

CENTRAL ELECTRICITY REGULATORY COMMISSION

NEW DELHI

Petition No.337/TT/2018

Coram :

Shri P.K. Pujari, Chairperson

Dr. M. K. Iyer, Member

Shri I.S. Jha, Member

Date of Order: 20th of November, 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 Asset-I: 3x5 MVA (132/33 kV), 1-ph, ICT-I alongwith associated bays at Tezu Sub-station, Asset-II: 4x5 MVA (132/33 kV) (01 no spare), 1-ph, ICT-II alongwith associated bays at Tezu Sub-station, Asset-III: 132 kV S/C (on D/C Tower) Tezu-Namsai Transmission Line alongwith associated bays at Tezu and Namsai Sub-station, 4X6.67 MVAR, 145 kV, 1-ph Bus Reactor, 3X5 MVA, 132/33 kV, 1-ph ICT-I and 4X5 MVA, 132/33 kV 1-ph ICT-II (01 no spare phase) at Namsai Sub-station under "Transmission System Associated with Pallatana GBPP and Bongaigaon TPS" in North 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. Assam Electricity Grid Corporation Limited,
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. Power Department, Government of Arunachal Pradesh,
Vidyut Bhawan, Itanagar-791111,
Arunachal Pradesh
4. Power and Electricity Department,
Government of Mizoram,
Aizawl, Mizoram
5. Manipur State Power Distribution Company Limited,
(Formerly Electricity Department, Govt. of Manipur)
Electricity Complex, Patta No. 1293 Under 87(2),
Khwai Bazar, Keishampat, District-Imphal West,
Manipur-795001
6. Department of Power,
Government of Nagaland
Kohima, Nagaland
7. Tripura State Electricity Corporation Limited,
Vidyut Bhawan, North Banamalipur, Tripura (W)
Agartala-799001, Tripura
8. ONGC Tripura Power Corporation Limited (OTPC),
6th Floor, A Wing, IFCI Towers,
New Delhi – 110019
9. National Thermal Power Corporation Limited (NTPC Limited),
NTPC Bhawan, SCOPE Complex, Institutional Area,
Lodhi Road, New Delhi - 110003

...Respondents

Parties present:

For Petitioner: Shri Zafrul Hasan, PGCIL
Shri S. S. Raju, PGCIL
Shri S.K.Venkatesan, PGCIL
Shri Vivek Kumar Singh, PGCIL

For Respondent: None

ORDER

The present petition has been filed by the Petitioner, Power Grid Corporation of India Ltd. ("PGCIL") seeking approval of transmission tariff for transmission assets of "Transmission System Associated with Pallatana GBPP and Bongaigaon TPS" in North 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”).

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 Commission for suitable revision in the norms for O&M expenditure for claiming the impact of wage hike, if any, during tariff 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 and recover Service tax on Transmission Charges separately from the respondents, if at any time service tax on transmission is withdrawn from 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.*
- (xi) 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 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 the project "Transmission System Associated with Pallatana Gas Based Power Project (GBPP) and Bongaigaon Thermal Power Station (TPS)" in North Eastern Region was accorded by Board of Directors of the Petitioner in its 233rd meeting held on 25.2.2010 for ₹214400 lakh including an IDC of ₹17835 lakh based on 3rd Quarter, 2009 price level (communicated vide Memorandum No. C/CP/Pallatana-Bongaigaon dated 26.2.2010).

4. The administrative approval and expenditure sanction of Revised Cost Estimate (RCE) of the transmission project was accorded by the Board of Directors of Petitioner in its 324th meeting held on 12.1.2016 for ₹293288 lakh including an IDC of ₹38804 lakh based on October, 2015 price level (communicated vide Memorandum No. C/CP/RCE:PB dated 29.1.2016).



5. The scope of the scheme was discussed and agreed upon in Standing Committee on Power System in North Eastern Region meeting held on 25.6.2008. The scheme was also discussed and approved in the 6th TCC and 6th NERPC meeting held on 7.8.2008 & 8.8.2008, respectively. Prior approval of Government of India, under section 68 of the Electricity Act, 2003 for transmission system of Pallatana (GBPP) and Bongaigaon (TPS) was obtained vide Ministry of Power's letter dated 24.11.2008.

6. The scope of work covered under the project "Transmission System Associated with Pallatana GBPP and Bongaigaon TPS" in North Eastern Region is as follows:-

Transmission Line

1. Bongaigaon TPS - Bongaigaon 400kV D/C Line
2. Silchar-Badarpur (PG) Switching Station Interconnecting 132kV D/C line
3. Pallatana-Surajmaninagar (TSECL) 400kV D/C line (charged at 132 kV)
4. Silchar-Purba Kanchanbari (TSECL)400kV D/Cline(charged at 132kV)
5. Silchar-Melriat (New) 400kV D/C Line (charged at 132kV)
6. Silchar-Imphal (New) 400kV Dic Line (charged at 132kV)
7. Melriat (New)- Melriat (Mizoram) interconnecting 132kV D/C Line
8. Silchar-Srikona (AEGCL) 132kV D/C Line
9. Silchar - Hailakandi (AEGCL) 132kV D/C line
10. LILO of Loktak-Imphal (POWERGRID) 132kVS/C Line at Imphal (New)
11. LILO of 400kVS/C Misa-Kathalguri Line at Mariani (New) (charged at 220kV)
12. Mariani (New)-Mokokchung (POWERGRID) 220kV D/C Transmission Line
13. Mokokchung (PG) - Mokokchung (NG) 132kVD/C line (with Zebra conductor)
14. Pasighat - Roing 132kVS/C Line (on D/C Tower)
15. Roing - Tezu 132kV SIC Line (on D/C Tower)
16. Tezu - Namsai 132kV SIC Line (on D/C Tower)



Sub Station

1. 2x200MVA, 400/132kV New SS at Silchar
2. 2x50MVA, 132/33kV New SS at Melriat (New) (upgradable to 400kV)
3. 2x50MVA, 132/33kV New SS at Imphal (New)
4. 220kV New Switching Station at Mariani
5. 2x50MVA, 220/132kV New SIS at Mokokchung
6. 2x15MV A, 132/33kV New SIS at Roing
7. 2x15MVA, 132/33kV New SIS at Tezu
8. 2x15MVA, 132/33kV New SIS at Namsai
9. 400kV Bongaigaon 400 kV SIS Extension
10. 132 kV Badarpur (PG) SIS Extension
11. 132 kV Melriat (Mizoram) SIS Extension
12. 132 kV Mokokchung (NG) SIS Extension
13. 132 kV Ziro (PG) SIS Extension
14. 132 kV Pasighat (Gov of Arunachal) SIS Extension
15. 132 kV Surajmaninagar (TSECL) SIS Extension
16. 132 kV Purba Kanchan Bari (TSECL) SIS Extension
17. 132 kV Hailakandi (AEGCL) SIS Extension
18. 132 kV Srikona Substation Extension

