loan	Rate of Interest on Loan on annual basis	Interest on loan	Loan repayment effective from (date to be indicated)
B	UNSECURED LOANS TERM LOANS												
1	Loans - Short term loan from Bank of Baroda	75.34		75.34	0.00	75.34	0.00	0.00	0.00	37.67	8.90%	2.05	
2	Short Term Loan from REC				90.52	0.00	90.52	0.00	90.52	45.26	7.75%	5.79	
3	Loans - Short term loan from M/s IREDA				144.84	38.02	106.82	106.82	0.00	53.41	7.75%	7.16	
	SUB-TOTAL	75.34	0.00	75.34	235.36	113.36	197.34	106.82	90.52	136.34		15.00	
	TOTAL	1236.43	116.44	1352.87	315.70	268.65	1399.91	227.89	1172.02	1376.39	9.32	128.23	
C	BOND								8371.74				

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)	2021-22			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	1456.13	1352.87	667.2	
4	Increase/Decrease due to ACE/de-capitalization during the Year	153.76	315.70	370.09	
5	Repayments of Normative Loan during the year	196.26	268.65	132.24	
6	Net Normative loan - Closing	1413.64	1399.91	905.05	
7	Average Normative Loan	1434.88	1376.39	786.13	
8	Weighted average Rate of Interest of actual Loans	9.33%	9.32%	9.32	
9	Interest on Normative loan	133.9	128.23	73.27	

Form G 6.2 (c)

Interest on Bonds to meet Terminal Liabilities

Name of Generating Business/ C KERALA STATE ELECTRICITY BOARD LTD.

(Rs. Cr)

S.No	Particulars (specify items)	2021-22			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		6,515.20	6,515.20	
2	Rate of Interest on Bond		10%	10%	
3	Interest on Bond	651.52	651.52	651.52	
B	Bond Series 2				
4	Value of Bond		2,614.53	2,614.53	
5	Rate of Interest on Bond		9%	9%	
6	Interest on Bond		235.31	235.31	
C	Bond Series 3				
	...				

Form G 6.3
Details of Project Specific Loans

Name of the Generating Business/Company : KERALA STATE ELECTRICITY BOARD LTD.

Name of the Generating Station : _____

Commercial Operation Date : _____

Year (n-1)*

Rs. Crore

Particulars	Package 1	Package 2	Package 3	Package 4	Package 5	Package 6
1	2	3	4	5	6	7
Source of Loan ¹						
Currency ²						
Amount of Loan sanctioned						
Amount of Gross Loan drawn upto previos year/during current/ensuing year/COD ^{3,4,5,13,15}						
Interest Type ⁶						
Fixed Interest Rate, if applicable						
Base Rate, if Floating Interest ⁷						
Margin, if Floating Interest ⁸	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No
Are there any Caps/Floor ⁹						
If above is yes,specify caps/floor						
Moratorium Period ¹⁰						
Moratorium effective from						
Repayment Period ¹¹						
Repayment effective from						
Repayment Frequency ¹²						
Repayment Instalment ^{13,14}						
Base Exchange Rate ¹⁶						

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	2021-22						
			(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	8.00					8.00	
02.	Buildings	10.2	21.69					21.69	
03.	Hydraulic Works	10.3	187.84					187.84	
04.	Other Civil Works	10.4	32.29					32.29	
05.	Plant & Machinery	10.5	95.04					95.04	
06.	Lines, Cable, Network etc.	10.6	1.68					1.68	
07.	Vehicles	10.7	5.53					5.53	
08.	Furniture & Fixtures	10.8	6.80					6.80	
09.	Office Equipments	10.9	2.41					2.41	
	TOTAL		361.27					361.27	

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	2021-22				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	831.27		831.27	
2	Capitalisation						
3	Equity portion of capitalisation						
4	Equity at the end of the year		831.27	831.27		831.27	
	Return Computation						
5	Return on Equity at the beginning of the year	14%*(1)	116.38	154.45		116.38	
6	Return on Equity portion of capitalisation (on pro-rata basis)	14%*(3)/2		0			
7	Total Return on Equity	(5)+(6)	116.38	154.45		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	2021-22				Remarks
		Approved in Tariff Order	Audited	Normative	Truing Up requirement	
1	2	3	4	5	6	13
1	Fuel cost (as per norms)		1.17		0.1	
2	Liquid fuel stock (as per norms)		37.56			
3	O & M expenses (as per norms)	172.01	289.06		16.61	
4	Maintenance Spares (as per norms)				50.28	
5	Receivables (as per norms)		0.00			
	Total Working Capital		327.79		66.99	
	Rate of Interest (as per norms)				9.00	
	Interest on Working Capital	7.60	6.20		6.03	

Form G 6.13
Inflow Review (Water Year)

Name of the Generating Business/Comp: KERALA STATE ELECTRICITY BOARD LTD.

														MU
Sr. No.	Year	April	May	June	July	August	September	October	November	December	January	February	March	Total
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	1993-94													
2	1994-95													
3	1995-96													
4	1996-97													
5	1997-98													
6	1998-99													
7	1999-00													
8	2000-01													
9	2001-02													
10	2002-03													
11	2003-04													
12	2004-05													
13	2005-06													
14	2006-07													
15	2007-08													
16	2008-09													
17	2009-10													
18	2010-11													
19	2011-12													
20	2012-13													
21													
22													
23	2021-22	127.96	640.13	1101.51	1723.35	1219.08	1074.77	1408.41	1080.08	534.89	207.4	107.52	105.92	
	Average													

Form G 6.15
Maintenance Schedule and net hydro capacity available (MW)

Name of the Generating Business/Company: KERALA STATE ELECTRICITY BOARD LTD.

Name of the Generating Station : _____

Rs. Crore

Sr. No.	Stations	No. of units and unit size	Installed Capacity under operation (MW)	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Remarks
				Maintenance Schedule (MW)												
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1	Idukki	6*130	780			U3			U1			U6	U4	U2, U5		
2	Sabarigiri	4*55+60*2	340.00							U2		U3	U4	U1		
	Sabarigiri									U4						
3	Kakkayam	3*25+1*50+2*50	225.00	U6							U1	U5	U2,U3		U4	
4	Lower Periyar	3*60	180.00									U1	U3	U2		
5	Idamalayar	2*37.5	75.00				U2					U1				
6	Panniyar	2*16.2	32.40										U1	U2		
7	Sholayar	3*18	54.00			U2	U3	U1								
..																
..																
..																
..																
..																
	Average															

Form G 8

Deviation Analysis

Name of Generation Business/Company KERALA STATE ELECTRICITY BOARD LTD.

Year : 2021-22

(Rs. Crore)

S. No.	Particulars	Approved	Actual	Deviation	Reason for Deviation	Controllable	Uncontrollable
1	2	3	4	5	6	7	8
A	Expenditure						
1	Variable Costs, including Fuel Cost		1.17	-1.17			
2	1) Depreciation	196.26	180.22	16.04			
3	Interest on term Loan & Finance charges	133.9	26.76	107.14			
4	Return on Equity	116.38	154.45	-38.07			
5	Tax on ROE			0.00			
6	Interest on Working Capital	6.11	6.20	-0.09			
7	O & M Expenses	172.01	289.38	-117.37			
9	Any other item (to be specified)		0.01	-0.01			
	Amortisation of Intangible Assets		0.01	-0.01			
	Prior Period Expenditure		0.00	0.00			
	Total (A) Expenditure	681.03	658.21	22.82			
B	Receipts						
1	Revenue from Sale of Power (Tariff income)	639.86	647.21	-7.35			
2	Non Tariff income	41.17	11.00	30.17			
3	Revenue Subsidies, Grants & Subvention from State Govt.						

Form G P&L

Profit & Loss Account

Name of Generation Business/Cor **KERALA STATE ELECTRICITY BOARD LTD.**

S.No.	Particulars	Ref	Previous Year	Previous Year	Remarks
			2021-22	2020-21	
1	2	3	4	5	6
	I. INCOME				
	a. Revenue from Sale of Power		620.11	766.16	
	b. Revenue Subsidies and Grants				
	c. Other Income		38.09	14.78	
	Total (a+b+c)		658.20	780.94	
	II. EXPENDITURE				
	a. Repairs and Maintenance.		30.48	22.45	
	b. Employee Cost		278.63	304.52	
	c. Administration and General Expenses		53.97	44.25	
	d. Depreciation		180.22	178.92	
	1). Amortisation of Intangible Assets		0.01	0.33	
	e. Interest and Finance charges		177.28	177.83	

G P&L

S.No.	Particulars	Ref	Previous Year	Previous Year	Remarks
			2021-22	2020-21	
1	2	3	4	5	6
	f. Subtotal (a+b+c+d+e)		720.59	728.31	
	g. Less Capitalised Expenses:				
	- Interest & Finance Charges		144.32	43.88	
	- Other Expenses		74.03	40.52	
	h. Other Debits		0.01	0.07	
	Change in fair valuation and other adjustments				
	I. Extra Ordinary Items		0.33	1.01	
	j. Fuel cost (Generation of Power)		1.17	4.80	
	Total Expenditure (f-g+h+i+j)		503.74	649.79	
	III. Profit/(Loss) before Tax (I-II)		154.46	131.15	
	IV. Provision for Income Tax				
	V. Net Prior period credits (Charges)				
	V.(a). Other Comprehensive Income		-45.65	-31.25	
	VI. Surplus (Deficit)		108.81	99.90	
	VII. Net Assets at the beginning of the year (Less consumer's Contribution)		13954.19	14009.12	
	VIII. Rate of Return (VI/ VII)				

Form G BS

Balance Sheet at the end of the year

Name of Generation Business/Company **KERALA STATE ELECTRICITY BOARD**

S.No.	Particulars	Ref	Previous Year	Previous Year	Remarks
			2021-22	2020-21	
1	2	3	4	5	6
	Sources of Funds:				
	(A)Capital Funds:				
	Share Capital (Govt. equity)		831.27	831.27	
	Reserves & Surplus		736.92	839.03	
	Total (A)		1568.19	1670.30	
	(B) Loan from State Government				
	Loan from others :				
	-Secured		9453.24	10290.82	
	-Unsecured		90.52	75.34	
	Total (B)		9543.76	10366.15	
	(C) Contribution, grants & subsidies towards cost of capital assets		76.52	62.24	
	Provident Fund		140.29	114.79	
	Terminal Benefit Fund		745.34	375.51	
	Borrowings for working capital				
	Long term Provision & Other Non current Liabilities		-37.87	-852.58	
	Grand total of sources of funds (A+B+C)		12036.24	11736.41	

S.No.	Particulars	Ref	Previous Year	Previous Year	Remarks
			2021-22	2020-21	
	*Application of Funds:				
	A) Fixed assets				
	a) Gross fixed assets		17572.07	17210.44	
	b) Less accumulated depreciation		3436.47	3256.25	
	c) Net Fixed assets((a)-(b))		14135.60	13954.19	
	d) Capital works in progress		1843.96	1722.30	
	e) Assets not in use				
	f) Deferred costs		0.00	0.00	
	g) Intangible assets		2.31	1.42	
	h) Investments		12.30	8.85	
	Other Non current assets		242.84	145.10	
	Total (c) +(d)+(e)+(f)+(g)+(h)		16237.01	15831.86	
	B)Subsidy receivable from Government				
	Contribution receivable from State Government towards pension liability		120.84	98.87	
	C) Net Current Assets				
	(1) Current assets, loans and advances				
	a) Inventories*		37.56	-14.44	
	b) Receivables against Sale of Power				
	c) Cash & bank balances		37.72	18.39	
	d) Loans and advances				
	e) Sundry receivables		-2640.08	-2630.82	
	Total (C)(1)		-2564.80	-2626.87	
	(2) Current liabilities & provisions				
	a) Borrowings for working capital		271.68	239.61	
	b) Payments due on Cap. liabilities				
	c) Other current liabilities		1485.13	1327.84	
	Total (C)(2)		1756.81	1567.45	
	Net Current Assets (C) [(C(1)) - (C(2))]		-4321.61	-4194.32	
	Grand Total of Application of funds (A)+(B)+(C)		12036.25	11736.41	
			0.00	0.00	

Form G CF**Cash Flow for the year**

Name of Generation Business/Company

KERALA STATE ELECTRICITY BOARD LT

S.No.	Particulars	Ref	Previous Year	Previous Year	Remarks
			2021-22	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		108.81	99.90	
	Less : Income Tax Payment during the year				
	: Other Comprehensive Income		-45.65	-31.25	
	Total of (a)		154.46	131.15	
	b. Add: Debits to rev. account not requiring cash Flow:				
	I) a) Depreciation		180.22	178.92	
	b) Depreciation on IND As Adj		0.00	0.00	
	ii) Amortisation of Deferred costs				
	iii) Amortisation of Intangible Assets		0.01	0.33	
	iv) Investment Allowance Reserve				
	v) Others, if any		814.71	336.87	
	Total of (b)		994.94	516.12	
	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)		1149.40	647.27	
2	Contributions, Grants & Subsidies to cost of Capital Assets		14.28	-10.54	
4	Proceeds from disposal of fixed Assets				
5	Total Funds from Operations (1+2+3)		1163.68	636.73	
6	Net Increase/(Decrease) in working Capital				
	(a) Increase/(Decrease) in Current Assets				
	I) Inventories		52.00	-23.12	
	ii) Receivables against sale of power				
	iii) Loans and Advances		0.00	0.00	
	iv) Sundry receivables		-9.26	326.45	
	Total of (a)		42.74	303.33	

S.No.	Particulars	Ref	Previous Year	Previous Year	Remarks
			2021-22	2020-21	
1	2	3	4	5	6
	(b) Increase/(Decrease) in Current liabilities				
	i) Borrowings for working Capital		32.07	-172.00	
	ii) Other current liabilities		157.29	70.83	
	iii) Others (Increase in Reserve + payment due on cap.liab)		-256.57	-31.24	
	Total of (b)		-67.21	-132.40	
	Net Increase/(Decrease) in working Capital (a)- (b)		109.95	435.73	
7	Net Funds from operations before subsidies and Grants (5-6)		1053.72	201.00	
8	Receipts from revenue subsidies and Grants		-21.97	-98.87	
	Total Net Funds from operations including subsidies & Grants (7+8)		1031.75	102.13	
II.	Net increase/ decrease in Capital liabilities				
	a). Fresh borrowings				
	i) State Loans				
	ii) Foreign currency Loans / Credits				
	iii) Other borrowings		315.70	732.89	
	Total of (a)		315.70	732.89	
	b) Repayments :				
	i) State Loans				
	ii) Foreign currency Loans / Credits				
	iii) Other borrowings		1138.09	711.28	
	Total of (b)		1138.09	711.28	
	Net Increase/(Decrease) in Capital liabilities (a) - (b)		-822.39	21.61	
III.	Increase/(Decrease) in equity Capital		0.00	0.00	
IV.	Total Funds available for Capital Expenditure (I+II+III)		209.36	123.74	
V	Funds utilised on Capital Expenditure				
	a)On projects		483.29	261.80	
	b)Advance to Suppliers & Contractors				
	c) Intangible Assets		0.90	0.00	
	d) Deferred Cost		0.00	0.00	
	e) Long Term Loans and Advances		97.74	-27.09	
	Total of V (a+b+c+d)		581.93	234.71	
VI	Net Increase/(Decrease) in Government contribution				
VII	Net Increase/(Decrease) in Terminal benefit fund		369.83	89.11	
VIII	Net Increase/(Decrease) in Provident fund		25.50	9.13	
IX	Net Increase/(Decrease) in investments		3.45	-0.15	
X	Net Increase / (Decrease) in cash / bank balance (IV - V- VI-IX) + (VII+VIII)		19.32	-12.58	
XI	Add opening cash & Bank balance		18.39	30.97	
XII	Closing Cash & Bank balance		37.71	18.39	

CHAPTER 3: TRUING UP OF ARR OF SBU – T & SLDC FOR 2021-22

As per the second Transfer Scheme, SBU-T is entrusted with the construction of 33KV and above system of KSEBL. The voltage level wise capacity of Transmission system and number of substations and transmission lines within the State as on 31st March, 2022 is summarized below:

Table-T1: Transmission System statistics			
No	Item	Unit	Quantity (as on 31-3-2022)
1	400 kV Lines	Ckt-km	<i>177.03 (KSEBL owned) + 1152.56 (PGCIL owned)</i>
2	220 kV Lines	Ckt-km	3499.29 (KSEBL owned) + 282 (PGCIL owned)
3	110 kV Lines	Ckt-km	5818.37
4	66 kV Lines	Ckt-km	1541.43
5	33KV lines	Ckt-km	2304.90
6	400 kV Substations	Nos	1 (KSEBL owned) + 6 (PGCIL owned)
7	220 kV Substations	Nos	29
8	110 kV Substations	Nos	174
9	66KV Substations	Nos	58
10	33 KV Substations	Nos	161
11	Total transmission capacity (MVA)	MVA	23824

The SBU-T handle total energy sold to consumers and licensees within the state, open access power drawn by the consumers and the quantum energy sold outside the state. The ARR, ERC and Transfer cost of SBU-T are furnished as per Form T P&L and Form T1. Transfer price for SBU T as per accounts has been Rs. 1210.14 Cr against approval of Rs. 1283.52 Cr. Net ARR in line with the Tariff Regulation sought for true up in this petition amounts to Rs.1152.24 Cr, which is less than Rs.131.28 Cr approved as detailed in table below. Item wise explanation is furnished thereafter.

TABLE – T2 : ARR OF TRANSMISSION BUSINESS UNIT (SBU-T) & SLDC for 2021-22 (Rs Cr)				
No	Particulars	Approved	Actual	Truing up requirement
1	Interest & Finance Charges	313.12		227.66
2	Interest on bonds	73.73		59.35
3	GPF Interest	24.74		16.22
4	Depreciation	261.09	276.66	201.61
5	O&M Expenses	491.28	574.35	459.07
6	Return on equity (14%)	119.99	205.24	119.99
7	Interest on working capital	23.28		18.40
8	Amortization of intangible assets			6.78
9	Other items – Other Finance charges			1.55
10	Other items		-5.70	-5.70
11	Additional contribution to Master Trust	22.64		27.33
12	Incentive on Transmission Availability			4.45
13	Pay revision expenses	0	0	63.24
14	ARR	1329.87	1252.08	1199.95
15	Less: Non-tariff Income	46.35	41.94	47.71
16	Net ARR (Cost Transferred to SBU-D)	1283.52	1210.14	1152.24

3.1 Interest and Finance charges:

- 3.1.1** An amount of Rs 434.87 Cr had been approved by the Hon Commission under this head. The actual expense incurred was Rs.201.54 Cr (net of capitalized interest Rs.66.55 Cr). Item wise explanation is furnished below.
- 3.1.2 Interest on Normative loan:** While issuing orders on MYT petition, Hon'ble Commission approved Rs. 3257.07 Cr as opening normative loan as at 01.04.2021 after considering provisional asset addition for the year 2020-21 and contributions and grants. The interest was approved at 9.25%. Further, provisional approval of Rs. 615.21 Cr was granted for the asset addition during 2021-22 along with contribution and grant at Rs.100 Cr. Considering interest rate at 9.25% Hon'ble Commission approved normative interest at Rs.313.12 Cr for 2021-22. Hon'ble Commission, as per true up order for 2020-21 has approved normative loan at Rs. 1452.68 Cr as on 31.03.2021 and the actual weighted average interest rate for 2021-22 had been 9.52% for SBU T. Actual entitlement of normative interest amounts to Rs.227.66 Cr as per Tariff regulation is explained in chapter 5. Based on the computation, an amount of Rs. 227.66 Cr may kindly be approved towards interest on normative loan for the year 2021-22.
- 3.1.3** During the year, capital works executed by SBU-T was Rs.1024.19 Cr and Rs.1762.84 Cr has been capitalized as per accounts. GFA addition includes decommissioning liability of Rs.0.82 Cr. Out of the GFA addition during the year, assets worth Rs.40.41 Cr represent part capitalization within the meaning of Tariff Regulations. Further, Rs.110.89 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, 2018 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 2021-22 were considered to arrive at the asset addition eligible as per Tariff Regulation. This amounted to Rs.1832.49 as detailed in chapter 5.
- 3.1.4** Hon'ble Commission may kindly approve GFA addition of Rs.1832.49 Cr for 2021-22. Consumer contribution, grants and subsidies received during the year amounted to Rs.15.81 Cr as detailed Appendix 5. GFA addition to the tune of Rs. 1816.68 Cr (Rs.1832.49 Cr-Rs.15.81 Cr) may kindly be approved as GFA addition eligible for normative loan and Rs.1812.62 Cr (excluding land value Rs.4.06 Cr) as GFA eligible for depreciation. Normative loan as on 31.03.2022 and normative interest for the year works out to Rs. 3198.96 Cr and Rs.227.66 Cr respectively as detailed in chapter 5 of this petition may kindly be approved.
- 3.1.5** The details of the substations and lines commissioned during the year 2021-22 are enclosed as **Annexure- 1**; the summary of the same is given below.

Table-T3: Summary of Capital Works executed in 2021-22		
No	Item	Quantity
1	400KV lines	0 ckt-km
1	220KV lines	224.81 ckt-km
2	110KV lines	228.98 ckt-km
3	66KV lines	0 ckt-km
4	33KV lines	68.85 ckt-km
5	EHT Substations	8 numbers
6	Capacity addition/enhancement	740.50 MVA

3.1.6 Interest on GPF: Interest paid on GPF during the year amounts to Rs.178.06 Cr as detailed in chapter 5. The share of interest on GPF for SBU-T along with approved figure is furnished below. Hon'ble Commission may kindly approve the same.

Table-T4: Interest on GPF for SBU-T for 2021-22			
	Approved	Actual	True-up requirement
	Rs. Cr	Rs. Cr	Rs.Cr
SBU-T	24.74	16.22	16.22

3.1.7 Interest on Master Trust Bonds: Hon'ble Commission, by virtue of provision contained in Tariff Regulation, 2018 had approved Rs.73.73 Cr towards interest on Master Trust bonds. Actual share of SBU T has been Rs. 59.35 Cr as explained in Chapter 5. Thus, Hon'ble Commission may kindly approve Rs.59.35 Cr for the year 2021-22.

3.1.8 Additional contribution to Master Trust: Hon'ble Commission, by virtue of provision contained in Tariff Regulation, 2018 had approved Rs.22.64 Cr towards additional contribution to Master Trust. In line with the decision of the Hon'ble Commission to true up Rs. 300 Cr towards additional contribution for the years from 2018-19 to 2020-21, Hon'ble Commission may kindly true up the Rs.27.33 Cr as the share of SBU T as detailed in chapter 5.

3.1.9 Interest on Working Capital: As per the Regulation 32(2), 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 10.15% on the working capital of Rs.229.38 Cr and the interest on working capital approved for SBU-T for 2021-22 is Rs. 23.28 Cr. Base rate of SBI on 01.04.2021 (rate prevailed from 10.03.2021 to 14.06.2021) for 1 year tenor has been 7 % and therefore the normative interest rate for the computation of working capital interest for 2021-22 would be 9%. Based on the working capital requirement computed as per Tariff Regulation, a sum of Rs. 18.40 Cr is claimed as interest on working capital as detailed below, which may kindly be approved.

Table-T5: Interest on working capital (Rs Cr)		
	Approved	True up requirement
O&M Expenses As per norms	491.28	459.07
Pay revision expenses		63.24
Additional contribution to Master Trust		27.33
Total O&M expenses		549.64
GFA Plants and Equipment	8147.73	6335.02
Transmission charges	1283.53	1152.24
O&M Expenses for one month	40.94	45.80
1% of Historical cost of plants & Equipment	81.48	63.35
Receivables (Transmission charges for one month)	106.96	95.26
Total requirement of working capital	229.38	204.41
Rate of interest	10.15%	9.00%
Interest on Working Capital	23.28	18.40

Other charges:

3.1.10 Hon'ble Commission has not approved any amount towards other interest. Actual expenses incurred under this head for SBU-T amounts to Rs.1.55 Cr as detailed in chapter 5 and furnished below, may kindly be approved.

No	Particulars	SBU T
1	Interest Expenses-others	1.42
2	Other Bank Charges	0.13
	Total	1.55

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

No	Particulars	Approved	Actual	True-up requirement
1	Interest on Outstanding Capital Liabilities	313.12	179.77	227.66
2	Interest on GPF	24.74	16.22	16.22
3	Interest on Master Trust Bonds	73.73	59.35	59.35
4	Interest on Working capital	23.28	11.20	18.40
5	Other charges	0	1.55	1.55
6	Sub total	434.87	268.09	323.18
7	Less: Capitalized		66.55	
8	Total	434.87	201.54	323.18

3.2 O&M Expenses:

3.2.1. As per the provisions of Regulation 58, the O&M expenses applicable for the SBU-T is based on the number of bays and transmission line length in ckt km for the previous year (2020-21). The no. bays and circuit kilometres and the O&M cost based on the norms approved for 2020-21 and actual are as shown below:

Item	Approved for 2020-21 end	Actual for 2020-21 end
Substation Bays*	3007	2794
Tran Lines***	11130.965	10582
* Excluding 33 kV bays *** (in CktKms)		

3.2.2 The O&M cost norm for SBU-T for 2021-22 as per the Regulation and the O&M cost based on the norms are submitted below.

Item	Actual for 2020-21 end	Norm
Substation Bays*	2794	Rs.12.34 Lakh/bay
Tran Lines***	10582	Rs.1.08 Lakh/Ckt-km
* Excluding 33 kV bays *** (in CktKms)		
O&M Cost = Rs. (12.34 * 2794 + 10582* 1.08) Lakh = Rs.459.07 Cr		

3.2.3 It is respectfully submitted that the O&M expenses as per CERC norms (Regulation 35(3) (a) of CERC (T&C of Tariff) Regulations, 2019) for the above drivers are Rs. 24.12 Lakh per bay (for 220 KV), Rs.0.263 Lakhs per MVA and 0.404 Lakh per km for (Double Circuit single conductor) lines. Thus, the permissible O&M cost as per CERC Regulations would be (2794 x Rs. 24.12 Lakhs + 10582 km x 0.404 + 0.263*21304.60=) Rs. 772.70 Cr. Therefore, it may kindly be noted that the actual O&M expense of the petitioner (Rs.574.35 Cr) is less than the allowable cost as per CERC norms.

3.3 Depreciation:

3.3.1 Hon'ble Commission approved depreciation for the year 2021-22 on the provisionally approved asset additions of Rs. 769.32 Cr for 2021-22. Based on Tariff Regulations; the depreciation for the Transmission assets for the year 2020-21 has been approved at **Rs 261.09 Cr**. Hon'ble Commission may kindly note that the depreciation as per audited accounts was **Rs.276.66 Cr** as detailed in **Form T3**. The difference in depreciation is because of the methodology as per Ind AS and Tariff Regulations.

3.3.2 Depreciation eligible as per MYT Regulation for the year 2021-22 has been worked out at Rs. 201.61 Cr as detailed in chapter 5. Comparison of approval, actual and true up requirement is furnished below:

Table-T10: Depreciation (Rs Cr)				
No	Particulars	Approved	Actual	True-up requirement
1	Depreciation	261.09	276.66	201.61

3.4 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-T11: Return on Equity (Rs Cr)				
No	Particulars	Approved	Actual	True-up requirement
1	Return on Equity	119.99	205.24	119.99

3.5 Other items: Gain under other items amounts to Rs. 5.70 Cr for the year 2021-22, as detailed in chapter 5, may kindly be approved.

3.6 Amortization of intangible assets:

A. Edamon-Kochi line:

3.6.1 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.

3.6.2 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.

3.6.3 An amount of Rs. 40.65 Crore has been transferred to the District Collector, Ernakulam during the year 2021-22 as detailed below.

Sl.No	Amount	Payment Details	Remarks
1	Rs.40,64,60,000	Ch.No. 936755 dtd 31.12.21.	Sanctioned vide BO (FTD) No.633/2021/D (T&SO) T/Koodamkulam/2021-22 dated 18-8-2021

3.6.4 Out of the above, share of KSEBL to the tune of Rs.20.32 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 and Rs. 1.67 Cr was proposed for amortization during 2020-21.

3.6.5 As per orders of the Hon'ble Commission interest (at average interest rate for 2021-22 at 9.57%) and amortization amounts to Rs.6.67 Cr (Amortization + Interest) for 2021-22 as shown below.

Sl. No	Amount (Rs Cr)	Year of disbursement	KSEBL share (Rs Cr)	2019-20		2020-21		2021-22		
				Amortization (Rs Cr)	Balance (Rs Cr)	Amortization (Rs Cr)	Interest @ 9.88%	Amortization (Rs Cr)	Balance (Rs Cr)	Interest @ 9.57%
1	5.20	2019-20	2.60	0.22	2.38	0.22	0.24	0.22	1.95	0.19
2	0.80	2019-20	0.40	0.03	0.37	0.03	0.04	0.03	0.30	0.03
3	12.00	2019-20	6.00	0.50	5.50	0.50	0.54	0.5	4.50	0.43
4	22.00	2020-21	11.00			0.92	0.38	0.92	9.16	0.88
5	40.65	2021-22	20.33					1.69	18.63	1.78
6		Total		0.75	8.25	1.67	1.20	3.36	34.54	3.31

B. Pugalur-Thrissur line

3.6.6 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.

3.6.7 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.

3.6.8 It is humbly submitted that KSEBL will be submitting separate petition before the Hon'ble Commission seeking approval of the Special Compensation package of Pugalur-Thrissur line.

3.6.9 An amount of Rs. 2.56 Crore has been transferred to the District Collector, Ernakulam during the year 2021-22 as detailed below.

Table T14- Details of compensation released during 2021-22

Sl.No	Amount	Payment Details	Remarks
1	Rs.6,02,638/-	UTR No & date SBIN221271279603 dtd. 28-9-2021	Sanctioned vide BO (FTD)No.616/2021/D (T& SO) T4/Pugalur-Thrissur Compensation/2020-21 dated 13-8-2021
2	Rs.2,49,83,467/-	UTR No. & Date: SBINR52022031071689803 dtd. 10-3-2022.	Sanctioned vide BO (FTD)No.126/2022/D (T& SO) T4/Pugalur-Thrissur Compensation/2020-21 dated 18-2-2022.

3.6.10 Out of the above, share of KSEBL to the tune of Rs.1.28 Cr has been accounted under Intangible Assets. A sum of Rs. 0.11 Cr being 1/12th of Rs. 1.28 Cr is proposed for amortization during 2021-22.

3.6.11 **Total amortization of intangible assets:** The total amortization of intangible assets and interest for the year amounts to Rs. 6.78 Cr as submitted below may kindly be approved.

Table T15- Total amortization of intangible assets and interest for 2021-22

Sl. No.	Transmission Line	Amortization amount (Rs. Cr.)
1	Edamon-Kochi	6.67
2	Pugalur-Thrissur	0.11
	Total	6.78

3.7 **Transmission Availability:** The transmission system of KSEBL could achieve an availability of 98.38 %. 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, 2018, the transmission licensee shall be entitled to incentive on achieving annual availability above the target availability, in accordance with the following formula: -

Aggregate Revenue Requirements x [Annual availability
achieved – Target Availability]

Incentive = -----
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. 4.45 Cr as calculated below.

Table –T16 : Incentive on transmission availability (Rs Cr)	
ARR excluding incentive (Rs. Cr.)	1147.79
Annual availability achieved	98.38%
Target availability	98%
Incentive	4.45

It is humbly requested that the above incentive amounting to **Rs. 4.45 Cr** may kindly be approved as incentive for SBU-T.

3.8 **Non-Tariff Income:** Hon'ble Commission approved Rs. 46.35 Cr under this head. As per trifurcated accounts, a sum of Rs. 41.94 Cr has been accounted under SBU T and a sum of Rs. 47.71 Cr as detailed under chapter 5, may kindly be trued up.

3.9 **Net ARR (Transfer Cost) of SBU-T and SLDC:** ARR for Transmission Business Unit for the year 2021-22 had been Rs. 1199.95 Cr and non-tariff income earned was Rs. 47.71 Cr. Therefore, Net ARR of SBU-T has been Rs. 1152.24 Cr. This cost may kindly be approved as the Cost of intra-state Transmission in the ARR of SBU-D.

3.10 **Transmission loss:** The total energy *delivered to* the transmission system was 26703.19 MU in FY 2021-22. 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 2021-22 was 4380 MW on 17.03.2022 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 740.762 MU. The transmission loss approved by Hon’ble Commission for the year 2021-22 and the actual are submitted below.

Table-T17: Transmission Losses					
No	Voltage Level (kV)	Approved (%)	Losses MU	Losses upto the voltage level MU	Actual Losses up to voltage level (%)
1	400		52.711	52.711	
2	220		313.186	365.897	
3	110		313.469	679.366	
4	66		61.396	740.762	
6	Transmission loss (%)	3.75	740.762		2.77

3.11 Auxiliary consumption of substations of Transmission SBU:

Hon’ble Commission had approved an auxiliary consumption of **18.04 MU** for the year 2020-21. The actual auxiliary consumption was **20.77 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-T18: Total Auxiliary consumption of Substations for 2021-22	
Month	Aux Consumption(MU)
April	1.79
May	1.67
June	1.61
July	1.60
August	1.61
September	1.64
October	1.66
November	1.62
December	1.77
January	1.88
February	1.83
March	2.09
Total	20.77

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.

- 3.12 The formats for Truing up of Transmission Business Units as per the Tariff Regulation 2018 are furnished hereunder.
-

SUBSTATIONS COMMISSIONED DURING 2021-22											
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: THODUPUZHA											
1	110kV S/s Marady	110kV	Upgn.	25.05.2021	01.10.2020	01.10.2020	25.05.2021	25.05.2021	1790	1393	-
2	33kV S/S Marayoor	33kV	New	16.09.2021	09.11.2018	28.05.2019	30.04.2019	16.09.2021	440	134.33	Reason for Time over run- Project delayed due to covid-19 pandemic situations
3	66kV S/S Pallivasal	66kV	New (Extension of Pallivasal PH)	16.09.2021	16.01.2021	16.01.2021	31.03.2021	16.09.2021	685	333.3	Reason for Time over run- Project delayed due to covid-19 pandemic situations
TRANSMISSION CIRCLE: THRISSUR											
1	Construction of 110 kV s/s, Mannuthy	110kV	New	21-06-2021	01.02.2020	05.03.2020	17.04.2021	21.06.2021	1160.00	570.12	Reason for time over run: Covid 19 lock down period delayed the work.
TRANSMISSION CIRCLE: PALAKKAD											
1	110kV Substation Pattambi	110kV	New	24.08.2021	15.03.2019	15.03.2019	31.03.2019	24.08.2021	1760	1751.82	Reason for time over run:- Man power shortage due to Covid 19 pandemic
2	110kV GIS Vennakkara	110kV	Upgn.	22.11.2021	20.03.2019	20.03.2019	22.11.2021	22.11.2021	3950	3360.01	-
TRANSMISSION CIRCLE: MALAPPURAM											
1	110kV Substation, Nilambur	110kV	Upgn	10.05.2021	20.04.2018	04.05.2020	06.10.2019	10.05.2021	705	827	Reason for time over run: The upgradation of Nilambur Substation delayed due to delay in completing the upgradation of Manjeri- Nilambur SC line to DC line due to objections in the line route, RoW issues with PWD. Upgradation completed in 2021. Reason for Cost over run: Due to price variations of materials
2	110kV SS Edakkara	110kV	Upgn	10.05.2021	15/04/2021	15.04.2021	10.05.2021	10.05.2021	386	347.72	
TRANSGRID											
1	220kV GIS, Kunnamangalam	220kV	Upgdn	09.07.2021	21.09.2019	21.09.2019	31.08.2021	09.07.2021	9018	3094	
LINES COMMISSIONED DURING 2021-22											

Sl. No	Name of Line	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: THIRUVANANTHAPURAM											
1	220 kV MC line from 220 kV Kattakada to Balaramapuram and 220 kV DC line from Balaramapuram to Vizhinjam and to VISL Substation	220 kV	New	29/09/2021 (2 NK VI), 19/04/2022 (2VZ VI) – Test Charged	05.12.2019	07.01.2019	05.11.2020	29.09.2021 (2 NK VI), 19.04.2022 (2VZ VI)	4997	6897 (including compensation)	Reason for time over run; Sanction from Railway Authority for stringing line at Railway crossing and Lock down due to Covid -19 delayed the project. Reason for cost over run: Expenditure amounting to Rs.1981 lakhs met towards Compensation and court cases are still pending for verdict
TRANSMISSION CIRCLE:THODUPUZHA											
4	Pallivasal to Marayoor DC	33kV	New	16.09.2021	27.08.2019	12.11.2019	26.02.2020	16.09.2021	800	826.13	Reason for cost over run - AS amount for construction of 110kV SS, Marayur and connected line – Rs.1240L(SS : Rs.440 and Line: 800) Total expenditure Rs.960.46 Lakh within the limit of AS amount. Reason for Time overrun- Project delayed due to covid-19 restrictions
TRANSMISSION CIRCLE: THRISSUR											
1	Interlinking 33kV Vellangallur with 33kV Anchangadi	33kV	New	13.08.2021	09.10.2019	09.10.2019	28.03.2020	13.08.2021	650.00	208.98	Reason for time over run: Covid -19 lock down.
TRANSMISSION CIRCLE: PALAKKAD											
1	110kV Thirumittakode-Pattambi	110kV	New	06.08.2021	05.08.2020	05.08.2020	05.02.2021	06.08.2021	300	315.57	Reason for time over run:- Man power shortage due to Covid 19 pandemic. Reason forCost over run: Due to price variations of materials
TRANSMISSION CIRCLE: MALAPPURAM											
1	110 kVManjeri to Nilambur	110kV	Upgn	10.05.2021	10.10.2018	08.10.2019	02.10.2019	10.05.2021	2166	488..56	Reason for time over run:- delay in completing the upgradation of Manjeri- Nilambur SC line to DC line due to objections in the line route
2	110 kv Nilambur to Edakkara	110kV	Upgn	10.05.2021	2016	11.02.2016	2019	10.05.2021	230	225	Reason for Time over run: The upgradation of Nilambur & Edakkara Substations delayed due to delay in completing the upgradation of Manjeri- Nilambur SC line to DC line due to objections in the line route, RoW issues with PWD. Upgradation completed in 2021.
TRANSGRID											

1	Construction of 220/110kV MCMV line from 220kV Areekode – Kaniyabetta feeder tap point (Malayamma) to 220kV Kunnamangalam	220kV	New	09.07.2021	13.07.2019	13.07.2019	30.09.2021	09.07.2021	2534	2268	-
		110kV	New								
CAPACITY ADDITIONS DURING 2021-22											
Sl. No	Name of Substation	Voltage level (kV)	New/Upgn./ Cap. Addn./Cap.enhct.	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: THIRUVANANTHAPURAM											
1	220kV substation kattakada	220kV	Capacity addition-200 MVA 220/110kV Transformer	21.04.2021	25.01.2019	25.01.2019	31.03.2021	21.04.2021	1160	884	-
2	110kV Substation Kazhakuttom	110kV	New addition - 2x16MVA 110/33 kV Transformer	31.05.2021 & 20.12.2021	02.05.2018	02.05.2018	30.09.2021	31.05.2021 & 20.12.2021	2520	2515	
3	33kV Substation Venjaramoodu	33kV	Capacity Enhancement- 2x5MVA to 8MVA 33/11kV Transformer	06.03.2022	19.02.2022	20.02.2022	20.03.2022	06.03.2022	85	69.22	-
3	66kV Substation Palode	66kV	Capacity Enhancement- 5 MVA to 10MVA 66/11kV Transformer	03.03.2022	20.01.2022	20.01.2022	03.03.2022	03.03.2022		4.35	10MVA Transformer was received from 110kV S/s Balaramapuram for the enhancement work.
TRANSMISSION CIRCLE: ALAPPUZHA											
1	110kV Substation, Chengannur	110kV	Cap. Enhmt: 10MVA to 12.5MVA 110/11kV)	18.03.2022	10.03.2020	10.03.2020	31.03.2021	18.03.2022	278	207.43	Reason for Time over run: Covid 19 Pandemic Restrictions, Unfortunate demise of the Contractor Sri. Abdul Kabeer and also Delay in Getting allocation for 110/11kV 12.5MVA Transformer
TRANSMISSION CIRCLE: KOTTARAKKARA											
1	66kV Substation, Thenmala	66	Cap Addn 10MVA	16.08.2021	26.12.2018	04.01.2019	21.04.2021	16.08.2021	116	57	Reason for time over run: Delayed due to Covid pandemic restrictions and First Transformer became faulty
TRANSMISSION CIRCLE: THODUPUZZHA											
1	66KV S/s Kulamavu	66kV	Cap enhct:- 2.3MVA replacing 1x4MVA trfr with 1x6.3MVA trfr	26.05.2021	12.04.2021	12.04.2021	26.05.2021	26.05.2021	3.5	3.405	-

2	33kV S/s kalloorkkadu	33kV	Cap enhct:- 6MVA 2x5MVA trfr with 2x8MVA trfr	30.12.2021	10.07.2020	17.08.2020	30.12.2021	30.12.2021	345	250	-
3	33KV S/s Mazhuvannoor	33kV	Cap enhct:- 6MVA 2x5MVA with 2x8MVA trfr	19.01.2022	26.10.2017	26.10.2017	19.01.2022	19.01.2022	130	93.58	-
4	110kV S/s Marady	110 kV	Upgn. From 66kV to 110 kV .Cap enhanced from 2X10MVA to 2X12.5 MVA Cap enhct:- 5MVA	25.05.2021	01.10.2021	01.10.2022	25.05.2021	25.05.2021	1790L	1393	-
5	33kV Substation, Marayoor	33 kV	Capacity addition: 1X5 MVA	16.09.2021	09.11.2018	28.05.2019	30.04.2019	16.09.2021	440	134.33	Reason for Time overrun- Project delayed due to covid-19 pandemic situations
6	66kV Substation Pallivasal	66kV	Capacity addition:1X16 MVA	16.09.2021	16.01.2021	16.01.2021	31.03.2021	10.10.2021	685	333.295	Reason for Time overrun- Project delayed due to covid-19 pandemic situations
TRANSMISSION CIRCLE:KALAMASSERY											
1	110kV Substation, Edathala	110kV	Upgdn: Replacing 3x 10MVA with 3x12.5MVA Tfrs. Cap.enhct: 7.5MVA	17.02.2021/ 04.05.2021/ 17.09.2021	17.09.2020	17.09.2020	29.05.2021	17.02.2021/04.05.2021/17.09.2021	670	517	-
TRANSMISSION CIRCLE: THRISSUR											
1	Construction of 110 kV s/s, Mannuthy	110kV	Capacity addition: 1X12.5MVA	21-06-2021	01.02.2020	05.03.2020	17.04.2021	21.06.2021	1160.00	570.12	Reason for time over run: Covid 19 lock down period delayed the work.
TRANSMISSION CIRCLE: PALAKKAD											
1	110kV Substation Pattambi	110kV	Capacity addition: 25MVA (2x12.5MVA)	8-24-2021	3-15-2019	3-15-2019	31.03.2021	24.08.2021	1760	1751.82	Reason for time over run: Man power shortage due to Covid 19 pandemic
2	110kV GIS Vennakkara	110kV	Upgdn	22.11.2021	20.03.2019	20.03.2019	22.11.2021	22.11.2021	3950	3360.01	
3	110kV Substation, Kollencode	110kV	Upgdn Replaced 2x5MVA to 2x12.5MVA Capacity Enhmt: 15MVA	05.10.2021	02.08.2021	02.08.2021	05.10.2021	05.10.2021	335	216.24	AS amount is for installation of 2NOs 12.5 MVA 110/11kV Transformer by replacing 2*5MVA 33/11 KV Transformer.
TRANSMISSION CIRCLE: KOZHIKODE											
1	33kV Substation Thiruvallur	33/11	Upgradation (1x5 MVA to 1x8MVA) Capacity enhmt: 3MVA	19.01.2022	21.12.2022	21.12.2022	31.12.2022	19.01.2022	170	75.74	-

2	66kV SS Mankavu	66kV	Upgradation (2x8 MVA to 2 x20MVA) - Capacity enhmt: 24MVA	04.07.2020 21.12.2021	26.04.2018	26.04.2018	01.12.2019	21.12.2021	1186	968.68	Reason for time over run : Delayed due to the delay in line construction and transformer delivery delayed due to covid pandemic situations.
3	66kV SS Kuttikkattoor	66kV	Upgradation (2x10 MVA +1x8 MVA to 1x20 MVA+ 1x12.5 MVA) Capacity enhmt: 4.5 MVA	30.09.2021	01.06.2018	01.06.2018	31.01.2019	30.09.2021	800	707.14	Reason for time over run : Doubling bus arrangement of feeder bay to Kuttikkattur at Kunnamangalam SS delayed. .
4	33kV SS Feroke	33kV	Capacity enhancement (2x5 MVA to 2x8 MVA) Capacity enhmt: 6MVA	07.12.2021 30.12.2021	19.11.2021	19.11.2021	30.12.2021	30.12.2021	161	144	-
5	66kV Substation, Ambalaparamba	66kV	Cap. Enhct. 1X6.3MVA to10MVA Capacity enhmt: 3.7MVA	28.04.21	04.03.2020	04.03.2020	31.03.2021	28.04.2021	135	83	-
TRANSMISSION CIRCLE: KANNUR											
1	110kV Substation, Valiyavelicham	110kV	Capacity addition - 1 No. 12.5MVA	10.03.2022	1.06.2021	01.06.2021	31.03.2022	10.03.2022	230	224.2	-
TRANSMISSION CIRCLE: MALAPPURAM											
3	110kV SS Mankada	110kV	Cap Addn	23.12.2021	11.10.2021	20.10.2021	23.12.2021	23.12.2021	430	408.44	2nd phase (10MVA TFR replaced with 12.5MVA (Total Exp: Rs413.59L)
1	Edarikode	110kV	Capacity enhmt: 9MVA 1x16MVA to 1x25MVA	24.12.2021	14.12.2021	14.12.2021	24.12.2021	24.12.2021	420	187.8 (21-22)	Reason fro cost over run is due to the price variation of power transformer and other materials.
2	33 kV Ss Kalikkavu	33kV	Capacity addition: 5MVA	29.04.2021	24.02.2020	15.04.2020	23.05.2020	30.04.2021	125	38	Bills are pending. Utilised old Transformer and equipments for the work.
3	33 kV Ss Pulamanthole	33kV	Capacity addition: 5MVA	01.07.2021	01.10.2020	16.10.2020	31.03.2021	30.06.2021	145	71	Reason for Cost over run: Utilised Old Transformer and equipments for the work.
4	110 kV S/s Melattur	110kV	Capacity addition: 16MVA	03.05.2021	05.07.2020	03.08.2020	03.05.2021	03.05.2021	304	268.004	-
5	220KV Substation Areekode	110KV	Cap Enhmnt- 7.5MVA (110/11kV 12.5 MVA Transfromer enhanced to 20 MVA)	10.09.2021	09.06.2021	20.10.2021	10.05.2021	10.09.2021	467	233	AS amount is for commisioning 2 nos of 20MVA TFR ,One 20MVA TFR was commisioned duding 2021-22 ,the other one is commisioned on 24/07/2022(2022-23) due to delay on TFR allocation Hnce the

											expenditure shown only for one transformer for the financial year 2021-22
6	33kV Substaion, Valluvambram	33kV	Cap Enhmnt- 6MVA	30.12.2021	13.12.2021	13.12.2021	31.12.2021	30.12.2021	295	219.48	
	110kV Ss Nilambur	110KV	New- 25MVA 2x12.5 MVA	10.05.2021	20.04.2018	04.05.2020	06.10.2019	10.05.2021	705	827	Reason for Time over run: Reason for time over run: The upgradation of Nilambur & Edakkara Substations delayed due to delay in completing the upgradation of Manjeri- Nilambur SC line to DC line due to objections in the line route, RoW issues with PWD. Upgradation completed in 2021. Reason for Cost over run: Due to price variations of materials
	110kV substation,Edakkara	110KV	Capacity addition- 25 MVA 2x12.5MVA	10.05.2021	15/04/2021	15.04.2021	10.05.2021	10.05.2021	386	347.72	-
TRANSMISSION CIRCLE: PATHANAMTHITTA											
1	66 kV Substation,Triveni	66 kV	Cap. Enhct (4MVA to 10MVA) enhanced capacity 6MVA	11.03.2022	09.02.2022	11.02.2022	09.04.2022	11.03.2022	-	53.6447	Combined work including capacity enhancement ,other bay works , panel replacement etc. (10MVA transformer taken from 110kV Substation, Edathala)
TRANSGRID											
1	220kV Substation, Kunnamangalam	220kV	Cap Addn: 200MVA	07.09.2021	07.12.2018	07.12.2018	07.06.2020	07.09.2021	90.18	32.71	Reason for time over run : Delayed due to COVID-19 restrictions, flood, rain,change in scope of work



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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No. CESO/EELD I/AEGS2/Tr. Avlbty/2022-23/1865

Dt: 8.11.2022

To

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

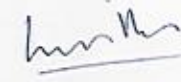
Sir,

Sub: Certification of Availability of Kerala Transmission system for 2021-22.

This is to certify that as per records the availability of Kerala system for the year 2021-22 is as below.

Transmission Elements	Availability
400 kV System	97.95 %
220 kV System	97.74 %
110 kV System	98.74 %
66 kV System	98.78 %
System Availability	98.38 %

Yours faithfully


for Chief Engineer (TSO).
R. AE.
B. EE

Acc: As above

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

Registered Office: VidyuthiBhavanam, Pattom, Thiruvananthapuram – 695004

Website: www.kseb.in, CIN:U40100KL2011SGC027424

**ARR and Tariff Formats
Transmission Business
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Note : Spread sheet financial models (in CD) shall also be submitted along with the application.

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.	Previous Year			
			2021-22			
			Approved in Tariff Order	Audited	Normative	Truing Up requirement
1	2	3	4	5	6	7
1	Operation & Maintenance Expenses	Form T 2	491.28	574.35		459.07
2	Interest and finance charges on long-term loans	Form T4(b)	313.12	113.22		227.66
3	Interest on Bonds to meet Terminal Liabilities	Form T4 (c)	73.73	59.35		59.35
4	Additional contribution to Master Trust		22.64			27.33
5	GPF Interest		24.74	16.22		16.22
6	Depreciation	T3	261.09	276.65		201.61
7	Interest on Working Capital and deposits from Users of the transmission system	Form T 5	23.28	11.20		18.40
8	Contribution to contingency reserves					
9	Other items - Other finance charges			1.55		1.55
10	Incentive on Transmission Availability					4.45
11	Other items	Form T 6		-5.70		-5.70
12	Amortisation of Intangible Assets			0.01		6.78
13	Pay revision expenses			0.00		63.24
14	Total Revenue Expenditure		1209.88	1046.85		1079.96
15	Return on Equity	Form T 7	119.99	205.24		119.99
16	Tax on RoE	Form T 8				
17	Aggregate Revenue Requirement (9+10+11)		1329.87	1252.09	0.00	1199.95
18	Less: Non Tariff Income	Form T 10	46.35	41.94		47.71
19	Less: Revenue from Short Term/Medium Term Open Access		1283.52	1210.14	0.00	1152.24
20	Less: Income from Other Business					
21	Aggregate Revenue Requirement from Transmission Tariff					

Form T 2

Operation and Maintenance Expenses

Name of Transmission Business/Licensee

KERALA STATE ELECTRICITY BOARD LTD.

S. No.	Particular	Previous Year				Remarks
		2021-22				
		Approved in Tariff Order	Audited	Normative	Truing Up requirement	
1	2	4	5	6	7	14
1	Bay Basis					
a	Op. Balance of no. of Bays					
b	Addition of no. of Bays during year					
c	Deletion of no. of Bay during year					
d	Cl. Balance of no. of Bays					
e	Average no. of Bays during Year					
f	Applicable O&M cost Norm for Bay :- Rs _____Lakh/Bay					
	A O&M Expense per Bay, Rs L					
2	ckt-km Basis					
a	Op. Balance of ckt-km					
b	Addition of ckt-km during year					
c	Deletion of ckt-km during year					
d	Cl. Balance of ckt-km					
e	Average ckt-km during Year					
f	Applicable O&M cost Norm - Rs _____Lakh / ckt-					
	B O&M Expense Rs. Lakh					
3	Total O&M Expenses (as per norms) (A+B)	491.28			459.07	
4	Total O&M Expenses (actual)		574.35			

Form T 2(a)

Employee Expenses

Name of Transmission Business/Licensee

KERALA STATE ELECTRICITY BOARD LTD.

Rs. Crore

S. No.	Particulars	Reference	Previous Year (n-1) - 2021-22			Remarks
			Approved in Tariff Order	Audited	Truing Up requirement	
1	2	3	4	5	6 = 5 - 4	13
1	Basic Salary			428.91	428.91	
2	Dearness Allowance (DA)			52.62	52.62	
3	House Rent Allowance			16.70	16.70	
4	Conveyance Allowance			0.00	0.00	
5	Leave Travel Allowance			0.01	0.01	
6	Earned Leave Encashment			16.19	16.19	
7	Other Allowances			1.57	1.57	
8	Medical Reimbursement			1.75	1.75	
9	Overtime Payment			0.00	0.00	
10	Bonus/Ex-Gratia Payments			0.92	0.92	
11	Interim Relief / Wage Revision			0.00	0.00	
12	Staff welfare expenses			0.16	0.16	
13	VRS Expenses/Retrenchment Compensation			0.00	0.00	
14	Commission to Directors			0.00	0.00	
15	Training Expenses			0.00	0.00	
16	Payment under Workmen's Compensation Act			0.00	0.00	
17	Net Employee Costs			518.83	518.83	

S. No.	Particulars	Reference	Previous Year (n-1) - 2021-22			Remarks
			Approved in Tariff Order	Audited	Truing Up requirement	
1	2	3	4	5	6 = 5 - 4	13
18	Terminal Benefits			0.01	0.01	
18	Provident Fund Contribution			0.00	0.00	
18	Provision for PF Fund			0.00	0.00	
18	Pension Payments			0.00	0.00	
18	Gratuity Payment			0.00	0.00	
19	Annual Contribution for Terminal Liabilities based on actuarial valuation			0.00	0.00	
	Contribution of KSEB Ltd towards National Pension Scheme			4.15	4.15	
19	Others			0.02	0.02	
20	Gross Employee Expenses			523.00	523.00	
21	Less: Expenses Capitalised			106.93	106.93	
22	Net Employee Expenses			416.07	416.07	

Form T 2(b)

Administrative & General Expenses

Name of Transmission Business/Licensee

KERALA STATE ELECTRICITY BOARD LTD.

