

**CENTRAL ELECTRICITY REGULATORY COMMISSION  
NEW DELHI**

**Petition No. 53/TT/2020**

**Coram:**

**Shri P. K. Pujari, Chairperson  
Shri I. S. Jha, Member  
Shri Arun Goyal, Member**

**Date of Order: 13.02.2021**

**In the matter of**

Approval under Regulation-86 of CERC (Conduct of Business) Regulations, 1999 and CERC (Terms and Conditions of Tariff) Regulations, 2014 for determination of Transmission tariff from COD to 31.3.2019 for **Asset-1**: 400 kV Dharmapuri (Salem New) Somanhalli 400 kV D/C Quad Line along with Bay Extensions at Dharmapuri (Salem New) and Somanhalli Sub-stations under "System Strengthening-XIV in Southern Region".

**And in the matter of**

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

**.... Petitioner**

**Versus**

1. Karnataka Power Transmission Corporation Ltd. (KPTCL),  
Kaveri Bhawan, Bangalore-560 009
2. Transmission Corporation of Andhra Pradesh Ltd. (APTRANSCO),,  
Vidyut Soudha,  
Hyderabad-500082
3. Kerala State Electricity Board (KSEB)  
Vaidyuthi Bhavanam Pattom,  
Thiruvananthapuram-695 004
4. Tamil Nadu Generation and Distribution Corporation Ltd.  
(Formerly Tamil Nadu Electricity Board - TNEB),  
NPKRR Maaligai, 800, Anna Salai,  
Chennai-600 002
5. Electricity Department,  
Government of Goa



Vidyuti Bhawan,  
Panaji, Goa-403001

6. Electricity Department,  
Government of Pondicherry,  
Pondicherry-605 001
7. Eastern Power Distribution Company of Andhra Pradesh Limited (APEPDCL),  
P&T Colony, Seethmmadhara,  
Vishakhapatnam, Andhra Pradesh
8. Southern Power Distribution Company of Andhra Pradesh Limited (APSPDCL),  
Srinivasasa Kalyana Mandapam Backside,  
Tiruchanoor Road, Kesavayana Gunta,  
Tirupati, Chittoor District  
Andhra Pradesh- 517 501
9. Central Power Distribution Company of Andhra Pradesh Limited (APCPDCL),  
Corporate Office, Mint Compound,  
Hyderabad- 500063, 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-560 001, 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 Soudha, Khairatabad,  
Hyderabad-500082

...Respondents



**Parties present:**

**For Petitioner:** Shri S. S. Raju, PGCIL  
Shri A. K. Verma, PGCIL  
Shri B. Dash, PGCIL

**For Respondent:** Dr. R. Kathiravan, TANGEDCO

**ORDER**

The present petition has been filed by the Petitioner, Power Grid Corporation of India Ltd. ("PGCIL") for determination of Transmission tariff from COD to 31.3.2019 for **Asset-1:** 400 kV Dharmapuri (Salem New) Somanhalli 400 kV D/C Quad Line along with Bay Extensions at Dharmapuri (Salem New) and Somanhalli Sub-stations under "System Strengthening in Southern Region-XIV" (hereinafter referred as "the transmission project") for 2014-19 tariff period under Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 (hereinafter referred to as "the 2014 Tariff Regulations").

2. The Petitioner has made the following prayers:

- "1) Approve the Transmission Tariff for the tariff block 2014-19 block for the assets covered under this petition.*
- 2) Admit the capital cost as claimed in the Petition and approve the Additional Capitalisation incurred/ projected to be incurred.*
- 3) Allow the Petitioner to approach Commission for suitable revision in the norms for O&M expenditure for claiming the impact of wage hike, if any, during period 2014-19.*
- 4) Allow the Petitioner to recover the shortfall or refund the excess Annual Fixed Charges, on account of Return on Equity due to change in applicable Minimum Alternate/Corporate Income Tax rate as per the Income Tax Act, 1961 (as amended from time to time) of the respective financial year directly without making any application before the Commission as provided under clause: 25 of the Tariff Regulations, 2014.*
- 5) Approve the reimbursement of expenditure by the beneficiaries towards petition filing fee, and expenditure on publishing of notices in newspapers in terms of Regulation 52 Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014, and other expenditure ( if any) in relation to the filing of petition;*



- 6) *Allow the Petitioner to bill and recover Licensee fee and RLDC fees and charges, separately from the respondents in terms of Regulation: 52 of Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014.*
- 7) *Allow the petitioner to bill and adjust impact on Interest on Loan due to change in Interest rate on account of floating rate of interest applicable during 2014-19 period, if any, from the Beneficiaries.*
- 8) *Allow the Petitioner to bill and recover GST on Transmission charges separately from the respondents, if GST on Transmission of electricity is withdrawn from the exempted (negative) list at any time in future. Further any taxes and duties including cess, etc. imposed by any Statutory/Govt./Municipal Authorities shall be allowed to be recovered from the beneficiaries.*
- 9) *Allow tariff up to 90% of the Annual Fixed Charges in accordance with clause 7 (i) of Regulation 7 Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 for purpose of inclusion in the PoC charges.*
- 10) *Allow the Petitioner to bill Tariff from actual DOCO.*

*and pass such other relief as the Commission deems fit and appropriate under the circumstances of the case and in the interest of justice.”*

### **Background**

3. The Investment Approval (IA) for implementation of assets under the transmission project “System Strengthening in Southern Region-XIV” was accorded by Board of Directors of the Petitioner in its 265<sup>th</sup> meeting dated 27.12.2011 (vide Memorandum No. C/CP/SRSS-XIV dated 27.12.2011) with an estimated cost of ₹29733 lakh including IDC of ₹1647 lakh based on 3<sup>rd</sup> quarter 2011 price level.
4. The Revised Cost Estimate-I (RCE-I) for the transmission project was accorded by Board of Directors of the Petitioner in its 309<sup>th</sup> meeting dated 29.1.2015 (vide Memorandum No. C/CP/RCE-SR dated 23.2.2015) with an estimated cost of ₹34679 lakh including IDC of ₹3690 lakh based on August 2014 price level.
5. Subsequently, the Revised Cost Estimate-II (RCE-II) for the transmission project was accorded by Board of Directors of the Petitioner in its 351<sup>st</sup> meeting dated 16.3.2018 (vide Memorandum No. C/CP/PA1718-12-00-RCE009 dated 28.3.2018) with an estimated cost of ₹53402 lakh including IDC of ₹10859 lakh based on October 2017 price level.



6. The scope of the project was discussed and agreed in the 30<sup>th</sup> meeting of the Standing Committee on Power System Planning of Southern Region held on 13.4.2010. The same was further agreed by Southern Regional Power Committee in its 13<sup>th</sup> meeting held on 11.5.2010. The Petitioner has been entrusted with implementation of the transmission project “System Strengthening-XIV in Southern Region”.

