KERALA STATE ELECTRICITY REGULATORY COMMISSION
THIRUVANANTHAPURAM

Present : Shri T K Jose, Chairman
Adv. A.J Wilson, Member
Shri B Pradeep, Member

OP No 53/2023

In the matter of	:	Petition in the matter of granting connectivity to the proposed 110KV substation at Laloor, Thrissur.
Petitioner	:	Thrissur Corporation Electricity Department
Petitioner represented by	:	Shri K.Krishnakumar, Asst: Secretary, TCED Shri M. K. Varghese, Hon'ble Mayor Thrissur Corporation Shri Jose T.S, Electrical Engineer, TCED
Respondent	:	Kerala State Electricity Board Limited
KSEBL represented by	:	Shri M.P Rajan, Dy. Chief Engineer, TRAC Shri Dinesh.K, Dy Chief Engineer, Transmission
Date of the hearing	:	12.12.2023,10:30 AM, Court Hall of the Commission

Interim Order dated 27.02.2024

1. M/s Thrissur Corporation Electricity Department (hereinafter referred as M/s TCED or petitioner), filed a petition dated 23.06.2023 before the Commission with the following prayers;

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- *to admit this petition and give direction to the KSEBL to grant connectivity to the proposed 110KV substation of TCED under RDSS project*
- *Pass an order as the Hon'ble Commission may deem fit and appropriate under the circumstances of the case and in the interest of justice.*
- *The petitioner declares that the subject matter of the petition has not been raised by the petitioner before any other competent forum. And that no other competent forum is currently seized of the matter or has passed any order in relation thereto."*

2. Summary of the petition filed by M/s TCED is given below.

(1) Thrissur Corporation Electricity Department (TCED) is distributing electricity within 12.65 sq.km area out of 101 sq.km area of Thrissur Municipal corporation, and the balance area is served by KSEBL. TCED is supplying electricity to 41000 consumers within their license area.

(2) The annual energy requirement of TCED is about 150MU and the average billing demand is about 35 MVA.

(3) TCED had established one 110kV s/s, one 66kV s/s and one 33kV s/s within their licensed area. M/s TCED avails supply at 110 kV and 66 kV voltage levels from Viyyur Substation of KSEB Ltd. These substations are located at Patturaikal, within the licensed area of TCED. The details of the substations owned by M/s TCED are given below;

- 110/11 kV system has 2x12.5 MVA capacity with 6 outgoing feeders
- 66/11kV substation contiguously existing has 3x10 MVA capacity with 8 feeders
- 110/33kV 16MVA with 2, 33 kV feeders feeding to 33 kV substation situated in east part of the licensee area and has 2x5MVA capacity with 4 feeders.

Thus, the total capacity of the substations installed within the area of TCED is 65 MVA.

(4) Existing 110kV and 66 kV substation has no space for future expansion. The 110kV and 66kV feeds from the Viyyur substation of KSEBL. Hence these substations have single point of failure vulnerability, which do not meet (N-1) requirement mandated as per CEA standards. The 33kV transformer is also at Full capacity.

(5) The proposed 110kV substation has primary objective of overcoming the (N-1) constraint since it is from an alternate substation of KSEBL with associated transmission system. The new 110kV substation and 8 feeders planned from there will add enough ring networking to existing TCED 11kV system and thus improving overall reliability, availability of feeders and hours of supply to consumers.

The elimination/ upgradation of the existing 66kV system is possible only with this alternate 110kV S/s to manage change over.

(6) M/s TCED submitted that, due to the failure of Viyyur Substation, the supply was interrupted for almost 167.4 hours under TCED area in the year during the period from 2021 to 2023.

Hence, TCED is not in a position to provide 24x7 uninterrupted supply to its consumers. By considering all these aspects in detail, M/s TCED has planned to set up a new 110 substation by availing supply from a different source from KSEBL.