Reactive Compensation

Line Reactor

1. 2x50 MVAR, 420 kV Switchable line reactors along with associated bays at Silchar (for Pallatana-Silchar 400KV D/C line)
2. 2x63 MVAR, 420 kV Switchable line reactors along with associated bays at Silchar (for Byrnihat-Silchar 400KV line & For Azara-Silchar 400KV line)
3. 2x63 MVAR, 420kV (Fixed) Line Reactor at Bongaigaon End (for Azara-Bongaigaon 400kV line)

Bus Reactors

1. 2x63 MVAR Bus Reactor at Silchar SIS along with associated bays.
2. 80 MVAR, 420 kV Bus Reactor at Bongaigaon along with associated bay.
3. 20 MVAR, 132kV Bus Reactor at Roing along with associated bay.



4. 20 MVAR, 132kV Bus Reactor at Tezu along with associated bay.
5. 20 MVAR, 132kV Bus Reactor at Namsai along with associated bay.
6. 20 MVAR (4x6.6 7MVAR), 132kV Bus Reactor at Ziro along with associated bay.

7. The Petitioner has submitted that during 8th TCC and 8th NERPC meeting held on 11.1.2010 & 12.1.2010, respectively, 2x50 MVA Transformers at Melriat and Mokokchung substations were replaced by 7x10 MVA Transformers in view of difficulties in transportation of 50 MVA transformers. The Petitioner has submitted that the scope of the project was further revised in 3rd SCM of NER held on 21.12.2011 and 14th TCC meetings held on 4.9.2013. The Petitioner has submitted the following details of addition / deletion in the aforesaid scope:

a) 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);

b) Following elements have been added under the scope of the project:-

- i) Melriat (New) - Sihhmui (Mizoram) 132 kV D/C line;
- ii) LILO of 132 kV Aizwal- Zemabawk (Mizoram) line at Melriat (New) Sis.
- iii) LILO of Imphal- Ningthoukhong (Manipur) 132 kV SIC line at Imphal (PG).

8. Details of the assets covered in the project scope under various petitions is summarized below:-

S.N.	Asset	Covered under Petition no
1	400kV D/C Bongaigaon TPS-Bongaigaon line along with associated bays	553/TT/2014
2	132 kV D/C Silchar-Badarpur line along with associated bays	
3	132 kV D/C Silchar-Srikona line along with associated bays	
4	200 MVA, 400/132kV ICT- I at Silchar S/S along with associated bays	
5	2x50 MVAR,420 kV Switchable line reactors along with	



S.N.	Asset	Covered under Petition no
	associated bays	
6	2x63 MVAR Bus Reactor at Silchar S/S along with associated bays	
7	132 kV Silchar – Hailakandi (AEGCL) line along with associated bays	
8	200 MVA, 400/132kV, ICT-II at Silchar along with associated bays	
9	400 kV D/C Pallatana-Surajmaninagar line (charged at 132 kV) along with associated bays	
10	80 MVAR, 420 kV Bus Reactor at Bongaigaon along with associated bay.	553/TT/2014
11	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.	
12	LILLO of 220kV Misa – Kathalguri Transmission Line at Mariani along with Mariani Switching Station	
13	4x6.67 MVAR, 132kV, 1-Ph Bus Reactor at 132kV Ziro Substation	78/TT/2016
14	220/132kV Imphal S/s (New) and LILLO of 132kV S/C Ningthoukhong – Yurembam line at Imphal (New) Substation	
15	20MVAR Bus Reactor at 220kV Mariani Switching Station	
17	220kV, D/C Mariani (New) – Mokokchung (POWERGRID) T/L along with associated bays at Mariani and Mokokchung (PG) Substation	
18	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) Substation	398/TT/2014
19	3 X 10 MVA, 220/132 kV ICT-I and 220kV & 132kV GIS bays at Mokokchung (PG) Substation	
20	400kV D/C Silchar – Imphal Transmission Line (to be charged at 132 kV) along with associated bays at Silchar and Imphal Substation	
21	400kV, D/C Silchar-Purba Kanchanbari Transmission Line (to be charged at 132kV) along with its associated bays at Silchar (new) and Purba Kanchanbari (TSECL) Substation	267/TT/2016

S.N.	Asset	Covered under Petition no
22	(i) 132kVS/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 Substation	01/TT/2018
23	(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 Substation	
24	Balance portion of 132kV Silchar - Hailakandi TL along with bays at Hailakandi Substation	177/TT/2018
25	Asset-I: 3x5 MVA (132/33kV), 1-ph, ICT-I alongwith associated bays at Tezu substation	Covered under instant petition
26	Asset-II: 4x5 MVA (132/33kV) (01 no spare), 1-ph, ICT-II alongwith associated bays at Tezu substation	
27	Asset-III: 132kV S/C (on D/C Tower) Tezu-Namsai Transmission Line alongwith associated bays at Tezu and Namsai S/S, 4X6.67MVAR, 145kV, 1-ph Bus Reactor, 3X5MVA, 132/33kV, 1-ph ICT-I and 4X5MVA, 132/33kV 1-ph ICT-II (01 no spare phase) at Namsai S/S	
28	Silchar-Melriat (New) 400kV D/C Line (charged at 132kV) and 2x50MVA, 132/33kV New SS at Melriat (New) (upgradable to 400kV)	Remaining assets under different stages of completion
29	LILO of 132kV S/C Aizawl-Zemabawk at Melriat T/L along with associated bays at Melriat S/S in place of 132kV D/C Melriat-Melriat T/L	
30	132kV D/C Melriat– Sihhmui T/L alongwith associated bays at Melriat (PG) & Sihhmui (Mizoram) S/S in place of 132kV D/C Melriat-Melriat T/L	
31	4x5MVAR, 132kV, 1-ph, Bus Reactor at Melriat Substation Melriat (PG) GIS S/s	

