

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 03/TT/2018

Coram:

**Shri P. K. Pujari, Chairperson
Dr. M.K. Iyer, Member**

Date of Order: 22.02.2019

In the matter of:

Approval of transmission tariff from COD to 31.03.2019 "Bunching of Tirunelveli-Edamon section of the Tirunelveli-Muvathapuzha (Cochin) 400 kV quad D/C line initially (and temporarily) at 220 kV with existing Tirunelveli-Edamon 400 kV twin D/C line (400 kV line charged at 220 kV) under Transmission System associated with Kudankulam Atomic Power Project" in Southern Region under Regulation 86 of Central Electricity Regulatory Commission (Conduct of Business) Regulations 1999 and Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations 2014.

And in the matter of:

Power Grid Corporation of India Limited
"Saudamini", Plot No.2,
Sector-29, Gurgaon -122 001

.....Petitioner

Vs

1. Karnataka Power Transmission Corporation Limited,
(KPTCL), Kaveri Bhawan,
Bangalore – 560009
2. Transmission Corporation of Andhra Pradesh Limited,
(APTRANSCO), Vidyut Soudha,
Hyderabad- 500082
3. Kerala State Electricity Board (KSEB),
Vaidyuthi Bhavanam,
Pattom, Thiruvananthapuram - 695 004
4. Tamilnadu Electricity Board (TNEB)
NPKRR Maaligai, 800, Anna Salai,
Chennai - 600 002
5. Electricity Department
Government of Goa, Vidyuti Bhawan,
3rd Floor, Panaji,Goa-403001
Order in Petition No.03/TT/2018



6. Electricity Department,
Government of Pondicherry,
Pondicherry - 605001
7. Eastern Power Distribution Company of Andhra Pradesh Limited,
(APEPDCL) P&T Colony, Seethmadhara,
Vishakhapatnam, Andhra Pradesh
8. Southern Power Distribution Company of Andhra Pradesh Limited,
(APSPDCL), Srinivasasa Kalyana Mandapam Backside
Tiruchanoor Road, Kesavayana Gunta,
Tirupati-517 501, Chittoor District, Andhra Pradesh
9. Central Power Distribution Company of Andhra Pradesh Limited,
(APCPDCL), Corporate Office, Mint Compound,
Hyderabad - 500 063, Andhra Pradesh
10. Northern Power Distribution Company of Andhra Pradesh Limited,
(APNPDCL), Opp. NIT Petrol Pump,
Chaitanyapuri, Kazipet, Warangal - 506 004, Andhra Pradesh
11. Bangalore Electricity Supply Company Ltd. (BESCOM),
Corporate Office, K. R. Circle
Bangalore - 560001, Karnataka
12. Gulbarga Electricity Supply Company Ltd (GESCOM)
Station Main Road, Gulbarga, Karnataka
13. Hubli Electricity Supply Company Ltd, (HESCOM)
Navanagar, PB Road, Hubli,
Karnataka
14. MESCOM Corporate Office,
Paradigm Plaza, AB Shetty Circle,
Mangalore – 575001, Karnataka
15. Chamundeswari Electricity Supply Corporation Ltd.,
(CESC), # 927, L J Avenue, Ground Floor,
New Kantharaj Urs Road, Saraswatipuram,
Mysore - 570 009, Karnataka
16. Transmission Corporation of Telangana Limited
Vidhyut Sudha, Khairatabad,
Hyderabad-500082

...Respondents



For Petitioner : Shri S. K. Venkatesan, PGCIL
Shri S.K. Niranjan, PGCIL

For Respondents : Shri S. Vallinayagam, Advocate, TANGEDCO

ORDER

The instant petition has been filed by Power Grid Corporation of India Limited (hereinafter referred to as "the petitioner") for determination of transmission tariff from COD to 31.3.2019 for "Bunching of Tirunelveli-Edamon section of the Tirunelveli-Muvathapuzha (Cochin) 400 kV quad D/C line initially (and temporarily) at 220 kV with existing Tirunelveli-Edamon 400 kV twin D/C line (400 kV line charged at 220 kV) under Transmission System associated with Kudankulam Atomic Power Project" in Southern Region for tariff block 2014-19 in terms of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 (hereinafter "the 2014 Tariff Regulations").

