

CENTRAL ELECTRICITY REGULATORY COMMISSION

NEW DELHI

Petition No. 177/TT/2018

Coram:

Shri P.K.Pujari, Chairperson

Dr M. K. Iyer, Member

Shri I.S.Jha, Member

Date of Order: 12.6.2019

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 31.03.2019 for 132kV D/C Silchar- Hailakandi (AEGCL) Transmission line (Balance portion beyond LILO point) along with associated bays at Hailakandi (AEGCL) Substation from DOCO to 31.03.2019 under **“Transmission system associated with Pallatana GBPP and Bongaigaon TPS”**.

And in the matter of:

Power Grid Corporation of India Limited

"Saudamini", Plot No.2,

Sector-29, Gurgaon -122 001

.....Petitioner

Vs

1. Assam Electricity Grid Corporation Limited
(Formerly Assam State Electricity Board)
Bijulee Bhawan, Paltan Bazar,
Guwahati – 781001, Assam.
2. Meghalaya Energy Corporation Limited
(Formerly Meghalaya State Electricity Board)
Short Round Road, “Lumjingshai”
Shillong – 793001, Meghalaya



3. Government of Arunachal Pradesh,
Itanagar, Arunachal Pradesh
4. Power and Electricity Department,
Government of Mizoram,
Aizwal, Mizoram
5. Manipur State Electricity Distribution Company Limited,
(Formerly Electricity Department, Government of Manipur),
Keishampat, Imphal
6. Department of Power,
Government of Nagaland,
Kohima, Nagaland
7. Tripura State Electricity Corporation Limited,
Vidyut Bhawan, North Banamalipur,
Agartala, Tripura (W)-799 001, Tripura
8. OTPC (ONGC Tripura Power Corporation Limited)
6th Floor, A Wing, IFCI Towers,
New Delhi – 110019
9. National Thermal Power Corporation Limited
NTPC Ltd., NTPC Bhawan,
Scope Complex, Institutional Area,
Lodi Road, New Delhi – 110003

....Respondents

Parties present:

For Petitioner: Shri S.S. Raju, PGCIL
Shri Vivek Kumar Singh, PGCIL
Shri S.K. Venkatesan, PGCIL
Shri Amit Yadav, PGCIL
Shri Zafrul Hassan, PGCIL

For Respondent: None



ORDER

The present petition has been filed by Power Grid Corporation of India Ltd. (“the petitioner”) for determination of tariff for 132kV D/C Silchar- Hailakandi (AEGCL) Transmission line (Balance portion beyond LILO point) along with associated bays at Hailakandi (AEGCL) Substation (hereinafter referred to as - transmission Asset) under “Transmission system associated with Pallatana GBPP and Bongaigaon TPS” for 2014-19 tariff period in North-Eastern 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:-
 - i. Approve the Transmission Tariff for the tariff block 2014-19 block for the assets covered under this petition.
 - ii. Admit the capital cost as claimed in the Petition and approve the Additional Capitalisation incurred / 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 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.
 - v. 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.
 - vi. 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.

- vii. 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.
- 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 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.
- x. Allow the petitioner to bill Tariff from anticipated DOCO and also the petitioner may be allowed to submit revised Certificate and tariff Forms (as per the Relevant Regulation) based on actual DOCO.

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.

3. The Investment Approval (IA) for implementation of assets under "Transmission system associated with Pallatana GBPP and Bongaigaon TPS" was accorded by the Board of Directors of the petitioner in 233rd meeting held on 25.2.2010 for ₹ 214400 lakh including IDC of ₹ 17835 lakh based on 3rd Quarter, 2009 price level vide Memorandum Ref: C/CP/Pallatana Bongaigaon dated 26.2.2010. Further, Revised Cost Estimate (RCE) of the project was approved by Board of Directors of the petitioner vide the Memorandum No. C/CP/RCE:PB dated 29th January'2016 with an estimated cost of ₹ 293288 lakh including IDC of ₹ 38804 lakh based on October, 2015 price level.