(7) M/s TCED further submitted that they had prepared the DPR and submitted the same to the Ministry of Power (MoP) GoI, and approved the scheme under RDSS. The Central Government has approved the estimate of the substation with the capital cost of Rs 38 crore under RDSS scheme. As per the conditions of approval under RDSS, the substation need to be commissioned by the year 2025.

(8) TCED has identified Laloor as the ideal place for substation. The site survey has already been carried out. To get the connectivity to the proposed substation from Madakathara- Valappad line, TCED and KSEBL had done multiple meetings at various venues but could not come to a consensus. Hence, the TCED file the instant petition before the Commission.

3. M/s KSEB Ltd vide the counter statement dated 17.08.2023 had submitted the counter arguments on the petition filed by TCED and its summary is given below;

(1) The 110kV and 66kV substations of TCED at Patturaickal avail power from tap lines, from Viyyur substation of KSEBL. The details of the feeding arrangement are given below;

Sl No	Substation	Transformer details	Feeding
1	110kV Substation Patturaikal	2 × 12.5MVA 110/11KV 1×16MVA 110/33kV	Tapping arrangement from Viyyur Pullazhy (VIPL) feeder
2	66kV Substation Patturaikal	3 ×10MVA 66/11 kV	Tapping from 66kV CHVI 2 feeder fed from 63MVA 110/66 kV transformer at Viyyur substation and 40 MVA 110/66 Kv transformer at Chalakkudy substation
3	33KV substation Ikkanda Warrier road	2×5MVA	110/33 kV transformer installed at 110kV Corporation substation

(2) The Commission vide the Order dated 01.02.2018 in petition OP No.11/2017 had disposed the petition filed by M/s TCED for the approval of investment for the construction of another 110KV substation at Kottappuram, observing that, there are three substations viz, 110 kV substation Pullazhy (KSEBL), 110 kV substation Viyyur (KSEBL) and 110 kV substation Patturaikkal (TCED) in corporation area.

(3) M/s TCED has proposed the construction of 110 kV substation at Laloor in the Capital Invest Plan (under RDSS Scheme) for the MYT Control Period 2022-23 to 2026-27. TCED proposes to connect the Laloor substation by tapping the 110 kV Madakkathara Valappad line.

The proposed substation location is beyond the license area of TCED and comes under the license area of KSEBL. This is equivalent to one distribution licensee is constructing 'intrastate transmission' system in the license area of another distribution licensee. This activity is not legitimate in terms of Section 12 of Electricity Act, 2003.

The KSERC (Connectivity and Intra State Open Access) Regulations, 2013, also not provide any provisions for connectivity of transmission substation constructed by one distribution licensee in the license area of another distribution licensee.

(4) KSEB Ltd as the STU of the State submitted that, the redundancy in the existing 110KV Patturaikal substation can be achieved by providing LILO arrangement as follows;

- Providing LILO arrangement on 1VIKK feeder at location 7 to the Corporation Substation by inserting a tower of required height.

- During the period of 110kV LILO arrangement works, the 11kV load of 110kV Corporation substation can be met by providing one 20MVA 110/11KV transformer in the existing yard, for which demand notice already served by STU.

- The 20MVA 110/11kV transformer can be installed in the TCED substation without affecting the existing system. By installing 20MVA 110/11KV transformer, the entire load of 66/11kV system can be met by this transformer and also the existing 66kV system of M/s TCED substation can be easily dismantled.

  The 66/11kV system at 110kV substation Viyyur is maintained exclusively for catering the load of M/s TCED and M/s. Appolo tyres. However, M/s Appolo tyres has provided an undertaking to upgrade their 66 kV system to 110 kV, in line with KSEBL.

  By providing the LILO arrangement on 1VIKK feeder, 110kV supply redundancy can be ensured at 110KV s/s of TCED at Patturaikkal, which results in better reliability, flexibility and ensuring N-1 security.

However, TCED has not responded to the proposal of KSEBL.

(5) KSEBL further submitted the spare capacity available at their nearby substations, the details are given below.