9. The Petitioner has filed the instant petition in respect of 3 assets initially and claimed actual COD in respect of Asset-I and Asset-II and anticipated COD for Asset-III. However, vide affidavit dated 10.12.2018, the Petitioner has bifurcated the Asset-III into Asset-III(a) and Asset-III(b) and claimed actual COD for these 2 Assets. The same has been summarized as under:-



Asset claimed at the time of filing of instant petition	COD claimed at the time of filing of instant petition	Assets revised vide affidavit dated 21.5.2019	COD claimed (Actual)
Asset-I: 3x5 MVA (132/33kV), 1-ph, ICT-I alongwith associated bays at Tezu substation	21.01.2018 (Actual)	Asset-I: 3x5 MVA (132/33kV), 1-ph, ICT-I alongwith associated bays at Tezu substation	21.1.2018
Asset-II: 4x5 MVA (132/33kV) (01 no spare), 1-ph, ICT-II alongwith associated bays at Tezu substation	21.01.2018 (Actual)	Asset-II: 4x5 MVA (132/33kV) (01 no spare), 1-ph, ICT-II alongwith associated bays at Tezu substation	21.1.2018
Asset-III: 132kV S/C (on D/C Tower) Tezu-Namsai Transmission Line alongwith associated bays at Tezu and Namsai Substation, 4X6.67MVAR, 145kV, 1-ph Bus Reactor, 3X5MVA, 132/33kV, 1-ph ICT-I and 4X5MVA, 132/33kV 1-ph ICT-II (01 no spare phase) at Namsai Substation	30.7.2018 (Anticipated)	Asset-III(a): 132kV S/C (on D/C Tower) Tezu-Namsai Transmission Line alongwith associated bays at Tezu and Namsai S/S, 3X5MVA, 132/33kV, 1-ph ICT-I and 4X5MVA, 132/33kV 1-ph ICT-II (01 no spare phase) at Namsai Substation	5.7.2018
		Asset-III(b): 4X6.67MVAR, 145kV, 1-ph Bus Reactor alongwith associated bays at Namsai Substation	14.6.2018

10. Vide order dated 21.12.2018 Annual Transmission Charges were allowed under the proviso (i) to Regulation 7(7) of the 2014 Tariff Regulations for inclusion in the POC charges in respect of the assets claimed initially in the instant petition.



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

(₹ in lakh)

Particulars	Asset-I		Asset-II	
	2017-18 (Pro-rata)	2018-19	2017-18 (Pro-rata)	2018-19
Depreciation	7.03	37.12	7.62	40.36
Interest on Loan	7.90	39.70	8.56	43.13
Return on Equity	7.83	41.36	8.49	44.97
Interest on Working Capital	1.16	6.07	1.20	6.29
O&M Expenses	13.05	68.72	13.05	68.72
Total	36.97	192.97	38.92	203.47

Particulars	Asset-III(a)	Asset-III(b)
	2018-19 (Pro-rata)	2018-19 (Pro-rata)
Depreciation	647.29	33.71
Interest on Loan	725.27	36.03
Return on Equity	741.41	38.09
Interest on Working Capital	52.27	3.60
O&M Expenses	168.57	27.39
Total	2334.81	138.82

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

(₹ in lakh)

Particulars	Asset-I		Asset-II	
	2017-18 (Pro-rata)	2018-19	2017-18 (Pro-rata)	2018-19
Maintenance Spares	9.98	10.31	9.98	10.31
O&M Expenses	5.54	5.73	5.54	5.73
Receivables	31.40	32.16	33.06	33.91
Total	46.92	48.20	48.58	49.95
Rate of Interest	12.60%	12.60%	12.60%	12.60%
Interest on working Capital	1.16	6.07	1.20	6.29

Particulars	Asset-III(a)	Asset-III(b)
	2018-19 (Pro-rata)	2018-19 (Pro-rata)
Maintenance Spares	34.20	5.15
O&M Expenses	19.00	2.86
Receivables	526.39	29.02
Total	579.60	37.04
Rate of Interest	12.20%	12.20%
Interest on working Capital	52.27	3.60

13. The Petitioner has served the copy of the petition upon the respondents and notice of this tariff 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.

14. The Petition was last heard on 24.5.2019 and the Commission reserved the order in the Petition.

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.

16. This order has been issued after considering the main petition dated 18.9.2018 and Petitioner's affidavits dated 12.10.2018, 4.12.2018, 10.12.2018, 31.12.2018 and 14.6.2019.

Analysis and Decision

Date of Commercial Operation (COD)

17. The Petitioner has claimed the following COD in respect of the assets covered in the instant petition:

Sl. No.	Name of Asset	COD claimed (actual)
1	Asset-I: 3x5 MVA (132/33kV), 1-ph, ICT-I alongwith associated bays at Tezu substation	21.1.2018
2	Asset-II: 4x5 MVA (132/33kV) (01 no spare), 1-ph, ICT-II alongwith associated bays at Tezu substation	21.1.2018
3	Asset-III(a): 132kV S/C (on D/C Tower) Tezu-Namsai Transmission Line alongwith associated bays at Tezu and Namsai S/S, 3X5MVA, 132/33kV, 1-ph ICT-I and 4X5MVA, 132/33kV 1-ph ICT-II (01 no spare phase) at Namsai	5.7.2018
4	Asset-III(b): 4X6.67MVAR, 145kV, 1-ph Bus Reactor alongwith associated bays at Namsai Substation	14.6.2018



18. In support of the actual COD of the Asset-I, II, III(a) & III(b) the Petitioner has submitted CEA energisation certificates dated 29.3.2017 & 26.7.2018 under Regulation 43 of CEA (Measures Related to Safety & Electricity Supply) Regulations, 2010 and RLDC charging certificates dated 14.12.2018, 19.6.2017 & 20.7.2018 as well as CMD certificate as required under Grid Code.

