

CENTRAL ELECTRICITY REGULATORY COMMISSION

NEW DELHI

Petition No.181/TT/2018

Coram :

Shri P.K. Pujari, Chairperson

Dr. M. K. Iyer, Member

Shri I.S. Jha, Member

Date of Order: 30th of September, 2019

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 DOCO to 31.3.2019 for Main SCADA EMS System (05 assets) under project – "Expansion/ Up-gradation of SCADA/ EMS System of SLDCs of Eastern Region".

And in the matter of

Power Grid Corporation of India Limited

"Saudamini", Plot No.2,

Sector-29, Gurgaon -122 001

....Petitioner

Versus

1. Bihar State Power (Holding) Company Limited, (Formely Bihar State Electricity Board),
Vidyut Bhawan, Bailey Road, Patna-800 001
2. West Bengal State Electricity Distribution Company Limited,
Bidyut Bhawan, Bidhan Nagar, Block DJ, Sector-II,
Salt Lake City, Kolkata-700 091
3. Grid Corporation of Orissa Limited,
Shahid Nagar, Bhubaneswar-751 007
4. Damodar Valley Corporation,
DVC Tower, Maniktala Civil Centre, VIP Road, Kolkata-700 054



5. Power Department,
Govt. of Sikkim, Gangtok-737 101
6. Jharkhand State Electricity Board, In front of Main
Secretariat, Doranda, Ranchi-834 002
7. North Bihar Power Distribution Company Limited,
Vidyut Bhawan, Bailey Road,
Patna, Bihar-800 001
8. South Bihar Power Distribution Company Limited,
Vidyut Bhawan, Bailey Road,
Patna, Bihar-800 001

...Respondents

Parties present:

For Petitioner: Shri S.K.Nirajan, PGCIL
Shri S.K.Venkatesan, PGCIL
Shri S.S.Raju, PGCIL
Shri Amit Yadav, PGCIL

For Respondent: None

ORDER

The present petition has been filed by Power Grid Corporation of India Ltd. ("the Petitioner") seeking approval of transmission tariff for the assets of Main SCADA EMS System (05 assets) under project – "Expansion/ Up-gradation of SCADA/ EMS System of SLDCs of Eastern Region" (hereinafter referred as "transmission asset") 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") for the asset.

2. The Petitioner has made the following prayers:

- (i) *Approve the Transmission Tariff for the tariff block 2014-19 for the assets covered under this petition.*
- (ii) *Admit the capital cost as claimed in the petition and approve the additional capitalization projected to be incurred.*



- (iii) *Allow the Petitioner to approach Hon'ble Commission for suitable revision in the norms for O&M expenditure for claiming the impact of wage hike, if any, during period 2014-19.*
- (iv) *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.*
- (v) *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.*
- (vi) *Allow the Petitioner to bill and recover Licensee fee and RLDC fees and charges, separately from the respondents in terms of Regulation 52 Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014.*
- (vii) *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 respondents.*
- (viii) *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.*
- (ix) *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.*
- (x) *Allow the Petitioner to bill Tariff from actual DOCO and also the Petitioner may be allowed to submit revised Certificate and tariff Forms (as per the Relevant Regulation) based on actual DOCO.*



(xi) *and pass such other relief as Hon'ble Commission deems fit and appropriate under the circumstances of the case and in the interest of justice.*

Background

3. The Investment Approval (hereinafter referred to as "IA") for implementation of "Expansion/ Up-gradation of SCADA/ EMS System of SLDCs of Eastern Region" in Eastern Region was accorded by Board of Directors of the Petitioner in 285th meeting held on 28.3.2013 for ₹3972 lakh including an IDC of ₹247 lakh based on February, 2013 price level (communicated vide Memorandum No. C/CP/ER-SCADA dated 5.4.2013).

4. The scope of the scheme was discussed and agreed in the 20th TCC & ERPC meeting held on 16th & 17th December, 2011 at Kolkata. The Scheme was later discussed and agreed for implementation in the 21st TCC & ERPC meeting held on 20th & 21st April, 2012 at Kolkata. The Petitioner has been entrusted with the implementation of Communication System.

5. The scope of work covered under the project "Expansion/ Up-gradation of SCADA/ EMS System of SLDCs of Eastern Region" in Eastern Region are as follows:

- (i) Installation of new EMS/SCADA platform equipped with Hardware & Software at SLDCs and Backup SLDC
- (ii) Installation of RTUs/ SAS to Main & Backup Control Centre on IEC 60870-5-101/104 protocol
- (iii) Integration of main & Backup Control Centers of SLDCs with Main and Backup ERLDC on ICCP protocol
- (iv) Integration of distribution company (DISCOM) control centre with their respective main & Backup SLDCs
- (v) Installation of Auxiliary Power Supply (APS) System for Control Centers
- (vi) RTUs for DVC, BSEB and Sikkim
- (vii) Installation of new Video projection System for all control centers envisaged in this project.
- (viii) Installation of Video Conferencing System for all control centers envisaged in this project.



