

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

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

**O.P. No.09/2016**

**In the matter of Removal of difficulties encountered by HT & EHT consumers in implementing provisions of supply code 2014, regulations 99 & 100 by licensee Kerala State Electricity Board Ltd.**

Petitioner : The Kerala High Tension and Extra High Tension Industrial Electricity Consumers' Association,

Petitioner represented by : Sri. S. Jayathilakan, HT & EHT Association  
Sri. A R Satheesh, President, HT & EHT Association  
Sri. A M Navas, HT & EHT Association  
Sri. T K Unnikrishna Prasad, DGM (E), FACT, Udyogamandal  
Sri. K R Radhakrishnan, HT&EHT Association  
Sri. Ajith R, TCC Ltd.  
Sri. Sunny K I, AGM (E), FACT  
Sri Ratheesh Kumar A, EICL Ltd.  
Sri. Jayakumar, MD , KELCON

Respondent : Chief Engineer (Commercial & Tariff)  
Kerala State Electricity Board Ltd,  
Vydyuthi Bhavanam, Pattom  
Thiruvananthapuram

Respondent represented by : Sri. V K Joseph, CE( C&T), KSEB Ltd  
Sri. Bipin Sankar, Dy.CE(TRAC), KSEB Ltd  
Sri.K.G.P Nampoothiri, EE, TRAC, KSEB Ltd  
Sri. Rajesh R, AEE, TRAC, KSEB Ltd  
Sri. Edward P Bonafice, AEE, TRAC, KSEB Ltd  
Sri. Anoop Mathew, TRAC, KSEB Ltd

**Order dated 10.11.2016**

**K Vikraman Nair**

1. The Kerala HT & EHT Industrial Electricity Consumers' Association (hereinafter referred to as the Association) filed a petition on 29.03.2016 in the matter of removal of difficulties encountered by the HT & EHT consumers in implementing the provisions in Regulations 99 and 100 of Kerala Electricity Supply Code 2014, by the licensee namely M/s Kerala State Electricity Board Ltd (KSEB Ltd).
2. The Kerala HT & EHT Industrial Electricity Consumers' Association submitted the following.
  - (a) Even though the procedures to be followed and the format of application (Annexure 11) have been clearly specified in Regulations 99 & 100 of Supply Code 2014, for enhancement/ reduction of contract demand, the licensee M/s Kerala State Electricity Board Limited is not following the procedures causing inordinate delay in getting sanction on enhancement / reduction of contract demand. Because of this, the consumers will have to pay penalty for the increased recorded maximum demand and for the additional consumption till regularization of contract demand.
  - (b) The petitioner cited instances faced by three consumers who are members of the association as mentioned below:
    - (i) **Difficulties encountered by consumer 1**
      - Consumer 1 applied for enhancement of contract demand from 300KVA to 435 KVA. The application fee was remitted with KSEB Ltd on 26.02.2013 and till 21.03.2016 the agreement was not signed, even after a period of 37 months from the date of application.
      - It is stated that the consumer applied for additional contract demand long back, scheduling the date of completion of Project as per time frame specified in Supply Code, giving enough cushion for Inspectorate approval, procurement of equipment, installation etc. investing considerable money towards cost of equipment and interest. Therefore, in their opinion, the consumer has no other option rather than energize the equipments after sanction from Inspectorate and start production / activities. The result is that the recorded maximum demand exceeds the existing contract demand and the consumer has to pay penalty for the same. The association stated that the consumer thus incurred financial

loss for no lapse from the side of consumer but only because of the delays from KSEB Ltd demanding irrelevant documents not specified in the Supply Code.

(ii) **Difficulties encountered by Consumer 2**

- Consumer 2, an EHT consumer, submitted the application to reduce contract demand to KSEB Ltd and the consumer got a direction from the licensee that 110kV CT should be replaced citing the reason that the accuracy of the CT at low load will be inadequate.
- According to the petitioner, the existing CTs of the consumer have the specified accuracy range at 20% to 120% of its rated current. The cost and time taken for procurement of new CTs is not affordable to a consumer struggling to continue even production in adverse industrial conditions.

(iii) **Consumer 3 - M/s FACT Udyogamandal**

- M/s FACT Udyogamandal Division (UD) and Cochin Division (CD) intended to replace the CTs & PTs of 110 KV installations, for improving the accuracy class to 0.2 S & 0.2 to match with the accuracy class of ABT meter as well as to facilitate purchase of power through open access. Request was given to KSEB Ltd, Kalamassery Circle to get the specification of the instrument transformers.
- The request of FACT Udyogamandal is to use existing CTR (150/1/1) while KSEBL is insisting CTR of 80/1/1, which, as per KSEBL, is based on the Contracted Maximum Demand (CMD).
- M/s FACT requested KSEB Ltd to permit to continue existing CTR, citing the following reasons:

- (1) *The CMD was reduced from 20 MVA, due to stoppage of plants.*
- (2) *Additional demand is expected due to planned future expansion.*
- (3) *The capacity of the transformers connected at the load side are 2 Nos. 20 MVA.*
- (4) *Revision of CTR, being a 110 KV installation, during change of demand is not warranted.*
- (5) *Momentary unloading of captive power plants feeding critical plant saving equipment will increase the demand through 10 MW and will remain till the plant is taken for safe shut down / servicing back of generators. CTR of adequate higher ratio is essential to meet this contingency.*
- (6) *Consumer is permitted to draw 130% of CMD during OFF peak hours without penal rates as per tariff order 2014 and CTR of adequate rating shall be available for this facility.*

*(7) CTs, as per standards should maintain the constant value of 0.2 % of current (ratio error) at 20% to 120 % of rated current. FACT being a continuous process industry, operate on higher load factor and the demand is contained in the range specified by standards (refer Annexure 3 - IS 2705 - measurement CTs).*

Further, the Kerala HT & EHT Industrial Electricity Consumers' Association submitted the following;

- 1. Delay on the part of licensee to reduce the CD results in financial loss to consumers by way payment of higher MD charges.*
- 2. KSEBL asks the consumers for unnecessary and irrelevant information in order to delay reduction and enhancement of MD.*
- 3. Licensees should not have the right to demand information other than those in the format specified in the Supply Code.*
- 4. In our opinion, there is no logic for correlation between CT Ratio (CTR) and CMD other than that the Current Transformer shall have the rated capacity corresponding to 130% of CMD, (130% has been considered taking into account the higher load that can be drawn during the off peak time). In any case, Licensee shall not raise technical objections in order to delay matters.*
- 5. If the Licensee has any technical objection regarding CTR or minimum MD, the same may be presented before the Commission and the Commission may, after scrutiny, make suitable amendments to the Supply Code. The Licensee shall not have any right to raise any objections other than those as per the Supply Code.*
- 6. 0.5 Class CTs are in use generally for HT & EHT consumers and 0.2 S class CTs have been installed by Open Access consumers.*

Accuracy Class	Percentage error at percentage rated current				
	1	5	20	100	120
0.2S	0.75	0.35	0.2	0.2	0.2
0.5		1.5	0.75	0.5	0.5

- 7. Factories may have to close down its operations due to several reasons. But electricity will be required for a year or two more till all the procedures for closure / revival is completed. It will be extremely difficult for such companies to pay higher MD charges during the above period.*
- 8. The accuracy of CTs below 20% load will not be very low so as to demand replacement. The accuracy of 0.2S class CT with a CTR of*

*100/1A at a load of 2 Amps primary current is 0.35% which is quite reasonable.*

3. Citing the three typical instances, the Kerala HT & EHT Industrial Electricity Consumers' Association submitted that, KSEB Ltd is insisting on unwarranted information and also insists replacement of Current Transformer, even though not required. The prayer of the petitioner is extracted below:

*“We humbly request the Commission to understand the difficulties encountered by HT / EHT Consumers in their application for contract demand reduction/ enhancement and pray for favourable orders for removal of difficulties connected with this matter.”*

4. The Commission admitted the petition of The Kerala HT & EHT Industrial Electricity Consumers' Association as OP No 09/2016.
5. KSEB Ltd submitted their written statement in reply to the petition on 20.06.2016, summary of which is extracted below.

- (1) KSEB Ltd submitted that, as far the prayers made by the petitioner on behalf of the three consumers mentioned in the petition are concerned, the petitioner has no locus standi to file this petition and is not maintainable since the State Electricity Commission has no jurisdiction to adjudicate this matter, which is a dispute between a consumer and a licensee. KSEBL submitted that the adjudication of a dispute by the Commission under Section 86(1)(f) of the Act does not cover a dispute between a consumer and a licensee citing the judgements by Supreme Court of India and Appellate Tribunal for Electricity.

- (2) As far as the general prayer made by the petitioner on the difficulties faced by them in implementing the regulation 99 and 100 of the Kerala Supply Code, 2014 is concerned, the submissions made by the KSEB Ltd is summarised below:

1. It was submitted as follows:

9. *Regarding the contentions raised by the petitioner citing the instances of consumer mentioned in the petition, it was mentioned that the licensee has demanded for the following*

*documents which are not warranted for enhancement/reduction in load*

- (i) ID Proof of the applicant*
- (ii) Building ownership certificate*
- (iii) Document to prove consumer 1 as the Chairman of the institution, attested copy of sale deed, tax receipts etc.*
- (iv) Explanation regarding the difference in sanctioned load and connected load.*

*10. It may be noted that, as per the regulation 90 of the Supply Code, 2014, the procedures to be followed for the modification or change in the existing connections has been mentioned. As per the above, the application for enhancement or reduction of load is to be given in the form specified (Annexure 11) and as per regulation 90(2):-*

*‘all application forms for modification or change in the existing connection shall be accompanied with an identity proof of the applicant in accordance with the regulation 44 of the Code, if the connection is registered in the name of the applicant himself or with a no objection certificate (NOC) from the person in whose name the connection is registered’.*

2. Regulation 45 specifies the documents to be accepted for proof of ownership. Accordingly, the instant case requires, as per regulation 90(2), an identity proof, in order to verify the authenticity of the applicant and any of the above documents to check the ownership of the building at the time of enhancing or reducing the connected load.