2. The petitioner is entrusted with the implementation of "Transmission System associated with Kudankulam Atomic Power Project". As per the investment approval of the project, accorded by Government of India vide Memorandum No.12/18/2003 dated 25.5.2005 of Ministry of Power, the scheduled date of commercial operation (COD) of the transmission scheme was 42 months from the date of investment approval. Accordingly, the scheduled COD of the instant transmission asset was 1.12.2008. The petitioner has claimed the COD of the Tirunelveli-Edamon section of the Tirunelveli-Muvathapuzha (Cochin) 400 kV quad D/C transmission line as 23.12.2016.

3. The petitioner has submitted that the COD of the Tirunelveli-Muvathapuzha (Kochi) 400 kV D/C line was held up due to non-completion of Edamon-Kochi portion



of the line because of RoW issues in Kerala. The petitioner in Petition No.83/MP/2014 submitted the detailed reasons for the delay in the completion of the Tirunelveli-Muvattapuzha (Kochi) 400 kV D/C line upto 2014 and sought appropriate relief. The Commission while disposing of the said petition made the following observations in order dated 11.4.2017:-

"In our view, after the asset is completed and commissioned, its tariff will be determined as per the Tariff Regulations and Petitioner will be entitled to IDC and IEDC if it is proved that delay in execution of the project is not on account of the Petitioner or its contractor."

4. The petitioner has submitted that the Tirunelveli-Edamon section of the Tirunelveli-Muvathapuzha (Cochin) 400 kV quad D/C line has been utilized by bunching with Tirunelveli-Edamon 220 kV line (on the same multi circuit towers). This has enhanced the power transfer capacity of existing line to meet the critical power requirement in Kerala. The petitioner has submitted that the issue of bunching was discussed in various meetings viz- 39th meeting of Standing Committee on Power System Planning of Southern Region held on 28-29th December, 2015, Joint Study Meeting of Southern Region held on 14-17th March, 2016 and 40th meeting of Standing Committee on Power System Planning of Southern Region held on 19.11.2016 wherein members agreed for the utilization of Tirunelveli-Edamon portion of Tirunelveli-Kochi 400 kV DIC line by bunching with Tirunelveli-Edamon 220 kV line on the same multi circuit towers.

5. Relevant extracts of these meetings are reproduced below:

(A) 39th Standing Committee Meeting (SCM) on Power System Planning of Southern Region held on 28-29th December, 2015:

"26.0 Utilization of Tirunelveli - Edamon portion of Tirunelveli - Cochin 400kV Quad D/C line was discussed, the relevant paras has been extracted as under.



26.1 Director, CEA said that PGCIL has informed that Tirunelveli-Cochin 400kV quad D/C line (routed via Edamon on multi circuit towers upto Edamon) under the scheme "Transmission System associated with Kudankulam APP" is held up due to severe RoW issues in Edamon-Cochin section and would take some more time for completion. Considering severe power crisis in Kerala, POWERGRID proposed to utilize the completed Tirunelveli-Edamon portion of Tirunelveli-Cochin 400kV quad D/C line by charging the line at 220kV level in Tirunelveli-Edamon portion for catering power requirement of Kerala.

26.2 COO(CTU-Plg), PGCIL explained that the above proposal would provide additional feeds to Kerala, and would relieve the overloading on Palakkad-Udumalpet 400kV D/C line. This would also lead to utilization of stranded assets which are left out idle from a long time.

26.3 AGM (CTU-Plg), PGCIL said that terminal equipments need to be changed by KSEB/PGCIL if Tirunelveli-Edamon portion of the Tirunelveli-Cochin 400kV line is to be charged at 220kV level. PGCIL further said that with this setup, as per the results of the studies, high wind scenario can be easily accommodated.

26.4 Director (Trans), TANTRANSCO said that this proposal may cause congestion in their 230KV network. He said that they would conduct Load flow study to check for any congestion in Tirunelveli (Abisekapatty) 230kV network during high wind and send their response to CEA & PGCIL."