7. The scope of the transmission project is as follows:

**Transmission Line**

- i. Dharmapuri (Salem New) – Somanhalli 400 kV D/C Quad line

**Sub Station**

- i. Augmentation of Hosur Substation by 1x315 MVA 400/220 kV Transformer and associated bays.
- ii. Extension of 400/220 kV Substation at Somanhalli
- iii. Extension of 400/220 kV Substation at Dharmapuri (Salem New)

8. The details of petitions filed by the Petitioner under the transmission project are as under:

S.No.	Asset Description	COD	Remarks
1	<b>Asset:</b> Augmentation of Hosur Substation by 1x315 MVA 400/220 kV Transformer and associated bays.	1.3.2014 (Actual)	Covered under Petition No. 96/TT/2016 (Order dated 22.8.2016)
2	<b>Asset-I:</b> 400 kV Dharmapuri (Salem New) – Somanhalli 400 kV D/C Quad Line along with Bay Extensions at Dharmapuri (Salem New) and Somanhalli Substations	30.3.2019 (Actual)	<b>Covered under the instant petition</b>

9. Accordingly, the asset covered in the instant petition is as under:

Asset	Asset Detail	SCOD	COD (claimed)
Asset-1	400 kV Dharmapuri (Salem New) – Somanhalli 400 kV D/C Quad Line along with Bay Extensions at Dharmapuri (Salem New) and Somanhalli Substations	27.8.2014	30.3.2019 (Actual)



10. The details of the Annual Transmission Charges claimed by the Petitioner are as under:

Particulars	(₹ in lakh)
	Asset-1 2018-19 (Pro-rata)
Depreciation	12.75
Interest on Loan	14.13
Return on Equity	14.31
Interest on Working Capital	0.97
O&M Expenses	2.31
<b>Total</b>	<b>44.47</b>

11. The details of the Interest on Working Capital (IWC) claimed by the Petitioner are as under:

Particulars	(₹ in lakh)
	Asset-1 2018-19 (Pro-rata)
Maintenance Spares	63.27
O&M Expenses	35.15
Receivables	1,352.68
<b>Total</b>	<b>1,451.10</b>
Rate of Interest (%)	12.20
<b>Interest on working Capital</b>	<b>0.97</b>

12. The Petitioner has served a copy of the petition upon the respondents and notice of this tariff application has been published in newspapers in accordance with Section 64 of the Electricity Act, 2003. No comments or suggestions have been received from the general public in response to the notices published by the Petitioner under Section 64 of the Electricity Act, 2003. Reply to the petition has been filed by the Respondent, TANGEDCO, vide affidavit dated 7.9.2020. In response, the Petitioner vide its affidavit dated 14.9.2020 filed its rejoinder to the reply of TANGEDCO.

13. The hearing in this matter was held on 19.8.2020 through video conference and the Commission reserved the order in the Petition.



14. This order is issued considering the submissions made by the Petitioner in the petition dated 11.10.2019, reply submitted by TANGEDCO vide affidavit dated 7.9.2020 and replies submitted by the Petitioner vide affidavits dated 5.5.2020, 11.9.2020 and 14.9.2020.

15. Having heard the representatives of the Petitioner present at the hearing and perused the material on record, we proceed to dispose of the petition.

**Date of Commercial Operation (COD)**

16. The Petitioner has claimed the actual COD for the instant asset as 30.3.2019. In support of COD, the Petitioner has submitted CEA energisation certificate dated 19.8.2016 under Regulation 43 of CEA (Measures Related to Safety & Electricity Supply) Regulations, 2010; RLDC charging certificate dated 11.4.2019 in accordance with Regulation 5(2) of CERC (Terms and Condition of Tariff) Regulations, 2014; self-declaration of COD letter dated 30.3.2019; and CMD certificate in accordance with Grid Code.

17. We have considered the submissions of Petitioner. It is observed that the Petitioner has not submitted CEA energisation certificate for 400 kV Dharmapuri (Salem New) – Somanhalli 400 kV D/C Quad Line, whereas, the Petitioner has submitted CEA energization certificate for bays at Dharmapuri and Somanhalli Sub-stations. Therefore, the Petitioner is directed to submit the CEA energization certificate for 400 kV Dharmapuri (Salem New) – Somanhalli 400 kV D/C Quad Line at the time of truing up.

18. Taking into consideration RLDC certificate, CMD certificate and COD letter, COD of instant asset is approved as 30.3.2019 subject to submission of CEA



energization certificate for 400 kV Dharmapuri (Salem New) – Somanhalli 400 kV D/C Quad Line at the time of truing up.

### **Capital Cost**

19. Clauses (1) and (2) of Regulation 9 of the 2014 Tariff Regulations provide as follows:

*“(1) The Capital cost as determined by the Commission after prudence check in accordance with this regulation shall form the basis of determination of tariff for existing and new projects”*

*(2) The Capital Cost of a new project shall include the following:*

*(a) The expenditure incurred or projected to be incurred up to the date of commercial operation of the project;*

*(b) Interest during construction and financing charges, on the loans (i) being equal to 70% of the funds deployed, in the event of the actual equity in excess of 30% of the funds deployed, by treating the excess equity as normative loan, or (ii) being equal to the actual amount of loan in the event of the actual equity less than 30% of the funds deployed;*

*(c) Increase in cost in contract packages as approved by the Commission;*

*(d) Interest during construction and incidental expenditure during construction as computed in accordance with Regulation 11 of these regulations;*

*(e) Capitalised Initial spares subject to the ceiling rates specified in Regulation 13 of these regulations;*

*(f) Expenditure on account of additional capitalization and de-capitalisation determined in accordance with Regulation 14 of these regulations;*

*(g) Adjustment of revenue due to sale of infirm power in excess of fuel cost prior to the COD as specified under Regulation 18 of these regulations; and*

*(h) Adjustment of any revenue earned by the transmission licensee by using the assets before COD.”*

20. The Petitioner has claimed the following capital cost incurred as on COD and additional capital expenditure projected to be incurred in respect of the instant asset and submitted Auditor’s Certificates in support of the same:

Asset	Apportioned Approved Cost (FR)	Apportioned Approved Cost (RCE-II)	Expenditure up to COD	Estimated Expenditure		Estimated Completion Cost
				2019-20	2020-21	
				Asset-1	27652.50	

### **Cost Over-run**





21. The Petitioner has submitted that the estimated completion cost of the asset is within the apportioned approved cost as per RCE-II. The Petitioner has also submitted the following reasons of variation in cost:

(i) **Cost variation due to technical requirement**

a) Route length of the line has increased marginally to 121.5 km as per the detailed and check survey against original estimated line length of 120 km. Brief details of variation in line length and no. of towers is given below:

S. N.	Description	Quantity as per FR	Quantity as per actual
1.	Line length (km)	120	121.5
2.	No. of towers	301	336
3.	Angle towers	95	137

b) Increase in cost of transmission line material, is mainly due to Increase in no. of angle towers and utilization of multi-circuit towers in forest sections to utilize the existing Somanhalli-Hosur 400 kV S/C line corridor. Following are the major reasons for increase in number of the angle towers:

i) Line route passes through the vicinity of Bangalore. Due to rapid urbanisation, there are a number of developmental projects, housing projects, layouts etc. in the envisaged route. In order to avoid the same, longer line length and higher number of angle towers were required.

ii) Angle towers also increased for utilisation of existing corridor of Somanhalli –Hosur 400 kV S/C line in the Gollhalli Gudda forest & Bannerghatta wildlife forest.

iii) No. of angle points increased due to development of layouts/ housing projects near Dharmapuri substation.

iv) Angle points have been finalized keeping in view new developments and obligatory points.