3. Further, K S E B Ltd. submitted that:

*12. As per regulation 99(1) & (2) of Kerala Electricity Supply Code, 2014, it was stated that:-*

*99 (1) - ‘consumer shall apply to the licensee for enhancement of contract demand in case of consumers under demand based tariff and of connected load in the case of others in the form specified in Annexure-11 of the code and the licensee shall process the application form in accordance with the relevant provisions of the Code’*

*99(2) - ‘for site inspection as well as issuance and payment of demand note for the estimated cost of work if any, both the*

*licensee and the applicant shall follow, mutatis mutandis the procedure and time lines as laid down in regulations 77 to 83 of the Code'*

*It is submitted that, as per the model form specified as Annexure 11 in the code, it is mentioned that the resolution for authorized signatory has to be collected from the applicant (if applicable). The same was also insisted on the form later approved by the Hon'ble Commission also. Accordingly, when the applicant is a company, trustee etc, the document to prove the authorization of the applicant is to be submitted along with the application in compliance to the above provisions of the Code.*

*13. As per regulation 43 (4) of the Central Electricity Authority (Measures relating to Safety and Electric Supply) Regulations, 2010, provides that,*

*' the owner of any installation of voltage exceeding 650V who makes any addition or alteration to his installation shall not connect to the supply his apparatus or electric lines, comprising the said alterations or additions unless and until such alteration or addition has been approved in writing by the Electric Inspector'*

*Further, as per regulation 15 (4) of the Supply Code,2014 approval of the Electrical Inspectorate is to be obtained for the electrical installations in the case of HT or EHT services.*

*Hence the regularisation of connected load of HT and EHT consumers can be made only with the approval of Electrical Inspector. Accordingly, the connected load mentioned in the application submitted by the HT & EHT consumer is to be the same as approved by the Electrical Inspector.*

*15. As such, it is submitted that the documents collected by Kerala State Electricity Board Limited as mentioned above are strictly in line with the provisions of the Supply Code, 2014.*

*16. Regarding the prayer for not to insist on details of minor equipments like lights, fans, DBs etc in case of HT consumers and not to ask for the back approvals of Electrical Inspector of yester years, KSEB Ltd submitted that as per clause (6) of the Regulation*

153 of KESC 2014,

“

*(6) in the case of consumers billed under demand based tariff, the total load declared in the test cum completion report of the installation of the consumer, submitted at the time of availing connection or the load mentioned in the energisation approval granted by the Electric Inspector or the load at the time of revising contract demand or revising the connected load may be taken as the sanctioned connected load’.*

*(7) If it found that any additional load has been connected without the due authorisation from the licensee or in violation of any of the provisions of the Central Electricity Authority (Measures relating to safety and electric supply) Regulations, 2010 as amended from time to time, the licensee shall direct the consumer to disconnect forthwith such additional load and the consumer shall comply with such direction, failing which the supply of electricity to the consumer shall be disconnected by the licensee.”*

*17. Accordingly, in order to comply with the above provisions of the Code, the details of the entire connected load are to be made available with the licensee. As far as the previous approval of the Electrical Inspector is concerned, the same is not needed in the normal cases. But in the model form specified as Annexure 11 in the Code, the details of load added / disconnected from supply is to be entered under item no 7. Hence, in cases where the consumer had earlier got approval from the Electrical Inspectorate and the same has not been regularised with the Board, the earlier approvals of the EI will not be available with the Board. In such instances when the consumer approach for sanction of load with a latest approval obtained from the Electrical Inspector then for assessing the load added/ disconnected from supply, the previous sanction is required. Now as per the new approved form by the Hon’ble Commission the details of load added/ disconnected is not requested. Hence, the previous approval of EI is not needed for processing the application for enhancement/ reduction in connected load in normal cases.*

*18. As far as the time frame to be specified for approval of enhancement and reduction of connected load or contract demand is concerned the same has been clearly specified in the regulation 99 and 100 of the KESC, 2014. In case of work to be executed based on the enhancement/ reduction of load, the same has to be*



*executed within the time line specified under regulation 85 of the Code. Since the timelines made by the Commission is clear and specific, Board is of the view that there is no need of further new time lines on the matter.*

*19. Regarding fixing responsibility among the different level of officers of Board, the same can only be seen as an internal matter of the Board.*

*20. As per regulation 100 of the Supply Code, 2014, the procedure and time lines to be followed for reduction of contract demand and connected load has been clearly specified and since there was no minimum CMD specified for each voltage class in the regulation, the consumer can reduce their load to the extent possible in compliance to the regulation 100 of KESC 2014 itself.*

*21. Regarding the prayer not to insist on replacement of CT for reduction of contract demand the following are offered;*

*As per regulation 104(2) of KESC 2014, the meter shall be tested and installed by the licensee and it shall conform to the requirements as specified in the Central Electricity Authority (Installation and Operation of Meters) Regulations, 2006, as amended from time to time and as per the standards prescribed in the Central Electricity Authority (Installation and Operation of Meters) Regulations, 2006, accuracy class of meters for above 650V and upto 33kV is 0.5s or better and for above 33kV is 0.2s or better.*