19. Taking into consideration of CEA Energisation certificate, RLDC charging certificate and CMD certificate as required under Grid Code, the COD of the Assets covered in the instant petition is approved as follows:

S.N.	Asset Name	COD Approved (Actual)
1	Asset-I : 3x5 MVA (132/33kV), 1-ph, ICT-I alongwith associated bays at Tezu substation	21.1.2018
2	Asset-II : 4x5 MVA (132/33kV) (01 no spare), 1-ph, ICT-II alongwith associated bays at Tezu substation	21.1.2018
3	Asset-III(a) : 132kV S/C (on D/C Tower) Tezu-Namsai Transmission Line alongwith associated bays at Tezu and Namsai S/S, 3X5MVA, 132/33kV, 1-ph ICT-I and 4X5MVA, 132/33kV 1-ph ICT-II (01 no spare phase) at Namsai substation	5.7.2018
4	Asset-III(b) : 4X6.67MVAR, 145kV, 1-ph Bus Reactor alongwith associated bays at Namsai substation	14.6.2018

Capital Cost

20. 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.”*

21. The Petitioner has initially submitted the apportioned approved cost as per Investment Approval and Revised Cost Estimate (RCE) and also submitted the Auditor Certificates dated 24.5.2018 in respect of Asset-I and Asset-II. Upon bifurcation of Asset-III into Asset-III(a) and Asset-III(b) by the Petitioner, the Petitioner vide affidavit dated 10.12.2018 submitted the revised Tariff forms and Auditor Certificates dated 06.09.2018 in respect of Asset-III(a) and Asset-III(b). The



details of apportioned approved cost, capital cost as on COD and estimated additional capital expenditure incurred or projected to be incurred during 2017-18, 2018-19, 2019-20 and 2020-2021 along with estimated completion cost as claimed by the Petitioner for the instant assets are as under:

(₹ in lakh)

Asset	Apportioned Approved Cost (FR)	Apportioned Approved Cost (RCE)	Cost upto COD	Proposed Expenditure				Estimated Completion Cost	Estimated Completion Cost as on 31.3.2019
				2017-18	2018-19	2019-20	2020-21		
Asset-I	748.89	755.08	697.36	5.20	22.45	-	-	725.01	725.01
Asset-II	822.52	807.45	754.19	5.20	30.91	-	-	790.30	790.30
Asset-III(a)		17932.00**	16666.91	-	1267.65	618.19	179.38	18732.13	17934.56
Asset-III(b)		849.00**	813.67	-	35.65	13.71	5.48	868.51	849.32

**Based on the Form-6 of the respective asset.*

Cost Over-run

22. It is observed from the above table that the estimated completion cost of Asset-I and Asset-II is within apportioned approved cost as per FR and RCE. Hence, there is no cost overrun in commissioning of the Asset-I and Asset-II. However, the estimated completion cost of Asset-III(a) and Asset-III(b) exceeds apportioned approved cost as per RCE. Thus, there is a cost overrun in respect of Asset-III(a) and Asset-III(b).

23. The Petitioner has submitted that the variation is on account of the actual assessment of crops/trees & huts encountered in line corridor by concerned state government officials of forest department of Arunachal Pradesh, wherein, the quantity & value of crop and tree compensation amount arrived is much greater than the notional estimate considered at the time of preparation of FR. The Petitioner has further submitted that the actual line length and route changed from about 90 Km to 95 Km, during the construction of line due to ROW issues and also led to



increase in number of angle towers, extension towers and Pile foundation due to change in course of river front etc..

24. We have considered the submissions of the petitioner. The estimated completion cost as on 31.3.2019 in respect of Asset-III(a) & III(b) exceeds the apportioned approved cost as per RCE but the actual expenditure upto COD is within apportioned approved cost as per RCE. The Petitioner has submitted that Revised Cost Estimate (RCE) for the subject project is under management approval and shall be submitted on approval. In the absence of RCE-II, the capital cost claimed by the Petitioner in respect of Asset-III(a) & III(b) is required to be restricted to apportioned approved cost as per RCE. This has been dealt in the succeeding paragraph of this Order.

Time over-run

25. As per the Investment Approval (IA) dated 25.2.2010, the transmission scheme was scheduled to be commissioned within 34 months from the date of IA. Accordingly, the Commissioning Schedule comes to 25.12.2012 against which the Asset-I and Asset-II have been commissioned on 21.1.2018. Asset-III(a) and Asset-III(b) have been commissioned on 5.7.2018 and 14.6.2018 respectively. Thus, there is a time overrun of 1853 days in respect of Asset-I and Asset-II and 2018 days and 1997 days in respect of Asset-III(a) and Asset-III(b) respectively.

26. The Petitioner has submitted that the assets covered in the instant petition are delayed due to delay in grant of statutory clearances, strikes, bandhs, Law and Order problems, difficult terrain conditions, ROW problems and other construction challenges in North East Region and submitted the following details to substantiate its claim:



Asset-I & II:

- (i) The Tezu substation is an inter-connected substation and the commissioning of Tezu substation depends upon the commissioning of Pasighat-Roing and Roing-Tezu transmission line. The 132kV Pasighat-Roing and 132 kV Roing-Tezu transmission lines were commissioned on 12.06.2017 & 14.06.2017, respectively. In the absence of transmission line and as well as downstream system, the substation of Tezu cannot be made ready and declared under commercial operation. The reasons for delay alongwith documentary evidence for Pasighat-Roing and Roing-Tezu were filed before the Commission in petition no: 1/TT/2018. The Petitioner has further submitted that in its Order dated 23.7.2018 in petition no 1/TT/2018, the Commission has condoned time over-run of 1630 days in case of Asset-II therein, i.e. Roing-Tezu TL along with associated bays at Roing and Tezu substations. In the same Order, the Commission also condoned delay of 1628 days in respect of Asset-I therein, i.e. Passighat-Roing TL along with associated bays at Passighat and Roing substations.
- (ii) Further, due to non-availability of downstream line at Tezu substation i.e. 33kV Tezu (PG) –Tezu (Power Dept.-Arunanchal Pradesh) Transmission Line, the asset under instant petition were not commissioned in March, 2017 / June, 2017. Thereafter, the status of construction for upstream / downstream transmission line at Pasighat, Roing and Tezu by Arunachal Pradesh were also discussed in 15th, 16th & 17th NERPC held on 21.8.2015, 30.1.2016 & 4.10.2016, respectively. Upon the commissioning of downstream at Tezu substation, the Asset-I & II covered under instant petition were commissioned on 21.1.2018.



27. We have considered the submissions of the Petitioner. The Asset-I and Asset-II are delayed due to delay in obtaining forest clearance for Passighat-Roing and Roing-Tezu transmission lines, ROW problems and law & order problems. The Commission vide order dated 23.7.2018 in petition No 1/TT/2018 has already taken cognizance of time delay due to forest clearance, ROW issues and law & order problems in case of dealing with delay of Passighat-Roing and Roing-Tezu transmission lines. The Tezu substation is an inter-connected substation and the commissioning of the Tezu substation is dependent upon the commissioning of Passighat-Roing and Roing-Tezu transmission lines. Thus, the Commission is of the view that the time delay of about 1630 days is beyond the control of the petitioner and the same has been condoned.

