

**KERALA STATE ELECTRICITY REGULATORY COMMISSION**  
**THIRUVANANTHAPURAM**

**Present: Shri. Preman Dinaraj, Chairman**

**Petition No. OP 10/2020**

In the matter of : Petition filed by M/s Kochi Metro Rail Limited (KMRL) for amending certain clauses in the HT&EHT service connection agreement of KMRL etc.

Petitioner : M/s Kochi Metro Rail Corporation Ltd

Petitioner represented by : Sri. Rajendran A.R, General Manager, KMRL

Respondent : Kerala State Electricity Board Limited

Respondent represented by : Shri. K.G.P Nampoothiri, EE, KSEB Ltd.  
Shri. Rajesh, AEE, KSEB Ltd.

**Order dated 15.09.2020**

1. M/s Kochi Metro Rail Corporation Ltd (hereinafter referred to as the petitioner or KMRL) on 05.03.2020 filed a petition before the Commission with following prayers.
  - (1) Clause 17 of EHT agreement and Clause 15 of HT agreement of the service connection agreements of the following three service connections of KMRL for Metro Rail operations may please be amended / be agreed in-line with the similar facility granted to Indian Railways being essential public services and considering as critical loads.
    - a. EHT Agreement No. 3/2017 – 18 dated 31.10.2017
    - b. EHT Agreement No. 3/2019 – 20 dated 24.07.2019
    - c. HT Agreement No. ECE/HT-11/17-18 dated 18.05.2017
  - (2) The method of billing for commercial loads issued by the Hon'ble KSERC through Clause C of RP No. 4/2017, Order of Hon'ble Kerala State Electricity Regulatory Commission Thiruvananthapuram dated: 12.07.2017 may also be extended for the office load consumption at JLN Metro station as below:-

The commercial loads at the Stations of KMRL are to be metered at one point at each of the Auxiliary Transformer at the stations by KSEB Ltd and the total energy consumption of such commercial loads shall be billed at the applicable energy charges at LT VII A tariff. KMRL corporate office load are to be metered at one point at the stations by KSEB Ltd and the total corporate office consumption shall be billed at LT VI A tariff. The consumption of commercial loads and office loads are to be deducted from the total consumption recorded at KMRL point of supply at Muttom for billing the traction load. A single bill for the traction load is to be issued along with charges for commercial consumption and KMRL corporate office as above.

- (3) Permit KMRL to retain the 33 kV Backup power supply from Kaloor 110kV KSEBL substation to KMRL JLN Stadium Metro Station substation without any charges including Demand Charges for drawing the power in case of exigencies, force majeure or major issues from KSEBL to feed Kochi Metro through Muttom or Thykoodam RSS with energy charges to be paid by KMRL for the usage alone in such situations.

2. Regarding the Prayer No.1, the petitioner submitted the following.

- (1) At present, KMRL has entered into three Power Supply Agreement with KSEB Ltd for availing electricity from KSEB Ltd, as detailed below.

Sl No	EHT/ HT agreement No.	Date of agreement	Contract demand	Point of drawal
1	EHT agt No. 3/2017-18	31.10.17	5.5 MVA	110 kV Muttom RSS
2	HT agt No. 3/2017-18	18.05.2017	1 MVA	33 kV Kaloor JLN
3	EHT agt No. 3/2019-20	24.07.2019	3 MVA	110 kV Thykoodam RSS

As per the EHT agreements, KMRL shall take 110 kV three phase supply from KSEB Ltd and convert 110 kV to 33 kV at Muttom RSS and Thykoodam RSS. KMRL has constructed two 110 kV substations at Muttom and Thykoodam. The total load of KMRL has been divided between these two substations with the facility for extension in case of failure of either feeder.

In normal circumstances, KMRL Muttom RSS will feed from Aluva to Changampuzha Metro Station. Thykoodam substation will feed from Changampuzha to Petta Station and further till Thripunithura Metro Station which is under construction.

A redundant power supply facility at 33 kV is being taken from Kaloor 110 kV s/s, which directly feeds the auxiliary and traction system from JLN metro station upto 1 MVA power in case of emergency failure of

power supply from the main substations. This has become redundant with the commissioning of Thykoodam 110 kV RSS.

- (2) The Petitioner further submitted that for periodical maintenance of their lines, KSEB Ltd avails shutdown of the HT/EHT feeders. During such shutdown period or during the time of 110 kV supply failure from 220kV substation Kalamassery or 110 kV New Vyttila substation, KMRL is extending power supply from the nearest healthy receiving substation to the unhealthy side to keep the system operational. During such periods, while availing supply from other 'receiving substations', the recorded maximum demand (RMD) may increase and exceed the monthly average recorded maximum demand. In such situations, KSEB Ltd has considered such excess RMD for billing purposes and forced KMRL to pay excess demand charges of 50% over and above the normal tariff, though it is directly related to issues arising from KSEB Ltd. side.

Thus, the above situation results in excess demand beyond the contractual demand and KMRL is forced to pay excess demand charges for no fault of theirs. Similar power failures or shutdown has been occurring periodically. Hence a suitable clause may be included in the EHT agreement so that this eventuality is addressed within the overview of the Agreement.

- (3) A request for amending the clause-17 of the EHT agreements No. 3/2017-18 and No. 3/2019-20 and clause-15 of the HT agreement No. ECE/HT-11/17-18 has been submitted to KSEB Ltd. Similar facility is already extended to Indian Railways, treating them as a public utility. A meeting was also conducted with Chief Engineer (Distribution-Central), KSEB Ltd, and during the meeting the field offices of KSEB Ltd has given no objection in extending power supply technically from the part of the KSEB Ltd. In the meeting, Chief Engineer KSEB Ltd, informed that the amendment to EHT agreement of Indian Railways was incorporated for Indian Railways on the basis of a petition filed by Railways with KSERC and as per the subsequent Board Orders, and directed KMRL to file a petition before the KSERC along with other matters.

3. Regarding the Prayer No.2, the petitioner submitted that,

- (1) The Commission vide the Order dated 12.07.2017 in petition RP No. 4/2017 ordered as follows.