SL No	Substation name	Installed Capacity	Existing Load	Network Augmentation in Progress
1	Viyyur	25 MVA (2 ×12.5 MVA)	15 MVA	AS received for enhancement of 12.5 MVA to 20 MVA
2	Ollur	37.5 MVA (3 ×12.5 MVA)	26 MVA	
3	Pullazhy	40 MVA (2×20 MVA)	21 MVA	
4	Mannuthy	25 MVA (2×12.5MVA)	7.5 MVA	The second 12.5 MVA Transformer is scheduled to commission within one month
Total Installed capacity- **127.5MVA** Total Demand- 69.5MVA				

(6) KSEBL is directly feeding more than 50% of the consumers in the Thrissur Corporation area. The existing demand of TCED is less than 40 MVA. The gross demand of the TCED can be easily met by KSEBL.

The 110 kV Pullazhy substation which is located at 3 kms from Laloor is under loaded and unutilized. Hence the immediate power requirement can be catered by Pullazhy substation itself by drawing extra 11 kV feeders. After the network augmentation of Viyyur and Mannuthy Substations, abundant spare capacity will be available and KSEBL can cater any future demand of TCED.

(7) Being the STU of the State, KSEBL is ensuring coordinated development of efficient and economical intra state transmission system for fulfilling the future power demand of the city with reliability and redundancy. KSEBL is willing and well equipped to provide reliable supply with N-1 condition to M/s. TCED. There is no requirement for an extra 110 kV substation at Laloor.

(8) As per the Clause 44.6 of CEA (Measures Relating to Safety & Electric Supply) Regulations, 2010, stipulates that, there shall not be tapping of another transmission line from the main line for 66kV and above class of lines.

Since the feeding arrangement of M/s TCED is from tap lines at both 66kV and 110kV levels, KSEBL has proposed LILO arrangement of existing tap line feeder, i.e., 110kV Viyyur-Pullazhy (1VIPL) feeder to 110kV substation at Patturaickal. As the CEA regulations need to be strictly adhered, the tapping arrangement needs to be converted to LILO immediately.

M/s. TCED is a user of intra state transmission system, they are bound to adhere the safety standards and convert the tapping of lines to LILO arrangement immediately. Due to the non-availability of LILO arrangement, the petitioner is not getting supply redundancy with the existing arrangement.

Considering all the factors, KSEBL requested that, the proposed substation at Laloor which is only 3kms away from existing 110kV substation Pullazhy, is not necessary.

4. The Commission admitted the petition as OP No. 53/2023. The hearing on the matter was conducted on 12.12.2023. Shri. Jose. T.S Electrical Engineer, TCED presented the petition on behalf the petitioner. Sri. Rajan.M.P, Deputy Chief Engineer, Tariff & Regulatory Affairs Cell, and Shri. Dinesh.K, Deputy Chief Engineer, Transmission, Thrissur presented the counter arguments on behalf of the KSEBL. The summary of the deliberations during the hearing is extracted below.

(1) M/s TCED submitted the following during the hearing;

- The distribution network of the TCED spans approximately 12.65 sq. km and has an annual energy sale of around 158 MU. TCED possesses its own 110kV and 33kV substation at Patturaickal, Thrisssur, with 610 distribution transformers. TCED receives

incoming supply from Viyyur Substation of KSEB Ltd at 110 kV and 66 kV voltage levels.

- 110/11kV Substation having 2x12.5 MVA Transformer capacity with 6 nos outgoing feeders(25MVA). The 66/11kV substation having 3x10 MVA transformer capacity with 8 nos outgoing feeders (30 MVA). The 33kV substation located at Ikkandawarrier Road, having 2 x 5 MVA transformer capacity with 4 nos. outgoing feeders (10 MVA). Thus, the total existing capacity comes to 65 MVA.

- TCED avails 110KV supply through a tap line from the Viyyur Pullazhy (VIPL) feeder. During 2021-23 the frequency of supply interruptions to the TCED substation from KSEB Ltd was very high, due to which the licensee could not provide 24*7 supply uninterrupted. During last month, there are 10 outages which resulted in a total supply interruption of 19 hours.