*22. Further, the clause 5.7 of IS 11448 sec 5.7 deals with the selection of Instrument transformers. As per the above the current transformer conforming to IS -2705 (part2) used for the metering of a particular category of tariff are recommended to have accuracy class, generally one index better than that of the meter. More over as per clause 11.3.2 of IS 15707:2006 for “testing, evaluation and installation and maintenance of AC electricity meters” states that ‘ the primary rating of the current transformer shall match with the load current requirement as per the contract demand’.*

*23. KSEB Ltd is insisting the consumers to install the CTs in accordance with the contract demand giving due consideration to*

*the possibility of 130% of CMD in off peak hours. Accordingly, the demand from the KSEB Ltd, to replace the CT, if required, in the case of reduction made by the consumer is for getting accurate measuring system which will be beneficial to both the consumer and the licensee. The above requirement was not imposed to the consumer by the KSEB Ltd, but it was based clearly on the guidelines of the following.*

- (i) Relevant clauses of Indian Standard on metering as explained.*
- (ii) Clause no 100(6), Kerala Electricity Supply Code, 2014*
- (iii) Standards specified under CEA (Installation & Operation of Meters) Regulation 2006.*

*24. In view of the above KSEB Ltd submitted that, the petitioner argument that ,there is no correlation between CTR and CMD, cannot be accepted as in the IS 15707:2006 clause 11.3.2, it is clearly mentioned that the primary rating of the current transformer shall match with the load current requirement as per the contract demand’.*

6. KSEB Ltd also submitted that the Board is keen and anxious in addressing all the genuine grievances and difficulties, if any, faced by the consumers. KSEB Ltd stated that it can look into any such difficulties actually experienced by the consumers and is ready to take appropriate action to redress the genuine grievances of the consumers. Further, it is keen to look into any specific cases pointed out by the petitioner for inordinate delay in processing the application submitted for enhancement and reduction of load and will initiate appropriate measures to adequately address all such issues. Also, KSEB Ltd is open to providing adequate guidelines to its officers working in the field for ensuing fair and transparent procedures for upholding the principles of natural justice as envisaged under the law.
7. The Commission conducted hearing on 21.06.2016 and the representatives from the HT & EHT Industrial Consumers’ association presented the petition. The Commission issued daily order dated 04.07.2016 in which the Commission expressed its displeasure on the fact that no senior officers from KSEB Ltd were present for the hearing. Hence the Commission decided to post the petition for a detailed hearing on 20.07.2016 and directed that Director (Distribution) or Chief Engineer (Commercial & Tariff) to be present for the hearing.

8. The second hearing was conducted on 20.7.2016. Sri. S. Jayathilakan, HT & EHT Association, presented the difficulties encountered by HT consumers on issues relating to the enhancement/reduction of contract demand including the demand of unwarranted documents by the field offices of KSEB Ltd resulting in continued payment of penalty by the consumers. Sri. Unnikrishna Prasad, Deputy General Manager (Electrical), FACT, Udyogamandal, presented the discrepancies in specifications of CTR (current transformer ratio) insisted by KSEB Ltd for change in contracted maximum demand. Sri. V.K. Joseph, CE (C&T), KSEB Ltd and Sri. Bipin Sankar, Deputy CE (TRAC), KSEB Ltd presented the views of KSEB Ltd.
9. During the hearing, the Commission clarified that the intention of admitting the petition and to conduct the hearing on the subject matter was to sort out the issues faced by the HT/EHT consumers in the enhancement/reduction of the contracted demand with KSEB Ltd. The Commission instructed KSEB Ltd to submit a draft of the directions to be issued to the field offices for following a uniform procedure as specified in Kerala Electricity Supply Code, 2014 including the selection of CT ratio in view of the specification of special class metering instruments used, in connection with the enhancement/reduction in the contracted demand of HT/EHT consumers, on or before 10-08-2016.
10. Accordingly, KSEB Ltd submitted additional affidavit on 12-08-2016, on the draft procedures to be followed in the field offices regarding enhancement/reduction of contract demand/connected load of HT & EHT consumers, and requested for approval of the Commission. The submission made by KSEB Ltd is extracted below;

*'Board has recommended for taking the following procedures in the field offices regarding enhancement/ reduction of contract demand/ connected load of HT&EHT consumers, subject to the approval of the Hon'ble Commission.*

**A. Documents Needed for Enhancement/ Reduction of Contract Demand/ Connected load in the case of HT & EHT consumers**

**(i) Identity Proof & Authorized signatory**

*The Identity proof of the applicant is needed along with the application for enhancement/ reduction in contract demand/connected load in the case of individuals and in the case where the applicant is a company, firm etc, then the resolution for authorized signatory has also to be collected from the applicant.*

**(ii) Ownership Certificate**

The ownership certificate need not be insisted from the applicant along with the application if there is no change in ownership of the premises. An undertaking from the consumer may be obtained in the above cases stating that the owner of the premises has not changed. It was further recommended for giving provisions for such undertaking in the application form itself, where the applicant is to declare whether the ownership of the premises has changed or not. In cases where the owner has changed, the procedures for ownership change or consent from the new owner which ever applicable may also be undergone along with the application for enhancement/ reduction.