*"Orders of the Commission*

*22.Having considered the review petition filed by KMRL and the reply furnished by KSEB Ltd the Commission has decided as follows:*

- a. *Having considered the details furnished by KMRL, the traction supply is allowed to be extended to feed the auxiliary loads such as stations, train control, signalling, telecommunication, passenger information display, public address system, ticketing, air-conditioning for technical equipment*

*rooms, passenger amenities and Safety services etc. at the stations. Accordingly there is no separate tariff for the metro stations of KMRL. The said traction tariff is also applicable to backup supply provided by KSEB Ltd.*

- b. The Offices of the KMRL shall be charged under LT VI (B) /HT II (A) tariff.*
  - c. The commercial loads at the Stations of KMRL are to be metered at one point at each station by KSEB Ltd and the total energy consumption of such commercial loads shall be billed at the applicable energy charges of LT VII A tariff. The consumption of commercial loads is to be deducted from the total consumption recorded at KMRL point of supply at Muttom for billing the traction load. A single bill for the traction load is to be issued along with charges for commercial consumption as above.*
  - d. KMRL shall charge the commercial loads in the stations separately at the applicable LT VII A tariff for both fixed and energy charges*
  - e. The schedule of Tariff and Terms and Conditions for Retail Supply of Electricity by KSEBL and other licensees with effect from 18-4-2017 to 31-3-2018, is amended as stated in para 21.”*
- (2) Presently at KMRL metro stations, the number of commercial establishments have increased. KMRL is supplying electricity to the commercial establishments as per the Order dated 12.07.2017 as above. As the auxiliary transformers installed at metro stations have limited capacity in certain stations, additional auxiliary transformers were installed so as to meet the increase in load requirements at metro stations. KSEB Ltd informed that, as per the order of the KSERC dated 12.07.2017, commercial energy metering is to be done at one point at each station by KSEB Ltd. They therefore directed KMRL to approach KSERC for amendment to facilitate multiple commercial metering points at each metro stations.
- (3) The corporate office of the KMRL has started functioning at JLN Metro station, Kaloor. KMRL is availing power supply for its corporate office from KMRL substation. A power transformer is presently available at JLN station for supply of power to the commercial loads, through which KMRL office needs can also be catered. To provide power supply to the corporate office, a feeder has been allocated, which is segregated from the commercial loads with the provision for sealing of panels in the commercial load panel.

As per the Order of the Commission dated 12.07.2017, the corporate office of the KMRL is to be charged under LT-VI(B) / HT II(A) tariff. As such, KMRL requested that the method of billing issued by KSERC may be extended for the office load consumption. The consumption of the commercial loads and office loads may be deducted from the total consumption recorded at each KMRL substations. The office loads shall also billed separately at LT VI(B)/ HT II(A) tariff.

4. Regarding Prayer No.3, the petitioner submitted as follows.

- (1) Out of the three substations as detailed under paragraph 2(1) above, the 33 kV s/s at Kaloor, JLN stadium with a contract demand of 1 MVA is not being utilized since the commissioning of 110kV Thykoodam s/s. KMRL desires to retain the 33kV s/s as standby, if no demand charge is billed on them for maintaining the contract demand. As per the discussion with KSEB Ltd, the licensee informed that, KMRL has to pay minimum charges for the contract demand for maintaining the station as standby. According to KMRL, this is an additional expenditure to KMRL for its standby arrangement.
  - (2) Hence KMRL requested to permit them to retain the 33kV backup supply from Kaloor 110 kV s/s of KSEB Ltd to KMRL JLN stadium without any charges including Demand Charge. The supply from the substation will be used in case of exigencies, force majeure or major issues from KSEB Ltd to feed Kochi Metro through Muttom or Thykoodam and energy charges will be paid by KMRL for the usage.
5. The Commission admitted the petition as petition No 10/2020 and forwarded a copy of the petition to KSEB Ltd for their comments.
6. KSEB Ltd, vide the affidavit dated 06.06.2020 submitted the written comments. The summary of the counter affidavit submitted by KSEB Ltd is given below.
  - (1) Regarding the Prayer No.1, KSEB Ltd agreed to avoid charging penalty or excess demand charges due to KSEB Ltd's power failure. In all other cases, the excess demand charges has to be charged on the consumer as per the rates approved by the Commission. Hence KSEB Ltd requested before the Commission to give approval for modifying the clause 17 of the EHT agreement and clause 15 of the HT agreement accordingly.
  - (2) Regarding the prayer No.2, KSEB Ltd agreed to adopt the billing suggested by the petitioner KMRL, except that the consumption of the corporate office of KMRL may be billed under LT VI(B) tariff instead of the LT-VI(A) tariff proposed by the petitioner.
  - (3) Regarding the Prayer No.3, KSEB Ltd submitted that, even when the 33kV substation is maintained as a standby, the billing demand shall be the recorded at the maximum demand for the month in kVA or 75% of the contract demand as per the Agreement, whichever is higher. KSEB Ltd requested that, they may be allowed to collect the applicable charges for maintaining the 33 kV supply at JLN stadium as standby.
7. The Commission conducted the first hearing on the petition on 08.06.2020 at 12.00 noon through video conferencing. Sri. Rajendran A R, General Manager presented the petition on behalf of the petitioner KMRL. Sri.K.G.P Nampoothiri, Executive Engineer presented the counter arguments of the respondent KSEB Ltd.

8. During the deliberations, the Commission observed that, the petitioner KMRL and the respondent KSEB Ltd have already reached consensus on the prayers 1 and 2 of the petitioner. However, regarding the Prayer-3 on providing backup supply at 33 kV from the 110 kV Kaloor substation to KMRL JLN stadium metro station, KSEB Ltd has insisted on collecting the applicable charges for maintaining the backup supply. However KSEB Ltd does not have any objection to KMRL reducing its contract demand to the minimum level for maintaining the HT supply. By this, the charges for maintaining the backup supply can be reduced. KMRL requested to permit them to retain the existing CT in such case. However KSEB Ltd reported that as per the earlier orders of the Commission, the CTs also has to be replaced while reducing the contract demand.
9. Based on the deliberations, the Commission, vide Daily Order dated 17.6.2020 directed KSEB Ltd and KMRL to discuss and arrive a consensus on reducing the contract demand and payment thereof to maintain the 33kV HT supply as per the prevailing Rules and Regulations, and report the same before 29.06.2020.
10. KMRL vide letter dated 30.6.2020 made additional submission before the Commission. KMRL submitted that since no consensus could be arrived in the meeting held by Chief Engineer (Distribution Central), KMRL took up the matter with Director (Distribution), KSEB Ltd. KMRL submitted the copies of the communication with KSEB Ltd. The additional submission was forwarded to KSEB Ltd by the Commission vide letter dated 2.7.2020 for comments. Thereafter, KMRL, vide letter dated 8.7.2020 filed supplementary submissions which was also forwarded to KSEB Ltd. KSEB Ltd. submitted its comments vide letter dated 24.7.2020.
11. Summary of the submissions made by KMRL and KSEB Ltd are given below:

**(1) Prayer 1: Modification of HT/EHT agreements**

KMRL proposed to modify the clause 17 of the EHT agreement and clause 15 of the HT agreement as below.

