

**KERALA STATE ELECTRICITY REGULATORY COMMISSION  
THIRUVANANTHAPURAM**

**Present** : Sri. T.M.Manoharan, Chairman  
Sri. K. Vikraman Nair, Member  
Sri. S. Venugopal, Member

In the matter of approval of Capital Investment Plan for the year 2017-18 submitted by Rubber Park India (P) Limited.

**Petitioner** : Rubber Park India (P) Limited  
2A,"Kautileeyam", Rubber Park,  
Valayanchirangara,  
Ernakulam-683556, Kerala

**Order No.1580/F&T/2016 dated 22/2/2017**

1. The managing director, Rubber Park India (P) Limited (herein after referred to as the petitioner or RPIL) has filed a petition before the Commission on 19.09.2016 seeking approval of capital investment plan for 2017-18 as per Regulation 72 (2) of the Kerala State Electricity Regulatory Commission (Terms and Conditions for Determination of Tariff) Regulations, 2014.
2. The summary of the investment proposal submitted before the Commission is shown below:

Particulars				Rs. in Lakh
Procurement of 110kV Current Transformers and Potential Transformers				12
Procurement of 110kV Lightning Arresters				1.5
Augmentation of Unitized Substations (USS)				2
Billing Software				8
Capital Expenditure required in connection with KSERC (Standards of Performance of Distribution Licensees) Regulation, 2015				
Sno.	Equipment proposed for procurement	Quantity	Rs. in Lakhs	
A	Distribution Transformer	1	6	
B	Energy Meters	10	2.5	
C	11 kV CTs and PTs	6	1.5	
D	Standard Reference meter	1	6.7	
E	EPBAX System	1	1.5	
F	Power Quality Analyzer	1	5	
G	Insulation Tester	1	5	28.7
H	True RMS Multi metre & Tong tester	1	0.5	
<b>Total</b>				<b>52.2</b>

3. The details of the capital investment proposed by the M/s RPIL is summarized below.

1) **Procurement of 110kV Current Transformers and Potential Transformers:**

RPIL has one 110/11 kV substation with two numbers of 12.5 MVA power transformers for catering power to the industrial consumers within their area of jurisdiction. In order to provide protection for the power transformer, 18 numbers of current transformers (CT) and potential transformers (PT) are installed in the substation. The failure of any of these instrument transformers would result in total failure of the power supply in the licensed area. At present the licensee does not have any spare instrument transformers to use in the case of emergencies. Considering the ageing of existing instrument transformers and long delivery period, it is essential to initiate the procurement process for three numbers of each of current transformer and potential transformer at the earliest. The investment proposed for procurement of two numbers each of CT and PT is estimated at Rs.12.00 lakh.

2) **Procurement of 110kV Lightning Arresters**

At present the company does not have any spare lightning arrestors to use in the case of emergencies. Hence, it is unavoidable to keep at least 3 numbers of spare lightning arrestors in the substation to improve performance and the capital expense expected is Rs.1.50 lakh.

3) **Augmentation of Unitized Substations (USS)**

The unitised substation of RPIL consists of a distribution transformer with 5 independent distribution feeders. It is stated that the licensee proposes some modification to the LT panel to make it suitable for site conditions. The investment estimated is Rs.2.00 lakh.

4) **Billing Software**

It is stated that the existing billing software is having several limitations for changing various parameters in accordance with the tariff orders issued by the Commission. Moreover, in order to provide online viewing of the bill for the consumers and for providing online bill payment facility, it is necessary to upgrade the existing software. The total investment estimated is Rs.8.00 lakh.

5) **Capital Expenditure required in connection with KSERC (Standards of Performance of Distribution Licensees) Regulation, 2015**

(a) **Distribution Transformer**

Restoration of supply in the case of failure of distribution transformer will be only possible through replacement of the faulty transformer with a suitable transformer. Hence, a spare distribution transformer is required to comply with the regulation.

**(b) Energy Meters 11 kV CTs and PTs**

As per the Regulation 4 (15) of KSERC (Standards of Performance of Distribution Licensees) Regulation, 2015, defective meters are to be replaced within seven working days. Hence it is proposed to keep 5 numbers of HT and LT meters each as spare. It is reported that it is unavoidable for the company to keep at least 4 numbers of CTs and 2 numbers of PTs as spare for emergency replacements in the case of defective CTs and PTs, since CT and PT are part of metering system.

**(c) Standard Reference meter**

The company is proposing to purchase a low cost standard reference meter for verification of the correctness of the consumer meters for the year 2017-18 to comply with the regulation.

