

**KERALA STATE ELECTRICITY REGULATORY COMMISSION  
THIRUVANANTHAPURAM**

**Petition No: OP 41/ 2021**

- Present** : Shri. Preman Dinaraj, Chairman;  
: Adv. A. J. Wilson, Member (Law).
- In the matter of** :The petition filed by M/s KSEB Ltd for approval of Transformers and Meter Repair units (TMR) of KSEB Ltd as approved laboratory, additional investment in TMR units, revision of Testing Fees and fixation of rent for CTs/PTs;
- Petitioner** : Chief Engineer (Commercial & Tariff), Kerala State Electricity Board Limited, Vidyuthi Bhavanam, Pattom, Thiruvananthapuram.
- Petitioner represented by** : 1. Dr. G. Sreenivasan, Deputy Chief Engineer, TRAC;  
2. Sri. Manoj, Assistant Executive Engineer TRAC;  
3. Sri. Mukesh, AEE, TMR, Thirumala;  
4. Sri. Shanavas, AEE, TMR, Shornur.
- Date of E- Hearing** : 13.09.2021, 11.00 AM

**Order dated 23.09.2021 in OP. No. 41/ 2021**

1. M/s Kerala State Electricity Board Limited (hereinafter referred to as KSEB Ltd.) filed the petition dated 23.07.2021 before the Commission seeking approval for the following:-
  - a) Approve the Transformers and Meter Repair units (TMR units) of KSEB Ltd as approved laboratories under Regulation 115 (1) of the Kerala Electricity Supply Code,2014;
  - b) Approve the additional investment in Transformers and Meter Repair units ;
  - c) Approve the proposed revised Meter Testing Fees; and
  - d) Approve the proposed rent for CT/PT units.

The details provided in the petition on each matter are briefed below:

2. **Approval of Transformers and Meter Repair units (TMR units) of KSEB Ltd as approved laboratory under Regulation 115(1) of the Kerala Electricity Supply Code, 2014;**

- 1) The Commission vide order dated 26.8.2016 in OP No. 08/2016, has directed KSEB Ltd that NABL accreditation is to be obtained for the TMR units at Kannur, Shornur, Angamaly, Pallom and Thirumala.
- 2) KSEB Ltd has submitted that they have complied with the direction of the Commission and all the TMRs under KSEB Ltd have now obtained NABL certification for meter testing facilities. The details of the NABL certificate obtained for each TMR is as given below:

Sl. No	TMR unit	Certificate Issue Date	Validity date (upto)	Remarks
1.	Kannur	19.09.2019	18.09.2021	Expired as on the date of this Order
2	Shornur	13.06.2019	12.06.2021	Applied for extension of validity.
3	Angamaly	14.10.2020	13.10.2022	
4	Pallom	09.03.2021	08.03.2023	
5	Thirumala	09.03.2021	08.03.2023	

- 3) KSEB Ltd has requested to approve the TMR units at Angamaly, Thirumala, Pallom, Shornur and Kannur as approved laboratory under Regulation 115(1) of the Kerala Electricity Supply Code, 2014.

3. **Approve the additional investment in the Transformers and Meter Repair units (TMR units);**

- 1) Vide the order dated 26.08.2016 in OP.No.8/ 2016;  
'the Commission had observed that the 'Red Phase make CT tester' cannot be used for testing CTs. Further vide Para 18 of the said Order the Commission has also observed that "*Current Transformer and Potential Transformer (CT & PT) are part of metering equipment and hence these are also to be tested along with the meters. Hence the Commission is of the opinion that KSEB Ltd. shall procure testing equipment for CT and PT also. KSEB Ltd may submit application for investment approval for purchase of optimum number of equipment to test CTs &PTs*".
- 2) KSEB Ltd has submitted that, based on the above observation of the Commission, the CT/PT error testing equipment available with KSEB Ltd is to be replaced. It is also submitted that the CT/PT error testing equipment of requisite standard is required for the TMR units of Thirumala, Shornur and Kannur.