**(iii) Details of Electrical Loads /Sanction of Electrical Inspectorate**

It was recommended for considering the same on a case to case basis as mentioned below.

**(a) In case where application is submitted for change in contract demand and where there is no change in connected load**

No need to insist for the approval of the Electrical Inspectorate. The applicant is to submit an undertaking that there is no change in connected load. The same was further recommended for being incorporated in the application form itself, which the consumer has to furnish.

**(b) In case where the connected load changes with or without change in contract demand**

The Latest Scheme approval and the energisation approval of the Electrical Inspectorate may only be insisted. No need to insist for prior approvals obtained from the Electrical Inspectorate. It was further decided that there is no need to insist the approval of the EI to be obtained within 6 months of making the application, if the actual load in the premises is as per the approval obtained from the Electrical Inspectorate.

**(iv) NOC from Statutory Bodies**

The NOC to be obtained for fire protection, Drugs Control etc other than the approval from EI need not be insisted along with the application for enhancement/ reduction of Contract Demand/ Connected load.

**B. Replacement of CT on enhancement/reduction of contract demand**

It was recommended for implementing the following procedure on the matter concerning replacement of CT on enhancement/ reduction of load.

**Case 1:- Enhancement of Contract Demand**

*For enhancement of contract demand, CT with appropriate specification, as per the new contract demand requirement needs to be installed.*

***Case 2:- Reduction of Contract Demand with existing metering equipment including CT is an 'S' Class one (Special Class) or as prescribed by the CEA metering regulations.***

*In the case of reduction of contract demand, the consumer will be allowed to reduce the contract demand without changing the CT, if it is found that the existing metering equipment including CT provided at the consumer premises is an 'S' class equipment as prescribed by the CEA metering regulation and the rated current based on the new contract demand is within the lower limit of 20% of the full load current of the existing CT. This is allowed considering the fact that the existing 'S' class CT's have a declared accuracy level upto 1% of the full load current. If the actual usage of the consumer is below the new contract demand, then also for the range from 20% to 1% is there where special CT has a declared level of accuracy. In the above case, if at a later stage it is found that the actual usage of the consumer is below 1% of the full load current of the CT, then the consumer may be insisted to replace the CT with the appropriate one. An undertaking from the consumer may be obtained specifying the above at the time of approving the reduction in contract demand.*

***Case 3:- Reduction of contract demand where existing metering equipment including CT is not an 'S' class one or not as prescribed by the CEA regulation.***

*The CT has to be replaced with the appropriate CT in compliance with the CEA regulations, as per the reduced contract demand.*

*3. It was further submitted that the above methodology of allowing the existing CT is to be considered in the case of existing HT and EHT consumers only and the same cannot be considered in the case of new connection.*

*4. In view of the above, the KSEB Ltd hereby humbly request before the Hon'ble Commission to kindly issue its approval on the above decision of the Board.*

## **Analysis and Decision**

11. The issues explained by the petitioner are generally the procedural lapses in the field offices of KSEB Ltd in enhancement and reduction of contract demand and not regarding any amendment required in regulation 99 or 100 of the Kerala

Electricity Supply Code, 2014. The application is made by the association on the implementation of provisions in the Supply Code by the licensee and not on a dispute between licensee and consumer. The association has pointed out the issues faced by the three consumers as an example on the difficulties faced by them. In this connection, the Regulation 179 of the Supply code is extracted below which empowers the Commission to issue orders on interpretation of any provisions;

*179. Power of relaxation and power to remove difficulties.- (1)The Commission may, in public interest and for reasons to be recorded in writing, relax any of the provisions of this Code.*

*(2) If any difficulty arises in giving effect to any of the provisions of this Code or there is a dispute regarding interpretation of any provision, the matter shall be expeditiously referred to the Commission.*

*(3) The Commission shall pass necessary orders after hearing the parties concerned.*

Hence the issue raised by the KSEB Ltd regarding the jurisdiction of the Commission on adjudicating the matter in the petition does not hold good and the Commission decided to process the petition accordingly.