Rs. Crore

S. No.	Particulars	Reference	Previous Year (n-1) - 2021-22			Remarks
			Approved in Tariff	Audited	Truing Up requirement	
1	2	3	4	5	6 = 5 - 4	13
1	Rent Rates & Taxes			0.44	0.44	
2	Insurance			1.11	1.11	
3	Telephone & Postage, etc.			1.48	1.48	
4	Legal charges			0.96	0.96	
5	Audit Fees			0.06	0.06	
6	Consultancy charges			0.01	0.01	
7	Other Professional charges			1.37	1.37	
8	Conveyance			6.24	6.24	
9	Vehicle Running Expenses Truck / Delivery Van			0.16	0.16	
10	Vehicle Hiring Expenses Truck / Delivery Van			0.07	0.07	
11	Electricity charges			0.00	0.00	
12	Water charges			0.09	0.09	
13	Entertainment			0.17	0.17	
14	Fees & subscription			0.32	0.32	
15	Printing & Stationery			0.96	0.96	
16	Advertisements, exhibition publicity			0.31	0.31	
17	Contribution/Donations			0.57	0.57	
18	Training expenses			0.04	0.04	

S. No.	Particulars	Reference	Previous Year (n-1) - 2021-22			Remarks
			Approved in Tariff	Audited	Truing Up requirement	
1	2	3	4	5	6 = 5 - 4	13
19	Miscellaneous Expenses			0.54	0.54	
20	DSM activities			0.00	0.00	
21	SRPC expenses			0.17	0.17	
22	Sports and related activities			0.09	0.09	
23	Freight			1.77	1.77	
24	Purchase Related Advertisement Expenses			0.84	0.84	
25	Bank Charges			0.00	0.00	
26	Office Expenses			101.66	101.66	
27	License Fee and other related fee			4.11	4.11	
28	Cost of services procured			0.00	0.00	
29	Outsourcing of metering and billing system			0.00	0.00	
30	V-sat, Internet and related charges			0.06	0.06	
31	Security arrangements			0.00	0.00	
32	Books & periodicals			0.02	0.02	
33	Computer Stationery			0.00	0.00	
34	Others			3.24	3.24	
	Others- Other Purchase related Expenses			2.18	2.18	
35	Gross A&G Expenses			129.01	129.01	
36	Ele. Duty u/s 3(I), KED Act			0.00		
37	Less: Expenses Capitalised			5.11	5.11	
38	Net A&G Expenses			123.90	123.90	

Form T 2(c)

Repair & Maintenance Expenses

Name of Transmission **KERALA STATE ELECTRICITY BOARD LTD.**

Rs. Crore

S. No.	Particulars	Reference	Previous Year (n-1)- 2021-22			Truing Up requirement	Remarks
			Approved in Tariff Order	Audited	flood (Exceptional Items)		
1	2	3	4	5		6 = 5 - 4	13
1	Plant & Machinery			20.55			
2	Buildings			1.35			
3	Civil Works			5.65			
4	Hydraulic Works			0.11			
5	Lines & Cable Networks			5.37			
6	Vehicles			0.81			
7	Furniture & Fixtures			0.08			
8	Office Equipment			0.47			
9	Gross R&M Expenses			34.38			
10	Less: Expenses Capitalised						
11	Net R&M Expenses			34.38			

Form T 3

Fixed assets & Depreciation

Name of Transmission Business/Licensee
Year (n-1)*

KERALA STATE ELECTRICITY BOARD LTD.
2021-22

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	10.1	502.87	3.09	0.00	505.96	0.00	0.00		0.00	502.87	505.96
2	Other Civil works	10.4	498.10	19.96	0.02	518.08	176.77	17.00		193.77	321.33	324.31
3	EHV		0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00
a)	Transmission lines	10601	1461.31	1112.34	0.19	2573.84	857.52	77.83		935.35	603.79	1638.49
b)	Sub-station equipments	10543	1181.46	416.38	0.43	1598.28	631.75	64.79		696.54	549.71	901.74
i)	Transformers	10541	982.58	45.32	0.05	1027.94	599.58	47.33		646.91	383.00	381.03
ii)	Switchgears, Control gear & Proteciton	10561	62.47	1.12	0.00	63.59	33.78	1.66		35.44	28.69	28.15
iii)	Batteries	10563	35.25	2.82	0.00	38.07	24.61	1.26		25.87	10.64	12.20
iv)	Others	10.5	270.09	11.63	0.01	281.73	190.65	6.57		197.22	79.43	84.51
4	HV & LT		0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00
a)	Transmission lines	10.6	924.62	96.19	0.10	1020.90	517.53	37.79		555.32	407.09	465.58
b)	Sub-station equipments		0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00
i)	Transformers	10542	154.38	7.81	0.01	162.20	114.98	3.35		118.33	39.40	43.87
ii)	Switchgears, Control gear & Proteciton		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	10571,72	83.80	8.41	0.01	92.22	64.19	3.20		67.39	19.61	24.82
6	Meters	10631	12.87	0.01	0.00	12.88	11.63	0.05		11.67	1.24	1.20
7	Vehicles	10.7	8.14	3.26	0.00	11.40	6.42	0.22		6.64	1.72	4.76
8	Furniture & fixtures	10.8	7.65	2.50	0.00	10.16	5.18	0.51		5.69	2.47	4.47
9	Office Equipments	10.9	5.67	2.36	0.00	8.03	3.08	0.34		3.42	2.59	4.61
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

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
b)	HV & LT transmisison		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	10.905	10.46	0.49	0.00	10.94	8.25	0.69		8.94	2.20	2.00
	Buildings	10.2	389.33	28.20	0.00	417.53	183.88	13.49		197.37	205.45	220.16
14	Any other items (Hydraulic Works)	10.3	11.30	0.13	0.00	11.43	16.45	0.59		17.04	-5.15	-5.61
15	Gross Asset (Total (1) to (14))		6602.35	1762.02	0.82	8365.18	3446.26	276.66	0.00	3722.92	3156.09	4642.26
16	Less: Consumer contribution	55.1	134.50	6.66	10.64	130.52					134.50	130.52
17	Less: Government grants	55.2&.3	419.44	3.95	20.77	402.63					419.44	402.63
18	Less: Deposit Works		0.00			0.00					0.00	0.00
19	Less: Capital Subsidies	55.4	49.47	5.20	3.81	50.86					49.47	50.86
	Less: Contribution from Public	55.5	1.00	0.00	0.08	0.92					1.00	0.92
20	Net Asset considered for depriciation (15-16-17-18-19)		5997.94	1746.21	-34.48	7780.25					2551.68	4057.34

Form T 4(a)

calculation of Weighted Average Rate of Interest on Actual Loan
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Name of Transmission Business/Licensee
Licensed Area of Supply

KERALA STATE ELECTRICITY BOARD LT

(Rs. Cr)

S.No	Particulars (specify items)	Previous Year (n-1) 22		2021-	Remarks
		Approved in Tariff Order	Audited	Truing Up requirement	
1	2	4	5	6 = 5 - 4	13
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		1859.74		
iv.	Add: Drawal(s) during the Year		443.12		
v.	Less: Repayment (s) of Loans during the year		384.13		
vi	Net loan - Closing		1918.72		
vii	Average Net Loan		1889.23		
viii	Interest on Loan		179.77		
ix	Weighted average Rate of Interest on Loans		9.52%		

SEPARATE SHEET ATTACHED

the calculations in Original currency is also to be furnished separately in the same form

TERM LOAN

SL NO	NAME OF THE FINANCIAL INSTITUTION	Net Loan - Opening	(IND Adj) 2019-20	Gross loan- Opening - 01/04/2020	Add: Drawal(s) during the Year	Less: Repayment (s) of Loans during the year	Gross loan - Closing - 31/03/2021	CFL	Net loan - Closing - 31/03/2021	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	66.07	9.07	75.14	0.00	9.18	65.96	10.31	55.65	70.55	9.01% - 10.66 %	7.34	
2	REC-TRAN.Kattakkada -Pothencode Scheme	57.33	14.33	71.66	1.19	15.53	57.33	14.33	43.00	64.49	9.5% - 11.39%	7.39	
3	SBI	362.67	45.30	407.97	0.00	41.08	366.89	45.52	321.38	387.43	7.95%	30.83	
4	Special Loan Assistance from PFC	330.13	28.71	358.84	0.00	27.12	331.72	28.84	302.87	345.28	9.08%	31.51	
5	Special Loan Assistance from REC	466.80	46.68	513.48	0.00	44.44	469.03	46.90	422.13	491.26	10% - 10.9%	52.43	
6	Kerala Financial Corporation	138.32	16.43	154.75	28.98	16.51	167.21	18.00	149.22	160.98	9.00%	13.31	
7	Medium Term Loan Kerala Financial Corporatio	115.53	37.47	153.00	0.00	36.92	116.08	37.65	78.43	134.54	8.00%	10.92	
8	Indian Bank				5.09	2.57	2.52	0.29	2.24	1.26	6.75%	0.03	
	SUB-TOTAL	1536.85	197.99	1734.84	35.26	193.35	1576.75	201.84	1374.91	1655.80		153.77	
B	UNSECURED LOANS TERM LOANS												
1	Loans - Short term loan from Bank of Baroda	124.90		124.90	0.00	124.89	0.00	0.00	0.00	62.45	8.90%	3.56	
2	Short Term Loan from REC			0.00	156.87	0.00	156.87	0.00	156.87	78.43	7.75%	10.03	
3	Loans - Short term loan from M/s IREDA			0.00	250.99	65.88	185.10	185.10	0.00	92.55	7.75%	12.41	
	SUB-TOTAL	124.90	0.00	124.90	407.85	190.78	341.97	185.10	156.87	233.43		26.00	
	TOTAL	1661.74	197.99	1859.74	443.12	384.13	1918.72	386.95	1531.78	1889.23	9.52	179.77	

Calculation of Interest on Normative Loan
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Name of Transmission Business/Licensee

KERALA STATE ELECTRICITY BOARD LTD

Licensed Area of Supply

(Rs. Cr)

S. No.	Particulars (specify items)	Previous Year (n-1)		2015-19	Remarks
		Approved in Tariff Order	Normative	Truing Up requirement	
1	2	4	5	6 = 5 - 4	13
1	Gross Normative loan - Opening				
2	Cumulative repayment of Normative Loan upto previous year				
3	Net Normative loan - Opening	3257.07	1859.74	1583.89	
4	Increase/Decrease due to ACE/de-capitalization during the Year	515.21	443.12	1816.68	
5	Repayments of Normative Loan during the year	261.09	384.13	201.61	
6	Net Normative loan - Closing	3511.18	1918.72	3198.96	
7	Average Normative Loan	3384.13	1889.23	2391.425	
8	Weighted average Rate of Interest of actual Loans	9.25	9.52%	9.52	
9	Interest on Normative loan	313.12	179.77	227.66	

Form T4(c)

Interest on Bonds to meet Terminal Liabilities

Name of Transmission Bus **KERALA STATE ELECTRICITY BOARD LTD.**

Licensed Area of Supply

(Rs. Cr)

S.No	Particulars (specify items)	Previous Year (n-1)			Remarks
		Approved in Tariff Order	Actual	Truing Up requirement	
1	2	3	4		12
A	Bond Series 1				
1	Value of Bond				
2	Rate of Interest on Bond	73.73	59.35	59.35	
3	Interest on Bond				
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	Previous Year				Remarks
		2021-22				
		Approved in Tariff Order	Audited	Normative	Truing Up requirement	
1	2	3	4	5	6	13
1	O&M expenses for one month	40.94			45.80	
2	Maintenance Spares (as per norms)	81.48			63.35	
3	Receivables calculated on target availability (as per norms)	106.96			95.26	
	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	229.38			204.41	
6	Interest Rate (as per norms)	10.15%			9%	
7	Interest on Working Capital	23.28	11.20		18.40	

Form T 6

Other items (Other debits or any other items)

Name of Transmission Business/Licensee

KERALA STATE ELECTRICITY BOA

S. No.	Particulars (specify items)	Previous Year			Remarks
		2021-22			
		Approved in Tariff Order	Audited	Truing Up requirement	
1	2	3	4	5 = 4 - 3	12
A1	Material Cost Variance		0.31	0.31	
2	Research and Development Expenses			-	
3	Cost Of Trading/Manufacturing Activity		-6.16	-6.16	
3	Miscellaneous Losses and Write Offs		0.15	0.15	
4	Loss/(compensation) on account of flood cyclone etc		0.00	-	
				-	
	Total		-5.70	-5.70	
				-	
				-	
	Less				
B	Chargeable to Capital Expenses				
	Net chargeable to revenue(A-B)		-5.70	-5.70	

Form T 7

Return on Equity/Return on Net Fixed Assets

Name of Transmission Business/Licensee

KERALA STATE ELECTRICITY BOARD LTD.

S.No.	Particulars	Ref.	Previous Year				Remarks
			2021-22				
			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		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)	119.99	205.24		119.99	
6	Return on Equity portion of capitalisation	14%*(3)/2		0.00			
7	Total Return on Equity	(5)+(6)	119.99	205.24		119.99	

Form T 8

Income Tax Provisions

Name of Transmission Business/Licensee **KERALA STATE ELECTRICITY BOARD LTD.**
Rs. Crore

S. No.	Particulars	Previous Year			Remarks
		2021-22			
		Approved in Tariff Order	Audited	Truing Up requirement	
1	2	3	4	5 = 4 - 3	12
(A)	Advance Tax assessed & deposited on ...				
a)	for Quarter I & deposited on 15th June				
b)	for Quarter II & deposited on 15th September				
c)	for Quarter III & deposited on 15th December				
d)	for Quarter IV & deposited on 15th March				
	Total (A)				

Form T 9

Revenue at Existing Transmission Tariff

Name of Transmission Business/License **KERALA STATE ELECTRICITY BOARD LTD.**

Year (n-1)*

2021-22

S. No	Category	Amount of Energy Transmitted (specify unit)	Transmission Tariff			Revenue from Transmission charges (Rs. Cr.)			
			Capacity based Charge (Specify part name and unit)	Energy based charge, (Specify unit)	Any other charge (Specify part name and unit)	Capacity based Charges	Energy based Charges	Any other charge (Please specify)	Total
1	2	3	4	5	6	7	8	9	10
1	Long Term Open Access								
A	Distribution Licensees								
	Discom 1								
	Discom 2								
	Discom 3								
	...								
	sub-total								
B	Traders								
	Trader 1								
	Trader 2								
	Trader 3								
								
	sub-total								
C	Consumers								

S. No	Category	Amount of Energy Transmitted (specify unit)	Transmission Tariff			Revenue from Transmission charges (Rs. Cr.)			
			Capacity based Charge (Specify part name and unit)	Energy based charge, (Specify unit)	Any other charge (Specify part name and unit)	Capacity based Charges	Energy based Charges	Any other charge (Please specify)	Total
1	2	3	4	5	6	7	8	9	10
	Consumer 1								
	Consumer 2								
	Consumer 3								
								
	sub-total								
2	Short Term Open Access								
	Consumer 1								
	Consumer 2								
	Consumer 3								
								
	sub-total								
	Total								

Form T 10

Non-tariff Income

Name of Transmission Business/Licensee

KERALA STATE ELECTRICITY BOARD LTD.

S.No	Particulars	Previous Year			Remarks
		2021-22			
		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		0.01	0.01	
2	Income from rent of land or buildings		0.10	0.10	
3	Income from sale of scrap		19.13	19.13	
4	Rental from staff quarters		0.06	0.06	
5	Interest on investments, fixed and call deposits and bank balances		2.09	2.09	
6	Interest on advances to suppliers/contractors		6.39	6.39	
7	Miscellaneous receipts		19.91	19.91	
8	Clawback of Grant		37.58		
	Total Non-Tariff Income	46.35	85.30	47.71	

Form T 11

Expected Revenue at Proposed Transmission Tariff

Name of Transmission Business/ Licens **KERALA STATE ELECTRICITY BOARD LTD.**

Year (n-1)*

S. No	Category	Amount of Energy transmitted (specify unit)	Transmission Tariff			Revenue from Transmission charges (Rs. Cr.)			
			Capacity based Charge (Specify part name and unit)	Energy based charge, (Specify unit)	Any other charge (Specify part name and unit)	Capacity based Charge	Energy based Charge	Any other charge (Please specify)	Total
1	2	3	4	5	6	7	8	9	10
1	Long term open access								
A	Distribution Licensees								
	Discom 1								
	Discom 2								
	Discom 3								
	...								
	sub-total								
B	Traders								
	Trader 1								
	Trader 2								
	Trader 3								

S. No	Category	Amount of Energy transmitted (specify unit)	Transmission Tariff			Revenue from Transmission charges (Rs. Cr.)			
			Capacity based Charge (Specify part name and unit)	Energy based charge, (Specify unit)	Any other charge (Specify part name and unit)	Capacity based Charge	Energy based Charge	Any other charge (Please specify)	Total
1	2	3	4	5	6	7	8	9	10
								
	sub-total								
C	Consumers								
	Consumer 1								
	Consumer 2								
	Consumer 3								
								
	sub-total								
2	Short term open access								
	Consumer 1								
	Consumer 2								
	Consumer 3								
								
	sub-total								
	Total								

Form T 12

Revenue Subsidy and Grant

Name of Transmission Business/Licensee

KERALA STATE ELECTRICITY BOARD LTI

Rs. Crore

S.No	Particulars	Previous Year			Remarks
		(n-1)			
		Approved in Tariff Order	Audited	Truing Up requirement	
1	2	3	4	5 = 4 - 3	12
	Revenue Subsidies & Grants				
1	Subvention from the State Government				
2	The State Govt. Grant				
3	Any Other item				
	Total				

Form T 13

Consumer Contribution, Capital Subsidy and Grant

Name of Transmission Business/Licensee

KERALA STATE ELECTRICITY BOARD LTD.

Rs. Crore

S. No.	Particulars	Previous Year			Remarks
		2021-22			
		Approved in Tariff Order	Audited	Truing Up requirement	
1	2	3	4	5 = 4 - 3	12
1	Consumer's Contribution for service connection lines and associated wiring		130.52		
2	Any other Contribution by consumers or for consumers under any scheme.				
a)	from public		0.92		
b)					
c)					
3	Sub-Total		131.44		
4	Subsidies towards cost of Capital Asset		50.86		
5	Grant towards cost of Capital Assets		402.63		
6	Amount received from State Govt. under any scheme as grant /subsidy				
7	Total		584.93		

Form T 14

Proposed improvement in performance
--

Name of Transmission Business/Licensee

S.No.	Paritculars	Performance parameters	Remarks
		Actual for the previous year	
		n-1	
1	2	3	8
1	EHV Trransmission losses	2.77%	
2	System availability		
a)	400 kV System	97.95%	
b)	220 kV System	97.74%	
c)	110 kV System	98.74%	
d)	66 kV System	98.78%	
e)	33 kV System		
	Total System Availability	98.38%	

Form T 15

Transmission Losses

Name of Transmission Business/Licensee **KERALA STATE ELECTRICITY BOARD LTD.**
2021-22

S.no	Particulars	Unit	2021-22			Remarks
			Approved in Tariff Order	Audited	Truing Up requirement	
1	2	3	4	5	6 = 5 - 4	13
1	Energy input into the sysrtem					
(a)	Energy from the sources Inside the State (T-G interfa	MU				
(b)	Energy from the sources outside the State (State Periphery)	MU				
(c)	Total (a)+(b)	MU				
2	Energy transmitted to Discoms (including their direct EHT consumers being fed from Grid SS)	MU				
3	Energy transmitted to open access consumers	MU				
4	Energy transmitted for inter-state sale	MU				
5	Intra-State transmission losses (1(c)-(2+3+4))/1(c))					

Form T 16

Forecast of Electricity Transmitted (MU)

Name of Transmission Busine **KERALA STATE ELECTRICITY BOARD LTD.**

S. No.	Category	Previous Year			Remarks
		2021-22			
		Approved in Tariff	Audited	Truing Up requirement	
1	2	3	4	5 = 4 - 3	10
1	Distribution Licensees				
	Discom 1				
	Discom 2				
	Discom 3				
	...				
	sub-total				
2	Traders				
	Trader 1				
	Trader 2				
	Trader 3				
				
	sub-total				
3	Consumers				
	Consumer 1				
	Consumer 2				
	Consumer 3				
				
	sub-total				
	Total				

Form T 17**Deviation Analysis**

Name of Transmission Business/Licensee
Licensed Area of Supply

KERALA STATE ELECTRICITY BOARD LTD.

Year : 2021-22

(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	491.28	574.35	-83.07			
2	Interest and finance charges on long-term loans	337.86	113.22	224.64			
3	Interest on Bonds to meet Terminal Liabilitie	73.73	59.35	14.38			
4	Depreciation	261.09	276.65	-15.56			
5	Interest on Working Capital and deposits from Users of the transmission system	23.28	11.20	12.08			
6	Additional contribution to Master Trust	22.64		22.64			
7	Other items						
8	Adjustment for profit/loss on account controllable/uncontrollable factors						
9	Other items		-5.70	5.70			
	Amortisation of Intangible Assets		0.01	-0.01			

S. No.	Particulars	Approved	Actual	Deviation	Reason for Deviation	Controllable	Uncontrollable
1	2	3	4	5	6	7	8
	Other Finance Charges		17.78	-17.78			
10	Total Revenue Expenditure	1209.88	1046.86	163.02			
11	Return on Equity	119.99	205.24	-85.25			
12	Tax on RoE						
13	Aggregate Revenue Requirement (9+10+11)	1329.87	1252.08	77.79			
D	Revenue						
1	Transfer price	1283.52	1210.14	73.38			
2	Less: Non Tariff Income	46.35	41.94	4.41			
3	Less: Revenue from Short Term/Medium Term Open Access						
4	Less: Income from Other Business						

Form T P&L

Profit & Loss Account

Name of Transmission Business **KERALA STATE ELECTRICITY BOARD LTD.**

S.No.	Particulars	Ref	Previous Year	Previous Year	Remarks
			2021-22	2020-21	
1	2	3	4	5	6
	I. INCOME				
	a. Revenue from Sale of Power		1210.14	1289.28	
	b. Revenue Subsidies and Grants				
	c. Other Income		41.94	81.81	
	d. Claw back of Grant				
	Total (a+b+c)		1252.08	1371.09	
	II. EXPENDITURE				
	a. Repairs and Maintenance.		34.38	31.62	
	b. Employee Cost		523.00	634.24	
	c. Administration and General Expenses		129.01	116.18	
	d. Depreciation		276.65	249.95	
	1). Amortisation of Intangible Assets		0.01	1.39	
	e. Interest and Finance charges		268.10	263.34	
	Purchase of Power				
	f. Subtotal (a+b+c+d+e)		1231.15	1296.71	
	g. Less Capitalised Expenses:				
	- Interest & Finance Charges		66.55	36.90	
	- Other Expenses		112.04	91.77	
	h. Other Debits		-5.70	1.17	
	Change in fair valuation and adjustments				
	I. Extra Ordinary Items		0.00	0.07	
	Total Expenditure (f-g+h+i)		1046.86	1169.28	
	III. Profit/(Loss) before Tax (I-II)		205.24	201.81	

S.No.	Particulars	Ref	Previous Year	Previous Year	Remarks
			2021-22	2020-21	
1	2	3	4	5	6
	IV. Provision for Income Tax				
	V.Net Prior period credits (Charges)				
	V.(a). Other Comprehensive Income				
	VI. Surplus (Deficit)		205.24	201.81	
	VII. Net Assets at the beginning of the year (Less consumer's Contribution)		2551.68	2160.08	
	VIII. Rate of Return (VI/ VII)				

Form T BS

Balance Sheet at the end of the year

Name of Transmission Business/Lice: KERALA STATE ELECTRICITY BOARD LTD.

S.No.	Particulars	Ref	Previous Year	Previous Year	2019.20	Remarks
			2021-22	2020-21		
1	2	3	4	5		6
	Sources of Funds:					
	(A)Capital Funds:					
	Share Capital (Govt. equity)		857.05	857.05	857.05	
	Reserves & Surplus		181.25	459.97	322.57	
	Total (A)		1038.30	1317.02	1179.62	
	(B) Loan from State Government					
	Loan from others :					
	-Secured		1374.90	1536.84	1245.81	
	-Unsecured		156.87	124.90	120.73	
	Total (B)		1531.77	1661.73	1366.54	
	(C) Contribution, grants & subsidies towards cost of capital assets		584.93	604.41	572.58	
	Provident Fund		253.58	236.54	231.26	
	Terminal Benefit Fund		1347.22	773.74	626.82	
	Borrowings for working capital					
	Long term Provision & Other Non current Liabilities		-1676.21	-2514.23	-3502.41	
	Grand total of sources of funds (A+B+C)		3079.59	2079.21	474.42	
	*Application of Funds:					
	A) Fixed assets					
	a) Gross fixed assets		8365.18	6602.35	5922.70	
	b) Less accumulated depreciation		3722.92	3446.26	3196.31	
	c) Net Fixed assets((a)-(b))	*	4642.26	3156.09	2726.40	
	d) Capital works in progress		957.78	1696.42	1156.43	
	e) Assets not in use					
	f) Deferred costs					
	g) Intangible assets		42.63	19.61	10.00	
	h) Investments		6.08	9.41	7.49	
	Other Non current assets		367.44	410.36	343.03	
	Total (c) +(d)+(e)+(f)+(g)+(h)		6016.19	5291.89	4243.35	

S.No.	Particulars	Ref	Previous Year	Previous Year		Remarks
			2021-22	2020-21	2019.20	
1	2	3	4	5		6
	B)Subsidy receivable from Government					
	Contribution receivable from State Government towards pension liability		120.84	203.73		
	C) Net Current Assets					
	(1) Current assets, loans and advances					
	a) Inventories*		169.58	122.03	121.12	
	b) Receivables against transmission charges					
	c) Cash & bank balances		1.85	4.67	20.02	
	d) Loans and advances					
	e) Sundry receivables		-1496.40	-1978.98	-2337.03	
	Total (C)(1)		-1324.97	-1852.28	-2195.90	
	(2) Current liabilities & provisions					
	a) Security Deposits from Consumers					
	b) Borrowings for working capital		470.80	397.24	578.56	
	c) Payments due on Cap. liabilities					
	d) Other current liabilities		1261.67	1166.88	994.47	
	Total (C)(2)		1732.47	1564.12	1573.03	
	Net Current Assets (C) [(C(1)) - (C(2))]		-3057.44	-3416.40	-3768.92	
	Grand Total of Application of funds (A)+(B)+(C)		3079.59	2079.22	474.42	
			0.00	0.00	0.00	

Form T CF

Cash Flow for the year

Name of Transmission Business/Licensee _____

S.No.	Particulars	Ref	Previous Year	Previous Year	Remarks
			2021-22	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		205.24	201.81	
	Less : Income Tax Payment during the year				
	: Other Comprehensive Income		0.00	0.00	
	Total of (a)		205.24	201.81	
	b. Add: Debits to rev. account not requiring cash Flow:				
	I) a) Depreciation		276.65	249.95	
	b) Depreciation on Assets capitalised in the initial BS of the IND As Accounts		0.01	0.00	
	ii) Amortisation of Deferred costs				
	iii) Amortisation of Intangible Assets		0.01	1.39	
	iv) Investment Allowance Reserve				
	v) Others, if any		838.02	988.18	
	Total of (b)		1114.69	1239.52	

S.No.	Particulars	Ref	Previous Year	Previous Year	Remarks
			2021-22	2020-21	
1	2	3	4	5	6
	c. Less : Credits to revenue Account not involving cash receipts				
	I) Deprecation				
	ii) Subsidies receivables				
	iii) Revenue gap				
	Total of (c)		0.00	0.00	
	Net Funds from Earnings (a)+(b)-(c)		1319.93	1441.33	
2	Contributions, Grants & Subsidies to cost of Capital Assets		-19.48	31.83	
3	Security Deposit from consumers				
4	Proceeds from disposal of fixed Assets				
5	Total Funds from Operations (1+2+3+4)		1300.45	1473.15	
6	Net Increase/ (Decrease) in working Capital				
	(a) Increase/ (Decrease) in Current Assets				
	I) Inventories		47.55	0.91	
	ii) Receivables against transmission charges				
	iii) Loans and Advances		0.00	0.00	
	iv) Sundry receivables		482.58	358.05	
	v)Subsidy receivables				
	Total of (a)		530.13	358.96	

S.No.	Particulars	Ref	Previous Year	Previous Year	Remarks
			2021-22	2020-21	
1	2	3	4	5	6
	(b) Increase/(Decrease) in Current liabilities				
	I) Borrowings for working Capital		73.56	-181.31	
	ii) Other current liabilities		94.79	172.41	
	iii) Others (Increase in Reserve + payment due on cap.liab)		-483.96	-64.41	
	Total of (b)		-315.61	-73.31	
	Net Increase/(Decrease) in working Capital (a)- (b)		845.74	432.28	
7	Net Funds from operations before subsidies and Grants (5-6)		454.70	1040.87	
8	Receipts from revenue subsidies and Grants		82.89	-203.73	
	Total Net Funds from operations including subsidies & Grants (7+8)		537.59	837.14	
II.	Net increase/ decrease in Capital liabilities				
	a). Fresh borrowings				
	I) State Loans				
	ii) Foreign currency Loans / Credits				
	iii) Other borrowings		450.57	845.28	
	Total of (a)		450.57	845.28	
	b) Repayments :				
	I) State Loans				
	ii) Foreign currency Loans / Credits				
	iii) Other borrowings		580.54	550.09	

S.No.	Particulars	Ref	Previous Year	Previous Year	Remarks
			2021-22	2020-21	
1	2	3	4	5	6
	Total of (b)		580.54	550.09	
	Net Increase/ (Decrease) in Capital liabilities (a) - (b)		-129.97	295.19	
III.	Increase/(Decrease) in equity Capital		0.00	0.00	
IV.	Total Funds available for Capital Expenditure (I+II+III)		407.63	1132.34	
V	Funds utilised on Capital Expenditure				
	a)On projects		1024.20	1219.63	
	b)Advance to Suppliers & Contractors				
	c) Intangible Assets		23.03	11.00	
	d) Deferred Cost		0.00	0.00	
	e) Long Term Loans and Advances		-42.92	67.33	
	Total of V (a+b+c+d)		1004.30	1297.96	
VI	Net Increase/(Decrease) in Government contribution				
VII	Net Increase/(Decrease) in Terminal benefit fund		573.48	146.92	
VIII	Net Increase/(Decrease) in Provident fund		17.04	5.28	
IX	Net Increase/(Decrease) in investments		-3.33	1.92	
X	Net Increase / (Decrease) in cash / bank balance (IV - V- VI-IX)+ (VII+VIII)		-2.82	-15.35	
XI	Add opening cash & Bank balance		4.67	20.02	
XII	Closing Cash & Bank balance (X+XI)		1.85	4.67	

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

4.1 An overlook on Kerala Distribution network:

Kerala State Electricity Board Limited supplies electricity to about 3.47 Cr of entire population across 14 districts in Kerala. There are about 1.02 crore domestic consumers, 24.56 Lakh commercial/general consumers, 1.45 Lakh industrial consumers, 5.1 Lakh agricultural consumers. The key statistics of distribution network is given below:

Table-D1 Key Statistics of KSEBL Distribution Network as on 31.03.2022	
Particulars	Statistics
Area Sq.km.	38863 km ²
Districts No's	14
Electrical Circle Offices	25
Population in Cr	3.47
Consumers (Nos)	13422642
Distribution transformers (Nos)	85594
HT lines (Ckt. Kms)	68173
LT lines (Kms)	299538
Energy sales by KSEBL including external sales MU	25594
Energy consumption inside the State(incl open access & captive consumption) in MU	24131.77
T&D loss in % (including transmission loss)	10.19%
Distribution loss in %	7.62%
AT&C loss in % as per CEA methodology	8.26%

TRUING UP of 2021-22

4.2 Energy Sales for 2021-22:

- 4.2.1 Hon'ble Commission, vide order dated 08.07.2019, had approved energy sale of 24991.45 MU for the year 2021-22. Actual energy sale of KSEBL inside the State for FY 2021-22 was 23499.59 MU. 2094.93 MU had been sold outside the state against 811.21 MU approved. 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 2021-22				
Sl. No	Consumption Category	Number of consumers	Energy sales	Connected load/ Contract Demand
			MU	MW/MVA
I	LT I Domestic	10246625	12675.79	19849.09
	LT II	178	3.60	2.93
	LT III	69	0.45	0.24
	LT IV A Industrial	143136	1157.40	1858.70
	LT IV B Industrial	2355	7.81	12.66
	LT V A Agriculture	476642	283.21	909.65
	LT V B Agriculture	33635	90.88	94.44
	LT VI A General	127471	181.46	366.61
	LT VI B General	46815	115.15	173.69
	LT VI C General	44278	223.43	302.34
	LT VI D General	33857	20.85	43.26
	LT VI E General	10338	2.64	9.38
	LT VI F General	520053	978.61	1097.87
	LT VI G General	18193	76.42	131.32
	LT VII A Commercial	1213401	1558.56	2557.25
	LT VII B Commercial	437950	137.49	165.39
	LT VII C Commercial	1301	12.96	24.99
	LT VIII A Public lighting	1618	230.41	87.81
	LT VIII B Public lighting	55576	132.42	80.70
	LT IX Advertisement & Hoardings	2058	1.23	2.89
LT X Electric vehicle charging stations	219	0.69	5.29	
	LT total	13415768	17891.47894	27776.4856
II	HT I A Industrial	2649	2286.81	952.52
	HT I B Industrial	27	10.09	7.17
	HT II A General	443	200.50	101.88
	HT II B General	1111	612.24	216.17
	HT III A Agriculture	53	6.49	12.69
	HT III B Agriculture	10	2.14	1.43
	HT IV A Commercial	1197	253.48	177.32
	HT IV B Commercial	1193	303.97	213.59
	HT V Domestic	125	17.97	12.19
	HT VII Temporary		0.27	
	HT Total	6808.00	3693.96	1694.97
III	EHT I 66 KV Industrial	13	210.46	80.55
	EHT II 110 KV Industrial	20	615.24	172.05
	EHT III 220 KV Industrial	1	193.21	40
	EHT General A	2	13.82	3
	EHT General B	3	44.83	24
	EHT Railway Traction	13	318.29	109
	KMRL	3	11.37	6.1
		EHT Total	55.00	1407.24
IV	Bulk Supply/ Licensees	11	506.91	109.215
V	HT, EHT & Licensees	6874	5608.11	2238.88
VI	Grand Total	13422642	23499.59	27771.1975/2238.88

4.2.2 While approving the energy sales for FY 2021-22, Hon'ble Commission considered the energy sales including energy wheeled through open access. Embedded open access consumers imported about 268.69 MU at Kerala periphery and energy injected by IPPs into the grid for sale outside the State through open access was 38.66 MU. The embedded open access consumers availed 253.37 MU through open access at consumer end. The details are furnished in table below.

Table –D3 Energy availed and sold through OA by embedded open access consumers in FY-22(MU)			
Particulars	Energy at Kerala Periphery	Energy at injection/ drawal point	Loss on accounting of wheeled units
Import	268.69	253.37	15.32
Export	-44.04	-45.84	1.80
Total loss			17.12

4.2.3 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 285.59 MW as on 31.03.2022 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

Table D4 . Consumption against captive generation						
Source	Category	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	A+B
SHEP	EHT 66	118.07	118.07	89.26	0.00	89.26
	EHT 110			0.01		0.01
Wind	HT	25.38	25.31	17.41	0.06	17.48
Solar(grid connected)	EHT Gen	43.20	32.07	22.84	11.13	33.97
	KMRL	6.79	3.03	2.64	3.76	6.41
	EHT 110	4.26	0.55	0.52	3.71	4.23
	HT *	60.77	8.85	8.21	51.92	60.13
	LT*	189.76	114.94	81.33	74.83	156.16
Solar offgrid	LT	2.95	0.00	0.00	2.95	2.95
		451.19	302.83	222.23	148.36	370.59

*including export from Saura scheme

4.2.4 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)						
Category	Approved*	Actual	Energy thru open access	Energy adjusted against captive injection	Total energy	% variation against appvl**
LT Category						
Domestic	12381.33	12675.79			12675.79	2.378
VI & VII Commercial	3885.49	3308.04			3308.04	-14.862
Industrial	1157.49	1165.21			1165.21	0.667
Agricultural	387.19	374.09			374.09	-3.383
Street Lights	437.81	362.83			362.83	-17.127
LT II	5.15	3.60			3.60	
Advertisement & Hoardings	2.25	1.23			1.23	
EV charging stations		0.69			0.69	
LT Total	18256.71	17891.48		81.33	17972.81	-1.56
HT Category						
HT I	2494.01	2296.90	8.45		2305.35	-7.565
HT II	975.88	812.74	6.82		819.57	-16.018
HTIII	10.76	8.64			8.64	-19.736
HT IV	820.98	557.44	9.09		566.53	-30.994
HT V	18.2	17.97			17.97	-1.249
HT VI	0				0.00	
HT VII		0.27			0.27	
HT Total	4319.83	3693.96	24.36	25.63	3718.32	-13.92
EHT Category						
EHT-I	382.38	210.46	64.67	89.79	364.92	-4.565
EHT-II	808.12	615.24	144.31		759.55	-6.011
EHT-III	112.02	193.21	18.45		211.66	88.949
EHTGeneral	77.54	58.66		22.84	81.50	5.110
Railway Traction	323.09	318.29			318.29	-1.486
KMRL	18.66	11.37		2.64	14.02	-24.891
EHT Total	1721.81	1407.236	227.42	115.28	1749.937	1.63
Bulk consumers/Licensees	693.1	506.91	1.59		508.50	-26.635
HT.EHT & Licensees	6734.74	5608.11	253.37	140.90	5976.76	-11.25
Total	24991.45	23499.59	253.37	222.23	23949.57	-4.17

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

Table D 6. Total energy consumption of State							
Category	Energy sales by KSEBL (MU)	Open access import (MU)	Sub Total (MU)	Captive generation (MU)			Total (MU)
				SHP	Solar	Wind	
LT	17891.5		17891.48		159.10		
HT	3693.96	24.36	3718.32		60.13	17.48	
EHT	1395.86	227.42	1623.28	89.27	38.20		
KMRL	11.37	0	11.37		6.41		
Bulk licensees	506.91	1.59	508.5				
Total	23499.6	253.37	23752.96	89.27	263.84	17.48	24123.55
RGCCPP aux. consumption	8.22		8.22				8.22
Total	23507.8	253.37	23761.18	89.27	263.84	17.48	24131.77

4.2.6 The actual energy sale inside the State by KSEBL was 1491.86 MU less than approval. Considering the impact of open access and consumption adjusted against captive injection, the actual quantum was 1041.88 MU less than the approved quantum (4.17%). Total consumption of the State including energy from captive generation was 24131.77 MU which is about 3.44% less as compared to approved quantum.

4.2.7 The reason for reduction in energy sales as compared to approved quantum was mainly due to the reduction in energy demand owing to the restrictions due to Covid Pandemic in the first half of the financial year especially in commercial and industrial category. Moreover, 2021-22 was blessed with distributed rain throughout the year due to which agriculture consumption was decreased by 7 % compared to previous year.

4.2.8 The energy sales pattern for 2021-22 is given in table below:

Table-D7: Energy Sales pattern for 2021-22				
No	Category	Energy sales		
		MU	%	
1	LT Domestic	12679.39	53.96	
2	LT Industrial	1165.21	4.96	
3	LT Agriculture	374.09	1.59	
4	LT Commercial	3309.96	14.09	
5	LT Public Lighting	362.83	1.54	
6	HT &EHT Total	4771.54	20.30	
7	EHT Railway Traction	318.29	1.35	
8	KMRL	11.37	0.05	
9	Bulk Supply	506.91	2.16	
10	Total sales to consumers (within state)	23499.59	100	
11	External sale	2094.41		
12	Total energy sale by KSEBL	25594		

4.2.9 The total energy sales inside the state in 2021-22 of 23499.59 MU registered an overall increase of 6 % over the year 2020-21 (22151.60 MU). The sale to industrial and commercial categories registered increase over previous year. The total energy sales to LT registered an increase by 2 % and HT & EHT energy sales by 22%.

4.3 T & D Loss:

- 4.3.1 Hon'ble Commission, vide order dated 08.07.2019, had approved the T&D loss target for FY 2021-22 as 11.62%. The targets approved for transmission loss and total AT & C loss was 3.75 % and 9.15 % respectively with a collection efficiency of 99 %.
- 4.3.2 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 2021-22 was 10.19%. The actual transmission loss and distribution loss for the year 2021-22 was 2.77 % and 7.62 % respectively. The AT&C loss for the year FY 2021-22 as per CEA methodology was 8.26%. KSEBL achieved collection efficiency of 99.31% during 2021-22.
- 4.3.3 Hon'ble Commission may kindly note that KSEBL was able to reduce loss by 1.43% from the level approved (11.62%) for the year, as detailed below:

Table D8: T&D loss for the year 2021-22 (MU)		
SI No	Particulars	2021-22
A	Energy Input	
i	Energy generation by KSEBL excl auxiliary consumption	9763.05
ii	Power Purchase /energy injected by captive consumers/solar prosumers at Kerala periphery	18887.67
iii	Sub Total (MU) (A+B)	28650.72
iv	Energy injected to the grid by private IPPs for sale outside the State through OA	49.280491
v	Energy wheeled by embedded open access consumers from outside the State at KSEB end	268.69
vi	Total energy input at Kerala periphery	28968.69
vii	Energy sales by KSEBL outside the State	2094.41
viii	Energy transfer outside the State by KSEBL through banking arrangement	106.28
ix	Energy sale by private IPPs for sale outside the State through open access	44.04
x	Total energy sale/transfer through banking outside the State	2244.74
xi	Net Energy Input at Kerala periphery (MU)(vi-x)	26723.95
xii	Substation auxiliary consumption (MU)	20.77
A.xiii	Net Energy Input excluding auxiliary consumption (MU) (xi-xii)	26703.19
B	Energy sales/usage	
i	Energy sales by KSEBL	23499.59
ii	Energy supplied by KSEBL for meeting the banked energy injected by captive prosumers/solar prosumers including solar prosumers under saura scheme	222.23
iii	Energy consumed by embedded open access consumers at consumer end by wheeling from outside the State	253.37
iv	Energy availed by RGCCPP to meet the auxiliary consumption	8.22
B.v	Energy at consumer end availed from grid(MU)	23983.42
C	T&D loss (MU) (A.xiii-B.v)	2719.77
D	T& D loss for 2020-21 in %(C*100/A.xiii)	10.19
E	T& D loss target approved for 2021-22 in %	11.62
F	Achievement in loss reduction in excess of target approved (E-D in %)	1.43

4.4 Distribution loss:

4.4.1 As already submitted, the actual transmission and distribution loss during the year 2021-22 was 10.19%. It may kindly be noted that the total transmission loss up to 66 KV level was 740.76 MU. The voltage wise transmission loss is depicted in chapter 3 of the petition. Based on the above the distribution loss for 2021-22 is assessed as follows:

Table – D9: Distribution losses			
SI No	Particulars	Quantum	Unit
(i)	Total Generation and Power Purchase at Kerala periphery (item A.xiii of tableD7)	26,703.19	MU
(ii)	Transmission loss	740.76	MU
(iii)	Total energy input into the distribution system (i)-(ii)	25,962.43	MU
(iv)	Total energy output (item B.v of Table D7)	23,983.42	MU
(v)	Distribution loss (iii)-(iv)	1,979.01	MU
(vi)	Distribution loss in % (v)*100/(iii)	7.62	%

4.4.2 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 10.19% during the year 2021-22. 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.

4.4.3 KSEBL has undertaken a series of measures during 2021-22, as detailed below, in order to achieve the above loss reduction.

Table- D10 Steps taken for T&D loss reduction	
Particulars	Achievement during 2021-22
Substations Commissioned	
400 kV	0
220 kV	1
110 kV	6
66 kV	1
33 kV	1
Total	9
Lines Commissioned (Ckt km)	
400kV	0
220kV	224.81
110 kV	228.98
66 kV	0
33 kV	68.85
Capacity addition/enhancement (MVA)	
11 KV line constructed(km)	2391
LT line constructed(km)	3983
No. of distribution transformers	2355
HT re conductoring (km)	1027
LT re conductoring (km)	25010
1 phase to 3 phase conversion(km)	1462
Meter Replacement (Nos)	487882

- 4.4.4 As KSEBL achieved loss reduction of 1.43% above the target of 11.62%, power purchase has been reduced to the extent of 420.76 MU. Considering the average power purchase cost of Rs 4.465 per unit for the year 2021-22; KSEBL was able to save Rs 187.87 Cr under cost of power purchase on account of this achievement.
- 4.4.5 As per Regulation 14 of Tariff Regulations, 2018, the aggregate gain on account of controllable factors shall be dealt with the following manner:
- One-third of the amount of such gain shall be passed on to consumers as a rebate in tariffs.
 - The remaining two third of the amount of such gain may be utilised at the discretion of licensee
- 4.4.6 KSEBL would like to claim the share of gain attributable to T&D loss reduction based on the weighted average calculation. Thus, the eligibility of KSEBL on this count amounts to Rs.125.25 Cr and that of consumers is Rs 62.62Cr as detailed below, which may kindly be approved.

Table- D11 Gain attributable to KSEBL on over achievement of T&D loss reduction target.			
Sl No	Particulars	Quantum	Unit
1	Energy sales by KSEBL	23730.04	MU
2	Energy input needed at 11.62% loss	26850.02	MU
3	Energy input needed for 2021-22	26429.26	MU
4	Energy savings	420.76	MU
5	Power Purchase cost saved due to over achievement of loss	187.87	Cr.
6	2/3 of savings	125.25	Cr.

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

Table- D12 Comparison of energy requirement (MU)(Approved vs Actual)			
Particulars	Approved	Actual	Difference
Energy sales including banked energy supplied by KSEBL & RGCCPP aux consn	24991.45	23730.04	-1261.41
Energy input for meeting the energy sales in MU(iii-vii-viii-xii of table D8)	28295.3	26429.26	-1866.04
Internal Generation in MU (excl aux)			
Hydro	7001.88	9742.85	2740.97
Thermal	0	-1.16	-1.16
Solar & wind	49.18	21.36	-27.82
Subtotal generation	7051.06	9763.049	2711.99
Power Purchase in MU at Kerala periphery			
CGS	11274.77	9505.47	-1769.3
RGCCPP	0	0	0
Renewable energy incl export of CPPs & solar prosumers	2133.62	952.37	-1181.25
LTA	8647.06	7721.3	-925.76

Short term/Medium term purchase (MU)		804.21	804.21
DSM		-95.68	-95.68
Sub Total generation & Power Purchase by KSEBL (MU)	29106.51	28650.72	-455.79
Substation auxiliary consumption (MU)	18.04	20.77	2.73
Energy availability(MU)	29088.47	28629.95	-458.52
External sale/swap return(MU)	793.17	2200.69	1407.52
Energy requirement for sale inside the State		26429.26	

4.4.8 It may kindly be seen from the table that the energy demand for FY 2021-22 was decreased by about 1866.04 MU. Hydro generation was more by 2740.9MU. There was a reduction of 1769 MU from CGS and 925.76MU from IPPs outside the State against the approval granted by the Hon'ble Commission. The peak shortage was met through purchase from exchanges, banking arrangements and through increased hydro generation, which were not originally approved in the order. The sale of power outside the State increased by 1301 MU mainly due to increased hydro generation as detailed in chapter 2.

4.5 Availability of Electricity for Supply:

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 2021, except for emergency supply interruptions caused by uncontrollable factors. The gross availability of electricity for supply for 2021-22 as per regulations was 110 % and the month-wise details of power availability is given as **Appendix D1**

Analysis of various ARR components

4.6 **Cost of Generation:** The energy generation from own generating stations was 9763.05 MU as detailed in Table D 12. ARR for SBU G for the year 2021-22 was **Rs. 571.63 Cr** and Non-tariff income earned was **Rs.31.41 Cr**. The net expenses of SBU G transferred to SBU-D amounts to **Rs. 540.22 Cr**. Deviation from approval is explained in chapter dealing with Truing up of SBU G.

4.7 Cost of intra state transmission

ARR for Transmission Business Unit for the year 2021-22 had been Rs. 1199.95 Cr and non-tariff income earned was Rs. 47.71 Cr. Therefore, Net ARR of SBU-T has been Rs. 1152.24 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.

4.8 Cost of Power Purchase

4.8.1 As already submitted, the Distribution Business Unit of the KSEBL had sold 23499.59 MU to its consumers during the year 2021-22 and supplied 8.22 MU to meet the auxiliary consumption of RGCCPP during non-operative periods. In addition to the above, KSEBL supplied 222.23 MU to captive consumers /solar prosumers against their banked energy. Thus, KSEBL supplied

23730.04 MU during 2021-22. This was met through own generation and power purchase from various sources. The total own generation (net of auxiliary consumption) was 9763.05 MU and power purchase by KSEBL was 18587.83 MU at Kerala periphery. Further captive consumers/solar prosumers injected 299.84 MU to the grid. The energy requirement for meeting the energy consumption of 23730.04 MU was 26429.26 MU. Thus, SBU G was able to supply 9763.05 MU (37%) only of the total requirement and balance power requirement was procured from CGS and IPPS within and outside the State, power exchanges etc.

- 4.8.2 Hon'ble Commission had approved a cost of Rs. 8964.44 Cr for the purchase of 22065.46 MU from various sources. The actual power purchase quantum was 18887.65 MU including injection by captive/solar prosumer at Kerala periphery at a cost of Rs 8532.14 Cr as detailed in **Form D3.1**. The true up requirement is Rs.8432.58 Cr, which is less than the sum approved by Rs 531.86 Cr. A summary of the approved and actual power purchase and trued up requirement is given in Table below.

Table – D13: Power Purchase for the year 2021-22									
No	Particulars	Approved		Actual		Truing up		Variation	
		Energy (MU)*	Cost (Rs Cr)	Energy (MU)*	Cost (Rs Cr)	Energy (MU)*	Cost (Rs Cr)	Energy (MU)*	Cost (Rs Cr)
1	Central Gen. Stations	11274.77	4244.91	9505.46	3753.3	9505.46	3753.3	-1769.31	-491.61
2	Renewable purchase	1712.24	651.78	652.53	222.48	652.53	222.48	-1059.71	-429.3
3	RGCCPP, Kayamkulam (net)	0	0	0	104.23	0	104.23	0	104.23
4	Captive/Solar prosumer injection**			299.84	3.03	299.84	3.03	299.84	3.03
4	Long Term Contracts	8647.06	3510.51	7721.3	3192.24	7721.3	3071.27	-925.76	-439.24
5	Short term / Exchanges/UI/Swap	0	0	708.52	249.37	708.52	249.37	708.52	249.37
8	Transmission charges		557.24		1023.62	0	1023.62	0	466.38
9	Other charges in connection with sale				5.27	0	5.27	0	5.27
10	Provisions for energy through banking transactions, which was not returned during FY 2021-22				-21.41			0	0
11	Total	21634.07	8964.44	18887.65	8532.14	18887.65	8432.58	-2746.42	-531.86
	Average Power Purchase cost (Rs/unit)	4.465							
* Energy at KSEB Bus									
**Energy injection during 2021-22 is shown in the table: Settled energy during FY 2021-22 in case of solar prosumers is 33.75 MU and that of captive consumers is 7.91 MU									

- 4.8.3 The source wise procurement of power is detailed in **Appendix-D5**. 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.

4.8.4 Power Purchase from Central Generating Stations:

- (i) A 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 2021-22									
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	1808.01	590.84	1329.76	491.30	1329.76	491.30	-478.25	-99.54
2	RSTPS III	453.27	147.65	385.26	147.04	385.26	147.04	-68.01	-0.61

3	Talcher Stage-II	3172.90	783.89	2887.83	743.34	2887.83	743.34	-285.07	-40.55
4	Simhadri TPS Stg II	584.87	259.53	428.97	244.70	428.97	244.70	-155.90	-14.83
5	NLC Stage-I	397.35	137.22	303.59	107.19	303.59	107.19	-93.76	-30.03
6	NLC Stage-II	567.42	197.35	447.46	157.94	447.46	157.94	-119.96	-39.41
7	NLC 1 Expansion	429.02	150.28	385.49	137.29	385.49	137.29	-43.53	-12.99
8	NLC II Expansion	282.78	140.83	267.46	137.14	267.46	137.14	-15.32	-3.69
9	MAPS	123.59	35.76	40.68	10.58	40.68	10.58	-82.91	-25.18
10	KAIGA	486.76	187.79	560.64	191.64	560.64	191.64	73.88	3.85
11	Kudankulam	1538.37	670.31	1847.60	765.49	1847.60	765.49	309.23	95.18
12	Vallur	347.05	171.03	214.54	133.98	214.54	133.98	-132.51	-37.05
13	NTPL	501.99	242.22	247.52	150.07	247.52	150.07	-254.47	-92.15
14	Kudgi	742.20	412.03	315.87	260.40	315.87	260.40	-426.33	-151.63
15	Bhavini	271.21	118.17			0.00	0.00	-271.21	-118.17
16	NNTPS			182.46	75.21	182.46	75.21	182.46	75.21
17	Eastern region				0.00	0.00	0.00	0.00	0.00
	Total	11706.78	4244.90	9845.13	3753.30	9845.13	3753.30	-	-
	*Energy at exbus							1861.66	491.60

- (ii) It may please be noted that Unit I (500 MW) of New Neyveli Thermal Power Station (NNTPS) which was not approved in Hon'ble Commission commenced its commercial operation on 28.12.2019 and Unit II (500 MW) commenced its operation on February 2021. KSEBL has an allocation of 32.4 MW. Hon'ble CERC vide order dated 29.01.2020 has determined the interim tariff of NNTPS for the period from anticipated COD of units to 31.03.2021. KSEBL scheduled 182.46 MU during 2021-22 from NNTPS for Rs 75.21 Cr.
- (iii) Hon'ble Commission may please be noted that KSEBL entered the PPA with NLC for power allocation from NNTPS on 10.12.2010. Regulation 18 of Tariff Regulation, 2014 (for the control period from 2015-16 to 2017-18) clearly stipulated that in the case of existing generating stations, approval shall not be required in the case of purchase of power based on Central allocation of generation capacity of Central Generating Stations to the State or in the case of purchase of power from generating stations/units at a tariff approved by Central Electricity Regulatory Commission though not under central allocation of generation capacity to the State or in case of purchase of power from generating stations/units at tariff approved by other State Electricity Regulatory Commissions. The same is reiterated in Tariff regulations 2018 (applicable for the control period from 2018-19 to 2021-22) also. Till the issuance of Tariff Regulations, 2014, KSEBL has been seeking approval for power allocation from Central Generating Stations (allocation of power by Ministry of Power) in the petition for approval for ARR & ERC for the financial year as and when the power started scheduling from Central Generating Stations and Honorable Commission was pleased to approve the same vide ARR & ERC orders. As per the Tariff regulations 2014 also, KSEBL has been continuing the same approach for all the PPAs with Central Generating Stations entered before November 2014.
- (iv) Similar procedure was adopted for all Central Generating Stations whose power is allocated as per Ministry of Power such as NTPC Kudgi, NLC II Expansion, NTPL, NTECL Vallur, NTPC Simhadri, NPCIL Kudankulam etc whose PPA was entered before FY 2010. But, as per Regulation 76 of Tariff Regulations 2018, KSEBL had sought approval for all power procurements through long term contracts, medium term contracts and short-term contracts entered into with IPPs and private generators, entered after FY2014.