(ii) **Cost variation due to Change of law for compensation:**

a) Transmission lines in Karnataka, especially those passing in and around Bangalore urban areas face severe ROW issues and stiff resistance from land owners against construction of transmission line. Increase in cost of compensation (₹88.45 crore) is mainly due to introduction of compensation towards damages to land under tower footing & corridor and



tree compensation based on the orders/ assessment of horticulture/ forest department.

b) Due to increased resistance from land owners for installation of transmission lines across the country and specifically in Karnataka, a committee to analyse the issues related to ROW issues for laying of transmission lines in the country and to suggest a uniform methodology for payment of compensation on this account was constituted by Ministry of Power. After deliberations by the committee, guidelines for payment of compensation towards damages in regard to Right of Way issues in transmission lines were issued by Ministry of Power vide letter dated 15.10.2015.

c) Corridor compensation can be released to the land owners only after completion of revenue survey, submission of reports and approval of revenue authorities and identification of land owners and collection of documents.

d) Revenue survey and identification of land owners over the length of the line i.e. 35 km (i.e. approx. 403.5 acres) is not only tedious but also involves coordination between Government departments like Revenue and Registration. Matter was taken up with State administration for expeditious completion of revenue survey works. The delay of completion of revenue survey works in the transmission line was deliberated at various meetings held at the level of at the level of Secretary of M/o Power, and Chief Secretary of Karnataka.

e) Due to high value of the lands in Bangalore Urban District, compensation for tree/ crop and damages to land works out to ₹70.48 crore. The increase in compensation of ₹88.45 crore w.r.t FR is purely due to subsequent developments after FR preparation and also beyond the control of Petitioner. Breakup of compensation is given below:

<b>S. N.</b>	<b>Description</b>	<b>Amount</b>
1.	Tree & crop compensation	₹18.00 crore
2.	Compensation for damages to land under tower footing and corridor.	₹72.48 crore



(iii) **Cost variation due to time over-run (₹70.92 crore):**

a) **IDC:** Increase in IDC is attributable to delay in commissioning of the line and increase in overall capital cost with respect to FR which was affected by severe ROW issues in Karnataka. The actual IDC accrued upto COD has been considered in the Auditor Certificate.

b) **IEDC:** During FR estimation, 10.75% and 3% of equipment cost and civil works has been considered for IEDC and contingency respectively, whereas actual amount of IEDC has been considered in the Auditor Certificate.

(iv) As regards variation in cost of individual items, the packages under subject scope of works comprise of a large number of items and the same are awarded through open competitive bidding. In the said bidding process, bids are received from multiple parties quoting different rates for various BOQ items under the said package. Further, lowest bidder can be arrived at/ evaluated on overall basis only. Hence, item-wise unit prices in contracts and its variation over unit rate considered in FR estimates are beyond the control of the petitioner. The Petitioner has been following a well laid down procurement policy which ensures both transparency and competitiveness in the bidding process. Through this process, lowest possible market prices for required product/services are obtained and contracts are awarded on the basis of lowest evaluated eligible bidder. The best competitive bid prices against tenders may vary as compared to the cost estimate depending upon prevailing market forces, bidder's perception and site requirements. Whereas, the estimates, are prepared by the petitioner as per well-defined procedures. The FR cost estimate is broad indicative cost worked out generally on the basis of average unit rates of recently awarded contracts/ general practice.



22. The Respondent, TANGEDCO vide affidavit dated 7.9.2020 has submitted as under:

a) The Petitioner has stated that increase in cost of transmission line material, is mainly due to Increase in no. of angle towers and utilisation of multi circuit towers in forest sections to utilise the existing Somanhalli-Hosur 400kV S/C line corridor. The Petitioner has not adopted prudent utility practices in preparing the cost estimates and awarding the contracts. Had it done so, none of the reasons advanced by the Petitioner for variation in cost would have emerged after finalization of preliminary and detailed route surveys which are essential for preparation of estimates and award of contracts. The Petitioner cannot shift the financial liabilities on account of their faults on the DICs which is a pass through to the end consumers.

b) The Petitioner always claims cost variation from FR cost to completion cost taking undue advantage of cost-plus route and is setting bad precedent for the TSPs executing the projects under TBCB route. The Petitioner has not followed any benchmark costing which is essential to compare the true cost of various elements with the market prices. The Petitioner also being the CTU and an experienced campaigner, should set high standards in terms of time and cost optimization so as to reduce undue burden on the consumers.

23. In response to the reply of TANGEDCO, the Petitioner has submitted the following:

a) The estimated completion cost of the instant asset is ₹477.70 crore against the approved apportioned cost (as per FR) of ₹276.52 crore, apportioned approved cost (as per RCE-I) of ₹325.15 crore and apportioned approved cost (as per RCE-II) of ₹510.03 crore. Accordingly, there is a cost over-run of ₹201.20 crore with respect to approved apportioned cost (as per FR) and cost over-run of ₹152.54 crore with respect to approved apportioned cost (as per RCE-I), whereas there is no cost over-run with respect to RCE-II. The detailed break up of cost under various heads along with the reasons for cost variation has already been submitted in the main petition.



b) The Petitioner follows a robust and time-tested system of preparing cost estimates before obtaining Investment Approval. After Investment Approval, the award letters are placed on the executing agencies on the basis of a tendering process as per best industry practices and due diligence including justification of bid prices vis-à-vis estimated cost before placing the awards. Further, the award for execution of the transmission asset was placed after following a transparent process of tendering, bid evaluation and award of work to lowest technical and commercially responsive bid.

c) Also, the actual cost incurred during Project execution was compiled and the proposal for RCE was put up before the Board of Directors of the Petitioner. Before submission to Board of Directors, the proposal was routed through various departments for Management approval, subsequent to which it was submitted for approval of Committee of Directors on Investment of projects (“COIP”). It is clear from the above, that there is a concern for cost efficiencies right from the project approval stage.

24. We have considered the submission of the Petitioner and Respondent, TANGDECO. The Petitioner has submitted justification for variation between FR and RCE which has been duly approved by the Board of Directors of the Petitioner. Based on the Form-5, the brief of variations is summarised as under:

Item Name	Variation (in lakh)	Reasons for variation
Preliminary works	-8844.76	Increase in cost of compensation (Rs.88.45 cr.) is mainly due to introduction of compensation towards damages to land under tower footing & corridor and tree compensation based on DC orders/assessment of horticulture/forest department
Transmission lines material	-3729.10	Increase in cost of transmission line material is mainly due to increase in line length, no. of angle towers in forest sections to utilize the existing Somanhalli-Hosur 400kV S/C line corridor, No. of angle points increased due to development of layouts/housing projects near Dharampuri sub-station due to rapid urbanization.
Substation equipment's	-87.63	Further, regarding variation in cost of individual item, it is submitted that the packages under subject scope of works comprise of a large no. of items and the same are awarded through open competitive bidding. In the said bidding process, bids are received from multiple parties quoting different rates for various BOQ items under the said



		package. Further, lowest bidder can be arrived at/ evaluated on overall basis only. Hence, item-wise unit prices in contracts and its variation over unit rate considered in FR estimates are beyond the control of the petitioner. Here it may be mentioned that being a Govt. enterprise, the Petitioner has been following a well laid down procurement policy which ensures both transparency and competitiveness in the bidding process. Through this process, lowest possible market prices for required product/services are obtained and contracts are awarded on the basis of lowest evaluated eligible bidder. The best competitive bid prices against tenders may vary as compared to the cost estimate depending upon prevailing market forces, bidder's perception and site requirements. Whereas, the estimates, are prepared by the petitioner as per well-defined procedures. The FR cost estimate is broad indicative cost worked out generally on the basis of average unit rates of recently awarded contracts/general practice.
IDC	-8684.53	Increase in IDC is attributable to delay in commissioning of the line and increase in overall capital cost w.r.t. FR which was affected by severe ROW issues in Karnataka.

25. We note As may be seen from the above table the cost variation was mainly due to increase in cost of compensation on account of introduction of compensation towards damages to land under tower footing & corridor and tree compensation based on orders/ assessment of horticulture/ forest department, increase in line length, increase in number of angle towers in forest sections to utilize the existing Somanhalli-Hosur 400 kV S/C line corridor, increase in number of angle points due to development of layouts/ housing projects near Dharampuri sub-station due to rapid urbanization and increase in award cost and price variation. Further, the estimated completion cost of the instant assets is within the apportioned approved cost as per RCE-II. Accordingly, the variation of the capital cost is allowed.