12. The issues raised by the association are the delay in processing the application for enhancement/ reduction in connected load/contract demand and the selection / replacement of CT. The provisions in the Supply Code regarding the enhancement/ reduction in connected load/ contract demand are extracted below;

*“99. Enhancement of connected load or contract demand.- (1) Consumer shall apply to the licensee for enhancement of contract demand in case of consumers under demand based tariff and of connected load in the case of others, in the form specified in Annexure - 11 to the Code and the licensee shall process the application form in accordance with the relevant provisions of the Code.*

*(2) For site inspection as well as issuance and payment of demand note for the estimated cost of work if any, both the licensee and the applicant shall follow, mutatis mutandis the procedure and timelines as laid down in regulations 77 to 83 of the Code.*

*(3) The licensee shall give a written intimation along with the demand note to the consumer which shall include the following:-*

*(a) whether the additional power can be supplied at the existing supply voltage or at a higher voltage;*

*(b) addition or alteration, if any, required to be made to the distribution system and the expenditure to be borne by the consumer, on that account;*

*(c) amount of additional security deposit and expenditure for alteration of service line and apparatus, if any, to be deposited in advance by the consumer;*

*(d) change in classification of the consumer and applicability of tariff, if required; and (e) any other information relevant to the issue.*

*(4) The application for enhancement of load shall not be considered if the consumer is in arrears of payment of the dues payable to the licensee.*

*(5) If the enhancement of load is feasible, the consumer shall:- (a) pay additional security deposit, expenditure for alteration of service line and apparatus, if any, required to be made, and the cost to be borne by the consumer for modification for distribution system if any, within fifteen days of receipt of the demand note; and*

*(b) execute a supplementary agreement;*

*(6) If the consumer pays the required charges and executes a supplementary agreement, the licensee shall execute the work of modification of the distribution system, service line or meter and other apparatus within the time line specified under regulation 85, mutatis mutandis, and sanction the additional contract demand or connected load.*

*(7) The licensee shall issue order on the application for the enhancement of load within thirty days from the date of its receipt and intimate the applicant whether or not the enhancement of load is sanctioned.*

*(8) If the licensee does not intimate its decision on the application for the enhancement of load within the above period, sanction for enhancement of load or contract demand, as the case may be, shall be deemed to have been granted with effect from the thirty first day of the date of submission of the application by the consumer.*

**100. Reduction of connected load or contract demand.-** *(1) Any application for reduction of connected load or contract demand shall be accepted only after six months from the date of original energisation for LT*

connections and only after one year from the date of original energisation for HT or EHT connections.

(2) Request for reduction of connected load or contract demand shall be entertained only once in six months thereafter.

(3) The consumer shall apply for reduction of load or contract demand to the licensee specifying the reasons thereof, in the form specified in Annexure - 11 to the Code and the licensee shall process the application form in accordance with relevant provisions of the Code.

(4) For site inspection as well as for issuance of demand note for the estimated cost of work, if any, and payment thereon, both the licensee and applicant shall follow, mutatis mutandis the procedure and timelines as laid down in regulations 77 to 83 of the Code.

(5) The licensee shall consider the grounds stated in the application, verify the same during inspection and issue order on the application within a period of fifteen days from the date of completion of inspection and intimate the applicant:

Provided that the licensee shall issue a speaking order if the request of the consumer is declined.

(6) If the licensee sanctions the reduction in connected load or contract demand, the meter and service line may be changed if required and the expenditure thereof recovered from the applicant.

(7) The licensee shall issue a demand note to the consumer in writing, under acknowledgment, in accordance with the timeline specified in regulation 81 mutatis mutandis and thereafter both the licensee and applicant shall follow mutatis mutandis the procedure and timelines as laid down in regulation 81 to 83 of the Code.

(8) If the consumer pays the required charges and expenditure for modification of distribution system, service line, meter and other apparatus, the licensee shall execute the work and sanction the reduction in the load within the time limit specified in regulation 85.

(9) If the licensee sanctions the reduction of connected load or contract demand, the same shall be effective from the date of inspection and a written intimation thereof shall be sent to the consumer.



*(10) If the application is not decided and order is not issued by the licensee within the above mentioned period of fifteen days from the date of completion of inspection, permission for reduction of connected load or contract demand, as the case may be, shall be deemed to have been granted with effect from the sixteenth day.*

*(11) Any difference in security deposit arising out of load reduction shall be adjusted in the subsequent two bills of the consumer.”*

13. The Commission has examined the submission of the petitioner and of the KSEB Ltd regarding the issues raised by the petitioner. It is found that the field offices of the KSEB Ltd is not following uniform procedures as stipulated in the Kerala Electricity Supply Code, 2014, for enhancement/ reduction of connected load/contract demand. As instructed by the Commission, the KSEB Ltd, vide its affidavit dated 12-8-2016, has submitted a draft proposal on the uniform procedure to be issued to the field offices regarding enhancement/ reduction of the connected load/ contract demand. The proposal of KSEB Ltd on different issues raised by the petitioner is discussed below.

(i) Identity proof & authorized signatory

KSEB Ltd submitted that,

*‘The Identity proof of the applicant is needed along with the application for enhancement/ reduction in contract demand/connected load in the case of individuals and in the case where the applicant is a company, firm etc, then the resolution for authorized signatory has also to be collected from the applicant.’*

The Commission is of the view that, there is no difficulty for the individual consumers to provide identity proof and also for the company, firm etc to provide the resolution of the Company for authorized signatory. Hence, the suggestion of the KSEB Ltd is acceptable

(ii) Ownership certificate:

KSEB Ltd submitted that, *the ownership certificate need not be insisted from the applicant along with the application if there is no change in ownership of the premises. An undertaking from the consumer may be obtained in the above cases stating that the owner of the premises has not changed.*

KSEB Ltd further submitted that, *in cases where the owner has changed, the procedures for ownership change or consent from the new owner which ever applicable may also be undergone along with the application for enhancement/ reduction.*

The Commission is of the view that,

- (i) the ownership certificate need not be insisted for enhancement or reduction of contract demand since the consumer himself or the authorized representative of the company / firm is applying for reduction / enhancement of contract demand.
- (ii) the application for change of ownership shall be processed as per the relevant regulations in the Supply Code.