- TCED further submitted that the maximum demand (MD) of the Patturakkal substation has increased from 26.479 MVA in 2013 to 44.91 MVA in 2023. The implementation of the proposed substation at Laloor will enable them to meet the n-1 requirement. Thrissur town is a fast-growing town and the requirement of power is also increasing. By the year 2030, TCED expects a MD of 71.16MVA.

- TCED further submitted that, the proposed location will shift the feeding source, and the new 110kV s/s with 8 feeders will add enough ring network to the existing 11kV system. It will improve overall reliability, availability of feeders and hours of supply to the consumers.

- Laloor is located at a distance of 600m from the distribution area of TCED. The Madakkathara- Valappad 110kV line is also available nearby. Out of the 8.2kM EHT line proposed, 7.50km is going through paddy field.

- The Central Government has approved Rs 38.00 crore for the construction of the proposed 110kV substation and allied works under RDSS and sanctioned 60% of the approved estimate as grant.

- TCED and KSEBL has number of discussions to finalise the connectivity of the proposed substation from Madakkathara-Velappad line, however they could not arrive at a consensus for the project. For connectivity, TCED already submitted an application to the Chief Engineer (Transmission- North), KSEBL, but it is pending for approval.

- The proposal of KSEBL to have 110kV LILO arrangement by dismantling the existing 66kV s/s is possible only after the commissioning of the new substation at Laloor.

(2) The respondent KSEBL submitted the following during the hearing;

- The 110kV s/s and 66kV s/s of TCED at Patturaickal is availing supply from KSEBL at two voltage levels, through tap lines from 110kV Viyyur – Pullazhy (1VIPL) feeder and 66kV Chalakudy-Viyyur (6CHVI 2) feeder. The total load requirement of TCED is about 40 MVA only.

  The tapping of 66 kV supply from 6CHVI 2 is causing interruption on line fault and is prolonging for the last few years due to lack of second source. It could be overcome by providing LILO connection. Though KSEBL has proposed for LILO arrangement to TCED number of times, however they are reluctant to accept the proposal.

- There are 5 Nos of 110kV Substations around TCED distribution area viz-Viyyur, Ollur, Pullazhy, Mannuthy and Palakkal. The total capacity of these substations together is about 152 MVA, out of it the demand of KSEBL is 80 MVA only and the spare capacity available is about 72 MVA.

  The 110kV Substation Pullazhy is located 3km away from the proposed Laloor substation and is under loaded.

- KSEB Ltd further submitted that the Existing Madakkathara-Valappad 110 kV line is constructed with ACSR Wolf conductor of current carrying capacity of 343 A. The 110 kV Valappad and Palakkal substations connected to this feeder is already having a station capacity of 61 MVA. By adding one more station at Laloor with 40 MVA station load, the existing Wolf conductor had to bear an additional load of 220 A.

  More over in case of system contingency, this line is used for feeding other stations with restriction according to the grid conditions. Therefore upgradation of entire 28 kM of 110 kV Madakkathara - Valappad (1MDVA) line from existing Wolf to HTLS conductor incur an additional cost of Rs 14.00 crore.

  For the drawal of 110 kV line and tower erection from tower location '60' to the proposed substation site requires new right of way through public land / Kole padam. In addition, the provision towards compensation/ litigation also to be considered into account which will delay the execution beyond the time frame of RDSS. The total additional cost for changing the conductor and allied works may be about Rs 45.00 crore, and KSEBL may submit the details of the additional cost within one week.

- The existing capacity of the 110kV s/s and 66kV s/s of TCED is 65 MVA where as the total demand of the licensee is less than 40 MVA only. Considering the total electricity demand of TCED, the proposed substation at Laloor may be under utilized and the additional cost has to be borne by the consumers without any benefit.

- KSEBL further submitted that, even now, during emergency situation and Thrissur Pooram, 11kV supply from KSEBL is fed to Corporation area at 4nos. of interlinking metered points. Similar interlinking HT points of KSEBL are available at the periphery of TCED to meet the load during emergencies.

