

CENTRAL ELECTRICITY REGULATORY COMMISSION

NEW DELHI

Petition No. 121/TT/2019

Coram:

Shri P. K. Pujari, Chairperson

Shri I. S. Jha, Member

Shri Arun Goyal, Member

Date of Order: 31.08.2021

In the matter of:

Approval under regulation 86 of CERC (Conduct of Business) Regulations, 1999 and CERC (Terms and Conditions of Tariff) Regulations, 2014 for determination of transmission tariff from COD to 31.3.2019 for 400 kV D/C Kameng - Balipara Transmission Line along with associated bays at Balipara Sub-station under "North East - Northern / Western Interconnector-I" 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,
(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,
Aizawl, Mizoram.

5. Manipur State Power 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) – 799001.
8. CMD, NEEPCO,
15, NBCC Tower, Bhikaji Cama Place,
New Delhi.

...Respondent(s)

For Petitioner: Shri S.S. Raju, PGCIL
Shri A.K. Verma, PGCIL
Shri B. Dash, PGCIL
Shri Ved Prakash Rastogi, PGCIL

For Respondent: None

ORDER

The present petition has been filed by the Petitioner, Power Grid Corporation of India Ltd. (PGCIL) for determination of transmission tariff from COD to 31.3.2019 in respect of 400 kV D/C Kameng-Balipara Transmission Line along with associated bays at Balipara Sub-station (hereinafter referred to as “the transmission asset”) under “North East-Northern/ Western Interconnector-I” in North Eastern Region (hereinafter referred to as “the transmission project”) under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 (hereinafter referred to as “the 2014 Tariff Regulations”).

2. The Petitioner has made the following prayers:



“1) Approve the Transmission Tariff for the tariff block 2014-19 for the assets covered under this petition

2) Invoke the provision of regulation 4(3)(ii) of CERC (Terms and Conditions of Tariff) Regulations, 2014 and Regulation – 24 of CERC (Conduct of Business) Regulations’ 1999 for approval of DOCO of Asset-I as 30.03.2018.

3) Admit the capital cost as claimed in the Petition and approve the Additional Capitalization incurred / projected to be incurred.

4) Allow actual IEDC considering the actual construction period of 109 months.

5) Allow the Petitioner to approach Commission for suitable revision in the norms for O&M expenditure for claiming the impact of wage hike, if any, during period 2014-19.

6) Allow tariff upto 90% of the Annual Fixed Charges as tariff in accordance with clause 7 (i) of Regulation 7 Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 for the purpose of inclusion in the POC charges.

7) 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.

8) 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 of Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014, and other expenditure (if any) in relation to the filing of petition.

9) Allow the Petitioner to bill and recover Licensee fee and RLDC fees and charges, separately from the respondents in terms of Regulation 52 of Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014.

10) 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.

11) 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.

12) 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.

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

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



3. **Backdrop of the case**

- a. The Investment Approval (I.A.) for implementation of the transmission project was accorded by the Board of Directors of the Petitioner in its 219th meeting held on 24.2.2009 at an estimated cost of ₹1113019 lakh including IDC of ₹106605 lakh based on 4th quarter 2008 price level (communicated vide Memorandum Ref No. C/CP/NER-NR.WR Intr-I dated 27.2.2009).
- b. The Revised Cost Estimate (RCE-I) for the transmission project was approved by Board of Directors of the Petitioner in its 323rd meeting held on 30.11.2015 at an estimated cost of ₹1376271 lakh including IDC of ₹174732 lakh based on April 2015 price level (communicated vide Memorandum Ref No. C/CP/RCE:NE-NR/WR Interconnector-I dated 9.12.2015).
- c. The Revised Cost Estimate-II (RCE-II) for the transmission project was approved by Board of Directors of the Petitioner in 363rd meeting held on 7.3.2019 at an estimated cost of ₹1471910 lakh including IDC of ₹176395 lakh based on March 2018 price level (communicated vide Memorandum Ref No. C/CP/RCE-II/PA1819-12-0AY-RTE023 dated 28.3.2019).
- d. The scope of work for the transmission project was firmed up in the meeting of the Standing Committee on Power System Planning for WR, NR and NER on 26.9.2005, 6.1.2005 and 24.10.2005, respectively and concurred in the 6th TCC and 6th NERPC meeting held on 7.8.2008 and 8.8.2008.
- e. NEEPCO *vide* letter dated 11.5.2007 intimated to Ministry of Power regarding the commissioning of first unit of the Kameng HEP by December 2010 and the Petitioner was asked to take up the commissioning of associated transmission project to match with the commissioning of generation project.
- f. Based on the communications from NEEPCO, deliberations in meetings of the Standing Committee and meetings of RPC, the Ministry of Power, Government of India *vide* order dated 2.3.2009 accorded prior approval under Section 68 of the Electricity Act, 2003 for the transmission project.



g. NEEPCO vide letter dated 6.9.2009 intimated to the Petitioner that the commissioning of the units of Kameng HEP was scheduled progressively from December 2012 to May 2013. Accordingly, the Petitioner proceeded to take up the implementation of the transmission project. As per 9th TCC and 9th NERPC meeting held on 11.8.2010 and 12.8.2010, Kameng HEP was expected to come up in 12th plan period (2012-17).