**(d) EPBAX System**

The company is proposing to establish an EPBAX system in the office for providing 24X7 services to the consumers for registering the complaints round the clock during all the days of the week.

**(e) Power Quality Analyzer**

The measurement of harmonics and periodical monitoring of the harmonics can be carried only with the help of a power quality analyzer. Hence the company is proposing to purchase a standard power quality analyzer for measuring the harmonics contents to comply with the regulation.

**(f) Insulation Tester, True RMS Multimeter & Tong tester**

At present the existing equipments are in very bad condition due to aging. Hence the company is facing a lot of problems during testing of electrical installations and fault rectification.

4. The Commission conducted a hearing on 3.1.2017 at Kalamassery. During hearing the Commission directed to revise the request considering the essentiality of the proposal and the technical constraints in keeping spares.
5. The RPIL submitted the revised proposal vide letter dated 10.01.2017 in which they revised the proposal and requested approval of the following proposals.

Sl.No	Details of Equipment	Quantity (Nos)	Amount (Rs Lakh)	Revised Quantity (Nos)	Revised Amount (Rs Lakh)
1	0.2 Class 110kV CT	2	6.0	1	3.0
2	0.2 Class 110kV PT	2	6.0	1	3.0
3	110 kV Lightening Arresters	3	1.5	2	1.0
4	Distribution Transformer and Unitized Substation	1	2.0	1	8.0
5	Billing Software	1	8.0	Nil	Nil
6	Distribution Transformer	1	6.0	Nil	Nil
7	Computers/printers	Nil	Nil	3	1.5
8	Energy Meters	10	2.5	2	0.5
9	11 kV CTs and PTs	6	1.5	6	1.5
10	Standard Reference meter	1	6.7	1	6.7
11	EPBAX System	1	1.5	1	1.5
12	Power Quality Analyzer	1	5.0	1	5.0
13	Insulation Tester	1	5.0	1	5.0
14	True RMS Multimeter & Tong tester	1	0.5	1	0.5
<b>Total (Rs. in lakhs)</b>			<b>52.2</b>		<b>37.2</b>

6. On the revised proposal, the petitioner had submitted the following.
- (i) The proposal for augmentation of unitised substation (USS) and distribution transformer were combined together and revised to installation of new unitised substation.
  - (ii) The existing computers and printers of the licensee were purchased during the year 2003 and are outdated. Due to obsolesce of the components in the fast evolving electronic industry, the existing computers and systems used by the licensee would not be repairable. Hence, it is proposed to replace the old computers and a printer in a phased manner. The company propose to purchase 2 numbers of laptops and one printer in the year 2017-18.
  - (iii) The number of energy meters reduced to one LT and, one HT meter from 10 numbers by considering the proposal of advanced metering infrastructure.
  - (iv) RPIL also decided to postpone the proposal for installation of advanced metering infrastructure

### **Analysis and Decision of the Commission**

7. The Commission analysed the proposal on the basis of the Electricity Act 2003 and the provisions in the Kerala State Electricity Regulatory Commission (Terms and Conditions for Determination of Tariff) Regulations, 2014. Regulation 72 of the Kerala State Electricity Regulatory Commission

(Terms and Conditions for Determination of Tariff) Regulations, 2014 stipulates that;

***Capital investment plan. -***

- (1) The distribution business/licensee shall ensure optimum investments in capital expenditure projects to enhance efficiency and productivity and to meet performance standards specified by the Commission.*
- (2) The distribution business/licensee shall, by the Thirtieth day of September of the current financial year, submit to the Commission for its approval, a detailed capital investment plan, financing plan and physical targets for meeting the requirement of load growth, reduction in distribution losses, improvement in quality of supply, reliability, metering, consumer services, etc., for the ensuing financial year and subsequent financial years of the control period, in accordance with the 'Guidelines for In-principle Clearance of Capital Investment' specified at Annexure-IV.*
- (3) (a) The capital investment plan shall be accompanied by such information, particulars and documents as may be required to substantiate the need and to justify the proposed investments.  
(b) The investment plan shall also include capitalisation schedule and financing plan.*
- (4) The Commission may approve the capital investment plan of the distribution business/licensee, with appropriate modifications, if required or reject the same, based on the prudence check:  
  
Provided that the Commission shall afford to the distribution business/licensee, a reasonable opportunity of being heard, before rejecting the proposal for approval of the capital investment plan.*
- (5) The costs corresponding to the approved capital investment plan of the distribution business/licensee for a given financial year shall be considered for its revenue requirement.*