4. The scope of work covered under "Transmission system associated with Pallatana GBPP and Bongaigaon TPS" as per RCE is follows:-



Transmission line

- i) Bongaigaon TPS - Bongaigaon 400kV D/C line;
- ii) Silchar - Badarpur (POWERGRID) switching station interconnecting 132kV D/C line;
- iii) Pallatana - Surajmaninagar (TSECL) 400kV D/C line (charged at 132kV);
- iv) Silchar - Purba Kanchan Bari (TSECL) 400kV D/C line (charged at 132kV);
- v) Silchar - Melriat (New) 400kV ole line (charged at 132kV);
- vi) Melriat (New) - Sihhmui (Mizoram) 132 kV D/C line;
- vii) Silchar - Imphal (POWERGRID) 400kV D/C line (charged at 132kV);
- viii) LILO of 132 kV Aizwal - Zemabawk (Mizoram) line at Melriat (New) Substation;
- ix) LILO of Imphal - Ningthoukhong (Manipur) 132 kV SIC line at Imphal (POWERGRID);
- x) LILO of Kathalguri - Misa 400kV SIC line at Mariani (New) (charged at 220kV);
- xi) Mariani (new) - Mokokchung (POWERGRID) 220kV D/C line;
- xii) Mokokchung (POWERGRID) -Mokokchung (Nagaland) 132kV D/C line (with Zebra conductor);
- xiii) Pasighat - Roing 132kV SIC line (on D/C tower);
- xiv) Roing - Tezu 132kV SIC line (on D/C tower);
- xv) Tezu - Namsai 132kV SIC line (on D/C tower);
- xvi) Silchar - Srikona 132kV D/C;
- xvii) Silchar - Hailakandi 132kV D/C.

Substations

- i) 2x200 MVA. 400/132kV New Substation at Silchar;
- ii) New substation at Melriat New (upgradable to 400kV);
- iii) Extension of 132/33 kV Imphal (POWERGRID) substation along with 2x50 MVA. 132/33 kV Transformers;
- iv) 220kV New Switching station at Mariani;
- v) 7x10 MVA. 220/132kV new substation at Mokokchung;
- vi) 2x15 MVA. 132/33kV New Substation at Roing;
- vii) 2x15 MVA. 132/33kV New Substation at Tezu;
- viii) 2x15 MVA. 132/33kV New Substation at Namsai;
- ix) 400kV Bongaigaon Substation Extension;
- x) 132kV Badarpur (POWERGRID) Substation Extension;
- xi) 132kV Shuimui (Mizoram) Substation Extension;
- xii) 132kV Mokokchung (Nagaland) Substation Extension;
- xiii) 132kV Ziro (POWERGRID) Substation Extension;
- xiv) 132kV Pasighat (Gov of Arunachal) Substation Extension;
- xv) 132kV Surajmaninagar (TSECL) Substation Extension
- xvi) 132kV Purba Kanchan Bari (TSECL) Substation Extension



- vii) 132kV Hailakandi(AEGCL) Substation Extension;
- xviii) 132kV Srikona Substation Extension.

5. Further, the petitioner has submitted that scheme was discussed during 8th meeting of NERPC held on 10th and 11th January 2010. Subsequently, 2x50 MVA Transformers at Melriat and Mokokchung substations were replaced by 7x10 MVA Transformers in view of difficulties in transportation of 50 MVA transformers. Subsequently, scope of the project was revised (in 3rd SCM of NER and 8th & 14th NERPC meetings) and following elements have been deleted from the scope:

- i) Melriat (New) – Melriat (Mizoram) interconnecting 132 kV D/C line;
- ii) 7x10 MVA 132 kV Transformers at Melriat (POWERGRID).
- iii) LILO of Loktak- Imphal (POWERGRID) 132kV S/C line at Imphal(New);

Following elements have been added under the scope of the project-

- i) Melriat (New) – Sihmui (Mizoram) 132 kV D/C line;
- ii) LILO of 132 kV Aizwal – Zemabawk (Mizoram) line at Melriat (New) S/s.
- iii) LILO of Imphal – Ningthoukhong (Manipur) 132 kV S/C line at Imphal (PG).

6. The petitioner has submitted the details of scope of the work covered in various petitions as shown below:-

Asset	SCOD	Anticipated/ Actual COD	Covered under Petition no
400kV D/C Bongaigaon TPS-Bongaigaon line along with associated bays	1.1.2013	1.1.2013 (Actual)	553/TT/2014 (True Up)
132 kV D/C Silchar-Badarpur line along with associated bays		1.5.2012 (Actual)	
132 kV D/C Silchar-Srikona line along with associated bays		1.4.2012 (Actual)	
200 MVA, 400/132kV ICT- I at Silchar S/S along with associated bays		1.7.2012 (Actual)	
2x50 MVAR,420 kV Switchable line reactors along with associated bays		1.7.2012 (Actual)	
2x63 MVAR Bus Reactor at Silchar S/S along with associated bays		1.7.2012 (Actual)	
132 kV Silchar – Hailakandi (AEGCL) line along with associated bays		1.7.2012 (Actual)	
200 MVA, 400/132kV, ICT-II at Silchar along with associated bays		1.7.2012 (Actual)	