h. As per 12th TCC and 12th NERPC meeting held on 14.11.2011 and 15.11.2011, original schedule of Kameng HEP was November 2009 which was subsequently revised to December 2012. In October 2011, NEEPCO again revised its commissioning schedule to June 2016.

i. As per CEA's status of hydro-electric projects for 12th plan and beyond, the schedule of Kameng HEP has been shown as 2016-17. In 123rd OCC of NER held on 12.7.2016, the commissioning schedule of first two units of Kameng HEP was informed as March 2017.

j. Initially, the tariff for the transmission asset was claimed in Petition No. 43/TT/2017. The Commission vide order dated 31.10.2017 in Petition No. 43/TT/2017 held that charges for the transmission asset will be allowed only after the actual COD. Accordingly, tariff was not granted for the transmission asset and the Petitioner was directed to file a fresh Petition after actual COD of the transmission asset. The relevant portion of the order dated 31.10.2017 in Petition No. 43/TT/2017 are as follows:

"5. We have considered the submissions of the petitioner as regards the delay in commissioning of the instant assets. As per Regulation 7 of the 2014 Tariff Regulations, the petitioner may file a petition within 180 days of the anticipated COD. The petition was filed in January, 2017 and more than six months have passed and still the instant assets are not commissioned. The petitioner has revised the anticipated COD of the instant assets three times which indicates that the COD of the transmission assets is not certain. No purpose is served in keeping the instant petition pending. We are of the view that transmission charges for the instant assets should be allowed only after the actual COD. Accordingly, tariff is not allowed for the instant assets for the present. The petitioner is directed to file a fresh petition after the instant assets are put into commercial operation. The petition filing fee in the instant case shall be adjusted in petitions filed by the petitioner in future.



4. In compliance of the order dated 31.10.2017, the Petitioner has filed the instant petition for approval of tariff of the transmission asset.
5. The scope of work covered under the transmission project is as follows:

Transmission Line

Part-A: North East – Northern/ Western Interconnector-I

- (i) Biswanath Chariali-Agra ± 800 kV, 6000MW HVDC Bipole line

As per Investment approval: This includes 22 km of four (4) number of corridors with 800 kV HVDC towers in the chicken neck area. Two of the corridors would be utilized by stringing of the Biswanath Chariyali-Agra HVDC bipole line (one pole in each corridor) while the other two corridors would be strung with single panther conductor per corridor charged at 132 kV. Further, this would include Earth Electrode line of 50 km length at Biswanath Chariyali end and of 40 km length at Agra end.

Scope Change as per RCE: This includes four (4) numbers of corridors with 800 kV HVDC towers in the chicken neck area. One corridor has been utilized by stringing of the Biswanath Chariyali – Agra HVDC bipole line while the other three corridors are proposed to be charged at 400 kV. Further, this would include Earth Electrode line at Biswanath Chariyali end and at Agra end.

- (ii) Balipara-Biswanath Chariyali 400 kV D/C line
- (iii) LILO of Ranganadi-Balipara 400 kV line at Biswanath Chariyali (Pooling Point)
- (iv) Biswanath Chariyali-Biswanath Chariali (AEGCL) 132 kV D/C line

Part-B: Transmission System for immediate evacuation of power from Kameng HEP

- (i) Kameng-Balipara 400 kV D/C line
- (ii) Balipara-Bongaigaon 400 kV D/C (Quad conductor) with 30% Fixed Series Compensation at Balipara end



Part-C: Transmission System for immediate evacuation of power from Lower Subansiri HEP

- (i) Lower Subansiri-Biswanath Chariali (Pooling Point) – 2 numbers of. 400 kV D/C lines with twin Lapwing conductor

Sub-station

Part-A: North East – Northern / Western Interconnector – I

- (i) Establishment of 400/132 kV Pooling Station at Biswanath Chariali with 2x200 MVA, 400/132/33 kV Transformers along with associated line bays
- (ii) HVDC rectifier module of 3000 MW at Biswanath Chariali and inverter module of 3000 MW capacity at Agra
- (iii) Augmentation of 400 kV Agra sub-stations by 4x105 MVA, 400/220/33 kV transformer along with associated bays
- (iv) Extension of 400 kV line bays at Balipara Sub-station
- (v) Extension of 132 kV line bays at Biswanath Chariali (AEGCL)

Part-B: Transmission System for immediate evacuation of power from Kameng HEP

- (i) 2nd 315 MVA, 400/220/33 kV ICT at MISA
- (ii) Extension of 400 kV line Bays at Bongaigaon and Balipara Sub-stations

Part-C: Transmission System for immediate evacuation of power from Lower Subansiri HEP

- (i) Extension of 400 kV line bays at Biswanath Chariali Pooling Sub-station

Reactive Compensation

<u>Substation</u>	<u>Bus Reactor</u>
1. Biswanath Chariali	2x80 MVAR
2. Bongaigaon	1x80 MVAR
3. Balipara	1x80 MVAR
4. Lower Subansiri	1x80 MVAR*
5. Kameng	1x80 MVAR*

* These reactors would be a part of generation switchyard



Transmission Line**Line Reactor**

1. Lower Subansiri-Biswanath Chariali 400 kV D/C Line: 4x63 MVAR
2. Balipara-Bongaigaon 400 kV D/C (Quad) Line: 4x63 MVAR
3. Balipara-Biswanath Chariali 400 kV D/C line resulting from LILO of Ranganadi-Balipara 400 kV D/C line at Biswanath Chariali: Existing 1x50 MVAR Fixed line reactor in each circuit at Balipara end to be made switchable at the present location itself.