6. The status and scope of work of the subject project covered under various petitions, is as follows:-

S. N.	Name of Asset	Actual COD (Claimed)	Remarks
1	Asset-I: SCADA system at DVC	8.01.2016	Covered under 232/TT/2016. Final order issued.
2	Asset-II: SCADA system at Sikkim		
3	Asset-III: SCADA system at BSPTCL		
4	Asset-IV: SCADA system at JUSNL		
5	Asset-V: SCADA system at DVC Main control centre (Howrah)	31.3.2016	
6	Asset-I: SCADA system at BSPTCL (Integration of RTUs to Main & Backup Control Centers and RTUs : 44 Nos)	1.7.2017	Covered under instant petition
7	Asset-II: SCADA system at DVC (Integration of RTUs to Main & Backup Control Centers and RTUs : 31 Nos)		
8	Asset-III: SCADA system at JUSNL (Integration of RTUs to Main & Backup Control Centers and RTUs : 15 Nos)		
9	Asset-IV: SCADA system at Sikkim (Integration of RTUs to Main & Backup Control Centers and RTUs : 05 Nos)		
10	Asset-V: SCADA system at BSPTCL (Integration of RTUs to Main & Backup Control Centers and RTUs : 10 Nos)	19.9.2017	

7. The details of the annual transmission charges claimed by the Petitioner are as under:-

(₹ in lakh)

Particulars	Asset-I		Asset-II		Asset-III	
	2017-18	2018-19	2017-18	2018-19	2017-18	2018-19
Depreciation	25.03	34.83	15.81	22.72	5.82	8.32
Interest on Loan	23.88	30.60	15.08	20.01	5.55	7.33
Return on Equity	23.26	32.37	14.69	21.12	5.41	7.73
Interest on Working Capital	1.57	2.13	0.99	1.39	0.37	0.51
O&M Expenses	0.00	0.00	0.00	0.00	0.00	0.00
Total	73.74	99.93	46.57	65.24	17.15	23.89



(₹ in lakh)

Particulars	Asset-IV		Asset-V	
	2017-18	2018-19	2017-18	2018-19
Depreciation	1.76	2.47	2.36	6.20
Interest on Loan	1.65	2.14	2.10	5.15
Return on Equity	1.64	2.30	2.20	5.76
Interest on Working Capital	0.11	0.15	0.15	0.37
O&M Expenses	0.00	0.00	0.00	0.00
Total	5.16	7.06	6.81	17.48

8. The details of the interest on working capital claimed by the Petitioner are as under:-

(₹ in lakh)

Particulars	Asset-I		Asset-II		Asset-III	
	2017-18	2018-19	2017-18	2018-19	2017-18	2018-19
O&M expenses	0.00	0.00	0.00	0.00	0.00	0.00
Maintenance Spares	0.00	0.00	0.00	0.00	0.00	0.00
Receivables	16.39	16.65	10.35	10.87	3.81	3.98
Total	16.39	16.65	10.35	10.87	3.81	3.98
Rate of Interest	12.80%	12.80%	12.80%	12.80%	12.80%	12.80%
Interest	2.10	2.13	1.32	1.39	0.49	0.51
Pro-rata Interest	1.57	2.13	0.99	1.39	0.37	0.51

Particulars	Asset-IV		Asset-V	
	2017-18	2018-19	2017-18	2018-19
O&M expenses	0.00	0.00	0.00	0.00
Maintenance Spares	0.00	0.00	0.00	0.00
Receivables	1.15	1.18	2.13	2.91
Total	1.15	1.18	2.13	2.91
Rate of Interest	12.80%	12.80%	12.80%	12.80%
Interest	0.15	0.15	0.27	0.37
Pro-rata Interest	0.11	0.15	0.15	0.37

9. The Petitioner has served the copy of the petition upon the respondents and notice of this application has been published in the 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. None of the Respondents have filed reply.

10. The Petition was last heard on 23.4.2019 and the Commission reserved the order in the Petition.



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

12. This order has been issued after considering the main petition dated 26.3.2018 and Petitioner's affidavits dated 29.5.2018, 14.12.2018, 15.2.2019, 6.5.2019 and 9.5.2019.