Asset	SCOD	Anticipated/ Actual COD	Covered under Petition no
400 kV D/C Pallatana-Surajmaninagar line (charged at 132 kV) along with associated bays		1.7.2012 (Actual)	
80 MVAR, 420 kV Bus Reactor at Bongaigaon along with associated bay.		1.11.2012 (Actual)	
400kV line bays at Silchar SS and Bongaigaon SS for 400kV D/C Silchar-Bongaigaon line of NETC along with 2 nos of switchable line reactors at Silchar and Bongaigaon SS.		(Silchar end) 1.11.2012 / 1.12.2012 (Bongaigaon end) 1.4.2013	
LILO of 220kV Misa – Kathalguri Transmission Line at Mariani along with Mariani Switching Station		1.4.2013 (Actual)	
4x6.67 MVAR, 132kV, 1-Ph Bus Reactor at 132kV Ziro Substation		1.2.2013 (Actual)	78/TT/2016 (True Up)
220/132kV Imphal S/s (New) and LILO of 132kV S/C Ningthoukhong – Yurembam line at Imphal (New) S/S Line		1.4.2013/ 1.5.2013/ 1.9.2013	
20MVAR Bus Reactor at 220kV Mariani Switching Station		1.4.2013 (Actual)	
220kV, D/C Mariani (New) – Mokokchung (POWERGRID) T/L along with associated bays at Mariani and Mokokchung (PG) S/s		1.8.2015 (Actual)	
132kV, D/C Mokokchung (PG) - Mokokchung (NG) T/L along with associated bays, 3 X 10 MVA, 220/132 kV ICT- II and 220kV & 132kV GIS bays at Mokokchung (PG) S/S		1.8.2015 (Actual)	398/TT/2014
3 X 10 MVA, 220/132 kV ICT-I and 220kV & 132kV GIS bays at Mokokchung (PG) S/S		1.9.2015 (Actual)	
400kV D/C Silchar – Imphal Transmission Line (to be charged at 132 kV) along with associated bays at Silchar and Imphal S/s		22.3.2015 (Actual)	
400kV, D/C Silchar-Purba Kancharbari Transmission Line (to be charged at 132kV) along with its associated bays at Silchar (new) and Purba Kancharbari (TSECL) S/s		1.8.2015 (Actual)	267/TT/2016
(i) 132kV S/C (on D/C Tower) Pasighat–Roing Transmission Line alongwith associated bays at Pasighat and Roing S/s, (ii) 3x5 MVA (132/33kV), 1-ph, ICT-I alongwith associated bays at Roing, (iii) 4x5 MVA (132/33kV), 1-ph, ICT-II alongwith associated bays at Roing, (iv) 4x6.67 MVAR, 1-Ph, 132kV Bus Reactor along with associated bay at Roing		12.6.2017 (Actual)	01/TT/2018
(i) 132kV S/C (on D/C Tower) Roing–Tezu Transmission Line alongwith associated bays at roing and Tezu S/S, (ii) 4x6.67 MVAR, 1-Ph, 132kV Bus Reactor along with associated bay at Tezu		14.6.2017 (Actual)	
132kV D/C Silchar-Hailakandi (AEGCL) Transmission line (Balance portion beyond LILO point) alongwith		17.11.2017 (Actual)	Covered under



Asset	SCOD	Anticipated/ Actual COD	Covered under Petition no
associated bays at Hailakandi (AEGCL) Substation.			instant petition
7x5 MVA, (132/33kV), 1-ph ICT-I and ICT-II alongwith associated bays at Tezu	Under different stages of commissioning. Petition shall be filed subsequently.		
Tezu-Namsai 132kV S/C Line (on D/C Tower) and 2x15MVA, 132/33kV alongwith associated bays at New Namsai S/S			
Silchar-Melriat (New) 400kV D/C Line (charged at 132kV) and 2x50MVA, 132/33kV New SS at Melriat (New) (upgradable to 400kV)			
LILO of 132kV S/C Aizawl-Zemabawk at Melriat T/L along with associated bays at Melriat S/S (New Scope) in place of 132kV D/C Melriat-Melriat T/L			
132kV D/C Melriat– Sihhmui T/L (New Scope) alongwith associated bays at Melriat (PG) & Sihhmui (Mizoram) S/S in place of 132kV D/C Melriat-Melriat T/L			
4x5MVAr, 132kV, 1-ph, Bus Reactor at Melriat Substation Melriat (PG) GIS S/s			

7. Annual Fixed Cost was allowed for the instant transmission asset vide order dated 18.1.2019 under the proviso (i) to Regulation 7(7) of the 2014 Tariff Regulations for inclusion in the PoC charges.