6. The status of various assets covered in the transmission project is as follows:

Sl. No.	Name of Asset	COD (Anticipated / Actual)	Covered in Petition No.
1	± 800 kV HVDC Biswanath Chariali – Agra Pole-1 (1500 MW HVDC Terminals at Biswanath Chariali and Agra each along with the ± 800 kV Hexa Lapwing Transmission Line)	1.11.2015 (Actual)	67/TT/2015
2	Loop In and Loop Out (LILO) of 400kV Ranganadi-Balipara-I T/L at Biswanath chariali PS alongwith associated bays at Biswanath chariali PS	28.10.2015 (Actual)	
3	Loop In and Loop Out (LILO) of 400kV Ranganadi-Balipara-II T/L at Biswanath chariali PS alongwith associated bays at Biswanath chariali PS	27.10.2015 (Actual)	
4	132 kV D/C BNC (PG) - BNC (AEGCL) T/L alongwith associated bays at BNC (AEGCL) and BNC PS (PGCIL)	1.10.2015 (Actual)	
5	200 MVA, 400/132/33 kV ICT – I at Biswanath Chariali PS	19.12.2015 (Actual)	
6	200 MVA, 400/132/33 kV ICT - 2 along with associated bays at BNC	1.10.2015 (Actual)	259/TT/2015
7	80 MVAR Bus Reactor – 1 along with associated Bays at Biswanath Chariali	3.10.2015 (Actual)	
8	80 MVAR Bus Reactor – 2 along with associated Bays at Biswanath Chariali	26.2.2016 (Actual)	
9	Augmentation of 400 kV Agra Sub-Station by 1X315 MVA, 400/220/33 kV ICT along with associated Bays	10.12.2015 (Actual)	
10	400 kV D/C Balipara-Biswanath Chariali # 3 Transmission Line along with associated bays at Balipara and Biswanath Chariali PS	12.10.2015 (Actual)	
11	400 kV D/C Balipara-Biswanath Chariali # 4 Transmission Line along with associated bays at Balipara and Biswanath Chariali PS	1.10.2015 (Actual)	
12	±800 kV Biswanath Chariali-Agra HVDC POLE-II (1500MW HVDC Terminal at Biswanath Chariali and Agra) along with Earth Electrode line and Earth Electrode Station for both BNC and Agra	2.9.2016 (Actual)	184/TT/2016



13	2 nd 315 MVA,400/220 kV ICT at Misa	1.7.2012 (Actual)	391/TT/2014
14	80 MVAR Bus Reactor at Balipara	1.10.2012 (Actual)	131/TT/2015
15	80 MVAR Bus Reactor at Bongaigaon	1.3.2013 (Actual)	217/TT/2015
16	400 kV, D/C (Quad) Balipara - Bongaigaon T/L along with associated bays at Bongaigaon S/s and Balipara S/s including 30% FSC at Balipara and 4 X 63 MVAR, 420 kV Line Reactors	7.11.2014 (Actual)	65/TT/2015
17	2X80 MVAR, 400 kV Switchable Line Reactors for 400 kV D/C Agra-Sikar T/L at Agra Substation	1.8.2017 (Actual)	242/TT/2018
18	63 MVAR line reactor (to be used as Bus Reactor) connected to 400 kV Lower Subansiri-BNC-I line bay along with associated bays at BNC substation	21.7.2017 (Actual)	
19	63 MVAR line reactor (to be used as Bus Reactor) connected to 400 kV Lower Subansiri-BNC-III line bay along with associated bays at BNC substation	11.12.2017 (Actual)	
20	Kameng – Balipara 400 kV D/C line along with associated bays at Balipara Substation	30.3.2018 (Proposed)*	Covered under the instant petition
21	Lower Subansiri–Biswanath Chariali (Pooling Point) – 2 nos. 400kV D/C lines with twin Lapwing conductor along with associated bays and 1x80MVA Bus reactor and 2x63MVA Line Reactor	Anticipated by 2019-2020 (matching with generation)	

* under proviso (ii) of Regulation 4(3) of the 2014 Tariff Regulations

7. The details of the Annual Transmission Charges claimed by the Petitioner for the transmission asset are as follows:

Particulars	Asset-I	
	2017-18 (pro-rata)	2018-19
Depreciation	7.35	1427.71
Interest on Loan	9.36	1739.14
Return on Equity	5.45	1081.61
Interest on Working Capital	0.52	100.58
O & M Expenses	0.96	183.52
Total	23.64	4532.56

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

Particulars	Asset-I	
	2017-18 (pro-rata)	2018-19
Maintenance Spares	26.78	27.53
O&M expenses	14.88	15.29



Particulars	Asset-I	
	2017-18 (pro-rata)	2018-19
Receivables	732.89	755.43
Total	774.55	798.25
Rate of Interest (in %)	12.60	12.60
Interest on working capital	0.52	100.58

9. The Petitioner has served a 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. Notice dated 14.1.2020 directing the beneficiaries/ Respondents to file reply in the matter was also published on Commission's website. Reply to the petition has been filed by NEEPCO (Respondent No. 8), *vide* communication dated 21.5.2020 and has intimated that the actual commissioning dates of its Kameng HEP units I and II were 10.2.2020 and 3.2.2020, respectively against scheduled timeline of March 2018. NEEPCO has also raised the issue of non-signing of Implementation Agreement between NEEPCO and the Petitioner. The Petitioner *vide* affidavit dated 5.6.2020 filed its rejoinder to the reply of BRPL.