*“ Increase in maximum demand, during shut down availed by KSEBL or during failure of incoming supply to KMRL, for reasons attributable to the licensee are to be waived off from billing, even if the actual demand exceeds the Recorded Maximum Demand prior to failure / after normalization of the shutdown/failure, in case of KMRL extending power supply from adjacent Receiving substation to the other section, which was originally fed from the previously healthy Receiving substation where shut down/failure of line has been effected by KSEBL. The recorded maximum demand prior to the failure / after normalization of the failure shall be taken for billing.”*

KSEB Ltd suggested to modify the agreement in line with the similar agreement for Railways as follows:

*Clause 15(b) :- “When the 110 kV power supply of KSEB Ltd. to the traction substation fails due to force majeure conditions or the Board takes shut down on the 110 kV line, KMRL shall be permitted to avail 33kV supply from the adjacent traction substation, subject to technical feasibility. KMRL shall on*

commencement of each year, ascertain from KSEB Ltd., such technical feasibility. When power is drawn from such alternate source, during shutdown periods specified above, if the recorded demand at the traction substation from where alternate supply is availed during the period of such outage, falls within the sum of contract demands specified for both the traction substations, then the billing demand applicable for the traction substation from where alternate supply was arranged for such period of outage of 110 kV line shall be as per the billing procedure given hereunder in Schedule –A.

However, in case the recorded maximum demand is in excess over the sum of contract demands of both the traction substations, the consumer is liable to pay penal charges as specified in Clause 15(a), through the bill raised for the consumer location where such maximum demand is recorded. The billing procedure during the months in which 110 kV supply of KSEB Ltd. to the traction substation fails due to force majeure condition or KSEB Ltd. takes shutdown on the 110 kV line, shall be as per Schedule – A.

Provided further that drawl of power in excess of contract demand in any other circumstances will attract penal charges specified in Clause 15(a).”

**(2) Prayer 2.: Billing of corporate office loads and commercial loads at each Auxiliary Transformer**

KMRL suggested as follows:

*“The commercial loads at the Stations of KMRL are to be metered **at one point at each Auxiliary Transformer** by KSEB Ltd and the total energy consumption of such commercial loads shall be billed at the applicable energy charges of LT VII A tariff. **KMRL corporate office load are to be metered separately at stations by KSEB Ltd and the total corporate office consumption shall be billed at LT VI (B)/HT II(A)**. The consumption of **commercial loads and office loads** is to be deducted from the total consumption recorded at KMRL point of supply at Muttom for billing the traction load. A single bill for the traction load is to be issued along with charges for commercial consumption and KMRL corporate office consumption as above.”*

KSEB Ltd agrees with the proposal of KMRL.

**(3) Prayer 3: Demand Charges payable for Standby supply to KMRL at 33kV Kaloor substation**

KMRL submitted that no consensus was arrived between KSEB Ltd. and KMRL and submitted the copies of the communication between KSEB Ltd. and KMRL and requested for a favorable decision by the Commission.

KSEB Ltd submitted that, in compliance to the direction contained in the Daily Order, KSEB Ltd. authorized the Chief Engineer (Distribution Central) to conduct discussion with M/s KMRL and to reach consensus. The meeting was convened with the KMRL authorities on 24.06.2020. However, a consensus with the KMRL could not be arrived on the matter. As per the Order issued by the Hon’ble Commission dated

10.11.2016 in OP No. 09/2016, replacement of current transformers (CT) of consumers requesting for enhancement / reduction in contract demand shall be decided considering the provisions in Central Electricity Authority (Installation and Operation of Meters) Regulations, 2006 and the IS 15707:2006 and IS2705. As per the above standards, the primary rating of the current transformer shall match with the load current requirement as per the contract demand. The secondary current and voltage rating of the instrument transformers shall match with that of the meter.

KMRL has stated in the meeting that their requirement on the 33kV connection during emergency comes to 2 MVA. Further, the entire load of KMRL will be availed at 110kV supply at Muttom and Thykoodam and the 33kV supply at Kaloor is kept only as a standby supply with the provisions of loading in case of power failure of both the 110kV substations. During such periods, the same will be used with increased demand. KSEB Ltd suggested for providing supply with contract demand of 400kVA with 40/5A CT of 0.2S class as a special case. KSEB Ltd submitted that the suggestion was made considering the fact that technically the error limits of the CT will be generally within the accuracy limits of 0.2%, on the usage of Max emergency requirement (2MVA) and a contract demand of (400kVA) suggested.

12. The Commission conducted the second hearing on 28.7.2020 at 11 AM through video conference. Sri. Rajendran A.R, General Manager, presented the petition on behalf of the petitioner M/s KMRL, and Sri. K. G.P Namboothiri presented the counter arguments on behalf of KSEB Ltd. Deliberations during the hearing was on the prayer-3 of the petitioner. Summary of the deliberations during the hearing are given below.
- (i) The proposal of KMRL is to reduce contract demand to 100 kVA with existing CT of 100/5 and that of KSEB is to fix contract demand as 400 kVA with change of CT to 40/5.
  - (ii) Both KSEB Ltd. and KMRL are public utility providers and KMRL is in its early stages of operation. KMRL submitted that the reduced expenses of KMRL will therefore not only be helpful to KMRL, but to the travelling public of Kochi.
  - (iii) Standby arrangement at 33 kV substation Kaloor will be used only in the event of failure of both 110 kV supply at Muttom and Thykoodam, and in that case the load requirement will be more than 2 MVA, and may go up to 5 MVA. If 40/5 CT is installed, load of 2 MVA only can be availed defeating the very purpose of the standby arrangement.
  - (iv) KSEB Ltd proposed the contract demand of 400kVA based on the Regulations and earlier Orders of the Commission. KSEB Ltd clarified that, decision of replacing the CT with ratio of 100/5 with 40/5 was taken on the assumption that KMRL will be availing 2 MVA load.