- 3) KSEB Ltd has also proposed expenditure on outdoor meter testing units, equipments to test the meters and instrument transformers at outside premises, transformer testing kit etc.
- 4) The TMR unit wise detailed split up of the investment proposed by KSEB Ltd is shown below:

**(i) TMR Unit, Thirumala:**

Sl. No	Name of the Equipment	Qty	Amount in Rs lakhs	Remarks
1	Fully Automatic CT-PT test kit with all accessories (with standard CT's having multi ranges and standard PT's for primary voltage of 11KV and 33 KV), class of accuracy at least 0.02 with all connecting cables and spares	1 No.	130.00	For testing the ratio and phase angle errors of LT&HT CT and HT PT as per relevant IS
2	Equipment calibration, Inter lab comparison, Documentation		3.05	Comparing the accuracy of meter test bench and for meeting statutory requirement
3	Portable energy meter test kit of 0.05 S class accuracy		30.017	
	<b>Total</b>		<b>163.067</b>	

\* GST/freight charges etc. to be collected as per rules.

**(ii) TMR Unit, Pallom:**

Sl. No	Name of the Equipment	Qty	Amount in Rs lakhs	Remarks
1	Equipment calibration, Inter lab comparison, Documentation		3.05	Comparing the accuracy of meter test bench and for meeting statutory requirement
2.	Portable energy meter test kit of 0.05 S class accuracy		30.017	
	<b>Total</b>		<b>33.067</b>	

**(iii) TMR Unit, Angamaly:**

Sl. No	Name of the Equipment	Qty	Amount in Rs lakhs	Remarks
1	Reference standard meter of accuracy 0.1		7.00	
2.	Other calibration equipments		8.85	
	<b>Total</b>		<b>15.85</b>	

**(iv) TMR Unit, Shornur:**

Sl. No	Name of the Equipment	Qty	Amount in Rs lakhs	Purpose
1	Fully automatic instrument transformer set for testing LT CTs upto 2000/5A and HT&EHT CTs (5A and 1 A), PTs- 11kV, 22kV and 33kV/110V	1 No	130.00	For testing of CTs and PTs as per relevant IS
2	Safety Equipments	1 No	1.00	
3	Civil & Electrical work		7.00	
4	Equipment calibration, Inter lab comparison, Documentation		3.05	Comparing the accuracy of meter test bench and for meeting statutory requirement
5	Transformer testing kit for 3 phase distribution transformer upto 500kVA rating 11kV-22kV/433V (OC, SC, HV, DVDF, Turns ratio and winding resistance tests) as per BIS	1 No	20.00	Testing of new as well as repaired transformer as per standards and to comply with the guidelines of BEE, CBIP and Energy Conservation Act.
	<b>Total</b>		<b>161.05</b>	

- GST /freight charges etc. to be collected as per rules.

**Equipment and machinery additionally required for the Outdoor HT Meter Testing Units of TMR Unit, Shornur** (for Kanjikode and Shornur field units)

<b>Shornur &amp; Kanjikode Outdoor Units</b>				
Sl. No	Details of Equipment required	Qty	Amount in Rs lakhs	Purpose
1	Portable and Handy type CT/PT Error Testing Kit	2 No	33.792	for confirmation of CT & PT ratio at site

2	Portable three phase fully automatic energy meter test system with integrated current and voltage source, of an accuracy class of 0.05 voltage generation and measurement upto 500V and current generation and measurement upto 120 A along with accessories.	2 No	60.034	For testing the accuracy of Energy Meters at site
3	CT/PT Polarity tester	2 No	0.400	Polarity Testing of CT/PT at site
<b>Total</b>			<b>94.226</b>	

- GST/ freight charges etc. to be collected as per rules.

Total for TMR Shornur & 2 outdoor units = **Rs. 255.276 lakhs**

**(v) TMR Unit, Kannur:**

Sl. No	Details of Equipment required	Qty	Amount in Rs lakhs	Purpose
1	Fully automatic instrument transformer set for testing LT CTs upto 2000/5A and HT&EHT CTs (5A & 1 A) and PTs of 11kV, 22kV and 33kV/110 V	1 No	130.00	For testing of CTs and PTs as per relevant IS to get NABL accreditation
2	Safety Equipments	1 No	1.00	
3	Civil & Electrical work		7.00	
4	Equipment calibration, Inter lab comparison, Documentation		3.05	
5	Earth resistance testing equipment, Lux meter ,Flux meter, Clamp meter		2.00	
6	Booster transformer, BDV kit, Clamp meter, Drilling machine, Aluminium bracing kit		7.00	
<b>Total</b>			<b>150.05</b>	

- GST/freight charges etc. to be collected as per rules.