8. The details of the Annual Fixed Cost claimed by the petitioner are as under:-

Particulars	(₹ in lakh)	
	2017-18 (pro-rata)	2018-19
Depreciation	34.60	113.73
Interest on Loan	36.26	112.65
Return on Equity	38.41	126.33
Interest on Working Capital	3.76	11.51
O & M Expenses	26.34	73.13
Total	139.37	437.35

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



Particulars	(₹in lakh)	
	2017-18(pro-rata)	2018-19
O&M expenses	5.90	6.09
Maintenance Spares	10.61	10.97
Receivables	62.40	72.89
Total	78.91	89.96
Rate of Interest	12.80%	12.80%
Interest on working capital	10.10	11.51
Pro-rata interest on working capital	3.76	11.51

10. The petitioner has served the petition on the respondents and notice of this application has been published in the newspapers in accordance with Section 64 of the Electricity Act, 2003 (hereinafter referred to as the Act). 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. No reply has been received from the respondent. Having heard the representatives of the petitioner present at the hearing and having perused the material on record, we proceed to dispose of the petition.

11. This order has been issued after considering the main petition and petitioner's affidavit(s) dated 11.5.2018, 23.5.2018, 12.10.2018 and 31.1.2019.

Date of Commercial Operation (COD)

12. The petitioner has claimed the actual date of commercial operation of the transmission asset as 17.11.2017. In support of COD of the instant asset, the petitioner has submitted CEA Energisation certificate dated 4.11.2017 under Regulation 43 of CEA (Measures Related to Safety & Electricity Supply) Regulations, 2010, RLDC charging certificate dated 30.11.2017 and CMD certificate as required under Grid Code. Taking into considering the CEA Energisation Certificate, RLDC charging Certificate and CMD



Certificate, the COD of the Asset is approved as 17.11.2017. The tariff has been worked out from COD to 31.3.2019.

Capital Cost

13. 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; 39

(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.”

14. The petitioner has submitted the apportioned approved cost as per investment approval and RECE. The petitioner has submitted Auditor Certificate dated 13.3.2018 in



the main petition for instant asset for the capital cost incurred as on COD and additional capitalization projected to be incurred during 2017-18 & 2018-19 which is summarized below:-

(₹ in lakh)

Asset	AppORTIONED Approved Cost (FR)	AppORTIONED Approved Cost (RCE)	Cost up to COD	Projected Expenditure for FY		Estimated Completion Cost
				2017-18	2018-19	
Asset	915.84	2268.70	1487.40	586.18	161.41	2234.99

15. The petitioner has submitted the Reason for Cost Overrun with respect to FR/RCE and the same is as follows:-

(₹ in lakhs)

Asset	AppORTIONED Approved Cost (FR)	AppORTIONED Approved Cost (RCE)	Estimated Completion Cost	Variation (As per FR)	Variation (As per RCE)
Asset	915.84	2268.70	2234.99	-1319.15	33.71

There is cost overrun in Asset of about ₹1319 lakh as per approved appORTIONED cost (FR). The reasons for item wise cost variation between approved costs (FR), approved cost (RCE) are summarized hereunder:

- (a) The price variation under the project is mainly attributable to the inflationary trend prevailing during execution of project and also market forces prevailing at the time of bidding process of various packages.
- (b) Due to ROW issues encountered during the construction of line, the actual line length and routing changed, which increased the no. of angle & Multi-circuit towers. Also there was increase in transmission line length from estimated 10 kms (as per FR) to 12.76 kms (as per actual), which resulted into increasing the cost by about ₹ 445 lakh. The cost increase is broadly on account of increase in number of angle towers, Multi-circuit towers and Pile foundation due to change in course of river front etc.



(c) The cost increase of about ₹ 588 Lakhs is on account of increase in compensation against transmission line construction for crop, tree and forest. The variation is due to the actual assessment of crops/trees & huts encountered in line corridor by concerned Govt. officials of Assam State, quantity & value of which are much greater than the notional estimate. The Compensation was further revised as per the Guidelines issued by MoP, Gol and Hon'ble Guwahati High Court for payment towards damages in regards to Right of Way of transmission line.

(d) There was increase of cost by about ₹ 475 lakh in the overheads/ IEDC and IDC w.r.t. the estimated cost (FR Cost) arrived during preparation of feasibility report.

16. We have examined the submissions of petitioner. It is observed that due to increase of line length from 10 KM to 12.76 KM, there is increase of about ₹ 445 lakh, increase of about ₹ 588 lakh is on account of compensation and increase of about ₹ 475 lakh is due to increase in the overheads/ IEDC and IDC w.r.t. the estimated cost (FR Cost) arrived during preparation of feasibility report.