### **Time over-run**

26. As per the Investment Approval (IA) dated 27.12.2011, the assets under the transmission project were scheduled to be commissioned within 32 months from the



date of IA. Accordingly, the scheduled commercial operation date of the instant asset comes to 27.8.2014 against which it has been put under commercial operation with effect from 30.3.2019. Thus, there is a delay of 1676 days in commissioning of the instant asset.

27. The Petitioner has submitted that the instant asset is delayed mainly due to severe ROW issues and court cases faced during the commissioning of the instant asset. The Petitioner has submitted the following details to substantiate its claim:

(i) **Right of Way issues faced during construction of line:**

a) The subject transmission line (121.50 km) passes through States of Tamil Nadu (85.5 km) and Karnataka (36 km). Initially, all the construction activities progressed well. Accordingly, SRPC was approached for early commissioning of the line considering the benefit to the system due to commissioning of the instant asset. SRPC in its 24<sup>th</sup> meeting held on 15.3.2014 concurred the early commissioning. SRPC also concurred for long duration shutdown from 21.5.2014 for a period of 45 days of existing corridor of 400 kV Somanhalli-Hosur S/C line which is required for completion of Salem (Dharmapuri) PS -Somanhalli 400 kV D/C line.

b) All works in the State of Tamil Nadu had been completed well before scheduled completion of the line. However, works in Karnataka portion of the line were badly affected due to severe ROW issues demanding high compensation/ rerouting of the line. Due to severe ROW issues in Karnataka portion of the transmission line, the Salem (Dharmapuri)-Somanhalli 400 kV D/C line could not be commissioned as envisaged.

c) During construction of the transmission line in the State of Karnataka, land owners under influence of Raitha Sangha obstructed construction works by manhandling/ threatening the employees of the Petitioner, employees of the executing agency and by damaging stubs of foundations at various locations and demanded higher compensations/ rerouting of the line. For resolution of ROW issues, matter was taken up at various levels of Government of Karnataka including Chief Minister, Minister of Energy and



Chief Secretary. The matter was also taken up with the Ministry of Power, Government of India. The subject transmission line was reviewed by PMO through PRAGATI. Also, Chief Secretary, Government of Karnataka had been holding regular review meetings for resolution of ROW issues. In Addition, matter was also pursued regularly with local revenue department, police and district administration for resolving ROW issues.

d) During construction of the line, there was no provision for releasing compensation for land damages in tower footing and corridor. Due to ROW issues in construction of transmission lines in Karnataka and other States, Ministry of Power constituted a high level Committee to formalize modalities to resolve the ROW issues. After deliberations with various stakeholders, Committee submitted its recommendations. Based on the Committee's recommendations, Ministry of Power issued guidelines for payment of compensation for damages/ restriction in use of land in tower footing and corridor in the month of October 2015. This necessitates identification of land owners and survey of the land under corridor and tower footings and issuance of compensation orders by Deputy Commissioners of respective Districts. Due to various land disputes, revenue survey of the land and issuance of compensation orders by DC was delayed.

e) All the ongoing transmission lines of the Petitioner and other utilities in and around Bangalore were affected due to ROW issues during this period. Further, ROW in the subject transmission line is more severe as the line passes through urban areas of Bangalore.

28. The Petitioner has furnished the detailed submissions in respect of specific location wise issues. The Petitioner has also submitted the detailed chronology of events in support of the same.

29. The Respondent, TANGEDCO vide affidavit dated 7.9.2020 has submitted as under:

a) The Petitioner has stated that the transmission line passing through Tamil Nadu for 85.5 km length was completed well ahead (4 years ahead) of the Karnataka portion of 36 km that was delayed due to severe ROW issues





demanding high compensation/ rerouting of the line. The petitioner should have anticipated the ROW issues in Karnataka since the line passes through the urban area of Karnataka. The developments in the ROW are not sudden and have not cropped up overnight. The Petitioner being well aware of the issues went ahead with execution of the project without any foresight and proper plan of execution, resulting in interruption of the project execution. The Petitioner itself has stated that this line is an inter-state power corridor and no land compensation has been paid in Tamil Nadu portion for 85 km. The Petitioner has failed to do preliminary survey before preparation of the estimates and finalization of the contracts, which has resulted in exorbitant delay in execution, for which the Petitioner alone should be liable. Passing on the burden on the Discoms in turn the end consumers due to their inefficiencies and improper planning is unjust and not permissible under law.

b) The Petitioner has stated that it was liable to pay compensation to the land owners as per the guidelines of MOP, GOI dated 15.10.2015 for fixing the tower footing and line corridor area compensation. This is illogical. The Petitioner was supposed to declare COD on or before 26.8.2014. The above change in law came into picture one year after the SCOD. Hence, this change in Law clause of the Regulation is also not applicable in the instant case.

c) The time over run of 4 years and seven months is attributable to the Petitioner due to their own inefficiency, improper planning and laxity and hence the claim of the Petitioner to condone the delay is liable for rejection.

30. In response, the Petitioner vide affidavit dated 14.9.2020 has mainly reiterated its submissions made earlier and are not being repeated for sake of brevity. The Petitioner has additionally submitted as under:

a) In the 30<sup>th</sup> SRPC meeting dated 27.8.2016, the matter of delay in commissioning of the instant asset was discussed and the Petitioner informed that the ROW issues were yet to be resolved and it would take around two months to complete the work once the ROW issues are resolved. In the 31<sup>st</sup> SRPC meeting held on 25.2.2017, the Petitioner informed that the shutdown was approved from 20.2.2017 to 20.3.2017 for stringing of the instant (Hosur-



Somanhalli) Transmission line. However, the shutdown could not be availed on account of persistent ROW issues.

b) Detailed reasons for delay along with chronology of the efforts made in resolving ROW issues along with supporting delay documents like minutes of meeting etc. are already submitted in the main petition. Further, various correspondences with state and District administration in resolving ROW issues during construction of the line are also submitted in the main petition.

c) The original 400 kV Somanhalli - Salem S/C line was covered under the project- RSTPP Stage- I and II. The Petitioner has filed true up Petition No. 473/TT/2020 in this regard. LILO of the said line, 400 kV Somanhalli - Salem S/C line, was made at Hosur and this LILO of Somanhalli - Salem S/C line at Hosur together with Extension of 400/220 kV Substation at Hosur were covered under the Project SRSS- 18. Treatment of the dismantled towers shall be dealt in the original petition i.e. RSTPP I and II in Petition No 473/TT/2020.

31. The Commission vide ROP of hearing dated 13.2.2020 directed the Petitioner to submit the reasons for time over-run and correspondence exchanged, along with the chronology of the time over-run in the prescribed format. In response, the Petitioner vide affidavit dated 5.5.2020 has submitted details of time overrun and chronology of activities in the following format:

Activity	Period of activity				Time over-run (In Months or days)	Reasons for time over-run
	Planned		Achieved			
	From	To	From	To		
Land Acquisition	NA					
LOA	21.3.2012		7.2.2012		-	
Supplies (Structures, equipment, etc.)	16.5.2012	31.12.2012	15.2.2012	25.12.2012	-	
Foundation/ Civil Works	13.6.2012	31.1.2014	10.4.2012	14.1.2019	-	Due to severe ROW issues and Court cases, the subject asset was commissioned and put under commercial operation w.e.f. 30.3.2019. Hence, there is a time over-run of about 55 months in commissioning of the
Tower Erection/ Equipment erection	3.10.2012	28.2.2014	25.6.2012	8.2.2019	-	
Stringing	20.3.2013	30.4.2014	5.11.2012	15.3.2019	-	
ROW issues (location wise)	123/0	124/0	6.8.2013	31.10.2018		
Court cases	127D/0	127E/0	6.9.2014	8.2.2018		
	116/0	117/0	19.1.2013	17.1.2018		
	MC-10	MC-12	15.1.2014	24.7.2018		
	MC14-MC15-MC-16 -134/0-BS12		13.8.2014	28.7.2018		