**Equipment and machinery additionally required for the Outdoor HT Meter Testing Units of TMR, Kannur (Kannur and Kozhikode outdoor units)**

<b><i>Kannur and Kozhikode outdoor unit</i></b>				
Sl No	Details of Equipment required	Qty	Amount in Rs lakhs	Purpose
1	Portable and Handy type CT/PT Error Testing Kit	2 No	33.792	For ratio confirmation of CT / PT unit at site
2	Portable three phase fully automatic energy meter test system with integrated current	2 No	60.034	For testing the accuracy of Energy

	and voltage source, of an accuracy class of 0.05 voltage generation and measurement upto 500V and current generation and measurement upto 120 A along with accessories.			Meters at site
3	CT/PT Polarity tester	2 No	0.400	Polarity Testing of PT/CT
4	Laptop	2 No	0.800	For downloading data from meters at site for analysis and preparing reports
5	Portable type Insulation tester, Multi meter and clamp meter	2 No	3.00	
<b>Total</b>			<b>98.026</b>	

- GST/freight charges to be collected etc as per rules.

Total for TMR Kannur & 2 outdoor units = **Rs 248.076 lakhs.**

- 5) **The total additional expenditure for all Transformers and Meter Repair units of KSEB Ltd is proposed to be Rs. 7.153 Crores.** KSEB Ltd has submitted that all the standards/ procedures for purchases and works, to ensure minimum cost and standards of works shall be followed and has requested the Commission to approve the investment costing Rs. 7.15 Crores for purchasing the additional testing equipments for the TMR units at Angamaly, Thirumala, Pallom, Shornur and Kannur.

#### 4. **Approval for revision of Testing Fees:**

- 1) KSEB Ltd has submitted that the fees approved by the Commission for meter testing in KSEB Ltd are, as per the notification dated 31.01.2014, under schedule I, Model schedule of miscellaneous charges in the Kerala Electricity Supply Code, 2014. Whereas, the Government of Kerala Agency, Electrical Inspectorate has revised the rates for meter testing in 2018 & in 2019 with an annual increment of 5% on the testing charges. However, KSEB Ltd is still continuing with the same rates approved in 2014.
- 2) A comparison of the Testing fees of KSEB Ltd to that of the Testing fees of Electrical Inspectorate with a 5% increase as per GO dated 08.03.2019 is shown below:

Sl. No	Type of Meters	Rates of KSEBL in Rs.	Existing rate (Rs.) as per G.O. dated 08.03.2019
1	Energy Meter		
A	Single Phase Meter	100	335/- (Ordinary Report) 555/- (Calibration Certificate as per NABL norms)

B	Poly Phase Meter	200	555/- (Ordinary Report) 1105/- (Calibration Certificate as per NABL norms)
<b>2</b>	<b>Energy Meter (Dispute)</b>		
A	Single Phase Meter	100	555/- (Calibration Certificate as per NABL norms)
B	Poly Phase Meter	200	1105/- (Calibration Certificate as per NABL norms)
<b>3</b>	<b>LT CT</b> (Ratio/ Phase angle error at a specified burden)	100	225/- (Ordinary Report)
<b>4</b>	<b>HT CT</b> (Ratio/ Phase angle error at a specified burden)	500	1105/- per range (Ordinary Report)
<b>5</b>	<b>HT PT</b> (Ratio/ Phase angle at a specified burden)	1000/- per phase (ordinary Report)	1105/- per phase (Ordinary Report)
<b>6</b>	<b>CT/PT Unit</b> (Indoor/ Outdoor)		
a	Ratio/ Phase angle error at a specified burden	2250/-	8820/- (Ordinary Report)
b	Ratio/ Phase angle error at a specified burden and HV Test	2250/-	16540/- (Ordinary Report)

- 3) KSEB Ltd has requested to revise the testing fee, at par with the fees specified by Government of Kerala in the Order dated 27.03.2019, in view of the investments done in the TMR units and the NABL accreditation received to the units.
- 4) KSEB Ltd has requested the approval of the Commission for the proposed rates/ fees for meter/ equipment testing as indicated below:

Sl. No	Type of Meters	Existing rates at TMR (Rs.)	Proposed Rates (Rs.)	Remarks
<b>I</b>	<b>Energy Meter</b>			<b>Same as Electrical Inspectorate Testing fees</b>
A	Single Phase Meter	100/-	335/-	
B	Poly Phase Meter	200/-	555/-	
<b>2</b>	<b>Energy Meter (disputed)</b>			
A	Single Phase Meter	100/-	555/-	
B	Poly Phase Meter	200/-	1105/-	
<b>3</b>	<b>LT CT</b> (Ratio/ Phase angle error at a specified burden)	100/-	225/-	
<b>4</b>	<b>HT CT</b> (Ratio/ Phase angle error at a specified burden)	500/-	1105/- per range	

5	HT PT (Ratio/ Phase angle error at a specified burden)	1000/- per phase	1105/- per phase	<b>Same as Electrical Inspectorate Testing fees</b>
6	CT PT Unit (Indoor/ Outdoor)			
A	Ratio/ Phase angle error at a specified burden	2250/-	8820/-	
B	Ratio/ Phase angle error at a specified burden and HV Test	2250/-	16540/-	
7	Single phase net meter	-	665/-	
8	Three phase net meter	-	2205/-	<b>New rates proposed</b>
9	LT CT ToD meter	1000/-	1500/-	
10	LT CT ToD Net Meter	2000/-	3000	
11	HT ToD meter	1000/-	2000.-	
12	HT Net Meter	2000/-	4000/-	
13	HT/EHT data downloading (Billing and Load Survey)	-	2500/-	
14	EHT meter	-	4000/-	
15	EHT meter (bidirectional)	-	8000/-	
16	HT/EHT ABT meter	-	15000/-	

#### 5. Approve the rent for 11 kV CTs/PTs:

- 1) The monthly rental charges for energy meters is provided as *item 3 in schedule -1 of model schedule of miscellaneous charges under the Kerala Electricity Supply Code, 2014*. As sub item (iv), even though CT/PT unit is mentioned, monthly rent is not specified. Moreover, the Commission has not fixed the rent for CT/PT units for HT also.
- 2) KSEB Ltd is presently installing CT/PT units, in case of HT consumers where the consumer is not installing the CT/PT units for metering purposes. In some cases, the CTs or PTs become faulty and KSEB Ltd have to install it for long durations until the CT/PT is replaced by the consumer. In such circumstances, KSEB Ltd is not able to collect the rental charges; since the rental charges are not fixed/ approved by the Commission.
- 3) It is proposed to collect rental charges from the consumers for the CTs/PTs installed by KSEB Ltd and rent is proposed based on the commonly used CTs/PTs. The methodology adopted for calculating the monthly charges is same as that is adopted by Commission for calculating the rent of energy meter.



- 4) The EMI (equally monthly installment) method is adopted for calculating the rent of CT/PTs, considering the life of CTs/PTs as 10 years, even though only 5 years is specified as warranty period. The interest rate of 10% is taken. From the calculated value the interest on security deposit of the meters is deducted to arrive at the rent.
- 5) The rent for the CTs/ PTs proposed by KSEB Ltd is indicated below:

11 kV CT units					
Rating of unit	Class, burden	Type (Indoor/ outdoor)	Cost Rs.	Rent proposed Rs/month	Remarks
11 KV CT unit 5/5A	0.2S class , Burden 10/15 VA	Indoor	8900	118	Rate/ phase
11 KV CT unit 10/5A and above	0.2S class , Burden 10/15 VA	Indoor	8600	114	Rate/ Phase
11 KV CT unit 5/5A to 20/5 A	0.2 S class	Indoor	10500	139	
11 KV CT unit 25/5A to 75/5 A	0.2 S class	Indoor	12500	165	
11 KV CT unit 80/5A to 100/5 A	0.2S class	Indoor	13500	178	

11 kV PT units				
Rating of unit	Class, burden	Type (Indoor/ outdoor)	Cost Rs.	Rent proposed Rs/month
11kV PT unit (3 phase) 11000/110 V	0.2S, 20/25 VA	Out door	17900	237
11kV PT unit (1phase) 11/√3/110/√3 V	0.2S, 20/25 VA	Out door	9900	131

11 kV CT/PT Units				
Rating of unit	Class, burden	Type (Indoor/ outdoor)	Cost Rs.	Rent proposed Rs/month
11kV CT/PT unit 200-100/5A	For CTs 0.2S, 10 VA, PTs 0.2S, 25 VA, (3 phase, 4 wire)	Indoor	32000	423
11kV CT/PT unit 400-200/5A	For CTs 0.2S, 10 VA, PTs 0.2S, 25 VA	Out door	27250	360
11kV resin cast CT/PT unit 5/5A to 100/5A	For CTs 0.2S, 10 VA, PTs 0.2S, 25 VA	Out door	63000	833
11kV CT/PT unit (3 phase) 5/5A	For CTs 0.2S, 10 VA, For PTs 0.2S, 25 VA	Out door	68900	911