Analysis and Decision

Date of Commercial Operation (COD)

13. The Petitioner has claimed the actual COD in respect of the assets covered under the instant petition as per the following details:

Asset Details	Actual COD (Claimed)
Asset-I: SCADA system at BSPTCL (Integration of RTUs to Main & Backup Control Centers and RTUs : 44 Nos)	1.7.2017
Asset-II: SCADA system at DVC (Integration of RTUs to Main & Backup Control Centers and RTUs : 31 Nos)	
Asset-III: SCADA system at JUSNL (Integration of RTUs to Main & Backup Control Centers and RTUs : 15 Nos)	
Asset-IV: SCADA system at Sikkim (Integration of RTUs to Main & Backup Control Centers and RTUs : 05 Nos)	
Asset-V: SCADA system at BSPTCL (Integration of RTUs to Main & Backup Control Centers and RTUs : 10 Nos)	19.9.2017

14. In support of the actual COD of the assets covered in the instant petition, the Petitioner has submitted charging certificates dated 2.8.2017, 12.7.2017, 23.2.2018 and 16.4.2019 issued by the respective state SLDC's. With regard to CMD certificate as required under Grid Code, the Petitioner vide affidavit dated 15.2.2019 has submitted that CMD/CEO/MD certificate is not applicable in the instant case as per 2014 tariff regulations which is in line with Commission's order dated 7.7.2017 in 53/TT/2016.

15. Taking into consideration the SLDC charging Certificates submitted by the Petitioner, the COD of the instant Assets are approved as mentioned below and the tariff has been worked out from COD to 31.3.2019:



Asset Details	COD (Actual)
Asset-I: SCADA system at BSPTCL (Integration of RTUs to Main & Backup Control Centers and RTUs : 44 Nos)	1.7.2017
Asset-II: SCADA system at DVC (Integration of RTUs to Main & Backup Control Centers and RTUs : 31 Nos)	1.7.2017
Asset-III: SCADA system at JUSNL (Integration of RTUs to Main & Backup Control Centers and RTUs : 15 Nos)	1.7.2017
Asset-IV: SCADA system at Sikkim (Integration of RTUs to Main & Backup Control Centers and RTUs : 05 Nos)	1.7.2017
Asset-V: SCADA system at BSPTCL (Integration of RTUs to Main & Backup Control Centers and RTUs : 10 Nos)	19.9.2017

Capital Cost

16. Clause (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.”

17. The Petitioner has submitted the apportioned approved cost as per Investment Approval. The Petitioner has submitted Auditors Certificates dated 6.9.2017 and 14.2.2019 claiming capital cost incurred as on COD as well as additional capitalization projected to be incurred during 2017-18 & 2018-19 in respect of the instant assets which is summarized below:

(₹ in lakh)

Asset	Apportioned Approved Cost (FR)	Cost up to COD	Projected Expenditure		Estimated Completion Cost
			2017-18	2018-19	
Asset-I	572.92	532.33	12.83	10.00	555.16
Asset-II	375.60	326.19	27.77	10.11	363.96
Asset-III	138.24	121.59	7.36	5.00	133.95
Asset-IV	40.86	37.02	1.57	1.00	39.59
Asset-V	109.07	51.27	39.42	15.00	105.69

Cost Over-run

18. We have considered the submissions of Petitioner and noted that against the total apportioned approved cost of assets covered in the instant petition as mentioned in the table above, the estimated completion cost as on 31.3.2019 including additional capitalization is within the respective apportioned approved cost. Therefore, there is no cost overrun.

Time over-run

19. As per the Investment Approval (IA), the transmission scheme was scheduled to be commissioned within 27 months from the date of investment approval. It is observed that the Petitioner in the present petition has considered the IA date as 5.4.2013 whereas the IA was accorded by the Board of the Petitioner on 28.3.2013. Therefore, the IA date has been considered as 28.3.2013. Accordingly, the Commissioning Schedule comes to 28.6.2015 against which Asset-I to Asset-IV and Asset-V have been commissioned on 1.7.2017 and 19.9.2017 respectively. Thus,



there is a time overrun of days 735 and 815 days in commissioning of Asset-I to Asset-IV and Asset-V respectively.

20. In support of time over-run, the Petitioner vide affidavit dated 15.2.2019 has submitted the following chronology of activities:-

Asset-I (BSPTCL)

Activity	Period of activity				Reasons for delay
	Schedule		Actual		
	From	to	From	to	
LOA	5.4.13	5.5.13	31.5.13	31.5.13	The LOA was awarded within 02 months of Investment approval
Supplies	1.5.13	29.8.14	8.6.13	30.11.14	The supplies were started almost immediately upon award of works
Testing & Commissioning/ Integration and Handing over	7.4.14	27.6.15	1.6.17	1.7.17	The reasons for delay predominantly include the slow pace of execution of states/ constituents. The completion of Control Center or related works to be executed by the constituents was delayed and had missed the deadlines even though numerous persuasive and proactive actions were taken through various forums. The delay in the above mentioned works lead to a cascading effect on the planned progress of the work under subject petition. The same have been elaborated in detail alongwith chronology in petition.