- (v) As NNTPS did not commence its operation at the time of filing of MYT petition and it was not certain about the date of commencement of scheduled operation, KSEBL did not submit the energy schedule of NNTPS in the MYT petition dated 31.10.2018. The date of commercial operation of unit I of NNTPS was declared on 28.12.2019 and KSEBL considered the energy schedule of the Station in Mid Term review petition filed by KSEBL on 24.03.2020. Considering the fact that KSEBL entered PPA with M/s NNTPP before the issuance of Regulations KSEBL humbly requests before the Hon'ble Commission to kindly consider the power procurement of NNTPS and allow the power purchase cost of M/s NNTPP.
- (vi) KSEBL filed petitions for approval of PPA of Central generating stations such as Kudgi, NNTPP on 11.11.2022 in compliance of Tariff regulation, 2021. Hence KSEBL humbly requests the Hon'ble Commission to approve the power purchase cost of these stations.
- (vii) Table D14 shows that there was an overall reduction in CGS to the extent of 1861.66 MU from the approved quantum during the year 2021-22. The actual power purchase cost from CGS had been less by Rs 491.60 Cr from the amount approved by the Hon Commission as detailed in table above.
- (viii) Hon'ble Commission may kindly note that KSEBL has been scheduling energy based on merit order despatch basis. The reduction in availability is due to the energy surrender during low demand periods. The details of energy availability as well as the details of energy surrender are detailed in table below:

Table D15: Comparison of energy availability Approved Vs Actual schedule during 2021-22 (MU)					
CGS	Approved	Actual Schedule	Surrender	Total	Deviation
RSTPS I & II	1808.01	1329.76	386.87	1716.63	-91.38
RSTPS III	453.27	385.26	111.33	496.59	43.32
Talcher Stage-II	3172.9	2887.83	224.77	3112.60	-60.30
Simhadri TPS Stg II	584.87	428.97	204.07	633.04	48.17
NLC Stage-I	397.35	303.59	120.63	424.22	26.87
NLC Stage-II	567.42	447.46	96.63	544.09	-23.33
NLC 1 Expansion	429.02	385.49	118.91	504.40	75.38
NLC II Expansion	282.78	267.46	31.63	299.09	16.31
MAPS	123.59	40.68		40.68	-82.91
KAIGA	486.76	560.64		560.64	73.88
Kudankulam	1538.37	1847.60		1847.60	309.23
Vallur	347.05	214.54	144.28	358.82	11.77
NTPL	501.99	247.52	143.47	390.99	-111.00
Kudgi	742.2	315.87	490.02	805.89	63.69
Bhavini	271.21	0.00		0.00	-271.21
NNTPS	0	182.46	12.09	194.55	194.55
Total	11706.79	9845.13	2084.70	11929.83	223.04

- (ix) From the above table it can be seen that the actual availability from Central Generating stations is higher as compared to the approved figures. The resurgence of Covid pandemic results in the reduction in demand during April and May, and this reduction was managed by external sales and merit order surrender. The additional inflow received coupled with low demand,

optimum hydro usage for avoiding spillage etc results in surrender of energy. The month-wise details of surrender and the reasons for surrender are enclosed as **Appendix D2**.

- (x) As per the notified CERC Tariff Regulations 2019-24, there has been revision in normative auxiliary consumption for various stations, which was not considered in the MYT order dated 08.07.2019. This also results in variation of availability. Further Bhavini nuclear power plant which was expected to be commissioned during the control period was not commenced its operation during the control period.
- (xi) The variations in cost from that of the approved cost is due to the reasons mentioned below.
- a) 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 CGS 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. Hon'ble Commission vide MYT order dated 08.07.2019 approved fixed charges for the financial year 2020-21 by deducting 2 % annually on the fixed charges for FY 2018-19 in anticipation of reduction in return on equity in the subsequent CERC Tariff regulations to be notified. The CERC notified Tariff Regulations 2019 on 07.03.2019, with effective date as 01.04.2019. In the notified Tariff Regulations, there was no reduction in return on equity. Further the tariff orders based on the CERC Regulations 2019-2024 is yet to be issued for all stations except RSTPS- Stage III and Simhadri, and the fixed charges are being continued at the same tariff as before. This results in increase in fixed charges when compared to the approved in tariff order.
 - b) In the order dated 08.07.2019, the variable charges of various stations for the control period including 2020-21 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 2018-19. As per the notified CERC Tariff Regulations 2019-24, there has been revision in normative station heat rate and auxiliary consumption for various stations. Accordingly, energy charges increased considerably compared to the estimation. The impact of CERC Tariff regulations was not captured in the tariff of 2019-20 approved in the MYT order. In addition to the above, as mentioned above the variation of energy charges depends on the price notified for each mine which are different from mine to mine, grade of coal, blending ratio of imported coal and domestic coal, receipt of coal from different sources, distance from source (Coal mines), mode of transport etc. The variable charges depend on the cost of fuel and the transportation cost. The transportation cost by rail depends on the latest freight charges of railways. In the case of coal-based stations the linkage of fuel is mainly from Coal India Ltd (CIL) and Singareni Collieries Ltd (SCCL). Due to shortage from linkage sources, the generating stations has to augment coal from other domestic sources and imported coal as well. Coal from Eastern Coal Fields (ECL) and SECL is expensive as compared to coal from

Mahanadi coal fields (MCL) under Coal India Ltd due to the variations in grade of coal and other reasons. Price of coal from Singareni Collieries (SCCL) is based on the price notifications of Singareni Collieries from time to time whereas price of Coal India Ltd (CIL) is based on the notification dated 08.01.2018. There are frequent revisions in SCCL price notification compared to CIL.

- c) The market prices as well as the fuel cost was high on account of the severe coal shortage occurs after August 2021. This also result in increase in variable cost during 2021-22.
- d) Thus, the actual per unit variable cost of power purchase from various sources will vary from the approved level and this matter is well considered by the KSERC Tariff Regulations, by issuing regulations for claiming fuel surcharge. KSEBL filed quarterly fuel surcharge petitions during 2021-22 along with the reasons for variations in monthly fuel surcharge.
- e) 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 2020-21 vide order dated 08.07.2019.
- f) All the above factors contribute to variation in the per unit power purchase cost of FY 2021-22 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 true up petition. Further KSEBL humbly requests before the Hon'ble Commission to kindly allow the revisions in charges on the issuance of Tariff orders for central generating stations as and when it materialises.

4.8.5 Power Purchase from wind and small IPPs within the State:

- i. KSEBL had purchased 374.47 MU for Rs.117.28 Cr against the approved quantum of 280.7 MU for Rs 103.78 Cr. The details of approval are furnished in **Appendix D3** of this petition. The purchase of power from Independent Power Producers /CPP injection/solar prosumer injection is given in table below.

Table-D16: Power Purchase from Wind and other small IPPs								
Station	KSERC approval		Audited Accounts		TU requirement		Difference	
	(MU)	(Rs Cr)	(MU)	(Rs Cr)	(MU)*	(Rs Cr)	(MU)	(Rs Cr)
Wind- Ramakkalmedu	27.87	8.75	23.79	19.834	23.79	19.83	-46.36	-2.19
Wind-Koundikkal	12.56	3.94	10.07		10.07			
Wind- Agali	29.72	9.33	28.95		28.95			
Wind Ahalya	20.98	10.97	17.42	9.11	17.42	9.11	-3.56	-1.86
INOX	30.84	12.61	32.97	13.48	32.97	13.48	2.13	0.87
Kosamattom	0	0	1.24	0.49	1.24	0.49	1.24	0.49
Wind Sub total	121.97	45.61	114.43	42.91	114.43	42.91	-7.54	-2.70
Ullunkal(EDCL)	17.79	4.34	25.36	6.19	25.36	6.19	7.57	1.85
Iruttukanam Stage-I & II(Viyyat)	24.69	6.673	26.37	7.25	26.37	7.25	1.68	0.58
Karikkayam HEP(AHPL)	37.56	15.624	58.76	24.45	58.76	24.45	21.20	8.82
Meenvalloam(PSHCL)	8.44	4.12	8.71	4.25	8.71	4.25	0.27	0.13

Kallar of Idukki District Panchayat	0.08	0.04	0.00	-	-	-	-0.08	-0.04
Mankulam of Grama Panchayat	0.09	0.04	0.00	-	-	-	-0.09	-0.04
Minar Renewable energy project Ltd	0	0	25.27	8.82	25.27	8.82	25.27	8.82
Deviar micro hydro project			0.13	0.05	0.13	0.05	0.13	0.05
Anakkampoil			24.53	9.81	24.53	9.81	24.53	9.81
Arippara			6.40		6.40	-	6.40	0.00
SHEP subtotal	88.65	30.84	175.52	60.81	175.52	60.81	86.87	29.98
Solar					-	-	0.00	0.00
Solar IREDA	70.08	27.33	75.90	29.07	75.90	29.07	5.82	1.74
Solar IPP ANERT			2.33	0.63	2.33	0.63	2.33	0.63
THDCIL			84.65	32.69	84.65	32.69	84.65	32.69
CIAL Ettukudukka			1.07		1.07		1.07	
Solar IPPs	70.08	27.33	163.95	62.38	163.95	62.38	93.87	35.05
Total IPPs subtotal	280.70	103.78	453.90	166.11	453.90	166.11	173.20	62.33
Grid connected average pooled power purchase cost-solar prosumers against settled energy as on 30.09.2021/Solar incentive given to Chalayur colony			33.75	3.03	33.75	3.03	33.75	3.03
Total IPPs/CPPs inside the State	280.70	103.78	753.74	169.14	753.74	169.14	473.04	65.36

4.8.5.i Wind IPPs

Hon'ble Commission approved 121.97 MU from various wind IPPs for a total cost of 45.61 Cr against which, KSEBL purchased 114.43 MU for a total cost of Rs 42.91 Cr as shown in table above.

Hon'ble Commission has not approved power schedule from M/s Kosamattom Finance Ltd, which was connected to grid on 20.03.2018 and injected 1.61 MU during FY 2019-20 at a total cost of Rs 0.495 Cr. It may please be noted that KSEBL initialled draft PPA with M/s Kosamattom Pvt Ltd on 27.10.2018 @ interim tariff of Rs 3.07 per unit and submitted the same before Hon'ble Commission for approval. Subsequently Hon'ble Commission, vide the Order dated 04/12/2019, approved the levelized tariff for the electricity generated from the 1 MW WEG installed by M/s KFL at Ramakkalmedu is approved at Rs 4.23 per unit without the benefit of accelerated depreciation and Rs 3.93 per unit, if the benefit of accelerated depreciation is to be availed of. Honorable Commission vide order dated 27.10.2020 approved the draft PPA of the generator with certain modifications @ Rs 3.93 per unit and KSEBL entered PPA with M/s Kosamattom Finance limited on for purchasing power from the 1MW Wind Mill at Ramakkalmedu at a tariff of Rs 3.93/unit availing the benefit of accelerated depreciation. The power purchase cost for FY 2021-22 was Rs 0.49 Cr.

4.8.5.ii Small Hydro IPPs

Hon'ble Commission vide order dated 08.07.2019 approved 88.65 MU from various small hydel IPPs for a power purchase cost of Rs 30.84 Cr. KSEBL has procured 92.50 MU at a cost of Rs 36.09 Cr. Honorable Commission vide order dated 14 .09.2020 approved interim tariff for Deviyar at the rate of the average cost of power purchase from sources other than from KSEB Ltd.'s own plants as applicable for each of the Financial Years. Interim tariff @ Rs 4 per unit was approved for Anakkampoyil and KSEBL purchased 24.53 MU for a power purchase cost amounting to Rs 9.83 crores. Arrippara SHEP (4.5 MW) injected 6.40 MU to the grid during FY 2021-22. As PPA is not yet approved, expenditure was not accounted during FY 2021-22.

4.8.5.iii. Solar IPPs

Hon'ble Commission approved 70.08 MU from Kasargod solar park (IREDA) for a total power purchase cost of Rs 27.33 Cr. KSEBL has purchased 73.05 MU from IREDA at a cost of Rs 27.98 Cr. In addition, 2.86 MU was procured from solar Project Kuzhalmannam of ANERT. The draft PPA with M/s Anert was signed on 04.12.2019 and submitted before Hon'ble Commission for approval. As per the order of Hon'ble Commission dated 28.08.2021 and 08.10.2021 KSEBL has initialled modified PPA with M/s ANERT and submitted the same before Hon'ble Commission for approval on 30.11.2021 @ Rs 2.69 per unit as ceiling rate. KSEBL remitted Rs 0.63 Cr towards the power purchase cost during FY 2021-22.

Further 50 MW solar project by THDCIL Paivalika was commissioned on 31.12.2021 and KSEBL started scheduling energy from January 2021 onwards. KSEBL procured 17.24 MU during FY 2020-21 and 84.65 MU during FY 2021-22. The bills for the FY 2020-21 were settled only on 2021-22 and hence a total of Rs 32.69 was provided during 2021-22.

4.8.6 Captive Power producers/Solar prosumers

- i. Captive power producers (43 MW) injected energy into the grid and availed energy through banking at their consumer premises. In addition to the above, solar prosumers with a total installed capacity of 276.81 MW as on 31.03.2022 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.
- ii. The details of energy generation export to the grid and consumption adjusted against the injection is depicted in table D4 of the petition.
- iii. The energy in the bank at the end of settlement period is considered for settlement purposes. The remaining energy in bank at the end of settlement period for captive consumers during FY 2021-22 was 7.9 MU. Hon'ble Commission vide order dated 16.02.2022 has approved the APPC rate of FY 2021-22 was Rs 3.22 per unit. The corresponding settlement amount was adjusted against the bills during FY 2022-23 as per the agreement. The energy settled at the end of settlement period for solar prosumers was 33.75 MU and the total settlement amount at APPC rate is Rs 10.87 Cr. Out of this Rs 2.93 crores was accounted during FY 2021-22. An incentive of Rs 0.11 crores is paid towards Chalayur tribal colony against the solar generation as incentive during FY 2021-22. Table D17 shows the details of settlement amount against solar injection/captive injection.

Table D 17 Total settlement amount paid during FY 2021-22 against captive /solar injection		
Source	Energy (MU)	Amount (Rs cr)
Solar Chalayur colony*	0.075792	0.11
Grid connected -solar(settlement)	33.75	2.93
captive consumer settlement	7.91	Adjusted against the bills in April and May 2022.
Total	41.736	3.03

*Energy included in solar generation of KSEBL

4.8.7 Thermal IPPs- Power purchase from RGCCPP, Kayamkulam:

- i. Hon'ble Commission, vide order dated 08.07.2019, did not approve any schedule from RGCCPP for the year 2020-21 and did not approve the AFC of RGCCPP in the ARR of KSEBL from 2019-20 onwards and had directed KSEBL to negotiate for bringing down the AFC. As per the direction of Hon'ble Commission, KSEBL and NTPC Ltd. held several rounds of discussions and in the meeting held between NTPC and KSEBL on 12-11-2020, wherein both NTPC and KSEBL agreed on Rs. 100 crores per annum as annual fixed charges of RGCCPP, Kayamkulam for the period starting from 01.04.2019 to the end of station life as per PPA i.e up to 28.02.2025. The matter was brought to the kind attention of Hon'ble Commission vide Petition for approval of the settlement reached in compliance with the direction of the Commission contained in the Order dated 08-07-2019, between KSEB Ltd and NTPC Ltd and approved by Government of Kerala in respect of the PPA of Rajiv Gandhi Combined Cycle Power Project (RGCCPP), Kayamkulam, for the years from 2019-20 till the end of the current PPA period (i.e. till 28-2-2025) under Section 86 of the Electricity Act 2003, vide petition dated 11.01.2021 and Hon'ble Commission vide order dated 15.03.2021 was pleased to approve the fixed charges for the PPA period. KSEBL did not schedule energy from RGCCPP during FY 2021-22. The auxiliary consumption of the station supplied by KSEBL during non-operative periods was 8.22 MU. The power purchase cost as per accounts is Rs 104.23 crores towards RGCCPP during FY 2021-22 towards various charges as given in table below.

Table :- D 19 Charges towards RGCCPP for the year 2021-22					
Particulars	Capacity Charges	Deviation charges	IT	Others	Total
	Rs Crores				
RGCCPP	100.00	-0.43	4.79	-0.13	104.23

- ii. It may please be noted that Rs 4.79 crores shown above was the deferred liability with respect to previous tariff period upto 31st March, 2009. As per Regulation 67 of CERC Tariff Regulations, deferred tax liabilities for the period upto 31st March, 2009 whenever they materialise shall be recoverable directly by the generating companies or transmission licensees from the then beneficiaries or long term customers. M/s RGCCPP raised invoices vide invoice no 602139703 dated 08.06.2021 amounting to Rs 2.35 Cr. towards the materialisation of deferred tax liability on account of difference in depreciation as per book of accounts and depreciation as per Income Tax Rules 1962, during FY 2020-21 in respect of the block of fixed assets as on 31.03.2009 of RGCCPP, Kayamkulam. Further M/s RGCCPP also raised a claim vide invoice no 602547029 dated 05.06.2022 amounting to Rs 2.44 Cr. towards the materialisation of deferred tax liability on account of difference in depreciation as per book of accounts and depreciation as per Income Tax Rules 1962, during FY 2021-22 in respect of the block of fixed assets as on 31.03.2009 of RGCCPP, Kayamkulam. Thus the total deferred tax liability prior to 2009 amounting to Rs 4.79 crores are provided in the accounts for FY 2021-22. As per Regulation 67, KSEBL is liable to pay the deferred tax liability for the period prior to FY 2009 materialised during the financial year. Hence Hon'ble Commission may kindly approve Rs 104.23 Cr as per the accounts of KSEBL for the year 2021-22. Total power purchase from IPPs inside the State is summarized as below:

Table-D20: Power Purchase from IPPs inside the State								
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	0.00	0.00	0.00	104.23	0.00	104.23	0.00	104.23
Wind & SHEP	210.62	76.45	289.95	103.73	289.95	103.73	79.33	27.28
Solar	70.08	27.33	163.95	62.38	163.95	62.38	93.87	35.05
Grid connected solar prosumers(settlement)	0.00	0.00	33.75	2.93	33.75	2.93	33.75	2.93
Chalayur tribal colony	0.00	0.00	7.90	0.11	7.90	0.00	7.90	0.00
Subtotal	280.70	103.78	495.55	273.38	495.55	273.38	214.85	169.60

4.8.8 Power Purchase from IPPs outside state through approved firm contracts: Since the power demand of the State cannot be met fully from resources within the state, KSEBL had, with the approval of Hon'ble Commission, entered into agreements with various generators outside the State. The details of approval are attached as **Appendix D3**. Hon'ble Commission had approved 8994.76 MU for a total amount of Rs 3518.12 Cr from various generators inclusive of power contracted through DBFOO basis against which KSEBL had purchased 7996.74 MU for a total cost of Rs 3192.24 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-D21: Power Purchase thru various LTA as per audited accounts approved for FY -22						
Source	KSERC approval		Actual		Deviation	
	Energy* (MU)	Cost (Rs Cr)	Energy* (MU)	Cost (Rs Cr)	MU	Rs Cr.
Maithon Power Ltd-I	1105.73	420.43	1044.79	399.12	-60.94	-21.31
Maithon Power Ltd-II	1105.73	420.43	1044.77	397.78	-60.96	-22.65
DVC Mejia	705.50	276.32	560.59	262.01	-144.91	-14.31
DVC RTPS	348.10	137.89	238.85	124.74	-109.25	-13.15
Jindal Power Ltd-Bid I	1,497.96	548.13	1453.52	498.33	-44.44	-49.80
Jhabua Power Ltd-PSA I	861.33	332.31	732.66	297.21	-128.67	-35.10
Jindal Power Ltd-Bid II	1,123.47	458.33	1090.31	441.58	-33.16	-16.75
Jhabua Power Ltd-Bid II	748.98	305.56	637.09	297.13	-111.89	-8.43
JITPL	748.98	305.56	689.26	290.18	-59.72	-15.38
BALCO	748.98	305.56	504.91	184.16	-244.07	-121.40
Subtotal	8994.76	3510.52	7996.74	3192.24	-998.02	-439.24

* Energy at ex bus

4.8.8.i Power purchase from IPPs through long term contracts for which tariff is determined by CERC

Hon'ble Commission approved 3265.06 MU for a total cost of Rs 1241.77 Cr for the year 2019-20 from the projects through long term contracts whose tariff is determined by CERC. KSEBL purchased 2955.09 MU for a total amount of Rs 1262.93 Cr against this. The details are given below.

Table-D22: Power Purchase thru various LTA as per audited accounts approved for FY -22				
Source	KSERC approval		Actual	
	Energy* (MU)	Cost (Rs Cr)	Energy* (MU)	Cost (Rs Cr)
Maithon Power Ltd-I	1105.73	420.43	1044.79	399.12
Maithon Power Ltd-II	1105.73	420.43	1044.77	397.78

DVC Mejia	705.50	276.32	560.59	262.01
DVC RTPS	348.10	137.89	238.85	124.74
Total	3265.06	1255.07	2889	1183.65

The reasons for variation for power purchase cost in the case of power contracted through long Term contracts is given below.

a. Maithon Power Ltd: -

The variation in energy charges was due to the reasons mentioned in paragraph 4.6. Vide CERC Tariff regulations 2019, the auxiliary consumption increased from 5.75% to 6.25 %. In addition to the above, ash disposal charges amounting to Rs 8.197 Crores each towards Maithon-I and Maithon II was admitted during 2021-22.

There was an energy surrender of 92.54 MU and 92.55 MU from Maithon I & II during FY 2021-22 during low demand periods, The reasons for monthly surrender is enclosed as **Appendix D2**.

b. DVC Mejia and DVC RTPS

Revised gross station heat rate due to revised Tariff guidelines and usage of high cost coke grade coal resulted in increase in cost in these stations. The gross station heat rate increases from 2371.61 to 2374.1 and auxiliary consumption increases from 5.25% to 5.75% for DVC Mejia and gross station heat rate increases from 2339.78 to 2352.87 and auxiliary consumption increases from 5.25% to 5.75% for DVC RTPS which contributes to increase in energy charges. Further the variation in coal prices and transportation charges also contributes to variation in energy charges.

4.8.8.ii Power contracted through DBFOO

- a. Hon'ble Commission approved power procurement of 5729.70 MU for a total cost of Rs 2269.94 Cr from projects under DBFOO basis for the financial year 20201-22. KSEBL procured 5107.75 MU for a total power purchase cost as per audited accounts of Rs 2008.58 Cr.

Table-D23: Power Purchase thru DBFOO contracts as per audited accounts approved for FY -22				
Source	KSERC approval		Actual	
	Energy* (MU)	Cost (Rs Cr)	Energy* (MU)	Cost (Rs Cr)
Jindal Power Ltd-Bid I	1,497.96	548.13	1,453.52	498.33
Jhabua Power Ltd-PSA I	861.33	332.31	732.66	297.21
Jindal Power Ltd-Bid II	1,123.47	458.33	1,090.31	441.58
Jhabua Power Ltd-Bid II	748.98	305.56	637.09	297.13
JITPL	748.98	305.56	689.26	290.18
BALCO	748.98	305.56	504.91	184.16
Total	5,729.70	2,255.45	5,107.75	2,008.58

- b. In the case of approved PPAs as per MYT order dated 08.07.2019, Hon'ble Commission approved fixed charges for the financial year 2021-22 after an annual deduction of 2% on the fixed charges for FY 2018-19. But as per PSA the base fixed charges for a particular year is

obtained by applying a depreciation of 2 % on the base fixed charges of previous year. The base fixed charges so arrived is escalated with 30% of variation in whole price index of January of corresponding year from that of January 2014.

- c. In the MYT order, the variable charges of FY 2019-20 are arrived at by applying an escalation of 2 % on the variable charges for first half FY 2018-19 and the variable charges for FY 2021-22 is arrived arrive after applying a yearly escalation of 2% thereafter. As per PSA, the variable charges are dependent on the landed cost of fuel, station heat rate, and gross calorific value of fuel. The variation in variable charges is due to the variation in landed cost of fuel.
- d. The details of quantum and cost approved by Hon'ble Commission for Commission approved PPAs vide Table 5.49 of the MYT order dated 08.07.2019 is given in table below.

Table D 24: Power purchase Cost approved for Commission approved PPA (Rs Cr)					
Trader/Source	Energy at Kerala periphery	Fixed charges	Variable charges	Other charges	Total
	A	B	C	D	E
	MU	Rs Cr.	Rs Cr.	Rs Cr.	Rs Cr
Jindal Power Ltd-Bid I	1431.81	369.39	200.31	-21.57	548.13
Jhabua Power Ltd-Bid I	822.57	170.24	170.93	-8.86	332.31
Balco	718.32	223.46	92.99	-10.90	305.56
Total	2972.7	763.09	464.23	-41.33	1186

- e. The actual power purchase cost for these stations for FY 2021-22 are as follows

Table D 25: Power purchase Cost as per accounts for FY 2021-22 for Commission approved PPA as per order dated 08.07.2019 (Rs Cr)						
Trader/Source	Energy at Kerala periphery	Fixed charges	Variable charges	Incentive	Other charges	Total PP cost
	A	B	C	D	E	F
	MU	Rs Cr.	Rs Cr.	Rs Cr.	Rs Cr.	Rs Cr
Jindal Power Ltd-Bid I	1403.46	376.09	192.76		-70.52	498.33
Jhabua Power Ltd-Bid I	707.36	182.59	151.02	0.00	-36.41	297.21
Balco	487.37	169.67	59.18	-13.46	-31.24	184.16
Total	2598.19	728.35	402.97	-13.46	-138.17	979.70

- f. The energy availability from the above station is given in table below

Table D 26:-Energy schedule details (at exbus)from approved contracts						
	Source	Approved	Actual	Energy surrender	Total availability	Deviation
		MU	MU	MU	MU	MU
	Long Term contracts					
1	Jindal power Ltd-Bid I	1,497.96	1,453.52	103.14	1556.66	58.70
2	Jhabua Power Ltd-Bid I	861.33	732.66	67.20	799.86	-61.47
3	Balco	748.98	504.91	44.20	549.11	-199.87
	LTA subtotal	3108.27	2691.09	214.54	2905.63	-202.64

- g. It can be seen from the above table that there is a reduction in availability of 202.64 MU from these stations for the year 2021-22. The availability from M/s BALCO was less than 10 MU during September and October due to the unprecedented heavy rain fall during this monsoon in Korba region. The rain fall crippled the plant operation due to failure of multiple equipment & machinery i.e. motor failure, instrument failure etc. in coal handling plant. Apart from this water logging at various locations inside the plant and wet coal issues are also reported. Further the availability was nil during February 2022 stating problem in CHP of the Coal conveying system of the Thermal Power Plant.
- h. The overall availability from M/s BALCO was 60 % only and Rs 13.45 crores damages was levied on M/s BALCO during FY 2021-22.
- i. In the case of power contracted from generators under DBFOO for which rate is not approved by Hon'ble Commission, the following points may kindly be noted.
- j. Hon'ble Commission approved scheduling of power from M/s Jindal Power Limited (150 MW), M/s Jhabua Power Limited (100 MW) and M/s Jindal India Thermal Power Ltd (100 MW), under bid II, for the limited purpose of estimating the ARR&ERC for the control period at rate equivalent to that of power from Balco, as the final approvals from GoI and State Government was still awaited.
- k. While approving the fuel surcharge petition for the year 2019-20, Hon'ble Commission has not admitted the fuel price variation in respect of three IPP stations viz Jindal India Thermal Power Ltd (100 MW), Jhabua Power Ltd (100 MW) and Jindal Power Ltd (150 MW), which were contracted by KSEBL based on tenders invited under DBFOO basis in 2014. Hon'ble Commission has considered drawal of power from these stations at a cost equivalent to that being paid to M/s. BALCO, for the provisional estimation of cost of power while approving the ARR & ERC for the control period, 2018-2022.
- l. This Hon'ble Commission has further ordered that approval of power purchase from the stations mentioned above shall be given only after getting approval from Government of India as well as from Government of Kerala on the entire power purchase under DBFOO. It was also mentioned in the order that actual tariff paid by KSEBL for procuring power from these three stations were much higher and reiterated that, during truing up of accounts for the respective financial years, the excess amount incurred for procuring power from these three generators shall not be considered, unless KSEBL gets the approval for power purchase from Government of India for deviations from the guidelines and on getting the approval of Government of Kerala on the entire power purchase under DBFOO.
- m. It is most respectfully submitted that KSEBL, vide Review Petition dated 30.03.2020 and 04.06.2020 sought review of the above-mentioned orders and prayed for permission for passing on of additional fuel cost incurred against PSAs with Jindal India Thermal Power Ltd, Jindal Power Ltd and Jhabua Power Ltd under Bid-2 of DBFOO and to issue appropriate directions on the drawal of power contracted against these PSAs if the Honorable Commission is not inclined to pass over the liabilities of 350MW PSAs executed on DBOO basis under Bid 2. But Hon'ble Commission rejected the prayers of KSEBL on both the petitions as per order dated 14.08.2020 and directed KSEBL to file separate petition.
- n. With due respect to the orders of this Hon'ble Commission, from August 2020 onwards, KSEBL has limited payment towards power purchase from the above mentioned three stations limiting

to the rate of M/s BALCO at Kerala periphery. KSEBL has filed separate petition before this Hon'ble Commission seeking final and conclusive order in the matter of the drawal of power contracted against the PSAs of the three generating stations on 09.11.2020 vide petition dated OP No 5/2021.

- o. In the meanwhile, being aggrieved with the direction of Honorable Commission for limiting / restricting the amount of fuel surcharge payable by KSEBL to the generating companies, Jindal India Thermal Power Ltd. (JITPL), M/s JITPL filed an Appeal before this Hon'ble Tribunal, numbered as DFR No. 369 of 2020, challenging the orders dated 14.02.2020, 27.04.2020 and 14.08.2020 passed by Ld. KSERC. Hon'ble Tribunal, by its order dated 20.11.2020 passed in the Appeal filed by JITPL, grant stay of the orders dated 14.02.2020 and 27.04.2020 passed by Honorable Commission on the subject of fuel surcharge and restore the status quo ante of the dispensation prevailing immediately anterior thereto. Further, by the consent of all parties, Hon'ble Tribunal direct that the Petition filed by KSEBL before the Ld. KSERC, shall be heard and decided expeditiously by the Honorable Commission.
- p. Honorable Commission filed an Appeal before the Hon'ble Supreme Court (Civil Appeal No. 41/2021) against the interim order dated 20.11.2020 of Hon'ble Tribunal. In the said appeal, the Hon'ble Supreme Court vide its order dated 27.01.2021 stayed the interim order dated 20.11.2020 of Hon'ble Tribunal. The matter is now pending before the Hon'ble Supreme Court .
- q. Complying with the direction of Hon'ble Commission, KSEBL has been effecting the payment of the unapproved contracts at the monthly power purchase rate of M/s BALCO at Kerala periphery during the year 2021-22. It may please be seen that the actual availability of M/s BALCO was only 60% and as a result Rs 13.45 crores damages was levied on M/s BALCO during FY 2021-22.
- r. During September to November and February to March of FY 2021-22, the availability was much lower as compared to the normative availability. The availability was nil during September, October and February. Hence the rate per unit of during these months are abnormal owing to the damages imposed due to low availability. Hence KSEBL effected the payment@ L1 (M/s BALCO) rate of Bid II as on bid date Rs 4.29 per unit for the abovementioned stations during the months of September, October, November, February and March of FY 2021-22. KSEBL effected the payment at the monthly power purchase rate of M/s BALCO at Kerala periphery for the remaining months of FY 2021-22. .

Table D 27 Power purchase cost of M/s BALCO								
Trader/ Source	Energy at Kerala periphery	Fixed charges	Variable charges	Incentive /Damage	Other charges	Total PP cost	Total PP cost excluding damages	Rate of PP cost excluding damages
	MU	Rs Cr						Rs/kWh
BALCO	487.37	169.67	59.18	-13.46	-31.24	184.16	197.62	4.05

- s. The amount claimed by M/s JITPL (100 MW), M/s Jindal Power Ltd (100 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 D28 Power purchase cost of generating stations for which PPA not approved			
Trader/Source	Energy at Kerala periphery (MU)	Power Purchase Cost for FY 2021-22 (Rs Cr)	
		Claimed	Amount remitted
Jindal Power Ltd-Bid II	1090.31	441.58	404.78
Jhabua Power Ltd-Bid II	637.09	297.13	239.68
JITPL	689.26	290.18	263.47
Total	2416.66	1028.89	907.93

- t. KSEBL humbly requests before the Hon'ble Commission to approve the actual expenses claimed in this petition given in the table above. Further KSEBL humbly requests before the Hon'ble Commission to pass on the amount payable as per final orders in this matter, as and when the same materializes.
- u. The true up claim for stations under DBFOO contracts is given below.

Table D 29 True up claim of Power purchase cost		
Source	As per accounts	True up claim
	Rs Cr	
Jindal Power Ltd-Bid I	498.33	498.33
Jhabua Power Ltd-PSA I	297.21	297.21
Jindal Power Ltd-Bid II	441.58	404.78
Jhabua Power Ltd-Bid II	297.13	239.68
JITPL	290.18	263.47
BALCO	184.16	184.16
Total	2008.59	1887.62

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

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

- i. 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. Honorable Commission vide order dated 09.12.2020 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. Honorable 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. KSEBL procured 198.63 MU during the year 2021-22 for a power purchase cost of 56.37 Cr.

4.8.8.iv Power purchase considered under short term/medium term contracts

- i. In the MYT petition, KSEB Ltd has proposed to procure 219 MU of power from short term market to meet the peak deficit anticipated in the summer months. Hon'ble Commission vide order dated 08.07.2019 observed as follows:

"In the control period there will be overall energy surplus though there may be deficit in some months due to increase in peak demand or changes in climatic conditions or reasons such as general elections as mentioned by KSEB Ltd. Since such situations are difficult to predict and KSEB Ltd has proposed the same rate for the purchase and sale, the Commission for the purpose of approving the ARR & ERC has considered the net surplus energy sale only in all the years of the control period."

- ii. In order to meet the deficit during summer months, KSEB Ltd entered into short term power procurement arrangement with GMR Energy Trading Ltd (GMRETL), Adani Enterprises Ltd (AEL) and PTC India Ltd (PTC), which was approved by Honorable Commission vide order dated 23.03.2021. The details are furnished in table below.

Table D 30 . Energy purchased thru short term contracts for FY 21-22(MU)				
Period	Duration (Hrs)	Quantum (MW)	Rate at Kerala periphery	Source of Power
Adani Enterprises Ltd				
01.04.2021 to 30.04.2021	RTC	50	Rs 3.04/unit	Raipur Energen Ltd,Chattisgarh
01.05.2021 to 31.05.2021	RTC	50	Rs 3.04/unit	
GMRETL(GMR Energy Trading Ltd)				
01.04.2021 to 30.04.2021	RTC	50	Rs 3.04/unit	DB Power Ltd.Chattisgarh
01.05.2021 to 31.05.2021	RTC	50	Rs 3.04/unit	
01.04.2021 to 15.04.2021	14.00 to 24.00 hrs	50	Rs 3.40/unit	
16.04.2021 to 30.04.2021	14.00 to 24.00 hrs	50	Rs 3.42 per unit	
01.05.2021 to 31.05.2021	14.00 to 24.00 hrs	50	Rs 3.47 per unit	
PTC India Ltd				
01.04.2021 to 15.04.2021	14.00 to 24.00 hrs	50	Rs 3.41 per unit	JINDAL Power Ltd Madhya Pradesh
16.04.2021 to 30.04.2021	14.00 to 24.00 hrs	50	Rs 3.43 per unit	
01.05.2021 to 31.05.2021	14.00 to 24.00 hrs	50	Rs 3.48 per unit	

- iii. Further KSEB Ltd entered PSA for procuring 270MW 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 onwards. Hon'ble Commission vide order dated 07.10.2021 has given approval for the above contract.
- iv. Details of energy purchased from short term /medium term contracts during FY 2021-22 is given in table below

Table D 31. Power purchased through short term/medium term contracts for FY 22				
Particulars	SR periphery	KSEBL periphery	PGCIL loss	PP Cost
	MU	MU	MU	Rs Cr
Purchase from JITPL through PTC	522.74	503.51	19.23	171.98
Purchase from RPREL through AEL	66.5	64.24	2.26	19.48
Purchase from JPL-2 Through PTCIL	25.57	24.7	0.87	8.77
DEEP purchase from DB power through GMRETL(RTC)	69.04	66.69	2.35	20.27

DEEP purchase from DB power through GMRETL	29.05	28.06	0.99	9.65
Sub Total	712.89	687.21	25.68	230.15

4.8.8.v Power Purchase from Exchanges: - Table 20 shows the details of energy purchased from exchanges (PXIL and IEX). Average rate of purchase is Rs 3.11 Rs per unit at Kerala periphery.

Table D 32 Energy purchased in MU through exchanges for FY 22			
Particulars	SR periphery	KSEBL periphery	PGCIL loss
Power exchanges	MU	MU	MU
IEX			
DAM	46.14	44.44	1.70
TAM	0	0	0.00
RTM	15.30	14.77	0.53
GDAM	5.22	5.03	0.19
Total Power purchase	66.66	64.24	2.42

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

Table D33 : Power purchase cost - through exchanges - for FY 22		
Source	Energy* (MU)	Cost (Rs Cr)
IEX	64.24	18.77
Other charges associated with power exchange		0.16
Sub total	64.24	18.93
* Energy at Kerala periphery		

4.8.8.vi Swap arrangement:

KSEBL entered banking arrangements with TPDDL through PTC India Ltd. (Trader), vide the tender dated 10.12.2020, for the period from 03/2021 to 09/2021 to meet the summer demand. KSEBL availed 34.81 MU during April 2021. Honorable Commission vide order dated 16.02.2021 has approved the same. Further KSEB Ltd entered banking arrangements with M/s BRPL through M/S. Arunachal Pradesh Power Corporation Pvt Ltd. with the approval of Honorable Commission (vide order dated 25.02.2022) for the period from 1-3-2022 to 30-9-2022 and availed 17.96 MU at Kerala periphery during March 2022. 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 D 34 Energy availed through banking arrangements								
Supply (to KSEBL) Period			Return to TPDDL through PTC (Period)				Return Quantum	Trading margin
Month	Duration/MW		Month	Duration/MW		MU		
	RTC	14.00 to 24.00 hr		0.00 to 5.00 hr	22.00 to 24.00 hr			
March 2021	50	100	16 to 30 June 2021	126	100	12.45	102%	
April 2021	50		July 2021	180	140	36.58		

			August 2021	177.9	140	36.2545		
			September 2021	100	100	21		
Supply to KSEBL			Return to BRPL through APPCPL					
Month	Duration/MW	Month	Duration MW					
	18:00 to 24:00		23.00 to 01.00	01.00 to 04.00				
March 2022	100	15.06.22 to 30.06.22	123.48	123.48		103%	2.75	
		01.07.2022 to 15.07.22	123.48	123.48		103%	2.75	

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

Table D 35 Power received through banking arrangement for 2021-22 (MU)					
Utility	Trader	Period	Energy received at exbus	Energy at Kerala periphery	Loss
TPDDL	PTCIL		36.00	34.81	1.19
BRPL	APPCL		18.6	17.957	0.643
Total			54.60	52.76	1.837

KSEBL returned 106.284 MU during 2021-22 as part of banking transactions. The expenditure on account of banking transactions are 0.58 crores. A provision of receivables of Rs (-) 21.48 crores is provided in the annual accounts of FY 2021-22 as a provision against the energy availed in FY 2021-22 which is to be returned during FY 2022-23. It may please be noted that the energy was settled during FY 2022-23, and hence KSEBL is not claiming the same in true up petition.

4.8.8.vii Deviation Settlement Mechanism (DSM):

- KSEB had delivered a net energy of 95.68 MU export to the grid through deviation settlement mechanism (DSM). **Table 22** shows the details of energy transacted through deviation settlement mechanism during the year 2021-22.

Table D 36 Deviation for the year 2021-22			
Month	Import in MU	Export in MU	Net Deviation in MU
Apr-21	30.98	-21.03	9.95
May-21	26.53	-28	-1.47
Jun-21	31.54	-22.1	9.44
Jul-21	22.38	-36.83	-14.46
Aug-21	17.85	-38.19	-20.34
Sep-21	21.92	-26.56	-4.64
Oct-21	14.49	-36.26	-21.76
Nov-21	12.44	-38.93	-26.49
Dec-21	17.91	-27.84	-9.93
Jan-22	20.98	-24.23	-3.25
Feb-22	19.05	-18.51	0.55
Mar-22	15.87	-29.15	-13.28
Total	251.95	-347.64	-95.68

- ii. An amount of 0.23 crores was accounted for import as power purchase cost and an amount of Rs 86.47 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.
- iii. 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. Details of approval obtained from the Hon'ble Commission are furnished in **Appendix D3**. The details of purchases through long-term, short-term contracts are given as **Appendix D4**. The summary of power Purchase from power exchanges and power transfer through deviation settlement mechanism against quantum approved towards short term contracts for FY 2021-22 is furnished below:

Table D 37: 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				687.21	230.15	3.35		
IEX/PXIL				64.24	18.93	2.95		
Deviation Settlement Mechanism				-95.68	0.23			
SWAP				52.76	0.06			
Total	0	0	0	708.53	249.37	3.52	708.53	249.37

4.8.8.viii Inter-state Transmission charges paid to PGCIL:

- i. Hon'ble Commission, vide order dated 08.07.2019, approved interstate transmission charges of Rs 557.24 Cr for 2020-21. Honorable 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%. Actual transmission charges incurred by KSEBL during 2021-22, as per audited accounts, were Rs. 1062.13 Cr. which may kindly be approved.

4.8.8.ix Energy sale outside the State: -

Hon'ble Commission approved sale of surplus power of 811.21MU for a total revenue of Rs 405.61 Cr. Honorable Commission may please note that KDSEBL received ample rainfall during FY 2021-22 and sold 2091.41 MU of power through exchanges during 2021-22 for a total revenue of 1023.93 Cr as given in table below. The details of energy sale through exchanges are given in table below:

Table D 38 Energy sale o/s State					
SI No	Source	Energy at KSEB periphery	Total revenue	Rate	Expenditure
		MU	Rs. Cr.	Rs/Unit	Rs Cr
1	IEX TAM	3.08			
2	IEX DAM	1442.44			
3	IEX RTM	525.85			
4	IEX GDAM	0.73			

5	IEX Total	1972.09			
6	PXIL TAM	100.15			
7	PXIL DAM	22.17			
8	PXIL Total	122.32			
9	Total	2094.41	1023.93	4.86	5.271

Thus, KSEBL sold 2094.41 MU for a total amount of Rs 1023.93 Cr. @ Rs 4.89 per unit against the approved quantum of 811.21 MU for Rs 405.61 Cr and the expenditure associated with sale through power exchanges amounts to Rs 5.27112 Cr. 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 3.10 per unit)

4.8.8.x Total Power Purchase Cost: -

The total power purchase cost as per annual accounts is Rs 8057.95 Cr. As stated in above paragraphs Rs 95.71 Cr towards the unadmitted claims/withheld amount towards Jhabua Power Ltd(115 MW), Jindal Power Ltd(100 MW),Jhabua Power Ltd-II(100 MW) ,Jindal India Thermal Power Ltd is not claiming in this petition. Hence Hon'ble Commission may kindly true up the total power purchase cost amounting to Rs 8432.58 Cr as detailed in **Appendix D5**, summary of which is provided in table below.

Table D 39 True up claim of Power Purchase cost for the year 2021-22	
Particulars	Amount (Rs Cr)
Power Purchase as per accounts	8,532.14
Less provision towards energy availed through banking arrangement to be returned during FY2022-23	(21.41)
Less provision for Jhabua Power Ltd 100 MW towards unadmitted claims and disallowance vide order dated 26.08.2020	36.80
Less provision for Jindal Power Ltd 100 MW towards disallowance vide order dated 26.08.2020	57.45
Less provision for JITPL100 MW towards unadmitted claims and disallowance vide order dated 26.08.2020	26.72
Power Purchase claimed in the truing up petition	8,432.58
Energy at Kerala periphery for FY 2021-22	18887.67
Rate per unit	4.465

4.9 O&M Expenses:

- 4.9.i Actual O&M expenses for SBU D for the year 2021-22 has been Rs. 3912.53 Cr (net of capitalization) as detailed in Form D3.4.
- 4.9.ii Cost Drivers: Tariff regulation, 2018 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 40 Cost drivers of O & M Expenses										
Item	FY12	FY13	FY14	FY15	FY16	FY17	FY-18	FY-19	FY-20	FY-21
Consumers (Nos)	10457637	10806890	11192890	11430895	11668031	11994816	12276321	12552206	12826185	13142910
Dist Transformers (Nos)	62329	64972	67546	71199	73460	75759	77724	79876	81470	83465
HT Lines (KM)	51328	52907	53579	57309	59476.66	61398.43	62855	64393.5	64808.748	66648
Energy Sales (MU)	15981	16838	17454	18426	19325.07	20087.55	20998	22369.59	22728.34	22413.03

4.9.iii. The parameters of FY-21 are taken for computing normative O&M expenses. The normative values of employee cost and A&G expenses is given in table below:

Table D 41: Normative O& M expenses for 2020-21		
No	Parameters	Quantity
1	No. of consumers (Rs. Lakh/1000)	5.53
2	Dist Transformers (Rs. Lakh/DTr)	0.73
3	Length of HT line (Rs. Lakh/km)	0.91
4	Energy sales (Rs/unit)	0.22
5	No. of consumers	13142910
6	No. of Dist Transformers (Nos)	83465
7	HT Line (Ckt-Km)	66648
8	Energy sales in MU	22413
9	Employee, A&G Cost (Rs Cr)	2435.68

4.9.iv. As per the provision 79 and Annexure IX of Tariff regulations 2018, R&M expenses of Distribution licensees is:

- (i) 3% of Opening GFA (excluding value of land and land under lease) of distribution business of each year of the control period.
- (ii) Repair and Maintenance expenses for assets added during the year of the control period shall be allowed after prudence check by the Commission on a pro-rata basis subject to production of details of the assets.

4.9.v. Based on the above normative R&M expense is calculated as follows:

Table D 42: Normative R&M expenses (Rs Cr.)			
Particulars	Amount (Rs Cr)		
Opening GFA as on 01.04.2021 (Rs Cr.)	12876.06		
Less land	20.44		
R& M @ 3% on opening GFA-A	385.67		
Addition of assets during the year	1647.20		
Less Decommissioning value	1.57		
Less land	1.98		
R&M at prorata basis for assets added during the year	17.33		
	Pro rata GFA addition	Pro rata % based on works	Pro rata R&M expenses
April	60.82	3.7	1.67
May	128.20	7.8	3.21
June	139.71	8.5	3.14
July	92.04	5.6	1.84
August	108.32	6.59	1.90
September	92.04	5.6	1.38
October	54.90	3.34	0.69
November	68.70	4.18	0.69
December	136.26	8.29	1.02
January	195.59	11.9	0.98
February	328.40	19.98	0.82
March	238.66	14.52	0.00
Total	1643.65		
R&M expenses for assets added during FY-22 -B			17.33
Total R&M expenses (A+B)			403.00

4.9.vi. Thus, O&M expenses sought for true up as per the norms prescribed in the Tariff Regulations, 2018 amounts to Rs.2838.68 Cr. (Rs. 2435.68 Cr+ Rs.403 Cr). A comparison of approved normative and actual O&M expenses is given in table below:

Table – D43 : Components of O&M Expenses for SBU D (Rs Cr)						
No	Particulars	Approved	As per accounts	True up claim	Variation of true up claim from approval	Remarks
1	Employee Cost & A&G Expenses	2490	3681.83	2435.68	-54.32	See Form D3.4 (a)
2	R&M Expenses	358.95	230.71	403	44.05	See Form D3.4 (c)
3	Total	2848.95	3912.54	2838.68	-10.27	See Form D 3.4

4.9.vii. Hon'ble Commission may kindly approve expenses in connection with Covid 19 (Rs.8.59 Cr) over and above norms as detailed in chapter 5. Total O&M expenses amounts to Rs. 2847.27 Cr.

4.10. Expenses towards Pay Revision

Pay revision arrears in line with the orders of the Hon'ble Commission amounts to Rs. 437.36 Cr as detailed in chapter 5 may kindly be approved over and above norms.

4.11. Depreciation:

- i. Hon'ble Commission had approved the depreciation of SBU-D for FY 21-22 at Rs 154.91 Cr. Actual Depreciation for the Distribution assets as per accounts for the year has been Rs.682.85 Cr as detailed in **Form D3.5 (2)**.
- ii. 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, 2018 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.252.98 Cr** as detailed in Chapter 5. Hon'ble Commission may kindly approve the same.

4.12. Interest and Finance charges

- i. Hon Commission had approved the interest and finance charges for SBU-D for the year 2021-22 at Rs.1322.63 Cr. However, as per the audited accounts, the actual expenses incurred under interest and finance charges were Rs.1383.73 Cr (after capitalized portion of interest). True up claim amounts to Rs. 1724.03 Cr as summarized below.

Table D44: Comparison of I&FC for 2021-22 (Rs. Cr)				
No	Particulars	Approved	Accounts	TU Sought
1	Interest on outstanding Loans	329.8	439.53	423.14
2	Interest on Security Deposit	238.74	136.2	142.18
3	Interest on GPF	182.63	152.86	152.86
4	Other Interest		8.63	8.63
5	Interest on Master Trust Bond	544.38	559.33	559.33
6	Carrying cost on revenue gap till 2020-21	27.08		437.88

7	Interest on working capital	0	105.59	0
8	Less: Interest capitalized		18.41	
9	Grand Total	1322.63	1383.73	1724.03

- ii. KSEBL has executed capital works to the tune of Rs. 1631.28 Cr. and added fixed assets of Rs. 1647.20 Cr under SBU D during the year as detailed in Chapter 5. Physical addition to fixed assets is summarized below:

Table – D45 : Details of Capital Works during 2021-22	
Particulars	Achievement
Service Connections (Nos)	361712
HT Line construction (km)	2391
LT Line construction (km)	3983
Transformer installation (Nos)	2355
Line conversion (km)	1462
HT re-conductoring (conductor km)	1027
LT re-conductoring (conductor km)	25010
Faulty meter replacement (Nos)	487882

4.12. i. Interest on normative loan

The normative loan at the beginning of the year (01.04.2021) 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 31.03.2022, 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. 423.14 Cr as interest on normative loan for the year 2021-22, which may kindly be approved.

4.12. ii. Interest on security deposit: Hon'ble Commission approved interest on SD for the year at Rs.238.74 Cr. Actual disbursement in the FY 2021-22 amounted to Rs.142.18 Cr (disbursement made against provision amounting to Rs 149.07 Cr created @ 4.65% on SD for FY 2020-21 as per provisions in Supply Code, 2014. Hon'ble Commission may kindly approve the actual disbursement in 2021-22 amounting to Rs.142.18 Cr under SBUD.

4.12. iii. Interest on working capital: 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. The parameters adopted for computation of Working capital for the year 2021-22 are furnished below.

Table D46 Parameters for estimation of working capital (Rs Cr)		
Normative O&M cost	2838.68	
Pay revision expenses	437.36	
Additional contribution to Master Trust	257.55	
Exceptional items-O&M due to natural calamities	17.58	3551.17
Revenue for the year 2021-22		14602.00
Opening stock of inventory (Note 11 of accounts)	684.96	

Closing stock of inventory (Note 11 of accounts)	723.11	
Average inventory		704.04
Opening Security deposit (Note 20)	3207.98	
Closing Security deposit (Note 20)	3235.94	
Average SD		3221.96

Based on the above, net working capital computed is negative as calculated below. Therefore, no claim is made towards interest on working capital.

Table D 47 Interest on working capital (Rs Cr)	
O&M Exp for 1 month	295.93
Maintenance spares @ One twelfth of average of opening and closing balance of Inventory	58.67
Revenue (2 months)	2433.67
Total	2788.27
Less: Security deposit (Average for FY 2021-22)	3221.96
Net Working Capital	-433.69

Since the Working Capital requirement is less than the average security deposit held by KSEBL during the year interest on working capital is not claimed for 2021-22.

4.12.iv Carrying cost on approved revenue gap:

Hon'ble Commission approved carrying cost of Rs. 27.08 Cr for the year 2021-22 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. 7123.65 Cr till 2020-21 (excluding 2014-15, for which orders are yet to be issued). Hon'ble Commission was pleased to review the truing up order for 2017-18 and approved an additional revenue gap of Rs. 7.08 Cr. Thus, the trued-up revenue gap amounts to Rs. 7130.73 Cr.

Based on the methodology adopted by the Hon'ble Commission, average GPF balance of Rs.2607.16 Cr has been excluded from the approved gap to determine the revenue gap eligible for carrying cost. Actual average interest on loans during 2021-22 for SBU D had been 9.68 %. Accordingly, a sum of Rs.437.88 Cr is claimed as carrying cost for the year 2021-22 in respect of trued up revenue gap as detailed below:

Table D 48: Computation of carrying cost on approved revenue gap (Rs Cr)		
1	Trued up revenue gap till 31.03.2021 as per True up order for 2020-21 (OA 23/2022 dated 24.06.2022)	7123.65
2	Revenue gap as per RP 04/2021-TU 2017-18 dated 16.07.2022	7.08
3	Total trued up revenue gap (1+2)	7130.73
4	Less: Average PF balance for 2021-22 (2430.72+2783.61)/2	2607.16
5	Net revenue gap	4523.57
6	Carrying cost at average interest rate of 9.68 % on above	437.88

Hon'ble Commission may kindly approve Rs. 437.88 Cr towards carrying cost for 2021-22 for SBU D.

4.12.v. Interest on PF: Hon'ble Commission approved Rs 182.63 Cr towards interest on PF for 2021-22. But as per the audited accounts, the actual interest on PF was Rs.152.86 Cr, which is less by Rs. 29.77 Cr. Therefore Rs.152.86 Cr is sought for true up as detailed in chapter 5, which may kindly be approved.

4.12.vi. Interest on Master Trust Bonds: 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, 2014. Thus, Hon'ble Commission approved Rs.544.38 Cr towards interest on Master Trust bonds against share of SBU D. Actual share of expenses for SBU D has been Rs.559.33 Cr as detailed in chapter 5, which may kindly be approved.

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

No	Particulars	Approved	Accounts	TU Sought	Difference over approval
1	Interest on outstanding Loans	329.80	439.53	423.14	-93.34
2	Interest on Security Deposit	238.74	136.20	142.18	96.56
3	Interest on GPF	182.63	152.86	152.86	29.77
4	Other Interest		8.63	8.63	-8.63
5	Interest on Master Trust Bond	544.38	559.33	559.33	-14.95
6	Carrying cost on revenue gap till 2021-22	27.08		437.88	-410.80
7	Interest on working capital	0.00	105.59	0	0.00
8	Less: Interest capitalized		18.41		0.00
9	Grand Total	1322.63	1383.73	1724.03	-401.40

4.13 Additional contribution to Master Trust: Hon'ble Commission was pleased to provisionally approve Rs.167.10 Cr towards additional contribution to Master Trust under SBU-D. KSEBL seeks trueing up of Rs.257.55 Cr also as detailed in chapter 5.

4.14 Return on Equity:

Hon'ble Commission vide order dated 08.07.2019 approved Return on equity at Rs 253.50 Cr, which, the Hon'ble Commission may kindly true up.

4.15 Other expenses and exceptional items:

As detailed in chapter 5, a sum of Rs. 169.88 Cr is sought for true up, under other expenses and exceptional items Rs. 17.58 Cr, which may kindly be trueed up.