28. The Petitioner has submitted that the transmission Line alongwith Substation at Roing and Tezu was completed in the month of June, 2017. The Petitioner also submitted that the RLDC certificate on „No load“ was issued on 19.6.2017 and due to non-availability of downstream at Tezu substation i.e. 33 kV Tezu (PG) -Tezu Transmission Line under the control of Arunachal Pradesh electrical department, the assets under instant petition were not commissioned in March, 2017 / June, 2017.

29. We have gone through the submissions of the Petitioner. It is noted that the Petitioner was ready in the month of June, 2017 and obtained „No-Load“ RLDC charging certificate and CEA energisation certificate. But the Petitioner has not claimed COD under proviso (ii) to Regulation 4(3) of 2014 Tariff Regulations. Therefore, out of the total time delay of 1853 days in respect of Asset-I and Asset-II, 1630 days is beyond the control of the Petitioner and the same has been condoned.

Asset-III



30. The Petitioner has bifurcated the Asset-III into Asset-III (a) and Asset-III (b) and submitted the reasons for time delay as under:-

- (i) **Statutory clearances for Tezu-Namsai T/L:** The total length of Tezu-Namsai transmission line is 95 Km (approx.) Out of this, 23.42 Km line falls in Tezu (Lohit) division requiring 60.59 Ha of land for the line. Also, 36 Km falls in Namsai division having 100.37 Ha land for the line. This length of 59.42 Km (23.42+36) of line passes through Reserve forest, dense forest area and is highly disturbed area. MoEF, New Delhi, vide Order dated 3.8.2009, directed all State Governments to ensure compliance of Forest Rights Act, 2006 which inter-alia required NOC and written consent from each Gram Sabha (in which at least 50% of the members present) and certification of the same by the respective State Government as a prerequisite for submission of forest proposal. The Compliance of this condition, which came into force only from 3.8.2009, considerably delayed the forest proposal submission. However, with extensive mobilization of manpower, this exercise was completed in July, 2010 and forest proposal was submitted by the petitioner to DFOs on 26th July, 2010. The work in the forest area could not be commenced on time due to late receipt of forest clearance. The forest clearance for the line was accorded by Union Ministry of Environment & Forest (MoEF) on 11th June, 2014 (160.958Ha) for Lohit and Namsai portion after 47 months of submission of proposal which generally takes 10-14 months. Further, extraction of trees in Forest area by the State forest department took additional time due to procedural requirements. For completing the line within commissioning schedule as per Investment approval i.e. 01.01.2013, the forest clearance was to be



received before Sept, 2011. But, the last Forest clearance was received in the month of June, 2014, with a delay of around 37 months.

The Petitioner has submitted the detailed chronology of events pertaining to Forest Clearance.

(ii) **Statutory clearances for Namsai Substation:** The substation land for Namsai falls under Forest area and the land could be acquired after the forest clearance. The proposal for land acquisition at Jengtho village, Namsai was submitted to DFO, Namsai on 21st Apr, 2009 i.e. well before investment approval. The final land possession certificate for the substation land was issued by Additional Deputy Commissioner, Lohit district on 13th June, 2011.

(iii) **Adoption of special towers in Reserve forest area:** Tezu-Namsai line also (unavoidably) passes through Kamlang Wildlife Sanctuary which is populated by Hoolock Gibbons (an endangered species). A committee for identification of habitat of the endangered species and ascertaining locations for raising the height of towers was formed vide order dated 12.11.2013. In line with the recommendations of the committee forwarded by the CCF, Tezu vide letter 15.12.2013, +25-meter body extensions had to be adopted for 145 nos. of towers in reserve forest area. The adoption of special towers in Reserved Forest area considerably delayed the project.

(iv) **Right of Way:** The works of line construction could not be taken up due to compensation demand beyond the provision of the relevant acts from the landowners. Most of the ROW occurred in reserve forest area due to habitat of Hoolock Gibbon in forest area. Further, to resolve this ROW problem, the petitioner had to design special tower and also had to divert the route. Due to change in design of tower, foundation, stub etc. there was considerable



delay in procurement, civil works, tower erection and stringing of the line at different locations. By adopting the special tower design, the ROW issues at the location and in reserve forest area was resolved, but resulted in delay in commissioning of the line. There was severe resistance from forest dwellers due to demand of compensation in Tezu section which remained unresolved without the intervention of the District authorities. Persistent objection by Parashuram Kund Ashram Committee against construction of line, claiming that the line would affect the temples, holy bath, gaushala etc. lasted from March, 2015 to August, 2016 i.e. around 17 months. The work at Duraliang and Changliang villages including location nos. 9/1 - 9/2 and 11/2 - 13/0 could not be carried out due to obstruction of work by landowners for demand of additional compensation. The work in the above stretch 9/1 – 9/2 and 11/2-13/0 could only be completed in May, 2018 with the deployment of police official and personnel to maintain law & order in the area.

The Petitioner has submitted the detailed chronology of events pertaining to ROW issues faced during construction of Transmission Line.

- (v) **Law & order situation:** 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. Skilled and unskilled manpower is not available locally and gangs are brought from other States. Every now and then, various local groups stop construction works demanding considerable amounts as donations. Incidents of manhandling & threatening are common and these result in attrition of laborers and reduced work output. Due to issues like ILP (Inter labour Permit) etc. there were constraints in bringing laborers from other State. 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.

(vi) **Climate and Soil Factors:** Arunachal Pradesh has a humid climate in the plain and sub-alpine region in the hills. The average rainfall recorded in Arunachal Pradesh is 300 centimeters and varies between 450 cm to 80 cm. The monsoon period normally starts from later part of April and continues till November. The monsoon also spells disaster in the plains due to flood, affecting all road communication, thereby affecting the movement of construction materials like cement, steel etc. Furthermore, change in course of river Diphu Nallah in September, 2015 resulted in modification of foundation design of the vulnerable locations.

(vii) **Pile foundation required to be adopted due to change in river course:** Heavy flood in river Dibang and Kamlang resulted in collapse of 3-4 towers and damage in 2 towers. As the river course has also changed, 04 nos. of new pile foundations were required to be casted. This has resulted in rerouting of the section and adoption of 04 new foundations at the river banks.