(iii) Details of electrical loads/ sanction of electrical inspectorate.

In this issue, KSEB Ltd submitted tat,

(a) In case where application is submitted for change in contract demand and where there is no change in connected load, *no need to insist for the approval of the Electrical Inspectorate. The applicant is to submit an undertaking that there is no change in connected load.*

(b) In case where the connected load changes with or without change in contract demand : *The Latest Scheme approval and the energisation approval of the Electrical Inspectorate may only be insisted. No need to insist for prior approvals obtained from the Electrical Inspectorate. It was further recommended that there is no need to insist the approval of the EI to be obtained within 6 months of making the application, if the actual load in the premises.*

The Commission has examined the submissions of KSEB Ltd. The Commission is of the view that, the latest scheme approval and energisation approval by electrical inspector is not required if there is no change in connected load.

(iv) NOC from statutory bodies.

KSEB Ltd submitted that, *the NOC to be obtained for fire protection, drugs Control etc other than the approval from EI need not be insisted along with the application for enhancement/ reduction of Contract Demand/ Connected load.*

14. The Commission is of the considered view that, the following documents need only be insisted for the enhancement / reduction in contract demand or connected load;

- (i) Identity proof of the applicant; provided that the applicant is the registered consumer.
  - (ii) If applicant is a company, firm, society, trust etc., the resolution of the company or the firm or the society or the trust, authorizing the signatory to the application, is also required.
  - (iii) Approval of the scheme or certificate for energisation issued by the electrical inspector is not required for the change in contract demand without any change in connected load.
  - (iv) Copy of the latest scheme approval and energisation certificate issued by the electrical inspector is required for the change in connected load.
15. The Commission analyzed the issue of replacement of CT on reduction / enhancement of contract demand also in detail. The details are given below.
- (i) The part-1 of schedule to Central Electricity Authority (Installation and Operation of Meters) Regulations, 2006 provides for the standards common to all type of meters and is extracted as follows:

*(2) Specifications of meters*

<b>Standard Reference Voltage</b>	<i>As per IS</i>															
<b>Voltage Range</b>	<i>As per IS</i>															
<b>Standard Frequency</b>	<i>As per IS</i>															
<b>Standard Basic Current</b>	<i>As per IS (Current range of consumer meters shall be so chosen as to record the load current corresponding to the sanctioned load)</i>															
<b>Accuracy Class</b>	<i>Meters shall meet the following requirements of Accuracy Class:</i> <table border="1" style="width: 100%;"> <tr> <td><b>Interface meters</b></td> <td><i>0.25</i></td> </tr> <tr> <td><b>Consumer meters</b></td> <td></td> </tr> <tr> <td><i>Up to 650 volts</i></td> <td><i>1.0 or better</i></td> </tr> <tr> <td><i>Above 650 volts and up to 33 kilo volts</i></td> <td><i>0.55 or better</i></td> </tr> <tr> <td><i>Above 33 kilo volts</i></td> <td><i>0.25</i></td> </tr> <tr> <td colspan="2"><b>Energy accounting and audit meters</b></td> </tr> <tr> <td colspan="2"><i>The accuracy class of meters in generation and transmission system shall not be inferior to that of 0.25 Accuracy Class. The accuracy class of meters in distribution system shall not</i></td> </tr> </table>		<b>Interface meters</b>	<i>0.25</i>	<b>Consumer meters</b>		<i>Up to 650 volts</i>	<i>1.0 or better</i>	<i>Above 650 volts and up to 33 kilo volts</i>	<i>0.55 or better</i>	<i>Above 33 kilo volts</i>	<i>0.25</i>	<b>Energy accounting and audit meters</b>		<i>The accuracy class of meters in generation and transmission system shall not be inferior to that of 0.25 Accuracy Class. The accuracy class of meters in distribution system shall not</i>	
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<i>Above 650 volts and up to 33 kilo volts</i>	<i>0.55 or better</i>															
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<b>Energy accounting and audit meters</b>																
<i>The accuracy class of meters in generation and transmission system shall not be inferior to that of 0.25 Accuracy Class. The accuracy class of meters in distribution system shall not</i>																

	<i>be inferior to that of 0.5S Accuracy Class</i>
<b>Starting Current and Maximum Current</b>	<i>As per IS</i>
<b>Power Factor Range</b>	<i>As per IS</i>
<b>Power Frequency Withstand Voltage</b>	<i>As per IS</i>
<b>Impulse Voltage Withstand Test for 1.2/50 micro sec</b>	<i>As per IS</i>
<b>Power Consumption</b>	<i>As per IS</i>

As extracted above, the HT consumers need to install the CTs of accuracy class of 0.5S and EHT consumers 0.2S.