17. The petitioner has revised the total apportioned approved cost as ₹ 2268.70 lakh (as per RCE) against the estimated completion cost of ₹ 2234.99 lakh. The cost variation cannot be attributed to the petitioner. Moreover, the completion cost is lower than the revised approved apportioned cost. Accordingly, the cost variation is allowed.

Time over-run

18. As per the Investment approval, the transmission scheme was scheduled to be commissioned in 34 months from the date of investment approval. The date of Investment Approval is 26.2.2010. Hence, the SCOD comes to 25.12.2012 against



which COD of the Asset is 17.11.2017. Thus, there is a time over-run of 58 months 23 days in the commissioning of instant asset.

19. The petitioner has submitted that the delay in execution is mainly because of various factors viz. delay in late receipt of land from AEGCL, intense ROW problems, strikes, bandhs, Law and Order situation, difficult terrain conditions & other construction challenges in North East Region. The detailed reasons for delay in commissioning of the Assets are as summarized below:-

- i) **Delay in Land acquisition of Hailakandi (AEGCL) Substation:** As per the original scope of project, the 132 kV D/C Silchar-Hailakandi (AEGCL) Transmission line was to be terminated at Hailakandi substation of AEGCL. However, due to delay in acquisition of substation land by AEGCL and consequent to the decision in the 10th NERPC meeting held on February 8-9, 2011 (MOM dated 25.02.2011 enclosed), it has been decided to connect 132 kV D/C Silchar – Hailakandi line with 132 kV S/C Panchgram – Dullavcherra line of AEGCL so as to form Silchar – Panchgram and Silchar – Dullavcherra lines in absence of Hailakandi (AEGCL) Substation, as an interim arrangement to facilitate evacuation of power from Pallatana project via Silchar substation. Phase-II of 132 kV D/C Silchar – Hailakandi line is delayed due to delay in completion of Hailakandi substation by AEGCL and the same is commissioned on 17.11.2017.
- ii) The petitioner has submitted that AEGCL acquired the land for substation (132 kV Hailakandi) and handed over the site to petitioner for construction of 132 kV PGCIL bay at Hailakandi S/S on 11.03.2013. The inordinate delay in handing over of this land by AEGCL to petitioner happened after the scheduled completion (SCOD: 1.1.2013) of the subject project. Further, by the time land (for substation) was handed over by AEGCL to the petitioner, significant amount of time had been lost resulting into de-mobilization by petitioner's contractor as the said delay was putting various constraints and it was not financially viable for it to remain idle. Pursuant to handing over of the land to the petitioner by AEGCL, considerable time was



consumed in re-mobilization of labour gangs & resources by the contractor owing to difficult terrain and geographical limitations.

- iii) **Right of Way:** After re-mobilization of labour gangs & resources the foundation work started in balance portion of line from LILO point. The works of line construction could not be taken up due to compensation demand beyond the provision of the relevant acts from the landowners at location on 58/0, 59/0, and 60/0. The construction activities like foundation, erection and stringing of the line were severely hampered by ROW problems due to high demand of compensation by the landowners. Assessment of compensation took a considerable time by District Administration thereby delaying the distribution of compensation amount, which resulted in severe RoW issues in a few places. There have been instances where the line had to be rerouted as a result of severe resistance from landowners. The ROW started from 27-Jun-14 and lasted up to 17-Aug-17
- iv) **Law & order situation:** It is submitted that in order to ensure execution and commissioning of the project well within the time, the petitioner placed all orders for supply of material and erection works pertaining to towers, substation and other related works of the said project well in time. Frequent bandhs, strikes and blockades called by various organizations on different issues within the State and outside also resulted in loss of man days during construction of the Transmission Line. Moreover, due to remoteness of location and unavailability of skilled labour, laborers from other States were required to be engaged. However, due to issues like ILP (Inter labour Permit) etc there were constraints in bringing such laborers to site. Due law & order problems laborers often quitted site. High level of labor quitting resulted in slow progress of works. Some incidents happening during construction activity like threatening etc hampered the normal working in adjacent locations and due to prevalent fear-psychosis gang output were reduced considerably. Though security had been provided from Government's side, the same was not found to be effective. Due to frequent stoppage of works, gangs deployed by the contractor had to remain idle for days due to RoW problems at locations. Mobilization and demobilization of gangs slowed down the work and also led to contractual issues. Lastly the law and order situation at certain locations was



resolved with administration support, which caused the delay in commissioning of transmission line from the scheduled completion date.