4.16 Non-tariff income and other income: Hon'ble Commission approved Rs.594.36 Cr under non-tariff income. As per accounts, the share of other income of SBU D amounts to Rs. 565.75 Cr as detailed in Form D 2.4. Rs. 930.51 Cr is sought for true up as detailed in chapter 5 of the petition. Hon'ble Commission may kindly approve the same.

4.17 Tariff income:

- i. Hon'ble Commission approved revenue from sale of power as Rs 14523.36 Cr and net revenue as Rs 14489.41 Cr after deducting Rs 33.95 Cr as power factor incentive. A sum of Rs 405.61 Cr was also approved towards revenue from surplus energy sales outside the State.
- ii. Actual revenue from tariff during the year 2021-22 has been Rs. 14640.61 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 – D50: Revenue from Sale of Power					
No	Category	Energy sales		Revenue	
		MU	%	Rs Cr	%
1	Domestic incl colonies	12679.39	53.96	5999	40.98
2	Commercial	3309.96	14.09	3316.84	22.66
3	Public lighting	362.83	1.54	175.27	1.20
4	Irrigation & Dewatering	374.09	1.59	109.52	0.75
5	Industrial LT	1165.21	4.96	878.89	6.00
6	Railway Traction	329.66	1.40	200.52	1.37
7	Bulk Supply /CESCK	506.91	2.16	336.76	2.30
9	HT	3693.96	15.72	2910.88	19.88
10	EHT	1077.57	4.59	712.93	4.87
11	Total sales (within state)	23499.59	100	14640.61	100
12	Interstate sale	2094.41		1024.31	
13	Total	25594		15664.92	

- iii. Hon'ble Commission while approving the revenue from sale of power had deducted Rs 33.95 Cr. as power factor incentive against which incentive actually extended during the year was Rs 38.61 Cr, (booked under A&G expenses) as explained in chapter 5. Accordingly, actual power factor incentive to the tune of Rs.38.61 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 53.96% of total consumption was domestic which contribute 40.98 %of revenue. Actual revenue was more by Rs.732.79 Cr from approval. A comparison of approved vs actual sale is given in table below.

Table – D51: Revenue comparison Approved Vs Actuals							
No	Category	Energy sales (MU)			Revenue (Rs. Cr)		
		Approved	Actual	Deviation	Approved	Actual*	Deviation
1	Domestic	12386.48	12679.39	292.91	5163.65	5999.00	835.35
2	Industrial	1157.49	1165.21	7.72	820.93	878.89	57.96
3	Agriculture	387.18	374.09	-13.09	92.6	109.52	16.92
4	Commercial	3885.5	3309.96	-575.54	3579.36	3316.84	-262.52
5	Public Lighting	440.06	362.83	-77.23	203.28	175.27	-28.01
6	HT & EHT Total	5718.56	4771.54	-947.02	3849.3	3623.81	-225.49

7	Railway Traction	323.09	329.66	6.57	188.24	200.52	12.28
8	Bulk Supply	693.1	506.91	-186.19	412.6	336.76	-75.84
9	Total sales (within state)	24991.46	23499.59	-1491.87	14309.96	14640.61	330.65
10	Interstate sale	811.21	2094.41	1283.2	615.68	1024.31	408.25
11	Total	25802.67	25594	-208.67	14925.64	15664.92	738.9
12	Less Power Factor incentive				32.5	38.61	6.11
13	Revenue from Sale of power	25802.67	25594	-208.67	14893.14	15626.31	732.79

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

4.18 It is respectfully submitted that, as per audited accounts, KSEBL has earned profit of Rs. 736.27 Cr. But, as per regulatory accounts, revenue surplus during 2021-22 has been Rs. 346.39 Cr only as deliberated in detail in this petition. Hon'ble Commission had amortized past approved revenue gap of to the tune of Rs.850 Cr while approving ARR for the year 2021-22. Thus, it may kindly be seen that revenue surplus actually materialized during the year fell short of approval by Rs. 503.61 Cr. Summary of ARR & ERC of SBU D for the year 2021-22 is furnished below:

TABLE – D52: ARR & ERC OF DISTRIBUTION BUSINESS UNIT (Rs Cr)				
Particulars	Approved	Actual	True up	Difference
Cost of Generation (SBU-G)	639.86	647.21	540.22	99.64
Cost of Power Purchase incl RLDC charges	8967.44	8532.16	8432.58	534.86
Cost of Intra-State Transmission (SBU-T)	1283.52	1210.14	1152.24	131.28
Interest & Finance Charges	1322.63	1383.73	1724.03	-401.40
Depreciation	154.91	682.85	252.98	-98.07
O&M Expenses	2848.95	3912.53	2847.27	1.68
Pay revision arrears			437.36	-437.36
Return on equity (14%)	253.50	376.58	253.50	0.00
Other Expenses		169.88	169.88	-169.88
Exceptional items		17.58	17.58	-17.58
Sharing of gains on account of higher T&D loss reduction			125.25	-125.25
Recovery of past gap	850.00		346.39	503.61
Additional contribution to Master Trust	167.10		257.55	-90.45
Total ARR	16487.92	16932.67	16556.82	-68.91
Tariff Income incl fuel surcharge	14523.36	16366.93	14640.61	-117.25
Less Power factor incentive	33.95		38.61	-4.66
Revenue from external sale	405.61		1024.31	-618.70
Non-Tariff Income	594.36	565.75	930.51	-336.15
Total ERC	15489.38	16932.67	16556.82	-1067.45
Net Revenue Gap (-)/ Surplus (+)	-998.54	0.00	0.00	-998.54

4.19 As shown above the total revenue surplus for the year 2021-22 as per this petition amounting to Rs. 346.39 Cr has been disclosed against recovery of past revenue gap.

4.20 Appendices 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 2021-22	
Month	Gross Availability of electricity for Supply
April	100.16%
May	101.03%
June	121.90%
July	121.81%
August	113.82%
September	103.78%
October	120.50%
November	130.64%
December	107.58%
January	108.40%
February	100.66%
March	100.11%
Average	110%

Annexure D2 Reasons for surrender				
Months	CGS	LTA	TOTAL	Remarks
Apr-21	49.85	2.00	51.85	36.76 MU corresponds to Deemed surrender from Kudgi STPS as the units were under RSD. The demand decreased from mid April-21 due to re-surgence of pandemic COVID-19. The reduction in demand was managed through sale and merit order surrender.
May-21	316.15	189.31	505.46	The consumption was curtailed downward in the month of May-21, this was further lowered drastically due to summer rains charged with heavy inflow to the reservoirs. The increased inflow about 5 times the anticipated in the month of May'21, along with drastic fall in demand due to the impact of COVID-19 pandemic resulted in a carryover storage of 1483.4MU. Market operation activities consisting of merit order surrender with sale were deployed to exploit the market conditions favourably to keep the must run schedule and catering the low demand while monitoring the build up of storage in the major reservoirs.
Jun-21	286.50	153.02	439.52	The actual inflow received was much higher than the anticipated. at Idukki ,Sabarigiri and Idamalayar, Kuttiady. As a result ,actual hydro hydro generation was more than the planned generation. The must run hydro and low demand balanced using sale and surrender in merit order.
Jul-21	364.43	146.43	510.86	The actual inflow received was much higher than the anticipated.
Aug-21	151.97	69.06	221.03	The monsoon was comparatively weak in August resulting in a deficit of 555MU from the anticipated. The market rates during August were generally high due to coal shortage. Aggressive market operation was continued in view of the probable revival of monsoon and to avoid any spillage in the event of a high inflow. Surrender for using hydro generation as per plan during periods of low demand was also done to manage the LGB.
Sep-21	110.40	22.85	133.25	

Months	CGS	LTA	TOTAL	Remarks
Oct-21	115.41	29.16	144.57	Heavy rainfall was received in almost all parts of Kerala after 07.10.21. The inflow was 256.62% of the 10-year moving average. It was also decided that Sabarigiri be operated as must run for a few more days in view of the predicted heavy rainfall as the storage margin was very low. Further, the generation from hydro stations was increased. to control the water level and also to utilize the best market rates which was on the higher side on account of coal shortage. Idukki inflow was steadily increasing from 9.3MU/day from 1-10-21, above the anticipated value. This was also favouring increased generation during this period.On account of the incessant rain, the inflow to Idukki alone went upto 112MU on 16-10-21. Consequently, all generating stations including Idukki were brought into must run condition. As the inflow continued to be on the higher side, a decision was taken at government level for controlled release of water from Idukki, Pamba and Idamalayar reservoirs from 19-10-2021 and Kakki from 18.10.2021. Pamba and Idamalayar reservoirs were closed on 22-10-21 and Idukki on 27-10-21. Kakki reservoir continued to be kept open with reduced spill. In order accommodate the hydrogenation as planned above ,energy was surrendered during periods of low demand as part of LGB management.
Nov-21	272.11	95.89	367.99	The total inflow received during November 2021 was 1451.86 MU which is much more than the anticipated figure.. The inflow received in Idukki reservoir was almost 4 to 5 times the anticipated value and that of Sabarigiri and Idamalayar reservoirs was around 3 times the anticipated inflow. In view of the increased inflow, the generation was also increased to maximum. The total average daily hydro generation including small HEPs was 38.15 MU in November 2021. Sale/surrender was done during low demand periods. The consumption decreased to 70.86MU due to the widespread rains received during the month.
Dec-21	134.72	41.95	176.67	The low demand period managed through surrender on merit order with sale
Jan-22	181.25	54.24	235.50	The low demand period managed through surrender on merit order with sale
Feb-22	81.43	18.06	99.49	The low demand period managed through surrender on merit order with sale
Mar-22	20.57	0.54	21.11	Summer rains received during second half of march-22, In view of the increased inflow, storage position , market conditions and the low quantity of swap power to be returned during June22-July22, the generation from hydro stations was enhanced to 26.49MU/day during the second half of march . Hence high cost power was surrendered and hydro scheduled whenever possible, so as to meet the hydro plan.
Total	2084.77	822.51	2907.28	

Annexure –D3: Details of approval of long term /short term contracts for procuring power during 2021-22				
Source	Contracted Capacity (MW)	Commission Approval Letter/Order	Period of contract	Approved Tariff
Long Term contracts				
Maithon Power	150	No.2158/C.Engg/Maithon/2013/1398 dated 26.12.2013	25 years	Approved under Section 62 of Electricity Act 2003
Maithon Power	150	Order dated 08 - 07- 2015	25 years	
DVC Mejia	100	No.500/C.Engg/DVC/2014/348 dated 28.03.2014 & Order dated 21.01.2016	25 years	
DVC RTPS	50		25 years	
Jindal Power Ltd-PSA I (DBFOO)	200	Order dated 30.8.2016	25 years	Approved under Section 63 of Electricity Act 2003.
Jhabua Power Ltd-PSA-I (DBFOO)	115	Order dated 22.12.2016	25 years	
Jindal Power Ltd-PSA I (DBFOO)*	150	Letter dated 22.12.2017	25 years	
Jhabua Power Ltd-PSA-I (DBFOO)*	100	Letter dated 22.12.2017	25 years	
JITPL*	100	Letter dated 22.12.2017	25 years	
BALCO	100	Order dated 30.8.2016	25 years	
SECI Wind	200	Order dated 19.09.2020 on OP 53/19	25 years	
THDCIL-Solar	50	Order dated 29.10.2021 on OP No 33/2021	25 years	
Deviar micro hydro HEP	0.05	Order dated 14 .09.2020 on OP 56/2019 approved interim tariff		
Purchase from JITPL (MTOA)	270	Order dated 07.10.2021	from January to June in a year for three years	
Purchase from JPL through AE L (STOA)	50	Order dated 23.03.2021	2 months	
Purchase from JPL through PTC (STOA)	50	Order dated 23.03.2021	2 months	
Purchase from JPL through GMRETL(STOA)	50	Order dated 23.03.2021	2 months	
TPDDL through PTC(banking)	50 (RTC)	Order dated 16.02.2021		
BRPL through APPCL	100 MW	Order dated 25.02.2022		

*Rate yet to be approved

Annexure – D4: 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	1044.79	1009.11	399.12	399.12	3.820
Maithon Power Ltd-II	1044.77	1009.08	397.78	397.78	3.807
DVC Mejia	560.59	541.24	262.01	262.01	4.674
DVC RTPS	238.85	230.66	124.74	124.74	5.223
Jindal Power Ltd-Bid I*	1453.52	1403.46	498.33	498.33	3.428
Jhabua Power Ltd-Bid I	732.66	707.36	297.21	297.21	4.057
Jindal Power Ltd-Bid II*	1090.31	1052.75	441.58	404.78	3.713
Jhabua Power Ltd-Bid II	637.09	615.09	297.13	239.68	3.762
JITPL	689.26	665.17	290.18	263.47	3.822
BALCO	504.91	487.37	184.16	184.16	3.647
Purchase of power thru SECI	198.63	198.63	56.37	56.372	2.84
Subtotal	8195.38	7919.93	3248.61	3127.65	3.816
Short term contract					
Purchase from JITPL through PTC	522.74	503.51	171.98	171.98	3.290
Purchase from RPREL through AEL	66.50	64.24	19.48	19.48	2.929
Purchase from JPL-2 Through PTCIL	25.57	24.70	8.77	8.77	3.431
DEEP purchase from DB power through GMRETL(RTC)	69.04	66.69	20.27	20.27	2.937
DEEP purchase from DB power through GMRETL	29.05	28.06	9.65	9.65	3.321
Total	712.90	687.20	230.15	230.15	3.228
IEX/PXIL	66.66	64.24	18.93	18.93	2.840
Deviation Settlement Mechanism*	-95.68	-95.68	0.23	0.23	
Swap Purchase	54.60	52.76	0.06	0.06	
Total	8933.85	8628.45	3497.98	3377.01	3.780

* PP cost shown as expenditure and revenue from export shown **Misc receipts /charges from inter-state trading of energy** in revenue from sale of power

Appendix – D5: Source wise details of Power Purchase for 2021-22						
No	Source	Approved Energy (MU)	Approved Cost (Rs Cr)	Actual Energy (MU)	Actual Power purchase cost (Rs Cr)	True up claim (Rs Cr)
1	CENTRAL GENERATING STATIONS					
	RSTPS I & II	1808.01	590.84	1329.76	491.30	491.30
	RSTPS III	453.27	147.65	385.26	147.04	147.04
	Talcher Stage-II	3172.9	783.89	2887.83	743.34	743.34
	Simhadri TPS Stg II	584.87	259.53	428.97	244.70	244.70
	NLC Stage-I	397.35	137.22	303.59	107.19	107.19
	NLC Stage-II	567.42	197.35	447.46	157.94	157.94
	NLC 1 Expansion	429.02	150.28	385.49	137.29	137.29
	NLC II Expansion	282.78	140.83	267.46	137.14	137.14
	MAPS	123.59	35.76	40.68	10.58	10.58
	KAIGA	486.76	187.79	560.64	191.64	191.64
	Kudankulam	1538.37	670.31	1847.60	765.49	765.49
	Vallur	347.05	171.03	214.54	133.98	133.98
	NTPL	501.99	242.22	247.52	150.07	150.07
	Kudgi	742.2	412.03	315.87	260.40	260.40
	Bhavini	271.21	118.17	0.00	0.00	0.00
	NNTPS	0	0	182.46	75.21	75.21
	Eastern region	0	0	0.00	0.0000278	0.00
		11706.79	4244.9	9845.13	3753.30	3753.30
	PGCIL losses	432.02		339.67	0	0
	Sub Total	11274.77	4244.90	9505.46	3753.30	3753.30
	RGCCPP, Kayamkulam	0.00	0.00	0.00	104.23	104.23
	Renewable Energy					
	Wind- Ramakkalmedu	27.87	8.75	23.79	19.83	19.83
	Wind-Koundikkal	12.56	3.94	10.07		0.00
	Wind- Agali	29.72	9.33	28.95		0.00
	Wind Ahalya	20.98	10.97	17.42	9.11	9.11
	INOX	30.84	12.61	32.97	13.48	13.48
	Kosamattom	0	0	1.24	0.49	0.49
	Wind Sub total	121.97	45.61	114.43	42.91	42.91
	Ullunkal(EDCL)	17.79	4.34	25.36	6.19	6.19
	Iruttukanam Stage-I & II(Viyyat)	24.69	6.673	26.37	7.25	7.25
	Karikkayam HEP(AHPL)	37.56	15.624	58.76	24.45	24.45
	Meenvallom(PSHCL)	8.44	4.12	8.71	4.25	4.25
	Kallar of Idukki District Panchayat	0.08	0.04	0.00	0.00	0.00
	Mankulam of Grama Panchayat	0.09	0.04	0.00	0.00	0.00
	Minar Renewable energy project Ltd	0	0	25.27	8.82	8.82
	Deviar micro	0	0	0.13	0.0519	0.05
	Anakkampoil			24.53	9.81	9.81
	Arippara			6.40	0.00	0.00
	SHEP subtotal	88.65	30.84	175.52	60.81	60.81

Continued

No	Source	Approved Energy (MU)	Approved Cost (Rs Cr)	Actual Energy (MU)	Actual PP cost (Rs Cr.)	True up claim (Rs Cr)
	Solar					0.00
	Solar IREDA	70.08	27.33	75.90	29.071	29.07
	Solar IPP ANERT	0	0	2.33	0.628	0.63
	THDCIL	0	0	84.65	32.69	32.69
	CIAL Ettukudukka			1.07	0.00	0.00
	Solar IPP sub total	70.08	27.33	163.95	62.38	62.38
	Sub Total IPPs	280.70	103.78	453.90	166.11	166.11
	Solar Chalayur colony				0.11	0.11
	Grid connected -solar(settlement)	0	0	33.75	2.93	2.93
	captive consumer settlement			7.90		
	grid connected solar injection			156.45		
	captive consumer injection			143.39		
	Wind Power through SECI			198.63	56.37	56.37
	RPO-Solar	787.71	228.84			
	RPO-Non solar(SECI)	1065.21	319.56			
	Sub Total	2133.62	652.18	952.37	225.51	225.51
3	Long Term Contracts outside the State					
	Maithon Power Ltd-I	1105.73	420.43	1044.79	399.12	399.12
	Maithon Power Ltd-II	1105.73	420.43	1044.77	397.78	397.78
	DVC Mejia	705.5	276.32	560.59	262.01	262.01
	DVC RTPS	348.1	137.89	238.85	124.74	124.74
	Jindal Power Ltd-Bid I*	1497.96	548.13	1453.52	498.33	498.33
	Jhabua Power Ltd-Bid I	861.33	332.31	732.66	297.21	297.21
	Jindal Power Ltd-Bid II*	1123.47	458.33	1090.31	441.58	404.78
	Jhabua Power Ltd-Bid II	748.98	305.56	637.09	297.13	239.68
	JITPL	748.98	305.56	689.26	290.18	263.47
	BALCO	748.98	305.56	504.91	184.16	184.16
	Total exbus	8994.76	3510.52	7996.741	3192.2368	3071.27
	PGCIL losses	347.7		275.44		
	Sub TotalLTA	8647.06	3510.52	7721.30	3192.24	3071.27
4	Short term/Exchanges/swap					
	Purchase from JITPL through PTC			522.74	171.98	171.98
	Purchase from RPREL through AEL			66.50	19.48	19.48
	Purchase from JPL-2 Through PTCIL			25.57	8.77	8.77
	DEEP purchase from DB power through GMRETL(RTC)			69.04	20.27	20.27
	DEEP purchase from DB power through GMRETL			29.05	9.65	9.65
	Sub Total Short term			712.90	230.15	230.15
	PGCIL losses			25.70		
	Sub Total Short term			687.20	230.15	230.15
	IEX/PXIL			66.66	18.93	18.93
	Deviation Settlement Mechanism*			-95.68	0.23	0.23
	Swap Purchase			54.60	0.06	0.06
	CTUIL losses			4.25		
	Total LTA /MTOA/STOA	8647.06	3510.52	8429.82	3441.60	3320.64
	Transmission charges payable to PGCIL		557.24		1023.62	1023.62
	Total	22055.45	8964.84	18887.65	8548.27	8427.31
	Power returned through banking arrangements			-106.28		
	Sale through IEX			-1972.09	5.27	5.27
	Sale through PXIL			-122.32		
	Provisions for energy availed through banking transactions from outside the State which was not returned during FY 2021-22				-21.41	
	Net Power Purchase	21158.56	8964.84	16686.96	8532.14	8432.58

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	Revenue from Sale of Power
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	NA
8	Form D 2.7	Consumer Contribution, Capital Subsidy and Grant
9	Form D 3.1	Power Purchase Expenses
10	Form D 3.2	NA
11	Form D 3.3	NA
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)	NA
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	NA
27	Form D 5.2	NA
28	Form D 5.3	NA
29	Form D 6.1	Improvement in performance
30	Form D 6.2	Appropriation of Distribution loss
31	Form D 7.1	Category-wise Sales
32	Form D 7.2	NA
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		KERALA STATE ELECTRICITY BOARD LTD.					
Licensed Area of Supply							
							(Rs Cr)
S.No.	Particulars	Reference form no.	2021-22				Remarks
			Approved in Tariff Order	Audited	Normative	Truing Up requirement	
1	2	3	4	5	6	7	14
1	Cost of own power generation/power purchase	3.1	9607.3	9179.37	8972.80	8972.8	
2	Intra Transmission Charges	3.2	1283.52	1210.14	1152.24	1152.24	
3	NLDC/RLDC/SLDC Charges	3.3				0	
4	Operation & Maintenance Expenses	3.4	2848.95	3912.53	2847.27	2847.27	
4.1	Employee Expenses & A&G Expenses	3.4	2490	3681.82	2,444.27	2444.27	
4.2	Repair & Maintenance Expenses	3.4	358.95	230.71	403.00	403.00	
5	Depreciation	3.5	154.91	682.85	252.98	252.98	
6	Interest and finance charges on long term loans	3.6	329.8	421.12	423.14	423.14	
7	Interest on Bonds to meet Terminal Liabilities	3.7	544.38	559.33	559.33	559.33	
8	Interest on Working Capital	3.8	0	105.59	0.00	0	
9	Interest on consumer security deposits and deposits from Users of the distribution system	3.9	238.74	136.20	142.18	142.18	
10	Interest on GPF	3.1	182.63	152.86	152.86	152.86	
11	Carrying Cost	3.11	27.08		437.88	437.88	
12	Pay Revision arrears				437.36	437.36	
13	Any other item (to be specified)					0	
	Others			169.88	169.88	169.88	

S.No.	Particulars	Reference form no.	2021-22				Remarks
			Approved in Tariff Order	Audited	Normative	Truing Up requirement	
1	2	3	4	5	6	7	14
	Amortisation of Intangible Assets					0	
	Other Interest and finance Charges			8.63	8.63	8.63	
	Prior Period Expenditure					0	
14	Contribution to contingency reserves					0	
15	Provisioning for Bad debts, if any					0	
16	Exceptional items			17.58	17.58	17.58	
17	Adjustment for profit/loss on account of controllable/uncontrollable factors(higher T&D loss reduction)				125.25	125.25	
18	Recovery of revenue gap		850		346.39	346.39	
19	Additional contribution to Master Trust		167.1		257.55	257.55	
20	Return on Equity /Net Fixed Assets	3.8	253.5	376.58	253.5	253.5	
21	Tax on ROE	3.9				0	
22	Aggregate Revenue Requirement (13+15)		16487.92	16932.66	16556.82	16556.82	
23	Less: Non Tariff Income	2.4	594.36	565.75	930.51	930.51	
24	Less: Income from wheeling charges	2.2					
25	Less: Income from Other Business (to be specified)						
26	Less: Receipt on account of Cross Subsidy Surcharge on wheeling charges						
27	Less: Receipt on account of additional surcharge on charge of wheeling						
28	Aggregate Revenue Requirement from Retail Tariff		15893.56	16366.93	15626.32	15626.32	

Form D 2.1

Revenue from Sale of Power

Name of Distribution Business/Licensee
Licensed Area of Supply

KERALA STATE ELECTRICITY BOARD LTD.

Year (n-1)*

2021-22

S.No.	Particulars	Number of consumers	Connected Load of consumers	Units Sold (MU)	Demand/ fixed charges@	Energy Charges @	Fuel Adjustment charges@	Total	Other charges if any@	Sub-total	Misc. recoveries@ (Net provision for unbilled revenue)	Sub-total
1	2	3	KW 5	MU 6	8	9	10	8+9+10 11	18	(13) to (19) 20	22	(11)+(20)+(21)+(22) 23
A)	Revenue from sale of Electricity to consumers (categories as per Tariff for supply of Electricity)											
	LT Categories											
1	Domestic	10246803.00	19852.02	12679.39	658.98	5362.67	0.00	6021.65	0.07	0.07	-14.41	5999.00
2	Commercial	2456003.00	4880.51	3309.96	694.39	2611.53	-0.05	3305.88	-0.02	-0.02	10.99	3316.84
3	Public Lighting	57194.00	168.52	362.83	3.12	172.44	0.01	175.57	0.00	0.00	-0.30	175.27
4	Irrigation and Dewatering	510277.00	1004.09	374.09	60.70	-292.51	0.00	-231.80	0.03	0.03	341.29	109.52
6	Industrial LT	145491.00	1871.36	1165.21	194.50	762.52	0.08	957.10	0.02	0.02	-78.23	878.89
7	Railway Traction	16.00	115.10	329.66	39.79	158.61	0.00	198.40		0.00	2.12	200.52
8	Miscellaneous					1.44		1.44		0.00	0.06	1.52
9	HT Categories	6808.00	1694.97	3693.96	581.79	2560.01	0.08	3141.88		0.00	-235.28	2910.88
10	Extra High Tension (EHT)	39.00	319.60	1077.57	113.54	562.71	0.00	676.24		0.00	8.41	712.93
11	Bulk Consumers/ Licensees	11.00	109.22	506.91	46.14	287.35	0.34	336.76		0.00	1.43	336.76
12	Revenue from sale of power outside the State											
	Sale through power exchange					1023.93		1023.93		0.00		1023.93
	Sale to other States					0.38		0.38		0.00		0.38
	Sale through Traders							0.00	101.42	101.42		101.42
	Consumption adjustments against captive injection			222.23								

S.No.	Particulars	Number of consumers	Connected Load of consumers	Units Sold (MU)	Demand/ fixed charges@	Energy Charges @	Fuel Adjustment charges@	Total	Other charges if any@	Sub-total	Misc. recoveries@ (Net provision for unbilled revenue)	Sub-total
			KW	MU				8+9+10		(13) to (19)		(11)+(20)+(21)+(22)
1	2	3	5	6	8	9	10	11	18	20	22	23
13	Total of items not shown categorywise											
a)	Reactive Energy Charges							0.00		0.00		0.00
b)	Electricity Duty Recovery								1006.30	1006.30		1006.31
c)	Other state Levies Recovery								21.89	21.89		21.90
	Total Duty & Levies											
d)	Transmission charges/Wheeling charges Recoveries(Embedded open access consumers)*								2.17	2.17		2.17
	Cross subsidy surcharge(Embedded open access consumers)			253.37					32.55	32.55		32.55
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								301.90	301.90		301.90
4	TF/RF								10.84	10.84		10.84
5	Meter rent								102.31	102.31		102.31
6	LE/SC Minimum								0.03	0.03		0.03
7	Meter Box Charges								0.00	0.00		0.00
8	Processing Fee for Allocation of Power								3.25	3.25		3.25
9	STOA - Registration and Application fee								0.22	0.22		0.22
10	STOA - Open Access charges								15.32	15.32		15.32
11	Application fee®istration fee for grid connectivity to solar panels								9.82	9.82		9.82
12	Penal charge for making the meter inaccessible for billing								0.00	0.00		0.00
13	Energisation charges								0.36	0.36		0.36
14	Power factor penalty								49.84	49.84		49.84
	Energy supplied to RGCCPP to meet their auxiliary consumption during non operative period			8.22								
14	Gross Revenue From Sale of Power				2392.95	13211.08	0.47	15607.42	1658.33	1658.33	36.08	17324.69
	Less: i) Electricity Duty Payable to Govt. (Contra)								1006.30	1006.30	0.00	1006.31
	ii)Other State Levies Payable to Govt. (Contra)								21.89	21.89	0.00	21.90
	iii) Board Consumption								8.30	8.30	0.00	
15	Net Revenue from Sale of Power (A29-A30)	13422642.00		23983.42	2392.95	13211.08	0.47	15607.42	621.83	621.83		16296.55

Form D 2.2

Income from Wheeling Charges

KERALA STATE ELECTRICITY BOARD LTD.

Name of Distribution Business/Licensee
Licensed Area of Supply

Year (n-1)*

2021-22

(Rs Cr)

S.No	Open Access Consumer	Open Access Contracted Capacity (kW)	Fixed Charge (Rs/kW/month)	Energy Wheeled at regional periphery(MU)	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 (Rs/kWh)	Wheeling charge (Rs/kWh)	SLDC charge operating charge				
	<u>1</u>	2	3	4	5	6	7	8	9	10	11	12=6+7+8
1	Alagappa Textiles (Cochin) Mills (A Unit of NTC) Alagappa Nagar Thrissur 680302	1.38		0		0.39	0.55	1000				0.000
2	Amrita Institute Of Medical Science And Research Centre Edappally 682041 Kochi	2.5		5.5736		0.39	0.55	1000				0.554
	Apollo Tyres Ltd Perambra Chalakkudy Kerala	9		13.79533		0.39	0.55	1000				0.577
	Aster DM Healthcare Pvt Ltd South Chittoor PO Cheranellore Kochi 682027	2.2		2.9215		0.39	0.55	1000				0.301
	AVT Natural Products Ltd South Vazhakulam Aluva Kochi Kerala 683105	1.1		0.658		0.39	0.55	1000				0.075
	BPCL Kochi Refinery (Consumer No 2/201) Ambalamugal PO Ernakulam Kerala 682302	38		19.97675		0.39	0.55	1000				0.827
	BPCL Kochi Refinery STF Bharat Petroleum Corporation Limited	3		0.7477		0.39	0.55	1000				0.078
	Cannanore Spinning & Weaving Mills Kakkad Kannur Kerala 670005	3.1		0.146775		0.39	0.55	1000				0.016
	Carborundum Universal Ltd P B 3 Koratty 680308 Trissur Kerala	6.75		14.335715		0.39	0.55	1000				0.618
	Carborundum Universal Ltd P B I Kalamassery Development Plot P O Kochi	16.5		35.16319		0.39	0.55	1000				1.434

S.No	Open Access Consumer	Open Access Contracted Capacity (kW)	Fixed Charge (Rs/kW/month)	Energy Wheeled at regional periphery(MU)	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 (Rs/kWh)	Wheeling charge (Rs/kWh)	SLDC charge operating charge				
	<u>1</u>	2	3	4	5	6	7	8	9	10	11	12=6+7+8
	Classic Industries and Exports Ltd Cons No 103 of Dist Licensee Rubber Park	2.3		0		0.39	0.55	1000				0.000
	Cochin Shipyard Ltd Administrative Building P O Bag No 1653 Perumanoor	5		2.7086		0.39	0.55	1000				0.130
	EICL Limited TC 79/4 Veli Thiruvananthapuram 695021 Consumer No	2		1.11215		0.39	0.55	1000				0.127
	EICL Limited TC 79/4 Veli Thiruvanthapuram 695021 Consumer No	1.5		0		0.39	0.55	1000				0.000
	FCI OEN Connectors Ltd Mulanthuruthy Kerala	2		0.396		0.39	0.55	1000				0.044
	Gasha Steels Private Ltd New Industrial Development Area Kanjikode Palakkad	1.8		0.234535		0.39	0.55	1000				0.027
	Glenrock Rubber Products Pala	1.5		0.00025		0.39	0.55	1000				0.000
	GTN Textiles Ltd Aluva Kerala	3.8		4.1949		0.39	0.55	1000				0.192
	Hindalco Industries Limited P B No 21 Kalamassery 683104 Ernakulam	1.5		1.674655		0.39	0.55	1000				0.102
	Hindustan Organic Chemicals Ltd (Consumer No LCN 15/1515) Ambalamugal	7		7.0734475		0.39	0.55	1000				0.333
	Indsil Electrosmelts Ltd Pallathery (PO) Palakkad Kerala 678007	10		0		0.39	0.55	1000				0.000
	Inox Air products Pvt Ltd,Palakkad	5.5		8.9777275		0.39	0.55	1000				0.375
	Kairali Steels & Alloys Pvt Ltd 134 A Kanjikode Palakkad 678621	4.455		2.708585		0.39	0.55	1000				0.280
	Kerala Lakshmi Mills Pullazhi Thrissur 680012	1.35		0		0.39	0.55	1000				0.000
	LULU Convention And Exhibition Center Pvt Limited Botgatty LCN 20/8335	3		3.1588		0.39	0.55	1000				0.331

S.No	Open Access Consumer	Open Access Contracted Capacity (kW)	Fixed Charge (Rs/kW/month)	Energy Wheeled at regional periphery(MU)	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 (Rs/kWh)	Wheeling charge (Rs/kWh)	SLDC charge operating charge				
	<u>1</u>	2	3	4	5	6	7	8	9	10	11	12=6+7+8
	LULU International Shopping Mall Pvt Ltd 34 1000 NH 47 Edappally Kochi	4.2		3.8066225		0.39	0.55	1000				0.407
	LULU International Shopping Mall Pvt Ltd Marriott Kochi HTB 03/7169 34/1111	1.7		1.9626		0.39	0.55	1000				0.213
	Malabar Cements Limited Walayar P O Palakkad 678624	9.5		5.07995		0.39	0.55	1000				0.223
	MFAR Hotels & Resorts Pvt Ltd (Le Meridien) NH 47 Bypass Kundannoor	1.1		0.3299		0.39	0.55	1000				0.043
	Minar Castings Pvt Ltd NIDA Kanjikode Palakkad Kerala 678621	2		0		0.39	0.55	1000				0.000
	MRF Limited PB No 2 Vadavathoor P O Kottayam 686010 Kerala	8		14.0017625		0.39	0.55	1000				0.587
	**Nitta Gelatin India Ltd Gelatin Division Info Park P O Kakkanad Ernakulam	1.5		1.72425		0.39	0.55	1000				0.103
	Nitta Gelatin India Ltd Ossein Division Kathikudam P O Thrissur District	1.5		1.0598		0.39	0.55	1000				0.133
	Patspin India Limited Kanjikode East P O Palakkad Kerala 678621	3.8		4.30555		0.39	0.55	1000				0.196
	Peekay Rolling Mills (P) Ltd Nallalam Kozhikode Kerala	4		1.8782		0.39	0.55	1000				0.200
	*Philips Carbon Black Limited Kochi	7		44.0422425		0.39	0.55	1000				1.756
	Precot Meridian Ltd A Unit Kanjikode Palakkad Kerala 678623	4.3		8.0239025		0.39	0.55	1000				0.344
	Precot Meridian Ltd C&D Unit Walayar Palakkad Kerala	2.6		5.1362525		0.39	0.55	1000				0.231
	Premier Tyres Ltd (Consumer No 4/438) Kalamassery Ernakulam Kerala	3		3.2835		0.39	0.55	1000				0.162

S.No	Open Access Consumer	Open Access Contracted Capacity (kW)	Fixed Charge (Rs/kW/month)	Energy Wheeled at regional periphery(MU)	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 (Rs/kWh)	Wheeling charge (Rs/kWh)	SLDC charge operating charge				
	<u>1</u>	2	3	4	5	6	7	8	9	10	11	12=6+7+8
	Saint Gobain India Pvt Ltd P B No 1 Kanjikode West Kerala 678623	10		7.5949		0.39	0.55	1000				0.325
	Synthite Industries Private Limited Consumer No LCN 18/1975 Synthite Valley	1.2		0.3168		0.39	0.55	1000				0.038
	Tata Consultancy Services Ltd TCS Centre Infopark SEZ Infopark Kochi 682042	1.98		0		0.39	0.55	1000				0.000
	Terumo Penpol Private Limited Puliয়ারakonam P O Thiruvananthapuram	1.4		0.62495		0.39	0.55	1000				0.068
	The Fertilisers and Chemicals Travancore Ltd Cochin Div (Cons No 05/202)	9		15.9764625		0.39	0.55	1000				0.679
	The Kerala Minerals and Metals Ltd Chavara Kerala	10		18.9845		0.39	0.55	1000				0.786
	The Travancore Cochin Chemicals Ltd (Consumer No HTB 1/102) PB No 4	22		56.9688		0.39	0.55	1000				2.288
	Thieh Ingots Pvt Ltd 410 417 10 Pudukkottai New Industrial Development Area	2.7		0.9357925		0.39	0.55	1000				0.101
	Travancore Titanium Product Ltd, Thiruvananthapuram	2.5		0.5583		0.39	0.55	1000				0.034
	Vijaya Mohini Mills Thirumala PO Thiruvananthapuram 695006	1.15		0		0.39	0.55	1000				0.000
	Total			322.15		0.39	0.55	1000				15.320

Total at Kerala periphery

268.69

Form D 2.3

Income from sale of surplus power

Name of Distribution Business/Licence KERALA STATE ELECTRICITY BOARD LTD.

Licensed Area of Supply

Year (n-1)*

2021-22

(Rs Cr)

Month	Name of buyer	Transaction No.	Nature of transaction- Bilateral /Exchange	Volume of trading in		Sale Price Rs/Unit	Income
				MU	Contracted MW		
1	2	3	4	5	6	7	8
April		...					
	24.68	...				4.32	10.65
May		...					
	190.90	...				3.07	58.54
June		...					
	174.01	...				3.73	64.83
July		...					
	200.40	...				3.23	64.67
August		...					
	307.53	...				5.84	179.73
September		...					
	107.01	...				4.86	51.97
October		...					
	225.99	...				7.49	169.29
November		...					
	367.85	...				3.15	115.81
December		...					
	151.41	...				4.05	61.36
January		...					
	137.55	...				4.54	62.43
February		...					
	81.54	...				6.13	49.95
March		...					
	125.54	...				10.73	134.69
TOTAL	2094.41					4.89	1023.93

0.38

Form D 2.4

Non-tariff Income

Name of Distribution Business/Licensee

Licensed Area of Supply

(Rs Cr)

S. No.	Particulars	Previous Year (n-1)			Remarks
		2021-22			
		Approved in Tariff Order	Audited	Truing Up requirement	
1	2	3	4	5 = 4 - 3	12
1	Interest on staff loans and advances	0.07	0.04	0.04	
2	Income from statutory investments		0.00	0.00	
3	Income from trading		0.00	0.00	
4	Income from rent of land or buildings	5.12	0.50	0.50	
5	Income from sale of scrap	27.51	114.22	103.41	Cost of LED bulb deducted
6	Income from wheeling	0.10	2.17	2.17	
7	Rental from staff quarters	0.31	0.14	0.14	
8	Excess found on physical verification	0.03	0.00	0.00	
9	Interest on investments, fixed and call deposits and	2.78	3.35	3.35	
10	Interest on advances to suppliers/contractors	16.23	9.94	9.94	
11	Income from hire charges from contractors and others		0.69	0.69	
12	Income due to right of way granted for laying fibre optic cables/co-axial cables on distribution system	54.24	52.84	52.84	
13	Income from advertisements, etc.		0.00	0.00	
14	Miscellaneous receipts	134.03	176.71	176.71	
15	Commission for collection of electricity duty	12.02	9.98	9.98	
16	Interest on delayed or deferred payment of bills	20.69	227.57	293.50	Includes interest recovered on KWA
17	Rebate from Central Generating Stations	141.00	123.57	123.57	
18	Reactive energy charges	50.00	0.00	0.00	
19	Recovery for theft and pilferage of energy	6.58	1.52	1.52	
20	Meter/metering equipment/service line rentals	99.57	102.31	102.31	
21	Clawback of Grant		265.62		
22	Reversal of provision on doubtful debts		56.30		
23	Power Factor penalty	24.08	49.84	49.84	
	Total	594.36	1197.31	930.51	

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) - 2021-22					
		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)				362.24		362.24
2	Tariff Revision 2012 Subsidy from Govt. For providing free supply of electricity to patients surviving on life support system				1.06		1.06
3	Subsidy receivable from Govt. for exempting hike for Agri. consumers in Tariff Revision 2012				23.81		23.81

Form D 2.7

Consumer Contribution, Capital Subsidy and Grant

Name of Distribution Business/Licensee
Licensed Area of Supply

KERALA STATE ELECTRICITY BOARD LTD.

(Rs. Cr)

S. No.	Particulars	Previous Year (n-1)			Remarks
		2021-22			
		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		393.41		
2	Any other contribution by consumers under any scheme.				
a)					
b)					
c)					
	Sub-Total	72.01	393.41		
3	Capital Subsidies from appropriate Government towards cost of Capital Assets		154.79		
4	Receipts from appropriate Government under any scheme as Grants		506.24		
5	Any Other item(to be specified)				
	Total		661.03		
	TOTAL		1054.44		

Form D 3.1

Power Purchase Expenses

Name of Distribution Business/Licensee KERALA STATE ELECTRICITY BOARD LTD.
 Licensed Area of Supply _____

Year (n-1)*

2021-22

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 (MU)	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
	Hydro				9836.91	94.06158675	9742.85										
	Thermal				0.00	0.613497	-0.61										
	Wind				1.159341		1.16										
	Solar				20.20		20.20										
	Total				9858.27	94.68	9763.59		9763.59							647.21	
	RSTPS I & II	2100	11.67	245.07	1329.76	3.41	1284.35	2.77	1248.72	1057.6897	120.16	2.79	370.57	0.09	0.48	491.30	3.69
	RSTPS III	500	12.2	61	385.26	3.42	372.07	2.77	361.75	283.6573	35.5543712	2.77	106.85054	0.9465746	3.6911086	147.04	3.82
	Talcher Stage-II	2000	21.35	427	2887.83	3.45	2788.20	2.77	2710.85	996.95	211.1684065	1.77	511.627594	4.7299341	15.8121987	743.34	2.57
	Simhadri TPS Stg II	1000	9.09	90.9	428.97	3.46	414.11	2.77	402.62	1029.6034	105.007005	3.00	128.786813	0	10.9034422	244.70	5.70
	NLC Stage-I	630	10	63	303.59	3.47	293.05	2.77	284.92	299.8	27.3804923	2.65	80.5416365	0.4915668	-1.2202664	107.19	3.53
	NLC Stage-II	840	10.72	90.048	447.46	3.45	432.04	2.77	420.06	414.29	39.1911282	2.66	118.947467	0	-0.2034341	157.94	3.53
	NLC I Expansion	420	16.37	68.754	385.49	3.48	372.08	2.77	361.76	276.18	44.1250242	2.43	93.5052585	-0.1779321	-0.1652891	137.29	3.56
	NLC II Expansion	500		0	267.46	3.44	258.26	2.77	251.10	728.0556	68.5144814	2.71	72.5149809	0.0040903	-3.8972084	137.14	5.13
	MAPS	440	5.23	23.012	40.68	3.53	39.24	2.77	38.16		0	2.52	10.2672317		0.3100876	10.58	2.60
	KAIGA	880	8.3	73.04	560.64	3.44	541.33	2.77	526.32		0	3.40	190.412208		1.2242028	191.64	3.42
	Kudankulam	2000	13.675	273.5	1847.60	3.47	1783.50	2.77	1734.03				733.552163		31.9407741	765.49	4.14
1	Vallur	1500	3.33	49.95	214.54	3.46	207.12	2.77	201.38	1090.1654	60.2930007	3.33	71.3689608	0.0150278	2.3031412	133.98	6.24
2	NTPL	1000	7.25	72.5	247.52	3.42		239.05	232.42	1858.9601	59.4141454	3.23	79.9473207	0	10.7089728	150.07	6.06
	Kudgi	2400	5	120	315.87	3.47	304.90	2.77	296.44		133.244266	4.00	126.191707	0	0.9661645	260.40	8.24
	Bhavini			0	0.00			2.77	0.00								
	NNTPS	1000	3.24	32.4	182.46	3.45	176.16	2.77	171.28	1259.5975	35.1585526	2.19	39.9476135		0.1084694	75.21	4.12
	Eastern region														0.000028		
	Sub Total			1690.174	9845.13	3.45	9505.47		9241.78	9294.95	939.21		2735.03	6.10	72.96	3753.30	3.81
	RGCCPP										100.0000008				4.2312564	104.2312572	
	Wind-Ramakalmedu				23.79		23.79	2.77	23.13								
	Wind-Koundikkal	16.6			10.07		10.07	2.77	9.79								
	Wind-Agali				28.95		28.95	2.77	28.15				19.83			19.83	3.14
	Wind Ahalya				17.42		17.42	2.77	16.93				9.11			9.11	5.23
	INOX				32.97		32.97	2.77	32.05				13.48			13.48	4.09
	Kosamattom				1.24		1.24	2.77	1.21				0.49			0.49	3.94
	Wind Sub total				114.43		114.43	2.77	111.26				42.91			42.91	3.75
	Ullunkal(EDCL)				25.36		25.36	2.77	24.66				6.19			6.19	2.44
	Iruttukanam Stage-I & II(Vivvat)				26.37		26.37	2.77	25.64				7.25			7.25	2.75
	Kanikkayam HEP(AHPL)				58.76		58.76	2.77	57.14				24.45			24.45	4.16
	Meenvallom(PSHCL)				8.71		8.71	2.77	8.47				4.25			4.25	4.88
	Kallar of Idukki District Panchayat				0.00		0.00	2.77	0.00				0.00			0.00	
	Mankulam of Grama Panchayat				0.00		0.00	2.77	0.00				0.00			0.00	
	Minar Renewable energy project Ltd				25.27		25.27	2.77	24.57				8.82			8.82	3.49
	Deviar micro				0.13		0.13	2.77	0.12				0.05			0.05	4.06
	Anakkampoil				24.53		24.53	2.77	23.85				9.81			9.81	4.00

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 (MU)	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
	Arippara				6.40		6.40	2.77	6.22				0.00			0.00	0.00
	SHEP subtotal				175.52		175.52	2.77	170.66				60.81			60.81	
	Solar				0.00												
	Solar IREDA				75.90		75.90	2.77	73.80				29.0706192			29.07	3.83
	Solar IPP ANERT				2.33		2.33	2.77	2.27				0.6278355			0.63	2.69
	THDCIL				84.65		84.65	2.77	82.30				32.6855516			32.69	3.86
	CIAL Ettukudukka				1.07		1.07	2.77	1.04				0			0.00	0.00
	Solar IPP sub total				163.95		163.95	2.77	159.41				62.3840063			62.38	3.81
	Sub Total IPPs				453.90		453.90	2.77	441.32				166.111343			166.11	3.66
	Solar Chalayar colony				0.00		0.00	2.77	0.00				0.105002			0.11	
	Grid connected -solar(settlement)				33.75		33.75	2.77	32.82				2.92702412			2.93	
	captive consumer settlement				7.90		7.90	2.77	7.68				0			0.00	
	grid connected solar injection				156.45		156.45	2.77	152.12				0			0.00	
	captive consumer injection				143.39		143.39	2.77	139.42				0			0.00	
	Wind Power through SECI				198.63		198.63	2.77	193.13				56.3715564			56.37	2.82
	RPO-Solar				0.00		0.00	2.77	0.00				0			0	
	RPO-Non solar(SECI)				0.00		0.00	2.77	0.00				0			0	
	Sub Total				952.37		952.37	2.77	925.99				225.51			225.51	2.37
	Mailthon Power Ltd-I			150	1044.79	35.69	1009.11	2.77	981.16				251.29		45.53	399.12	3.96
	Mailthon Power Ltd-II			150	1044.77	35.68	1009.08	2.77	981.13	1093.63	104.78		251.28		41.71	397.78	3.94
	DVC Mejia			100	560.59	19.35	541.24	2.77	526.25	1019.21	99.38		162.57		0.06	262.01	4.84
	DVC RTPS			50	238.85	8.19	230.66	2.77	224.27	1395.55	52.45		72.04		0.25	124.74	5.41
	Jindal Power Ltd-Bid I*			200	1453.52	50.06	1403.46	2.77	1364.58		376.09		192.76		-70.52	498.33	3.55
	Jhabua Power Ltd-Bid I			115	732.66	25.30	707.36	2.77	687.77		182.59		151.02	0.00	-36.41	297.21	4.20
	Jindal Power Ltd-Bid II*			150	1090.31	37.55	1052.75	2.77	1023.59		360.63		144.51		-63.56	441.58	4.19
	Jhabua Power Ltd-Bid II			100	637.09	22.00	615.09	2.77	598.05		200.82		131.16		-34.85	297.13	4.83
	JITPL			100	689.26	24.09	665.17	2.77	646.75		246.10		80.25		-37.76	290.18	4.36
	BALCO			100	504.91	17.53	487.37	2.77	473.87		169.67		59.18	-13.46	-31.24	184.16	3.78
	Sub Total			1215	7996.74	275.44	7721.30	2.77	7507.42		1894.83		1496.07	-11.86	-186.79	3192.24	4.13
	Purchase from JITPL through PTC			300	522.74	19.23	503.51	2.77	489.56				171.98			171.98	3.42
	Purchase from RPREL through AEL				66.5	2.26	64.24	2.77	62.46				19.48			19.48	3.03
	Purchase from JPL-2 Through PTCIL				25.57	0.87	24.70	2.77	24.02				8.77			8.77	3.55
	DEEP purchase from DB power through GMRETL(RTC)				69.04	2.35	66.69	2.77	64.84				20.27			20.27	3.04
	DEEP purchase from DB power through GMRETL				29.05	0.99	28.06	2.77	27.29				9.65			9.65	3.44
	Sub Total Short term				712.9	25.69	687.21	2.77	668.17				230.15			230.15	3.35
	IX/PXIL				66.66	2.42	64.24	2.77	62.46				18.93			18.93	2.95
	Deviation Settlement Mechanism*				-95.68	0.00	-95.68	2.77	-93.03				0.23			0.23	-0.02
	Swap Purchase				54.60	1.84	52.76	2.77	51.30				0.06			0.06	0.01
	Total LTA /MTOA/STOA				8735.21	305.39	8429.82	2.77	8196.32				1745.43			3441.60	4.08
	Transmission charges payable to PGCIL												1023.62			1023.62	
	Total																
	Power returned through banking arrangements				106.28				106.28								
	Sale through IEX				1972.09				1972.09								
	Sale through PXIL				122.32				122.32				5.27			5.27	
	Provisions for energy availed through banking transactions from outside the State which was not returned during FY 2021-22												-21.41			-21.41	
	Total Power Purchase				19532.72		18887.67		18364.09							8532.16	
	Total generation & Power Purchase				29390.99		28651.26		28127.69							9179.37	
	Net generation & Power Purchase				27190.29		26450.57		25926.99								

Operations and Maintenance Expenses

A Name of Distribution Business/Licensee **KERALA STATE ELECTRICITY BOARD LTD.**
 Licensed Area of Supply _____

1 Employee Expenses & A&G expenses

S. No.	Particulars	Reference	Previous Year (n-1) - 2021-22			Remarks
			Approved in Tariff Order#	Audited	Truing Up requirement#	
1	2	3	4	5	6 = 5 - 4	13
1	Number of Consumers ('000)		13314526		13142910	
	Norms (Rs. Lakh/'000 consumers)		5.53		5.53	
2	Distribution Transformers (no.)		82502		83465	
	Norms (Rs. Lakh/Distribution Transformer)		0.73		0.73	
3	HT line (km)		68613		66648	
	Norms (Rs. Lakh/km of HT line)		0.91		0.91	
4	Sales (kWh)		23957.26		22413	
	Norms (Rs./unit of sales)		0.22		0.22	
5	Employee Expense (as per norms)		2,490.00		2,435.68	
6	Employee Expense (actuals)	3.4(a)		3236.50		

#. Employee expenses & A&G

2 Administrative and General Expenses

S. No.	Particulars	Reference	Previous Year (n-1) - 2021-22			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)					
5	A&G Expense (actuals)	3.4(b)		445.32		

Note: nth year = FY 2014-15, n+1th year = FY 2021-22, and so on, for the first filing under the KSERC Tariff Regulations, 2014

3 Repair and Maintenance Expense

S. No.	Particulars	Reference	Previous Year (n-1) - 2021-22			Remarks
			Approved in Tariff Order	Audited/ Normative	Truing Up requirement	
1	2	3	4	5	6 = 5 - 4	13
1	Opening GFA (Rs. Crore)			12876.06	12876.06	
	Norms (% of opening GFA)			3%	3%	
2	R&M Expense (as per norms)			403.00	403.00	
3	R&M Expense (actuals)	3.4(c)	358.95	230.71		

B Name of Distribution Business/Licensee
Licensed Area of Supply

KSEBL

1 O&M Expenses

S. No.	Particulars	Reference	Previous Year (n-1) - 2021-22			Remarks
			Approved in Tariff Order	Audited/ Normative	Truing Up requirement	
1	2	3	4	5	6 = 5 - 4	13
1	Employee Expenses & A&G expenses(as per norms)			3236.50	2,435.68	
2	R&M Expenses (as per norms)			230.71	403.00	
3	A&G Expenses (as per norms)			445.32		
4	O&M Expense (as per norms) (1+2+3)		2,848.95	3912.53	2,838.68	
	Covid expenses				8.59	
2	O&M Expense (actuals)	3.4(a),3.4(b), 3.4(c)		3912.53	2,847.27	

D3.4(a)

Form D 3.4(a)

Employee Expenses

Name of Licensee

KERALA STATE ELECTRICITY BOARD LTD.