8. The capital expenditure proposed is mainly to keep sufficient stock to provide quality supply to consumers with minimum interruption. The licensee needs to meet the requirements under KSERC (Standards of performance of distribution licenses) Regulations, 2015. Hence licensee has to ensure the availability of spares, testing equipment, communication system, IT infrastructure etc. The Commission analysed the revised proposal submitted by RPIL in detail. The revised proposal of RPIL includes purchase of 1 number 110kV CT and 1 number 110kV PT and 2 numbers of 110kV lightning arrestors. Keeping a spare of each of CT and PT and 1 LA are reasonable considering the urgency of replacement in the event of failure of any of this equipment. The Central Electricity Authority (Installation and

Operation of Meters), Regulations, 2006 specifies that the accuracy class of CT for metering purpose should be of 0.2S class and that of PT should be 0.2. The Commission revises the number of LA required to 1 number , approves the procurement of 1 number 0.2S class 110 kV CT and 1 number 0.2 class 110 kV PT and 1 number 110 kV LA as spare.

9. The Commission is of the opinion that the availability of 1 number distribution transformer and unitised substation is required to maintain uninterrupted supply. Hence the Commission approves the procurement of one 500 kVA distribution transformer and unitised substation.
10. Annexure 1 to Kerala State Electricity Regulatory Commission (Terms and Conditions for Determination of Tariff) Regulations, 2014 specifies that IT equipment is having a depreciation of 15 % per annum. The licensee reported that Computers and Printers are purchased during 2003. Hence the Commission approves procurement of computers and printers as the existing system has completed its useful life.
11. M/s RPIL has requested for 1 number LT and 1 number HT energy meter to keep as spare. The availability of energy meters is essential to cater any contingency and hence the Commission approves the capital investment proposed to procure 1 LT and 1HT meter.
12. The licensee proposes to purchase 4 numbers of 11 kV CTs and 2 numbers of 11kV PTs to maintain as spare for replacement. The Commission approves the procurement of 3 numbers 11 kV CTs of 0.5S class and 1 number 11 kV PT of 0.5 class.
13. The Commission on going through the quotation submitted, has observed that the Standard reference meter of accuracy class 0.5 is available at an amount of Rs. 2.75 Lakh and that of accuracy class 0.2 is available at an amount of Rs 6.7 lakh. M/s RPIL is procuring the standard reference meter to have a first-hand information on the correctness of meters installed. The authority for testing of meters lies only with NABL accredited laboratories as per CEA (Installation and Operation of Meters), Regulations, 2006. Therefore, the Commission approves the purchase of standard reference meter of 0.5 accuracy class at a cost of Rs.2.75 lakh.
14. The Commission approves the investment proposal for EPBAX System amounting to Rs 1.5 lakhs, Power Quality Analyzer amounting to Rs 5 lakhs, Insulation Tester amounting to Rs 5 lakhs, True RMS Multimeter & Tong tester amounting to Rs 0.5 lakhs, in view of the fact that availability of these equipment with a distribution licensee are essential for keeping Standard of Performance stipulated by the Commission.

#### **Orders of the Commission:**

15. Considering the facts and circumstances of the case, the Commission approves the capital investment proposal of RPIL for the year 2017-18 in

accordance with Kerala State Electricity Regulatory Commission (Terms and Conditions for Determination of Tariff) Regulations, 2014 as follows;

Sl No	Particulars	Quantity	Amount (Rs in lakhs)
1	0.2 Class 110kV CT	1	3.0
2	0.2 Class 110kV PT	1	3.0
3	110 kV Lightening Arresters	1	0.5
4	Distribution Transformer and Unitized Substation	1	8.0
5	Computers/printers	3	1.5
6	Energy Meters	2	0.5
7	11 kV CTs and PTs	4	0.7
8	Standard Reference meter	1	2.75
9	EPBAX System	1	1.5
10	Power Quality Analyzer	1	5.0
11	Insulation Tester	1	5.0
12	True RMS Multimeter & Tong tester	1	0.5
<b>Total (Rs. in lakhs)</b>			<b>31.95</b>

Petition is disposed of accordingly.

Sd/-  
**K. Vikraman Nair**  
Member

Sd/-  
**S. Venugopal**  
Member

Sd/-  
**T.M.Manoharan**  
Chairman

Approved for issue

**Santhosh Kumar K.B**  
Secretary