(B) Joint Study Meeting of the Southern Region held on 14-17th March, 2016:

"5.0 Possibility of operating Tirunelveli – Edamon section of Tirunelveli Muvathapuza 400kV quad D/C line initially and temporarily at 220kV.

Possibility of operating Tirunelveli – Edamon section of Tirunelveli Muvathapuza 400kV quad D/C line initially and temporarily at 200kV by bunching with existing 220kV line was discussed. TANTRANSCO informed that as per their studies, the proposal will increase loading on the upstream 230kV lines of Tirunelveli – Edamon which are already critically loaded under high wind scenario. The study has been reviewed and CEA stated that the cumulative increase in loading is not more than 30-40MW. Further, TANTRANSCO mentioned that, vide letter dated 8.2.2016, they have informed that completed Tirunelveli – Edamon portion of Tirunelveli – Cochin 400kV Quad D/C line may be utilized by terminating the above feeder at Edamon 230kV S/S and may be charged at 230kV level as an interim arrangement."

(C) 40th Standing Committee Meeting (SCM) on Power System Planning of Southern Region held on 9th November, 2016

"15.0 Utilization of Tirunelveli - Edamon portion of Tirunelveli - Cochin 400kV Quad D/C line

15.1 CEA stated that during 39th SCPSPSR, it was proposed to utilize the completed Tirunelveli-Edamon portion of Tirunelveli- Cochin 400kV quad D/C line by charging the line at 220kV level in Tirunelveli-Edamon portion for catering power requirement of Kerala. Director(Trans), TANTRANSCO said that this proposal may cause congestion in their 230KV network. He said that they would conduct Load flow study to check for any congestion in Tirunelveli (Abisekapatty) 230kV network during high wind and send their response to CEA & PGCIL.

15.2 TANTRANSCO suggested that the completed Tirunelveli – Edamon portion of Order in Petition No.03/TT/2018



Tirunelveli – Cochin 400kV Quad DC line may be utilised by terminating the above feeder at Edamon 230kV SS and may be charged at 230kV level as an interim arrangement, subject to the following conditions:

“The power flow in Edamon – Tirunelveli line during wind season has to be maintained by Kerala in such a way that the 230kV feeders of TANTRANSCO should not get over loaded, by providing necessary Special Protection Scheme (SPS) to limit the load drawn by Kerala”

15.3 TANTRANSCO informed that during high wind condition Kayathar, Veeranam and Udayathur 230kV feeders to Tirunelveli 230kV SS are in fully loaded condition and SPS is necessary to limit the drawl of Kerala.

15.4 Chief Engineer, CEA enquired KSEB about the present loading on existing Tirunelveli – Edamon 400kV D/c line (charged at 220kV). KSEB informed that max loading observed till date is in the range of 250-260 MW per ckt and no constraint is observed.

15.5 POSOCO suggested that Reverse Power Relay could also be used instead of SPS to control power flow on this line.

15.6 Chief Engineer(PSPA-II), CEA suggested that based on the studies of SRPC, Kerala and Tamil Nadu the flow on this line could be restricted between 600-650 MW.

15.7 After discussions it was agreed that power flow on the line may be contained within the range of 600-650 MW with proposed arrangement by providing necessary SPS at Edamon end.”

6. The petitioner was directed to clarify regarding difference in arrangement discussed in 39th & 40th SCM and implemented arrangement. In response, petitioner vide affidavit dated 4.4.2018 has submitted that it was agreed in the 39th and 40th SCMs to terminate Tirunelveli-Edamon line at Edamon 230 kV Sub-station with installation of SPS by KSEB. However, in the present case the line was bunched between Towers 16 & 217 without being terminated in Edamon 230 kV Sub-station.

7. TANGEDCO, Respondent No.4, has filed its reply vide affidavits dated 22.1.2018 and 19.4.2018. The submissions made by TANGEDCO are as follows:-

- a. In the approved scope for 'Transmission system associated with Kudankulam Atomic Power Project", Bunching of Tirunelveli-Edamon section is not included. The petitioner without any approval has proceeded with the "bunching" work merely to keep the line charged to safeguard their asset and to claim the transmission charges for the redundant asset.