Activity	Period of activity				Time over-run (In Months or days)	Reasons for time over-run
	Planned		Achieved			
	From	To	From	To		
	134/0-134/1-134/2		26.8.2014	20.12.2018	2062 Days	subject asset. Detailed analysis of ROW issues and court cases faced during the construction of line along has been submitted along with the main petition.
	109/1 to 110/0		15.1.2013	7.1.2018		
	BS3-137/0 –MC17-139/0		26.8.2014	28.3.2019		
Testing and COD	26.5.2014	26.8.2014	1.2.2019	30.3.2019	-	

32. We have considered the submissions of the Petitioner and Respondent TANGEDCO. The instant asset has been put under commercial operation on 30.3.2019 with a time delay of about 55 months (1676 days). We note that the instant asset is delayed mainly due to ROW issue faced by the Petitioner at various locations and Court cases during the construction of the 400 kV Dharmapuri (Salem New) – Somanhalli 400 kV D/C Quad Line.

33. We also observe that the letter of award (LOA) was placed well in time on 7.2.2012 against the planned schedule of 21.3.2012 and thereafter supplies work commenced on 15.2.2012 and completed within scheduled time on 25.12.2012. Further, the Petitioner commenced foundation/ civil works, tower erection/ equipment and stringing work as per the schedule. However, due to severe ROW issues and court cases, the Petitioner could not commission the instant asset as per the scheduled COD. It is observed that the Petitioner has faced ROW problems at various locations namely 123/0-124/0 from 6.8.2013 to 31.10.2018, 127D/0-127E/0 from 6.9.2014 to 8.2.2018, 116/0-117/0 from 19.1.2013 to 17.1.2018, MC-10-MC-12 from 15.1.2014 to 24.7.2018, MC14-MC-16 from 13.8.2014 to 28.7.2018, 134/0-134/2 from 26.8.2014 to 20.12.2018 and at 109/1-110/0 from 15.1.2013 to 7.1.2018. The last such ROW problem was faced by the Petitioner on 29.12.2018. After resolution of the last ROW problem, the Petitioner took around 3 months of



time and finally, upon completion of final checking and testing of the transmission line, the instant asset was put under commercial operation from 30.3.2019.

34. The Petitioner has also submitted extensive details of correspondences with various authorities along with supporting documents. Based on the submission of the Petitioner, it is observed that the Petitioner has faced ROW issues from 27.1.2013 to 29.12.2018 (2163 days) at various locations thereby affecting the commissioning of the instant asset. However, the Petitioner has compressed the execution time and commissioned the instant assets with overall delay of 1676 days. Therefore, the time over run of 1676 days in commissioning of the instant asset is condoned.

#### **Interest During Construction (IDC)**

35. The Petitioner has claimed Interest During Construction (IDC) for instant asset and submitted the Auditors Certificate in support of the same. The Petitioner has submitted computation of IDC along with the year-wise details of IDC discharged.

36. The loan details submitted in Form-9C for the 2014-19 tariff period and the IDC computation sheet have been considered for the purpose of IDC calculation on cash and accrued basis. Among various bonds through which loan have been raised by the Petitioner, repayment schedule of some of the bonds falls under the construction period of the transmission asset. The repayment of bonds is not appearing in the IDC statement submitted by the Petitioner. Further, the loan portfolio as mentioned in IDC statement and in Form 9C is not matching. For the time being, the allowable IDC has been worked out considering the information submitted by the Petitioner. However, the Petitioner is directed to submit the



detailed IDC statement including date and amount of repayment, applicable rate of interest as on various dates with resets as well as the copy of loan agreement at the time at the time of true up. IDC discharged beyond 31.3.2019 has not been taken into consideration and the same shall be dealt during the next tariff period as per the provisions of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019.

37. Accordingly, IDC considered, subject to true up, is as under:-

**(₹ in lakh)**

<b>Asset</b>	<b>IDC as per Auditor certificate dated 30.7.2019</b>	<b>IDC Admissible</b>	<b>IDC Discharged as on COD</b>	<b>IDC Un-discharged as on COD</b>
<b>A</b>	<b>B</b>	<b>C</b>	<b>E</b>	<b>F=C-E</b>
1	10216.53	10216.53	9472.91	743.62

### **Incidental Expenditure During Construction (IEDC)**

38. The Petitioner has claimed IEDC and submitted Auditors Certificate in support of the same. IEDC claimed is within the percentage of hard cost as indicated in the abstract cost estimate. Further, the Petitioner has submitted that the IEDC was fully discharged as on COD. Accordingly, the IEDC of ₹1563.24 Lakh as claimed has been allowed.

39. IEDC allowed for the instant asset will be reconsidered in the light of the directions of Appellate Tribunal for Electricity (APTEL) in judgment dated 2.12.2019 in Appeal No. 95 of 2018 and Appeal No.140 of 2018, at the time of truing up. The Petitioner is directed to furnish the details of IEDC of all the assets of the transmission project at the time of true-up of capital cost.

### **Initial Spares**



40. Regulation 13 of the 2014 Tariff Regulations specifies ceiling norms for capitalization of initial spares in respect of transmission system as under:-

**“13. Initial Spares**

*Initial spares shall be capitalised as a percentage of the Plant and Machinery cost upto cut-off date, subject to following ceiling norms:*

*(d) Transmission system*

*(i) Transmission line - 1.00%*

*(ii) Transmission Sub-station (Green Field) - 4.00%*

*(iii) Transmission Sub-station (Brown Field) - 6.00%*

*(iv) Series Compensation devices and HVDC Station - 4.00%*

*(v) Gas Insulated Sub-station (GIS)-5.00%*

*(vi) Communication system-3.5%*

*Provided that:*

*(i) where the benchmark norms for initial spares have been published as part of the benchmark norms for capital cost by the Commission, such norms shall apply to the exclusion of the norms specified above:*

*(ii) -----*

*(iii) Once the transmission project is commissioned, the cost of initial spares shall be restricted on the basis of plant and machinery cost corresponding to the transmission project at the time of truing up:*

*(iv) for the purpose of computing the cost of initial spares, plant and machinery cost shall be considered as project cost as on cut-off date excluding IDC, IEDC, Land Cost and cost of civil works. The transmission licensee shall submit the breakup of head wise IDC & IEDC in its tariff application.”*

41. The Petitioner has claimed initial spares corresponding to Brown Field substation for instant assets and has submitted Auditors Certificate in support of the same. The Petitioner, vide affidavit dated 5.5.2020, has submitted details of year-wise capitalisation and initial spares discharged up to COD. The Petitioner has further submitted that the expenditure incurred towards initial spares up to COD have been considered in COD cost. The amount towards balance initial spares liabilities have been considered in additional capital expenditure of the respective year. The Petitioner has prayed to allow the entire initial spares claimed under the instant petition.