10. The hearing in this matter was held on 28.8.2020 through video conference and the order was reserved.

11. This order is issued considering the submissions made by the Petitioner in the petition dated 3.12.2018, affidavits dated 7.2.2020, 4.5.2020, 5.6.2020, 11.11.2020 and reply dated 21.5.2020 of the Respondent, NEEPCO.



12. Having heard the representatives of the Petitioner and after perusing the material on record, we proceed to dispose of the petition.

Date of Commercial Operation (COD)

13. The Petitioner has submitted that it has completed its work, namely, Kameng-Balipara 400 kV D/C line along with associated bays at Balipara Sub-station under the transmission project but was unable to put the transmission asset under regular service due to delay on the part of the associated generation under the scope of NEEPCO. Accordingly, the Petitioner has claimed COD of the transmission asset as 30.3.2018 under proviso (ii) of Regulation 4(3) of the 2014 Tariff Regulation.

14. The Commission vide RoP of the hearing dated 11.2.2020 directed the Petitioner to submit the status of the associated generation under the scope of NEEPCO and proof of co-ordination and correspondence made with NEEPCO regarding commissioning of the generation project, if any. In response, the Petitioner vide affidavit dated 4.5.2020 has submitted status of the generation project discussed in various forums and as submitted by NEEPCO. The same has been summarised hereunder:

Sr. No.	Description	Date	Commissioning Scheduled
1	1 st Standing Committee Meeting of NER	24.10.2005	2009-10
2	Letter from NEEPCO to JS (Hydro), MoP	11.5.2007	1 st unit December, 2010
3	Letter from NEEPCO to Petitioner	6.3.2009	1 st Unit December, 2012 2 nd Unit February, 2013 3 rd Unit March, 2013 4 th Unit May, 2013
4	9 th NERPC meeting	12.8.2010	12 th Plan
5	12 th NERPC meeting	15.11.2011	June, 2016



6	15 th NERPC meeting	21.8.2015	June, 2016
7	16 th NERPC meeting	30.1.2016	1 st Unit June, 2016 2 nd Unit November, 2016 3 rd & 4 th Unit March, 2017
8	Letter from NEEPCO regarding commissioning schedule	20.5.2016	March, 2017
9	Letter from Petitioner to NEEPCO regarding signing of implementation Agreement	6.7.2016	March, 2017
10	123 rd OCC meeting	12.7.2016	First two units March, 2017
11	17 th NERPC	3.10.2016	Unit-I & II: March, 2017
12	129 th OCC meeting	17.2.2017	Unit-1 October, 2017 Unit-2 & 3 November, 2017 Unit-4 December, 2017
13	131 st OCC meeting	12.4.2017	First unit by early 2018
14	Affidavit submitted by NEEPCO in petition no. 43/TT/2017	5.9.2017	Tentative Synchronization scheduled: Unit No.1: 27.3.2018 Unit No.2: 1.4.2018 Unit No.3: 7.4.2018 Unit No.4: 13.4.2018
15	18 th NERPC meeting	11.10.2017	Unit-I & II: March, 2018
16	19 th NERPC meeting	29.11.2018	Unit-I & II: March, 2019

15. The Petitioner was further directed to submit Implementation Agreement signed between Petitioner and NEEPCO, if any. In response, the Petitioner has submitted that the Implementation Agreement was forwarded to NEEPCO on 6.7.2016 for signing. However, it has not been signed till date by NEEPCO.

16. NEEPCO has submitted that its generation project was on schedule as per the project implementation timelines. NEEPCO was to commission the first two units of 150 MW of Kameng HEP by March, 2018 and accordingly conveyed the same to the Petitioner through various correspondences which has been submitted in its reply dated 21.5.2020. However, during mechanical trial run of the first two units of Kameng HEP, leakages were noticed in the penstock and as such further



commissioning activities were put on hold to enable carrying out the necessary rectification works. After completion of rectification works of the penstock, Unit I and Unit II were commissioned on 10.2.2020 and 3.2.2020 respectively. As regards signing of implementation Agreement between NEEPCO and the Petitioner, the same is yet to be materialized and correspondences made in this regard have been submitted along with the reply dated 21.5.2020.

17. In response, the Petitioner vide affidavit dated 5.6.2020, has submitted that the implementation timeline for commissioning of first two units of Kameng HEP was March 2018 and the same was conveyed to the Petitioner by NEEPCO. Accordingly, the Petitioner has completed its scope of work under the transmission project but was not able to put the same under regular service due to delay on the part of the generating station of NEEPCO. Accordingly, Asset-I was charged and is proposed to be put under commercial operation with effect from 30.3.2018.