- KSEB Ltd submitted that TCED can avail two independent 110kV sources from Madakkathara 400kV Substation or Kunnamkulam 220kV Substation by upgrading present 66kV System to 110kV and there by minimizing interruptions of Thrissur Corporation.

(3) Based on the deliberations, the Commission has directed the parties to clarify the following;

(i) To what extent can the interruptions be reduced by the implementation of the proposed 110 kV substation at Laloor?.

(ii) Whether TCED has any technical or commercial objection to switching the existing substation arrangement of the tapped line to the LILO arrangement?

(iii) The age of the transformers in the existing 66KV substation of TCED and how much duration is needed to dismantle the existing 66KV substation when the proposed substation comes.

(iv) Whether TCED had explored the possibility of availing supply from Pullazhy substation as submitted by KSEB Ltd, instead of the proposed Laloor substation.

(4) In reply to clarifications sought by the Commission, TCED submitted that the two transformers of 66kV s/s were installed in the year 1981 and one transformer is installed in the year 2006.

The upgradation of 66KV substation can be ensured only after ensuring the supply redundancy. The LILO arrangement proposed by the KSEB Ltd can be done after reaching the redundancy of supply.

5. In compliance of the directions of the Commission, KSEBL vide the affidavit dated 09.01.2024 submitted the following, additional points;

(i) The existing Madakkathara- Valappad 110 kV line is constructed with ACSR Wolf conductor of current carrying capacity of 343 Ampere and is the major source of supply to Valappad 110kV bus feeding other substations.

By adding one more station at Laloor with 40 MVA load, the existing wolf conductor has to bear an additional load of 220A.

Moreover, in the case of system contingency, this line is used for feeding other stations with restriction according to the grid condition. Therefore, the upgradation of the entire 28kM of 110kV Madakkathara- Valappad line from the existing Wolf to HTLS conductor is necessitated and the cost of the same will be in addition to the construction cost of 110kV s/s and LILO arrangement.

(ii) For the drawal of 110kV line and tower erection from tower location 60 to the proposed Laloor s/s, new right of way through public land/ Kole Padam is required.

(iii) The additional cost for drawing 110kV line works for connecting the Laloor s/s is estimated as below.

Sl No	Particulars	Amount (Rs. Cr)
1	Cost of conductor changing of 28kM (Ckt) 1 MDMA Wolf conductor with HTLS conductor	14
2	Cost of new 110kV line construction with OPGW (7km DC line using HTLS conductor and 1kM UG cable)	23
3	Compensation cost towards tower footing and RoW	8
	Total anticipated cost	45

(iv) KSEBL further submitted that, the LILO work for the conversion of the existing 66kV s/s to 110kV s/s can be managed with minimum interruptions. KSEBL has already prepared DPR and estimate for installing new 110/11kV 20 MVA transformer for transferring the existing 66KV load to the 110kV system at Patturaickal. The LILO arrangement with minimum interruptions can be done subsequently from 110kV Viyyur Kandassankadavu line. Thereby TCED can avail two independent 110 KV sources from Madakkathara 400kV substation or Kunnamkulam 220kV s/s by upgrading present 66kV system to 110kV system. However, TCED has not responded to the proposal of KSEB.

6. In response to additional submission of KSEBL dated 09.01.2024, M/s TCED submitted the following;

(i) The argument of KSEBL that, the proposed 110kV s/s at Laloor will be underloaded is baseless argument.

(ii) The completed application rectifying all the anomalies pointed out by the respondent vide Letter No. TCED-RDSS-2405/22 dated 23.01.2024 was submitted to KSEBL.

(iii) Regarding the upgradation of 66kV s/s to 110kV s/s, it is possible only after the commissioning of the proposed 110 kV s/s.

(iv) The petitioner will be drawing underground cable from the proposed substation to its distribution area.