- (v) The Order dated 10.11.2016 was issued by the Commission in OP No 09/2016 “in the matter of removal difficulties encountered by HT & EHT consumers in implementing provisions of Supply Code, 2014 Regulations 99 & 100 by licensee Kerala State Electricity Board Ltd.” The present situation is different since KMRL proposes the 33kV supply as a back up and the actual demand at the time of emergency is expected to match with the CT installed at present.
- (vi) KMRL further submitted that, the CT presently installed is having an accuracy class of 0.2S. As per Central Electricity Authority (Installation and Operation of Meters) Regulations, 2006, the accuracy class must be of 0.5S or better for 33kV consumer meters. Since the CT installed is of 0.2S class, the error will be well within the limit specified by CEA. Thus even at 5% loading, the specified meter accuracy is fulfilled, even though no such low load is expected.
- (vii) A demand between 2 to 5 MVA is expected only during emergency. Further, when the number of trains increases, there may also be a case for increased demand. Further, the contract demand is availed throughout the day. The present requirement is only to ensure a standby supply. Hence a decision is to be taken on the minimum demand to be fixed.
- (viii) KMRL may, if required by KSEB Ltd., give an undertaking that under normal circumstances, KMRL will not be availing 33kV supply at Kaloor and the facility will be kept as stand by supply. KSEB Ltd. may propose a minimum demand considering these views favourably.

In case of amendment of the HT and EHT agreements (*prayer 1*), KMRL submitted that the billing procedure proposed in Schedule A to the Annexure B proposed by KSEB Ltd. is agreeable to KMRL. But it is observed that KMRL substation is referred to as traction substation instead of Receiving Sub Station (RSS) and therefore suitable modification is to be made in the proposed amendment. Further, the reference to 110kV supply is also to be included along with 33 kV.

13. After deliberations, the Commission, vide daily order dated 30.7.2020 directed as follows;
- (i) KMRL shall give a detailed letter to KSEB Ltd within 3 days of date of the Order clearly indicating the various issues involved.
  - (ii) KSEB Ltd shall make appropriate recommendations to the Commission duly considering the request of KMRL

KSEB Ltd shall submit the response on or before 11.8.2020.

14. In compliance of the above, KMRL vide letter dated 3.8.2020 took up the third prayer of the petitioner with KSEB Ltd, and its summary is given below:

- (1) KMRL will avail power from 33 kV substation, Kaloor only in emergency situation when all other Receiving Substations are under shutdown. Since the present actual demand is about 5 MVA, when it uses power from the 33 kV service connection, the demand will vary upto 5MVA. Hence, the existing CT is essential so as to cater to the load of this range.
- (2) KMRL has installed CT and meter of 0.2S class instead of 0.5 class required as per CEA (Installation and Operation of Meters) Regulations, 2006. Hence even 5% load range, the accuracy of the meter is within the permissible limit.
- (3) KMRL is likely to avail power from the 33kV service connection only during emergency situations and hence the loading will be higher than the percentage limits as per Regulations for CT/meters combinations for ensuring accuracy. Hence, KSEB Ltd is not likely to be face any financial loss due to retaining the CT 100/5MVA.
- (4) When availing power from the standby source at 33 kV in emergency conditions, the demand will certainly be above 1 MVA and hence the question of accuracy and financial loss to KSEB Ltd will not arise.

KMRL requested KSEB Ltd to permit availing power from 33 kV substation, Kaloor, with the existing CT of ratio 100/5 A without demand charges. Alternatively, KMRL may be permitted to avail power at 100 kVA contract demand with existing CT arrangement.

15. KSEB Ltd vide the letter dated 11.09.2020 communicated that, they are agreeable for providing backup supply to KMRL as detailed below, subject to the approval of the Commission.
  - (a) The 33kV backup supply to KMRL at Kaloor can be provided at 100kVA contract demand with the existing 0.2S class 100/5A CT as a special case , with the following conditions.
    - (i) The Power drawn when the 110kV supply to KMRL at Muttom and Thykoodam fails simultaneously due to reasons attributable to KSEBL, will not result in penal charges for over drawal, as in the case of Railways.
    - (ii) Normal billing with 100kVA contract demand will be done on the connection.
    - (iii) In case of drawal of power falls below 300 kVA and exceeds meter accuracy level required for 0.5S class CT, such drawal during healthy condition of any of the 110 kV supply connections may be discouraged through a surcharge charged on the consumer, which will be 5% of the charges for the consumption recorded.

- (b) The corrections specified by KMRL in the agreement clause to the extent of mentioning Receiving Substations (RSS) instead of traction substation and also for mentioning 110/33 kV instead of 33 kV can be incorporated in the agreement.

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

16. The Commission examined in detail the prayers of the KMRL in the petition dated 05.03.2020, as per the provisions of the Electricity Act-2003 and the Regulations in force, and orders the following.

**I. Prayer-1 of the petitioner,**

- 17. Prayer-1 of the petitioner is extracted below for ready reference.**

*“Clause 17 of EHT agreement and Clause 15 of HT agreement of the service connection agreements of the following three service connections of KMRL for Metro Rail operations may please be amended / be agreed in-line with the similar facility granted to Indian Railways being essential public services and considering as critical loads.*

- (a) EHT Agreement No. 3/2017 – 18 dated 31.10.2017.  
(b) EHT Agreement No. 3/2019 – 20 dated 24.07.2019  
(c) HT Agreement No. ECE/HT-11/17-18 dated 18.05.2017”.

18. The Commission examined the prayer of the petitioner in detail and the additional submission made by petitioner during the hearing and the comments of the respondent KSEB Ltd, and noted the following.

- (1) At present KMRL has entered into the following Power Supply Agreement with KSEB Ltd.
- (i) HT Agreement dated 18.05.2017 for availing 1MVA power at 33 kV substation at Kaloor.
  - (ii) EHT Agreement dated 31.10.2017 for availing 5.5 MVA power at 110 kV s/s at Muttom.
  - (iii) EHT Agreement dated 24.07.2019 for 3 MVA power at 110 kV s/s at Thykoodam.

Under normal circumstances, KMRL draws power through the 110 kV substations at Muttom and Thykoodam to meet the entire load of KMRL. The 33 kV substation at Kaloor is kept as a redundant facility, and to be used only during emergency situations, when power supply from both Muttom and Thykoodam fails.

KMRL further submitted that, power drawn through the Muttom 110 kV substation feed the load requirement from Aluva to Changampuzha Metro station, and Thykoodam 110 kV substation feed from Changampuzha to Petta Metro station and further till Thripunithura station.