Asset-II (DVC)

Activity	Period of activity				Reasons for delay
	Schedule		Actual		
	From	to	From	to	
LOA	5.4.13	5.5.13	31.5.13	31.5.13	The LOA was awarded within 02 months of Investment approval
Supplies	1.5.13	29.8.14	8.6.13	30.11.14	The supplies were started almost immediately upon award of works
Testing & Commissioning/ Integration and	7.4.14	27.6.15	1.6.17	1.7.17	The reasons for delay predominantly include the slow pace of execution of states/ constituents. The completion of Control Center or related works to be executed by the



Activity	Period of activity				Reasons for delay
	Schedule		Actual		
	From	to	From	to	
Handing over					<p>constituents was delayed and had missed the deadlines even though numerous persuasive and proactive actions were taken through various forums. The delay in the above mentioned works lead to a cascading effect on the planned progress of the work under subject petition.</p> <p>The same have been elaborated in detail alongwith chronology in petition.</p>

Asset-III (JUSNL)

Activity	Period of activity				Reasons for delay
	Schedule		Actual		
	From	to	From	to	
LOA	5.4.13	5.5.13	31.5.13	31.5.13	The LOA was awarded within 02 months of Investment approval
Supplies	1.5.13	29.8.14	8.6.13	30.11.14	The supplies were started almost immediately upon award of works
Testing & Commissioning/ Integration and Handing over	7.4.14	27.6.15	1.6.17	1.7.17	<p>The reasons for delay predominantly include the slow pace of execution of states/ constituents.</p> <p>The completion of Control Center or related works to be executed by the constituents was delayed and had missed the deadlines even though numerous persuasive and proactive actions were taken through various forums. The delay in the above mentioned works lead to a cascading effect on the planned progress of the work under subject petition.</p> <p>The same have been elaborated in detail alongwith chronology in petition.</p>

Asset-IV (Sikkim)

Activity	Period of activity				Reasons for delay
	Schedule		Actual		
	From	to	From	to	
LOA	5.4.13	5.5.13	31.5.13	31.5.13	The LOA was awarded within 02 months of Investment approval
Supplies	1.5.13	29.8.14	8.6.13	30.11.14	The supplies were started almost immediately upon award of works
Testing &	7.4.14	27.6.15	1.6.17	1.7.17	The reasons for delay predominantly



Activity	Period of activity				Reasons for delay
	Schedule		Actual		
	From	to	From	to	
Commissioning/ Integration and Handing over					<p>include the slow pace of execution of states/ constituents.</p> <p>The completion of Control Center or related works to be executed by the constituents was delayed and had missed the deadlines even though numerous persuasive and proactive actions were taken through various forums. The delay in the above mentioned works lead to a cascading effect on the planned progress of the work under subject petition.</p> <p>The same have been elaborated in detail alongwith chronology in petition.</p>

Asset-V (BSPTCL)

Activity	Period of activity				Reasons for delay
	Schedule		Actual		
	From	to	From	to	
LOA	5.4.13	5.5.13	31.5.13	31.5.13	The LOA was awarded within 02 months of Investment approval
Supplies	1.5.13	29.8.14	8.6.13	30.11.14	The supplies were started almost immediately upon award of works
Testing & Commissioning/ Integration and Handing over	7.4.14	27.6.15	1.7.17	19.9.17	<p>The reasons for delay predominantly include the slow pace of execution of states/ constituents.</p> <p>The completion of Control Center or related works to be executed by the constituents was delayed and had missed the deadlines even though numerous persuasive and proactive actions were taken through various forums. The delay in the above mentioned works lead to a cascading effect on the planned progress of the work under subject petition.</p> <p>The same have been elaborated in detail alongwith chronology in petition.</p>

21. The Petitioner has submitted that the actual testing and commissioning / integration and handing over in respect of Asset-I to Asset-IV and Asset-V was started from 1.6.2017 and 1.7.2017 and completed on 1.7.2017 and 19.9.2017 respectively. This indicates that the said activities were completed within one/ two months whereas the schedule time for this activity was around 14 months i.e. from



7.4.14 to 27.6.2015. Thus, there seems to be error in the submission of the Petitioner with regard to date of actual start of the testing and commissioning/ integration and handing over activity in respect of then instant assets. Accordingly, the Petitioner is directed to furnish these details at the time of truing up exercise.