Analysis and Decision of the Commission

7. The Commission having examined in detail the proposal of the TCED to construct a new 110kV substation at Laloor under RDSS and the comments of KSEBL, the provisions of the Electricity Act, 2003, KSERC (Terms and Conditions for Determination of Tariff) Regulations, 2021, other Rules and Regulations in force, decide the matter as follows;

8. Thrissur Corporation Electricity Department (TCED) is one of the small distribution licensees in the State of Kerala. The licensed area of TCED is around 12.63 sq.km only and serving electricity to about 40,000 consumers in the area. TCED avail power from KSEBL at BST tariff approved by the Commission from time to time.

At present, TCED has one 110kV substation and one 66kV substation, at same location at Patturaickal. The total capacity of the sub-station together is about 65MVA, as against the present load requirement of 40MVA of TCED.

Both the substations of TCED avail power from Viyyur 110kV substation of KSEBL, through tap arrangements. Since both the substations receives power from the single source, i.e. from the Viyyur substation of KSEBL, TCED reports to had 8 interruptions with 26 hours duration in 2021, 8 interruptions with 17.80 hours duration in 2022, and 6 interruptions with 24.30 hours in the year 2023 at the110kV s/s of TCED. Similarly, TCED report to had 10 interruption with 26.92 hours duration in 2021, 36 interruption with 59.11 hours duration in 2022, and 31 interruptions 54 hour duration in 2023 at 66kV.

Hence, TCED proposed to have a new 110 kV substation at Laloor with a transformer capacity of 40 MVA. The location of the substation is outside the license area of TCED. It is proposed to connect the substation with the Madakkathara- Valappad 110kV line of KSEBL, by drawing 8km 110 kV line through paddy field.

The Commission has also noted that, the Power Finance Corporation, on behalf of the Ministry of Power, GoI vide the approval dated 25.04.2022 has approved to include the 110 kV s/s at Laloor and allied works with a total estimate cost of Rs 37.74 crore under Revamped Distribution Sector Scheme (RDSS) of TCED as part of the infrastructure projects approved under RDSS for loss reduction works. Under RDSS, the TCED is eligible to get 60% of the approved estimate of Rs 37.74 crore i.e., Rs 22.64 crore as grant from Central Government for the project.

9. KSEBL vehemently opposed the proposal of TCED to construct another 110 KV substation at Laloor. According to KSEBL, it had four 110 kV substation within the area of Thrissur Corporation. The total spare capacity available with these substation is more than 70 MVA capacity. Out of it, the Pullazhy 110 KV s/s is situated within 3 km from the area of TCED. The interruptions at the existing 110 kV and 66 kV substations of TCED at Patturaickal can be avoided by converting the existing tap line to LILO arrangements.

KSEBL had also opposed the proposal of the TCED to connect the proposed Laloor substation with the Madakkathara- Valappad 110 kV line of KSEBL by constructing 8kM of 110 kV line through paddy filed citing the following reasons;

- The existing capacity of the Madakkathara- Valappad line is fully used.
- In order to connect the Laloor substation, they have to change the existing wolf conductor of these line with HTLS conductor, and this would results an additional cost of Rs 14.00 crore.

10. The Commission has noted the proposal of TCED to construct a new 110 kV s/s at Laloor under RDSS scheme approved by the Central Government and also the objections raised by KSEBL against the proposal.

The proposal to construct the 110kV substation at Laloor was included in the RDSS scheme approved for loss reduction works in the area of distribution of TCED with a budget estimate of Rs 37.74 crore. Accordingly, as part of RDSS, the licensee is eligible to get 60% of the approved estimate of Rs 37.44 crore as grant, i.e., TCED is entitled to get Rs 22.66 crore as grant for the construction of the substation.

As per the Section 39(2) of the Electricity Act, 2003, KSEBL as the STU is responsible for the co-ordinated development of the intra-State Transmission within the State of Kerala. It is the responsibility of the KSEBL as the STU to provide adequate redundancy of supply to TCED. If KSEBL plans the transmission system within the State, in coordination with the TCED to address the interruptions and other system constraints faced by them, the present dispute on requirement of the new substation at Laloor could have been avoided.