As and when KSEB Ltd avails shutdowns, or during failure of power supply to its 110 kV substations, KMRL is extending power supply from the healthy 110kV substation to the unhealthy side. More precisely, when shut down occurs at 220 kV substation of Kalamassery or power failure at 110kV s/s Muttom, KMRL extends power supply from Thykoodam upto Aluva Metro station. Similarly, when shutdown occurs at the 110kV s/s of Vyttila or power failure occurs at 110 kV s/s at Thykoodam, power is being supplied from the 110 kV s/s at Muttom. Under these circumstances, i.e., when power is supplied from one side to the other end, the Recorded Maximum Demand (RMD) of the power receiving s/s will exceed the contract demand of that station. KSEB Ltd has been billing this demand as excess demand charges @50% of the normal tariff for the excess demand in addition to the normal tariff, as per the clause-17 of the EHT supply agreement.

The existing clause 17 of the EHT agreement dated 31<sup>st</sup> October 2017 and 5<sup>th</sup> August 2019 is extracted below .

*“17. The consumer also agrees that when the actual maximum demand of any month exceeds the contract demand as specified in the agreement, and the Licensee and the consumer have not signed any new agreement as envisaged in clause 16(a) above, the service shall be liable to be disconnected without notice. Also the consumer is liable to pay the excess demand charges at the rate as shown in the tariff notification in force from time to time’.*

However, KSEB Ltd, in compliance of the Order of the Commission dated 11.11.2015 in OP No. 22 of 2015 has granted exemption to Southern Railways from payment of excess demand charges for the excess power drawl at traction substation when power failure occurs at nearby traction substation.

- (2) KSEB Ltd vide the affidavit dated 06.06.2020 submitted that, KMRL being a SPV whose beneficiaries are found to be common people, uninterrupted power supply is essential for the smooth functioning of the KMRL. Hence the request of KMRL to avoid charging penalty on excess demand is genuine. However the technical feasibility of the KSEBL substation to cater the excess load has to be ascertained before approving the same.

KSEB Ltd further submitted that, modifying the agreement clause as per the request of the petitioner without the approval of the Commission will be in violation of the item No.3 of the General conditions of HT&EHT tariff specified in the prevailing tariff order dated 08.07.2020. Hence Commission may give approval for modifying the clause 17 of the EHT agreement and clause 15 of the HT agreement as it was done in the case of M/s Southern Railways.

- (3) KMRL vide the letter dated 25.06.2020 propose to modify the Clause-17 of the EHT agreement and Clause 15 of the HT agreement as follows.

*“ Increase in maximum demand, during shut down availed by KSEBL or during failure of incoming supply to KMRL, for reasons attributable to the licensee are to be waived off from billing, even if the actual demand exceeds the Recorded Maximum Demand prior to failure / after normalization of the shutdown/failure, in case of KMRL extending power supply from adjacent Receiving substation to the other section, which was originally fed from the previously healthy Receiving substation where shut down/failure of line has been effected by KSEBL. The recorded maximum demand prior to the failure / after normalization of the failure shall be taken for billing.”*

KSEB Ltd, vide the letter dated 24.07.2020 suggested to modify the EHT agreement in line with the similar agreement for Railways as follows:

*Clause 15(b) :- “When the 110 kV power supply of KSEB Ltd. to the traction substation fails due to force majeure conditions or the Board takes shut down on the 110 kV line, the KMRL shall be permitted to avail 33kV supply from the adjacent traction substation, subject to technical feasibility. KMRL shall on commencement of each year, ascertain from KSEB Ltd., such technical feasibility. When power is drawn from such alternate source, during shutdown periods specified above, if the recorded demand at the traction substation from where alternate supply is availed during the period of such outage, falls within the sum of contract demands specified for both the traction substations, then the billing demand applicable for the traction substation from where alternate supply was arranged for such period of outage of 110 kV line shall be as per the billing procedure given hereunder in schedule –A.*

*However, in case the recorded maximum demand is in excess over the sum of contract demands of both the traction substations, the consumer is liable to pay penal charges as specified in Clause 15(a), through the bill raised for the consumer location where such maximum demand is recorded. The billing procedure during the months in which 110 kV supply of KSEB Ltd. to the traction substation fails due to force majeure condition or KSEB Ltd. takes shutdown on the 110 kV line, shall be as per Schedule – A.*

*Provided further that drawl of power in excess of contract demand in any other circumstances will attract penal charges specified in Clause 15(a).”*

KMRL during the second hearing held on 28.07.2020 submitted that, the billing procedure proposed by KSEB Ltd is agreeable to KMRL. But it is observed that KMRL substation is referred to as traction substation instead of Receiving Sub Station (RSS) and therefore suitable modification is to be made in the proposed amendment. Further, the reference to 110kV supply is also to be included along with 33 kV.

19. As discussed above, KSEB Ltd agrees to exempt KMRL from payment of excess demand charges while availing power from the nearest Receiving Sub Station during the failure of power supply due to the force majeure conditions or the Board takes shut down on the 110 kV lines. M/s KMRL also agrees with the billing procedure suggested by KSEB Ltd similar to the billing procedure adopted for Southern Railways while availing power from nearby traction

substation due to the failure of power supply to the traction substation. Since both the parties, the petitioner KMRL and the respondent KSEB Ltd agrees to modify the clause 17 of the EHT agreement and clause-15 of the HT agreement. Duly considering the proposal of KMRL and KSEB Ltd, the Commission approve to modify the clause-17 of the EHT agreement by inserting a new Clause-17(b) as below.

***“Clause 17(b) :- “When the power supply of KSEB Ltd to the Receiving Sub Stations (RSS) of KMRL fails due to force majeure conditions or the Board takes shut downs, KMRL shall be permitted to avail supply from the adjacent Receiving Sub Station (RSS). When power is drawn from such alternate source, during shutdown periods specified above, if the recorded demand at the Receiving Sub Stations of KMRL from where alternate supply is availed during the period of such outage, falls within the sum of contract demands specified for both the Receiving Sub Stations, then the billing demand applicable for the Receiving Sub Station from where alternate supply was arranged for such period of outage shall be as per the billing procedure given hereunder in schedule –A.***

***However, in case the recorded maximum demand is in excess over the sum of contract demands of both the Receiving Sub Stations, the consumer is liable to pay penal charges as specified in Clause 17(a), for the excess demand over the sum of the contract demand of both the Receiving Sub Stations. The billing procedure during the months in which supply of KSEB Ltd to the Receiving Sub Stations of KMRL fails due to force majeure condition or KSEB Ltd takes shutdown, shall be as per Schedule – A.***

***Provided further that drawl of power in excess of contract demand in any other circumstances will attract penal charges specified in Clause 17(a).”***

KMRL and KSEB Ltd, may also modify the Clause-15 of the HT Agreement by inserting Clause 15(b) in line with the modification approved for Clause 17(b) above.