(viii) **Difficult Terrain Conditions:** Arunachal Pradesh 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 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. With the advent of monsoon season, the approach roads to these locations get washed away due to landslides, interrupting communication and movement of manpower and material. Due to deteriorated condition of the left over



stretches, 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.

(ix)**Poor Road Conditions and frequent Bandhs in Assam:** The Construction materials are not available locally and the same are to be transported from Assam. Due to poor road conditions/ washed out roads, especially during rainy season every year between April to October, the transportation is disrupted resulting in stoppage of material supply. Many of the remote locations also become inaccessible during rainy season and other locations (in plain areas) can be reached only by small boats. 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 altogether. 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 affects the material supply.

31. We have considered the submissions of Petitioner. The Asset-III(a) and Asset-III(b) is delayed due to delay in obtaining forest clearance for Tezu-Namsai transmission line, delay in land acquisition for Namsai Substation, adoption of special towers in reserve forest area, ROW problems, Law & Order problems, climate and soil factors, difficult terrain conditions, poor road conditions and frequent bandhs in Assam.



32. As regards ROW problems, the Petitioner has submitted documentary evidence for the period from 1.9.2010 to 28.5.2018. The details of chronology of events in respect of ROW issues at various locations have been considered. We observe that the time delay from 6.5.2011 to 28.5.2018 (2579 days) due to ROW problems was beyond the control of the petitioner and therefore, the same has been condoned. Thus, the entire time delay of 2018 days and 1997 days due to ROW problems in respect of Asset-III(a) and III(b) respectively is condoned. The time delay due to other activities like forest clearance, the law and order problem, climate and soil factors, pile foundation required to be adopted due to change in river course, difficult terrain conditions, and poor road conditions is not dealt herewith.

Interest During Construction (IDC)

33. The Petitioner has claimed Interest During Construction (IDC) for the instant assets and has submitted the Auditor Certificates 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 year-wise	
			2018-19	2019-20
	1	2	3	4
Asset-I	138.70	117.14	21.56	-
Asset-II	151.19	130.20	20.99	-
Asset-III(a)	3810.96	3307.85	500.46	2.65
Asset-III(b)	173.88	135.09	38.79	-

34. The allowable IDC as on COD has been worked out considering the information submitted by the Petitioner. The loan details submitted in Form-9C for period 2014-19 and date of drawl submitted in IDC statement has been perused for the purpose of calculating IDC for the asset. The statement showing IDC consists of

name of the loan, drawl date, loan amount, interest rate and Interest claimed. The loan portfolio which is mentioned in IDC statement and in Form 9C is not matching. Hence, for the purpose of determination of allowable IDC, the loan amount as mentioned in Form 9C has been considered. The Petitioner is directed to submit the detailed IDC statement for all assets of the instant petition, by rectifying the above mentioned deviation, at the time of true up of 2014-19.

35. Accordingly, 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 true up is as below:-

(₹ in lakh)

Asset	IDC claimed as per Auditor Certificate	IDC disallowed as on COD due to time over-run & computational difference	IDC worked out and allowed on accrual basis	IDC worked out & allowed on cash basis as on COD	Un-discharged IDC as on COD	IDC discharged in FY 2018-19
	1	2	3=(1-2)	4	5=(3-4)	6
Asset-I	138.70	19.11	119.59	91.92	27.67	27.67
Asset-II	151.19	20.35	130.84	101.00	29.84	29.84
Asset-III(a)	3810.96	0.00	3810.96	3307.85	503.11	500.46
Asset-III(b)	173.88	0.00	173.88	135.09	38.79	38.79

Incidental Expenditure During Construction (IEDC)

36. The Petitioner has claimed IEDC for the instant assets and submitted Auditor Certificates in support of the same. The IEDC claimed is beyond the percentage of hard cost of 5% as indicated in the FR abstract cost estimate and therefore, the same has been restricted to 5% of the hard cost, subject to true up. The details of claimed and allowed IEDC is as follows:-

(₹ in lakh)



Asset	IEDC claimed as per Auditor Certificate	Admissible IEDC as per % abstract cost as on COD	IEDC disallowed due to time over-run	IEDC allowed
	1	2	3	4=2-3
Asset-I	59.71	26.33	2.03	24.30
Asset-II	65.09	28.70	2.22	26.48
Asset-III(a)	1571.48	627.61	0.00	627.61
Asset-III(b)	72.52	30.15	0.00	30.15

Initial Spares

37. This has been dealt in line with Regulation 13 of the 2014 Tariff Regulations. The Petitioner has claimed initial spares in respect of the assets covered under the instant petition and submitted Auditor Certificates in support of the same. The details of initial spares claimed by the Petitioner is as follows:-

(₹ in lakh)

Asset	Particulars	Plant and Machinery Cost excluding IDC, IEDC and Land Expenditure (up to 31.3.2019)	Initial spares claimed
Asset-I	Substation	526.60	10.74
Asset-II	Substation	574.02	24.50
Asset-III(a)	Substation	2083.29	58.57
	Communication	63.49	2.88
	Transmission Line	10139.58	105.41
Asset-III(b)	Substation	587.20	9.97

38. We have considered the submissions made by the Petitioner and the Respondents. The initial spares allowed for the purpose of tariff calculation after considering the Plant and Machinery cost excluding IDC, IEDC and Land expenses only up to 31.3.2019, subject to true-up are as under:-

(₹ in lakh)

Asset	Particulars	Plant and Machinery Cost excluding IDC, IEDC and Land expenditure up to cut-off date	Initial spares claimed	Initial spares allowed as on COD	Excess Initial spares
Asset-I	Substation	526.60	10.74	10.74	0.00
Asset-II	Substation	574.02	24.50	22.90	1.60
Asset-III(a)	Substation	2083.29	58.57	58.57	0.00



Asset	Particulars	Plant and Machinery Cost excluding IDC, IEDC and Land expenditure up to cut-off date	Initial spares claimed	Initial spares allowed as on COD	Excess Initial spares
	Communication	63.49	2.88	2.15	0.73
	Transmission Line	10139.58	105.41	95.97	9.44
Asset-III(b)	Substation	587.20	9.97	9.97	0.00

Capital cost as on COD

39. 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 claimed as on COD	IDC disallowed as on COD		IEDC disallowed		Excess Initial spares	Capital Cost considered as on COD
		Due to time over-run & computational difference	Un-discharged IDC	Beyond the % of FR abstract cost estimate	Due to time over-run		
	1	2	3	4	5	6	7=(1-2-3-4-5-6)
Asset-I	697.36	19.11	27.67	33.38	2.03	0.00	615.17
Asset-II	754.19	20.35	29.84	36.39	2.22	1.60	663.79
Asset-III(a)	16666.91	0.00	503.11	943.87	0.00	10.17	15209.76
Asset-III(b)	813.67	0.00	38.79	42.37	0.00	0.00	732.51