18. Regulation 4(3) of the 2014 Tariff Regulations provides as follows:

"(3) date of commercial operation in relation to a transmission system shall mean the date declared by the transmission licensee from 0000 hour of which an element of the transmission system is in regular service after successful trial operation for transmitting electricity and communication signal from sending end to receiving end: Provided that:

i) Where the transmission line or sub-station is dedicated for evacuation of power from a particular generating station, the generating company and transmission licensee shall endeavor to commission the generating station and the transmission system simultaneously as far as practicable and shall ensure the same through appropriate Implementation Agreement in accordance with Regulation 12(2) of these Regulations:

ii) in case a transmission system or an element thereof is prevented from regular service for reasons not attributable to the transmission licensee or its supplier or its contractors but is on account of the delay in commissioning of the concerned generating station or in commissioning of the upstream or downstream transmission system, the transmission licensee shall approach the Commission through an appropriate application for approval of the date of commercial operation of such transmission system or an element thereof."

19. Regulation 6.3A(4)(iv) of the Grid Code provides as follows:



“6.3A Commercial operation of Central generating stations and inter-State Generating Stations

4. Date of commercial operation in relation to an inter-State Transmission System or an element thereof shall mean the date declared by the transmission licensee from 0000 hour of which an element of the transmission system is in regular service after successful trial operation for transmitting electricity and communication signal from the sending end to the receiving end:

(iv) In case a transmission system or an element thereof is prevented from regular service on or before the Scheduled COD for reasons not attributable to the transmission licensee or its supplier or its contractors but is on account of the delay in commissioning of the concerned generating station or in commissioning of the upstream or downstream transmission system of other transmission licensee, the transmission licensee shall approach the Commission through an appropriate application for approval of the date of commercial operation of such transmission system or an element thereof.”

20. We have considered the submissions of the Petitioner and NEEPCO. The Petitioner has claimed COD of the transmission asset as 30.3.2018 under proviso (ii) of Regulation 4(3) of the 2014 Tariff Regulations. The Petitioner has submitted that the asset could not be put to regular service due to non-commissioning of the associated generating station (Kameng HEP) under the scope of NEEPCO.

21. As per proviso (ii) to Regulation 4(3) of the 2014 Tariff Regulations, if a transmission licensee is prevented from putting a transmission asset or element to regular use due to the delay in commissioning of associated generation or COD of upstream or downstream transmission, the transmission licensee may approach the Commission for approval of COD of the transmission asset. There is a similar provision in Regulation 6.3A(4)(iv) of the Grid Code. Accordingly, in the instant case, the Petitioner has claimed COD of the transmission asset as 30.3.2018 under proviso (ii) of Regulation 4(3) of 2014 Tariff Regulations as the associated generation project under NEEPCO has not been commissioned.

22. In support of COD of the transmission asset, the Petitioner has submitted CEA energisation certificate dated 22.3.2018 issued under Regulation 43 of Central



Electricity Authority (Measures Relating to Safety and Electric Supply) Regulations, 2010, 'No-load' RLDC charging Certificate dated 26.8.2018, self-declaration COD letter dated 30.8.2018 and CMD Certificate as required under Grid code.

23. Taking into consideration of CEA Energisation Certificate, 'No-load' RLDC charging Certificate and CMD Certificate as required under Grid Code, COD of the transmission asset is approved as 30.3.2018 under proviso (ii) of Regulation 4(3) of the 2014 Tariff Regulations.

Capital Cost

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

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

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

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

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

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

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

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

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

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

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

25. The Petitioner has submitted the details of apportioned approved cost as per RCE-II and claimed following capital cost as on COD and additional capital



expenditure (ACE) projected to be incurred, in respect of the transmission assets and submitted Auditor's Certificates in support of the same:

FR apportioned approved cost	RCE-I apportioned approved cost (RCE-I)	RCE-II apportioned approved cost (RCE-II)	Capital cost up to COD	Projected ACE			Estimated completion cost
				2018-19	2019-20	2020-21	
14083.81	18153.17	31153.23	26801.95	1346.74	749.21	300.53	29198.43

(₹ in lakh)

Cost over-run

26. The Petitioner has claimed the estimated completion cost of the transmission asset as ₹29198.43 lakh including IEDC and IDC which exceeds the FR apportioned approved cost and cost as per RCE-I. However, the same is within the apportioned approved cost as per RCE-II.

27. The Petitioner was directed to provide justification for increase in apportioned approved cost as per FR (₹14083.81 lakh) and RCE-I (₹18153.17 lakh) vis-à-vis apportioned approved cost as per RCE-II (₹31153.23 lakh). In response, the Petitioner has submitted the following:

a) The item-wise major variations are as follows:

Sl. No.	Particulars	Cost details			Variation	
		FR	RCE-I	Completion	(+ within, - increase)	
					w.r.t FR	w.r.t RCE-I
1	Crop & Tree Compensation	62.28	196.00	2526.66	-2464.38	-2330.66
2	Forest/ NPV Compensation	1835.60	2442.68	1673.75	161.85	768.93
3	Transmission line (Steel, Conductor, Hardware, erection, ERS)	6286.65	4791.44	6195.59	91.06	-1404.15
4	Taxes & Duties	0.00	745.45	992.21	-992.21	-246.76
5	Civil Works for T/L	1572.21	2280.65	4491.25	-2919.04	-2210.60
6	Substation equipment	332.21	276.80	368.04	-35.83	-91.24