42. We have considered the submissions made by the Petitioner. The initial spares allowed for the purpose of tariff calculation after considering the Plant and Machinery cost excluding IDC, IEDC and land expenses up to 31.3.2019. Accordingly, the initial spares allowed is as under:

(₹ in lakh)							
	Element	Plant and Machinery Cost excluding IDC, IEDC and Land expenditure up to cut-off date (31.3.2019)	Initial spares claimed	Ceiling limit prescribed in 2014 Tariff Regulations	Initial spares allowed	Excess Initial Spares disallowed as on COD	Excess Initial Spares to be disallowed from ACE during 2019-20
Asset-1	Substation (Brown Field)	1033.99	62.73	6%	62.00	0.73	0.00
	Trasnmission Line	22756.89	251.72	1%	227.32	0.00	24.40

### Capital cost as on COD

43. Accordingly, the capital cost allowed as on COD under Regulation 9(2) of the 2014 Tariff Regulations is summarized as under:

(₹ in lakh)				
Asset	Capital Cost as on COD as per Auditor Certificate	Un-discharged as on COD	Excess Initial Spares	Capital Cost considered as on COD
	1	2	3	4=1-2-3
Asset-1	44712.83	743.62	0.73	43968.47

### Additional Capital Expenditure (ACE)

44. Clause (1) of Regulation 14 of the 2014 Tariff Regulations provides as under:

*“(1) The capital expenditure in respect of the new project or an existing project incurred or projected to be incurred, on the following counts within the original scope of work, after the date of commercial operation and up to the cut-off date may be admitted by the Commission, subject to prudence check:*

- (i) Undischarged liabilities recognised to be payable at a future date;*
- (ii) Works deferred for execution;*



(iii) Procurement of initial capital spares within the original scope of work, in accordance with the provisions of Regulation 13;

(iv) Liabilities to meet award of arbitration or for compliance of the order or decree of a court; and

(v) Change in Law or compliance of any existing law:

Provided that the details of works asset wise/work wise included in the original scope of work along with estimates of expenditure, liabilities recognized to be payable at a future date and the works deferred for execution shall be submitted along with the application for determination of tariff.”

45. Clause (13) of Regulation 3 of the 2014 Tariff Regulations defines “cut-off” date as under:

“cut-off date” means 31st March of the year closing after two years of the year of commercial operation of whole or part of the project, and in case the whole or part of the project is declared under commercial operation in the last quarter of the year, the cut-off date shall be 31st March of the year closing after three years of the year of commercial operation”

46. The Petitioner vide Auditors Certificate has claimed ACE for the year 2019-20 and 2020-21 and not claimed any ACE during 2018-19. The projected ACE claimed beyond 2018-19 has not been taken into consideration and the same shall be dealt during the next tariff period as per the provisions of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019.

#### **Capital cost for the tariff period 2014-19**

47. Accordingly, the capital cost considered for the tariff period 2014-19, subject to truing up, is as follows:

**(₹ in lakh)**

<b>Asset</b>	<b>Capital Cost allowed as on COD</b>	<b>ACE allowed in FY 2018-19</b>	<b>Capital cost allowed as on 31.3.2019</b>
<b>Asset-1</b>	43968.47	Nil	43968.47

48. Based on the above, the tariff in respect of instant asset for 2 days during the year 2018-19 has been determined in subsequent paragraphs.





## Debt-Equity Ratio

49. Clauses 1 and 5 of Regulation 19 of the 2014 Tariff Regulations specify as follows:

*“(1) For a project declared under commercial operation on or after 1.4.2014, the debt-equity ratio would be considered as 70:30 as on COD. If the equity actually deployed is more than 30% of the capital cost, equity in excess of 30% shall be treated as normative loan:*

*Provided that:*

*i. where equity actually deployed is less than 30% of the capital cost, actual equity shall be considered for determination of tariff:*

*ii. the equity invested in foreign currency shall be designated in Indian rupees on the date of each investment:*

*iii. any grant obtained for the execution of the project shall not be considered as a part of capital structure for the purpose of debt : equity ratio.*

*Explanation.-The premium, if any, raised by the generating company or the transmission licensee, as the case may be, while issuing share capital and investment of internal resources created out of its free reserve, for the funding of the project, shall be reckoned as paid up capital for the purpose of computing return on equity, only if such premium amount and internal resources are actually utilised for meeting the capital expenditure of the generating station or the transmission system.”*

*“(5) Any expenditure incurred or projected to be incurred on or after 1.4.2014 as may be admitted by the Commission as additional capital expenditure for determination of tariff, and renovation and modernisation expenditure for life extension shall be serviced in the manner specified in clause (1) of this regulation.”*

50. The Petitioner has considered debt-equity ratio of 70:30 as on COD and for ACE post COD for instant assets. Debt-equity ratio is considered as per Regulation 19 of the 2014 Tariff Regulations. The financial package up to COD as submitted in Form 6 has been considered to determine the debt-equity Ratio. The same has been summarised as under:-

Asset-1	Capital Cost as on COD		Capital Cost as on 31.3.2019	
	Amount (₹ in lakh)	(%)	Amount (₹ in lakh)	(%)
Debt	30777.92	70.00	30777.92	70.00
Equity	13190.55	30.00	13190.55	30.00
<b>Total</b>	<b>43968.47</b>	<b>100.00</b>	<b>43968.47</b>	<b>100.00</b>

## Return on Equity (ROE)



51. Clauses (1) and (2) of Regulation 24 and Clause (2) of Regulation 25 of the 2014 Tariff Regulations specify as under:

**“24. Return on Equity:** (1) Return on equity shall be computed in rupee terms, on the equity base determined in accordance with regulation 19.

(2) Return on equity shall be computed at the base rate of 15.50% for thermal generating stations, transmission system including communication system and run of the river hydro generating station, and at the base rate of 16.50% for the storage type hydro generating stations including pumped storage hydro generating stations and run of river generating station with pondage:

Provided that:

(i) in case of projects commissioned on or after 1st April, 2014, an additional return of 0.50 % shall be allowed, if such projects are completed within the timeline specified in **Appendix-I**:

(ii) the additional return of 0.5% shall not be admissible if the project is not completed within the timeline specified above for reasons whatsoever:

(iii) additional RoE of 0.50% may be allowed if any element of the transmission project is completed within the specified timeline and it is certified by the Regional Power Committee/National Power Committee that commissioning of the particular element will benefit the system operation in the regional/national grid:

(iv) the rate of return of a new project shall be reduced by 1% for such period as may be decided by the Commission, if the generating station or transmission system is found to be declared under commercial operation without commissioning of any of the Restricted Governor Mode Operation (RGMO)/ Free Governor Mode Operation (FGMO), data telemetry, communication system up to load dispatch centre or protection system:

(v) as and when any of the above requirements are found lacking in a generating station based on the report submitted by the respective RLDC, RoE shall be reduced by 1% for the period for which the deficiency continues:

(vi) additional RoE shall not be admissible for transmission line having length of less than 50 kilometres.

**“25. Tax on Return on Equity:**

(1) The base rate of return on equity as allowed by the Commission under Regulation 24 shall be grossed up with the effective tax rate of the respective financial year. For this purpose, the effective tax rate shall be considered on the basis of actual tax paid in the respect of the financial year in line with the provisions of the relevant Finance Acts by the concerned generating company or the transmission licensee, as the case may be. The actual tax income on other income stream (i.e., income of non-generation or non-transmission business, as the case may be) shall not be considered for the calculation of “effective tax rate”.

(2) Rate of return on equity shall be rounded off to three decimal places and shall be computed as per the formula given below:

$$\text{Rate of pre-tax return on equity} = \text{Base rate} / (1-t)$$

Where “t” is the effective tax rate in accordance with Clause (1) of this regulation and shall be calculated at the beginning of every financial year based on the estimated profit and tax to be paid estimated in line with the provisions of the relevant Finance Act applicable for that financial year to the company on pro-rata basis by excluding the income of non-generation or non-transmission business, as the case may be, and the corresponding tax thereon. In case of generating company or transmission



*licensee paying Minimum Alternate Tax (MAT), “t” shall be considered as MAT rate including surcharge and cess.”*

52. The Petitioner has submitted that ROE has been calculated at the rate of 19.758% after grossing up ROE with MAT rate of 21.549% for the FY 2018-19 as per provisions of Regulations 24 and 25 of the 2014 Tariff Regulations and submitted Form-8. The Petitioner has further submitted that the grossed up ROE is subject to truing up based on the effective tax rate of respective financial year applicable to the Petitioner Company.