11kV CT/PT unit (3 phase)10/5A and above	For CTs 0.2S, 10 VA, PTs 0.2S, 25 VA	Out door	68500	905
11kV CT/PT unit/ metering sets (3ph) 5/5 A to100/5A	For CTs 0.2S, 10 VA, PTs 0.2S, 25 VA	Out door	84000	1110
11kV CT/PT units 5/5A to 20/5 A	0.2S class	Out door	75000	991
11kV CT/PT units 25/5A to 75/5A	0.2S class	Out door	80000	1057
11kV CT/PT units 80/5A to 100/5 A	0.2S class	Out door	88000	1163

6) KSEB Ltd has requested to approve the above proposed rental rates for the CTs & PTs.

#### **Hearing on the petition:**

6. The Commission admitted the petition as OP No. 41/ 2021. Form 3 A notice was issued to the petitioner intimating the date of the public hearing on 13.09.2021. The stake holders & the public were informed about the petition and the hearing. The public hearing on the petition was conducted on 13.09.2021. The petitioner was represented by Dr. G. Sreenivasan, Deputy Chief Engineer, TRAC, Sri. Manoj, Assistant Executive Engineer, TRAC, Sri. Mukesh, Assistant Executive Engineer, TMR, Thirumala and Sri. Shanavas, Assistant Executive Engineer, TMR, Shornur. Sri. Manoj presented the petition before the Commission and responded to the queries sought by the Commission. The Commission directed KSEB Ltd. to provide copies of the NABL accreditation certificates received to each TMR unit. They were also directed to provide the cost and the parameters used for calculating the EMI and thereby the rational of the rent proposed, for perusal of the Commission. They submitted the same by e-mail dated 14.09.2021.

#### **Analysis and decision of the Commission:**

7. Based on detailed analysis of the petition and the related documents and clarifications submitted by the petitioner, the Commission observes the following;

The Commission vide order dated 26.08.2016 in OP. No. 8/2016 has ordered as follows:

*“16. As per NABL 100, the general information brochure, Accredited laboratories can objectively state conformance of product or service to specified requirements. It is important for the purchaser, regulator, government, and the public to be able to identify accredited testing and calibration laboratories. Also, in case the laboratory performs site testing/ calibration, it must also comply with NABL 130 ‘Specific criteria for site testing and site calibration*

laboratories'. The accredited laboratories are required to comply at all times with the terms and conditions of NABL given in NABL 131 'Terms & Conditions for obtaining and maintaining NABL Accreditation'. Hence the Commission is of the view that KSEB Ltd should be vigilant in continuous maintenance of the requirements of NABL accreditation. Commission also observes that the NABL accreditation requires sufficient facilities and procedures which are to be got approved after verification by the NABL. The Commission therefore feels that sufficient time should be allowed to KSEB Ltd to get their meter testing laboratories accredited by NABL as required by the above regulations.

17. The Committee constituted by the Commission visited all the four TMRs and appraised the status of equipments available and submitted report to the Commission. The Committee has analyzed the procedure followed in each TMR. The Commission examined the report of the Committee in detail. The Commission also examined in detail the test reports and other documents submitted by the Committee along with the inspection report. The two TMRs, viz, Kannur and Shornur already have required equipment and hence K S E B Ltd. shall take immediate action for getting accreditation from NABL.
18. The Commission also analyzed in detail the proposal submitted by KSEB Ltd on the investment required for accreditation of the four TMR units. The meter testing facility proposed at Thirumala and Pallom are capable of testing single phase and three phase whole current meters, LT and HT three phase CT meters and ABT meters. Outdoor units are also proposed in the TMRs of Pallom, Thirumala and Kannur for calibration of HT & EHT meters in the field. The investment is proposed for meeting the statutory requirements for testing of energy meters as per CEA Regulation and Supply Code. KSEB Ltd serves around 120 lakh consumers with an annual addition of 3.2 lakh consumers. Hence the Commission, after prudent check, approves the investment proposal of KSEB Ltd in the TMRs for obtaining NABL accreditation. Current Transformer and Potential Transformer (CT & PT) are part of metering equipment and hence these are also to be tested along with meters. Hence the Commission is of the opinion that KSEB Ltd. shall procure testing equipment for CT and PT also. KSEB Ltd may submit application for investment approval for purchase of optimum number of equipment to test CTs and PTs.
19. Commission is of the opinion that a temporary approval can be given to the TMR units of KSEB Ltd at Thirumala, Pallom, Shornur and Kannur as approved laboratories for testing the consumer meters, with the testing equipments calibrated at a NABL accredited lab. The permission is granted considering the essentiality of keeping sufficient stock of energy meters with KSEB Ltd so that consumer interests are not adversely affected.
20. Considering the facts and circumstances as above, the Commission hereby orders that;
  - (i) The KSEB Ltd shall initiate action immediately for obtaining accreditation from NABL for their TMR units at Shornur and Kannur for testing of the energy meters since the equipment are already installed.