## **II. Prayer-2 of the petitioner.**

20. Prayer-2 of the petitioner is extracted below.

*“The method of billing for commercial loads issued by the Hon’ble KSERC through Clause C of RP No. 4/2017, Order of Hon’ble Kerala State Electricity Regulatory Commission Thiruvananthapuram dated: 12.07.2017 may also be extended for the office load consumption at JLN Metro station as below:-*

*The commercial loads at the Stations of KMRL are to be metered at one point at each Auxiliary Transformers at stations by KSEB Ltd and the total energy consumption of such commercial loads shall be billed at the applicable energy charges of LT VII A tariff. KMRL corporate office load are to be metered at one point at the stations by KSEB Ltd and the total corporate office consumption shall be billed at LT VI A tariff. The consumption of commercial loads and the corporate office load are to be deducted from the total consumption recorded at KMRL point of supply at Muttom for billing the traction load. A single bill for the traction load is to be issued*

*along with charges for commercial consumption and KMRL corporate office as above”.*

21. The Commission examined in detail the second prayer of the petitioner and the comments of KSEB Ltd and noted the following.

(1) Commission vide the order dated 12.07.2017 in petition RP No. 4/2017 ordered as follows.

*“Orders of the Commission*

*22.Having considered the review petition filed by KMRL and the reply furnished by KSEB Ltd the Commission has decided as follows:*

- a. Having considered the details furnished by KMRL, the traction supply is allowed to be extended to feed the auxiliary loads such as stations, train control, signalling, telecommunication, passenger information display, public address system, ticketing, air-conditioning for technical equipment rooms, passenger amenities and Safety services etc. at the stations. Accordingly there is no separate tariff for the metro stations of KMRL. The said traction tariff is also applicable to backup supply provided by KSEB Ltd.*
- b. The Offices of the KMRL shall be charged under LT VI (B) /HT II (A) tariff.*
- c. The commercial loads at the Stations of KMRL are to be metered at one point at each station by KSEB Ltd and the total energy consumption of such commercial loads shall be billed at the applicable energy charges of LT VII A tariff. The consumption of commercial loads is to be deducted from the total consumption recorded at KMRL point of supply at Muttom for billing the traction load. A single bill for the traction load is to be issued along with charges for commercial consumption as above.*
- d. KMRL shall charge the commercial loads in the stations separately at the applicable LT VII A tariff for both fixed and energy charges.*
- e. The schedule of Tariff and Terms and Conditions for Retail Supply of Electricity by KSEBL and other licensees with effect from 18-4-2017 to 31-3-2018, is amended as stated in para 21.”*

(2) KMRL submitted that, electricity is being supplied to commercial establishments at metro stations as per the order of the Commission dated 12.07.2017. However, since the number of commercial establishments at the metro stations have increased, the auxiliary transformer initially installed with limited capacity could not meet the load requirement at certain metro stations. Hence, additional auxiliary transformers were installed at such stations. Field offices of KSEB Ltd informed that, as per the Order of the Commission dated 12.07.2017, commercial energy metering is to be done at one point at each of the stations, therefore a clarifications is required from the Commission to facilitate multiple commercial metering point at each metro stations.

KMRL further submitted that, the corporate office of KMRL has started functioning at JLN Metro station, Kaloor and was availing power supply for its corporate office from KMRL substation. A power transformer is presently available at JLN station for supply of power to commercial loads, through which KMRL office needs can also be catered. To provide power supply to the corporate office, a feeder has been allocated, which is segregated from the commercial loads with the provision for sealing of the panel in the commercial load panel. KMRL suggested that, the method of billing issued by KSERC may be extended for the corporate office load consumption also.

- (3) KSEB Ltd, vide its affidavit dated 06.06.2020 submitted that, the billing suggested by the petitioner KMRL can be adopted for metro stations to facilitate multiple commercial metering points, and also for the corporate office, except that the consumption of the corporate office of KMRL may be billed under LT VI(B) tariff instead of the LT-VI(A) tariff proposed by the petitioner.

Petitioner during the hearing submitted that, the proposal to charge the corporate office at LT-VI(A) was a typing mistake and as per the prevailing tariff order dated 08.07.2019, LT-VI(B) is applicable to the corporate office of the KMRL.

- (4) KMRL, vide the affidavit dated 08.07.2020, proposed to modify the clause-c of the paragraph 22 of the Order of the Commission dated 12.07.2017 in petition RP No. 04/2017 as follows.

*“The commercial loads at the Stations of KMRL are to be metered **at one point at each Auxiliary Transformers** by KSEB Ltd and the total energy consumption of such commercial loads shall be billed at the applicable energy charges of LT VII A tariff. **KMRL corporate office load is to be metered separately at the JLN Metro stations by KSEB Ltd and the total corporate office consumption shall be billed at LT VI (B)/HT II(A).** The consumption of **commercial loads and the corporate office loads are** is to be deducted from the total consumption recorded at KMRL point of supply at Muttom for billing the traction load. A single bill for the traction load is to be issued along with charges for commercial consumption and KMRL corporate office consumption as above.”*

KSEB Ltd during the second hearing submitted that, they agree with the proposal of KMRL.

22. The Commission has examined the proposal of KMRL to modify the sub-paragraph (c) in the paragraph 22 of the Order of the Commission dated 12.07.2017 in petition RP No. 04/2017, and ordered to modify the same as follows.