Rs. Crore

S. No.	Particulars	Reference	Previous Year (n-1) 2021-22	Remarks
			Audited	
1	2	3	4	11
1	Basic Salary		2959.12	
2	Dearness Allowance (DA)		332.92	
3	House Rent Allowance		105.93	
4	Conveyance Allowance		0.00	
5	Leave Travel Allowance		0.04	
6	Earned Leave Encashment		119.80	
7	Other Allowances		35.17	
8	Medical Reimbursement		11.51	
9	Overtime Payment		0.06	
10	Bonus/Ex-Gratia Payments		7.73	
11	Interim Relief / Wage Revision		0.00	
12	Staff welfare expenses		4.74	

S. No.	Particulars	Reference	Previous Year (n-1) 2021-22	Remarks
			Audited	
1	2	3	4	11
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		0.37	
17	Net Employee Costs		3577.39	
18	Terminal Benefits		0.47	
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		39.08	
19	Others		0.26	
20	Gross Employee Expenses		3617.21	
21	Less: Expenses Capitalised		380.71	
22	Net Employee Expenses		3236.50	

Form D 3.4(b)

Administrative & General Expenses

Name of Licensee

KERALA STATE ELECTRICITY BOARD LTD

Rs. Crore

S. No.	Particulars	Reference	Previous Year (n-1)	Remarks
			2021-22	
			Audited	
1	2	3	4	11
1	Rent Rates & Taxes		11.61	
2	Insurance		1.79	
3	Telephone & Postage, etc.		7.55	
4	Legal charges		1.47	
5	Audit Fees		0.61	
6	Consultancy charges		0.05	
7	Other Professional charges		1.04	
8	Conveyance		58.42	
9	Vehicle Running Expenses Truck / Delivery Van		0.65	
10	Vehicle Hiring Expenses Truck / Delivery Van		4.26	
11	Electricity charges		0.00	
12	Water charges		0.51	
13	Entertainment		0.47	
14	Fees & subscription		0.04	
15	Printing & Stationery		4.97	
16	Advertisements, exhibition publicity		0.43	
17	Contribution/Donations		3.00	
18	Training expenses		1.10	
19	Miscellaneous Expenses		2.78	
20	DSM activities		0.00	
21	SRPC expenses		0.16	
22	Sports and related activities		0.09	
23	Freight		1.64	
24	Purchase Related Advertisement Expenses		0.93	
25	Bank Charges		5.83	
26	Office Expenses		138.10	
27	License Fee and other related fee		7.14	

S. No.	Particulars	Reference	Previous Year (n-1) 2021-22	Remarks
			Audited	
1	2	3	4	11
28	Cost of services procured		0.00	
29	Outsourcing of metering and billing system		0.00	
30	V-sat, Internet and related charges		2.02	
31	Security arrangements		0.00	
32	Books & periodicals		0.04	
33	Computer Stationery		0.00	
34	Others		10.55	
	Others- Other Purchase related Expenses		-7.99	
	Others - Power Factor Incentive given to consumers		38.61	
	Others - Expenditure in connection with distribution of LED		13.89	
35	Gross A&G Expenses		311.75	
36	Ele. Duty u/s 3(I), KED Act		136.04	
37	Less: Expenses Capitalised		2.47	
38	Net A&G Expenses		445.32	

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) 2021-22(Audited)		Remarks
			Normal	Exceptional items-Flood	
1	2	3	4		10
1	Plant & Machinery		3.05	0.19	
2	Buildings		2.42	0.00	
3	Civil Works		0.06		
4	Hydraulic Works		0.07	0.00	
5	Lines & Cable Networks		221.74	17.39	
6	Vehicles		0.57		
7	Furniture & Fixtures		0.31		
8	Office Equipment		2.49		
9	Gross R&M Expenses		230.71	17.58	
10	Less: Expenses Capitalised				
11	Net R&M Expenses		230.71	17.58	

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 (2021-22)				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	10.1	20.44	1.98	0.00	22.42	0.00	0.00		0.00	20.44	22.42
2	Other Civil works	10.4	7.76	1.56	0.00	9.31	3.07	0.27		3.34	4.69	5.98
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	1,06,01,602	104.13	17.13	0.02	121.28	22.32	1.72		24.04	81.81	97.24
b)	Sub-station equipments	10543	75.69	0.86	0.00	76.55	35.75	3.61		39.37	39.94	37.19
i)	Transformers	10541	672.29	5.59	0.01	677.89	423.25	29.37		452.61	249.04	225.27
ii)	Switchgears, Control gear & Protection	10561	0.11	0.08	0.00	0.19	0.10	0.00		0.10	0.01	0.09
iii)	Batteries	10563	0.80	0.17	0.00	0.97	0.17	0.05		0.21	0.64	0.76
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	10.6	9429.07	1516.37	1.52	10946.96	4006.05	519.05		4525.10	5423.02	6421.86
b)	Sub-station equipments		0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00
i)	Transformers	10542	156.58	4.44	0.00	161.02	41.41	7.34		48.75	115.17	112.27
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	10.5	136.22	12.47	0.01	148.70	70.06	5.44		75.50	66.16	73.20
5	Communication equipment	1,05,71,572	0.41	0.00	0.00	0.41	0.27	0.00		0.27	0.13	0.14
6	Meters	10631	1590.10	11.69	0.01	1601.81	949.09	66.77		1015.85	641.01	585.95
7	Vehicles	10.7	8.39	3.11	0.00	11.50	7.46	0.06		7.52	0.93	3.98
8	Furniture & fixtures	10.8	46.95	3.33	0.00	50.29	20.61	2.64		23.26	26.34	27.03

S. No.	Asset Group (as per notification in respect of depreciation)	Rate of depreciation (%)	Gross fixed assets (2021-22)				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
9	Office Equipments	10.9	38.97	2.86	0.00	41.83	26.96	2.36		29.33	12.01	12.51
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 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	10905	342.30	34.69	0.00	376.99	87.91	41.22		129.13	254.39	247.86
	Buildings	10.2	87.52	29.32	0.00	116.84	42.77	2.88		45.65	44.75	71.19
15	Any other items (Hydrualic Works)	10.3	0.08	0.00	0.00	0.08	0.04	0.00		0.05	0.03	0.03
16	Gross Asset (Total (1) to (15))		12717.80	1645.66	1.57	14365.04	5737.29	682.79	0.00	6420.08	6980.51	7944.96
17	Less: Consumer contribution	55.1	1732.61	393.41	155.45	1970.57					1732.61	1970.57
18	Less: Government grants	55.2&55.3	833.05	506.24	80.75	1258.54					833.05	1258.54
19	Less: Deposit Works		0			0.00						
20	Less: Capital Subsidies	55.4	318.59	154.79	31.71	441.67					318.59	441.67
21	Net Asset considered for depriciation (16-17-18-19-20)		9833.55			10694.25					4096.26	4274.17

Term Loan

SL NO	NAME OF THE FINANCIAL INSTITUTION	Net Loan - Opening	CFL- OB	Loan- Opening – 01/04/2021	Add: Drawal(s) during the Year	Less: Repayment (s) of Loans during the year	Loan – Closing – 31/03/2022	CFL	Net loan – Closing – 31/03/2022	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	805.18	124.17	929.35	0.00	124.17	805.18	124.17	681.01	867.27	9.26% - 10.16%	87.44	
2	REC- Distriburion - Meter Scheme	0.00	12.45	12.45	0.00	12.45	0.00	0.00	0.00	6.22	9.75%	0.56	
3	Special Loan Assistance from REC	746.63	74.66	821.29	0.00	65.99	755.30	75.53	679.77	788.30	10% - 10.9%	84.43	
4	R E C - RGGVY	8.63	1.96	10.59	0.00	1.96	8.63	1.78	6.85	9.61	10.25% - 11%	1.07	
5	REC R-APDRP PART-B	367.37	65.16	432.54	0.00	65.16	367.37	65.16	302.21	399.95	9.26% - 10.16%	39.85	
6	SBI	580.09	72.46	652.54	0.00	61.72	590.82	73.30	517.53	621.68	7.95%	49.65	
7	Special Loan Assistance from PFC	528.04	45.92	573.96	0.00	39.78	534.17	46.45	487.72	554.06	9.08%	50.75	
8	PFC R-APDRP	225.52	0.00	225.52	5.85	0.00	231.37	0.00	231.37	228.45	9.00%	38.97	
9	PFC R-APDRP Part B	221.63	0.00	221.63	0.00	11.52	210.11	0.00	210.11	215.87	9.00%	5.87	
10	Kerala Financial Corporation	221.23	26.29	247.52	48.34	26.59	269.27	28.98	240.29	258.40	9.00%	21.44	
11	Medium Term Loan Kerala Financial Corporation	184.79	59.93	244.72	0.00	57.79	186.93	60.63	126.31	215.82	8.00%	17.58	
12	Indian Bank				8.20	4.14	4.06	0.46	3.60	2.03	6.75%	0.05	
	SUB-TOTAL	3889.10	483.00	4372.10	62.40	471.27	3963.23	476.47	3486.76	4167.66		397.66	
B	UNSECURED LOANS TERM LOANS												
1	Short Term Loan from REC			0.00	252.61	-	252.61	0.00	252.61	126.31	7.75%	16.14	
2	Short term loan from Bank of Baroda	199.77		199.77	-	199.77	0.00	0.00	0.00	99.89	8.90%	5.73	
3	Short term loan from M/s IREDA			0.00	404.18	106.10	298.08	298.08	0.00	149.04	7.75%	19.99	
	SUB-TOTAL	199.77	0.00	199.77	656.79	305.86	550.69	298.08	252.61	375.23		41.87	
	TOTAL	4088.87	483.00	4571.87	719.18	777.13	4513.92	774.55	3739.37	4542.89	9.68%	439.53	

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) 2021-22		Remarks
		Approved in Tariff Order	Audited	
1	2	3	4	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.	Loan repayment effective from (date to be indicated)			
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.	Loan repayment effective from (date to be indicated)			
4	Total Loan			
i.	Gross Loan -Opening			
ii.	Cumulative repayments of Loans upto previous year			
iii.	Net loan-Opening	3169.41	4571.87	
iv.	Add: Drawal(s) during the Year	675.01	719.18	
v.	Less: Repayment (s) of Loans during the year	154.91	777.13	
vi.	Net loan - Closing	3689.51	4513.92	
vii.	Average Net Loan	3429.46	4542.90	
viii.	Interest on Loan	329.8	439.53	
ix.	Weighted average Rate of Interest on Loans	9.68%	9.68%	

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) - 2021-22			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	3169.45	4571.87	4202.18	
4	Increase/Decrease due to ACE/de-capitalization during the Year	675.01	719.18	591.19	
5	Repayments of Normative Loan during the year	154.91	777.13	252.98	
6	Net Normative loan - Closing	3689.55	4513.92	4540.39	
7	Average Normative Loan	3429.51	4542.90	4371.29	
8	Weighted average Rate of Interest of actual Loans	9.62%	9.68%	9.68%	
9	Interest on Normative loan	329.80	439.53	423.14	

Form D 3.6 (c)

Interest on Bonds to meet Terminal Liabilities

Name of Distribution Licensee

KERALA STATE ELECTRICITY BOARD LTD.

Licensed Area of Supply

(Rs. Cr)

S.No .	Particulars (specify items)	Previous Year (n-1)			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				
3	Interest on Bond				
B	Bond Series 2				
4	Value of Bond				
5	Rate of Interest on Bond				
6	Interest on Bond				
C	...				
	...	544.38	559.33	559.33	

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	2021-22				Remarks
		Approved in Tariff Order	Audited	Normative	Truing Up requirement	
1	2	3	4	5	6	13
1	O&M expenses (as per norms)	246.51	326.04	295.93	295.93	
2	Maintenance Spares (as per norms)	8.02	58.67	58.67	58.67	
3	Receivables (as per norms)	2400.40	2433.67	2433.67	2433.67	
	Less:					
4	Security deposits except security deposits held in the form of Bank Guarantee from Users	3686.96	3221.96	3221.96	3221.96	
6	Total Working Capital	-1032.04	-403.58	-433.69	-433.69	
7	Interest Rate (as per norms)					
8	Interest on Working Capital (actual)		105.59			

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 _____

S.No.	Particulars	Ref.	2021-22			
			Approved in Tariff Order	Audited	Normative	Truing Up requirement
			4	5	6	7
1	Equity at the beginning of the year		1810.74	1810.74	1810.74	1810.74
2	Capitalisation					
3	Equity portion of capitalisation					
4	Equity at the end of the year			0.00		
	Return Computation			1810.74		
5	Return on Equity at the beginning of the year	14%*(1)	253.5	376.58		
6	Return on Equity portion of capitalisation	14%*(3)/2				
7	Total Return on Equity	(5)+(6)	253.50	376.58	253.50	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

KERALA STATE ELECTRICITY BOARD LTD.

Licensed Area of Supply _____

S. No.	Particulars	2021-22			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)				

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)*

2021-22

(Rs Crore)

S. No.	Description of the project/Scheme	Capital Expenditure					Remark
		Opening Balance as on	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)	1.92	8.41		8.08	2.24	
2	Emobility Promotion Fund FameIndia Scheme PhaseII		0.80		0.58	0.22	
3	Integrated Power Development Scheme (IPDS)	21.42	68.50		87.05	2.87	
4	Saubhagya Scheme		2.25		2.25	0.00	
5	Rural Electrification Scheme	0.04	0.69		0.71	0.02	
6	Distribution Line Extension	2.86	172.01		174.22	0.64	
7	Distribution Service Connection	3.16	176.08		176.62	2.62	
8	Distribution System Improvement	16.14	846.11	18.41	868.44	12.22	
9	Electrification of Harijan Colonies	0.00	0.08		0.08	0.00	
10	Electrification of Tribal Colonies	0.00	0.13		0.13	0.00	
11	Punja Package	0.00	0.01		0.01	0.00	
12	System Improvement in other areas	0.00	6.00		5.99	0.01	
13	Distbn. Capacitor Installation Scheme	2.11	1.91		0.09	3.93	
14	Street Lights	0.34	26.68		26.56	0.46	
15	Expenditure due to Natural Calamity	0.08	3.47		3.48	0.07	
16	RGVY-Village electrification Infrastructure	0.00	0.13		0.13	0.00	
17	RGVY-For effecting BPL Service Connection	0.00	0.01		0.01	0.00	
18	Part B Projects of R-APDRP	13.68	19.23		19.74	13.17	
19	R- APDRP Scheme	257.94	14.90		70.18	202.66	
20	CWIP - General	423.23	264.81		202.17	485.87	
21	Innovation fund	0.00	0.70		0.68	0.02	
22	Projects not Identified	1.06	0.00			1.06	
	TOTAL	744.00	1612.87	18.41	1647.20	728.08	

Form D 4.2

Consolidated report on additions to Fixed Assets during the year

Name of Distribution Business/Licensee

KERALA STATE ELECTRICITY BOARD LTD.

Licensed Area of Supply

Year (n-1)*

2021-22

(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	1.98	
02.	Buildings	10.2	29.32	
03.	Hydraulic Works	10.3	0.00	
04.	Other Civil Works	10.4	1.56	
05.	Plant & Machinery	10.5	35.31	
06.	Lines, Cable, Network etc.	10.6	1533.50	
07.	Vehicles	10.7	3.11	
08.	Furniture & Fixtures	10.8	3.33	
09.	Office Equipments	10.9	37.55	
	Decommissioning liability		1.57	
	TOTAL		1,647.20	

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)	2021-22			Remarks
		Approved in Tariff Order	Audited	Truing Up requirement	
		3	4	5 = 4 - 3	
1	2	3	4	5 = 4 - 3	12
1	Material Cost Variance		13.39	13.39	
2	Research and Development Expenses		-		
3	Cost Of Trading/Manufacturing Activity		(1.66)	(1.66)	
4	Bad and Doubtful Debts Written off / Provided/demand withdrawal of consumers		125.56	125.56	
5	Miscellaneous Losses and Write Offs		3.91	3.91	
6	Sundry Expenses		-		
7	Loss/(compensation) on account of flood cyclone etc		-		
8	Rebate allowed for online payment consumers		-		
9	Rebate on fixed charges		25.79	25.79	
10	Discount to Consumers		2.90	2.90	
	Total		169.88	169.88	
	Less				
	Chargable to Capital Expenses				
	Net chargable to revenue		169.88	169.88	

Form D 6.1

Improvement in performance

Name of Distribution Business/Licer **KERALA STATE ELECTRIC**
 Licensed Area of Supply _____

S.No.	Particulars	Ref	2021-22	Remarks
			4	
1	2	3	4	11
1	Distribution Losses, (%)		7.62	
2	Collection Efficiency, (%)		99.31	
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)		6.12	
5	Stopped Meters %			
6 (a)	Defective meters/metering arrangement%			
6 (b)	Replacement of Defective meters, %			
7	Supply availability %			
(1)	Base Load supply availability			
(a)	Actual contracted Base Load supply in MW		2970.67	
(b)	Base Load in MW		2651.67	
(c)	Base Load supply availability (%) (c=a/b)		112.03	
(2)	Peak Load supply availability			
(d)	Actual Contracted Peal Load Supply in MW		4085.17	
(e)	Peak load in MW		3924.33	
(f)	Peak Load Supply Availability (%) (c=a/b)		104.10	
	Supply availability % (0.75*c + 0.25*f)		110.05	
8	Transformer failure rate			
a.	Distribution transformers (%)			
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	Previous Year (n-1)				
		(Actual/Audited)				
		Energy Input	Energy Sales	Energy sent to lower voltage	Distribution Loss	
		MKWh	MKWh	MKWh	Percent	MKWh
1	2	3	4	5	6	7
	Voltage-wise Apportionment of Distribution losses					
1	33 kV					
2	11 kV					
3	LT					
	Overall Distribution Loss	25962425.43	23983416.87		7.62	1979008.56

Form D 7.1

Category-wise Sales

Name of Distribution Business/Licensee **KERALA STATE ELECTRICITY BOARD LTD.**

Licensed Area of Supply _____

Year (n-1)*

(MU)

S. No.	Consumer Category & Consumption Slab	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Total
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
	LT I	1204.11	1119.25	1078.60	1019.17	1009.14	1020.36	1006.29	970.63	1008.88	1047.98	1060.49	1130.89	12675.79
	LT II	0.30	0.25	0.29	0.31	0.30	0.32	0.30	0.28	0.31	0.31	0.30	0.32	3.60
	LT III A	0.07	0.00	0.00	0.01	0.01	0.01	0.01	0.04	0.16	0.05	0.04	0.05	0.45
	LT III B	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-4A	94.57	61.36	79.32	92.81	100.78	104.48	102.74	101.36	107.23	104.90	99.21	108.64	1157.40
	LT-4B	0.69	0.42	0.46	0.54	0.58	0.64	0.66	0.68	0.77	0.73	0.75	0.88	7.81
	LT-5A	28.59	22.18	15.37	12.04	12.62	12.54	10.33	11.11	22.91	43.55	47.05	44.91	283.21
	LT-5B	7.46	7.09	6.91	7.20	7.15	7.55	7.77	7.88	8.07	8.13	7.58	8.08	90.88
	LT-6A	16.19	12.56	11.89	12.19	12.58	13.75	14.71	15.71	17.39	17.08	17.40	20.03	181.46
	LT-6B	9.76	7.62	7.82	9.00	8.42	9.45	9.30	10.08	10.50	10.59	10.38	12.22	115.15
	LT-6C	20.35	14.49	15.00	16.95	17.41	18.58	18.11	18.48	20.59	20.14	20.21	23.11	223.43
	LT-6D	1.76	1.52	1.53	1.50	1.56	1.59	1.72	1.74	1.95	1.89	1.96	2.12	20.85
	LT-6E	0.22	0.17	0.15	0.18	0.18	0.23	0.23	0.26	0.25	0.26	0.24	0.28	2.64
	LT-6F	83.04	59.77	79.20	80.87	81.20	83.65	83.43	82.56	86.70	85.95	83.50	88.74	978.61
	LT-6G	6.60	5.40	5.59	5.89	5.87	6.42	6.39	6.41	6.71	6.76	6.61	7.75	76.42

S. No.	Consumer Category & Consumption Slab	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Total
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
	LT-7A	134.24	86.95	81.84	95.25	115.38	129.43	138.47	142.57	158.98	152.79	153.71	168.95	1558.56
	LT-7B	12.41	9.57	8.40	9.12	10.38	11.87	12.07	12.65	12.66	13.06	12.30	13.02	137.49
	LT-7C	1.05	0.31	0.20	0.24	0.31	0.30	0.58	1.84	2.27	1.70	1.79	2.37	12.96
	LT-8A	20.52	20.35	19.24	19.28	19.33	18.75	19.06	19.10	18.83	18.76	18.59	18.60	230.41
	LT-8B	10.72	10.31	10.12	10.73	10.64	11.26	10.92	11.24	11.46	12.17	11.18	11.66	132.42
	LT-9	0.12	0.07	0.07	0.06	0.10	0.09	0.13	0.11	0.13	0.12	0.14	0.11	1.23
	LT X	0.03	0.02	0.03	0.04	0.05	0.05	0.05	0.05	0.08	0.10	0.11	0.09	0.69
	LT Total	1652.82	1439.66	1422.05	1393.39	1413.98	1451.30	1443.27	1414.77	1496.86	1547.03	1553.52	1662.82	17891.48
	EHT GENERAL (A)	1.20	1.15	1.10	1.13	1.09	1.13	1.16	1.12	1.17	1.18	1.11	1.29	13.82
	EHT GENERAL (B)	3.96	2.48	3.04	3.48	3.65	3.80	3.82	4.26	4.14	3.89	3.85	4.45	44.83
	EHT I (66 kV) INDUSTRIAL	16.85	7.60	9.28	10.61	18.99	21.39	20.80	15.71	18.52	21.06	22.74	26.92	210.46
	EHT II (110 kV) INDUSTRIAL	49.66	36.65	38.05	40.38	55.36	54.62	62.10	51.16	53.88	54.65	55.09	63.62	615.24
	EHT II (110 kV) RT	23.70	18.01	19.03	26.22	27.41	26.46	29.14	27.32	30.10	31.60	28.46	30.86	318.29
	EHT III (220 kV) INDUSTRIAL	8.71	2.86	4.74	5.80	13.03	21.50	24.46	21.43	27.97	18.19	18.64	25.90	193.21
	HT I (A) INDUSTRIAL	193.41	135.68	173.08	190.98	193.02	200.14	199.33	190.82	200.78	205.12	193.83	210.63	2286.81
	HT I (B) INDUSTRIAL	0.83	0.64	0.73	0.80	0.78	0.82	0.83	0.83	0.92	0.88	0.89	1.14	10.09
	HT II (A) GENERAL	17.20	13.73	15.01	16.56	15.80	17.02	16.90	16.58	17.66	17.09	16.81	20.15	200.50
	HT II (B) GENERAL	52.07	47.08	45.92	48.91	49.39	50.72	52.40	50.99	53.46	52.19	50.00	59.11	612.24
	HT III (A) AGRICULTURE	0.66	0.44	0.36	0.42	0.39	0.41	0.38	0.37	0.51	0.81	0.89	0.86	6.49

S. No.	Consumer Category & Consumption Slab	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Total
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
	HT III (B) AGRICULTURE	0.13	0.13	0.14	0.17	0.21	0.21	0.20	0.18	0.19	0.20	0.18	0.21	2.14
	HT IV (A) COMMERCIAL	22.66	11.69	14.08	16.51	20.60	21.44	23.06	23.16	25.88	24.18	23.08	27.13	253.48
	HT IV (B) COMMERCIAL	26.56	10.46	11.48	15.76	20.04	21.51	27.58	29.82	36.89	32.90	31.30	39.67	303.97
	HT V DOMESTIC	1.52	1.39	1.38	1.47	1.43	1.50	1.53	1.49	1.65	1.53	1.45	1.62	17.97
	HT VI	0.00	0.00	0.05	0.05	0.06	0.06	0.05	0.00	0.00	0.00	0.00	0.00	0.27
	KMRL(Kochi Metro Rail Ltd)	1.02	0.19	0.07	0.98	1.04	0.95	1.29	1.40	1.30	1.11	0.91	1.10	11.37
	KMRL(Kochi Metro Rail Ltd)-HT	0.0001	0.0000	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0000	0.0001	0.0010
	Bulk Licensees/consumers	44.22	35.83	38.61	40.86	40.19	41.91	42.73	41.87	44.79	44.15	42.69	49.05	506.91
	Total Energy sales (A)	2117.18	1765.68	1798.20	1814.48	1876.46	1936.88	1951.04	1893.28	2016.67	2057.75	2045.45	2226.52	23499.59
	Energy supplied by KSEBL to adjust against captive injection /solar prosumers injection(B)	16.681	15.774	16.674	19.530	18.709	17.580	19.604	19.808	21.107	17.593	17.937	21.237	222.235
	Energy supplied to RGCCPP for meeting auxiliary consumption©	0.86041	1.3299	0.64169	0.6004	0.6759	0.5519	0.69263	0.55031	0.5007	0.64056	0.605773	0.57368	8.223894
	Sub Total(D)	2134.72	1782.78	1815.52	1834.61	1895.84	1955.01	1971.34	1913.64	2038.27	2075.98	2063.99	2248.34	23730.04
	Energy wheeled through open access at consumer end (E)	17.130	30.505	34.374	40.305	14.403	19.073	14.228	27.956	16.248	19.316	13.450	6.385	253.373
	Total energy handled(D+E)	2151.85	1813.29	1849.89	1874.91	1910.24	1974.09	1985.56	1941.60	2054.52	2095.30	2077.44	2254.72	23983.42

Form D 7.3

Collection Efficiency

Name of Distribution Business/Licensee _____

Licensed Area of Supply _____

(Rs. Crore)

S. No.	Particulars	Previous Year (2021-22)	Remarks
		(Actuals/Audited)	
1	2	3	8
	HT Category		
	Category-1		
	Category-n		
	LT Category		
	Category-1		
	Category-n		
	Total	99.31%	

Form D 8

Deviation Analysis

Name of Distribution Business/Licensee
Licensed Area of Supply

KERALA STATE ELECTRICITY BOARD LTD.

2021-22

(Rs. Crore)

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	9607.30	9179.37	427.93			
2	Transmission Charges	1283.52	1210.14	73.38			
3	NLDC/RLDC/SLDC Charges						
4	Operation & Maintenance Expenses						
4.1	Employee Expenses	2490	3236.50	-746.50			
4.2	Administration & General Expenses		445.32	-445.32			
4.3	Repair & Maintenance Expenses	358.95	248.29	110.66			
5	Interest and finance charges on long term loans	329.8	379.25	-49.45			
6	Depreciation	154.91	682.79	-527.88			
7	Interest on Working Capital		105.59	-105.59			
8	Interest on consumer security deposits and deposits from Users of the distribution system	238.74	136.20	102.54			
9	Any other item (to be specified)						
	Others		169.88	-169.88			

S. No.	Particulars	Approved	Actual	Deviation	Reason for Deviation	Controllable	Uncontrollable
1	2	3	4	5	6	7	8
	Amortisation of Intangible Assets		0.05	-0.05			
	Other Interest and Finance Charges	754.09	762.70	-8.61			
	Prior period expenditure						
10	Additional contribution to Master Trust	167.1		167.10			
11	Amortization of past gap	850		850.00			
A	Total Expenditure	16234.42	16556.10	-321.68			
B	Return on Equity	253.5	376.58	-123.08			
C	Tax on ROE						
D	Revenue						
1	Revenue from sale of electricity	14895.02	16296.55	-1401.53			
2	Other Income	594.36	565.75	28.61			

Form D P&L

Profit & Loss Account

Name of Distribution Business/Licence **KERALA STATE ELECTRICITY BOARD LTD.**
 Licensed Area of Supply _____

S.No.	Particulars	Ref	Previous Year	Previous Year	Remarks
			2021-22	2020-21	
1	2	3	4	5	6
	I. INCOME				
	a. Revenue from Sale of Power		16296.55	14091.45	
	b. Revenue Subsidies and Grants				
	c. Other Income		565.75	981.35	
	Total (a+b+c)		16862.30	15072.80	
	II. EXPENDITURE				
	a. Repairs and Maintenance.		230.71	206.51	
	b. Employee Cost		3617.21	4701.10	
	c. Administration and General Expenses		447.79	434.92	
	d. Depreciation		682.79	578.77	
	1). Amortisation of Intangible Assets		0.05	2.63	
	e. Interest and Finance charges		1402.15	1448.06	
	f. Subtotal (a+b+c+d+e)		6380.69	7371.99	
	g. Less Capitalised Expenses:				
	- Interest & Finance Charges		18.41	82.08	
	- Other Expenses		383.17	355.89	
	h. Other Debits		169.88	163.21	
	I. Extra Ordinary Items		17.58	17.53	
	j. Purchase of power		10319.13	10113.35	
	k. Generation of Power				
	Total Expenditure (f-g+h+i+j+k)		16485.72	17228.11	
	III. Profit/(Loss) before Tax (I-II)		376.58	-2155.30	
	IV. Provision for Income Tax				
	V. Net Prior period credits (Charges)				
	V.(a). Other Comprehensive Income		-826.94	-566.14	
	VI. Surplus (Deficit)		-450.36	-2721.45	
	VII. Net Assets at the beginning of the year (Less consumer's Contribution)		4096.26	3366.23	
	VIII. Rate of Return (VI/ VII)				

Form D BS

Balance Sheet at the end of the year

Name of Distribution Business/Lice **KERALA STATE ELECTRICITY BO**
Licensed Area of Supply

S.No.	Particulars	Ref	Previous Year		Remarks
			2021-22	2020-21	
1	2	3	4	5	6
	Sources of Funds:				
	(A) Capital Funds:				
	Share Capital (Govt. equity)		1810.74	1810.74	
	Reserves & Surplus		-20118.57	-15887.59	
	Total (A)		-18307.83	-14076.85	
	(B) Loan from State Government				
	Loan from others :				
	-Secured		3486.76	3889.10	
	-Unsecured		252.61	199.77	
	Total (B)		3739.37	4088.87	
	(C) Contribution, grants & subsidies towards cost of capital assets		3670.79	2884.26	
	Provident Fund		2389.74	2079.39	
	Terminal Benefit Fund		12695.99	6801.90	
	Borrowings for working capital				
	Other Non current Liabilities		330.03	335.91	
	Long term Provision		3489.31	6195.45	
	Grand total of sources of funds (A+B+C)		8007.39	8308.92	
	Application of Funds:				
	A) Fixed assets				
	a) Gross fixed assets		14365.04	12717.80	
	b) Less accumulated depreciation		6420.08	5737.29	
	c) Net Fixed assets(a)-(b)		7944.96	6980.51	
	d) Capital works in progress		728.08	744.00	
	e) Assets not in use				
	f) Deferred costs				
	g) Intangible assets		18.49	11.34	
	h) Investments		2.11	2.23	
	Other Non current assets-Other Financial Assets		-170.74	21.09	
	Total (c) +(d)+(e)+(f)+(g)+(h)		8522.89	7759.17	

S.No.	Particulars	Ref	Previous Year		Remarks
			2021-22	2020-21	
1	2	3	4	5	6
	B)Subsidy receivable from Government				
	Contribution receivable from State Government towards pension liability		1138.83	1791.00	
	C) Net Current Assets				
	(1) Current assets, loans and advances				
	a) Inventories*		515.97	577.37	
	b) Receivables against Sale of Power		2462.36	2526.70	
	c) Cash & bank balances		407.09	408.31	
	d) Loans and advances		0.50	-149.15	
	e) Sundry receivables		5345.28	5817.24	
	Total (C) (1)		8731.20	9180.47	
	(2) Current liabilities & provisions				
	a) Security Deposits from Consumers		3235.94	3207.98	
	b) Borrowings for working capital		758.15	635.37	
	c) Payments due on Cap. liabilities				
	d) Other current liabilities		6391.44	6578.37	
	Total (C) (2)		10385.53	10421.72	
	Net Current Assets (C(1)) - (C(2))		-1654.33	-1241.25	
	Grand Total of Application of funds (A)+(B)+(C)		8007.39	8308.92	

Form D CF

Cash Flow for the year

Name of Distribution Business/Licensee _____

Licensed Area of Supply _____

S.No.	Particulars	Ref	Previous Year		Remarks
			2021-22	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		-450.36	-2721.45	
	Less : Income Tax Payment during the year				
	: Other Comprehensive Income		-826.94	-566.14	
	Total of (a)		376.58	-2155.30	
	b. Add: Debits to revenue account not requiring cash Flow:				
	I) a) Depreciation		682.79	578.77	
	b) Depreciation on IND As Adj		0.00	0.00	
	ii) Amortisation of Deferred costs				
	iii) Amortisation of Intangible Assets		0.05	2.63	
	iv) Investment Allowance Reserve				
	v) Others, if any		-2712.02	-133.28	
	Total of (b)		-2029.18	448.12	
	c. Less : Credits to revenue Account not involving cash receipts				
	I) Deprecation				
	ii) Subsidies receivables				
	iii) Revenue gap				
	Total of (c)		0	0	
	Net Funds from Earnings (a)+(b)-(c)		-1652.60	-1707.19	
2	Contributions, Grants & Subsidies to cost of Capital Assets		786.53	494.20	
3	Security Deposit from consumers		27.96	2.77	
4	Proceeds from disposal of fixed Assets				
5	Total Funds from Operations (1+2+3+4)		-838.11	-1210.22	
6	Net Increase/(Decrease) in working Capital				
	(a) Increase/(Decrease) in Current Assets				
	I) Inventories		-61.40	-101.69	
	ii) Receivables against sale of power		-64.34	-40.78	
	iii) Loans and Advances		149.65	-149.15	
	iv) Sundry receivables		-471.96	-597.29	
	Total of (a)		-448.05	-888.91	

	(b) Increase/(Decrease) in Current liabilities			
	I) Borrowings for working Capital		122.78	-304.69
	ii) Other current liabilities		-186.93	240.68
	iii) Others (Increase in Reserve + payment due on cap.liab)		-4607.56	-566.16
	Total of (b)		-4671.71	-630.17
	Net Increase/(Decrease) in working Capital (a)- (b)		4223.66	-258.73
7	Net Funds from operations before subsidies and Grants (5-6)		-5061.77	-951.48
8	Receipts from revenue subsidies and Grants		652.17	1063.44
	Total Net Funds from operations including subsidies & Grants (7+8)		-4409.60	111.96
	II. Net increase/ decrease in Capital liabilities			
	a). Fresh borrowings			
	I) State Loans			
	ii) Foreign currency Loans / Credits			
	iii) Other borrowings		748.13	1938.79
	Total of (a)		748.13	1938.79
	b) Repayments :			
	I) State Loans			
	ii) Foreign currency Loans / Credits			
	iii) Other borrowings		1097.63	1672.96
	Total of (b)		1097.63	1672.96
	Net Increase/(Decrease) in Capital liabilities (a) - (b)		-349.50	265.83
	III. Increase/(Decrease) in equity Capital		0.00	0.00
	IV. Total Funds available for Capital Expenditure (I+II+III)		-4759.10	377.78
	V Funds utilised on Capital Expenditure			
	a) On projects		1631.31	1537.87
	b) Advance to Suppliers & Contractors			
	c) Intangible Assets		7.20	0.00
	d) Deferred Cost		0.00	0.00
	e) Long Term Loans and Advances		-191.83	113.30
	Total of V (a+b+c+d)		1446.68	1651.17
	VI Net Increase/(Decrease) in Government contribution			
	VII Net Increase/(Decrease) in Terminal benefit fund		5894.09	1364.54
	VIII Net Increase/(Decrease) in Provident fund		310.35	73.35
	IX Net Increase/(Decrease) in investments		-0.12	-1.77
	X Net Increase/(Decrease) in cash / bank balance (IV - V- VI -IX)+ (-1.22	166.27
	XI Add opening cash & Bank balance		408.31	242.05
	XII Closing Cash & Bank balance (X+XI)		407.09	408.32

CHAPTER – 5: GENERAL EXPLANATION ON VARIOUS EXPENSES

5.1 Interest and finance charges: An amount of Rs 1943.62 Cr had been approved by the Hon'ble Commission under this head. The actual expense incurred was Rs.1618.25 Cr (net of capitalized interest Rs.229.28 Cr). A comparison summary of I & F charges under various heads, as approved by the Hon Commission and actually incurred as per audited accounts, are given below.

Table 5.1: Interests and finance Charges (Rs Cr)												
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	133.90	313.12	329.80	776.82	128.22	179.77	439.53	747.52	5.68	133.35	109.73	29.30
Security Deposit Interest			238.74	238.74			136.20	136.20	-	-	102.54	102.54
Master Trust Bond Interest	33.41	73.73	544.38	651.52	32.84	59.35	559.33	651.52	0.57	14.38	14.95	0.00
WC/OD interest	7.60	23.28		30.88	6.20	11.20	105.59	122.99	1.40	12.08	105.59	-92.11
PF interest	11.21	24.74	182.63	218.58	8.97	16.22	152.86	178.06	2.24	8.52	29.77	40.52
Other charges	-	-	-	-	1.06	1.55	8.63	11.24	-1.06	-1.55	-8.63	-11.2
Carrying cost	-	-	27.08	27.08				-	-	-	27.08	27.08
GROSS TOTAL	186.12	434.87	1,322.63	1,943.62	177.29	268.09	1,402.14	1,847.53	8.83	166.78	79.51	96.09
Less: Interest capitalized	-	-	-	-	144.32	66.55	18.41	229.28	144.32	66.55	18.41	-229.2
Total I&F	186.12	434.87	1322.63	1943.62	32.97	201.54	1383.73	1618.25	153.15	233.33	-61.10	325.37

5.2 Interest on loans: The normative interest provisionally approved on loan amounted to Rs. 776.82 Cr but actually incurred Rs. 747.52 Cr, which was less than the sum approved by Rs.29.30 Cr. Difference is mainly because of the normative approach adopted by the Hon Commission to assess the loan. While approving ARR, Hon'ble Commission considered trued up normative loan for 2015-16 and thereafter provisionally assessed the normative loan for 2016-17 and 2017-18. Then, provisional GFA addition for 2018-19,2019-20, 2020-21 and 2021-22 were considered to ascertain the level of normative loan as on 31.03.2022. Actual average rate of interest during the year 2021-22 was 9.57 % against approved rate of 9.43%. Normative interest was approved at Rs.776.82 Cr as summarized below:

Table 5.2: Normative loan as on 31.03.2022 and interest as per order dated 08.07.2019 (Rs Cr)					
Sl. No	Description	SBU G	SBU T	SBU D	Total
1	Opening levels of normative Loan (as on 1-4-2021)	1456.13	3257.07	3169.46	7882.66
2	Provisional Asset Addition for 2021-22	153.76	615.21	880.75	1649.72
3	Contribution & Grants	0	100	205.74	305.74
4	Net Addition to Normative loan 2021-22 (2-3)	153.76	515.21	675.01	1343.98
5	Repayment for 2021-22 (Depreciation)	196.26	261.09	154.91	612.26
6	Closing provisional Normative Loan 31.03.2022	1413.63	3511.18	3689.56	8614.37
7	Average normative loan	1434.88	3384.13	3429.51	8248.52
8	Rate of interest	9.33%	9.25%	9.62%	
9	Interest charges	133.90	313.12	329.80	776.82

However, the actual outstanding loan as on 31.03.2022 was Rs.7832.55 Cr as against the assessed normative loan of Rs.8614.37 Cr by the Hon'ble Commission. Actual loan was less than the assessed levels by Rs. 781.82 Cr, whereas the actual opening loan as on 31.03.2021 was less than the approved normative loan by Rs. 98.19 Cr. This has 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. 1299.10 Cr received from KIIFB and DRIP, which has been disclosed under Note 20 of the accounts.

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

Table 5.3: Summary of loans, interest and average rate of interest (Rs. Cr)							
SBU	Opening (01/04/2021)	Add: additions during the Year	Less: Repayments during the year	Closing (31/03/2022)	Average loan	Interest on loan	Average interest rate (%)
SBU G	1352.87	315.70	268.65	1399.91	1376.39	128.22	9.32
SBU T	1859.74	443.12	384.13	1918.72	1889.23	179.77	9.52
SBU D	4571.87	719.18	777.13	4513.92	4542.90	439.53	9.68
Total	7784.48	1477.99	1429.92	7832.55	7808.51	747.52	9.57

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

Table-5.4 : Basis of apportionment of Loans and Interests (2017-18)		
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	
1	State Bank of India	GFA+CWIP
2	Vijaya Bank	GFA+CWIP
3	South Indian Bank	GFA+CWIP
4	Bank of India	GFA+CWIP
5	REC	GFA+CWIP
6	Union bank of India	GFA+CWIP
7	Canara Bank	GFA+CWIP
8	Andhra Bank	GFA+CWIP

5.5 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 31.03.2022 has been Rs. 500 Cr. A summary of Short-Term loans is given in **Appendix-2**. Interest on STL for the year 2021-22 had been Rs.82.87 Cr. The details are given in **Appendix-3**. Overdrafts & Demand loans as on 31.03.2022 amounted to Rs. 1500.63 Cr (Rs.1272.23 Cr in 2020-21) with an interest to the tune of Rs.122.99 Cr. Thus, Long term loan and STL registered an increase of Rs.48.08 Cr and OD balance by Rs. 228.40 Cr during the year. There was an increase in receipt from KIIFB and DRIP to the tune of Rs.395.42 Cr (Note No. 20 of Audited accounts) due to which the overall borrowings recorded an increase of Rs.671.90 Cr in comparison with 2020-21.

5.6 During 2021-22, KSEBL executed capital works to the tune of Rs.3138.75 Cr during the year and completed works capitalized to the tune of Rs 3771.67 Cr. Project wise details of CWIP are furnished in **Appendix 4**. A summary of capital works is furnished below:

Sl. No	SBU	CWIP as on 01/04/2021	Works executed during the year	GFA Addition	CWIP as on 31/03/2022
1	Generation	1,722.31	483.28	361.63	1,843.96
2	Transmission	1,696.42	1024.19	1762.84	957.77
3	Distribution	744.00	1631.28	1647.20	728.08
4	GRAND TOTAL	4,162.73	3,138.75	3,771.67	3,529.81

5.7 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 (Appeal No.27 of 2019 and 31 of 2019 for 2015-16 and 2016-17 respectively). Hon'ble Commission, took similar view in the truing up order for 2017-18 to 2020-21 also, on which KSEBL has been left with no option but to appeal against. In view of the pendency of dispute on normative loan claim as well as approval, KSEBL retains the claim in true up for 2021-22 also as had been done for the earlier years.

5.8 Hon'ble Commission, as per order dated 24.06.2022 in OA 23/2022, has decided the truing up for 2020-21, in which normative loan has been approved at Rs.5985.67 Cr. Therefore, Normative loan at the beginning of the year 2021-22 has been considered at Rs. 6453.27 Cr as summarized below:

Table 5.6 Computation of Normative loan as on 01.04.2021					
Sl. No	Description	SBU G	SBU T	SBU D	Total
1	Closing balance of Normative loan as per True up order for 2020-21 (OA 23/2022 dated 24.06.2022)	531.97	1452.68	4001.02	5985.67
2	Add: Disputed claim pending before APTEL	135.23	131.21	201.16	467.60
3	Normative loan as on 01.04.2021 considered in this petition	667.20	1583.89	4202.18	6453.27

Additional capitalization during 2021-22 and normative loan thereon.

5.13 GFA addition during 2021-22 was Rs. 3771.67 Cr. The asset class wise details of fixed assets addition under the strategic business units of SBU G, SBU T and SBU D during 2021-22 as per accounts is furnished below:

Table 5.7 SBU wise -Asset class wise GFA addition for 2021-22 (Rs Cr)					
Sl.No	Description	SBU G	SBU T	SBU D	Total
1	Land	8.00	3.09	1.98	13.08
2	Building	53.98	28.20	29.32	111.50
3	Hydraulic works	187.84	0.13		187.97
4	Other Civil works		19.96	1.56	21.52
5	Plant & Machinery	95.04	493.49	35.31	623.84
6	Lines, cable networks etc.	1.68	1208.53	1533.50	2743.71
7	Vehicle	5.53	3.26	3.11	11.90
8	Furniture & Fixtures	6.80	2.50	3.33	12.64
9	Office equipment	2.41	2.85	37.55	42.81
10	Decommissioning liability	0.36	0.82	1.57	2.75
11	Total	361.63	1762.84	1647.20	3771.67

5.14 SBU wise details of GFA addition with explanation is furnished below:

SBU GENERATION:

5.15.1 GFA worth Rs. 16.87 Cr represent part capitalization within the meaning of Tariff Regulations. Asset category wise details of part capitalized assets are furnished in **Appendix 4A**.

5.15.2 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 amounting to Rs.0.36 Cr is not considered in GFA addition during the year for truing up purpose. Further, Rs. 46.54 Cr worth of part capitalized assets in earlier years has been considered as GFA addition during 2021-22, details of which are furnished in **Appendix 4B**.

5.15.3 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.391.05 Cr as detailed in Table below.

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

Table 5.8: GFA addition for 2021-22 eligible as per Tariff Regulation for SBU G (Rs. Cr)										
No.	Particulars	Gross fixed assets for 2021-22 as per Accounts			Part capitalized in 2021-22	Part capitalized in earlier years but considered in 2021-22			Decommissioning liability	Addition net of adjustments
		Year beginning	Additions	Year End		2016-17	2017-18	2020-21		
1	Land & land rights	1553.41	8.00	1561.41	7.77					0.23
2	Hydraulic works	1404.32	187.84	1592.16	1.62					186.22
3	Building & Civil works of Power plant	623	53.98	676.98	1.73	0.03		1.52		53.80
4	Plant & machinery including sub-station equipment	13591.85	95.04	13686.89	5.70	0.01	0.68	44.12		134.15
5	Line, cable network etc	8.64	1.68	10.32				0.06		1.74
6	Vehicles	10.27	5.53	15.80						5.53
7	Furniture & fixtures	6.36	6.80	13.16	0.02	0.03		0.01		6.82
8	Office Equipment	12.51	2.41	14.92	0.03	0.01	0.17	0.01		2.57
9	Decommissioning liability	0.08	0.36	0.44					0.36	0.00
	Total (1) to (9)	17210.44	361.63	17572.07	16.87	0.08	0.85	45.72	0.36	391.05
	True up claim for 2021-22									
	Enhancement in value due to revaluation	11988.98		11988.98						
	Net of enhancement in value	5221.46	361.63	5583.09						

5.15.5 Hon'ble Commission may kindly note that a sum of Rs. 20.96 Cr was received as capital subsidy and grants during 2021-22. Hon'ble Commission may be pleased to approve GFA addition under SBU G at Rs.370.09 for the year 2021-22 for the purpose of normative loan and 362.09 Cr (Excluding land value of Rs. 8.00 Cr) for depreciation.

SBU Transmission:

5.16.1 As per audited accounts, GFA addition during the year has been Rs.1762.84 Cr. Details are furnished in Appendix 4. Out of the GFA addition during the year, assets worth Rs.40.41 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**.

5.16.2 KSEBL, as per truing up petition for 2016-17 to 2020-21, 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. 110.89 Cr were commissioned in 2021-22. Details are furnished as per **Appendix 4 D to 4 H**. Project wise GFA addition details are furnished in **Appendix 4 I**.

5.16.3 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 2021-22 were considered to arrive at the asset addition eligible as per Tariff Regulation. This amounted to Rs.1832.49 as detailed in Table below:

No	Assets Group	Gross fixed assets			Adjustments		Part capitalized in earlier years but commissioned during 2021-22					Addition as per Regulation
		Year beginning	Additions	Year End	Part capitalized	DC liability	16-17	17-18	18-19	19-20	20-21	
1	Land & land rights	502.87	3.09	505.96	0.12				0.49	0.00	0.60	4.06
2	Buildings	407.97	28.20	436.17	0.62				0.08	0.00	2.80	30.46
3	Hydraulic Works	11.29	0.13	11.42	0.00					0.00	0.10	0.24
4	Other Civil works	497.89	19.96	517.85	1.70			0.79	0.18	0.18	4.73	24.15
5	Plant & Machinery	2767.3	493.49	3260.79	25.88			0.18	1.85	0.28	49.92	519.84
6	Lines, cable networks etc.	2381.99	1208.53	3590.52	12.06		0.01	0.13	4.77	18.87	24.88	1245.13
7	Vehicle	8.14	3.26	11.40	0.00					0.00	0.00	3.26
8	Furniture and Fixtures	7.65	2.50	10.15	0.00					0.00	0.03	2.53
9	Office Equipment	16.13	2.85	18.98	0.02					0.00	0.00	2.82
10	Decommissioning liability	1.12	0.82	1.94		0.82						0.00
11	Gross Asset (Total (1) to (10))	6602.35	1762.84	8365.19	40.41	0.82	0.01	1.10	7.38	19.33	83.07	1832.49

5.16.4 Hon'ble Commission may kindly approve GFA addition of Rs.1832.49 Cr for 2021-22. Consumer contribution, grants and subsidies received during the year amounted to Rs.15.81 Cr as detailed **Appendix 5**. GFA addition to the tune of Rs. 1816.68 Cr (Rs.1832.49 Cr- Rs.15.81 Cr) may kindly be approved as GFA addition eligible for normative loan and Rs.1812.62 Cr (excluding land value Rs.4.06 Cr) as GFA eligible for depreciation.

GFA addition for SBU D:

5.17.1 As per audited accounts, assets capitalized during the year has been to the tune of Rs.1647.20 Cr as detailed below:

Table 5.10: Scheme wise capital expenditure and GFA addition under SBU D for 2021-22 (Rs. Cr)					
CWIP Code	Description	Opening CWIP	Cost incurred	Capitalized	Closing CWIP
14.05	Deen Dayal Upadhyay Gram Jyothi Yojana (DDU GJY)	1.92	8.41	8.08	2.24
14.10	E mobility Promotion Fund FAME India Scheme Phase II		0.80	0.58	0.22
14.13	Integrated Power Development Scheme (IPDS)	21.42	68.50	87.05	2.87
14.47	Saubhagya Scheme		2.25	2.25	-
14.50	Rural Electrification Scheme	0.04	0.69	0.71	0.02
14.51	Distribution Line Extension	2.86	172.01	174.22	0.64
14.52	Distribution Service Connection	3.16	176.08	176.62	2.62
14.53	Distribution System Improvement	16.14	864.52	868.44	12.22
14.54	Electrification of Harijan Colonies	-	0.08	0.08	-
14.55	Electrification of Tribal Colonies	-	0.13	0.13	-
14.57	Punja Package	-	0.01	0.01	-
14.58	System Improvement in other areas	-	6.00	5.99	0.01
14.59	Distbn. Capacitor Installation Scheme	2.11	1.91	0.09	3.93
14.60	Street Lights	0.34	26.68	26.56	0.46
14.61	Expenditure due to Natural Calamity	0.08	3.47	3.48	0.07
14.62	RGVY-Village electrification Infrastructure	-	0.13	0.13	-
14.63	RGVY-For effecting BPL Service Connection	-	0.01	0.01	-
14.67	Part B Projects of R-APDRP	13.68	19.23	19.74	13.17
14.82	R- APDRP Scheme	257.94	14.90	70.18	202.66
14.90	CWIP - General	423.23	264.81	202.17	485.87
14.91	Innovation fund	-	0.70	0.68	0.02
14.99	Projects not Identified	1.06	-		1.06
	SUB TOTAL (C)	744.00	1,631.28	1,647.20	728.08

5.17.2 Decommissioning liability amounting to Rs. 1.57 Cr is included in the GFA addition for the year. Consumer contribution, grants and subsidies received during the year 2021-22 has been Rs.1054.44 Cr, details of which are given in **Appendix 5**. After excluding contribution etc GFA addition eligible for normative loan amounts to Rs. 591.19 Cr. (Rs.1647.20 Cr- (Rs.1054.44 Cr+ Rs.1.57 Cr). GFA addition eligible for depreciation amounts to Rs. 589.21 Cr after excluding land value of Rs.1.98 Cr (Form D3.5 of the petition).

5.18 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.705.45 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 2021-22 is furnished below:

Sl. No	Description	SBU G	SBU T	SBU D	Total
1	Interest and Finance charges	144.32	66.55	18.41	229.28
2	Employee cost	63.84	106.93	380.71	551.48
3	A&G expenses	10.19	5.11	2.47	17.77
3	Total	218.35	178.59	401.59	798.53

5.18.1 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 with regard to GFA are allowed on assets put to use at normative basis. The norms were derived based on net trued up expenses of previous years. Therefore, in the truing up petition, normative interest as well as normative O&M expenses are considered as a charge in ARR and no portion earmarked towards subsequent capitalization.

Contribution and Grants:

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

SL No.	PARTICULARS	GEN	TRANS	DIST	TOTAL
1	Consumer contribution	0.05	6.66	393.41	400.13
2	Subsidies	20.91	0.00	0.00	20.91
3	Grants Recd. Towards Cost of Fixed Assets	0.00	3.95	506.24	510.20
4	Others	0.00	5.20	154.79	159.99
5	Gross Total	20.96	15.81	1054.44	1091.22
6	Add: Concessional loan				
7	Add: Decommissioning liability	0.36	0.81	1.57	2.75
8	Less: Subsidies & grants amortization	6.68	35.30	267.91	309.88
9	As per Accounts	14.65	-18.67	788.10	784.09

5.20 On the basis of the above submission, GFA addition eligible as per Tariff Regulation, 2018 amounts to Rs. 3869.18 Cr against Rs. 3771.67 Cr as per audited accounts. GFA addition eligible for depreciation amounts to Rs.2763.91 Cr and additional normative loan Rs. 2777.96 Cr. Details are furnished below:

Table 5.13: Breakup of additional capitalization as per Accounts and as per KSERC Regulations					
Sl.No	Particulars	SBU G	SBU T	SBU D	TOTAL
1	GFA Addition as per Accounts	361.63	1762.84	1647.20	3771.67
2	Less: Decommissioning liability	0.36	0.82	1.57	2.75
3	Less: Part capitalization	16.87	40.41	0	57.28
4	Add: Part capitalization in 2016-17 but commissioned during 2021-22	0.08	0.01	0	0.09
5	Add: Part capitalization in 2017-18 but commissioned during 2021-22	0.85	1.10	0	1.95
6	Add: Part capitalization in 2018-19 but commissioned during 2021-22		7.38	0	7.38
7	Add: Part capitalization in 2019-20 but commissioned during 2021-22		19.33	0	19.33
8	Add: Part capitalization in 2020-21 but commissioned during 2021-22	45.72	83.07	0	128.79
9	GFA addition eligible as per Regulation	391.05	1832.49	1645.63	3869.18
10	Less: Consumer contribution & grants	20.96	15.81	1054.44	1091.22
11	GFA addition eligible for normative loan as per Regulation	370.09	1816.68	591.19	2777.96
12	Less: Land value addition (excluding the portion under part capitalization)	0.23	4.06	1.98	6.27
13	GFA addition eligible for depreciation	369.86	1812.62	589.21	2771.68

5.21 Normative loan as on 31.03.2022 and normative interest for the year works out to Rs.8644.59 Cr and Rs.724.07 Cr respectively as detailed below may kindly be approved.

Table 5.14 Computation of Normative loan as on 31.03.2022 and normative interest for 2021-22 (Rs Cr)					
Sl. No	Description	SBU G	SBU T	SBU D	Total
1	Closing balance of Normative loan as per True up order for 2020-21 (OA 23/2022 dated 24.06.2022)	531.97	1452.68	4001.02	5985.67
2	Add: Disputed claim pending before APTEL	135.23	131.21	201.16	467.60
3	Opening normative loan for 2021-22	667.20	1583.89	4202.18	6453.27
3	Additional normative loan for 2021-22	370.09	1816.68	591.19	2777.96
4	Normative repayment 2021-22	132.24	201.61	252.98	586.83
5= (1+2+3)-4	Closing normative loan 31.03.2022	905.04	3198.96	4540.39	8644.39
6= (1+5)/2	Average Normative loan for the year 2021-22	786.12	2391.42	4371.29	7548.83
7	Weighted average interest rate for 2020-21 (%)	9.32	9.52	9.68	9.57
8	Normative interest for 2021-22	73.27	227.66	423.14	724.07

5.22 Interest on Overdraft: A sum of Rs.122.99 Cr (Rs. 154.36 Cr in 2020-21) was incurred during the year under this head. Expenses under this head could not be claimed as per Tariff Regulation, 2018. Hon'ble Commission was pleased to approve carrying cost on un bridged revenue gap from 2015-16 onwards. In view of the above, KSEBL is not seeking true up of interest paid on overdraft during the year 2021-22.

5.23 Carrying cost on approved revenue gap:

5.23.1 Hon'ble Commission had trued up revenue gap of Rs. 7123.65 Cr till 2020-21 (excluding 2014-15, for which orders are yet to be issued). Hon'ble Commission was pleased to review the truing up order for 2017-18 and approved an additional revenue gap of Rs. 7.08 Cr. Thus, the trued-up revenue gap amounts to Rs. 7130.73 Cr.