- (ii) *The KSEB Ltd shall immediately take necessary steps for procurement of the equipment for testing meters and get accreditation from NABL for their TMR units at Thirumala and Pallom.*
- (iii) *The following investments for the three TMRs are approved, the details of which are given in Annexure 1. The standard procurement process may be followed.*

Sl. No	TMR	Cost Estimate Approved by the Commission ( Rs Lakh)
1	Thirumala	128.50
2	Pallom	128.50
3	Kannur	16.10

*Any further investment required for purchase of equipment shall be incurred only after getting approval of the Commission.*

- (iv) *Commission approves the meter testing facilities at the TMR units of KSEB Ltd at Shornur and Kannur for testing the single phase and three phase whole current meters, CT operated meters and ABT meters excluding instrument transformers, upto a period of one year or till the validity of the calibration equipment at the TMRs expires, whichever is earlier.*
- (v) *Commission approves the meter testing facilities at the TMR units of KSEB Ltd at Thirumala and Pallom for testing the single phase and three 15 phase whole current meters, LT and HT CT operated meters excluding instrument transformers, upto a period of one year or till the validity of the calibration equipment at the TMRs expires, whichever is earlier.*
- (vi) *KSEB Ltd shall submit the progress of the accreditation process of each of the four TMRs and the status on continued accreditation of TMR, Angamaly every six months from the date of this order.'*
8. Through this petition KSEB Ltd has submitted that the TMR units at Angamaly, Thirumala, Pallom, Shornur and Kannur have obtained NABL accreditation and hence these units may be approved as 'approved laboratories under Regulation 115(1) of the Kerala Electricity Supply Code, 2014'. KSEB Ltd in support of their request have submitted copies of the NABL approval certificates and have indicated the date and period of approval in the petition. In view of the NABL accreditation obtained for each of the five TMR units of KSEB Ltd., the Commission may approve, the TMR units at Angamaly, Thirumala, Pallom, Shornur and Kannur as, 'approved laboratories under Regulation 115(1) of the Kerala Electricity Supply Code, 2014'.
9. Vide Para 18 of the Order dated 26.08.2016 in OP No. 8/ 2016; the Commission had opined that, '*KSEB Ltd. shall procure testing equipment for CT and PT also. KSEB Ltd may submit application for investment approval for purchase of optimum number of equipment to test CTs and PTs*'. Further, vide Para 20 (iii) Commission has ordered that '*Any further investment required for purchase of equipment shall be incurred only after getting approval of the Commission*'.

10.KSEB Ltd in the petition has requested for investment approval for Rs. 7.15 Crores, for procuring; CT/ PT error testing systems, Standard reference meters, Portable energy testing equipments etc. for the five TMR units. The summary of the investment proposed by KSEB Ltd is shown below:

<b>TMR unit</b>	<b>Details of Investment</b>	<b>Cost (Rs lakhs)</b>
Thirumala	For purchasing of CT/PT error testing systems and related works	163.067
Pallom	For calibration expenses	33.067
Angamaly	For Standard reference meter of accuracy of 0.1 S class	15.85
Shornur	CT/PT error testing systems. Purchase of meter testing system for the use of meter testing at site and other related works & Cost of transformer testing kit	255.276
Kannur	Purchase of CT/PT error testing systems, purchase of portable energy meter testing equipment at site and related works	248.076
<b>Total</b>		<b>715.336</b>