Additional Capital Expenditure (ACE)

40. The Petitioner has claimed Additional Capital Expenditure (hereinafter referred to as "ACE") as per Clause (1) of Regulation 14 of the 2014 Tariff Regulations based in respect of the instant assets and submitted the Auditor Certificates in support of the same. The ACE claimed by the Petitioner is summarized in the table below:-

(₹ in lakh)

Asset	Year	Work/ equipment proposed to be added after COD to cutoff date/ beyond cutoff date	Amount capitalized and proposed to be capitalized	Regulation under which covered
Asset-I	2017-18	Balance and retention payment	5.20	14(1)(i) &
		Total	5.20	
	2018-19	Accrual IDC	21.56	
		Balance and retention payment	22.45	
		Total	44.01	



Asset	Year	Work/ equipment proposed to be added after COD to cutoff date/ beyond cutoff date	Amount capitalized and proposed to be capitalized	Regulation under which covered
Asset-II	2017-18	Balance and retention payment	5.20	14(1)(ii)
		Total	5.20	
	2018-19	Accrual IDC	20.99	
		Balance and retention payment	30.91	
Total			51.90	
Asset-III(a)	2018-19	Accrual IDC	500.46	
		Balance and retention payment	1267.65	
		Total	1768.11	
	2019-20	Accrual IDC	2.65	
		Balance and retention payment	618.19	
		Total	620.84	
	2020-21	Balance and retention payment	179.38	
Total			179.38	
Asset-III(b)	2018-19	Accrual IDC	38.79	
		Balance and retention payment	35.65	
		Total	74.44	
	2019-20	Balance and retention payment	13.71	
		Total	13.71	
	2020-21	Balance and retention payment	5.48	
Total			5.48	

41. Since, FY 2019-20 & 2020-21 falls beyond the tariff period 2014-19 and is not covered under the 2014 Tariff Regulation, the projected ACE claimed by the Petitioner for FY 2019-20 & 2020-21 has been ignored for the purpose of tariff and shall be dealt during the next tariff period as per extant tariff Regulations.

42. 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:-

Particulars	Regulation	(₹ in lakh)			
		Asset-I		Asset-II	
		2017-18	2018-19	2017-18	2018-19
ACE to the extent of Balance & Retention Payment	14 (1)(i)	5.20	22.45	5.20	30.91
IDC Discharged	14 (1)(i)	0.00	27.67	0.00	29.84
Total		5.20	50.12	5.20	60.75



Particulars	Regulation	Asset-III(a)	Asset-III(b)
		2018-19	2018-19
ACE to the extent of Balance & Retention Payment	14 (1)(i)	1267.65	35.65
IDC Discharged	14 (1)(i)	500.46	38.79
Total		1768.11	74.44

Capital cost for the tariff period 2014-19

43. 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 Capital Cost up to 31.3.2019
Asset-I	615.15	5.20	50.12	670.49
Asset-II	663.79	5.20	60.75	729.74
Asset-III(a)	15209.76	-	1768.11	16977.87
Asset-III(b)	732.51	-	74.44	806.95

44. As may be seen from the Table above that admissible Capital Cost as on 31.3.2019 in respect of Asset-III(a) and Asset-III(b) is within the apportioned approved cost as per RCE. Accordingly, Capital Cost as on 31.3.2019 in respect of Asset-III(a) and Asset-III(b) has been allowed as such.

Debt-Equity Ratio

45. 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:-

Asset-I		(₹ in lakh)		
Particular	Capital cost as on COD		Capital cost as on 31.3.2019	
	Amount	%	Amount	%
Debt	430.62	70.00%	469.34	70.00%
Equity	184.55	30.00%	201.15	30.00%
Total	615.15	100.00%	670.49	100.00%

Asset-II				
Particular	Capital cost as on COD		Capital cost as on 31.3.2019	
	Amount	%	Amount	%
Debt	464.65	70.00%	510.82	70.00%
Equity	199.14	30.00%	218.92	30.00%
Total	663.79	100.00%	729.74	100.00%

Asset-III(a)				
Particular	Capital cost as on COD		Capital cost as on 31.3.2019	
	Amount	%	Amount	%
Debt	10646.83	70.00%	11884.51	70.00%
Equity	4562.93	30.00%	5093.36	30.00%
Total	15209.75	100.00%	16977.86	100.00%

Asset-III(b)		(₹ in lakh)		
Particular	Capital cost as on COD		Capital cost as on 31.3.2019	
	Amount	%	Amount	%
Debt	512.76	70.00%	564.87	70.00%
Equity	219.75	30.00%	242.08	30.00%
Total	732.51	100.00%	806.95	100.00%

Return on Equity (ROE)

46. 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.

47. 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.

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

Particulars	(₹ in lakh)			
	Asset-I		Asset-II	
	2017-18 (Pro-rata)	2018-19	2017-18 (Pro-rata)	2018-19
Opening Equity	184.55	186.11	199.14	200.70
Addition due to Additional Capitalization	1.56	15.04	1.56	18.23
Closing Equity	186.11	201.15	200.70	218.92
Average Equity	185.33	193.63	199.92	209.81
Return on Equity (Base Rate)	15.50%	15.50%	15.50%	15.50%
MAT rate	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)	6.97	37.97	7.52	41.14

Particulars	(₹ in lakh)	
	Asset-III(a)	Asset-III(b)
	2018-19 (Pro-rata)	2018-19 (Pro-rata)
Opening Equity	4562.93	219.75
Addition due to Additional Capitalization	530.43	22.33
Closing Equity	5093.36	242.08
Average Equity	4828.14	230.92
Return on Equity (Base Rate)	15.50%	15.50%
MAT rate	20.961%	20.961%
Rate of Return on Equity (Pre-tax)	19.610%	19.610%
Return on Equity (Pre-tax)	700.37	36.10

Interest on Loan (IOL)

49. 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.

50. 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 triung-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 triung-up.