*“ **The commercial loads at each of the Metro Stations of KMRL are to be metered at one point at each of the Auxiliary Transformers installed at each metro station by KSEB Ltd. The total energy consumption of such commercial loads shall be billed at the applicable energy charges***



***of LT VII A tariff or at such category of tariff as notified by the Commission. KMRL corporate office load is to be metered separately at JLN Metro Station at Kaloor through separate feeder/ auxiliary transformer by KSEB Ltd at the applicable energy charges of LT VI (B)/HT II(A) tariff or at such category of tariff as notified by the Commission. The consumption of commercial loads and corporate office load is to be deducted from the total consumption recorded at KMRL point of supply at Muttom for billing the traction load. A single bill for the traction load is to be issued along with charges for commercial consumption and KMRL corporate office consumption as above.”***

III. **Prayer-3 of the petitioner.**

23. **Prayer-3 of the petitioner is extracted below for ready reference.**

*“Permit KMRL to retain the 33 kV Backup power supply from Kaloor 110kV KSEBL substation to KMRL JLN Stadium metro station substation without any charges including Demand Charges for using the power in case of exigencies, force majeure or major issues from KSEBL to feed Kochi Metro through Muttom or Thykoodam RSS with energy charges to be paid by KMRL for the usage alone in such situations.”*

24. Commission examined the third prayer of the petitioner and comments of the KSEB Ltd and noted the following.

(1) KMRL in the petition dated 05.03.2020 submitted that, after the commissioning of the 110 kV substation at Thykoodam, the petitioner is not drawing power through the 33 kV substation at Kaloor with contract demand of 1 MVA. KMRL desire to retain the 33kV supply at Kaloor as a standby to utilize during the failure of power supply from both the 110 kV s/s at Muttom and 110 kV s/s at Thykoodam, if no additional financial implications in terms of demand charge is billed. Hence KMRL requested to exempt them from payment of demand charges for maintaining the 1 MVA load at 33 kV s/s at Kaloor.

KMRL further submitted that, the substation shall be used only in the case of exigencies, force majeure or major issues arising from KSEB Ltd inability to feed KMRL through its 110 kV s/s Muttom or Thykoodam.

(2) KSEB Ltd vide the affidavit dated 06.06.2020 submitted that, in order to maintain the 33 kV station as standby, K S E B Ltd. is required to have capacity reservation at substation to cater to such emergency loads. Further maintenance of the feeders upto the metering point is the responsibility of the licensee. Hence KSEB Ltd will be incurring expense for maintaining the 33 kV supply at the JLN stadium, Kaloor. Hence as per the prevailing tariff orders, KSEB Ltd is authorized to levy demand charge for minimum billing demand of 75% of the contract demand even during the period of disconnection. Hence, KSEB Ltd

requested to allow them to collect applicable demand charges for maintaining the 33 kV supply at JLN stadium, Kaloor as standby.

However, KSEB Ltd submitted that, they do not have any objection to KMRL to reduce the contract demand for maintaining the HT supply, so that demand charges for maintaining the 33kV supply at Kaloor as standby can be got reduced.

(3) In compliance to the direction of the Commission issued vide the Daily Order dated 17.06.2020 to arrive at a consensus on reducing the contract demand so as to maintain the 33 kV supply as standby, KSEB Ltd vide the letter dated 24.07.2020 submitted that,

(i) KSEB Ltd suggested to provide 33kV supply to KMRL at 400 kVA contract demand on replacing the existing CT with maximum power requirement of 2 MVA considering it as special case.

(ii) KSEB Ltd further submitted that, the order of the Commission dated 10.11.2016 in OP No. 09/2016 directs as follows.

*'replacement of current transformers of consumers requesting for enhancement/ reduction in contract demand shall be decided considering the provisions in the CEA (Installation and Operation of Meters) Regulations 2006 and IS 15707:2006 and IS 2705. As per the above, the primary rating of the current transformer (CT) shall match with the load current requirement as per contract demand. The secondary current and voltage rating of the instrument transformers shall match with that of the meter'.* Accordingly the Commission rejected the request of HT&EHT Association to retain the existing CT on reduction/ enhancement of contract demand in the said Order,

(iii) KSEB Ltd suggestion was to provide 33 kV supply at 400 kVA with 40/5A CT of 0.2S class as a special case, considering the fact that technically the error limit of the CT will be generally within the accuracy limits of 0.2%, on the usage of maximum emergency requirement of 2 MVA.

(4) In response of KSEB Ltd proposal, KMRL submitted the following.

(i) In case, KSEB Ltd is not willing to exempt KMRL from payment of demand charge for maintaining the existing 1 MVA capacity at 33 kV substation as standby, they requested to reduce the contract demand may be reduced to 100 KVA with the existing CT of 100/5.

(ii) KMRL further submitted that, the 33 kV supply at Kaloor is proposed to be used in the event of failure of both 110 kV supply at Muttom and Thykoodam, and in that case the load requirement of KMRL will be more than 2 MVA. If 40/5 CT is

installed, load of 2 MVA only can be availed, defeating the very purpose of the stand by supply.

- (iii) KMRL has deposited Rs 2.18 crore for capacity enhancement at 33 kV s/s Kaloor for availing the 5MVA power, but has availed only 1 MVA power and KSEB Ltd has utilized the balance 4 MVA power for its own use.
- (iv) KMRL also submitted that, HT consumers are supposed to install 0.5 S class CT as per the order of the Commission dated OP 09/2016, whereas KMRL has installed a 0.2 S class of CT at Kaloor. The percentage error of CT installed by KMRL is very less even at the 5% burden of the 25% VA loading condition as reported in the test report dated 02.03.2017 by the Meter testing lab of KSEB Ltd at Angamally. Hence it is justified that the CT is not to be replaced, even while the demand is reduced to the lowest value of 100 kVA for HT. Since KMRL is having 0.2S class CT and measured percentage error reported is upto 5% of the 25% VA burden, KMRL intended to reduce the contract demand upto 100 kVA, which is 1.75% of the rated load current of the CT, if KSEB Ltd is not agreeable for the complete waiver of demand charge.
- (v) As KMRL is having redundant power supply at 110 kV level, i.e, even during the failure of the power supply from either one of the 110 KV s/s at Muttom or Thykoodam, power supply from the healthy 110 KV substation is being extended from other end. Hence, even during failure of one of the 110 kV s/s, the 33kV power supply at Kaloor is not proposed to be utilized. However, in the case of failure of power supply from the both the 110 kV s/s at Muttom and Thykoodam, KMRL proposed to use power from 33 kV s/s at Kaloor as emergency supply, and in such case the load requirement of KMRL will be more than 2 MVA.

25. In this matter, KSEB Ltd, vide its letter dated 11.09.2020 communicated that, they are agreeable for providing backup supply to KMRL as below, subject to the approval of the Commission.

“The 33kV backup supply to KMRL at Kaloor can be provided at 100kVA contract demand with the existing 0.2S class 100/5A CT as a special case, with the following conditions.

“

- (i) The Power drawn when the 110kV supply to KMRL at Muttom and Thykoodam fails simultaneously due to reasons attributable to KSEBL, will not result in penal charges for over drawal, as in the case of Railways.
- (ii) Normal billing with 100kVA contract demand will be done on the connection.
- (iii) In case of drawal of power falls below 300 kVA and exceeds meter accuracy level required for 0.5S class CT, such drawal during healthy condition of any of the 110 kV supply connections may be discouraged through a surcharge

charged on the consumer, which will be 5% of the charges for the consumption recorded.