(₹ in lakh)



7	Overheads	904.94	2030.10	4710.70	-3805.76	-2680.60
8	IDC	1867.08	3693.55	6011.79	-4144.71	-2318.24
9	Others	1222.84	1696.50	2228.44	-1005.60	-531.94
	Total	14083.81	18153.17	29198.43	-15114.62	-11045.26

b) The cost of about ₹24.64 crore and ₹23.30 crore w.r.t FR and RCE-I respectively has increased on account of increase in crop and tree compensation towards construction of transmission line. The variation is due to the actual assessment of crops/ trees and huts in the plain and forest area encountered in line corridor by concerned Government officials of Forest Departments of Assam and Arunachal Pradesh as per which the actual quantity and value of which are much greater than the notional FR estimate. The compensation for the transmission line was further revised as per the guidelines dated 15.10.2015 issued by Ministry of Power as well as in terms of order dated 3.3.2017 of Hon'ble Guwahati High Court for payment towards damages with regard to Right of Way in case of the transmission asset.

c) During the construction of transmission asset, the actual line length and routing changed due to severe ROW issues, which increased the number of angle towers, requirement of unequal leg extensions, raised chimneys as per site condition which resulted in increase of cost of transmission line by about ₹ 14.04 crore with regard to RCE-I. Increase in number of extensions, raised chimneys and tension/ suspension tower due to actual line routing and line length resulted in increase of hardware fitting, earth wire, insulators etc.

d) The civil works (excavation, concreting, revetment, benching etc.) has increased by ₹29.19 crore w.r.t FR and ₹22.10 crore w.r.t RCE-I due to the following reasons:

- (i) Increase in payment of PV by around ₹200 lakh.
- (ii) Increase in the quantities of benching, excavation, concreting due to adoption of special type of foundations, tower protection and revetment works, incorporation of unequal leg extensions and raised chimneys which have increased the cost by around ₹2000 lakh due to



frequent landslides, monsoon in hilly areas and also change in river course.

(iii) Increase in cost for adopting special block foundations at vulnerable locations.

e) Increase in cost was also due to inflationary trends prevalent during execution of project from June 2009 (FR preparation) to March 2016 (period of major supplies), as may be seen from the trend of variation in indices of various major raw materials as indicated below:

Name of indices	June, 2009 (one month prior to first OBD)	DPR (3Q'09 PL)	March, 2011	March, 2013	March, 2015	March, 2016	Increase from first OBD (in %)
Tower Steel	46835	47360	49037	53539	49918	44582	-4.81
HG Zinc	88200	106900	128700	132900	155600	143900	63.15
EC Grade Al	96433	115433	144000	146700	151833	135972	41.00
CRGO	211655	210409	145759	156590	226050	269025	27.11
Copper	258090	308032	450950	441489	393972	352213	36.47
WPI	126.8	130.3	149.5	170.1	176.1	175.3	38.25
WPI for Ferrous metals	122.1	123.2	140.9	154.7	151.4	139.3	14.09
WPI for Fuel & Power	125.7	132.9	157.6	191.6	187.3	172.4	37.15
CPI	153	163	185	224	254	268	75.16

f) The price variation is also attributable to change in actual site conditions, change in soil conditions and also market forces prevailing at the time of bidding process of various packages vis-à-vis that considered in FR.

g) Increase of about ₹79.50 crore and ₹49.98 crore in overheads and IDC w.r.t. the estimated cost (FR Cost) and RCE-I cost respectively is due to time over-run. The actual IDC accrued up to COD has been considered at the time of claim of tariff. IEDC (Overheads) - during estimation for FR, 3% and 5% of equipment cost and civil works has been considered for contingency and IEDC respectively. The actual amount of IEDC, establishment and contingency has been considered at the time of claim of Tariff.



28. The Petitioner has submitted that reasons for cost variation are beyond the control of the Petitioner. Tariff for the project has been claimed on capital cost as on proposed COD and projected expenditure up to 31.3.2021. Hence, it has prayed that tariff may be allowed at the completion cost for the transmission asset as the completion cost is within the apportioned approved cost as per RCE-II.

29. We have considered the submissions of Petitioner. It is observed that the capital cost has increased due to increase in crop and tree compensation, forest compensation including NPV, railway compensation etc. encountered in transmission line, due to ROW issues encountered during the construction of line, the actual line length and route alignment changed from FR, which necessitated the increase in number of angle towers, requirement of unequal leg extensions, raised chimneys etc. as per site condition which resulted into increase in the cost of transmission line and on account of fluctuation in exchange rate from FR approval to completion, resulting into increase of FERV liability in External Commercial Borrowings (ECB) and IFC loan in the subject asset.

30. As compared with FR cost, the estimated completion cost increased by ₹15114.62 lakhs which is 107.3% higher than FR cost. The Petitioner has submitted RCE-I for an amount of ₹18153.17 lakhs and RCE-II for an amount of ₹ 31153.23 lakhs. It is observed that the capital cost varied about ₹13000.00 lakhs from RCE-I to RCE-II. As the completion cost of transmission asset is within RCE-II cost, the capital cost claimed by the Petitioner is being allowed subject to review at the time of truing up.