The Commission has also noted inconsistency in the approach of KSEB in the matter. The Distribution Reforms Committee constituted by the Government, in which KSEB Ltd is also a part of, has approved the DPR of TCED, including the 110 kV substation at Laloor way back in 21.02.2021.This has lead to approval of the DPR by the State Cabinet and thereafter by the Central Government. As per the approvals the project has to be completed by 2025. Thereafter, the matter is seen discussed in a joint meeting chaired by CMD, KSEB Ltd wherein it is recorded that KSEBL as STU has no objection in constructing the substation. However, the matter has been dragged over years and is now escalated as a dispute before the Commission.

Since the proposal to construct the 110kV substation is included under RDSS and the licensee TCED is eligible to get Rs 22.66 crore as grant under RDSS and any delay in execution can result in loss of grant, the Commission is of the considered view that further delay on the part of KSEBL is not in the best interest of the State. Accordingly, the Commission is inclined to grant approval to TCED for proceeding with the works.

Hence, the Commission after appraising the matter in detail has decided to give consent to proceed with the construction of the 110 kV substation at Laloor under RDSS scheme. KSEBL as the STU is directed to grant connectivity to the substation by following due procedure

11. The Commission has noted that, the total approved estimate cost of the 110kV substation at Laloor and allied works is Rs 37.74 crore. Out of the approved estimate, 60% of the same amounts to Rs 22.66 crore is only eligible to get as grant under RDSS. The licensee M/s TCED has to met the balance 40% of the approved cost of the substation and allied works as their own.

12. The instant petition was filed for issuing direction to KSEBL to grant connectivity to the proposed 110kV substation at Laloor under RDSS. The petitioner has not sought any investment approval for the balance amount to be met for the construction of the proposed substation at Laloor and not proposed the source of fund for meeting the balance amount excluding the grant under RDSS.

As per the Order dated 22.11.2023 in petition OP No. 33/2023 in the matter of Truing Up of accounts of TCED for the year 2021-22, the total regulatory surplus available with TCED as on 31.03.2022 is Rs 163.51 crore. The surplus with the TCED is mainly due to the higher mix of commercial consumers with higher tariff, within the area of the licensee since their area of operation is limited to the urban area of the Thrissur Municipal corporation.

The Commission has approved the revenue surplus after allowing all the reasonable expenses including the normative Return as per the norms specified in the Tariff Regulations notified by the Commission from time to time. As per the Regulatory practices, the revenue surplus approved by the Commission after accounting the approved expenses including normative return has to be passed on to the consumers as reduction in tariff.

Since the Commission has been following uniform retail tariff and differential BST, the surplus has to be passed on to KSEBL for meeting its subsidy burden to provide electricity to the subsidised categories of consumers. However, this may result in increase in the BST of the TCED. Considering all these aspects in detail, the Commission has been allowing the licensee TCED to retain the surplus with them on the condition that, it shall be utilised only with the prior approval of the Commission.

TCED can utilise 40% of the approved cost of the Laloor substation and allied works amounting to Rs 15.10 crore from the approved surplus available with the licensee. However, the Commission hereby clarify that, TCED is not eligible to get interest, return on equity and depreciation for the assets created with the grant from the Central Government under RDSS and also the balance amount met from the approved surplus which is to be passed to the consumers.

13. The Commission has also noted the issues raised by the KSEBL as the STU for the connectivity of the proposed 110kV substation with the 110 kV Madakkathara- Valappad line, including the following;

(1) Additional cost of Rs 14.00 crore, involved for changing the existing wolf conductor to HTLS conductor to enhance the electricity carrying capacity of the 110 kV DC Madakkathara-Valappad line.

(2) The proposed substation is outside the license area of TCED and the proposal amounts to construction of intrastate transmission system by a distribution licensee beyond its area of license.

(3) The nearby substations of KSEBL has spare capacity to meet the additional requirement of TCED.

(4) Modifying the existing connectivity of TCED with LILO arrangement will provide N-1 contingency and better reliability.