26. The observation and decisions of the Commission on the third prayer of the petitioner based on the deliberations on the subject matter is given below.”
- (1) The prayer of the petitioner KMRL is to permit the retention of the existing 33kV supply at Kaloor with 1 MVA load as standby without the payment of demand charges. The petitioner clarified that, only in case of failure of power supply from the both the existing 110 kV substations at Muttom and Thykoodam shall the power supply through the 33 kV substation at Kaloor be used.
  - (2) As per the prevailing 'Schedule of Tariff and Terms and Conditions of Supply applicable in the State', all the HT& EHT consumers has to pay minimum demand charges for retaining the supply even during disconnection. The minimum demand charge is the demand charge corresponds to the 75% of the contract demand. Commission cannot grant exemption on payment of demand charge to any consumer, even though the connection is proposed to be retained as a standby.
  - (3) However, in order to reduce the burden on the demand charge payable by KMRL for retaining 33 kV supply at Kaloor as standby, the licensee KSEB Ltd vide the letter dated 11.09.2020 communicated that they are agreeable to retain the 33kV supply at Kaloor with the contract demand of 100 kVA with the existing 0.2S class 100/5A CT as a special case.
27. Commission appreciates the stand of the KSEB Ltd to permit KMRL to reduce the contract demand to 100 kVA with the existing 0.2S class 100/5A CT as a special case, for retaining the 33 kV substation at Kaloor as standby for the use during emergency conditions.
28. KMRL submitted that, normally they shall not avail power through 33 kV substation at Kaloor. But irrespective of whether KMRL avails power from the 33kV substation or not, KMRL has to pay demand charge to KSEB Ltd based on the contract demand as per the HT supply agreement. So, as per the prevailing Tariff order dated 08.07.2019 in OA 15/2018, KMRL has to pay demand charges of Rs 275 /kVA for retaining the 100 kVA contract demand, even though the supply is intended to keep as a standby for the use during emergency conditions.
29. As discussed in the preceding paragraphs, during emergency conditions, when power supply fails from both the existing two substations at Muttom and Thykoodam, KMRL may avail supply through the 33 kV substation at Kaloor. Such situations are expected to occur very rarely, as it happened during the flood in the 2018.

30. Commission also examined the third condition proposed by KSEB Ltd in its letter dated 11.09.2020 to retain the 33KV supply at Kaloor with the reduced contract demand of 100 kV with the existing CT. KSEB Ltd requested before the Commission to approve a surcharge on KMRL if the drawl of power through the 33kV substation at Kaloor falls below 300 kVA and exceeds meter accuracy level required for 0.5S class CT during healthy conditions of supply from any of the 110 kV substations. The surcharge proposed by KSEB Ltd is 5% of the charges for the consumption recorded. Commission noted the proposal, and is of the considered view that such a condition is not required due to the following.

- (1) M/s KMRL vide the petition, additional submission and during the deliberations of the subject petition, clarified that they shall avail supply through the 33 kV substation at Kaloor only during emergency conditions of failure of supply from the both the 110 kV sub-stations at Muttom and Thykoodam.

Accordingly, under normal conditions, there will not be any consumption at 33 kV substations at Kaloor, except auxiliary consumption, if any.

- (2) The minimum contract demand allowed to maintain is 100kVA. Hence there is no rational to impose surcharge on KMRL, if they draw power upto the contract demand even during healthy conditions of any of the 110 kV substations. However, as mentioned earlier, KMRL clarified that they will not avail power through the 33 kV sub station during the failure of supply from any one of the 110 kV substations.

***The Commission further directs KMRL to give an undertaking to KSEB Ltd that, power from the 33 kV supply at Kaloor shall be availed only during emergency conditions of failure of power supply from both the 110 kV substations at Muttom and Thykoodam.***

31. Considering all these aspects in detail, the Commission is of the considered view that, KMRL be allowed to reduce the contract demand at 33 kV substation at Kaloor to 100 kVA from the existing 1 MVA as agreed to by KSEB Ltd, with the existing CT. However, KMRL has to pay the monthly minimum demand charges for the reduced 'contract demand' of 100 kVA to KSEB Ltd to retain the supply as per the Tariff orders issued by the Commission from time to time.

Commission hereby clarify that the permission granted to KMRL to reduce the contract demand without changing the existing current transformer is only to retain the connection as a standby to a very important public utility and, shall not be available to other consumers who enhance/reduce contract demand as per Regulations 99 and Regulation 100 of the Supply Code, 2014 based on their requirement of power.

### **Orders of the Commission**

32. The Commission after examining the petition filed by M/s Kochi Metro Rail Corporation Limited, comments of the respondent KSEB Ltd, and other documents and records placed before the Commission during the deliberations of the subject petition, hereby orders the following.
- (1) First prayer of the petitioner to amend the Clause-17 of the 'EHT Agreement No. 03/2017-18 dated 31.10.2017 and EHT Agreement No.3/2019 dated 24.07.2019', and also the Clause-15 of the HT Agreement No. ECE/HT-11/17-18 dated 18.05.2017, is approved. The modifications to these clause shall be as per paragraph 19 of this Order.
  - (2) Second prayer of the petitioner to extend the method of billing for commercial load issued by the Commission in its Order dated 12.07.2017 in RP No. 04/2017, is approved as detailed under paragraph 22 of this Order.
  - (3) Third prayer of the petitioner is approved as below.
    - (i) KMRL is allowed to retain the 33 kV supply at Kaloor as standby, for meeting the load during emergency conditions of failure of power supply from both the existing 110 kV substations of KMRL at Muttom and Thykoodam. KMRL may reduce the contract demand of the existing 33 kV supply at Kaloor from 1 MVA to 100 kVA, with the existing CT.
    - (ii) KSEB Ltd shall levy the applicable charges for maintaining 33kV supply at Kaloor as standby, for the reduced contract demand of 100kVA.
    - (iii) KMRL shall give an undertaking to KSEB Ltd that the 33 kV supply at Kaloor shall be kept as standby and shall be used only during emergency conditions of failure of power supply from both the existing 110 kV substations of KMRL at Muttom and Thykoodam. In case of non-compliance to this undertaking, KSEB Ltd is at liberty to approach the Commission for appropriate redressal.

Petition disposed as above.

**Sd/-**

**Preman Dinaraj**

**Chairman**

Approved for issue

Satheeshchandran C R  
Secretary (I/C)