22. We are proceeding with the analysis of time over-run on the basis of available documents in respect of instant assets. The Petitioner has been entrusted with the implementation of Expansion/ Up-gradation of SCADA/ EMS system of SLDCs of Eastern Region at various premises of the constituents (*i.e. BSPTCL, DVC, JUSNL & Sikkim for the current petition*). The scope consists of Equipment Supply and various “Site Work” and “Site Testing” related activities inside the premises of these constituents as per description and milestone indicated in the Work Matrix (*annexed as Annex-II of Investment approval*). As per the Work Matrix, the “Site Works” related to “D(1) RTU installation and Commissioning Work” had to be finished by the intermediate milestone of 1.6.2014 with the assistance of respective constituents (*i.e. BSPTCL, DVC, JUSNL and SIKKIM*). Therefore, it was incumbent upon these constituents to make available the site at least 12 months prior to the milestone of 1.6.2014 (*i.e. by 1.6.2013*). However, as per the documents submitted by the Petitioner, the 105 nos. premises of these constituents were actually made available to the Petitioner ranging from 19.5.2016 to 18.9.2017, against the schedule of 1.6.2013, with a delay ranging from 1083 days to 1570 days. Thereafter, the Petitioner immediately went ahead with the remaining activities of “Site Works” of “D(1) RTU installation and commissioning works”, “D(2) Commissioning works for Control Centre” and “Site Testing” of “E(1) Site Acceptance Testing & Handing Over”, since they had already completed the equipment supply, by 30.11.2014. However, the above delay spanning from 1083 days to 1570 days in handing over of the premises by the constituents had a cascading effect on the overall completion of the assets. However, Petitioner compressed the execution time due to which the Asset-I to Asset-IV and Asset-V could be commissioned on 1.7.2017 and 19.7.2017 with an overall delay of 735 days and 815 days respectively. Therefore, we are of the view that the delay in handing over of working site by the constituents BSPTCL, DVC, JUSNL and Sikkim has resulted in the overall delay in commissioning of Asset-I to Asset-V and was beyond the control of Petitioner, therefore, the total time overrun is condoned.



Interest During Construction (IDC)

23. The Petitioner has claimed Interest During Construction (IDC) for the instant assets and has submitted the Auditor Certificate in support of the same. The Petitioner has submitted computation of IDC alongwith the year-wise details of the IDC discharged which is summarized as under:

(₹ in lakh)

Asset	IDC as per Auditor Certificate	IDC discharged upto COD	IDC discharged in 2017-18	IDC discharged in 2018-19
Asset I	89.71	66.55	23.16	0.00
Asset II	54.97	40.78	14.19	0.00
Asset III	20.49	15.20	5.29	0.00
Asset IV	6.52	5.04	1.48	0.00
Asset V	7.21	5.72	1.08	0.41

24. The IDC on cash basis upto the COD has been worked out on the basis of the loan details given in the statement showing discharge of IDC and Form-9C for the instant assets. The IDC claimed and considered as on COD and summary of discharge of IDC liability upto COD and thereafter, for the purpose of tariff determination, subject to revision at the time of trueing up is as below:

(₹ in lakh)

Asset	IDC claimed as per Auditor's Certificate	IDC allowed	Excess IDC disallowed	IDC allowed as on COD	Undischarged IDC as on COD	Year-wise IDC discharged	
						2017-18	2018-19
Asset I	89.71	89.71	-	66.55	23.16	23.16	-
Asset II	54.97	54.97	-	40.78	14.19	14.19	-
Asset III	20.49	20.49	-	15.20	5.29	5.29	-
Asset IV	6.52	6.05	0.47	5.04	1.01	1.01	-
Asset V	7.21	7.21	-	5.72	1.49	1.08	0.41

Incidental Expenditure During Construction (IEDC)

25. The Petitioner has claimed IEDC of the Assets covered in the petition as per the tabulation given below. The Petitioner has claimed IEDC as on COD, which is within the percentage of hard cost as indicated in the abstract cost estimate. Further, the Petitioner submitted that entire IEDC claimed in Auditor Certificates is on cash basis and is paid up to COD of the assets. Hence, the entire amount of IEDC has been allowed. Accordingly, the IEDC details considered for the purpose of tariff calculation are as follows:-



(₹ in lakh)

Assets	IEDC claimed as per Auditor's Certificate	IEDC considered as on COD	IEDC discharged Up to COD
Asset-I	8.68	8.68	8.68
Asset-II	5.32	5.32	5.32
Asset-III	1.98	1.98	1.98
Asset-IV	0.60	0.60	0.60
Asset-V	2.46	2.46	2.46

Initial Spares

26. The Petitioner has not claimed any initial spares for the assets covered in the instant petition.

Capital cost as on COD

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

(₹ in lakh)

Assets	Capital Cost claimed as on COD (A)	Excess IDC disallowed (B)	Un-discharged IDC liability (C)	Capital Cost as on COD considered for tariff calculation (D)=A-B-C
Asset-I	532.33	0.00	23.16	509.17
Asset-II	326.19	0.00	14.19	312.00
Asset-III	121.59	0.00	5.29	116.30
Asset-IV	37.02	0.47	1.01	35.54
Asset-V	51.27	0.00	1.49	49.78