- v) **Difficult Terrain Conditions:** Assam has aptly been described as a region of bare, craggy hills, huge tropical and alpine forests, steep, rugged valleys and great cascading rivers as well as lofty ranges and towering peaks covered with snow. Almost 20 kM of the total line passes through steep hilly terrain. Since the locations are at hill top, materials are to be carried by head loading through hilly approaches over long distances. In the monsoon season, the approach roads to these locations get washed away due to landslides, interrupting communication and movement of manpower and material and due to deteriorated condition of the left over stretches and it is nearly impossible to carry the materials. The daily working hours are limited in the forested hilly area. Due to unfavorable locations of working sites, the working gangs have to travel long distance to their working site limiting the effective working hours of the gangs.
- vi) **Poor Road Conditions:** The road condition to the particular site locations which are remotely located in Arunachal Pradesh is very poor. For most part of the year, there is disruption in road communication due to heavy flood resulting in washing away and collapse of connecting bridges. In rainy season there is heavy landslide at several places across the road and the transportation is blocked for days together. Few paper clippings have been enclosed by the petitioner. Since the approach road to Arunachal Pradesh is via lower Assam & upper Assam, disruption of road transport during monsoon due to high flood levels in lower Assam also affect the material supply.
- vii) **Flood & Heavy rains:** Due to heavy rains in the month of August 13, May 15, April 16, and June 17 flood like situation happened in Hailakandi district area. NH-53 at Panchgram in Hailakandi district suffered major damage due to landslides in May 15. Many villages in Hailakandi District submerged due to flood. Due to major crack in Matijuri Bridge, vehicular traffic was banned in April 16. Landslides were in Hailakandi triggered by incessant rains in June 17.



20. The petitioner vide affidavit dated 31.1.2019 has submitted the detailed time over run chronology and the same is as follows:

Activity	Period of activity				Reason(s) for delay along with reference to supporting documents
	Planned		Achieved		
	From	To	From	To	
LOA	19.5.2010		08.3.2010		The details of time overrun along with documentary evidence have already been submitted in main petition at Para-7.0, Page no: 11-22 and at enclosure Page no: 109 to 275
Supplies	15.7.2010	17.7.2012	Aug-10	Mar-17	
Civil Works & erection, Stringing	9.9.2010	27.6.2012	Jun-11	Nov-17	
Testing & Commissioning	26.11.2012	24.12.2012	16.11.2017		

21. We have considered the submissions of the petitioner with respect to time over run. The instant assets were scheduled to be put into commercial operation within 34 months from the date of investment approval dated 26.2.2010. Accordingly, the scheduled COD works out to 25.12.2012. However, the instant asset was put into commercial operation on 17.11.2017. Therefore, there is a delay of 58 months 23 days (1788 Days) in commercial operation of the instant asset. The petitioner has attributed the time over run to the delay in land acquisition of Hailakandi (AEGCL) Substation, Right of Way, law & order situation, difficult terrain conditions, poor road conditions, flood & heavy rains.

22. The petitioner has submitted that the assets covered in the instant petition are delayed due to delay in land acquisition at Hailakandi Substation. The petitioner has submitted that AEGCL has handed over the site to petitioner for construction of 132 kV bays at Hailakandi S/S on 11.03.2013 and after availability of land only PGCIL started work for the assets covered in the instant petition. The petitioner has prayed for condonation of delay due to handing over of land by AEGCL. We have gone through the submissions of the petitioner and observed from the table submitted vide affidavit dated



31.1.2019 that the civil work was scheduled to commence from 9.9.2010 but it could not have commenced prior to the possession of land on 11.3.2013, thereby causing a delay of 30 months 3 days on this count. Therefore, the time delay is beyond the control of the petitioner and is condoned.

23. The petitioner has submitted that the construction activities like foundation, erection and stringing of the line were severely hampered by ROW problems due to high demand of compensation by the landowners at location on 58/0, 59/0, and 60/0. The petitioner has submitted chronology of the activities from 27.6.2014 to 11.8.2017 and also submitted documentary evidence for the RoW problems at various locations, thereby causing a delay of 37 months 16 days.

24. In addition to the delay caused due to late handing over of substation land at Hailakandi and ROW issues faced during the construction of remaining part of Silchar-Hailakandi line, the petitioner has put forth various other reasons of delay such as law and order problems like frequent bandhs, strikes and blockades, difficult terrain conditions, poor road conditions and flood and heavy rains. It has been observed that the delay caused due to additional reasons is subsumed in the delay due to land and ROW. Therefore, the additional reasons are not being discussed further for determining their impact on the time over-run.

25. In view of the above, it is seen that the total delay caused by above two counts of Land (30 months 3 days) and ROW (37 months 16 days) comes to 67 months 19 days against the overall delay of 58 months and 23 days in the instant asset. Therefore, we are of the view that time over-run of 58 months 23 days is beyond the control of petitioner and hence the same is condoned.