5.23.2 Based on the methodology adopted by the Hon'ble Commission, average GPF balance of Rs.2607.16 Cr has been excluded from the approved gap to determine the revenue gap eligible for carrying cost. Actual average interest on loans during 2021-22 for SBU D had been 9.68 %. Accordingly, a sum of Rs.437.88 Cr is claimed as carrying cost for the year 2021-22 in respect of trued up revenue gap as detailed below:

1	Trued up revenue gap till 31.03.2021 as per True up order for 2020-21 (OA 23/2022 dated 24.06.2022)	7123.65
2	Revenue gap as per RP 04/2021-TU 2017-18 dated 16.07.2022	7.08
3	Total trued up revenue gap (1+2)	7130.73
4	Less: Average PF balance for 2021-22 (2430.72+2783.61)/2	2607.16
5	Net revenue gap	4523.57
6	Carrying cost at average interest rate of 9.68 % on above	437.88

5.23.3 Hon'ble Commission, since the truing up for 2017-18, has considered the consumer Security deposit available with KSEBL over the working capital requirement computed as per Tariff Regulation for SBU D as funds available for meeting approved and unbridged revenue gap. KSEBL would like to furnish the following for the kind consideration of the Hon'ble Commission:

(i) Working capital requirement for SBU D is determined as per Regulation 32 (e) of Tariff Regulations, 2018, which is extracted below for ready reference:

32 (e) In the case of distribution business/licensee the working capital shall comprise of,-

(i) operation and maintenance expenses for one month; plus

(ii) cost of maintenance spares equivalent to one-twelfth of the average of the book value of stores, materials and supplies at the beginning and end of the financial year; plus

(iii) receivables equivalent to the expected revenue from sale of electricity for two months at the prevailing tariff:

Provided that the amount, if any, held as security deposits except the security deposits held in the form of Bank Guarantee from users of the distribution system and consumers shall be reduced while computing the working capital requirement;

Provided further that for distribution business/licensees who supply electricity to their consumers on prepaid metering system, no interest on working capital shall be allowed.

(ii) It may kindly be seen that the Regulation 32 (e) (iii) does not take into consideration the arrears of electricity charges beyond two months. KSEBL has to raise funds by incurring expense to meet the fall in revenue collection on account of delayed

remittance by consumers. Regulation does not permit KSEBL to claim the cost associated with it.

- (iii) In order to earn rebate on power purchase bills, KSEBL has to make payment to generators before the stipulated due date. KSEBL has to incur interest expenses for arranging funds to make the payment early. KSEBL, while opting rebate scheme offered by the Generators, make comparison of likely income through rebate as well as the additional interest burden on making early payment. When it is seen beneficial financially, KSEBL opts for the rebate scheme offered by generators.
- (iv) But the requirement for higher working capital is not permissible as per Tariff Regulations. The cost associated for ensuring early payment i.e., for making payment before due date is not recognized in ARR.
- (v) On the other hand, late payment surcharge and rebate earned are recognized fully as other income by virtue of Regulation 82, which is extracted below for ready reference:

82. Other income.–

(1) The receipts of Other income of the distribution business/licensee as approved by the Commission shall be deducted from the Aggregate Revenue Requirement in determining the tariff of the distribution business/licensee.

(2) The indicative list of items to be considered as Other Income includes:-

- (i) interest on staff loans and advances;*
- (ii) income from statutory investments;*
- (iii) income from trading;*
- (iv) income from rent of land or buildings;*
- (v) income from sale of scrap;*
- (vi) income from staff welfare activities;*
- (vii) rental from staff quarters;*
- (viii) excess found on physical verification;*
- (ix) interest on investments, fixed and call deposits and bank balances;*
- (x) interest on advances to suppliers/contractors;*
- (xi) income from hire charges from contractors and others;*
- (xii) income due to right of way granted for laying fibre optic cables/coaxial cables on distribution system;*
- (xiii) income from advertisements, etc.;*
- (xiv) miscellaneous receipts;*
- (xv) commission for collection of electricity duty;*
- (xvi) interest on delayed or deferred payment on bills;**
- (xvii) rebate from central generating stations; and**
- (xviii) Any other receipts*

- (vi) It is humbly submitted that a sum of **Rs. 227.57 Cr** has been collected as late payment surcharge during the year 2021-22. In addition, interest realized on KWA arrears till 31.09.2018 (taken over by the Government) amounting to **Rs. 65.93 Cr** aggregating to **Rs. 293.50 Cr** has been included under non-tariff income for 2021-22.

- (vii) In other words, while income from these two heads is included under the revenue, the cost for higher working capital needs to earn such revenue are not permissible in ARR by virtue of Tariff Regulation, 2018.
- (viii) It is respectfully submitted that there is no enabling regulation either in the first MYT Tariff Regulation, 2014 (for the 3-year control period from 2015-16 to 2017-18) or the second MYT Tariff Regulation, 2018 (4 years from 2018-19 to 2021-22) to set off the surplus security deposit against approved revenue gap for determining carrying cost.
- (ix) Further, Hon'ble Commission did not consider such surplus security deposit while approving carrying cost for the first 2 years of the first control period (2015-16 to 2017-18) but decided to take such an approach for the first time in 2017-18 and thereafter followed the methodology till 2020-21.
- (x) Arrears as on 31.03.2022 over the previous year has marginally come down by Rs. 64.34 Cr (as per note 7 & 12 of audited accounts Rs.2462.36 Cr-Rs. 2526.70 Cr) mainly because of the release of KWA arrears by Government of Kerala to the tune of Rs. 331.67 Cr. Actual receivables exceeded normative receivables by Rs. 28.69 Cr. (Rs. 2462.36 Cr-Rs. 2433.67 Cr)
- (xi) It is respectfully submitted that KSEBL has earned Rs. 123.57 Cr as rebate from power suppliers by making payment before the due date and the income has fully been offered for true up by virtue of Regulation 82 (xvii). Average monthly power purchase cost for the year (excluding rebate Rs. 123.57 Cr) works out to appx Rs. 701 Cr.
- (xii) Hon'ble Commission may kindly note that the additional working capital requirement on account of arrears (outstanding arrears over the normative receivables considered in computing working capital requirement) of Rs. 28.69 Cr and average monthly power purchase cost of Rs. 701 Cr (aggregating to Rs. Rs. 729.69 Cr) far exceeds the surplus security deposit over normative working capital requirement of Rs.433.69 Cr.
- (xiii) In view of the above, Hon'ble Commission in the interest of justice, may kindly consider the cost associated with prompt payment to generators and for holding arrears over and above norms for working capital while determining the quantum of surplus security deposit as funds available for meeting accumulated revenue gap.
- (xiv) Since the fund requirement for earning income under late payment surcharge and rebate is in excess of the surplus security deposit computed in line with Tariff Regulation, 2018, Hon'ble Commission may be pleased to approve carrying cost as per Table above.

Interest on working capital

- 5.24 Hon'ble Commission may kindly approve Rs.6.03 Cr and Rs.18.40 Cr respectively for SBU G and SBU T as detailed in chapter 2&3 of this petition.

Interest on security deposit:

- 5.25 Hon'ble Commission approved interest on SD for the year at Rs.238.74 Cr. The Actual Security Deposit balance as per accounts was Rs.3207.24 Cr at the beginning of the year (01-04-2021) and Rs. 3235.94 Cr at the year end. Interest at 4.25 % on SD is provided in accounts for FY 2021-22 (Rs 136.20 Cr) on accrual basis. Actual disbursement in the FY 2021-22 amounted to Rs.142.18 Cr (disbursement made against provision amounting to Rs 149.07 Cr created @ 4.65% on SD for FY 2020-21) as per provisions in Supply Code, 2014. Hon'ble Commission may kindly approve the actual disbursement in 2021-22 amounting to Rs.142.18 Cr under SBUD.

Interest on PF:

- 5.26 Hon Commission approved Rs 218.58 Cr towards interest on PF. But as per the audited accounts, the actual interest paid on PF was Rs.178.06 Cr, which was less than approval by Rs.40.52 Cr mainly due to fall in interest rate. Hon'ble Commission had considered average PF balance for 2021-22 at Rs. 2732.33 Cr and applied interest @ 8%. However, actual average PF balance was Rs.2607.17 Cr. The actual rate of interest, however, was at 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	8.97	16.22	152.86	178.06

Interest on Master Trust Bonds:

- 5.27 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 unfunded pension liabilities as above and approved recovery of interest on KSEBL share of Bonds as per Tariff Regulations, 2018. Thus, Hon'ble Commission approved Rs.651.52 Cr towards interest on Master Trust bonds in the order. Further, Hon'ble Commission provisionally approved Rs.200 Cr towards unfunded liability.
- 5.26.1 It is respectfully submitted that as per the Actuarial valuation as on 31.03.2022, the increase for the year 2021-22 has been Rs.2003.34 Cr and the same was captured in audited accounts for 2021-22 as follows:
- (i) Liability pertaining to 2021-22 amounting to Rs.1036.68 Cr has been booked under employee cost for the year and
 - (ii) Remaining portion, pertaining to earlier years Rs.966.66 Cr under other comprehensive income in P&L account.
- 5.26.2 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 2021-22 through Master

Trust amounts to Rs.2376.69 Cr as detailed below:

Month	Rs. Cr	Month	Rs. Cr
Apr-21	155.59	Nov-21	168.17
May-21	138.08	Dec-21	181.41
Jun-21	137.93	Jan-22	233.21
Jul-21	166.39	Feb-22	150.79
Aug-21	225.42	Mar-22	161.30
Sep-21	350.11		2376.69
Oct-21	308.30		

5.26.3 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.692.24 Cr. Bifurcation of interest on bonds among SBUs are as detailed below:

Item	SBU G	SBU T	SBU D	Total
Interest on Bonds	32.84	59.35	559.33	651.52

5.26.4 It is respectfully submitted that there is no deviation between interest approved for the year as per the 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.

5.26.5 Tariff Regulations provide that, the annual pension contribution by KSEBL to the Master Trust based on the actuarial valuation is allowed to recover through tariff on annual basis. Statutory transfer scheme as well as tripartite agreement provides for the same. KSEBL has sought interest on un funded portion of actuarial liability in the MYT petition against which Hon'ble Commission provisionally approved Rs. 200 Cr with the following observation:

.....Considering all these factors, the Commission is decided to hold a separate proceeding towards the determination of funds requirements of Master Trust. Till such time, the Commission provisionally allows Rs.200 crore as an additional funding for the Master Trust. Hence the figures shown as additional funding for the trust is only provisional and is subject to a prudency check before the same is finally allowed.

5.26.6 Hon'ble Commission, as per truing up order for the years 2018-19 to 2020-21, was pleased to approve Rs. 300 Cr as additional contribution. It is further submitted that the service cost portion of the actuarial liability alone for 2021-22 is more than 300 Cr. Considering the

above, it is humbly requested that the Hon'ble Commission may true up an additional Rs.300 Cr for 2021-22 also, which may be subject to the final decision on the matter, in view of the fact that KSEBL has no other source to meet these expenses as detailed below.

Table 5.20: Interest on Master Trust Bonds (Rs Cr)				
Item	SBU G	SBU T	SBU D	Total
Additional contribution to Master Trust	15.12	27.33	257.55	300.00

5.26.7 Hon'ble Commission may kindly note that the additional liability as per actuarial valuation for 2021-22 amounts to Rs.1036.68 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 cost for the year over Rs.300 Cr amounting to Rs. 736.68 Cr (Rs. 1036.68 Cr – Rs. 300 Cr) with interest as and when the scheme for unfunded liability is finalized.

Other charges:

5.27 Hon'ble Commission has not approved any amount towards other interest. Actual expenses incurred as per accounts amounts to Rs.11.24 Cr and its ARU wise segregation is furnished below, which may kindly be approved.

Table 5.21: Details of other charges under Interest and Finance Charges (Rs. Cr)					
No	Particulars	SBU G	SBU T	SBU D	Total
1	Interest Expenses-others	0.99	1.42	2.27	4.68
2	Interest on Employers Contribution Under Tier I of NPS	0	0	0.01	0.01
3	Other Bank Charges	0.07	0.13	0.22	0.42
4	Guarantee Charges	-	-	0.01	0.01
5	Interest on Power purchase			6.13	6.13
	Total	1.06	1.55	8.64	11.24

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

Table 5.23: Statement showing comparison of I&F Charges-Approved, Actual and TU requirement for 2021-22 (Rs Cr)										
No	Item	KSERC	As per Accounts				True up requirement			
		Approval	SBU G	SBU T	SBU D	Total	SBU G	SBU T	SBU D	Total
1	Interest on Loan	776.82	128.22	179.77	439.53	747.52	73.27	227.66	423.14	724.07
2	Security Deposit Interest	238.74	0.00	0.00	136.20	136.20			142.18	142.18
3	Master Trust Bond Interest	651.52	32.84	59.35	559.33	651.52	32.84	59.35	559.33	651.52
4	Working capital/ OD interest	30.88	6.20	11.20	105.59	122.99	6.03	18.40	0	24.43

5	PF interest	218.58	8.97	16.22	152.86	178.06	8.97	16.22	152.86	178.06
6	Other interests	-	1.06	1.55	8.63	11.24	1.06	1.55	8.63	11.24
7	Carrying cost on revenue gap till last year	27.08				0			437.88	437.88
8	Carrying cost on current year revenue gap					0			0	0
9	Total	1943.62	177.29	268.09	1402.14	1847.53	122.17	323.18	1724.03	2169.38
10	Less: Interest capitalized		144.32	66.55	18.41	229.28				
11	I&FC net of capitalization	1943.62	32.97	201.54	1383.73	1618.25	122.17	323.18	1724.03	2169.38

Depreciation:

5.29.1 Depreciation as per audited accounts (Rs.1139.74 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.309.88 Cr and credited to Other Income under Note 28 of Annual accounts. Since depreciation can be claimed strictly in line with Tariff Regulations, 2018 in regulatory accounts, it is humbly requested that the income accounted under note 28 towards claw back as per accounts may not be considered in True up.

5.29.2 Taking guidance from the methodology adopted by the Hon'ble Commission for the computation of normative depreciation for 2017-18, normative depreciation for 2021-22 has been computed at Rs.586.63 Cr as detailed below:

	Particulars	SBU-G	SBU-T	SBU-D	KSEBL
1	Opening GFA as on 1-4-2017 (As per TU Order 2017-18 (OA 9/2020 Dt 25.06.2021))	4658.32	4628.56	7530.5	16817.38
2	Total asset addition approved for 2017-18	71.42	388.82	699.45	1159.69
3	GFA addition approved for 2018-19	103.86	347.17	1202.5	1653.53
5	Asset addition approved for 2019-20	116.27	384.17	1642.19	2142.63
6	Asset addition approved for 2020-21	78.20	586.3	1801.42	2465.92
7= (1 to 6)	Approved GFA as on 31.03.2021	5028.07	6335.02	12876.06	24239.15
8	Assets >12 years old (GFA as on 1-4-2009)	3132.03	3029.04	3088.04	9249.11
9	Fully depreciated Assets (assets up to 1-4-1991)	269.87	101.87	333.43	705.17
10= (8-9)	Assets having life 12-30 yrs	2862.16	2927.17	2754.61	8543.94
11= (10*2.80%)	Value of land on above	94.39	171.72	6.98	273.09

12	Grants and contributions (from 01.04.1991 to 31.03.2009)			2395.72	2395.72
13= (9-10-11)	Assets having life 12-30 yrs eligible for depreciation	2767.77	2755.45	351.91	5875.13
14= (12*1.42%)	Depreciation for Assets 12-30 years (@1.42%)	39.30	39.13	5.00	83.43
15= (7-8)	Assets < 12 years old (1-4-2009 to 31-3-2021)	1896.04	3305.98	9788.02	14990.04
16	Value of land (from 01.04.2009 to 31.03.2021)	182.02	331.15	13.45	526.62
17	Grants and contributions (1-4-2009 to 31-3-2021)	90.75	719.96	5244.62	6055.34
18= (15-16-17)	GFA < 12 years old eligible for depreciation as on 01.04.2021	1623.27	2254.87	4529.95	8408.08
19	Asset addition for 2021-22 as per this submission	369.86	1812.62	589.21	2,771.68
20= (18+19)	Closing balance of Assets <12 years Old (1-4-2009 to 31-3-2022)	1993.12	4067.49	5119.15	11179.77
21= (18+20)/2	Average Value of Assets <12 Years old	1808.19	3161.18	4824.55	9793.93
22= (21*5.14%)	Depreciation for assets <12 years (@5.14%)	92.94	162.48	247.98	503.41
23= (14+22)	Total Depreciation for assets for 2021-22	132.24	201.61	252.98	586.83

5.30 Details of Consumer Contribution and grants as on 31.03.2022 as per accounts amounted to Rs.4361.22 Cr as detailed below:

No	Particulars	Amount	Amount
1	Consumer contribution	2784.54	
2	Subsidies	185.36	
3	Grant	1909.41	
4	Local bodies etc	601.52	
5	De commissioning liability (IND AS)	29.01	5509.82
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	145.16	
13	2019-20	200.22	
14	2020-21	245.69	
15	2021-22	309.88	1148.6
16	Contribution and grants (Note 22) as per Accounts.		4361.22

5.31 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 31.03.2022 amounted to Rs.5480.81 Cr (Rs.5509.82 Cr-Rs. 29.01 Cr). SBU wise break up of consumer contribution and grants as on 31.03.2022 as per accounts are furnished in **Appendix 5** hereto.

5.32 Gross Consumer Contribution and grants till 31.03.2021 as per accounts amounted to Rs.3577.15 Cr and after excluding decommissioning liability and claw back. Actual receipt amounts to Rs.4389.61 Cr {4415.87-26.26}. Details of actual receipt, adjustment, claw back and balance as per audited accounts are detailed below:

No	Particulars	Amount	Amount
1	Consumer contribution	2384.41	
2	Subsidies	164.45	
3	Grant	1399.21	
4	Local bodies etc	441.54	
5	De commissioning liability (IND AS)	26.26	4415.87
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	145.16	
13	2019-20	200.22	
14	2020-21	245.69	838.72
15	Contribution and grants (Note 22) as per Accounts.		3577.15

5.33 Hon'ble Commission may kindly note that actual receipt of Consumer Contribution and grants till 31.03.2021 as per accounts amounted to Rs.5480.81 Cr. Thus, additional receipt of contribution and grants during the year amounts to Rs.1091.20 Cr (Rs. 5480.81Cr - Rs. 4389.61 Cr).

5.34 **Others Rs. 164.20 Cr:** The details of other expenses as per the audited accounts and detailed explanation of various items are provided there under.

No	Particulars	SBU G	SBU T	SBU D	Total
1	Rebate on fixed charges	-	-	25.79	25.79
2	Discount to Consumers	-	-	2.90	2.90
3	Material Cost Variance	-0.00	0.31	13.39	13.70
4	Research and Development Expenses	0.01	-	-	0.01
5	Cost Of Trading/Manufacturing Activity	-0.00	6.16	-1.66	-7.83
6	Bad and Doubtful Debts Written off / Provided/demand withdrawal of consumers	-	-	125.56	125.56
7	Miscellaneous Losses and Write Offs	-0.00	0.15	3.91	4.06
			-		
	TOTAL (Note No. 36 of audited accounts)	0.01	5.70	169.89	164.20

5.34.1 **Bad and Doubtful Debts Written off** represent withdrawal of credits to revenue account. **The material cost variance** represents the difference between the actual rate at which material was procured and the standard rate at which pricing the issue of material was made. **Rebate on fixed charges** denote rebate allowed to consumers due to Covid 19. Detailed explanation is furnished below for the kind consideration of the Hon'ble Commission:

5.34.2 Government vide **G.O. (RT) No.84 /2021/P.D. dated 28.06.2021.**, in order to redress the hardship faced by general public in the State during the second wave of covid-19 pandemic, has accorded sanction to KSEB Ltd. to allow following reliefs to Industrial / Commercial consumers and Cinema theatres in the State:

- a) *to provide relief to the tune of 25% on fixed charge/demand charge applicable to Industrial/Commercial consumers for the month of May-2021.*
- b) *to provide relief to tune of 50% on fixed charge/demand charge applicable to cinema theatres for the month of May- 2021.*
- c) *to allow three equal installments to remit the balance dues after allowing reliefs as above, up to 30.09.2021.*
- d) *In cases, where the bill amounts are already paid in full or part, the eligible relief in demand charge /fixed charge may be adjusted in subsequent bills.*

5.34.3 Government has issued above directions, in view of public interest, to KSEB Ltd to pass on the above relief smoothly, as per Article 55 of Article of Association of the Company. Government has also directed Hon'ble Commission to grant approval by considering the matter of allowing reliefs as a matter of policy involving public interest under section 108 of the Act.

5.34.4 Thereafter, Government vide order G.O. (RT) No.215 /2021/Power dated 22.12.2021, after having considered the closure of Cinema theatres in the State for a period of five months due to the second wave of Covid -19 pandemic, consequent lockdown and associated circumstances, directed KSEB Ltd. to allow relief of 50% on fixed charge/demand charge for the period from June to October-2021 (for 5 months) and to allow six installments to remit their balance dues after allowing relief. KSEBL has implemented the directions as per order dated 12.01.2022 & 02.07.2021.

5.34.2 Considering the direction of the State Govt., it is humbly requested before the Hon'ble Commission to allow pass through of entire financial liability on account of reliefs extended to the consumers to the tune of Rs. 25.79 Cr.

5.34.3 Hon'ble Commission may kindly true up Rs.164.20 Cr under other expenses as detailed below:

Table 5.28: Other expenses (Rs Cr)				
Item	SBU G	SBU T	SBU D	Total
Other expenses	0.01	-5.70	169.89	164.20

- 5.35 **Exceptional items Rs.17.91 Cr:** Expenses incurred for the restoration of assets damaged due to natural calamities are accounted under this head. SBU wise break up of other expenses and exceptional items are furnished below, which may kindly be approved.

Item	SBU G	SBU T	SBU D	Total
Exceptional items	0.33	0	17.58	17.91

- 5.36 **O&M Expenses:** Hon'ble Commission approved Rs.3512.24 Cr under this head on normative basis against which a sum of Rs.4775.93 Cr was actually incurred during the year 2021-22, exceeding approval by Rs.1263.69 Cr. as summarized below:

No	Particulars	Approval				KSEBL Accounts			
		SBU G	SBU T	SBU D	Total	SBU G	SBU T	SBU D	Total
1	Employee cost					278.62	523	3617.21	4418.83
2	Less: Capitalized					63.84	106.93	380.71	551.48
3	Balance					214.78	416.07	3236.5	3867.35
4	R&M expenses					30.48	34.38	230.71	295.57
5	A&G expenses					53.98	129.01	447.79	630.78
6	Less: Capitalized					10.19	5.11	2.47	17.77
7	Balance					43.79	123.9	445.32	613.01
8	Total O&M Expenses	172.01	491.28	2848.95	3512.24	289.05	574.35	3912.53	4775.93

- 5.36.1 **Employee cost:** It is respectfully submitted that gross employee cost (excluding actuarial liability) registered increase in 2021-22 primarily due to the pay revision implemented from March, 2021. The table below reveals the yoy increase under employee cost (from 2018-19 to 2021-22) in terms of gross employee cost. Detailed tabulation is furnished in **Appendix 6**.

Sl. No	Particulars	2018-19	2019-20	2020-21	2021-22
1	Gross employee cost -As per accounts (Before capitalization)	3354.63	3508.41	5658.96	4418.83
2	Less: Actuarial liability	498.37	435.64	2099.9	1036.68
3	Less: Provision for PR	176	250	585	
4	Employee Cost for the year for TU	2680.26	2822.77	2974.06	3382.16
5	Increase over previous year		142.51	151.29	408.10
6	YOY increase %		5.32	5.36	13.72

- 5.36.2 **R&M expenses** R&M cost depends on the Gross Fixed Assets in use at the beginning of the financial year, age of the assets as well as inflation. SBU wise split up of R&M expenses as per accounts is furnished below:

Item	SBU G	SBU T	SBU D	Total
R&M expenses	30.48	34.38	230.71	295.57

5.37.3 As already submitted, expenses towards restoration of assets owing to natural calamities amounting to Rs.17.91 Cr has been incurred and disclosed under exceptional items. It may kindly be seen that KSEBL has been able to contain R&M expenses at optimum levels in spite of the ageing assets that are being maintained by KSEBL. Hon'ble Commission may kindly approve Rs. 17.91 Cr over and above the normative claim.

5.37.4 **A&G expenses** Hon'ble Commission may kindly note that A&G expenses as per accounts amounts to Rs.613.01 Cr as detailed in Note 35 of the Annual Statement of Accounts. Expenses under this head contain predominantly, the following expenses:

1	Conveyance & travel	68.76
2	Other operative expenses	258.42
3	Expenditure on Filament free Kerala	10.81
4	Electricity Duty u/s 3(l), KED Act	136.04
5	Power factor incentive to consumers	38.61
6	Freight	17.34
7	Rent, rates & taxes	13.07
8	Printing, Stationery, Telephone etc	17.47
9	Expenditure in connection with Covid 19	8.59
10	Notary fee and other expenses relating to KSERC & CGRF	14.13
11	Contribution to CMDRF	7.94
12	All Other A&G expenses	39.60
13	Gross A&G Expenses	630.78
14	Less: Expenses Capitalized	17.77
15	Net A&G Expenses	613.01

5.37.5 Hon'ble Commission may kindly note that a sum of Rs.38.61 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.

5.37.6 It may kindly be seen that an amount of Rs.10.81 Cr has been incurred for the filament free Kerala campaign in which LED lamps were supplied to consumers. An income of Rs. 15.06 Cr has been booked under Income from bulb, scrap, tender form etc (Note 27 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.

5.37.7 KSEBL incurred an amount of Rs. 8.59 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 2021-22.

5.37.8 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.

5.37.9 KSEBL has incurred a sum of Rs. 3.07 Cr towards Nilavu 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 also 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. It is humbly submitted that no revenue was earned during the year 2021-22 and therefore 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.

5.37.10 Based on the Tariff Regulation, KSEBL is entitled to claim normative O&M expenses of Rs.3448.27 Cr for 2021-22 as explained in the respective chapters against Rs. 3512.24 Cr approved by the Hon’ble Commission, as summarized below.

Table 5.35: Normative O&M expenses for 2021-22 (Rs. Cr)					
Sl. No	Particulars	SBU G	SBU T	SBU D	Total
1	True up claim as per Tariff Regulation	150.52	459.07	2838.68	3448.27
2	Approved as per Order dated 08.07.2019	172.01	491.28	2848.95	3512.24
3	Variance over approval	21.49	32.21	10.27	63.97

5.37.11 Hon’ble Commission may kindly true up O&M expenses for the year at Rs.3456.86 Cr as detailed below:

Table 5.36: Normative O&M expenses for 2021-22 (Rs. Cr)					
Sl. No	Particulars	SBU G	SBU T	SBU D	Total
1	As per norms	150.52	459.07	2838.68	3448.27
3	Expenditure in connection with Covid 19				8.59
4	Total O&M expense	150.52	459.07	2838.68	3456.86

5.38 Pay revision

5.38.1 KSEBL, as per truing up petition for the years 2018-19, 2019-20 and 2020-21 has sought approval for the provision created in accounts towards pay revision due from July / August 2018 for officers and workmen. Hon’ble Commission, as per orders dated 14.06.2022,

21.06.2022 and 24.06.2022, while deciding the truing up petitions did not approve the claim preferred on provision for pay revision. Hon'ble Commission 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. Hon'ble Commission had deliberated the issue in detail in the order for 2020-21, which is extracted below for ready reference:

Provisions in the Regulations

5.149 *The Regulation 14(3) of the Tariff Regulations, 2018 deals with the 'pay revision and related issues' which is extracted below.*

"(3) 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."

Analysis and Decision of the Commission

5.150 *KSEB Ltd, in the Truing up petition for the year 2020-21 submitted that , the revision of pay and allowances of its workmen and employees are due from July/August 2018 onwards. KSEB Ltd had implemented the same in the months of March 2021. The total pay revision arrears due from July/ August 2018 onwards is Rs 947.99 crore as detailed in Table 5.64 above. KSEB Ltd created a provision of Rs 176.00 crore in the year 2018-19 and Rs 250.00 crore in the year 2019-20 towards pay revision in the accounts of previous years. After excluding the provisions of pay revision created in the previous years, the pay revision arrears booked in the year 2020-21 is Rs 521.99 crore. Out of it the share of SBU-D is Rs. 446.53 crore.*

5.151 *The Commission noted that as stated under paragraph 5.149 above, the Regulation 14(3) of the Tariff Regulations 2018 provides that, the Commission may allow the expenses related to pay revision during the control period from 2018-19 to 2021-22, for the same level of employees as admitted in the truing up of accounts for the year 2016-17 of the SBU-G, SBU-T and SBU-D of KSEB Ltd.*

5.152 *The Commission also noted that, Hon'ble APTEL vide the judgment dated 10.11.2014, in Appeal Petition No. 01 of 2013 and 19 of 2013, had issued the following observations and directions regarding the pay revision and related matters of the employees of KSEB Ltd.*

"Paragraphs 8.4 to 8.5 of the Judgement of the Hon'ble APTEL dated 10.11.2014 in Appeal Petition No.01 of 2013 and 19 of 2013.

*8.4 The State Commission has rightly shown concern about the high employees cost but we are not able to appreciate magnitude in the absence of a specific finding about the excess manpower and non-availability of Regulations. We feel that DA increase which is effected as per the Government orders have to be accounted for and allowed in the ARR as it compensates the employees for the inflation. **The pay revision as per the agreements reached between the management and the unions have also to be honoured. The terminal benefits have also to be provided for.***

8.5 We find that the State Commission has taken the actual expenses trued-up for FY 2008-09 as the base. The State Commission should have at least allowed the actual basic pay and DA increase, **pay revision** and terminal benefits over the actual base year expenses without accounting for increase in manpower from 2008-09 to 2012-13. The gratuity directed to be paid as per the judgments of the High court dated 10.03.2003 as the Division bench of the High Court had dismissed the Appeal filed against this judgment, and which were disallowed by the State Commission by order in Appeal no. 1 of 2013 should also be allowed.

5.153 KSEB Ltd submitted before the Hon. High Court in its petition WPC 465/2015 that,

“in case the truing up of Accounts for the year 2014-15 onwards are also considered in the light of the revised Orders passed for the year 2010-11 onwards in tune with the judgments of the APTEL, the difficulties faced by the petitioner on account of the Regulations would be addressed to some extent”.

5.154 The Commission also submitted before the Hon. High Court that while considering the truing up applications of the petitioner for the year 2015-16, 2016-17 and 2017-18, the Commission would take into account the judgment of APTEL and the consequential orders passed thereafter, Hon’ble High Court on 28-02-2018 issued the final judgment and disposed off the Petition No WP(C) 465/2015, without going into the broad contentions raised in the writ petition as the Regulation under challenge is a sub-ordinate legislation issued under the Section 181(2)(d) of the Electricity Act 2003. The Hon. High Court in the judgment, directed the Commission to pass order on the application of the petitioner KSEB Ltd for truing up of accounts for the years 2015-16, 2016-17, 2017-18 with due regards to the findings in APTEL Judgments in Appeal Nos. 1 and 19 of 2013 and consequential orders passed by the Commission for 2010-11 onwards, in the case of KSEB Ltd. The relevant portion of the judgment of the Hon. High Court is quoted below:

“In view of the submission made by learned senior counsel that the Commission would take into account Ext.P6 judgment of the APTEL while taking up the applications for truing up of accounts, I direct the 1st respondent to pass orders on the applications of the petitioner for truing up of accounts for the year 2015-16, 2016-17, and in 2017-18 with due regard to the findings in Ext.P6 judgment and the consequential orders passed by the commission for the year 2010-11 onwards in the case of petitioner.”

*As discussed in the preceding paragraphs, and also as per the Tariff Regulations, 2018, the pay revision expenses **as per the agreements reached between the management and the unions has to be allowed after prudence check.***

5.155 However, as per the details submitted before the Commission, the pay revision due from July / August 2018 was implemented from March 2021 only, and thus no cash flow was incurred towards pay revision in the Year 2020-21 except in the month of March 2021. Since KSEB Ltd is preparing the accounts on accrual basis, KSEB Ltd has claimed the provision of Rs 521.99 crore towards pay revision for the year 2020-21. The Commission also noted that the Additional Chief Secretary, Finance, vide its circular 04/2021 dated 18.01.2021 has instructed to the Head of the Departments of all PSU’s owned by the State Government that “the revision of pay and allowance to its employees” shall be implemented only with the prior approval of the Cabinet.

5.156 However, the Commission is approving such expenditure in the Truing up of accounts only on cash basis after appraising the prudence of the amount incurred. Considering the facts that no actual out flow of cash had occurred during this period, the Commission is not in a position to approve the provision for pay revision created on accrual basis for the year 2020-21.

5.157 As extracted above, the Commission has decided that, the provisions created for pay revision for the year 2020-21 cannot be allowed in the Truing up due to the reasons explained therein. However, KSEB Ltd is permitted to take up the actual amount paid to employees due to pay revision with all supporting documents including the approvals of the KSEB Ltd Board of Directors and the State Government at the time of Truing up of accounts of the relevant years in which the actual outflow of funds occur and the arrears are actually credited to the employees accounts.

5.38.2 In view of the direction contained in the truing up order for 2020-21, KSEBL humbly submits the following for the kind consideration of the Hon'ble Commission.

5.38.3 Hon'ble Commission may kindly note that the wages and allowances of employees in the workmen category in KSEBL is revised as per the provisions in the Industrial Disputes Act, 1947. From 1990 onwards, a cogent negotiation process could be evolved thereby strikes and employee agitations could be averted and better working atmosphere maintained in KSEBL. Government of Kerala, as per order No. G.O (P) No. 7/2016/Fin dated 20.01.2016 has instructed to obtain formal approval / sanction from the Government for extending revised pay scales and other benefits to employees.

5.38.4 The Long-Term Settlement (LTS) for revision of wages and allowances have been arrived at through bilateral negotiation between the KSEBL and Representatives of Trade Unions. As there is lot of shared/ common cadre positions between workmen and Officers in KSEBL, the revision of Pay & allowances of work men and Officers cannot be done separately. After signing the LTS, the same is forwarded to the Government and the Labour Commissioner as specified in section 5.9 (4) of the Kerala Industrial Dispute Rules 1957 and Industrial Dispute Act 1947 for registration.

5.38.5 Government of Kerala, in exercise of powers conferred under section 131 of the Electricity Act 2003, vide order No G.O.(P) 46/2013/PD dated 31.10.2013 has notified the scheme for re vesting of all the functions, properties and all interests, rights in properties, all rights and liabilities of the Board vested in the Government under first transfer scheme 2008 to KSEBL. It is pertinent to mention that the Transfer Scheme notified by the State Government has a statutory force. As per Section 131 (3(b)) of Electricity Act, 2003 the transfer scheme is binding on all persons including third parties.

5.38.6 Clause 6 (8) of the Second Transfer Scheme envisages a Tripartite agreement among the State Government, KSEBL and the employee union in consideration of the promises and mutual conditions set forth therein. Clause 2 (d) of the agreement guarantees that "with regard to wage / pay revision, the present system of periodic bipartite negotiations and agreements shall continue.

5.38.7 The revision of pay and allowances of officers are implemented in KSEBL subject to formal sanction from the Government. As the approval for the revision of pay and allowance of workmen and officers are granted by the Government after due verification and evaluation of various aspects pertaining to pay related components, which may involve considerable period of time, KSEBL has implemented the same at the earliest for administrative convenience in anticipation of Government approval which will be obtained subsequently.

5.38.8 It is respectfully submitted that since LTS is a legally binding agreement to the employer, KSEBL is not at all in a position to deviate itself from its obligations for want of approval from Government. It may kindly be noted that the approval of wage revision in 2011 was granted by the Government after a gap of 5 years on 26.6.2016.

5.38.9 The Director Board of KSEBL, as per B.O. (DB) No. 133/2021 (PS1/2617/PR/2018) dated 15.02.2021, has approved a Long-Term Settlement (LTS) with the recognized Trade Unions for revising the Pay and Allowances of workmen and all relevant documents were forwarded to the Government for formal approval on 20.02.2021 and 02.03.2021. The LTS, 2021 has been implemented in KSEBL from the date of signing of settlement in anticipation of Government approval, which is being issued later. Formal sanction from Government has not been obtained till date.

5.38.10 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. The arrears for the months of January 2021 and February 2021 were paid in cash and the revised pay has been disbursed from March 2021 onwards. Thus, two instalments out of four instalments of arrears till 31.12.2020 (Rs. 469.79 Cr) were credited to the GPF accounts of the employees during the year 2021-22 and the arrears for the months of January and February (Rs. 85.10 Cr) were disbursed in cash, aggregating to Rs. 554.88 Cr as detailed below:

Table 5.37 Details of arrear amount paid and credited to GPF account during the year 2021-22 (Rs Cr)					
No	Particulars	Paid	I Instalment	II Instalment	Total
1	Workmen	59.98	159.99	156.59	376.57
2	Officers	24.91	76.73	75.33	176.98
3	PTC	0.20	0.58	0.55	1.34
4	Total	85.10	237.30	232.48	554.88

5.38.11 As per Regulation 14(3) of the Tariff Regulations, 2018 extracted above, expenses relating to pay revision is allowable for 27175 nos. Later on, Hon'ble Commission was pleased to re determine the allowable employee strength since 2009 for cost recovery as per order dated 14.07.2022 in OA 63/2021. Hon'ble Commission, in the said order, was pleased to re determine the employee strength at 30321 nos for cost recovery since 2022-23. The decision was taken after accepting the requirement of such additional number of employees. Hon'ble Commission well found that, the posts created as per State Government order dated 16.07.2012 and the order of the Board of Directors dated 31.12.2013 are also allowable since the Government and the Director Board have the competency to create such additional posts if found necessary. Hon'ble Commission has rightly found that the vacancies reported to PSC

prior to 31.03.2009 but recruiters joined after 31.03.2009 can also be allowed. As such Hon'ble commission found that total increase of 3206 employees over the working strength of 27175 nos as on 31.03.2009 is genuine and acceptable. However, Hon'ble Commission, vide order dated 14.07.2022, has ordered that the approved increase in staff strength is applicable with prospective effect only ie from 2022-23 onwards. It may kindly be noted that the employees additionally approved for cost recovery were in the rolls of KSEBL on the date of revision of pay i.e 01.07.2018 for officers and 01.08.2018 for workmen.

5.38.12 It is humbly submitted that since the requirement of additional working strength has been found to be justifiable, then these employees are eligible for the service benefit as applicable to others. Therefore, pay revision expenses attributable to the employee strength may kindly be approved in true up for 2021-22. It may kindly be noted that arrears were disbursed for 32359 serving employees during the year 2021-22, which was more than the approved limits by 2038 nos as detailed below:

Table 5.38 Computation of employee strength over approved limit (Nos)

SI No	Particulars	Officers	Workmen	PTC	Total
1	Pay revision effected-No. of employees	5871	29023	287	35181
2	Employees retired during 01.07.2018 to 31.12.2021	849	1942	31	2822
3=(1-2)	Serving employees for whom pay revision effected	5022	27081	256	32359
	Break up				
a	Employees in service prior to 31.03.2009	4100	14178	242	18520
b	Employees joined service after 01.04.2009	922	12903	14	13839
4	Employee strength approved as per OA 63/2021	4301	25557	463	30321
5= (3-4)	Employee strength over approved limit	721	1524	-207	2038

5.38.13 Out of Rs. 494.97 Cr actually disbursed during the year for the serving employees, Rs Cr pertains to the employees joined service after 01.04.2009 as detailed below:

Table 5.39 Pay revision arrears to employees joined service after 01.04.2009 (Rs Cr)

SI No	Particulars	Officers	Workmen	PTC	Total
1	Pay revision arrears disbursed in 2021-22	176.98	376.57	1.34	554.88
2	Arrears to retired employees	25.18	34.79	0.17	60.14
3= (1-2)	Arrears of serving employees	151.80	341.78	1.17	494.74
	Break up				
a	Arrears to employees in service prior to 31.03.2009	137.72	255.59	1.13	394.43
b	Arrears to employees joined service after 01.04.2009	14.08	86.19	0.04	100.31

5.38.14 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. Cr is attributable to the increased working strength of 2038 nos over the limit approved by the Hon'ble Commission on pro rata basis as computed below:

Table 5.40 Computation of pro rata pay revision expenses for the employee strength over approval

SI No	Particulars	Officers	Workmen	PTC	Total
1	Employees joined service after 01.04.2009 (Nos)	922	12903	14	13839
2	Arrears to employees joined service after 01.04.2009 (Rs Cr)	14.08	86.19	0.04	100.31
3	Employee strength over approved limit (Nos)	721	1524	-207	2038
4= (2/1) *3	Pro rata expenses for the increased strength (Rs Cr)	11.01	10.18	-0.59	20.60

5.38.15 Hon'ble Commission may kindly approve Rs. 534.28 Cr (Rs.554.88 Cr- Rs. 20.60 Cr) after excluding arrears for the increased staff strength of 2038 nos towards pay revision arrears actually disbursed during the year 2021-22 as part of truing up. SBU wise break up on the basis of gross employee cost ratio is furnished below:

Item	SBU G	SBU T	SBU D	Total
Pay revision expenses	34.99	65.67	454.22	554.88
Cost for the increased staff strength	1.30	2.44	16.86	20.60
Allowable expenses	33.69	63.24	437.36	534.28

5.39 **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 on the basis of 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

5.40 **Gains on achievement of T&D loss reduction target:** As per Tariff Regulations, 2018, 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.125.25 Cr as detailed in chapter 4. Hon'ble Commission may kindly approve the same.

5.41 **Non- Tariff Income and Other income:** Hon'ble Commission approved Rs.681.88 Cr under Non-Tariff income & Other income for the year 2021-22. Actual income earned during the year as per accounts amounted to Rs.1320.70 Cr. It may kindly note that the disclosure in accounts and truing up petition with regard to 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 27) in accounts amounting to Rs.297.12 Cr are considered under non-tariff income in this petition. Out of Rs.1320.70 Cr, remaining Rs.404.89 Cr is disclosed under Other operating income (Note 27 A) and Rs. 618.69 Cr under other income (Note 28) of audited accounts as detailed below.

Table 5.41: Non-tariff income as per accounts considered in TU petition for 2021-22 (Rs. Cr)					
Sl. No	Particulars	SBU G	SBU T	SBU D	Total
A	Revenue booked under Note No. 27				
1	Miscellaneous receipts / charges from interstate trading of energy			101.42	101.42
2	Meter rent / service line rental			102.31	102.31
3	Recovery of theft / malpractices			1.52	1.52
4	Wheeling charges recoveries			2.17	2.17
5	Miscellaneous charges from consumers			89.70	89.70
	Revenue booked under Note No. 27 considered as Non-Tariff Income-Sub Total A			297.12	297.12
B	Revenue booked under Note No 27 A				
6	Rebate received	0.02	0.04	123.65	123.71
7	Interest-Advance to suppliers / contractors	3.70	6.39	9.94	20.03
8	Income from sale of bulb, scrap, tender forms etc	7.84	19.94	114.22	142.00
9	Miscellaneous receipts	15.52	16.99	86.64	119.15
	Sub Total B	27.08	43.36	334.45	404.89
	Other income as per Note 28 of Annual accounts				
1	Interest on belated payment charges			227.57	227.57
2	Interest-Staff loans and advances	0.00	0.01	0.04	0.05
3	Interest from loans & others			0.69	0.69
4	Interest from banks	2.06	2.09	3.35	7.50
5	Claw back of grants	6.67	37.58	265.62	309.88
6	Reversal of provision on doubtful debts			56.30	56.30
7	Other receipts	2.27	2.26	12.17	16.70
	Sub Total C	11.00	41.94	565.75	618.69
D= (A+B+C)	Non-tariff income as per Accounts considered for TU	38.08	85.30	1197.32	1320.70

5.42 Miscellaneous charges from consumers (Rs. 89.70 Cr) are detailed in **Appendix 7**. Misc receipts /charges from inter-state trading of energy (Rs. 101.42 Cr) are detailed in **Appendix 8**. Miscellaneous receipts (Rs.119.15 Cr) are detailed in **Appendix 9**. Income from sale of bulb, scrap/tender form amounting to Rs.142.00 Cr as detailed in **Appendix 10**.

5.43 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.

5.44 During the year 2021-22, third instalment of KWA arrear taken over by the Government along with interest was released and interest pertains to the receipt amounts to Rs.65.93 Cr, which may kindly be trued up in 2021-22.

5.45 Income from sale of scrap/tender form amounting to Rs.142 Cr includes Rs.15.06 Cr towards sale proceeds of LED bulbs. Further, the cost of LED bulbs amounting to Rs. 10.81 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.

5.46 'Filament free Kerala' was one of the projects envisaged in 'Urja Kerala Mission' announced by the Government of Kerala. The project envisages replacement of entire incandescent lamps & CFLs of domestic consumers in the state by energy efficient LED bulbs. The project envisages distribution of 7 crore LED Bulbs and 3 crore 18W led Tubes. Under the project, branded 9W LED bulbs were made available to the domestic consumers at Rs.65 per bulb and the consumers were given liberty to pay in lump sum or in interest free instalments. In the first phase, 13.27 lakh consumers had registered for 1.07 crore bulbs and on 07.01.2021, the project was inaugurated at state level by the hon'ble Chief minister.

5.47 Details of income to be trued up on account of LED transaction are furnished below:

Table- 5.42: Details of income to be trued up in 2021-22	
Particulars	Rs Cr
Sale proceeds of LED bulbs (Note 27 B of Annual Accounts)	15.06
Cost of LED bulbs (Note 35 of Annual Accounts)	10.81
Income earned	4.25

5.48 Out of Rebate received Rs. 123.71 Cr, rebate allowed by CGS amounted to Rs. 123.57 Cr.

5.49 It is respectfully submitted that the reversal of provision on doubtful debts amounting to Rs. 56.30 Cr (Rs.328.88 Cr for 2020-21) may not be considered for true up since such provisions are not approved by the Hon'ble Commission in the year in which they were created in books. It is the consistent stand of the Hon'ble Commission that expenses can be allowed only upon actual write off and subject to prudence check. It is humbly submitted that the provision created in the books in earlier years in line with the accounting standards and were not approved while true up in the respective years may not be trued up in the year of reversal. It is also submitted that the Hon'ble Commission was pleased to accept the prayer in this regard and did not consider the provision reversal while truing up the accounts for 2020-21.

5.50 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:

Table 5.43: Non-tariff income for 2021-22 (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 5.41	38.08	85.30	1197.32	1320.70
2	Less: Items sought to be excluded in TU				
i	Claw back of grant-Considered separately	6.67	37.58	265.62	309.88
ii	Cost of LED Bulbs booked under A&G expenses			10.81	10.81
iii	Reversal of provision on doubtful debts			56.30	56.30
iv	Total exclusions (I to iii)	6.67	37.58	332.74	376.99
3	Add: Items sought to be considered in True up				
i	Interest on KWA arrears taken over by GoK			65.93	65.93
4	NT Income sought for TU 2019-20 (1-2+3)	31.41	47.71	930.51	1009.64

5.51 **Revenue from Tariff:** 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 5.44: Revenue from tariff for 2021-22 (Rs. Cr)					
Sl No	Particulars	SBU G	SBU T	SBU D	Total
1	Revenue from Sale of power-As per Accounts (Note No. 27)				16366.93
2	Less: Items considered under non-tariff income (Table 5.41 Subtotal A+B)				702.01
3= (1-2)	Revenue from Tariff and external sale as per Accounts				15664.92
4	Less: Power factor incentive accounted under A&G expenses				38.61
5= (3-4)	Revenue from tariff & external sale for truing up purpose				15626.31
	Break up				
8	Revenue from sale within the State including fuel surcharge			14640.61	14640.61
9	Less: Power factor incentive			38.61	38.61
10= (8-9)	Revenue domestic sale net of PFI			14602.00	14602.00
11	Add: Revenue from external sale			1024.31	1024.31
12= (10+11)	Total (8+9-10)			15626.31	15626.31

5.52 Reconciliation of total income as per audited accounts and income considered in Truing up petition is furnished below:

Table 5.45: Reconciliation of Income as per Accounts and True up for 2021-22 (Rs. Cr)			
Sl No	Particulars	Amount	Amount
	AS PER AUDITED ACCOUNTS		
1	Revenue from Operation as per Accounts (Note 27)		16366.93
2	Other Income as per Accounts (Note 28)		618.69
3= (1+2)	Total income as per accounts		16985.62
	AS PER TU PETITION		
4	Revenue from tariff & external sale (Table)		15626.31
5	Non-Tariff Income in TU petition (Table 5.45)		1009.64
6= (4+5)	Total revenue for TU		16635.95
7= (3-6)	Difference		349.67
	Break up		
a	Power factor Incentive	38.61	
b	Claw back of Grant	309.88	
c	LED purchase	10.81	
d	Reversal of provision on doubtful debts	56.30	415.60
e	Less: Interest on KWA arrears taken over by GoK		65.93
			349.67

5.53 **Variation between audited accounts and truing up petition:** Profit as per audited accounts for 2021-22 has been Rs.736.27 Cr (excluding RoE). Hon'ble Commission had ordered to amortize past revenue gap to the tune of Rs. 850 Cr. But, revenue surplus as per this petition is Rs.346.39 Cr only and therefore Hon'ble Commission may kindly approve the same as amortization against past gap. The following table summarizes the variation between loss as per audited accounts and TU petition. Detailed information is furnished in **Appendix 11**.

Table 5.46: Comparison of Accounts and TU Petition (Rs Cr)				
Sl.No	Particulars	As per Accounts	TU Petition	Difference
1	Interest & Finance charges	1618.25	2169.38	-551.13
2	Additional contribution to Master Trust	0	300.00	-300.00
3	Depreciation	1139.74	586.83	552.91
4	O&M Expenses	4775.93	3456.86	1319.07
6	Pay revision provision		534.28	-534.28
7	Power purchase & PGCIL charges	8532.16	8432.58	99.58
8	RoE	0	489.87	-489.87
9	Others	164.19	164.19	0.00
10	Generation of power	1.17	1.17	0.00
11	Exceptional items	17.91	17.91	0.00
12	Gain on T&D loss reduction	0	125.25	-125.25
13	Incentive, Amortization and interest		11.23	-11.23
14	Amortization of past gap		346.39	-346.39
15	ARR (1 to 14)	16249.35	16635.94	-386.59
16	Revenue from tariff / operation	15342.62	14602.00	740.62
17	External sale	1024.31	1024.31	0.00
18	Non-tariff income /Other income	618.69	1009.64	-390.95
19	ERC (16 to 18)	16985.62	16635.94	349.68
20	Revenue (gap)/Surplus (19-15)	736.27	0.00	736.27

5.54 Detailed explanation with regard to variation under power purchase, revenue from tariff and claim on T&D loss reduction are furnished in **chapter 4** of this petition.

5.55 **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 08.07.2019 and truing up sought for the year 2021-22. Detailed information is furnished in **Appendix 12**.