Additional Capital Expenditure (ACE)

28. As per Clause (13) of Regulation 3 of the 2014 Tariff Regulations, the cut off date for Asset I to V is 31.3.2020. The Petitioner has claimed the following ACE on estimation basis in respect of the instant assets and submitted the Auditor's Certificates in support of the same:

(₹ in lakh)

Asset	Estimated Expenditure in the FY		Total Estimated Additional Capital Expenditure claimed by Petitioner as on 31.03.2019
	2017-18	2018-19	
Asset-I	12.83	10.00	22.83
Asset-II	27.77	10.00	37.77
Asset-III	7.36	5.00	12.36
Asset-IV	1.57	1.00	2.57
Asset-V	39.42	15.00	54.42



29. The Petitioner has claimed additional capital expenditure towards Balance and Retention payments. The admissible un-discharged IDC liability as on COD has been allowed as ACE during the year of its discharge. The allowed Additional Capital expenditure are summarized below which is subject to true up:-

(₹ in lakh)

Particulars	Asset-I		Asset-II		Asset-III	
	2017-18	2018-19	2017-18	2018-19	2017-18	2018-19
ACE to the extent of Balance & Retention Payment	12.83	10.00	27.77	10.00	7.36	5.00
IDC Discharged	23.16	0.00	14.19	0.00	5.29	0.00
Total allowed Add-Cap	35.99	10.00	41.96	10.00	12.65	5.00

Particulars	Asset-IV		Asset-V	
	2017-18	2018-19	2017-18	2018-19
ACE to the extent of Balance & Retention Payment	1.57	1.00	39.42	15.00
IDC Discharged	1.01	0.00	1.08	0.41
Total Add Cap allowed	2.58	1.00	40.50	15.41

Capital cost for the tariff period 2014-19

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

(₹ in lakh)

Asset	Capital Cost allowed as on COD	Add Cap for 2017-18	Add Cap for 2018-19	Total Estimated Completion Cost up to 31.3.2019
Asset-I	509.17	35.99	10.00	555.16
Asset-II	312.00	41.96	10.00	363.96
Asset-III	116.30	12.65	5.00	133.95
Asset-IV	35.54	2.58	1.00	39.12
Asset-V	49.78	40.50	15.41	105.69

Debt-Equity Ratio

31. 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 capital cost allowed as on the date of commercial operation arrived at as above and additional capitalization allowed have been considered in the debt-equity ratio of 70:30. The debt-equity as on dates of commercial operation and 31.3.2019 considered on normative basis are as under:-



(₹ in lakh)

Asset-I				
Particular	Capital cost as on COD		Capital cost as on 31.3.2019	
	Amount	%	Amount	%
Debt	356.42	70.00	388.61	70.00
Equity	152.75	30.00	165.55	30.00
Total	509.17	100.00	555.16	100.00

Asset-II				
Particular	Capital cost as on COD		Capital cost as on 31.3.2019	
	Amount	%	Amount	%
Debt	218.40	70.00	254.77	70.00
Equity	93.60	30.00	109.19	30.00
Total	312.00	100.00	363.96	100.00

Asset-III				
Particular	Capital cost as on COD		Capital cost as on 31.3.2019	
	Amount	%	Amount	%
Debt	81.41	70.00	93.77	70.00
Equity	34.89	30.00	40.19	30.00
Total	116.30	100.00	133.95	100.00

Asset-IV				
Particular	Capital cost as on COD		Capital cost as on 31.3.2019	
	Amount	%	Amount	%
Debt	24.88	70.00	27.38	70.00
Equity	10.66	30.00	11.73	30.00
Total	35.54	100.00	39.12	100.00

Asset-V				
Particular	Capital cost as on COD		Capital cost as on 31.3.2019	
	Amount	%	Amount	%
Debt	34.85	70.00	73.98	70.00
Equity	14.93	30.00	31.71	30.00
Total	49.78	100.00	105.69	100.00

Return on Equity (ROE)

32. The Petitioner has submitted that RoE has been calculated at the rate of 19.61% after grossing up the RoE with MAT rate of 20.961% as per the above Regulations. 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.

33. We have considered the submissions made by the Petitioner and 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 applicable during 2013-14 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.