The Commission has examined the assertion made by KSEBL vide issue (1) above as against the data furnished along with the Capital Investment Plan submitted by KSEBL for Thrissur area and has noted that sufficient capacity is available in the EHT line / system for catering the load to be transferred to the proposed substation. Accordingly, the Commission rejects the contention and at the same time is restraining ourselves from initiating proceedings against the STU, for the time being. However, for granting connectivity to the transmission system, proper load flow study has to be carried out to determine the most optimal connectivity. But, even after a lapse of over 2 years of approval by the Distribution Reforms Committee, the STU is yet to carry out required studies.

Considering the above aspects in detail, the Commission hereby direct KSEBL to conduct detailed load flow studies with the proposed 110kV Laloor substation by modelling all the EHT lines passing through the Thrissur Corporation and nearby areas. KSEBL shall study each case separately with cost benefit analysis including addition/ reduction in system losses, with special reference for connectivity of the proposed Laloor s/s at different load conditions, with KSEBL transmission grid.

KSEBL shall submit a detailed report with specific recommendations, within one month from the date of this Order. The Commission hereby direct the Director (Transmission) of KSEBL to bestow special attention to complete the load flow studies within the time limit specified by the Commission and to submit the report to take an appropriate decision on the connectivity of the proposed 110kV s/s at Laloor with KSEBL grid. The Commission hereby clarify that, the additional cost, if any, incurred by the STU, specifically for the connectivity of the Laloor substation and allied works shall be borne by the TCED as its own sources

On issue number (2) above, it is evident that the proposed 110 kV s/s and its downstream system is not part of the intra-state transmission system. It is part of the distribution system of the licensee. However, it is pertinent that the location of the substation is outside the area of license of TCED. On this, TCED has undertaken that they will use UG cables to draw power to their area of license. Considering this, the Commission grants permission to establish the substation at Laloor, subject to the Condition that the power drawn shall be exclusively used in the area of license of TCED alone. Also, the EHT line connecting the substation with state grid shall be the asset of STU, cost for which shall be borne by TCED in the same manner as ordered in para 12 above.

The Contention at (3) above is without any basis as a mere perusal of data furnished by KSEBL will reveal that the proposal does not meet

N-1 contingency. Further, such arrangements will lead to complexities in metering and billing and has to be avoided to the extent possible.

The point raised at (4) above on the requirement for modification of existing connectivity is valid. However, it cannot be held as a counter proposal for a new connectivity for meeting the requirements of ever growing network and electricity demand in the area of license.TCED is directed to coordinate with STU and facilitate the modification in the existing connectivity. TCED shall submit a plan along with time schedule for modifying the connectivity, in consultation with KSEB Ltd, within one month.

Orders of the Commission

14. The Commission, has examined the petition filed by M/s TCED with the request to give direction to KSEBL to grant connectivity to the proposed 110kV s/s of TCED at Laloor under RDSS, the arguments of the KSEBL, the provisions of the Electricity Act, 2003, other Rules and Regulations in force, hereby Orders the following;

(1) Grant consent to M/s TCED to proceed with the implementation of the proposed 110 kV substation at Laloor under RDSS, with the observations and clarifications given under paragraphs 10, 11, 12, and 13 of this Order.

(2) KSEBL shall conduct detailed load flow studies by modelling the proposed 110kV substation and all the EHT lines, with special reference to connect the proposed substation with any one of the nearby 110kV DC lines of KSEBL as discussed under paragraph 13 of this Order. TCED is directed to provide necessary details required for the study.

KSEBL shall submit a detailed report within one month from the date of this Order, with the specific recommendations on the most optimal connectivity, with cost benefit analysis including addition/ reduction in system losses in each case separately.

(3) The petition shall be disposed after considering the reports to be submitted by KSEB Ltd and TCED.

Sd/-	**Sd/-**	**Sd/-**
T K Jose	**Adv. A J Wilson**	**B Pradeep**
Chairman	**Member**	**Member**

Approved for issue

Sd/-
C R Satheesh Chandran
Secretary