- (ii) As per the IS 2705 (Part 2) for Indian Standard for current transformers - specification, measuring current transformers, the required accuracy levels are shown below;

Accuracy class	Percentage Current (Ratio) Error at Percentage of Rated Current				
	1	5	20	100	120
0.2	Not specified	0.75	0.35	0.20	0.20
0.2S	0.75	0.35	0.20	0.20	0.20
0.5	Not specified	0.75	0.75	0.50	0.50
0.5S	1.50	0.75	0.50	0.50	0.50

Thus for CTs of 0.2S and 0.5S accuracy class, the error will be 0.2% to 0.5% for 20 to 120% of rated current. Even at low current upto 1% of rated current, the error is specified.

- (v) Further, clause 11.3.2 of IS 15707:2006 for “testing, evaluation and installation and maintenance of AC electricity meters” is as follows;

.....

*“Metering units shall use instrument transformers rated for metering use only. In no case, protection - core instrument transformers shall be used for metering.*

*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”.*

.....

Clause 6.1 of IS 4201 - application guide for current transformers is also reproduced below;

*6.1 Since the performance of a current transformer depends to some extent on the connected burden, it is desirable that the rated output should be as near to in value but not less than to the actual output at which the transformer is to operate. Ordering a current transformer with a rated output considerably in excess of required output may result in increased errors under operating conditions. This is due to the turns correction being chosen for the rated burden and thus being excessive for a much lower burden.*

.....

Also, Clause 5.7 of IS 11448, the application guide for ac electricity meters is as follows;

*5.7 Selection of Instrument Transformers*

*The current transformers conforming to IS -2705 (Part 2 ) used for metering of a particular category of tariff are recommended to have accuracy class, generally one index better than that of the meter. The voltage transformer conforming to IS 3 156 ( Part 2 ) and used for metering for a particular category of tariff, are required to have accuracy class similar to that of the meter. The following may be taken as the guideline:*

<i>Meter accuracy class</i>	<i>2.0</i>	<i>1.0</i>	<i>0.5</i>	<i>0.5s</i>	<i>0.2s</i>
<i>CT accuracy class</i>	<i>1.0</i>	<i>0.5</i>	<i>0.2</i>	<i>0.2s</i>	<i>0.2s or 0.1</i>
<i>VT accuracy class</i>	<i>-</i>	<i>1.0</i>	<i>0.5</i>	<i>0.5</i>	<i>0.2</i>

*It is important to note that measuring range of current transformer used should preferably be compatible to the measuring range of meter. Also, the connected burden of each current/voltage circuit should preferably be within the operating range of instrument transformer, that is between 25 percent and 100 percent of the rated output of each CT/VT.*

.....

- (iv) The CT with the required accuracy class as per CEA regulation and matching with the load current as per contract demand shall be selected.
16. KSEB Ltd submitted three cases on enhancement / reduction of contract demand.
- (1) **Case 1:- Enhancement of contract demand, requiring replacement of the Current Transformer.** KSEB Ltd stated that Current Transformers are selected considering the requirement of drawing 130% of Contracted Maximum Demand (CMD) during off peak hours. The Commission is of the considered view that the existing Current Transformer is not required to be replaced if the primary current corresponding to 130% of the enhanced contract demand is within 120 % of the rated current of the existing special class Current Transformer.
- (2) **Case 2 :- Reduction of contract demand with existing metering equipment including special class Current Transformer.** KSEB Ltd submitted that if the revised load current corresponding to the revised contract demand is within 20% of full load current, the existing special class Current Transformer, is not required to be replaced.
- (3) **Case 3:- Change in contract demand requiring replacement of Current Transformer.** As specified in the Central Electricity Authority (Installation and Operation of Meters) Regulations, 2006, the HT consumers shall install 0.5 S class current transformers and EHT consumer shall install 0.2 S class current transformers. If the existing current transformers in the premises of the consumer do not conform to the specifications stipulated by the above regulations, the existing current transformers shall be replaced.

Order of the Commission

17. In view of the preceding discussion on the facts and relevant regulations the Commission orders that;

- (i) The following documents as specified in Regulation 99 and 100 of the Kerala Electricity Supply Code, 2014 shall only be insisted for enhancement / reduction in contract demand.
- (a) The identity proof of the applicant
  - (b) The resolution of the company/ firm / trust / society authorizing the signatory in the application, to apply for change in contract demand, if the consumer is a company/ firm / trust / society.
  - (c) Copy of the latest scheme approval and energisation certificate from electrical inspectorate if there is change in connected load. It is clarified that the scheme approval or the energisation certificate issued by the electrical inspector is not required if there is no change in connected load.
- (ii) The replacement of current transformers 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 IS 2705.
- (iii) The KSEB Ltd shall issue necessary direction to the field offices based on the direction under (i) and (ii) above within 15 days from date of issue of this order.
- (iv) K S E B Ltd. shall ensure that the time lines prescribed by the Supply Code are adhered to by all the officers of K S E B Ltd.

The petition 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