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

(₹ in lakh)

Particulars	Asset-I		Asset-II	
	2017-18 (Pro-rata)	2018-19	2017-18 (Pro-rata)	2018-19
Gross Normative Loan	430.62	434.26	464.65	468.29
Cumulative Repayment upto previous Year	0.00	6.26	0.00	6.75
Net Loan-Opening	430.62	428.00	464.65	461.54
Addition due to Additional Capitalization	3.64	35.08	3.64	42.53
Repayment during the year	6.26	34.08	6.75	36.93
Net Loan-Closing	428.00	429.01	461.54	467.14
Average Loan	429.31	428.51	463.10	464.34
Weighted Average Rate of Interest on Loan	8.5449%	8.5100%	8.5368%	8.5023%
Interest on Loan	7.04	36.47	7.58	39.48

Particulars	Asset-III(a)	Asset-III(b)
	2018-19 (Pro-rata)	2018-19 (Pro-rata)
Gross Normative Loan	10646.83	512.75
Cumulative Repayment upto previous Year	0.00	0.00
Net Loan-Opening	10646.83	512.75
Addition due to Additional Capitalization	1237.68	52.11
Repayment during the year	611.26	31.94
Net Loan-Closing	11273.24	532.92
Average Loan	10960.04	522.84
Weighted Average Rate of Interest on Loan	8.4505%	8.1924%
Interest on Loan	685.12	34.15

Depreciation

52. 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 & 2018-19. Accordingly, it will complete 12 years beyond the tariff period 2014-19 and 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	
	2017-18 (Pro-rata)	2018-19	2017-18 (Pro-rata)	2018-19
Opening Gross Block	615.17	620.37	663.79	668.99
Additional Capital expenditure	5.20	50.12	5.20	60.75
Closing Gross Block	620.37	670.49	668.99	729.74
Average Gross Block	617.77	645.43	666.39	699.36
Rate of Depreciation	5.2800%	5.2800%	5.2800%	5.2800%
Depreciable Value	555.99	580.89	599.75	629.43
Remaining Depreciable Value	555.99	574.63	599.75	622.68
Depreciation	6.26	34.08	6.75	36.93

(₹ in lakh)

Particulars	Asset-III(a)	Asset-III(b)
	2018-19 (Pro-rata)	2018-19 (Pro-rata)
Opening Gross Block	15209.75	732.51
Additional Capital expenditure	1768.11	74.44
Closing Gross Block	16977.86	806.95
Average Gross Block	16093.81	769.73
Rate of Depreciation	5.1345%	5.2053%
Depreciable Value	14417.68	692.75
Remaining Depreciable Value	14417.68	692.75
Depreciation	611.26	31.94



Operation and Maintenance Expenses (O&M Expenses)

53. The Petitioner has claimed the O&M expenses for assets covered in the instant petition as per following details:-

(₹ in lakh)

Asset	Particulars	2017-18	2018-19
Asset-I	O&M Expenses	13.05	68.72
Asset-II		13.05	68.72
Asset-III(a)		-	168.57
Asset-III(b)		-	27.39

54. 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.

55. Norms for O&M expenditure for Transmission System have been specified under section 29 (4) of Tariff Regulation are as follows:-

Element	2017-18	2018-19
Double Circuit (Single conductor)	0.334	0.346
132 kV Bay	33.25	34.36

56. We have considered the submissions made by the Petitioner. The O&M Expenses have been worked out as per the norms of O&M Expenses specified in the 2014 Tariff Regulations. Accordingly, the allowed O&M Expenses for the year 2017-18 & 2018-19 is given below:-



(₹ in lakh)			
Asset	Details	2017-18	2018-19
Asset-I	2 Nos. 132 kV ICT bays	13.05	68.72
Asset-II	2 Nos. 132 kV ICT bays	13.05	68.72
Asset-III(a)	132 kV S/C Tezu-Namsai transmission line (95.10 KM) and 6 Nos. 132 kV bays	-	166.61
Asset-III(b)	1 No. 132 kV Bus Reactor bay	-	27.39

Interest on Working Capital (IWC)

57. 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% has been considered as the rate of interest on working capital for the Asset-I and Asset-II and SBI Base Rate 8.70 as on 01.04.2018 Plus 350 Bps i.e. 12.20% has been considered as the rate of interest on working capital for the Asset-III(a) and Asset-III(b).

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



(₹ in lakh)

Particulars	Asset-I		Asset-II	
	2017-18 (Pro-rata)	2018-19	2017-18 (Pro-rata)	2018-19
Maintenance Spares	10.21	10.31	10.21	10.31
O&M Expenses	5.67	5.73	5.67	5.73
Receivables	29.91	30.52	31.32	32.05
Total	45.79	46.55	47.20	48.09
Rate of Interest	12.60%	12.60%	12.60%	12.60%
Interest on working Capital	1.11	5.87	1.14	6.06

Particulars	Asset-III(a)	Asset-III(b)
	2017-18 (Pro-rata)	2018-19 (Pro-rata)
Maintenance Spares	33.78	5.15
O&M Expenses	18.77	2.86
Receivables	498.63	27.82
Total	551.19	35.83
Rate of Interest	12.20%	12.20%
Interest on working Capital	49.74	3.49

Annual Transmission charges

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

(₹ in lakh)

Particulars	Asset-I		Asset-II	
	2017-18 (Pro-rata)	2018-19	2017-18 (Pro-rata)	2018-19
Depreciation	6.26	34.08	6.75	36.93
Interest on Loan	7.04	36.47	7.58	39.48
Return on Equity	6.97	37.97	7.52	41.14
Interest on Working Capital	1.11	5.87	1.14	6.06
O&M Expenses	13.05	68.72	13.05	68.72
Total	34.42	183.10	36.04	192.33

Particulars	Asset-III(a)	Asset-III(b)
	2018-19 (Pro-rata)	2018-19 (Pro-rata)
Depreciation	611.26	31.94
Interest on Loan	685.12	34.15
Return on Equity	700.37	36.10
Interest on Working Capital	49.74	3.49
O&M Expenses	166.61	27.39
Total	2213.11	133.07



Filing fee and the publication expenses

60. 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

61. 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

62. 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

63. The transmission Charges for all the assets covered in the instant petition shall be recovered on monthly basis in accordance with Regulation 43 of the 2014 Tariff Regulations and shall be shared by the beneficiaries and long term transmission customers in Central Electricity Regulatory Commission (Sharing of Inter State Transmission Charges and Losses) Regulations, 2010 as amended from time to time.



64. This order disposes of Petition No.337/TT/2018.

Sd/-
(I. S. Jha)
Member

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

Sd/-
(P. K. Pujari)
Chairperson