Interest During Construction (IDC)

26. The petitioner has claimed IDC for instant asset and has submitted the Auditor's certificate dated 13.3.2018 in support of the same. The petitioner has submitted IDC computation statement which also shows the discharge details of IDC given below:-

(₹ in lakh)

Asset	IDC As per Auditor certificate	IDC Discharged up to COD	IDC Discharged in 2017-18	IDC Discharged in 2018-19
Asset	375.89	337.10	24.90	13.88

The statement showing IDC consist of the name of the loan, drawl date, loan amount, interest rate and Interest claimed. While going through the loan portfolio as mentioned in IDC statement and as mentioned in Form 9C are not matching. Hence, for the purpose of determination of allowable IDC, the drawl date as mentioned in the IDC statement and the loan amount as mentioned in Form 9C has been considered. Moreover, the IDC working as submitted by the petitioner is not matching with the IDC claimed in Auditor certificate. Therefore, the IDC as shown in the Auditor certificate has been considered as allowable IDC. Based on the Auditor certificate and the IDC liability as submitted by the petitioner, the allowable IDC has been considered as shown below.

(₹ in lakh)

Asset	IDC claimed as per Auditor certificate	IDC Allowed on cash basis as on COD	Un-discharged IDC liability as in COD
	1	2	3=1-2
Asset	375.89	337.10	38.79



Incidental Expenditure During Construction (IEDC)

27. The petitioner vide Auditor's Certificate dated 13.3.2018 has claimed IEDC of ₹ 185.00 lakh for the instant asset . In the instant petition, 5% of hard cost is indicated as IEDC in the abstract cost estimate. The claimed IEDC as on COD is beyond the percentage on hard cost as indicated in the abstract cost estimate. Therefore, excess IEDC of ₹ 101.30 lakh (₹185.00 lakh -₹83.71lakh) has not been allowed. Accordingly, IEDC of ₹ 83.71 lakh is being considered for determination of tariff in respect of instant Asset.

Initial spares

28. This has been dealt in line with Regulation 13 of the 2014 Tariff Regulations. The petitioner has claimed ₹12.00 lakh as initial spares pertaining to transmission lines for the instant asset. The spares claimed are within the ceiling limit of the 2014 Tariff Regulations. Thus, no initial spares have been reduced from the capital cost as on COD.

Capital cost as on COD

29. Based on the above, 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 claimed as on COD (A)	Undischarged IDC liability (B)	Excess IEDC disallowed as on COD (C)	Capital Cost as on COD considered for tariff calculation (D)=A-B-C
Asset	1487.40	38.79	101.30	1347.32



Additional Capital Expenditure (ACE)

30. The cut-off date for the instant asset is 31.3.2020, as per Clause (13) of Regulation 3 of the 2014 Tariff Regulations. The claim of additional capital expenditure has been dealt in accordance with Regulation 14. The ACE claimed as per Auditor certificates on projected basis is given below:-

Asset	Estimated Expenditure in the FY		Total Additional capital expenditure claimed by petitioner as on 31.3.2019
	2017-18	2018-19	
Asset	586.18	161.41	747.59

However, for the purpose of tariff the petitioner in Form 7 has claimed the ACE as ₹ 611.08 lakh and ₹ 175.29 lakh for financial year 2017-18 and 2018-19 respectively against balance and retention payment and accrual IDC.

31. The entitled 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:-

Allowed Add-cap	Regulation	(₹ in lakh)	
		2017-18	2018-19
Discharge of Liability on Hard Cost	14(1)(i)	586.18	161.41
Add cap to the extent of unexecuted work	14(1)(ii)	-	-
Discharge of un discharge liabilities- IDC.	14(1)(i)	24.90	13.88
Total allowed add-cap		611.08	175.29



Capital cost as on 31.3.2019

32. The capital cost considered for the purpose of computation of tariff is as follows:-

Asset	Capital Cost Allowed as on COD	ACE Allowed for FY		Total Estimate Completion Cost as on 31.3.2019
		2017-18	2018-19	
Asset	1347.32	611.08	175.29	2133.69

Debt-Equity Ratio

33. 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:-

Particular	Capital cost as on COD		Capital cost as on 31.3.2019	
	Amount	%	Amount	%
Debt	943.12	70.00	1493.58	70.00
Equity	404.19	30.00	640.11	30.00
Total	1347.32	100.00	2133.69	100.00

Return on Equity

34. 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.



35. 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.