Table 5.48: Comparison of Approval and TU Petition (Rs Cr)				
Sl.No	Particulars	Approved	TU sought	Difference
1	Fuel charges for generation	0	1.17	-1.17
2	POP & Interstate transmission	8967.44	8432.58	534.86
3	Interest & Finance charges	1943.62	2169.38	-225.76
4	Depreciation	612.26	586.83	25.43
5	O&M Expenses	3512.24	3456.86	55.38
6	Other expenses	0	164.19	-164.19
7	Retaining gains out of T&D loss reduction beyond target	0	125.25	-125.25
8	Interest on additional bond to Trust	200.00	300.00	-100.00
9	RoE	489.87	489.87	0.00
10	Amortization of past gap	850.00	346.39	503.61
11	Incentive, Amortization and interest		11.23	-11.23
12	Exceptional items		17.91	-17.91

13	Provision for pay revision		534.28	-534.28
14	ARR (1 to 13)	16575.43	16635.94	-60.51
15	Revenue from tariff	14489.41	14602.00	-112.59
16	External sale	405.61	1024.31	-618.70
17	Non-tariff income	681.88	1009.64	-327.76
18	ERC (15 to 17)	15576.90	16635.94	-1059.04
19	Revenue (gap)/Surplus	-998.53	0.00	-998.53

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

APPENDICES

Appendix 1 : Details of capital liabilities (2021-22)

SL NO	NAME OF THE FINANCIAL INSTITUTION	Net Loan - Opening	(IND Adj) 2020-21	Gross loan-Opening – 01/04/2021	Add: Drawal(s) during the Year	Less: Repayment (s) of Loans during the year	Gross loan – Closing – 31/03/2022	CFL	Net loan – Closing – 31/03/2022	Rate of Interest on Loan on annual basis	Interest on loan
A) SECURED LOANS											
1	REC-Distriburion - 23 Circle Scheme	805.18	124.17	929.36	0.00	124.17	805.18	124.17	681.01	9.26-10.16	87.44
2	REC- Distriburion - Meter Scheme	0.00	12.45	12.45	0.00	12.45	0.00		0.00	9.75%	0.56
3	REC-TRAN.Kattakkada -Pothencode Scheme	57.33	14.33	71.66	1.19	15.53	57.33	14.33	43.00	10.90-11.39	7.39
4	REC-TRAN-Group I	66.07	9.07	75.14	0.00	9.18	65.96	10.31	55.65	9.01-10.66	7.34
5	Special Loan Assistance from REC	1494.99	149.50	1644.49	0.00	149.50	1494.99	149.50	1345.49	9.08-10.90%	167.12
6	REC - Peringalkuthu. Scheme	81.87		81.87	16.89	7.46	91.29		91.29	9.75-10.25%	8.87
7	REC – Bhoothathankettu Scheme	114.70		114.70	0.51	1.92	113.29	7.68	105.61	10.07-10.25%	11.73
8	R E C - RGGVY	8.63	1.96	10.59	0.00	1.96	8.63	1.78	6.85	10.25-11%	1.07
9	SOUTH INDIAN BANK-Barapole SHEP	61.79	7.20	68.99	0.00	7.21	61.78	7.20	54.58	8.00%	6.39
10	REC R-APDRP PART-B	367.37	65.16	432.54	0.00	65.16	367.37	65.16	302.21	9.26% - 10.16%	39.85
11	REC for the DDG Scheme	0.14		0.14	0.00	0.00	0.14		0.14	11.00%	0.01
12	RIDF of NABARD Banasuragar SPVP	0.45		0.45	1.80	0.00	2.25		2.25	2.75% - 6.25%	0.06
13	RIDF of NABARD Upper Kallar SHEP	3.61		3.61	9.81	0.00	13.42		13.42	2.75% - 6.25%	0.41
14	SBI	1161.52	145.08	1306.60		137.16	1169.44	145.08	1024.36	7.95%	98.28
15	Special Loan Assistance from PFC	1057.31	91.94	1149.25	0.00	91.94	1057.31	91.94	965.37	9.08%	100.45
16	PFC R-APDRP	225.52		225.52	5.85	0.00	231.37		231.37	9.00%	38.97
17	PFC R-APDRP Part B	221.63		221.63	0.00	11.52	210.11		210.11	9.00%	5.87
18	PFC GEL Kakkayam	16.47	1.37	17.84	0.00	1.37	16.47	1.37	15.09	10.00-10.35%	1.74
19	PFC GEL Perumthenaruvi	29.48	2.56	32.04	0.00	2.56	29.48	2.56	26.91	10.25%	3.13
20	Kerala Financial Corporation	442.98	52.63	495.61	90.00	52.63	532.98	57.37	475.61	9.00%	42.43
21	Medium Term Loan Kerala Financial Corporation	370.00	120.00	490.00	0.00	120.00	370.00	120.00	250.00	8.00%	34.80
22	Indian Bank			0.00	16.24	8.20	8.04	0.92	7.12	6.75%	0.09
23	NABARD-Solar Plant at Pothencode			0.00	8.47		8.47		8.47	2.75%	0.16
24	NABARD- Solar Plant at Thalikulathur			0.00	3.27		3.27		3.27	2.75%	0.06
25	NABARD-Peruvannamoozhi SHEP			0.00	23.98		23.98		23.98	2.75%	0.42
	TOTAL	6587.04	797.43	7384.48	177.99	819.92	6742.54	799.38	5943.16		664.65
B) Unsecured Loan											
1	Short Term Loan from REC			0.00	500.00		500.00		500.00	7.75	31.96
2	Short term loan from Bank of Baroda	400.00		400.00		400.00	0.00		0.00	9.00	11.35
3	Short term loan from M/s IREDA			0.00	800.00	210.00	590.00	590.00	0.00	7.75	39.57
	Total	400.00	-	400.00	1,300.00	610.00	1,090.00	590.00	500.00		82.87
	SEC+UNSEC	6,987.04	797.43	7,784.48	1,477.99	1,429.92	7,832.54	1,389.38	6,443.16	9.57	747.52

Appendix 1A : Details of capital liabilities (2020-21)-SBU G

SL NO	NAME OF THE FINANCIAL INSTITUTION	Net Loan -Opening	(IND Adj) 2020-21	Gross loan-Opening – 01/04/2021	Add: Drawal(s) during the Year	Less: Repayment (s) of Loans during the year	Gross loan – Closing – 31/03/2022	CFL	Net loan – Closing – 31/03/2022	Rate of Interest on Loan on annual basis	Interest on loan
A	SECURED LOANS TERM LOANS										
1	Special Loan Assistance from REC	281.57	28.16	309.72	0.00	39.07	270.66	27.07	243.60	9.08% - 10.9%	30.26
2	REC - Peringalkuthu. Scheme	81.87	0.00	81.87	16.89	7.46	91.29	0.00	91.29	9.75% - 10.25%	8.87
3	REC – Bhoothathankettu Scheme	114.70	0.00	114.70	0.51	1.92	113.29	7.68	105.61	10.07% - 10.25%	11.73
4	SOUTH INDIAN BANK-Barapole SHEP	61.79	7.20	68.99	0.00	7.21	61.78	7.20	54.58	8.00%	6.39
5	REC for the DDG Scheme	0.14	0.00	0.14	0.00	0.00	0.14	0.00	0.14	11.00%	0.01
6	RIDF of NABARD Banasuragar SPVP	0.45	0.00	0.45	1.80	0.00	2.25	0.00	2.25	2.75% - 6.25%	0.06
7	RIDF of NABARD Upper Kallar SHEP	3.61	0.00	3.61	9.81	0.00	13.42	0.00	13.42	2.75% - 6.25%	0.41
8	SBI	218.76	27.32	246.08	0.00	34.36	211.72	26.27	185.46	7.95%	17.79
9	Special Loan Assistance from PFC	199.13	17.32	216.45	0.00	25.03	191.42	16.65	174.78	9.08%	18.19
10	PFC GEL Kakkayam	16.47	1.37	17.84	0.00	1.37	16.47	1.37	15.09	10% to 10.35%	1.74
11	PFC GEL Perumthenaruvi	29.48	2.56	32.04	0.00	2.56	29.48	2.56	26.91	10.25%	3.13
12	Kerala Financial Corporation	83.43	9.91	93.34	12.68	9.53	96.49	10.39	86.11	9.00%	7.68
13	Medium Term Loan Kerala Financial Corporation	69.69	22.60	92.29	0.00	25.30	66.99	21.73	45.26	8.00%	6.30
14	Indian Bank			0.00	2.94	1.48	1.46	0.17	1.29	6.75%	0.02
15	NABARD-Solar Plant at Pothencode			0.00	8.47	0.00	8.47	0.00	8.47	2.75%	0.16
16	NABARD- Solar Plant at Thalikulathur			0.00	3.27	0.00	3.27	0.00	3.27	2.75%	0.06
17	NABARD-Peruvannamoozhi SHEP			0.00	23.98	0.00	23.98	0.00	23.98	2.75%	0.42
	SUB-TOTAL	1161.09	116.44	1277.53	80.33	155.29	1202.57	121.07	1081.50		113.22
B	UNSECURED LOANS TERM LOANS										
1	Short term loan from Bank of Baroda	75.34		75.34	0.00	75.34	0.00	-	0.00	9%	2.05
2	Short Term Loan from REC			0.00	90.52	-	90.52	-	90.52	7.75%	5.79
3	Short term loan from M/s IREDA			0.00	144.84	38.02	106.82	106.82	0.00	7.75%	7.16
	SUB-TOTAL	75.34	0.00	75.34	235.36	113.36	197.34	106.82	90.52		15.00
	TOTAL	1236.43	116.44	1352.87	315.70	268.65	1399.91	227.89	1172.02	9.32	128.23

Appendix 1B : Details of capital liabilities (2020-21) SBU T

SL NO	NAME OF THE FINANCIAL INSTITUTION	Net Loan -Opening	(IND Adj) 2020-21	Gross loan-Opening – 01/04/2021	Add: Drawal(s) during the Year	Less: Repayment (s) of Loans during the year	Gross loan – Closing – 31/03/2022	CFL	Net loan – Closing – 31/03/2022	Rate of Interest on Loan on annual basis	Interest on loan
A	SECURED LOANS TERM LOANS										
1	REC-TRAN-Group I	66.07	9.07	75.14	0.00	9.18	65.96	10.31	55.65	9.01% - 10.66 %	7.34
2	REC-TRAN.Kattakkada -Pothencode Scheme	57.33	14.33	71.66	1.19	15.53	57.33	14.33	43.00	10.90% - 11.39%	7.39
3	SBI	362.67	45.30	407.97	0.00	41.08	366.89	45.52	321.38	7.95%	30.83
4	Special Loan Assistance from PFC	330.13	28.71	358.84	0.00	27.12	331.71	28.84	302.87	9.08%	31.51
5	Special Loan Assistance from REC	466.80	46.68	513.48	0.00	44.44	469.03	46.90	422.13	9.08% - 10.9%	52.43
6	Kerala Financial Corporation	138.32	16.43	154.75	28.98	16.51	167.21	18.00	149.22	9.00%	13.31
7	Medium Term Loan Kerala Financial Corporation	115.53	37.47	153.00	0.00	36.92	116.08	37.65	78.43	8.00%	10.92
8	Indian Bank			0.00	5.09	2.57	2.52	0.29	2.24	6.75%	0.03
	SUB-TOTAL	1536.85	197.99	1734.84	35.26	193.35	1576.75	201.84	1374.90		153.77
B	UNSECURED LOANS TERM LOANS										
1	Short term loan from Bank of Baroda	124.90		124.90	0.00	124.89	0.00	0.00	0.00	9.00%	3.56
2	Short Term Loan from REC			0.00	156.87	0.00	156.87	0.00	156.87	7.75%	10.03
3	Short term loan from M/s IREDA			0.00	250.99	65.88	185.10	185.10	0.00	7.75%	12.41
	SUB-TOTAL	124.90	0.00	124.90	407.85	190.78	341.97	185.10	156.87		26.00
	TOTAL	1661.74	197.99	1859.74	443.12	384.13	1918.72	386.95	1531.77	9.52	179.77

Appendix 1C : Details of capital liabilities (2020-21) SBU D											
SL NO	NAME OF THE FINANCIAL INSTITUTION	Net Loan - Opening	(IND Adj) 2020-21	Gross loan-Opening – 01/04/2021	Add: Drawal(s) during the Year	Less: Repayment (s) of Loans during the year	Gross loan – Closing – 31/03/2022	CFL	Net loan – Closing – 31/03/2022	Rate of Interest on Loan on annual basis	Interest on loan
A	SECURED LOANS TERM LOANS										
1	REC-Distriburion - 23 Circle Scheme	805.18	124.17	929.35	0.00	124.17	805.18	124.17	681.01	9.26% - 10.16%	87.44
2	REC- Distriburion - Meter Scheme	0.00	12.45	12.45	0.00	12.45	0.00	0.00	0.00	9.75%	0.56
3	Special Loan Assistance from REC	746.63	74.66	821.29	0.00	65.99	755.30	75.53	679.77	9.08% - 10.9%	84.43
4	R E C - RGGVY	8.63	1.96	10.59	0.00	1.96	8.63	1.78	6.85	10.25% - 11%	1.07
5	REC R-APDRP PART-B	367.37	65.16	432.54	0.00	65.16	367.37	65.16	302.21	9.26% - 10.16%	39.85
6	SBI	580.09	72.46	652.54	0.00	61.72	590.82	73.30	517.53	7.95%	49.65
7	Special Loan Assistance from PFC	528.04	45.92	573.96	0.00	39.78	534.17	46.45	487.72	9.08%	50.75
8	PFC R-APDRP	225.52	0.00	225.52	5.85	0.00	231.37	0.00	231.37	9.00%	38.97
9	PFC R-APDRP Part B	221.63	0.00	221.63	0.00	11.52	210.11	0.00	210.11	9.00%	5.87
10	Kerala Financial Corporation	221.23	26.29	247.52	48.34	26.59	269.27	28.98	240.29	9.00%	21.44
11	Medium Term Loan Kerala Financial Corporation	184.79	59.93	244.72	0.00	57.79	186.93	60.63	126.31	8.00%	17.58
12	Indian Bank	0.00	0.00		8.20	4.14	4.06	0.46	3.60	6.75%	0.05
	SUB-TOTAL	3889.10	483.00	4372.10	62.40	471.27	3963.23	476.47	3486.76		397.66
B	UNSECURED LOANS TERM LOANS										
1	Short term loan from Bank of Baroda	199.77	0.00	199.77	0.00	199.77	0.00	0.00	0.00	9.00%	5.73
2	Short Term Loan from REC	0.00	0.00	0.00	252.61	0.00	252.61	0.00	252.61	7.75%	16.14
3	Short term loan from M/s IREDA	0.00	0.00	0.00	404.18	106.10	298.08	0.00	0.00	7.75%	19.99
	SUB-TOTAL	199.77	0.00	199.77	656.79	305.86	550.69	298.08	252.61		41.87
	TOTAL	4088.87	483.00	4571.87	719.18	777.13	4513.92	774.55	3739.37	9.68	439.53

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
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					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	
	Total	1525.97	1525.98	2000.00	1900.00	1887.50	4763.97	5201.54	1449.93	400.00	400.00	400.00	500.00

Appendix 3- Details of short-term loan Interest from 2013-14 to 2021-22

No	Bank	2013-14		2014-15		2015-16		2016-17		2017-18		2018-19		2019-20		2020-21		2021-22	
		Rate (%)	Amount (Rs.Cr)	Rate (%)	Amount (Rs.Cr)	Rate (%)	Amount (Rs.Cr)	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	10.15	30.96	10.15	44.03			9.05	69.45	8.00	56.69	8.42	39.08						
2	SBT					9.95	43.76												
3	Canara Bank	10.75	3.61			9.65	94.63												
4	Federal Bank					9.63	41.70												
5	Vijaya Bank	10.25	20.01	10.25	20.13	9.65	26.56	8.65	18.85	8.15	14.50	8.70	24.73	8.70	23.37				
6	South Indian Bank	10.50	30.12	10.50	19.73			9.00	17.92	8.25	13.46								
7	REC STL	13.00	20.61							8.20	5.05	8.20	11.91					7.75	31.96
8	PFC STL	12.50	42.52																
9	PFC STL	12.75																	
10	KSIFC STL	11.50	2.99	11.50	1.16														
11	Bank of India	10.50	9.07	10.50	43.07			8.75	44.49	8.15	25.02	8.15	0.25						
12	IOB	10.25	2.16	10.25	48.54														
13	Dhanalekshmi Bank	11.50	0.82	11.50	4.09														
14	Syndicate Bank			10.25	10.09			9.70	2.39										
15	TMB			10.75	5.60	10.40	0.17												
16	UBI					9.65	19.18												
17	Andhra Bank							8.85	38.97	8.85	19.05								
18	KGB					9.65	3.43												
19	Bank of Baroda													8.55	8.45	7.85	31.58	8.90	11.35
20	M/s IREDA																	7.75	39.57
	Total		162.87		196.44		229.43		38.97		133.77		75.97		31.82		31.58		82.87

Appendix 4: PROJECT WISE ANALYSIS OF CAPITAL EXPENDITURE FOR THE YEAR ENDED 31/03/2022 (Rs. Cr)					
Project Code	Brief Description of Project	Cost as on 01/04/2021	Cost Incurred during the year	Capitalised during the year	Cost as on 31/03/2022
A	GENERATION				
14.02	Idamalayar H E Project	0.56	4.05	3.86	0.75
14.03	Solar Power Project.	8.24	0.17	8.41	-
14.08	LNG based Thermal power scheme	2.78	-	-	2.78
14.09	Renovation of Sengulam Pump House	-	1.90	1.90	-
14.11	Kallada Low Head Scheme	0.02	-0.02	-	-
14.12	Bhoothathankettu Small H.E Scheme	218.23	18.00	1.83	234.41
14.14	Mananthavady Multi Purpose Scheme	2.69	-	-	2.69
14.15	Olikkal Small H.E Scheme	4.74	0.29	0.03	4.99
14.16	Lower Periyar Tunnel Works - Other than W B Aided Works	-	6.97	6.97	-
14.19	Uppen sengulam Hp	8.41	2.62	2.61	8.43
14.20	Western Kallar SHP	0.09	-	-	0.09
14.21	Malampuzha Power Gen. Scheme	-	0.04	0.04	-
14.24	Peppara Low Head Scheme	-	0.12	0.12	-
14.25	RMU SHOLAYAR	88.51	3.33	28.91	62.93
14.27	Chimoney Small H E Scheme	-	0.10	0.10	-
14.28	Poringalkuthu Left Bank Diversion Scheme	-	0.32	0.14	0.18
14.29	Kuttiar Diversion Scheme	0.11	-	-	0.11
14.30	Wind Generator, Kottamala, Palakkad	-	4.16	-	4.16
14.32	Poringalkuthu Left Bank H E Project Extension Scheme	0.22	2.30	2.53	-
14.33	Automatic Demand Management scheme(ADMS)	7.15	0.32	7.47	-
14.36	Anakkayam Small HE Scheme	13.62	2.39	0.10	15.91
14.38	Wanchiyam Small HE Scheme	0.02	-	-	0.02
14.39	Chathankottu Nada Small HE Scheme	68.30	25.66	93.96	-
14.40	DRIP Project	101.84	21.56	117.22	6.18
14.41	Renovation Division for Idukki H.E.P.	3.21	1.22	1.59	2.83
14.42	Valanthode SHEP	5.04	1.16	0.00	6.20
14.43	Roof Top Solar Power Plants	0.30	33.40	16.48	17.22
14.44	Sengulam Augmentation Scheme	74.07	8.66	-	82.73
14.45	Athirapally H E Project	15.57	-	-	15.57
14.46	Chembukadavu Mini HEP Stage II	-	0.06	0.03	0.03
14.48	Urumi Mini H E Project II	0.02	0.01	0.02	-
14.49	Poovaramthode Small H.E Scheme	6.57	0.81	0.01	7.37
14.61	Expenditure due to Natural Calamity	9.23	2.39	2.24	9.38

14.64	MARMALA SHEP	2.43	0.12	-	2.55
14.65	Kuttiadi Small Hydro Electric Project	0.25	1.12	1.27	0.10
14.66	Upper Kallar HE Scheme	31.28	4.16	0.21	35.23
14.68	Peechad Small Hydro Electric project	0.08	0.02	-	0.10
14.70	Vakkalar Hydro Electric Project	0.06	-	-	0.06
14.71	Peruvannamuzhi Small Hydro Electric Project	36.09	14.66	0.02	50.73
14.72	Chembukadavu III Small H.E Scheme	5.88	0.00	-	5.88
14.74	Chinnar HES	54.77	34.39	0.00	89.15
14.75	Pazhassi Sagar Small H.E Scheme	23.04	3.79	0.01	26.82
14.76	CWIP - Implementation of SCADA under RDSS		0.05	0.05	-
14.77	Pallivasal Extension Scheme	379.76	41.38	0.00	421.13
14.78	Barapole S.H. Scheme	0.12	4.48	4.60	0.00
14.79	Mangulam Hydroelectric Scheme	43.77	7.92	0.00	51.68
14.80	Achencoil SHEP	4.57	-	-	4.57
14.83	Peechi SHEP	-	1.62	0.97	0.65
14.84	Maripuzha SHEP (2 X 3 MW)	1.64	8.21	6.46	3.38
14.86	120 MW DGPP Kozhikode	-	0.40	0.40	-
14.88	Kuttiady Addl. Extention Scheme	22.15	-	22.15	-
14.89	LADRUM SHEP	2.72	0.85	-	3.57
14.90	CWIP - General	177.50	154.99	20.32	312.17
14.93	Vilangad Small Hydro Project	-	0.02	0.02	-
14.95	Perunthenaruvi- SHE schemes	0.13	0.02	0.16	-
14.96	Thottiyar HES	158.20	26.22	-	184.42
14.97	CWIP - Closed Projects	1.27	7.13	6.61	1.79
14.98	Poringalkuthu Addl.Extn. Scheme	137.06	29.73	1.81	164.98
	SUB TOTAL (A)	1,722.31	483.28	361.63	1,843.96
B	TRANSMISSION LINES & SUB STATIONS				
14.01	Electrical Transmission Schemes	428.64	294.32	417.88	305.08
14.03	Solar Power Project.		21.49	21.49	
14.18	Power System Development Fund	522.93	128.27	642.39	8.82
14.56	Load Despatch & Communication Schemes	1.80	4.67	4.46	2.01
14.61	Expenditure due to Natural Calamity	0.13	0.23	0.27	0.08
14.90	CWIP - General	90.39	127.79	26.01	192.16
14.94	TRANSGRID 2.0 PROJECT	652.54	447.42	650.33	449.63
	SUB TOTAL (B)	1,696.42	1,024.19	1,762.84	957.78
C	DISTRIBUTION				
14.05	Deen Dayal Upadhyay Gram Jyothi Yojana (DDU GJY)	1.92	8.41	8.08	2.24

14.10	E mobility Promotion Fund Fame India Scheme Phase II		0.80	0.58	0.22
14.13	Integrated Power Development Scheme (IPDS)	21.42	68.50	87.05	2.87
14.47	Saubhagya Scheme		2.25	2.25	-
14.50	Rural Electrification Scheme	0.04	0.69	0.71	0.02
14.51	Distribution Line Extension	2.86	172.01	174.22	0.64
14.52	Distribution Service Connection	3.16	176.08	176.62	2.62
14.53	Distribution System Improvement	16.14	864.52	868.44	12.22
14.54	Electrification of Harijan Colonies	-	0.08	0.08	-
14.55	Electrification of Tribal Colonies	-	0.13	0.13	-
14.57	Punja Package	-	0.01	0.01	-
14.58	System Improvement in other areas	-	6.00	5.99	0.01
14.59	Distbn. Capacitor Installation Scheme	2.11	1.91	0.09	3.93
14.60	Street Lights	0.34	26.68	26.56	0.46
14.61	Expenditure due to Natural Calamity	0.08	3.47	3.48	0.07
14.62	RGGVY-Village electrification Infrastructure	-	0.13	0.13	-
14.63	RGGVY-For effecting BPL Service Connection	-	0.01	0.01	-
14.67	Part B Projects of R-APDRP	13.68	19.23	19.74	13.17
14.82	R- APDRP Scheme	257.94	14.90	70.18	202.66
14.90	CWIP - General	423.23	264.81	202.17	485.87
14.91	Innovation fund	-	0.70	0.68	0.02
14.99	Projects not Identified	1.06	-		1.06
	SUB TOTAL (C)	744.00	1,631.28	1,647.20	728.08
	GRAND TOTAL (A+B+C)	4,162.73	3,138.75	3,771.67	3,529.81

Appendix 4A GENERATION SBU - DETAILS OF PART CAPITALISATION OF PROJECTS FOR THE FY 2021-22

Sl.No	Name of Project & project code	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	Design, Engineering, Manufacture, Supply, Erection, Supervision, Testing and Commissioning of one No. 66.667MVA, 220/11kV, Three Phase Generator Transformer including dismantling of the existing transformer to spare bay at Lower Periyar Hydro Electric Project, Karimanal					3.77					3.77
2	110kV yard extension work at Idamalayar					0.23					0.23
3	BHOOTHATHANKETTU SMALL HYDRO ELECTRIC PROJECT	0.00	0.13	0.00	0.00	1.70	0.00	0.00	0.00	0.00	1.83
4	UPPER SENGULAM HYDRO ELECTRIC PROJECT	2.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.61
5	Poovaramthode SHEP	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
6	Peruvannamuzhi SHEP	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02
7	PAZHASSI SAGAR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
8	OLIKKAL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.02	0.03
9	Poringalkuthu	0.00	0.00	1.62	0.19	0.00	0.00	0.00	0.00	0.00	1.81
10	Anakkayam SHES	0.00	0.00	0.00	0.10	0.00	0.00	0.00	0.00	0.00	0.10
11	Marippuzha (2X3 MW)	5.17	0.00	0.00	1.29	0.00	0.00	0.00	0.00	0.00	6.46
TOTAL		7.77	0.15	1.62	1.58	5.70	0.00	0.00	0.02	0.04	16.87

Appendix 4B GENERATION SBU - Details of part capitalisation in earlier years considered in 2021-22 (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 Network, etc	Vehicles	Furniture & fixtures	Office Equipment	
1	Construction of 2 Nos 110KV feeder bays for accommodating 110KV feeders from kohamangalam S/s and Bhoothathan kettu HEP to Idamalayar HEP (2020-21)	0	0	0	0	0.06	0	0	0	0	0.06
2	Renovation- IHEP -Moolamattom (2020-21)	0	1.32		0.03	40.13	0.05	0	0.01	0	41.54
3	RMU SHOLAYAR (2020-21)	0	0	0	0.17	3.93	0.01	0	0	0.01	4.12
	Sub total 2020-21	0	1.32	0	0.20	44.12	0.06	0	0.01	0.01	45.72
4	BDPP-Online continuous stack emission & Online effluent quality monitoring system (2017-18)					0.68					0.68
5	CHATHANKOTTUNADA STAGE II (2017-18)									0.17	0.17
	Sub total 2017-18	0	0	0	0	0.68	0	0	0	0.17	0.85
6	RMU Sholayar (2016-17)		0.03			0.01			0.03	0.01	0.08
	Total	0.00	1.35	0.00	0.20	44.81	0.06	0.00	0.04	0.19	46.65

Appendix 4C TRANSMISSION SBU - DETAILS OF PART CAPITALISATION OF PROJECTS FOR THE FY 2021-22

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	Construction of 110kV substation, Palakkal	0.00	0.01	0.00	0.16	0.00	0.02	0.00	0.00	0.00	0.19
2	Transgrid Downstream work at 110 kV Substation, Kunnankulam	0.00	0.00	0.00	0.01	0.73	0.01	0.00	0.00	0.00	0.75
3	Renovation work of store building at 110kV Substation Mankavu.	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
4	Up gradation of Thambalamanna SS to 110 kV Level balance work	0.05	0.00	0.00	0.00	0.31	0.00	0.00	0.00	0.00	0.36
5	Upgradation of 66 kV Substation Kuttikattoor to 110kv level yard metalling and fencing	0.00	0.03	0.00	0.12	1.48	0.00	0.00	0.00	0.00	1.63
8	110 KVSS W.Island.	0.00	0.00	0.00	0.04	0.05	0.00	0.00	0.00	0.00	0.09
9	110 KVSS Vyttila.	0.00	0.00	0.00	0.00	2.14	0.00	0.00	0.00	0.00	2.14
10	220 KVSS Ambalamughal	0.00	0.00	0.00	0.00	5.58	0.18	0.00	0.00	0.00	5.75
11	110 KV SS PAYYANNUR- works in connection with power evacuation to 10MW Solar Plant by M/s. CIAL	0.00	0.10	0.00	0.29	0.67		0.00			1.06
12	Installation of 100 MVA transformer 220 KV s/s Areacode.	0.00	0.00	0.00	0.00	0.33	0.04	0.00	0.00	0.00	0.37
13	construction of 2 nos 11 kv feeder bay at 110 kv s/s Edarikode	0.00	0.00	0.00	0.03	0.21	0.00	0.00	0.00	0.02	0.27
14	Manjeri-Nilambur line	0.00	0.00	0.00	0.71	0.00	4.14	0.00	0.00	0.00	4.85
15	Valambur-Elachola 66 KV line to 110KV	0.00	0.00	0.00	0.00	0.00	1.60	0.00	0.00	0.00	1.60
16	Malaparamba-Ramapuram line	0.00	0.00	0.00	0.00	0.00	0.84	0.00	0.00	0.00	0.84
17	Providing inter bus connection between 11 KV bus of existing newly erected panel at 110 KV s/s Perinthalmanna.	0.00	0.00	0.00	0.00	0.11	0.02	0.00	0.00	0.00	0.13
18	Capacity enhancement 33 Kv s/s makkarapparamba	0.00	0.00	0.00	0.00	0.06	0.00	0.00	0.00	0.00	0.06
19	Providing 11 KV feeder to Kottakkal Arya vaidya sala	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.04
20	Erecting new 20 MVA transformer at 110 KV s/s Kuttippuram	0.00	0.00	0.00	0.00	5.96	0.01	0.00	0.00	0.00	5.96
21	Deviated line route of Adyampara to Erumamunda	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.02
22	33 KV SC line Adyampara to Pothukallu	0.00	0.00	0.00	0.00	0.00	0.10	0.00	0.00	0.00	0.10

23	Capacity enhancement at 33 Kvs/s Kalikavu	0.00	0.00	0.00	0.00	0.30	0.00	0.00	0.00	0.00	0.30
24	Inter linking wandoor s/s and Pookkottumpadam s/s at Santhinagar	0.00	0.00	0.00	0.00	0.00	0.90	0.00	0.00	0.00	0.90
25	Construction of 33 KV feeder bay at 33 KV s/s Pookkottumpadam	0.00	0.00	0.00	0.00	0.25	0.00	0.00	0.00	0.00	0.25
26	Extension of control room building and construction of internal road and vehicle shed at 33 KV s/s Valluvambram	0.00	0.00	0.00	0.19	0.01	0.00	0.00	0.00	0.00	0.20
27	Construction of GIS at 110 Kv s/s Malappuram-counter survey	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.01
28	110 KV SS Kizhissery	0.00	0.00	0.00	0.00	0.00	1.49	0.00	0.00	0.00	1.49
29	Edakkara 66 KV-Erection of yard equipment	0.00	0.00	0.00	0.00	0.00	0.28	0.00	0.00	0.00	0.28
30	Installing 2nd 33/11 kv transformer and 2 nos 11 KV feeder outlet at 33 KV s/s Thavanur	0.00	0.00	0.00	0.00	0.00	0.85	0.00	0.00	0.00	0.85
31	33 KVSS Pothukallu	0.00	0.00	0.00	0.00	0.08	0.24	0.00	0.00	0.00	0.31
32	Construction of fencing and metal spreading at 66 KV s/s Mankada	0.00	0.00	0.00	0.01	0.42	0.02	0.00	0.00	0.00	0.45
33	Construction of foundation of transformer bay and equipment at 33 Kv s/s pulamanthole	0.00	0.00	0.00	0.00	0.15	0.19	0.00	0.00	0.00	0.34
34	66 KV s/s Nilambur upgradation	0.00	0.00	0.00	0.14	5.45	0.73	0.00	0.00	0.00	6.31
35	110 KV SS Melattur	0.00	0.00	0.00	0.00	1.32	0.21	0.00	0.00	0.00	1.53
36	Construction of cable trench ,loop well and equipment structure at 110 KV s/s Chelari	0.00	0.00	0.00	0.00	0.00	0.10	0.00	0.00	0.00	0.10
37	Erection of 11 Kv panel at 33 Kv s/s Kooriyad	0.00	0.00	0.00	0.00	0.03	0.04	0.00	0.00	0.00	0.07
38	Construction of transformer plinth at 33 Kv s/s Edavanna	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.02
39	Edakkara 66 KV s/s upgradation	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.04
40	110 KV SS Malampuzha	0.00	0.00	0.00	0.00	0.14	0.00	0.00	0.00	0.00	0.14
41	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	0.00	0.48	0.00	0.00	0.06	0.02	0.00	0.00	0.00	0.57
	TOTAL	0.12	0.62	0.00	1.70	25.88	12.06	0.00	0.00	0.02	40.41

Appendix 4D TRANSMISSION SBU -DETAILS OF PART CAPITALISATION OF PROJECTS FOR THE FY 2016-17 and commissioned in 2021-22											
Break-up of Project Cost											COD
Name of Project	Land	Buildings	Hydraulic Works	Other Civil Works	Plant and Machinery	Lines, Cable Network, etc	Vehicles	Furniture & Fictures	Office Equipments	Total (in Rs. Cr)	2021-22
TSD Kaniyambetta-Conducting profile surevey-conductor changing of 66kV Kuthumunda-Thamarassery feeder & tower insertion						0.01				0.01	0.01
	0	0	0	0	0	0.01	0	0	0	0.01	0.01

Appendix 4E TRANSMISSION SBU - DETAILS OF PART CAPITALISATION OF PROJECTS FOR THE FY 2018-19 COMMISSIONED DURING 2021-22											
Break-up of Project Cost											COD
Name of Project	10-Group Break-up (in Rs. Cr)										2021-22
	Land	Buildings	Hydraulic Works	Other Civil Works	Plant and Machinery	Lines, Cable Network, etc	Vehicles	Furniture & Factures	Office Equipments	Total (in Rs. Cr)	
Site leveling, construction of retaining wall and compound wall	0.26									0.26	0.26
Employee cost Capitalisation					0.05					0.05	0.05
Painting of A pole						0.97				0.97	0.97
MANJERI NILAMBUR line						0.49				0.49	0.49
NILAMBUR-EDAKKARA LINE						1.11				1.11	1.11
UPGRADATION-NILAMBUR 66 KV S/S	0.23	0.08		0.18	1.80	2.20				4.49	4.49
TOTAL	0.49	0.08	0.00	0.18	1.85	4.77	0.00	0.00	0.00	7.38	7.38

Appendix 4F: SBU T - DETAILS OF PART CAPITALISATION - FY 2017-18 (Rs. Cr) commissioned during 2021-22											
	Break-up of Project Cost										2021-22
	Land	Buildings	Hydraulic Works	Other Civil Works	Plant and Machinery	Lines, Cable Network, etc	Vehicles	Furniture & Fictures	Office Equipments		
110 KV S/s Kuttiadi- Providing Dedicated 11KV Feeder Outlet to KWA Koorankottukadavu Plant.						0.05				0.05	0.05
Trans Division Tirur				0.01						0.01	0.01
Upgradation at 66 KV S/S Veli				0.78						0.78	0.78
Con. Of 33kv S/s Kumily					0.08					0.08	0.08
Con. Of 33kv S/s Vandanmedu					0.10					0.10	0.10
Bhoothathankettu- KMLM 66kV Line						0.08				0.08	0.08
	0	0	0	0.79	0.18	0.13	0	0	0	1.10	1.10

Appendix 4G SBU T - DETAILS OF PART CAPITALISATION - FY 2019-20 (Rs Cr) Commissioned during 2021-22											
Name of Project	Break-up of Project Cost									Total (in Rs. Cr)	COD
	10-Group Break-up (in Rs. Cr)										
	Land	Buildings	Hydraulic Works	Other Civil Works	Plant and Machinery	Lines, Cable Network, etc	Vehicles	Furniture & Fictures	Office Equipments		2021-22
Upgradation 66 kv s/s Nilambur				0.18	0.28					0.46	0.46
Construction of 66 kv line from Western Kallar to Loc. 29 of Pallivasal Kothamangalam 66KV feeder						0.01				0.01	0.01
TransGrid						18.86				18.86	18.86
TOTAL	0.00	0.00	0.00	0.18	0.28	18.87	0.00	0.00	0.00	19.33	19.33

Appendix 4H SBU T - DETAILS OF PART CAPITALISATION - FY 2020-21 (Rs Cr) Commissioned during 2021-22											
Name of Project	10-Group Break-up (in Rs. Cr)									Total (in Rs. Cr)	2021-22
	Land	Buildings	Hydraulic Works	Other Civil Works	Plant and Machinery	Lines, Cable Network, etc	Vehicles	Furniture & Factures	Office Equipments		
33KV POTHUKALLU - Constuction of Sub Station	0.00	0.00	0.00	0.01	3.12	0.38	0.00	0.00	0.00	3.51	3.51
33 MAKKARAPARAMBA CAPACITY ENHANCEMENT	0.00	0.00	0.00	0.00	0.70	0.00	0.00	0.00	0.00	0.70	0.70
33 THAZHEKKODE - Relacement with auto reclosure with new CB	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.01	0.01
33 POOKOTTUMPADAM - Line work	0.00	0.00	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.09	0.09
66 KV NILAMBUR - Upgradation	0.00	0.03	0.00	0.00	0.25	0.91	0.00	0.00	0.00	1.19	1.19
110 PERINTHALMANNA - Upgradation	0.00	0.00	0.00	0.16	0.01	0.00	0.00	0.00	0.00	0.17	0.17
110 MANJERI - Upgradation	0.00	0.00	0.00	0.00	0.00	2.07	0.00	0.00	0.00	2.07	2.07
110 KUTTIPPURAM Capacity enhancement	0.00	0.00	0.00	0.01	0.22	0.00	0.00	0.00	0.00	0.23	0.23
110 MELATTUR - Capacity enhancement	0.00	0.00	0.00	0.00	1.37	0.00	0.00	0.00	0.00	1.37	1.37
110 EDARIKKODE Capacity enhancement	0.00	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00	0.09	0.09
110 EDAPPAL - New 11 KV out let	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.01	0.01
110 TIRUR - Traction Sub Station	0.00	0.00	0.00	0.00	1.92	0.00	0.00	0.00	0.00	1.92	1.92
110 KIZHISSERY - Upgradation work	0.00	0.00	0.00	0.00	1.74	0.31	0.00	0.00	0.00	2.05	2.05
110 PONNANI - Instalation of MVA 33/11 KV Transformer	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.03	0.03
110 PARAPPANANGADI - Treecutting Compensations	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.00	0.04	0.04
220 MALAPARAMBA - Instalation of 200 MVA & 100 MVA transformer	0.00	0.00	0.00	0.00	6.58	0.14	0.00	0.00	0.00	6.72	6.72
Trans Section MALAPPURAM - Replacing disk insulator	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.05	0.05
TC RAMAPURAM-Providing protection wall	0.00	0.00	0.00	0.00	0.00	0.14	0.00	0.00	0.00	0.14	0.14
TC Nilambur - Manjeri Nilambur Line	0.00	0.00	0.00	0.00	0.00	0.78	0.00	0.00	0.00	0.78	0.78
220 KV SS Elankur	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.02	0.02
Construction of 33KV S/s at Marayoor	0.00	0.00	0.00	0.00	0.05	0.31	0.00	0.00	0.00	0.36	0.36
Construction of 110kV substation, Mannuthy	0.00	0.00	0.00	1.07	0.00	0.00	0.00	0.00	0.00	1.07	1.07
Line Compensation Mannam Cherai 110 KV DC line	0.00	0.00	0.00	0.00	0.00	0.47	0.00	0.00	0.00	0.47	0.47
110 KV SS Pattambi	0.07	0.00	0.00	0.61	0.00	0.00	0.00	0.00	0.00	0.68	0.68
110 KV SS Vennakkara : 110kV GIS	0.00	0.14	0.00	2.00	0.41	0.05	0.00	0.01	0.00	2.61	2.61
Up-gradation of 33 kV Thambalamanna Substation to 110 kV Substation	0.17	0.54	0.00	0.17	6.54	18.27	0.00	0.00	0.00	25.69	25.69
Up gradation of 1st phase of 66 kV Kuttikkattur Substation	0.36	1.24	0.00	0.00	4.01	0.00	0.00	0.00	0.00	5.61	5.61

Newly Constructed 66 kV Sub Station Ambalavayal	0.00	0.71		0.39	2.23	0.00	0.00	0.00	0.00	3.33	3.33
Erection of yard structure, equipments of the additional bay, assembling Andcommissioning of new 12.5 MVA 110/11 kV Transformers at 110 kV SS Kinalur	0.00	0.00	0.00	0.00	1.59	0.00	0.00	0.00	0.00	1.59	1.59
Control room extension of 33 kV SS Melady	0.00	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.11
work providing earth shield over new control room - - Value addition at 110 kV SS Vadakara	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.03
Value addition work renovation of earthing system of 220 kV SS Nallalam- connecting of newly provided fencing to existing earth Mat	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.01	0.01
Formation of Electrical Vehicle Charging Station at 220 kV SS Nallalam	0.00	0.00	0.00	0.00	0.22	0.00	0.00	0.00	0.00	0.22	0.22
Supply, laying, testing and commissioning of 3c*300sqmm UG cable with 24 fibre OFC and constructing and commissioning of OH line for river crossing for power evacuation from Chathangottunada SHEP II to 110 kV SS Kuttiady	0.00	0.00	0.00	0.00	0.00	0.86	0.00	0.00	0.00	0.86	0.86
Capacity enhancement of 220kV Substation Nallalam upgradation of existing 2*60MVA + 2*100MVA to 2*200 MVA transformer and related works	0.00	0.00	0.00	0.00	17.64	0.00	0.00	0.00	0.00	17.64	17.64
Value Addition - Construction of steel bridge over Canoli Canal for conveying 110 kV cable to Chevayur Substation at 110 kV GIS Gandhioroad	0.00	0.00	0.00	0.31	0.00	0.00	0.00	0.00	0.00	0.31	0.31
Erection of 16MVA, 66/11kv transformer and related works at 66kv SS Cyber Park	0.00	0.00	0.00	0.00	1.17	0.00	0.00	0.00	0.00	1.17	1.17
JBIC Project- supply and installation of drinking water pipe line including water meters at 220 kv SS Compound	0.00	0.00	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.10
TOTAL	0.60	2.80	0.10	4.73	49.92	24.88	0.00	0.03	0.00	83.07	83.07

Appendix 4 I-SBU T- PROJECT CODE WISE ASSET ADDITION DURING 2021-22

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 & Figures(8)	Office Equipments(9)	TOTAL
Tr. Circle Kottarakkara	110kV SS Ayur	0	0.065	0	0.211	0	0	0	0	0	0.276
	66kV SS Karunagappally	0	0.472	0	0.282	0.033	0.008	0	0	0	0.795
	110kV SS Chavara	0	0	0	0	0.003	0.008	0	0	0	0.011
	Intrest & Finance Charges & Employee Cost for FY 2019-20	0	0	0	0.119	0.572	0.631	0	0	0	1.322
	110kV SS Anchal	0	0.021	0	0	0	0	0	0	0.003	0.024
	220kV SS Kundara	0	0.03	0	0	0.102	0.04	0	0	0	0.172
	110kV SS Ayathil	0	0	0	0	0.02	0	0	0	0	0.02
	220kV SS Edamon	0	0.141	0	0.034	0.103	0	0	0	0.006	0.284
	110kV SS Kottarakkara	0	0	0	0.008	0.002	0.002	0	0	0	0.012
	110kV SS Kavanad	0	0.087	0	0	0.041	0	0	0	0.003	0.131
	110kV SS Punalur	0	0	0	0.049	0.032	0	0	0	0	0.081
	66kV SS Thenmala	0	0	0	0	0.009	0	0	0	0	0.009
	LMS Edamon	0	0	0	0	0	0.48	0	0	0	0.48
	110kV SS Pathanapuram	0	0.015	0	0	0	0	0	0	0.003	0.018
	110kV SS Sasthamcottah	0	0.009	0	0	0.015	0	0	0	0	0.024
	110kV SS Ambalappuram	0	0	0	0	0.015	0	0	0	0.001	0.016
	LMS Punalur	0	0	0	0	0	0.028	0	0	0	0.028
	LMS Kundara	0	0.028	0	0	0	0.402	0	0	0	0.43
	110kV SS Karunagappally	0	0	0	0	0.023	0	0	0	0	0.023
	110kV GIS Kollam	0	0.036	0	0	0	0	0	0	0	0.036
	TC Store Ambalappuram	0	0	0	0	0	0	0	0	0.001	0.001
	110kV SS Parippally	0	0	0	0	0.001	0	0	0	0	0.001
	33kV SS Kannanalloor	0	0	0	0	0.006	0	0	0	0	0.006
	33kV SS Puthoor	0	0	0	0.028	0.008	0	0	0	0	0.036
	33kv SS Chengamanadu	0	0	0	0	0.009	0	0	0	0	0.009
	TCS Karunagappally	0	0	0	0	0	0.024	0	0	0	0.024
	TCS Punalur	0	0	0	0	0	0.071	0	0	0	0.071
		TOTAL(A)	0	0.904	0	0.731	0.994	1.694	0	0	0.017
Tr Circle Poovant	110 KV Substation, Vazhoor	1.016	0	0	0	0	0	0	0	0	1.016
	220 KV Pallom	0	0	0	0.019	0	0.256	0.001	0	0	0.276
	110 kv S/s, Erumely	0	0.039	0	0.002	0.092	0	0	0.001	0	0.134

110kV S/S,Vaikom	0	0.074	0	0	5.321	0	0	0	0	5.395
66 kV S/S,Ettumanoor	0	1.642	0	0.007	3.459	0	0	0.01	0.002	5.12
66 kV S/S, Kanjirappally	0	0.01	0	0	0	0	0	0	0	0.01
110 KV Koothattukulam	0	0.033	0	0.147	0	0	0	0	0	0.18
220 kV S/S,Poovanthuruthu	0	0.178	0	0	2.174	0	0	0.01	0	2.362
110 KV Substation, Mundakayam	0	0.022	0	0.005	0.001	0.061	0	0	0	0.089
Transmission Sub Dvn. Changanasserry	0	0.016	0	0	0	0	0	0	0	0.016
220 KV SS PALLOM	0	0.072	0	0.002	0	0	0	0	0	0.074
LMS Poovanthuruth	0	0.084	0	0	0	0	0	0	0	0.084
110 KV SS Kanjirappally	0	0.405	0	0	0	0	0	0	0	0.405
110 KV S/S, Koothattukulam	0	0.103	0	0.403	0	0.063	0	0	0.001	0.57
Transmission Division Poovanthuruth	0	0.01	0	0	0	0	0	0	0	0.01
110 KV SS Vaikom	0	0.373	0	0.177	0	0	0	0	0	0.55
66 kv Substaton, Kottayam	0	0.064	0	0	0	0	0	0.002	0	0.066
66 KV Kuravilangadu	0	0.045	0	0	0.049	0	0	0	0.004	0.098
110 KV Erattupetta	0	0.012	0	0.272	0.621	0	0	0	0	0.905
220 kV Switching Station, New Pallom	0	0	0	0.013	0	0	0	0.005	0	0.018
Maintenance. Sn, Poovanthuruthu	0	0	0	0.043	0.002	0	0	0.003	0.006	0.054
33kV S/S,Kaduthuruthy	0	0	0	0.038	0.263	0.007	0	0	0	0.308
33 kV Substation Manimala	0	0	0	0.005	0	0	0	0	0	0.005
110 kV S/S Kodimatha	0	0	0	0	1.41	0	0	0	0	1.41
110kVS/S, Ayarkunnam	0	0	0	0	0.208	0	0	0.003	0.001	0.212
33kV S/S,Kidangoor	0	0	0	0	0.19	0	0	0	0	0.19
33kV S/S,Paika	0	0	0	0	0.896	0	0	0	0	0.896
110 kV S/S Pala	0	0	0	0	0.281	0	0	0	0.004	0.285
66 kV S/S, Koothattukulam	0	0	0	0	8.041	0	0	0	0	8.041
66 kV S/S, Mundakkayam	0	0	0	0	1.143	0	0	0	0.004	1.147
33kV S/S,Koottickal	0	0	0	0	0.041	0	0	0	0	0.041
66 kV S/S,Gandhinagar	0	0	0	0	0.972	0	0	0	0.002	0.974
110 kV S/S,Pampady	0	0	0	0	0.096	0	0	0.005	0	0.101
T C Section, Erumely	0	0	0	0	0.029	0	0	0	0	0.029
66 KV Changanasserry	0	0	0	0	0.003	0	0	0	0	0.003
Transmission Circle Office	0	0	0	0	0.004	0	0	0.007	0.016	0.027
110 KV Chengalam	0	0	0	0	0.004	0	0	0	0	0.004
Erumely- Kanjirappally 110 kv Line	0	0	0	0	0	0.055	0	0	0	0.055
Pala- Ettumanoor	0	0	0	0	0	0.239	0	0	0	0.239
LMS Pala	0	0	0	0	0	0.017	0	0	0	0.017
Kaukadam Koothattukulam Line	0	0	0	0	0	24.558	0	0	0	24.558
Kaduthuruthy Kallara 33 KV	0	0	0	0	0	0.002	0	0	0	0.002

	Pallom – Peerumade 110 KV	0	0	0	0	0	0.099	0	0	0	0.099
	Koothattukulam Kuravilangad 110 KV Line	0	0	0	0	0	0.04	0	0	0	0.04
	110 kv Substation, Thrikkodithanam	0	0	0	0	0	0	0	0.001	0	0.001
	Transmission subdivision Pala	0	0	0	0	0	0	0	0.007	0	0.007
	Transmission Sub Division Vaikom.	0	0	0	0	0	0	0	0	0.002	0.002
							-18.5				-18.5
	TOTAL(B)	1.016	3.182	0	1.133	6.8	25.397	0.001	0.054	0.042	37.625
Tr Circle Thrissur	S/S THUMBOOR	0.051	0	0	0	0	0	0	0	0	0.051
	Angamaly	0	0.721	0	0	0.258	0.006	0	0.001	0	0.986
	Annamanada	0	0.597	0	0.055	0.184	0.837	0	0	0	1.673
	Ayyampuzha 110kv S/S	0	0.372	0	0	0	0	0	0.001	0	0.373
	Chavakkad	0	0.01	0	0	0	0	0	0	0	0.01
	Guruvayoor	0	0.01	0	0	0	0	0	0	0	0.01
	Kattoor	0	0.142	0	0.126	0.091	0.305	0	0	0	0.664
	Mannuthy	0	1.096	0	0.921	0.287	0.097	0	0	0.005	2.406
	Methala	0	0.023	0	0	0	0.696	0	0	0	0.719
	Pudukkad	0	0.035	0	0.287	0.016	0.586	0	0	0	0.924
	Wadakkancherry	0	0.031	0	0	0.001	0	0	0	0.001	0.033
	Athani	0	0	0	0	0.047	0.09	0	0	0.001	0.138
	Prappukara	0	0.01	0	0	0	0	0	0	0	0.01
	LMS Chalakudy	0	0.255	0	0	0	0	0	0	0	0.255
	Pazhayanoor	0	0.005	0	0.062	0	0	0	0.005	0	0.072
	Irinjalakuda	0	0.117	0	0	0.048	0.04	0	0	0.001	0.206
	Kodungallur	0	0.114	0	0	0.48	2.2	0	0	0	2.794
	110 kv SS Chalakudy	0	2.483	0	0	0.461	0	0	0	0	2.944
	110kv SS Kandassankadav	0	0.091	0	0.071	0.016	0.068	0	0.003	0	0.249
	400 k v MADAKKATHARA	0	1.392	0	1.164	1.1	1.388	0	0	0.001	5.045
	Palakkal	0	0.009	0	0.207	0.094	0	0	0	0	0.31
	Kunnamkulam	0	0	0.003	0.006	0.92	0.005	0	0	0.001	0.935
	Chalakudy	0	0	0.002	0	0.074	0.541	0	0	0	0.617
	Pullazhi	0	0	0	0.077	0	0	0	0	0	0.077
	T C Section TSR-2	0	0	0	0.013	2.159	0.277	0	0.013	0	2.462
	Anchangady	0	0	0	0.315	0	0	0	0	0	0.315
	Cherpu	0	0	0	0.208	0.019	0	0	0	0	0.227
	Chirakkal	0	0	0	0.022	0	0	0	0	0	0.022
	Kallettumkara	0	0	0	0.063	0	0	0	0	0	0.063
	Karukutty	0	0	0	0.506	0.02	0	0	0	0	0.526
Kodakara	0	0	0	0.012	0.053	0	0	0	0	0.065	
Kodungalloor	0	0	0	0.018	0	0	0	0	0	0.018	

Koratty (Vaigai)	0	0	0	0.124	0	0	0	0	0	0.124
Mala	0	0	0	0.026	0.49	0.003	0	0	0	0.519
Mullassery	0	0	0	0.058	0.024	0	0	0	0	0.082
Mundur	0	0	0	0.013	0	0	0	0	0	0.013
Ollur	0	0	0	0.038	0.048	0.169	0	0	0	0.255
Pattikkad	0	0	0	0.015	0.013	0	0	0	0	0.028
Puthur	0	0	0	0.014	0.016	0.022	0	0	0	0.052
T C CHALAKUDY	0	0	0	0.035	0	0.64	0	0	0	0.675
T.C .Circle Trichur	0	0	0	0.65	1.048	1.035	0	0.002	0.015	2.75
Vadanappilly	0	0	0	0.048	0.008	0.013	0	0	0	0.069
Vellangallur	0	0	0	0.041	0	0.312	0	0	0	0.353
Viyyur	0	0	0	0.002	0.059	0.325	0	0.004	0.005	0.395
Tran Dvn Chalakkudy	0	0	0	0	0.54	0	0	0	0	0.54
Transmission Circle Store, Madakkathara	0	0	0	0	3.163	0	0	0	0	3.163
Valappad	0	0	0	0	0.06	0.622	0	0	0	0.682
LMSII Madakkathara	0	0	0	0	0.016	0.006	0	0.002	0	0.024
LMS I Madakkathara	0	0	0	0	0.021	0.057	0	0.001	0.002	0.081
Malayattoor	0	0	0	0	0	0.012	0	0	0	0.012
Mullassery	0	0	0	0	0.003	0	0	0	0	0.003
TD Thrissur	0	0	0	0	0.022	0	0	0.017	0	0.039
PAZHAYANNUR	0	0	0	0	0.002	0	0	0	0.003	0.005
T C Sub Division Viyyur	0	0	0	0	0	0	0	0	0.002	0.002
LMS ANGAMALY	0	0	0	0	0.001	0.065	0	0	0	0.066
33kV SC line-Cherpu-Palakkal	0	0	0	0	0	0.021	0	0	0	0.021
66kV ALA feeder	0	0	0	0	0	0.299	0	0	0	0.299
arangottukara sub stn	0	0	0	0	0	0.016	0	0	0	0.016
Chalaky -Sholayar	0	0	0	0	0	19.002	0	0	0	19.002
Kaipamangalam	0	0	0	0	0	0.007	0	0	0	0.007
Kurumassery - Annamanada	0	0	0	0	0	0.176	0	0	0	0.176
Punnayurkulam	0	0	0	0	0	0.079	0	0.001	0	0.08
Anchangadi -33kVSub Station	0	0	0	0	0	0.256	0	0	0	0.256
Vellangallur -Cnchangady	0	0	0	0	0	0.05	0	0	0	0.05
T C Sec Pudukkad	0	0	0	0	0	1.978	0	0	0	1.978
					-0.15					-0.15
TOTAL©	0.051	7.513	0.005	5.197	11.712	32.301	0	0.05	0.037	56.866
Tr Circle										
Kozhikkode										
220KV SS Nallalam	0.148	0.245	0.005	0.238	7.414	0.049	0	0	0.012	8.111
110KV SS Vadakara	0.029	0.093	0.001	0.065	0.397	0.058	0	0	0	0.643
110 kv SS Kuttiady	0.021	0	0	0	0.324	2.372	0	0	0.004	2.721
110 KV SS Kinalur	0	0.083	0	0.11	0.507	0	0	0	0.004	0.704

220KV SS Kaniambetta	0	0.131	0	0	0.278	0	0	0	0	0.409
110 KV GIS Gandhi Road	0	0.169	0	0	0.03	0	0	0	0	0.199
66KV SS Mankave	0	0.101	0	0.175	0.982	0.049	0	0	0	1.307
110KV SS Koduvally	0	0.038	0	0	0.184	0	0	0	0	0.222
110 KV SS West Hill	0	0.117	0.035	0	0.3	0	0	0	0	0.452
33 KV SS Perambra	0	0.23	0	0	0.034	0	0	0	0	0.264
66 KV S/S Cyber Park	0	0.131	0	0	0.026	0	0	0	0	0.157
110 KV SS Thambalamanna	0	0.088	0	0	0.011	0	0	0	0.005	0.104
33 KV SS Melady	0	0.102	0	0	1.654	0	0	0	0.002	1.758
66 KV SS kuttikkattor	0	0.119	0	0.494	2.226	0.041	0	0.011	0	2.891
66 KVSS AMBALAVAYAL	0	0.001	0	0.09	2.533	0.041	0	0.002	0.001	2.668
PTRU Nallalam	0	0.005	0	0	0.434	0	0	0	0	0.439
110KV SS Chevayur	0	0.055	0	0	0.468	0	0	0	0.006	0.529
Trans.Circle Nallalam	0	0.013	0	0	0	0	0	0	0	0.013
66 kV SS Orkkattery	0	0.017	0	0	0.006	0	0	0	0	0.023
110 KV SS Agastiamuzhy	0	0.01	0	0.253	0	0	0	0	0.001	0.264
66 KV GIS Puthiyara	0	0.016	0	0	0.013	0	0	0	0	0.029
Kunnamangalam SS	0	0.023	0	0	0	0	0	0	0	0.023
110KV SS Meppayur	0	0	0	0.036	0.194	0	0	0.001	0	0.231
T. C.Sn. Agastiamoozhy	0	0	0	0.032	0.453	0	0	0	0	0.485
33KV SS Thambalamanna	0	0	0	0.169	1.348	0.001	0	0	0	1.518
33 KV SS Thiruvallur	0	0	0	0	0.95	0	0	0	0	0.95
33KV s/s Ramanatukara	0	0	0	0	0.894	0	0	0	0	0.894
110KV SS Kunnamangalam	0	0	0	0	3.446	0.095	0	0	0.004	3.545
110KV SS Koyilandy	0	0	0	0	0.134	0	0	0	0.019	0.153
33 KV SS Balussery	0	0	0	0	0.024	0	0	0	0	0.024
33KV s/s Meenangadi	0	0	0	0	0.123	0	0	0	0	0.123
33 KV SS Kuttiady	0	0	0	0	0.015	0	0	0	0	0.015
33 KV SS Vellannur	0	0	0	0	0.067	0	0	0	0	0.067
33KV SS Feroke	0	0	0	0	1.806	0	0	0	0	1.806
LCS VADAKARA	0	0	0	0	1.136	0	0	0	0	1.136
66 KV SS Anchukunnu	0	0	0	0	0.014	0	0	0.001	0	0.015
Tr.Divison Vadakara	0	0	0	0	0.001	0	0	0.001	0	0.002
220 kV SS Orkkattery	0	0	0	0	0.032	0	0	0	0	0.032
110KV SS Kuttikattoor	0	0	0	0	0.001	0	0	0	0	0.001
110kV SS Vatakara	0	0	0	0	0.014	0	0	0	0	0.014
220 KV SS SD Kaniyambetta	0	0	0	0	0.002	0	0	0.004	0	0.006
66 KV SS S.Bathery	0	0	0	0	0.014	0	0	0	0	0.014
66KV SS Mananthavady	0	0	0	0	0.03	0	0	0	0	0.03