Time over-run

31. As per the Investment Approval (IA) dated 24.2.2009, the transmission asset was scheduled to be commissioned within 48 months from the date of Investment Approval. Accordingly, the scheduled COD comes to 24.2.2013, against which the transmission asset has been put under commercial operation with effect from 30.3.2018 {under proviso (ii) of Regulation 4(3) of the 2014 Tariff Regulations} with a delay of around 1860 days.

32. The Petitioner has submitted that the delay in Asset-I is due to (i) delay in forest clearances, (ii) ROW issues, (ii) difficult terrain, (iv) law and order situation, (v) threats from underground organization/ deteriorated law and order situation and (vi) extended monsoon and HFL. The Petitioner has submitted the following detailed reasons to substantiate its claims:

A. Forest Clearance

(i) The transmission asset falls in Sonitpur, East Kameng and West Kameng districts, which is situated on the North Eastern extremity of India. The district shares an international border with Tibet in the north and Bhutan in the west. It has Tawang District in the north-west, East Kameng district in the east and Sonitpur district and Udalguri district of Assam in the south. The topography is mostly mountainous. Much of West Kameng area is covered with the Himalayas.

(ii) The details of forest clearances required for commissioning of the transmission asset is tabulated below:

State	Total length of line	Length of line in Forest area	Total number of locations	Number of locations in Forest area
Arunachal Pradesh	29.998	29.998	77	77
Assam	27.168	21.359	73	57
Total	57.166	51.357	150	134



(iii) Out of 57.166 km of 400 kV D/C Kameng-Balipara transmission line about 51.357 km line passes through reserved forest area, requiring number of clearances before starting the work. Forest clearance proposal for the subject line was submitted to forest authorities of Arunachal Pradesh and Assam on 13.6.2008 and 17.7.2008 respectively, which is well before award of contract and Investment Approval. However, forest clearance of the line was accorded only on 24.1.2013 for 133.56 Ha and on 24.11.2013 for 98.251 Ha. Thus, the Forest clearance was accorded after 55 months of submission of proposal against a normal period of 10-14 months. For completing the transmission line within the commissioning scheduled as per Investment approval i.e. 1.3.2013, the forest clearance for land was to be received before March to June 2009.

B. Right of Way (ROW)

(i) Work in the forest area commenced after receipt of Forest Clearance for both Arunachal Pradesh and Assam portion. However, the construction activities like foundation, erection and stringing of the line have been severely hampered by ROW problems due to high demand of compensation by the landowners in several areas.

(ii) The tower erection stringing work was hindered by villagers at many tower locations. Both tower foundation and erection work at location 77/1 at Baromile area was obstructed by landowner from 17.5.2014 and construction of line could not be taken up due to high compensation demand. The Petitioner lodged an FIR against the landowner. In this regard, ABSU (All Bodo Students' Union) intervened and demanded huge compensation amount of ₹5 lakh per tower for 4 towers and ₹10 lakh for another tower at location no.73/0. The matter could only be resolved by 1.5.2016.

(iii) At location 72/0 and 71/1, landowners stopped the work and demanded huge compensation. Further, complete tower foundation at location 71/1 was damaged by a miscreant. Although the Petitioner had already paid ₹2.86 lakh towards tree and crop compensation, stringing work at location 89/0 was forcefully stopped by landowner by threatening the labors to leave



the working site by 'Dhanukar' (Arrow). This caused huge loss of time and money as more than 100 labors per day sat idle.

(iv) Further, unprecedented RoW issues emerged in Bakula village and Senglimari Garogaon area (7 km). This resulted in further delay in completion of the entire line. There have been instances where stringing work of almost 1.8 km of the line under Bhalukpong area, Arunachal Pradesh, was obstructed due to encountering fresh rubber plantations along the line corridor in the reserved forest area, which had been planted eventually by some dubious landowners after completion of foundation and erection activities. Similarly, in Assam portion under Chariduar Circle, stringing works of almost 6.8 km was affected for demand of higher compensation. These issues were taken up with the District Administration and also with Ministry of Power for early resolution. However, the problem could be resolved only after deploying approx. 200 police/ paramilitary forces by District Administration w.e.f. end of January, 2018. Similarly, in the final stretch from location 74/0 to 76/0 of the line, severe resistance was faced from the landowners who were demanding exorbitant compensation beyond admissible amounts and the completion was delayed.

(v) Also, landslide at a location 43/0 resulted in damage of already erected tower and endangering a resort in the upper reaches of the slope. The owner of the resort did not allow any construction work in the location for around six months. The matter was constantly pursued with Ministry of Power, Government of India and District Administration, West Kameng and could only be resolved with the intervention of District Magistrate, West Kameng District. There have been instances where the line had to be re-routed as a result of severe resistance from landowners.

C. Difficult Terrain Conditions

(i) The locations in forest area were on steep hill and the same was separated from the approach road by a river. After onset of rainy season in monsoon, the approach to the locations became difficult. The heavy rain started in Arunachal Pradesh from 2nd week of August onwards which continued with the landslides in different areas through which the subject line was passing. As there was only one approach road from location 45/0 to 1/0



through which the construction activities were being carried out. Due to landslide, the communication to the construction areas was totally blocked and movement of men and material had totally stopped as the roads at some places had been totally washed out.