34. Accordingly, the ROE allowed is as follows:-

(₹ in lakh)

Particulars	Asset-I		Asset-II		Asset-III	
	2017-18 (Pro-rata)	2018-19	2017-18 (Pro-rata)	2018-19	2017-18 (Pro-rata)	2018-19
Opening Equity	152.75	163.55	93.60	106.19	34.89	38.69
Addition due to Additional Capitalization	10.80	3.00	12.59	3.00	3.80	1.50
Closing Equity	163.55	166.55	106.19	109.19	38.69	40.19
Average Equity	158.15	165.05	99.89	107.69	36.79	39.44
Return on Equity (Base Rate)	15.50%	15.50%	15.50%	15.50%	15.50%	15.50%
MAT rate for the Financial year 2013-14	20.961%	20.961%	20.961%	20.961%	20.961%	20.961%
Rate of Return on Equity (Pre-tax)	19.610%	19.610%	19.610%	19.610%	19.610%	19.610%
Return on Equity (Pre-tax)	23.26	32.37	14.69	21.12	5.41	7.73

Particulars	Asset-IV		Asset-V	
	2017-18 (Pro-rata)	2018-19	2017-18 (Pro-rata)	2018-19
Opening Equity	10.66	11.43	14.93	27.08
Addition due to Additional Capitalization	0.77	0.30	12.15	4.62
Closing Equity	11.43	11.73	27.08	31.71
Average Equity	11.05	11.58	21.01	29.39
Return on Equity (Base Rate)	15.50%	15.50%	15.50%	15.50%
MAT rate for the Financial year 2013-14	20.961%	20.961%	20.961%	20.961%
Rate of Return on Equity (Pre-tax)	19.610%	19.610%	19.610%	19.610%
Return on Equity (Pre-tax)	1.62	2.27	2.19	5.76

Interest on Loan (IOL)

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



- a) The Gross Normative loan has been considered as per the Loan amount determined based on the debt equity ratio applied on the allowed capital cost.
- b) The depreciation of every year has been considered as Normative repayment of loan of concerned year;
- c) The weighted average rate of interest on actual loan portfolio has been worked out by considering the Gross amount of loan, repayment & rate of interest as mentioned in the petition, which has been applied on the normative average loan during the year to arrive at the interest on loan.

36. The Petitioner has submitted that the 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. The 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.

37. The details of IOL calculated are as follows:-

Particulars	(₹ in lakh)					
	Asset-I		Asset-II		Asset-III	
	2017-18 (Pro-rata)	2018-19	2017-18 (Pro-rata)	2018-19	2017-18 (Pro-rata)	2018-19
Gross Normative Loan	356.42	381.61	218.40	247.77	81.41	90.27
Cumulative Repayment upto previous Year	0.00	25.03	0.00	15.81	0.00	5.82
Net Loan-Opening	356.42	356.59	218.40	231.96	81.41	84.44
Addition due to Additional Capitalization	25.19	7.00	29.37	7.00	8.86	3.50
Repayment during the year	25.03	34.83	15.81	22.72	5.82	8.32
Net Loan-Closing	356.59	328.76	231.96	216.24	84.44	79.62
Average Loan	356.50	342.67	225.18	224.10	82.93	82.03
Weighted Average Rate of Interest on Loan	8.9300%	8.9300%	8.9300%	8.9300%	8.9300%	8.9300%
Interest on Loan	23.88	30.60	15.08	20.01	5.55	7.33



Particulars	Asset-IV		Asset-V	
	2017-18 (Pro-rata)	2018-19	2017-18 (Pro-rata)	2018-19
Gross Normative Loan	24.88	26.68	34.85	63.20
Cumulative Repayment upto previous Year	0.00	1.75	0.00	2.36
Net Loan-Opening	24.88	24.93	34.85	60.84
Addition due to Additional Capitalization	1.80	0.70	28.35	10.79
Repayment during the year	1.75	2.44	2.36	6.20
Net Loan-Closing	24.93	23.19	60.84	65.43
Average Loan	24.91	24.06	47.84	63.13
Weighted Average Rate of Interest on Loan	8.8018%	8.7885%	8.2117%	8.1634%
Interest on Loan	1.64	2.11	2.09	5.15

Depreciation

38. Depreciation has been dealt with in line of Regulation 27 of 2014 Tariff Regulations. The instant assets were put under commercial operation during 2017-18. Accordingly, it will complete 12 years after 2017-18. As such, depreciation has been calculated annually based on Straight Line Method at the rates specified in Appendix-II to the 2014 Tariff Regulations. Details of the depreciation allowed are as under:-

(₹ in lakh)