11.Commission have carefully examined the above investment proposal of Rs. 7.15 crores, for procuring CT/ PT error testing systems, Standard reference meters, Portable energy testing equipments etc. for the five TMR units. Further, this petition is in compliance to the directions given by the Commission, vide the Order dated 26.08.2016. KSEB Ltd. has submitted that they will follow all the rules and regulations in force for the procurement of the equipments and ancillary works. The Commission notes that the proposals made by the licensee are essential for carrying out the activities of the TMR units and the investment amount proposed is based on budgetary quotes from suppliers/ manufacturers in the field. Considering the necessity of the TMR units, the Commission can approve the investment proposal of Rs.7.15 crores, on the condition that KSEB Ltd. shall comply with the rules, procedures, quality, cost, supplier/ manufacturer etc. for procurement and due prudence check shall be exercised in all the related works/ activities.

12.The Commission vide the notification dated 31.01.2014, has published the Kerala Electricity Supply Code, 2014. In this Supply Code 'the Testing Fees for metering equipments' are specified under Sl. No. 6 (c) (i to viii) of 'Schedule – 1- Model Schedule of Miscellaneous Charges'. The same rates are currently being followed by KSEB Ltd. The Commission notes that the Electrical Inspectorate under the Power Department, Government of Kerala is the other authorized NABL accredited agency in the State for testing & calibrating energy meters and

related equipments. The Government of Kerala has revised the fee structure and for the services rendered by the Electrical Inspectorate, vide the Order No. H1-4738 / 2019/ CEI dated 27.03.2019 through the proceedings of the Chief Electrical Inspector. In the Order, 'Testing Fee for electrical instruments in the Meter Testing and Standards Laboratory' are included under item IV.

13. KSEB Ltd in their petition has pointed out that these rates have not been revised since January 2014. Hence, they have filed this petition to revise the testing fee at par with the fees specified by Government of Kerala in the Order dated 27.03.2019. This revision is justified in view of the investments done in the TMR units and the NABL accreditation received to the units. Considering the fact that the fees have not been revised during the last seven years, the Commission may consider approving the proposed revised meter testing fees as shown below:

Sl. No	Type of Meters	Approved Rates (Rs.)
<b>1</b>	<b>Energy Meter</b>	
A	Single Phase Meter	335/-
B	Poly Phase Meter	555/-
<b>2</b>	<b>Energy Meter (disputed)</b>	
A	Single Phase Meter	555/-
B	Poly Phase Meter	1105/-
<b>3</b>	<b>LT CT (Ratio/ Phase angle error at a specified burden)</b>	225/-
<b>4</b>	<b>HT CT (Ratio/ Phase angle error at a specified burden)</b>	1105/- per range
<b>5</b>	<b>HT PT (Ratio/ Phase angle error at a specified burden)</b>	1105/- per phase
<b>6</b>	<b>CT PT Unit (Indoor/ Outdoor)</b>	
A	Ratio/ Phase angle error at a specified burden	8820/-
B	Ratio/ Phase angle error at a specified burden and HV Test	16540/-
7	Single phase net meter	665/-
8	Three phase net meter	2205/-
9	LT CT ToD meter	1500/-
10	LT CT ToD Net Meter	3000/-
11	HT ToD meter	2000/-
12	HT Net Meter	4000/-
13	HT/EHT data downloading (Billing and Load Survey)	2500/-
14	EHT meter	4000/-
15	EHT meter (bidirectional)	8000/-
16	HT/EHT ABT meter	15000/-

14. In the Kerala Electricity Supply Code, 2014 published by the Commission, 'the Monthly Rental Charges' for the meters/ equipments' are specified in Sl. No. 3 (c) (i to iv) of 'Schedule – 1- Model Schedule of Miscellaneous Charges'. The Commission has not specified the rental charges for the (iv) CT/PT units. KSEB Ltd has proposed for approval of the Commission, the monthly rental charges for various types of 11kV CT/PT units. The rates are proposed at the EMI rate for 10 years @ 10% annual interest rate.
15. Commission has gone through the proposal and noted that KSEB Ltd. is providing immediate replacement assistance to consumers whose CT/PT units become faulty. Since procurement of these CT/ PT units usually take time, KSEB Ltd. is forced to provide these units during this period. Since no approved rental rates are prevailing, KSEB Ltd. is unable to charge any rent for this service. Hence KSEB Ltd has proposed for approval of the rates subject to the condition that these rental rates are only for the period of emergency service mentioned above and shall not be applicable for units attached to a normal metering system. Accordingly the monthly rental charges for the various types of 11 kV CT/PT unit is approved as follows:

<b>11kV CT units</b>				
<b>Rating of unit</b>	<b>Class , burden</b>	<b>Type (Indoor/ outdoor)</b>	<b>Cost Rs</b>	<b>Rent Rs/month</b>
11 KV CT unit 5/5A	0.2 S class , Burden 10/15VA	Indoor	8900	118/phase
11 KV CT unit 10/5A and above	0.2 S class , Burden 10/15VA	Indoor	8600	114/phase
11 KV CT unit 5/5A to 20/5 A	0.2 S class	Indoor	10500	139/-
11 KV CT unit 25/5A to 75/5 A	0.2 S class	Indoor	12500	165/-
11 KV CT unit 80/5A to 100/5 A	0.2 S class	Indoor	13500	178/-
<b>11kV PTs units</b>				
11kV PT unit (3 phase) 11000/110 V	0.2S class, burden 20/25 VA	Out door	17900	237/-
11kV PT unit (1 phase) 11V/3/110V/3V	0.2S class, burden 20/25 VA	Out door	9900	131/-
<b>11KV CT/PT Units</b>				
11kV CT/PT unit 200-100/5A	For CTs 0.2S class, burden 10VA For PTs 0,2S class, burden 25 VA (3 phase 4 wire)	Indoor	32000	423/-

11kV CT/PT unit 400-200/5A	For CTs 0.2S class, burden 10VA For PTs 0.2S class, burden 25 VA	Out door	27250	360/-
11kV resin cast CT/PT unit 5/5A to 100/5A		Out door	63000	833/-
11kV CT/PT unit (3 phase) 5/5A		Out door	68900	911/-
11kV CT/PT unit (3 phase) 10/5A and above		Out door	68500	905/-
11kV CT/PT unit /metering sets (3 phase) 5/5A to 100/5A		Out door	84000	1100/-
11kV CT/PT units 5/5A to 20/5	0.2S class	Out door	75000	991/-
11kV CT/PT units 25/5A to 75/5A	0.2S class	Out door	80000	1057/-
11kV CT/PT units 80/5A to 100/5 A	0.2S class	Out door	88000	1163/-

### Orders of the Commission

16. The Commission, after due scrutiny of the petition filed by M/s Kerala State Electricity Board Limited, clarifications/ details provided during the hearing, earlier directions of the Commission in this regard, the rules/ regulations/ statutory requirements and the provisions under the Electricity Act, 2003, hereby orders as follows:

- 1) The Transformers and Meter Repair units (TMR units) at Angamaly, Thirumala, Pallom, Shornur and Kannur are approved as accredited laboratories under Regulation 115(1) of the Kerala Electricity Supply Code, 2014. Since the validity of the accreditation has already expired in the case of TMR Units at Kannur and Shornur, KSEB Ltd shall expedite renewal of the validity of certification from the NABL;
- 2) Approves the additional investment proposal of Rs.7.15 Crores to the five TMR Units. KSEB Ltd is directed to comply with the rules, procedures, statutory requirements, quality, cost, supplier/ manufacturer etc. for the procurement and due prudence check shall be done in all the related works/ activities;
- 3) Approves the revised meter testing fees as provided in Para 13 of this order. The rates specified under Sl. No. 6 –Testing Fee - in Schedule-1 (Model Schedule of Miscellaneous charges) of Kerala Electricity Supply Code, 2014 shall be deemed to be revised as approved above;
- 4) Approves the monthly rental charges for the various types of 11 kV CT/PT units as provided in Para 15 of this Order. These rates approved shall be



deemed to be included under Sl. No. 3 – Monthly rental charges – (iv) CT/PT unit - in Schedule-1 (Model Schedule of Miscellaneous charges) of Kerala Electricity Supply Code, 2014. However these rental rates shall be applicable to such consumers and for such periods during which their CT/PT units have become faulty and KSEB Ltd has provided substitute CT/PT to the consumer till such time new CT/PT are procured by the consumer. These rates shall not be charged for the units attached to normal metering system of the consumer.

The Petition is disposed off as ordered above.

Sd/-  
**Adv. A. J. Wilson**  
Member (Law)

Sd/-  
**Preman Dinaraj**  
Chairman

Approved for Issue

**Sd/-**  
Secretary