53. Regulation 24 read with Regulation 25 of the 2014 Tariff Regulations provides for grossing up of return on equity with the effective tax rate for the purpose of return on equity. It further provides that in case the generating company or transmission licensee is paying Minimum Alternative Tax (MAT), the MAT rate including surcharge and cess will be considered for the grossing up of return on equity. Accordingly, the MAT rate of 21.549%, applicable during 2018-19, has been considered for the purpose of return on equity, which shall be trued up with actual tax rate in accordance with Regulation 25(3) of the 2014 Tariff Regulations.

54. Accordingly, ROE allowed is as follows:

<b>Particulars</b>	<b>(₹ in lakh)</b>
	<b>Asset-1 2018-19 (2 days)</b>
Net Opening Equity	13190.55
Increase in Equity due to addition during the year	0.00
Closing Equity	13190.55
Average Equity	13190.55
Return on Equity (Base Rate) (%)	15.50
Tax Rate applicable (%)	21.549
Applicable ROE Rate (%)	19.758
<b>Return on Equity for the year</b>	<b>14.28</b>

### **Interest on Loan (IOL)**

55. Regulation 26 of the 2014 Tariff Regulations are provides as under:



*“(1) The loans arrived at in the manner indicated in regulation 19 shall be considered as gross normative loan for calculation of interest on loan.*

*(2) The normative loan outstanding as on 1.4.2014 shall be worked out by deducting the cumulative repayment as admitted by the Commission up to 31.3.2014 from the gross normative loan.*

*(3) The repayment for each of the year of the tariff period 2014-19 shall be deemed to be equal to the depreciation allowed for the corresponding year/period. In case of decapitalization of assets, the repayment shall be adjusted by taking into account cumulative repayment on a pro rata basis and the adjustment should not exceed cumulative depreciation recovered up to the date of decapitalisation of such asset.*

*(4) Notwithstanding any moratorium period availed by the generating company or the transmission licensee, as the case may be, the repayment of loan shall be considered from the first year of commercial operation of the project and shall be equal to the depreciation allowed for the year or part of the year.*

*(5) The rate of interest shall be the weighted average rate of interest calculated on the basis of the actual loan portfolio after providing appropriate accounting adjustment for interest capitalized:*

*Provided that if there is no actual loan for a particular year but normative loan is still outstanding, the last available weighted average rate of interest shall be considered:*

*Provided further that if the generating station or the transmission system, as the case may be, does not have actual loan, then the weighted average rate of interest of the generating company or the transmission licensee as a whole shall be considered.*

*(6) The interest on loan shall be calculated on the normative average loan of the year by applying the weighted average rate of interest.”*

56. The Petitioner has submitted that IOL has been claimed on the basis of rate prevailing as on COD and the change in interest due to floating rate of interest applicable, if any, needs to be claimed/ adjusted over the tariff block 2014-19. We have calculated IOL on the basis of rate prevailing as on the date of commercial operation. Any change in rate of interest subsequent to the date of commercial operation will be considered at the time of truing-up. IOL is allowed considering all the loans submitted in Form-9C. The Petitioner is directed to reconcile the total Gross Loan for the calculation of weighted average Rate of Interest and for the calculation of IDC, which would be reviewed at the time of truing-up.

57. IOL has been calculated as per the provisions of Regulation 26 of the 2014 Tariff Regulations as detailed below:



- (i) Gross amount of loan, repayment of instalments and rate of interest on actual loans have been considered as per petition including additional information.
- (ii) The yearly repayment for the tariff period 2014-19 has been considered to be equal to the depreciation allowed for that year.
- (iii) Weighted average rate of interest on actual average loan worked out as per (i) above is applied on the notional average loan during the year to arrive at the interest on loan

58. The details of IoL allowed for the instant transmission asset are as follows:-

Particulars	(₹ in lakh)
	Asset-1 2018-19 (2 days)
Gross Normative Loan	30777.92
Cumulative Repayment up to previous Year	0.00
Net Loan-Opening	30777.92
Addition due to ACE	0.00
Repayment during the year	12.73
Net Loan-Closing	30765.19
Average Loan	30771.56
Weighted Average Rate of Interest on Loan (%)	8.36
<b>Interest on Loan</b>	<b>14.10</b>

### Depreciation

59. Regulation 27 of the 2014 Tariff Regulations with regard to depreciation specifies as follows:

**"27. Depreciation:**

(1) Depreciation shall be computed from the date of commercial operation of a generating station or unit thereof or a transmission system including communication system or element thereof. In case of the tariff of all the units of a generating station or all elements of a transmission system including communication system for which a single tariff needs to be determined, the depreciation shall be computed from the effective date of commercial operation of the generating station or the transmission system taking into consideration the depreciation of individual units or elements thereof.

Provided that effective date of commercial operation shall be worked out by considering the actual date of commercial operation and installed capacity of all the units of the generating station or capital cost of all elements of the transmission system, for which single tariff needs to be determined.

(2) The value base for the purpose of depreciation shall be the capital cost of the asset admitted by the Commission. In case of multiple units of a generating station or multiple elements of transmission system, weighted average life for the generating station of the transmission system shall be applied. Depreciation shall be chargeable from the first year of commercial operation. In case of commercial



operation of the asset for part of the year, depreciation shall be charged on pro rata basis.

(3) The salvage value of the asset shall be considered as 10% and depreciation shall be allowed up to maximum of 90% of the capital cost of the asset:

Provided that in case of hydro generating station, the salvage value shall be as provided in the agreement signed by the developers with the State Government for development of the Plant:

Provided further that the capital cost of the assets of the hydro generating station for the purpose of computation of depreciated value shall correspond to the percentage of sale of electricity under long-term power purchase agreement at regulated tariff:

Provided also that any depreciation disallowed on account of lower availability of the generating station or generating unit or transmission system as the case may be, shall not be allowed to be recovered at a later stage during the useful life and the extended life.

4) Land other than the land held under lease and the land for reservoir in case of hydro generating station shall not be a depreciable asset and its cost shall be excluded from the capital cost while computing depreciable value of the asset.

(5) Depreciation shall be calculated annually based on Straight Line Method and at rates specified in Appendix-II to these regulations for the assets of the generating station and transmission system:

Provided that the remaining depreciable value as on 31st March of the year closing after a period of 12 years from the effective date of commercial operation of the station shall be spread over the balance useful life of the assets.

(6) In case of the existing projects, the balance depreciable value as on 1.4.2014 shall be worked out by deducting the cumulative depreciation as admitted by the Commission up to 31.3.2014 from the gross depreciable value of the assets.”