Particulars	Asset-I		Asset-II		Asset-III	
	2017-18 (Pro-rata)	2018-19	2017-18 (Pro-rata)	2018-19	2017-18 (Pro-rata)	2018-19
Opening Gross Block	509.17	545.16	312.00	353.96	116.30	128.95
Additional Capital expenditure	35.99	10.00	41.96	10.00	12.65	5.00
Closing Gross Block	545.16	555.16	353.96	363.96	128.95	133.95
Average Gross Block	527.17	550.16	332.98	358.96	122.63	131.45
Rate of Depreciation	6.3300%	6.3300%	6.3300%	6.3300%	6.3300%	6.3300%
Depreciable Value	474.45	495.14	299.68	323.06	110.36	118.31
Remaining Depreciable Value	474.45	470.12	299.68	307.26	110.36	112.48
Depreciation	25.03	34.83	15.81	22.72	5.82	8.32

Particulars	Asset-IV		Asset-V	
	2017-18 (Pro-rata)	2018-19	2017-18 (Pro-rata)	2018-19
Opening Gross Block	35.54	38.12	49.78	90.28
Additional Capital expenditure	2.58	1.00	40.50	15.41



Particulars	Asset-IV		Asset-V	
	2017-18 (Pro-rata)	2018-19	2017-18 (Pro-rata)	2018-19
Closing Gross Block	38.12	39.12	90.28	105.69
Average Gross Block	36.83	38.62	70.03	97.99
Rate of Depreciation	6.3300%	6.3300%	6.3300%	6.3300%
Depreciable Value	33.15	34.75	63.03	88.19
Remaining Depreciable Value	33.15	33.01	63.03	85.83
Depreciation	1.75	2.44	2.36	6.20

Operation and Maintenance Expenses (O&M Expenses)

39. The Petitioner has not claimed any O&M expenses for the assets covered in the instant petition.

Interest on Working Capital (IWC)

40. 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% Operation and maintenance expenses specified in Regulation 28.

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 (9.10%) as on 01.04.2017 Plus 350 Bps i.e. 12.60% have been considered as the rate of interest on working capital for the Assets.



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

(₹ in lakh)

Particulars	Asset-I		Asset-II		Asset-III	
	2017-18 (Pro-rata)	2018-19	2017-18 (Pro-rata)	2018-19	2017-18 (Pro-rata)	2018-19
O&M expenses	0.00	0.00	0.00	0.00	0.00	0.00
Maintenance Spares	0.00	0.00	0.00	0.00	0.00	0.00
Receivables	16.38	16.65	10.35	10.87	3.81	3.98
Total	16.38	16.65	10.35	10.87	3.81	3.98
Rate of Interest	12.60%	12.60%	12.60%	12.60%	12.60%	12.60%
Interest on working Capital	1.55	2.10	0.98	1.37	0.36	0.50

(₹ in lakh)

Particulars	Asset-IV		Asset-V	
	2017-18 (Pro-rata)	2018-19	2017-18 (Pro-rata)	2018-19
O&M expenses	0.00	0.00	0.00	0.00
Maintenance Spares	0.00	0.00	0.00	0.00
Receivables	1.14	1.16	2.12	2.91
Total	1.14	1.16	2.12	2.91
Rate of Interest	12.60%	12.60%	12.60%	12.60%
Interest on working Capital	0.11	0.15	0.14	0.37

Annual Transmission charges

42. Accordingly, the annual transmission charges being allowed for the instant assets are as under:-

(₹ in lakh)

Particulars	Asset-I		Asset-II		Asset-III	
	2017-18 (Pro-rata)	2018-19	2017-18 (Pro-rata)	2018-19	2017-18 (Pro-rata)	2018-19
Depreciation	25.03	34.83	15.81	22.72	5.82	8.32
Interest on Loan	23.88	30.60	15.08	20.01	5.55	7.33
Return on Equity	23.26	32.37	14.69	21.12	5.41	7.73
Interest on Working Capital	1.55	2.10	0.98	1.37	0.36	0.50
O&M Expenses	0.00	0.00	0.00	0.00	0.00	0.00
Total	73.71	99.89	46.56	65.22	17.14	23.88

Particulars	Asset-IV		Asset-V	
	2017-18 (Pro-rata)	2018-19	2017-18 (Pro-rata)	2018-19
Depreciation	1.75	2.44	2.36	6.20
Interest on Loan	1.64	2.11	2.09	5.15
Return on Equity	1.62	2.27	2.19	5.76
Interest on Working Capital	0.11	0.15	0.14	0.37
O&M Expenses	0.00	0.00	0.00	0.00
Total	5.13	6.98	6.78	17.49



Filing fee and the publication expenses

43. 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

44. 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

45. 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 Charges

46. The fee and charges for the Main SCADA EMS system under project "Expansion/ up-gradation of SCADA/EMS system of SLDC's of Eastern Region" under the State Sector shall be shared by the respective State as provided under Regulation 43 of the 2014 Tariff Regulations.

47. This order disposes of Petition No.181/TT/2018.

Sd/
(I. S. Jha)
Member

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

Sd/-
(P. K. Pujari)
Chairperson