Tr.Sn Kaniyambetta	0	0	0	0	0.007	0	0	0	0	0.007
33 kV TS Kaniyambetta	0	0	0	0	0.014	0	0	0	0.029	0.043
Transmission Section Nallalam	0	0	0	0	0.003	0	0	0	0	0.003
66 KV SS Kuthumunda	0	0	0	0	0.001	0	0	0.003	0.004	0.008
LM Sn Nallalam	0	0	0	0	0	0.235	0	0	0	0.235
LMS Vadakara	0	0	0	0	0	0.2	0	0	0	0.2
LCS Kaniyambetta	0	0	0	0	0	7.344	0	0	0	7.344
LCS Ambalavayal	0	0	0	0	0	6.346	0	0	0	6.346
TCSD Perambra	0	0	0	0	0	0.151	0	0	0	0.151
SS SD Vadakara	0	0	0	0	0	0	0	0	0.001	0.001
220KV SS SD Nallalam	0	0	0	0	0	0	0	0.003	0	0.003
66KV SS Thamarassery	0	0	0	0	0	0	0	0	0.004	0.004
LCS Ambalavayal/LCS Mananthavady	0	0	0	0	0	0	0	0.003	0.001	0.004
TC SectionThamarassery	0	0	0	0	0	0	0	0.003	0	0.003
Trans.Circle Kozhikkode	0	0	0	0	0	0	0	0	0.001	0.001
Tr.Circle Kozhikode	0	0	0	0	0	0	0	0	0.016	0.016
66kv SS,Ambalapparamba	0	0	0	0	0	0	0	0	0.005	0.005
Transmission Division Kaniyambetta	0	0	0	0	0	0	0	0	0.001	0.001
LMSD Nallalam	0	0	0	0	0.02	0	0	0	0	0.02
TSD Chevayur	0	0	0	0	0	0	0	0	0.004	0.004
TCSD Nallalam	0	0	0	0	0	0	0	0	0.004	0.004
LCS NALLALAM	0	0	0	0	0	0	0	0	0.001	0.001
Tr.Division,Nallalam	0	0	0	0	0	0	0	0	0.003	0.003
110kv SS Westhill	0	0	0	0	0	0	0	0.009	0	0.009
CE, Tran. North, KKD		0.05								
TOTAL(D)	0.198	1.837	0.041	1.662	28.564	16.982	0	0.041	0.132	49.457
Tr Circle Palakkad	Trans. Circle Palakkad	0	0	0	0	0.041	0	0	0	0.042
	220KV S/s Kanjikode	0	0.001	0	0.072	1.536	0.065	0	0	1.674
	220KV S/s Shornur	0	0.001	0.031	0.419	0.078	0.047	0	0	0.576
	110KV S/s Vennakkara	0	2.091	0.01	0.249	25.711	5.198	0	0.01	33.269
	110KV S/s Kanjikode	0	0	0	0.106	0.059	0.013	0	0	0.178
	110KV S/s, Walayar	0	0	0	0.006	0.023	0.013	0	0.002	0.045
	110KV S/s Parli	0	0	0	0.006	0.074	0.013	0	0.001	0.094
	110KV S/s Mannarkkad	0	0.06	0	0.01	0.02	0.013	0	0	0.103
	110KV S/s Malampuzha	0	0.016	0	0.006	0.158	0.013	0	0	0.193
	110KV S/s, Kalladikode	0	0	0	0.006	0.021	0.013	0	0	0.04
	110KV S/s, Pathiripala	0	0.007	0.001	0.006	0.022	0.013	0	0	0.049
	110KV S/s Ottapalam	0	0	0	0.006	0.085	0.013	0	0	0.104
	110KV S/s Cherpulassery	0	0	0	0.006	0.02	0.013	0	0	0.039

110KV S/s Koppam	0	0	0	0.056	0.02	0.013	0	0	0	0.089
110KV S/s Kootanad	0	0.015	0	0.046	0.588	0.013	0	0	0	0.662
110KV S/s Vadakkenchery	0	0	0	0.043	2.389	0.021	0	0	0	2.453
110KV S/s Kollengode	0	0	0	0.121	0.314	0.013	0	0	0	0.448
110KV S/s Kozhinjampara	0	0	0	0.018	0.02	0.013	0	0	0	0.051
110KV SS Pattambi	0.033	0.683	0.026	1.285	1.052	3.734	0	0.009	0.001	6.823
66KV S/S Nemmara (Upgraded to 110 KV)	0	0.727	0	1.14	1.044	0.124	0	0.004	0	3.039
66KV S/s Chittur	0	0	0	0.008	0.037	0.018	0	0	0	0.063
66KV S/s Kannampully	0.023	0	0	0.008	0.029	0.018	0	0	0.001	0.079
66KV S/s Chandranagar	0	0	0	0.008	0.029	0.018	0	0	0	0.055
33KV S/s Vidyuthi Bhavanam	0	0	0	0.004	0.012	0.008	0	0	0	0.024
33KV S/s Olavakkode	0	0	0	0.004	0.012	0.008	0	0	0	0.024
33KV S/s Agali	0	0.001	0	0.103	0.071	0.008	0	0	0	0.183
33KV S/s Alanellur	0	0	0	0.004	0.07	0.008	0	0	0	0.082
33KV S/s Kongad	0	0	0	0.004	0.012	0.008	0	0	0	0.024
33KV S/s Maniampara	0	0	0	0.004	0.077	0.008	0	0	0	0.089
33KV S/s Sreekrishnapuram	0	0	0	0.004	0.012	0.008	0	0	0	0.024
33KV S/s Pallassana	0	0	0	0.004	0.012	0.008	0	0	0	0.024
33KV S/s Koduvayur	0	0	0	0.004	0.012	0.008	0	0	0	0.024
33KV S/s Nelliampathy	0	0	0	0.004	0.012	0.008	0	0	0	0.024
33KV S/S Maruthur	0	0	0	0	0.014	0	0	0	0	0.014
33KV S/s Muthalamada	0	0	0	0.004	0.035	0.008	0	0	0	0.047
33KV S/s, Vannamada	0	0	0	0.004	0.06	0.008	0	0	0	0.072
33 KV S/s, Velanthavalam	0	0	0	0.004	0.438	0.008	0	0	0	0.45
33KV S/s, Meenakshipuram	0	0	0	0.004	0.016	0.008	0	0	0	0.028
33KV S/S Alathur	0	0	0	0.004	0.035	0.008	0	0	0	0.047
33KV S/s Tarur	0	0	0	0.004	0.025	0.008	0	0	0	0.037
33KV S/s Chittadi	0	0	0	0.004	0.012	0.008	0	0	0	0.024
33KV S/s Chalissery	0	0	0	0.004	0.038	0.008	0	0	0	0.05
33KV S/s Thirthala	0	0	0.004	0.041	0.051	0.017	0	0	0	0.113
33KV S/s Pattambi	0	0	0	0.004	0.012	0.008	0	0	0	0.024
33KV S/s, Thiruvegappura	0	0	0	0.004	0.012	0.008	0	0	0	0.024
Trans. Section, Palakkad	0	0	0	0	0.013	0	0	0	0	0.013
Trans. Section, Shoranur	0	0	0	0	0.024	0	0	0	0	0.024
SSSD Medical College Palakkad	0	0	0	0	0	19.128	0	0	0	19.128
TOTAL(E)	0.056	3.602	0.072	3.851	34.457	28.717	0	0.026	0.004	70.785
Tr Circle										
Kannur										
33 KV SS RAJAPURAM	0	0	0	0	0.003	0	0	0	0	0.003
33/110 KV Sub Station KANHANGAD	0	0.121	0	0	0	0	0	0	0	0.121
110KV Sub Station KUBANOOR	0	0.201	0	0.163	6.395	0.757	0	0	0	7.516

110 KV Sub Station PAYYANNUR	0	0.104	0	0.286	0.671	0	0	0	0	1.061
66/110 KV Sub Station, IRITTY	0	0.037	0	0	0	0	0	0	0.017	0.054
110 KV Chemberi	0	0.021	0	0.557	0.164	0.374	0	0	0	1.116
33 KV SS Veliyambra	0	0.057	0	0.019	0.034	0	0	0	0	0.11
220 KV SS MYLATTY	0	0.101	0	0	0.003	0	0	0.002	0.002	0.108
Solar SS,Ambalathara	0	0.004	0	0.511	1.161	0.259	0	0	0.002	1.937
TCS TALIPARAMBA	0	0.004	0	0.07	0.743	0.392	0	0	0	1.209
110 KV SS MANGAD	0	0.018	0	0.114	0.431	0	0	0	0	0.563
110 KV SS MUNDAYAD	0	0	0	0.071	0.164	0	0	0.002	0	0.237
110 KV SS MULLERIA	0	0	0	0.134	0.055	0	0	0.006	0.005	0.2
220 KV Sub Station KANHIRODE	0	0	0	0.019	0.721	0.026	0	0	0.015	0.781
33/11KV Kannur	0	0	0	0.038	0.015	0	0	0	0.01	0.063
110 KV Sub Station KANHANGAD	0	0	0	0.092	0	0.003	0	0	0	0.095
110 KV Sub Station KASARAGOD	0	0	0	0.041	0.11	0.021	0	0.003	0	0.175
110 KV Sub Station CHERUVATHUR	0	0	0	0.022	0.239	0	0	0	0.003	0.264
110 KV Sub station CHOVVA	0	0	0	0.001	0.008	0	0	0	0	0.009
TCS KANHANGAD	0	0	0	0.036	0.018	0.031	0	0	0.002	0.087
110 KV Sub Station AZHIKODE	0	0	0	0	0.004	0	0	0.003	0	0.007
220 KV SubStation THALIPARAMBA	0	0	0	0	0.002	0	0	0	0	0.002
33KV Puthur	0	0	0	0	0.126	0	0	0	0	0.126
110 KV Sub Station PINARAYI	0	0	0	0	0.315	0.027	0	0	0.002	0.344
110 KV Sub Station PANOOR	0	0	0	0	0.109	0.056	0	0	0.015	0.18
110 KV Sub Station, CHERUPOZHA	0	0	0	0	0.132	0	0	0.002	0.001	0.135
110 KV Sub Station KUTHUPARAMBA	0	0	0	0	0.003	0.007	0	0.002	0.011	0.023
33 KV Sub Station, NADUKANY	0	0	0	0	0.059	0	0	0	0	0.059
33 KV Sub Station, WEST ELERY	0	0	0	0	0.155	0	0	0	0	0.155
33 KV Sub Station, THRIKKARIPUR	0	0	0	0	0.012	0	0	0	0	0.012
33 KV Payyannur Town	0	0	0	0	0.021	0	0	0	0.006	0.027
33 KV Sub Station Belur	0	0	0	0	0.016	0	0	0	0	0.016
33 KV Substation Ananthapuram	0	0	0	0	0.03	0	0	0	0	0.03
33 KV Substation Perla	0	0	0	0	0.507	0	0	0	0	0.507
33 KV S/S THOTTADA	0	0	0	0	0.001	0	0	0	0	0.001
LMS MYLATTY	0	0	0	0	0.004	0.023	0	0	0	0.027
110 KV SS NEDUMPOYIL	0	0	0	0	0.003	0.048	0	0	0.018	0.069
110 KV SS KSIDC VALIYAVELICHAM	0	0	0	0	2.086	0.155	0	0.001	0	2.242
LMS PAYYANNUR	0	0	0	0	0.218	0	0	0.001	0.002	0.221
33 KV SS Dharmadam	0	0	0	0	0.02	0	0	0	0	0.02
TCS MATTANNUR	0	0	0	0	0.007	0.28	0	0	0	0.287
TCS MYLATTY	0	0	0	0	0.076	0	0	0	0	0.076

Tr. DIVISION KANNUR	0	0	0	0	0.026	0	0	0.003	0	0.029
TSD THALASSERY	0	0	0	0	0.008	0.026	0	0	0	0.034
TCS KANNUR	0	0	0	0	0.085	2.775	0	0.001	0	2.861
TRANSMISSION DIVISION KASARGOD	0	0	0	0	0	0	0	0.004	0.002	0.006
TRANSMISSION DIVISION KANHIRODE	0	0	0	0	0	0	0	0.007	0	0.007
Trans. Circle, KANNUR	0	0	0	0	0	0	0	0.001	0.004	0.005
110 KV S/S PAZHAYANGADI	0	0	0	0	0	0	0	0.003	0	0.003
TCS Kelakam	0	0	0	0	0	0.169	0	0	0	0.169
110 KV SS SREEKANDAPURAM	0	0	0	0	0	0.013	0	0	0.012	0.025
110 KV S/S MATTANNUR	0	0	0	0	0	0	0	0	0.015	0.015
33 KV Substation Iritty	0	0	0	0	0	0	0	0.001	0	0.001
33 KV SS Puthiyatheru	0	0	0	0	0	0	0	0	0.01	0.01
110 KV SS Ezhimala	0	0	0	0	0	0	0	0	0.002	0.002
Solar SS,Ambalathara(deduction)				-2.24	-18.1	-1				-21.34
SUB TOTAL(F)	0	0.668	0	-0.066	-3.14	4.442	0	0.042	0.156	2.102
33KV Substation,Makkaraparamba	0	0	0	0	0.06	0.001	0	0	0	0.061
33KV Substation, Edavanna	0	0	0	0	0.018	0.007	0	0	0	0.025
33KV Substation Pulamanthole	0	0	0	0	0.339	0	0	0	0	0.339
33KV Substation, Wandoor	0	0	0	0	0.065	0	0	0	0	0.065
33KV Substation, Valluvambram	0	0	0	0.187	0.015	0.002	0	0	0	0.204
33KV Substation, Thazhekode	0	0	0	0	0.016	0	0	0	0	0.016
TC Kizhissery	0	0	0	0	0	1.212	0	0	0	1.212
33KV Substation,Kalikavu	0	0	0	0	0.279	0.019	0	0	0	0.298
TC Sec./33KV Substation, Pookkottumpadam	0	0	0	0	0.252	0.898	0	0	0	1.15
33KV Substation,Pothukallu	0	0.008	0	0.114	0.073	0.385	0	0	0	0.58
TC Section Edarikode	0	0	0	0.049	0.01	0.006	0	0	0	0.065
66 KVS SS,Edakkara	0	0	0	0	0.282	0.032	0	0	0	0.314
66KV Substation,Nilambur	0	0	0	0.144	5.879	0.726	0	0	0	6.749
110 KV Substation, Perinthalmanna	0	0	0	0.006	0.047	0.229	0	0.001	0	0.283
110 KV Substation, Manjeri	0	0	0	0	0	3.528	0	0	0	3.528
66KV Substation Mankada	0	0	0	0.014	0.423	0.016	0	0	0	0.453
110KV Substation,Kuttippuram	0	0	0	0.032	5.956	0.007	0	0.003	0	5.998
110KV Substation,Malappuram	0	0	0	0.054	0	0	0	0	0	0.054
110KV Substation Melattur	0	0	0	0	1.573	0.004	0	0	0	1.577
110KV Substation, Chelari	0	0	0	0	0	0.095	0	0	0	0.095
110KV Substation, Edarikode	0	0	0	0.032	0.237	0.02	0	0	0.002	0.291
110KV Substation, Edappal	0	0	0	0	0	0	0	0.002	0	0.002
110KV Substation Tirur	0	0	0	0.084	0	0	0	0.003	0	0.087
110KV Substation Kizhissery	0	0	0	0.011	0.748	1.979	0	0.002	0	2.74

Tr Circle Malappuram

	220KV Substation Malaparamba	0	0	0	0	1.138	0	0	0.001	0	1.139
	220KV Substation, Areacode	0	0	0	0	0.327	0.042	0	0.004	0	0.373
	TC Section Malappuram	0	0	0	0	0	0.348	0	0	0	0.348
	Transmission Section, Ramapuram	0	0	0	0	0	2.886	0	0	0	2.886
	Transmission Section, Kuttippuram	0	0	0	0	0	0.092	0	0	0	0.092
	Transmission Division, Tirur	0	0	0	0.013	0	0	0	0	0	0.013
	33KV Substation,Kooriyad	0	0	0	0.026	0.042	0	0	0	0	0.068
	Transmission Subdivision,Tirur	0	0	0	0	0.021	0.032	0	0	0	0.053
	Transmission Subdivision,Nilambur	0	0	0	0.011	0.026	0.751	0	0	0	0.788
	33 KV Sub Station Thavanoor	0	0	0	0	0.762	0.048	0	0	0	0.81
	TC Nilambur	0	0	0	0	0	0.441	0	0	0	0.441
	Line Maintanence Section Areacode	0	0	0	0	0	0.066	0	0	0	0.066
	SUB TOTAL(G)	0	0.008	0	0.777	18.588	13.872	0	0.016	0.002	33.263
Tr Circle Kalamassery	Colony Maintenance Klmsry	0.132	0.269	0	0.051	0.01	0	0	0	0	0.462
	110 KVSS North Paravur	0.039	0	0	0	0	0	0	0	0	0.039
	Transmission Division Ernakulam	0.086	0	0	0.075	0.215	0.072	0	0.003	0.001	0.452
	Transmission Division Brahmapuram	0.038	0	0	0.089	0.071	0.094	0	0.017	0	0.309
	Transmission Division Kalamassery	0.015	0	0	0.03	0.11	0.027	0	0	0	0.182
	T.C.Kalamassery	0	0.126	0	0.456	3.796	8.152	0	0.02	0	12.55
	66 KV GIS Thrippunithura	0	0.01	0	0	0	0	0	0	0	0.01
	66 KVSS Edathala	0	0.065	0	0.125	0.229	0	0	0	0	0.419
	110 KVSS Kaloore	0	0.113	0	0	0.433	0	0	0.018	0	0.564
	110 kV S/S, Aluva	0	0.056	0	0.049	0	0	0	0	0	0.105
	220 KVSS Kalamassery	0	0.107	0	0	2.868	0	0	0.001	0.004	2.98
	110 Kv S/s,New Vyttila	0	0	0	0.043	0	0	0	0	0	0.043
	110 KVSS,W.ISLAND	0	0	0	0.035	0.053	0	0	0	0	0.088
	220 KVSS Ambalamughal	0	0	0	0.036	5.402	0	0	0	0	5.438
	110 KVSS Kadavantra	0	0	0	0.049	0	0	0	0.001	0	0.05
	66KV S/s,Perumanoor	0	0	0	0.039	0	0	0	0	0	0.039
	110KV S/s,N.Parur	0	0	0	0.008	0.496	0	0	0	0	0.504
	66KV S/s,Mulavukad	0	0	0	0.057	0	0	0	0	0	0.057
	110 kV S/S, Ekm North	0	0	0	0.042	0	0	0	0	0	0.042
	110 kV S/S, Vyttila	0	0	0	0.002	2.148	0	0	0.001	0	2.151
	110 kV S/S, Edayar	0	0	0	0.115	0	0	0	0.002	0	0.117
	66 KVSS Panambilli Nagar	0	0	0	0.062	0.011	0	0	0	0	0.073
	110 kV S/S,Mattanchery	0	0	0	0.001	0.212	0	0	0	0	0.213
110kV S/S, Edathala	0	0	0	0	0.036	0	0	0	0	0.036	
66KV s/s Thrikkakara	0	0	0	0	0.031	0.008	0	0	0	0.039	
110 KV S/s ,Kizhakambalam	0	0	0	0	0.092	0	0	0.001	0	0.093	

110 kV S/S, Kurumassery	0	0	0	0	0.125	0	0	0	0.001	0.126
220 kv S/S Brahmapuram	0	0	0	0	2.615	0.003	0	0.005	0	2.623
PTRU, Kalamassery	0	0	0	0	0.479	0	0	0	0	0.479
110 kv Substation, Cherai	0	0	0	0	0.075	0	0	0	0	0.075
110 KV S/S Edappally	0	0	0	0	0.052	0	0	0	0	0.052
66 KV GIS, Fortkochi	0	0	0	0	0.149	0	0	0.001	0	0.15
66 kV s/S, Puthrncruz	0	0	0	0	0.059	0	0	0	0	0.059
33 kv GIS, Thammanam	0	0	0	0	1.912	0	0	0	0	1.912
TSD Kalamassery	0	0	0	0	0.003	0	0	0.001	0	0.004
I B Kalamassery	0	0	0	0	0.001	0	0	0	0.007	0.008
TSD Kurumassery	0	0	0	0	0.003	0	0	0	0	0.003
Civil Sub Divn Kalamassery	0	0	0	0	0.003	0	0	0	0	0.003
Line Maintenance Subdivision, Kalamassery	0	0	0	0	0	0.006	0	0	0	0.006
Kalamassery-Aroor	0	0	0	0	0	1.507	0	0	0	1.507
Mannam-Cherai 110 kV DC line	0	0	0	0	0	0.616	0	0	0	0.616
110 kV KL BR 1 & 2 feeders	0	0	0	0	0	0.09	0	0	0	0.09
BRAHMAPURAM-KALOOR 220 KV LINE	0	0	0	0	0	0.092	0	0	0	0.092
66 KVSS Njarakkal	0	0	0	0	0	0.005	0	0.002	0	0.007
SSD Ernakulam	0	0	0	0	0	0	0	0.004	0	0.004
Substation S/d, Aluva	0	0	0	0	0	0	0	0.001	0	0.001
Colony Maince Sn. Kalamassery	0	0	0	0	0	0	0	0.004	0	0.004
Civil Sub Divn Kalamassery	0	0	0	0	0	0	0	0.001	0.003	0.004
Trans Div, Kly	0	0	0	0	0	0	0	0	0.001	0.001
L M S II, Kalamassery	0	0	0	0	0	0	0	0	0.001	0.001
T C Section Thrippunithura	0	0	0	0	0	0	0	0	0.001	0.001
220 KV COCHIN- BRAHMAPURAM MC FEEDER	0	0	0	0	0	0	0	0	0.156	0.156
TOTAL(H)	0.31	0.746	0	1.364	21.689	10.672	0	0.083	0.175	35.039
Tr Circle Trivandrum	110KV S/s ,paruthippara	0.009	0	0	0	1.44	0	0	0	1.449
	110KV S/s ,Thirumala	0	0	0	0	0.005	0	0	0	0.005
	110KV S/s ,kattakada	0	0	0	0	0.164	0	0	0	0.164
	110KV Subststion, Varkala	0	0	0	0	0.044	0	0	0	0.044
	110 KV S/sBalaramapuram	0.246	0	0	0	0.083	0	0	0	0.329
	66 KV S/sBalaramapuram	0	0.033	0	0.007	0	0	0	0	0.04
	110 KV S/s, Parassala	0	0.006	0	0	0.056	0	0	0	0.062
	110KVS/s, Medical College	0	0	0	0	0.136	0	0	0	0.136
	LMS I Paruthippara	0	0	0	0	0	0	0.125	0	0.125
	TC, TVM	0	0	0	0	0	0	0	0.003	0.003
	110KVS/s, Attingal	0	0	0	0	0.002	0	0	0	0.002
	110KVS/sNedumangad	0	0	0	0.016	0.02	0	0	0	0.036

110KVS/Aruvikkara	0	0	0	0.045	0	0	0	0	0	0.045
110KVs/s, Terls	0	0	0	0	0.133	0	0	0	0	0.133
110 KV S/s, veli	0	0	0	0	0	0	0	0.001	0	0.001
TC Section Veli	0	0	0	0	0.217	0	0	0	0.005	0.222
66 KV Subststion Vattiyoor kavu	0	0.032	0	0	0	0	0	0	0	0.032
220 KV Substation, Kattakada	0.068	0	0	0.022	9.637	0	0	0	0	9.727
TD Kazhakkoottam	0	0.001	0	0.066	0	0	0	0	0.001	0.068
110KV S/SKazhakoottom	0.234	0.36	0	0.386	3.971	0	0	0.016	0	4.967
33kv Subststion Kadakkal	0	0	0	0.044	0	0	0	0	0	0.044
220KVS/s, Pothencode	0	0.002	0	0	0.752	0	0	0	0	0.754
110 KV S/s , Muttathara	0	0.018	0	0.188	0.361	0	0	0	0	0.567
33 KVS/s, Vilakulam	0	0.016	0	0.193	0.334	1.592	0	0.013	0	2.148
TCS, Nedumangad	0	0	0	0	0	0.005	0	0	0	0.005
PPRA - Veli line	0	0	0	0	0	0.217	0	0	0	0.217
TECHNO PARK-UGC line	0.01	0	0	0.006	0	0	0	0	0	0.016
GIS LA Complex	0	0.008	0	0	0	0	0	0	0	0.008
Panthalacode	0	0.013	0	0	0	0	0	0	0	0.013
33 KV S/s, Kallambalam	0	0	0	0	0.061	0	0	0	0	0.061
33- chullimannoor	0	0.009	0	0	0.167	0	0	0	0	0.176
Parassala-Kuzhitua Line	0	0	0	0	0	0.985	0	0	0	0.985
KTDA-BPM-VISL LINE	0	0	0	0	0	66.154	0	0	0	66.154
SUB TOTAL(I)	0.567	0.498	0	0.973	17.583	68.953	0.125	0.03	0.009	88.738
Tr Circle Alappuzha	110kv S/S Chellanam	0	0.014	0	0.004	0.001	0	0	0	0.019
	220 KV S/s, Edappon	0	0.009	0	0.011	0.263	0.002	0	0.002	0.287
	33 KV S/s, Karuvatta	0	0.011	0	0.089	0	0	0	0	0.1
	66 KV S/s, Alappuzha	0	0.006	0	0	0	0	0	0.001	0.007
	Trans.Sub Dvn, Edappon	0	0.041	0	0	0	0	0	0	0.041
	110 KV S/s, kayamkulam	0	0.028	0	0.009	0.067	0	0	0	0.104
	66kv SS Pathirappally	0	0.063	0	0	0.083	0	0	0.004	0.15
	66kv SS Kuttanadu	0	0.009	0	0	0	0	0	0	0.009
	66kv SS Kattanam	0	0.072	0	0	0	0	0	0	0.072
	TSD Mavelikkara	0	0.007	0	0	0	0	0	0	0.007
	Trans Div Mavelikkara	0	0.002	0	0	0	0	0	0.008	0.01
	110 KV S/s, Edathua	0	0	0	0.025	0.13	0	0	0	0.155
	110 KV S/s, Chengannoor	0	0	0	0.012	0	0.005	0	0	0.017
	66 KV S/s, Nangiarkulangara	0	0	0	0.014	0.001	0	0	0.001	0.016
	33 KV S/s, Kattanam	0	0	0	0.09	0.589	0.328	0	0	1.007
	220 kv S/S .Punnapra	0	0	0	0.146	0	0	0	0.001	0.147
	110 KV S/s, Punnapra	0	0	0	0	0.382	0	0	0	0.382

110 KV S/s, S L Puram	0	0	0	0	0.033	0	0	0	0	0.033
110 KV S/s, Aroor	0	0	0	0	0.152	0	0	0.005	0	0.157
33 KV S/s, Vallikunnam	0	0	0	0	0.11	0	0	0	0	0.11
110kV Thycattusserry	0	0	0	0	0.087	0	0	0.001	0	0.088
110 KV S/s, Mavelikkara	0	0	0	0	0.088	0	0	0.022	0	0.11
110Kv S/s Eramalloor	0	0.045	0	0	0.726	0	0	0.002	0	0.773
33 Kv S/s Kalarcode	0	0	0	0	0.222	0.141	0	0.002	0	0.365
LMS Cherthala	0	0	0	0	0.425	0	0	0	0	0.425
66kV SS Karuvatta	0	0	0	0	0.062	0.08	0	0	0	0.142
TSD Edappon	0	0	0	0	0.016	0.106	0	0.002	0	0.124
33 KV S/s,Thakazhy	0	0	0	0	0	0.012	0	0	0	0.012
LMS Edappon	0	0	0	0	0	0.127	0	0	0	0.127
66 KV S/s, Cherthala	0	0	0	0	0	0	0	0.004	0	0.004
TSD Cherthala	0	0	0	0	0	0	0	0.002	0	0.002
Trans. Circle, Alappuzha	0	0	0	0	0	0	0	0.007	0	0.007
Tran Dvn Alappuzha	0	0	0	0	0	0	0	0.004	0	0.004
LMS Alappuzha	0	0	0	0	0	0	0	0.001	0	0.001
SUB TOTAL(J)	0	0.307	0	0.4	3.437	0.801	0	0.069	0	5.014
66kV S/s Kochupampa	0	0.001	0	0.001	0.024	0	0	0	0	0.026
110 kV S/s Thiruvalla	0	0.038	0	0	0.221	0.071	0	0.001	0	0.331
LMS Moozhiyar	0	0.09	0	0.129	0.062	0.169	0	0	0	0.45
110 kV S/s Pathanamthitta	0	0.026	0.002	0	0.62	0.171	0	0	0.01	0.829
110 kV S/s, Koodal	0	0	0	0.044	0.238	0.017	0	0	0	0.299
110 kV Kozhencherry	0	0	0	0.03	1.053	0.392	0	0	0.003	1.478
66kV S/s Triveni	0	0	0	0.045	0.082	0	0	0	0	0.127
66kV S/s Adoor	0	0	0	0.064	2.35	0.688	0	0	0.001	3.103
TC Section,Pathanamthitta	0	0	0	0	0.074	0.51	0	0	0	0.584
33 kV S/s,Konny	0	0	0	0.003	0.026	0	0	0	0	0.029
33 kV S/s,Kumbanad	0	0	0	0.018	0.049	0	0	0	0	0.067
TC.Sn.Pandalam	0	0	0	0.011	0.003	0.252	0	0	0	0.266
66 KV S/S, Enathu	0	0.025	0	0.004	0.002	0.163	0	0.001	0	0.195
Transmission Division, Pathanamthitta	0	0	0	0.082	0.19	0.149	0	0.007	0.042	0.47
33 kV S/s,Pandalam	0	0	0	0.014	0	0	0	0	0	0.014
110 kV S/s Ranny	0	0	0	0	0.068	0.044	0	0.004	0.006	0.122
33 kV S/s,Kadapra	0	0	0	0	0.038	0	0	0	0	0.038
TC Section,Enathu	0	0	0	0	0.003	0	0	0	0	0.003
110 kV S/s Mallappally	0	0	0	0	0.004	0.023	0	0	0	0.027
LMS,Pathanamthitta	0	0	0	0	0	0.056	0.085	0	0	0.141
Line Maintanance Section, Pathanamthitta	0	0	0	0.036	0	0.009	0	0	0	0.045

	TCSD,Kozhencherry	0	0	0	0	0	0	0	0.001	0	0.001
	TSD,Moozhiyar	0	0	0	0	0	0	0	0	0.001	0.001
	66 KV S/S, Chumathra	0	0	0	0	0	0	0	0	0.004	0.004
	TSD, Thiruvalla	0	0	0	0	0	0	0	0	0.002	0.002
	66 KV S/S, Thiruvalla	0	0	0	0	0	0	0	0	0.003	0.003
						-0.14	-0.35				
	SUB TOTAL(K)	0	0.18	0.002	0.481	4.967	2.364	0.085	0.014	0.072	8.165
Tr Circle Thodupuzha	110kv S/s Murickassery	0.137	0	0	0	0	0	0	0	0	0.137
	110 kv S/s Perumbavoor	0.088	0	0	0	0.065	0.008	0	0	0	0.161
	33kv S/s Marayoor	0.006	0.022	0	0.086	5.043	8.823	0	0.008	0	13.988
	33kv S/s Senapathy	0	0.008	0	0.097	0	0	0	0	0	0.105
	110kV S/s Piravom	0	0.065	0	0.566	0.023	0	0	0	0	0.654
	33kv S/s Kalloorkkadu	0	0.325	0	0.287	0	0	0	0	0	0.612
	33kv S/s Vengola	0	0.306	0	0	0	0	0	0	0	0.306
	220kV S/s Kothamangalam	0	0.003	0	0.263	3.123	0	0	0.006	0.01	3.405
	110kV S/s Marady	0	0.004	0	0	1.758	0	0	0	0	1.762
	Tr. DVN Nedumkandom	0	0.255	0	0	0	0	0	0.011	0.002	0.268
	110 kv S/s Udumbannoor	0	0.039	0	0	0.003	0	0	0	0	0.042
	LMS Muvattupuzha	0	0.071	0	0	0.009	0	0	0	0	0.08
	LMS Kothamangalam	0	0.137	0	0	0.001	0.022	0	0	0	0.16
	66kV S/s Thodupuzha	0	0.01	0	0	0.06	0	0	0	0	0.07
	66kV S/s Vandanmade	0	0	0.001	0	0	0	0	0	0	0.001
	110 kv S/s Adimaly	0	0	0.01	0	0.788	0.111	0	0.001	0	0.91
	110 kv S/s Rayonpuram	0	0	0.002	0	0.004	0	0	0	0	0.006
	110 kv S/s Muvattupuzha	0	0	0.003	0	0	0	0	0	0	0.003
	66kV S/s Kulamavu	0	0	0	0.044	0.034	0	0	0	0.001	0.079
	66kV s/s Vandiperiyar	0	0	0	0.232	0.003	0	0	0	0	0.235
	66kV S/s Nedumkandom	0	0	0	0.129	0	0.005	0	0.004	0	0.138
	66 Kv Kothamangalam	0	0	0	0.08	0	0	0	0.003	0	0.083
	33 kv S/s Mazhuvannoor	0	0	0	0.02	0	0	0	0	0	0.02
	110 kv S/s Myloor	0	0	0	0.165	0.18	0	0	0.002	0	0.347
	110 kv S/s Muttom	0	0	0	0.023	2.182	0	0	0	0.001	2.206
	66 Kv Karimanal	0	0	0	0.133	0	0	0	0	0	0.133
	66kV S/s Odakkali	0	0	0	0.024	0.083	0	0	0	0	0.107
66 kV S/s Kattappana	0	0	0	0	0.027	0	0	0.005	0	0.032	
TSD Peermade	0	0	0	0	0.003	0	0	0	0	0.003	
110 kV S/s Kutumkal	0	0	0	0	0.003	0	0	0	0	0.003	
110kV S/s Karimanal	0	0	0	0	0.002	0	0	0	0	0.002	
TC Nedumkandom	0	0	0	0	0	0.069	0	0	0	0.069	

	LMS Vazhathope	0	0	0	0	0	0.343	0	0	0	0.343
	TC Kothamangalam	0	0	0	0	0	0.009	0	0	0	0.009
	Tr. Circle. Thodupuzha	0	0	0	0	0	0	0	0.003	0	0.003
	Tr.Sub Dvn Thodupuzha	0	0	0	0	0	0	0	0.002	0.002	0.004
	Tr. SubDVN Nedumkandom	0	0	0	0	0	0	0	0.003	0.002	0.005
	Tr. Sub DVN Chithirapuram	0	0	0	0	0	0	0	0.001	0	0.001
	Tr. Sub DVN Chithirapuram	0	0	0	0	0	0	0	0	0.004	0.004
							-0.01				-0.01
	TOTAL(L)	0.231	1.245	0.016	2.149	13.384	9.39	0	0.049	0.022	26.486
	14.01 - TRANSMISSION SCHEMES - GRAND TOTAL	2.429	20.69	0.136	18.652	159.035	215.585	0.211	0.474	0.668	417.88
	14.03-SOLAR POWER PROJECTS										
208	Transmission Circle Palakkad	0	0	0	0	21.49					21.49
	14.03-SOLAR POWER PROJECTS-TOTAL	0	0	0	0	21.49	0.00	0.00	0.00	0.00	21.49
	14.18- POWER SYSTEM DEVELOPMENT FUND										
101	GEN CIRCLE MEENCUT					0.31					0.31
103	GEN CIRCLE MOOIAMATTOM					3.20			0.10		3.30
104	GEN CIRCLE MOOZHİYAR					0.19	0.28				0.47
207	GEN CIRCLE KOTHAMANGALAM					0.19					0.19
960	CE TRANSGRID SHORNUR	0				14.52	623.50		0.03	0.07	638.12
	14.18 - POWER SYSTEM DEVELOPMENT FUND - GRAND TOTAL				0.00	18.41	623.78	0.00	0.13	0.07	642.39
	14.56- LOAD DESPATCH & COMMUNICATION SCHEMES										
217	SYS OPERATION CIRCLE TVPM					1.20					1.20
218	SYS OPERATION CIRCLE KLMSRY					2.06					2.06
219	SYS OPERATION CIRCLE KANNR					1.20					1.20
	14.56 - LOAD DESPATCH & COMMUNICATION SCHEMES - GRAND TOTAL	0	0	0	0	4.46	0	0	0	0	4.46
	14.61- EXPENDITURE DUE TO NATURAL CALAMITY										
	VARIOUS ARUs	0	0	0	0	0.12	0.15	0	0	0	0.27
	14.61- EXPENDITURE DUE TO NATURAL CALAMITY - GRAND TOTAL	0	0	0	0	0.12	0.15	0	0	0	0.27
	14.90- CWIP-GENERAL										
	VARIOUS ARUs	14.5	0	0	0	6.5	5.01	0	0	0	26.01
	14.90- CWIP-GENERAL - GRAND TOTAL	14.5	0	0	0	6.5	5.01	0	0	0	26.01
	14.94- TRANSGRID 2.0 PROJECT										
960	CE TRANSGRID SHORNUR	0.03	0.18		9.30	118.23	522.50		0.02	0.07	650.33
	14.94- TRANSGRID 2.0 PROJECT - GRAND TOTAL	0.03	0.18	0	9.30	118.23	522.50	0	0.02	0.07	650.33
	SBU -T TOTAL ASSET ADDITION DURING 2021-22 (In Crores)	16.959	20.87	0.136	27.952	328.245	1367.025	0.211	0.624	0.808	1762.83

Appendix 5 SBU DETAILS OF CONTRIBUTIONS, GRANTS AND SUBSIDIES TOWARDS COST OF CAPITAL ASSETS (GROSS) (Rs. Cr)																	
SL No.	PARTICULARS	2019-20				2020-21				2021-22				Addition during 2021-22			
		GEN	TRANS	DIST	TOTAL	GEN	TRANS	DIST	TOTAL	GEN	TRANS	DIST	TOTAL	GEN	TRANS	DIST	TOTAL
1	Consumer contribution	0.00	153.23	1827.83	1981.06	0.00	171.76	2212.65	2384.41	0.05	178.42	2,606.07	2784.54	0.05	6.66	393.41	400.13
2	Subsidies	70.89	0.00	93.55	164.45	70.89	0.00	93.55	164.45	91.80	-	93.55	185.36	20.91	0.00	0.00	20.91
3	Grants Recd. Towards Cost of Fixed Assets	19.83	446.67	681.93	1148.44	19.83	487.74	891.64	1399.21	19.83	491.70	1,397.88	1909.41	0.00	3.95	506.24	510.20
4	Others	0.03	50.39	272.72	323.14	0.03	60.46	381.05	441.54	0.03	65.66	535.84	601.52	0.00	5.20	154.79	159.99
5	Gross Total	90.75	650.30	2876.03	3617.08	90.75	719.96	3578.89	4389.61	111.72	735.78	4633.33	5480.83	20.96	15.81	1054.44	1091.22
6	Add: Concessional loan																
7	Add: Decommissioning liability	5.11	6.27	12.81	24.19	5.18	6.70	14.38	26.26	5.54	7.51	15.95	29.01	0.36	0.81	1.57	2.75
8	Less: Subsidies & grants amortization	23.08	83.98	485.97	593.03	28.52	115.56	694.64	838.71	35.19	150.85	962.55	1148.59	6.68	35.30	267.91	309.88
9	As per Accounts	72.79	572.59	2402.87	3048.25	67.42	611.10	2898.64	3577.15	82.07	592.44	3686.74	4361.24	14.65	-18.67	788.10	784.09

Appendix 6: Employee Cost for the period from 2017-18 to 2021-22 (Rs. Cr)						
Sl. No	Particulars	2017-18	2018-19	2019-20	2020-21	2021-22
1	Basic Pay	1806.86	1828.35	1827.45	1,944.84	2,579.19
	Pension fund -Actuarial valuation	509.42	498.37	435.64	2,099.90	1,036.68
	Add: Provision for pay revision	0	176	250.00	585.00	
2	Overtime / Holiday wages	0.34	0.29	0.36	0.37	0.38
3	D.A.	443.35	547.44	684.99	711.29	394.02
	Add: Provision for DA revision	9		22.89	19.10	19.40
		2768.97	3050.45	3221.33	5,360.50	4,029.66
4	Other Allowances					
	a) HRA	44.72	45.01	44.46	47.38	129.12
	b) Spread over allowances	4.98				11.61
	c) Incentive allowances	0.27	32.39	28.37	29.79	0.01
	d) Local and other allowances	27.67				29.39
5	Bonus	9.83	9.44	9.73	9.75	9.06
6	Medical Reimbursement	10.83	12.88	12.85	11.72	13.90
7	Earned Leave encashment	153.1	181.1	160.46	169.64	144.47
	LTA	0.21	0.22	0.26	0.02	0.05
8	Payment under workmen compensation Act	0.14	0.54	0.22	0.31	0.37
9	Leave Salary and Pension Contribution	13.28				
	NPS Contribution		17.87	21.84	25.02	45.52
10	Staff welfare expenses	0.11	0.43	4.52	0.44	0.44
	a) Uniform & Livery expenses	4.24	4.29	4.37	4.39	4.86
	b) Cash award for meritorious service etc	0.05				0.01
11	Other Terminal Benefit					0.36
		269.38	304.17	287.08	298.46	389.17
12	Gross employee cost (before capitalization)-As per accounts	3038.40	3354.63	3508.41	5,658.96	4,418.84

Appendix -7: Miscellaneous charges from consumers (Rs Cr)					
NO	PARTICULARS	SBU G	SBU T	SBU D	Total
1	TF/RF			10.84	10.84
2	LE/SC Minimum			0.03	0.03
3	Processing fee power allocation			3.25	3.25
4	STOA Registration and application			0.22	0.22
5	STOA Open access charges			15.32	15.32
6	Energization charges			0.36	0.36
7	Misc charges-PF penalty			49.84	49.84
8	Application fee & Registration fee for grid connectivity to solar plants			9.82	9.82
	TOTAL			89.70	89.70

Appendix-9: MISCELLANEOUS RECEIPTS (Rs Cr)					
No	Particulars	SBU G	SBU T	SBU D	Total
1	Rental from staff quarters	0.07	0.06	0.14	0.27
2	Rental from contractors	0.12	0.03	0.10	0.25
3	Rent from others	0.75	0.08	0.39	1.22
4	Pole rent Cable TV Operators	-	0.02	52.84	52.87
5	Infra dev charges and supervision charges	0.10	2.67	12.53	15.30
6	Commission for collection of electricity duty	-	-	9.98	9.98
7	Commission Inspection Fees	-	-	0.13	0.13
8	SD Forfeited	0.02	0.01	0.08	0.11
9	Sale of trees	0.02	0.43	0.01	0.45
10	Usufructs	0.09	0.09	0.00	0.18
11	Penalty/LD from contractors/suppliers	3.13	5.47	5.21	13.81
12	Interest/penalty on pole rent SD	-	-	2.86	2.86
13	Outside students-project	0.01	0.13	0.14	0.27
14	Fee for providing information	0.00	0.00	0.02	0.02
15	Revenue Energy audit consultancy	-	-	0.02	0.02
16	Rent from office cum complex	-	-	0.35	0.35
17	Optical fiber cable leasing	-	6.31	-	6.31
18	Registration and Application fee-Roof Top Solar Power Plants	0.38	-	0.18	0.55
19	Service charge from consumers under Soura Project	-	-	0.04	0.04
20	Other Income from EV charging stations	-	-	0.05	0.05
22	Testing fee from contractors	0.19	0.19	0.30	0.68
23	Centage from Govt deptt/ agencies	0.01	0.02	0.17	0.19
24	Course fee received from training institution as reimbursement	0.02	0.04	0.41	0.48
25	Other Income- Annual Maintenance Charges	-	0.74	-	0.74

26	Other Income-Performance Incentive from MNRE	10.60	0.71	0.71	12.01
	Total	15.52	16.99	86.64	119.15

Appendix 8 Misc receipts /charges from inter-state trading of energy					
NO	PARTICULARS	SBU G	SBU T	SBU D	Total
1	Income from POSOCO towards UI Charges from Pool Account			86.47	86.47
2	Incom from POSOCO towards Reactive Energy charges from Pool Account			6.08	6.08
3	Fixed charges from the provider of Reserves Regulation Ancillary Services(RRAS) Settlement Account			4.94	4.94
4	Income from POSOCO towards National Pool Account(SCED)			3.93	3.93
	TOTAL			101.42	101.42

Appendix 10: INCOME FROM SALE OF BULB, SCRAP, TENDER FORM RTC (Rs. Cr)					
No	Particulars	SBU G	SBU T	SBU D	Total
1	Hire Charges from Contractors	0.01	0.00	0.02	0.03
2	Sale Of Scrap	7.46	19.13	96.79	123.38
3	Sale of LED Bulbs	-	-	15.06	15.06
4	Sale of safety equipment	-	-	0.01	0.01
5	Sale of tender forms	0.37	0.82	2.29	3.48
6	Income from sale of Energy Meters	-	-	0.05	0.05
	Total	7.84	19.94	114.22	142.00

Appendix 11 Comparison of SBU wise break up of ARR, ERC and Revenue gap for 2021-22 (Rs Cr)

No	Particulars	Accounts				True up petition				variation between accounts and TU			
		2021-22				2021-22				2021-22			
		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)			647.21			532.32					114.89	
2	Cost of Power Purchase			8532.16	8532.16			8432.58	8432.58			99.58	99.58
3	Cost of Intra-State Transmission (SBU-T)			1210.14			1143.20					66.94	
4	NLDC/RLDC Charges												
5	Cost of generation of power	1.17			1.17	1.17			1.17				
6	Interest & Financial Charges												
7	Interest on loans	128.22	179.77	439.53	747.52					128.22	179.77	439.53	747.52
8	Less: Capitalized	144.32	66.55	18.41	229.28					144.32	66.55	18.41	229.28
9	Net interest	-16.10	113.22	421.12	518.24	73.27	227.66	423.14	724.07	-89.37	-114.44	-2.02	-205.83
10	Interest on GPF	8.97	16.22	152.86	178.06	8.97	16.22	152.86	178.06				
11	Other interest	1.06	1.55	8.63	11.24	1.06	1.55	8.63	11.24				
12	Interest on Master Trust	32.84	59.35	559.33	651.52	32.84	59.35	559.33	651.52				
13	Int on SD	-	-	136.20	136.20			142.18	142.18			-5.98	-5.98
14	Working capital interest	6.20	11.20	105.59	122.99	6.03	18.40		24.43	0.17	-7.19	105.59	98.56
15	Carrying cost	0	0	0	0			437.88	437.88			-437.88	-437.88
16	Total I&F	32.97	201.54	1383.73	1618.25	122.17	323.18	1724.03	2169.38	-89.20	-121.64	-340.29	-551.13
17	Master Trust Contribution	0	0	0	0	15.12	27.33	257.55	300.00	-15.12	-27.33	-257.55	-300.00
18	Depreciation	180.23	276.66	682.85	1139.74	132.24	201.61	252.98	586.83	47.99	75.05	429.87	552.91
19	Total O&M Expenses	289.05	574.35	3912.53	4775.93	150.52	459.07	2847.27	3456.86	138.53	115.28	1065.26	1319.07
20	Pay revision	0	0	0	0	33.69	63.24	437.36	534.28	-33.69	-63.24	-437.36	-534.28
21	Return on equity (14%)	154.45	205.24	376.58		116.38	119.99	253.50	489.87	38.07	85.25	123.08	-489.87
22	Other Expenses	0.01	-5.70	169.88	164.19	0.01	-5.7	169.88	164.19	0.00	0.00	0.00	0.00
23	Amortization of intangible assets						6.78		6.78	0.00	-6.78	0.00	-6.78
24	Incentive for transm availability						4.45		4.45	0.00	-4.45	0.00	-4.45
25	Gain on T&D loss reduction							125.25	125.25	0.00	0.00	-125.25	-125.25
26	Exeptional items	0.33		17.58	17.91	0.33		17.58	17.58	0.00	0.00	0.00	0.00
27	Recovery of past approved gap							346.39	346.39	0.00	0.00	-346.39	-346.39
28	Total ARR	658.21	1252.08	16932.67	16249.35	571.63	1199.95	16556.82	16335.94	86.58	52.14	375.85	-386.59
29	Tariff Income/ Rev from operation			16366.93	16366.93			14640.61	14640.61	0.00	0.00	1726.32	1726.32
30	Less: PF Incentive							38.61	38.61	0.00	0.00	-38.61	-38.61
31	Revenue from external sale							1024.31	1024.31	0.00	0.00	-1024.31	-1024.31
32	Non-Tariff Income	11	41.94	565.75	618.69	31.41	47.71	930.51	1009.64	-20.41	-5.77	-364.76	-390.95
33	Total ERC/ Transfer price	647.21	1210.14	16932.67	16985.62	532.32	1143.20	16556.82	16635.94	114.89	66.94	375.85	349.68
34	Net Revenue surplus			0.00	736.27			0.00	0.00	0.00	0.00	0.00	-736.27

Appendix 12 Comparison of SBU wise break up of ARR, ERC and Revenue gap for 2021-22 (Rs Cr)

No	Particulars	KSERC				True up petition				variation between approval and TU			
		2021-22				2021-22				2021-22			
		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)			639.86			532.32					107.54	
2	Cost of Power Purchase			8964.44	8964.44			8432.58	8432.58			531.86	531.86
3	Cost of Inter-State Transmission												
4	Cost of Intra-State Transmission (SBU-T)			1283.52			1143.20					140.32	
5	NLDC/RLDC Charges			3.00	3.00							3.00	3.00
6	Cost of generation of power					1.17		1.17		-1.17			-1.17
7	Interest & Financial Charges												
8	Interest on loans	133.90	313.12	329.80	776.82					133.90	313.12	329.80	776.82
9	Net interest	133.90	313.12	329.80	776.82	73.27	227.66	423.14	724.07	60.63	85.46	-93.34	52.75
10	Interest on GPF	11.21	24.74	182.63	218.58	8.97	16.22	152.86	178.06	2.24	8.52	29.77	40.52
11	Other interest					1.06	1.55	8.63	11.24	-1.06	-1.55	-8.63	-11.24
12	Interest on Master Trust	33.41	73.73	544.38	651.52	32.84	59.35	559.33	651.52	0.57	14.38	-14.95	0.00
13	Int on SD			238.74	238.74			142.18	142.18			96.56	96.56
14	Working capital interest	7.60	23.28		30.88	6.03	18.40		24.43	1.57	4.88	0.00	6.45
15	Carrying cost			27.08	27.08			437.88	437.88	0.00	0.00	-410.80	-410.80
16	Total I&F	186.12	434.87	1322.63	1943.62	122.17	323.18	1724.03	2169.38	63.95	111.69	-401.40	-225.76
17	Master Trust Contribution	10.26	22.64	167.10	200.00	15.12	27.33	257.55	300.00	-4.86	-4.69	-90.45	-100.00
18	Depreciation	196.26	261.09	154.91	612.26	132.24	201.61	252.98	586.83	64.02	59.48	-98.07	25.43
19	Total O&M Expenses	172.01	491.28	2848.95	3512.24	150.52	459.07	2847.27	3456.86	21.49	32.21	1.68	55.38
20	Pay revision					33.69	63.24	437.36	534.28	-33.69	-63.24	-437.36	-534.28
21	Return on equity (14%)	116.38	119.99	253.50	489.87	116.38	119.99	253.50	489.87	0.00	0.00	0.00	0.00
22	Other Expenses					0.01	-5.7	169.88	164.19	-0.01	5.70	-169.88	-164.19
23	Amortization of intangible assets						6.78		6.78	0.00	-6.78	0.00	-6.78
24	Incentive for transm availability						4.45		4.45	0.00	-4.45	0.00	-4.45
25	Gain on T&D loss reduction							125.25	125.25	0.00	0.00	-125.25	-125.25
26	Exceptional items					0.33		17.58	17.91	-0.33	0.00	-17.58	-17.91
27	Recovery of past approved gap			850.00	850.00			346.29	346.29	0.00	0.00	503.61	503.61
28	Total ARR	681.03	1329.87	16487.92	16575.43	571.63	1199.95	16556.82	16635.94	109.40	129.92	-68.90	-60.51
29	Tariff Income/ Rev from operation			14523.36	14523.36			14640.61	14640.61	0.00	0.00	-117.25	-117.25
30	Less: PF Incentive			33.95	33.95			38.61	38.61	0.00	0.00	-4.66	-4.66
31	Revenue from external sale			405.61	405.61			1024.31	1024.31	0.00	0.00	-618.70	-618.70
32	Non-Tariff Income	41.17	46.35	594.36	681.88	31.41	47.71	930.51	1009.64	9.76	-1.36	-336.15	-327.76
33	Total ERC/ Transfer price	639.86	1283.52	15489.38	15576.90	532.32	1143.20	16556.82	16635.94	107.54	140.32	-1067.44	-1059.04
34	Net Revenue Gap			998.53	998.53			0.00	0.00			998.53	998.53

----- 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 2021-22				
Particulars	Approved	Actual	Sought for TU	Deviation from approval
Generation Of Power	0	1.17	1.17	-1.17
Purchase of power	8967.44	8532.16	8432.58	534.86
Interest & Finance Charges	1943.62	1618.25	2169.38	-225.76
Depreciation	612.26	1139.74	586.83	25.43
O&M cost	3512.24	4775.93	3456.86	55.38
Other Expenses	0	164.19	164.19	-164.19
Interest on Additional Bond to Trust	200	0	300.00	-100.00
Gains out of T&D loss reduction			125.25	-125.25
Amortization of past gap	850		346.39	503.61
RoE	489.87		489.87	0.00
Incentive, Amortization and interest			11.23	-11.23
Exceptional item		17.91	17.91	-17.91
Pay revision expenses			534.28	-534.28
Total Expenditure (A)	16575.43	16249.35	16635.94	-60.51
Non-Tariff Income	681.88	618.69	1009.64	-327.76
Revenue from tariff & external sale	14895.02	16366.93	15626.31	-731.29
Total Income (B)	15576.90	16985.62	16635.94	-1059.04
Revenue surplus (Gap) (B-A)	-998.53	736.27	0.00	-998.53

6.2 The Statutory Auditors have audited and certified the accounts for the year 2021-22. This truing up petition is prepared on the basis of the audited accounts. The petitioner is furnishing the details of accounts as per formats given in the Tariff regulation. However, should the Hon Commission require any further details or information; the petitioner will be furnishing them as and when required.

Prayer

KSEBL humbly requests before the Hon Commission that:

- (1) Truing up of Expenses and Revenue as per the Audited Accounts of KSEBL for the year 2021-22 as explained in this petition may kindly be approved, in view of the care and caution taken by the Board 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) The revenue surplus as per the petition may be accounted as amortization of 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


Deputy Chief Engineer (TRAC)