60. Depreciation has been dealt with in line of Regulation 27 of 2014 Tariff Regulations. The Gross Block during 2018-19 has been depreciated at weighted average rate of depreciation (WAROD) (as placed in Annexure-1). WAROD has been worked out after taking into account the depreciation rates of assets as prescribed in the 2014 Tariff Regulations and depreciation allowed during the 2018-19 is as under:

Particulars	(₹ in lakh)
	Asset-1 2018-19 (2 days)
Opening Gross Block	43968.47
Additional Capitalisation	0.00
Closing Gross Block	43968.47
Average Gross Block	43968.47
Value of Freehold Land included above	0.00



Particulars	Asset-1
	2018-19 (2 days)
Aggregated Depreciable Value	39574.00
Remaining Aggregate Depreciable Value at the beginning of the year	39574.00
No. of completed years at the beginning of the year	0
Balance useful life of the asset at the beginning of the year	35
Weighted Average Rate of Depreciation (WAROD) (%)	5.2834
Combined Depreciation during the Year	<b>12.73</b>
Cumulative Depreciation at the end of the year	12.73

### **Operation and Maintenance Expenses (O&M Expenses)**

61. The Petitioner has claimed O&M expenses for instant asset as per following details:

(₹ in lakh)		
Asset	Particulars	2018-19 (2 days)
400 kV Dharmapuri (Salem New) – Somanhalli 400 kV D/C Quad Line along with Bay Extensions at Dharmapuri (Salem New) and Somanhalli Substations.	O&M Expenses	2.31

62. The Petitioner has submitted that norms for O&M expenses specified in the 2014 Tariff Regulations for the tariff period 2014-19 had been arrived on the basis of normalized actual O&M Expenses during the period 2008-09 to 2012-13. The Petitioner has further submitted that the wage revision of the employees is due during 2014-19 and actual impact of wage hike effective from a future date has not been factored in fixation of the normative O&M rates specified for the tariff block 2014-19. The Petitioner has submitted that it would approach the Commission for suitable revision in norms for O&M Expenses for claiming the impact of wage hike during 2014-19, if any.

63. We have considered the submission of Petitioner. Norms for O&M expenditure for Transmission System have been specified under section 29(4) of the 2014 Tariff Regulations as follows:

Element	2018-19
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Element	2018-19
Double Circuit (Bundled conductor with four or more sub-conductors) (₹ in lakh/km)	1.210
Sub-Station: 400 kV bay (₹ in lakh/bay)	68.71

64. The O&M Expenses have been worked out as per the norms specified in the 2014 Tariff Regulations. As regards the impact of wage revision, any application filed by the Petitioner in this regard will be dealt with in accordance with the appropriate provisions of the 2014 Tariff Regulations. The Petitioner has computed normative O&M Expenses as per Regulation 29(4)(a) of the 2014 Tariff Regulations. Accordingly, the allowed O&M Expenses is given below:

		(₹ in lakh)
Asset	Element	2018-19 (2 days)
Asset-1	4 nos. of 400 kV bays	1.50
	Dharmapuri-Somanhalli line length of 121.450 Km with 4 nos. of sub-conductors	0.80
<b>Total O&amp;M Expenses Allowed</b>		<b>2.30</b>

### **Interest on Working Capital (IWC)**

65. Clause 1(c) of Regulation 28 and Clause 5 of Regulation 3 of the 2014 Tariff Regulations specify as follows:

***“28. Interest on Working Capital***

*(1) The working capital shall cover:*

*(c) Hydro generating station including pumped storage hydro electric generating station and transmission system including communication system:*

*(i) Receivables equivalent to two months of fixed cost;*

*(ii) Maintenance spares @ 15% of operation and maintenance expenses specified in regulation 29; and*

*(iii) Operation and maintenance expenses for one month”*

*(3) Rate of interest on working capital shall be on normative basis and shall be considered as the bank rate as on 1.4.2014 or as on 1st April of the year during the tariff period 2014-15 to 2018-19 in which the generating station or a unit thereof or the 72 transmission system including communication system or element thereof, as the case may be, is declared under commercial operation, whichever is later.*

*“(5) ‘Bank Rate’ means the base rate of interest as specified by the State Bank of India from time to time or any replacement thereof for the time being in effect plus 350 basis points;”*





66. As per the 2014 Tariff Regulations, the components of the working capital and the interest thereon are discussed hereinafter:

**a) Maintenance spares:**

Maintenance spares @15% of Operation and maintenance expenses specified in Regulation 29.

**b) O & M expenses:**

Operation and maintenance expenses have been considered for one month of the O&M expenses.

**c) Receivables:**

The receivables have been worked out on the basis of 2 months of annual fixed cost as worked out above.

**d) Rate of interest on working capital:**

As per Clause 28 (3) of the 2014 Tariff Regulations, SBI Base Rate as on 1.4.2018 (9.10%) plus 350 bps i.e. 12.20% has been considered as the rate of interest on working capital.

67. Accordingly, the interest on working capital is summarized as under:

Particulars	(₹ in lakh)
	Asset-1 2018-19 (2 days)
Maintenance Spares	62.96
O&M Expenses	34.98
Receivables	1349.89
<b>Total</b>	<b>1447.83</b>
Rate of Interest (%)	12.20
<b>Interest on working Capital</b>	<b>0.97</b>

**Annual Transmission charges**

68. Accordingly, the annual transmission charges being allowed for the instant asset are as follows:

(₹ in lakh)



Particulars	Asset-1
	2018-19 (2 days)
Depreciation	12.73
Interest on Loan	14.10
Return on Equity	14.28
Interest on Working Capital	0.97
O&M Expenses	2.30
<b>Total</b>	<b>44.38</b>

### **Filing fee and the publication expenses**

69. The Petitioner has sought reimbursement of fee paid by it for filing the petition and publication expenses in terms of Regulation 52 of the 2014 Tariff Regulations. The Petitioner shall be entitled for reimbursement of the filing fees and publication expenses in connection with the present petition, directly from the beneficiaries on pro-rata basis in accordance with clause (1) of Regulation 52 of the 2014 Tariff Regulations.

### **License fee and RLDC Fees and Charges**

70. The Petitioner has prayed to allow the Petitioner to bill and recover License fee and RLDC fees and charges, separately from the respondents. We are of the view that the Petitioner shall be entitled for reimbursement of license fee and RLDC fees and charges in accordance with Clause (2)(b) and (2)(a) of Regulation 52 in the 2014 Tariff Regulations.

### **Goods and Services Tax**

71. The Petitioner has prayed for reimbursement of tax, if any, on account of implementation of GST. GST is not levied on transmission service at present and we are of the view that Petitioner's prayer is premature.



### **Sharing of Transmission Charges**

72. The Transmission Charges for the asset covered in the instant petition shall be recovered on monthly basis in accordance with Regulation 43 of the 2014 Tariff Regulations. The billing, collection and disbursement of the transmission charges approved shall be governed by the provisions of Central Electricity Regulatory Commission (Sharing of Inter-State Transmission Charges and Losses) Regulations, 2010, as amended from time to time.

73. This order disposes of Petition No.53/TT/2020.

Sd/  
**(Arun Goyal)**  
Member

Sd/  
**(I. S. Jha)**  
Member

Sd/  
**(P. K. Pujari)**  
Chairperson



**DETAILS OF WEIGHTED AVERAGE RATE OF DEPRECIATION (WAROD)  
FOR THE 2014-19 TARIFF PERIOD****Asset-1**

<b>Asset-1 (2014-19)</b>	<b>Admitted Capital Cost as on COD</b>	<b>Projected Additional Capitalisation during tariff period 2014-19</b>	<b>Admitted Capital Cost as on 31.3.2019</b>	<b>Rate of Depreciation as per Regulations</b>	<b>Annual Depreciation as per Regulations</b>
<b>Capital Expenditure</b>					<b>2018-19</b>
Building, Civil Works & Colony	122.42	0.00	122.42	3.34%	4.09
Transmission Line	42504.76	0.00	42504.76	5.28%	2,244.25
Substation	1169.80	0.00	1169.80	5.28%	61.77
PLCC	147.71	0.00	147.71	6.33%	9.35
IT Equipment (Incl. Software)	23.78	0.00	23.78	15.00%	3.57
<b>Total</b>	<b>43968.47</b>	<b>0.00</b>	<b>43968.47</b>	<b>Total</b>	<b>2323.02</b>
<b>Average Gross Block (₹ in lakh)</b>					<b>43968.47</b>
<b>Weighted Average Rate of Depreciation (WAROD)</b>					<b>5.2834%</b>