36. Accordingly, the RoE allowed is as follows:-

Particulars	(₹ in lakh)	
	2017-18 (pro-rata)	2018-19
Opening Equity	404.19	587.52
Addition due to Additional Capitalization	183.32	52.59
Closing Equity	587.52	640.11
Average Equity	495.86	613.81
Return on Equity (Base Rate)	15.50%	15.50%
MAT rate for the Financial year 2013-14	20.961%	20.961%
Rate of Return on Equity (Pre-tax)	19.610%	19.610%
Return on Equity (Pre-tax)	35.96	120.37

Interest on loan (IOL)

37. 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.

38. 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.

39. Based on above, details of IOL calculated are as follows:-

Particulars	(₹ in lakh)	
	2017-18 (pro-rata)	2018-19
Gross Normative Loan	943.12	1370.88
Cumulative Repayment upto previous Year	0.00	32.41
Net Loan-Opening	943.12	1338.46
Addition due to Additional Capitalization	427.76	122.70
Repayment during the year	32.41	108.48
Net Loan-Closing	1338.46	1352.69
Average Loan	1140.79	1345.58
Weighted Average Rate of Interest on Loan	8.0464%	7.9799%
Interest on Loan	33.95	107.38

Depreciation

40. Depreciation has been dealt with in line of Regulation 27 of 2014 Tariff Regulations. The instant transmission Asset was put under commercial operation during



2017-18. Accordingly, it will complete 12 years after 2018-19. 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	2017-18 (pro-rata)	2018-19
Opening Gross Block	1347.32	1958.40
Additional Capital expenditure	611.08	175.29
Closing Gross Block	1958.40	2133.69
Average Gross Block	1652.86	2046.04
Rate of Depreciation	5.3019%	5.3019%
Depreciable Value	1487.57	1841.44
Remaining Depreciable Value	1487.57	1809.02
Depreciation	32.41	108.48

Operation and Maintenance Expenses (O&M Expenses)

41. The petitioner has claimed O&M expenses of ₹ 26.34 lakh and ₹ 73.13 lakh for 2017-18 and 2018-19 respectively in the instant petition.

42. The petitioner has submitted that norms for O&M Expenses for the tariff period 2014-19 have been arrived on the basis of **normalized actual** O&M Expenses during the period 2008-13. The petitioner has further submitted that the wage revision of the employees of the petitioner is due during the 2014-19 tariff period and actual impact of wage hike, which will be effective at a future date, has not been factored in fixation of the normative O&M rate specified for the tariff period 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.

43. Regulation 29(4)(a) of the 2014 Tariff Regulations specifies the norms for O&M



Expenses for the transmission system based on the type of sub-station and the transmission line as follows:-

Element	(₹ in lakh)	
	2017-18	2018-19
Line: Double Circuit (Single Conductor)	0.334	0.346
Bay: 132 kV and below	33.250	34.360

44. We have considered the submissions of petitioner **and respondents**. The O&M Expenses have been worked out as per the norms specified in the 2014 Tariff Regulations. Accordingly, the O&M Expenses allowed is given as under:-

Particulars	(₹ in lakh)	
	2017-18 (pro-rata)	2018-19
132 kV D/C Silchar -Hailakandi line (12.76 KM)	1.57	4.41
2 Nos. 132 kV Bays	24.59	68.72
Total	26.16	73.13

Interest on Working Capital (IWC)

45. 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 28.

b) O & M expenses:

O&M 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 asset.



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

(₹ in lakh)

Particulars	2017-18 (pro-rata)	2018-19
Maintenance Spares	10.61	10.97
O & M expenses	5.89	6.09
Receivables	59.49	70.06
Total	76.00	87.12
Rate of Interest on working capital	12.60%	12.60%
Interest	3.54	10.98

Annual Fixed Cost

47. In view of the above, the annual transmission charges being allowed for the instant asset is summarized hereunder:-

(₹ in lakh)

Particulars	2017-18 (pro-rata)	2018-19
Depreciation	32.41	108.48
Interest on Loan	33.95	107.38
Return on Equity	35.96	120.37
Interest on Working Capital	3.54	10.98
O&M Expenses	26.16	73.13
Total	132.03	420.33

Filing Fee and Publication Expenses

48. 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 is 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

49. The petitioner has requested to allow the petitioner to bill and recover License fee and RLDC fees and charges, separately from the respondents. The petitioner shall be entitled for reimbursement of license fee and RLDC fees and charges in accordance with Clause (2) (b) and (2) (a), respectively, of Regulation 52 of the 2014 Tariff Regulations.

Goods and Services Tax

50. The petitioner has prayed for reimbursement of tax, if any, on account of proposed 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

51. Transmission charges for all the assets allowed in this order 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.

52. This order disposes of Petition No. 177/TT/2018.

Sd/-
(I.S.Jha)
Member

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

Sd/-
(P. K. Pujari)
Chairperson