- b. The instant asset is not rendering any service intended, as the works in the Edamon-Muvathapuzha section has not been taken up due to severe ROW issues'
- c. The petitioner should submit the justification and details regarding cost over-run and discrepancy in IDC
- d. The petitioner should submit the CEA certificate indicating that the power transfer capacity has been enhanced by this work.
- e. The RoW in case of the Edmon-Muvathapuzha section of Tirunelveli-Muvathapuzha line pertains to Kerala and thus it is a state specific issue and thus IDC and IEDC for the period of delay should be borne by the concerned beneficiary viz KSEBL.

8. In response, the petitioner has filed its rejoinder vide affidavits dated 6.3.2018 and 22.5.2018 to the replies filed by TANGEDCO. As regards the approval for bunching, the petitioner has submitted that the utilization and impact of the instant was discussed and agreed in SCMs and Joint Study Meeting enclosed with the petition.

Analysis and Decision

9. We have considered the submissions of the petitioner and TANGEDCO. The completion of Tirunelveli-Muvathapuzha (Kochi) 400 kV D/C line was held up due to non-completion of Edamon-Kochi portion of the Tirunelveli-Muvathapuzha (Kochi) 400 kV D/C line because of RoW issues in Kerala. The petitioner approached the Commission in Petition No.83/MP/2014 for appropriate relief as the Tirunelveli-Muvathapuzha (Kochi) 400 kV D/C line has been inordinately delayed. The Commission disposed the said petition vide order dated 11.4.2017 wherein it was observed that tariff for the asset will be determined after the asset is completed and



put into commercial operation.

10. As there are severe RoW problems in Edamon-Kochi portion of the Tirunelveli-Muvathapuzha (Kochi) 400 kV D/C line and the Tirunelveli-Edamon portion of the line was ready, the matter was discussed in various meetings of the constituents of the SR. As per the petitioner, the constituents of the Southern Region agreed for the utilization of Tirunelveli-Edamon portion of Tirunelveli-Kochi 400 kV DIC line by bunching with the existing Tirunelveli-Edamon 220 kV line on the same multi circuit towers. However, it is observed from the minutes of the 40th meeting of Standing Committee on Power System Planning of Southern Region held on 19.11.2016 that TANTRANSCO had suggested that the Tirunelveli-Edamon portion of Tirunelveli-Cochin 400 kV Quad DC line may be utilised by terminating the feeder at Edamon 230 kV Sub-station and charged at 230 kV level as an interim arrangement. TANTRANSCO had further suggested that as during high wind condition Kayathar, Veeranam and Udayathur 230 kV feeders to Tirunelveli 230 kV Sub-station are in fully loaded condition, SPS is necessary to limit the drawl of Kerala. Thus, the agreed arrangement was that Tirunelveli-Edamon feeder to be terminated at Edamon 230 kV Sub-station and charged at 230 kV level and that power flow on the line may be contained within the range of 600-650 MW by providing necessary SPS at Edamon end.

11. However, as per the submissions of the petitioner, the Tirunelveli-Edamon portion of the Tirunelveli-Muvathapuzha (Kochi) 400 kV D/C line was bunched with the existing Tirunelveli-Edamon 220 kV line between Towers No. 16 and 217 and was not terminated at Edamon 230 kV Sub-station and the SPS is not installed. The petitioner has not implemented the arrangement agreed in the 40th meeting of Standing



Committee on Power System Planning. Hence, we are not inclined to grant tariff for the Tirunelveli-Edamon portion of the Tirunelveli-Muvathapuzha (Kochi) 400 kV D/C line in the instant petition. The petitioner is granted liberty to approach the Commission for determination of tariff after the arrangement agreed to in the 40th SCPSP is implemented.

12. This order disposes of Petition No. 03/TT/2018.

sd/-
(Dr. M. K. Iyer)
Member

sd/-
(P.K. Pujari)
Chairperson