(ii) Since the locations are on the hilltop, materials are to be carried by head loading only through hilly approaches over long distances. With advent of monsoon season, the approach roads to these locations get washed away due to landslides. Due to deteriorated condition of the road as well as the left over stretches, it is nearly impossible to carry the materials. Further, daily working hours were very limited in the forest hilly area. Due to unfavorable locations of working sites, the working groups have to travel long distance to their working site limiting the effective working hours of the groups. Due to landslide, the alignment of Transmission line changed from the original. Further, the diversion in transmission line delays the construction work and all along this period, progress of works suffered.

D. Law and order situation

(i) 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, sub-station and other related works of the said project well in time. However, during actual execution of the project, there were approximately 329 bandhs, blockades and obstructions in the state of Assam by various organizations (All motors workers Union, All Assam Students Association, All Assam Hindu Yuva Parishad, All Koch Rajbongshi Students' Union, NDFB, AASU etc.) which were operational in these areas. Work on subsequent days also suffered due to bandhs and riots.

(ii) Ethnic riot/ violence erupted in BTAD (Bodo-land Territorial Autonomous District) area during the period from 21.7.2012 to 12.9.2014 that severely affected the works. Working groups left site and material transportation was also affected adversely. One stringing group leader was abducted by militant groups on 25.3.2011 from location No. 63/1 of Balipara – Dolgaon section of the line. In two separate incidents, one engineer of the pile contractor was abducted on 15.2.2013 from Tamulpur, BTAD, Assam and



another Engineer was abducted on 22nd December 2013 from Chirang district, Assam by militant groups. Due to these incidents, normal working hampered in adjacent locations including the locations under subject asset. Also, due to prevalent fear-psychosis among workers, outputs were reduced considerably.

(iii) These blockades and bandhs were for numerous demands ranging from construction and repair of roads and schools to providing drinking water in villages, as also reserving certain percentage of jobs and contracts for different communities. Constant threats by these organizations created difficulties in executing the works. Rampant extortion bids and stoppage of works on non-fulfillment of the demands resulted in loss of valuable working time causing delay in execution of work. The Kokrajhar area in Assam is disputed and incidents of violence are very frequent in the area which also affects the works adversely. Lastly the law-and-order situation at certain locations were resolved with administration support, which caused the delay in commissioning of transmission line by 33 months from the scheduled completion.

(iv) The Petitioner has submitted detailed date-wise compilation of events of hindrance from 31.5.2010 to 14.9.2017. Based on information provided by the Petitioner, total number of days effected due to Law and Order situation, is as under:

Sl. No.	Year	No. of Days
1	2010	15
2	2011	35
3	2012	59
4	2013	64
5	2014	28
6	2015	39
7	2016	54
8	2017	35
	Total	329 days

E. Threats from underground organizations

(i) Constant threats from various underground organizations to the working gangs, contractors' engineers and officials of the Petitioner created immense difficulties in carrying out the works. Rampant extortion bids and



warnings about not to carry out works without fulfillment of their demands resulted in loss of valuable working time till negotiations were arrived upon.

(ii) These incidents could not be mitigated despite all possible support and assistance from district authorities and local administration.

F. Extended monsoon and HFL

(i) In 2011 and 2012, the flood levels in lower Assam were very high due to which works at many locations were disrupted for months together and material transportation was also suffered.

33. The Petitioner has further submitted that various problems occurring concurrently could have delayed the project enormously, but the experience and expertise of the Petitioner in project planning and execution curtailed the delay. The Petitioner has claimed that delay is due to the reasons beyond the control of the Petitioner and, therefore, the entire delay of 61 months may be condoned.

34. The Commission vide ROP of hearing dated 11.2.2020 directed the Petitioner to submit the reasons for time over-run along with supporting documents, if any, against each activity for the assets covered under the present petition in a tabular form. In response, the Petitioner vide affidavit dated 4.5.2020 has submitted that the details of time over-run along with documentary evidence have been submitted before the Commission in original Petition. The chronology of the time over-run for Asset-I are as follows:

Sl. No.	Activity	Period of activity				Time over-run in month(s) or day(s)	Reason(s) for Time over-run
		Planned		Achieved			
		From	To	From	To		
1	Investment Approval	24.2.2009	23.2.2013	24.2.2009	30.3.2018	1861	Details of Time over-run along with documentary evidence
2	LOA	23.3.2009		23.3.2009		--	
3	Supplies	23.6.2009	20.11.2012	1.3.2010	1.7.2015	953	
4	Foundation	25.8.2009	20.9.2012	1.11.2009	1.2.2018	1960	



5	Tower erection	27.10.2009	21.11.2012	1.5.2011	1.3.2018	1926	have been submitted
6	Stringing	25.12.2009	23.1.2013	1.2.2016	1.3.2018	1863	
7	Forest Clearance	29.6.2009	31.1.2011	13.6.2008	28.11.2013	1032	
8	ROW issues	--	--	23.2.2013	12.3.2018	--	
9	Difficult Terrain Condition	--	--	1.11.2009	1.2.2018	--	
10	Law & Order situation	--	--	31.5.2010	14.9.2017	329	
11	Threats from outfit organization/deteriorated law and order situation	--	--	1.11.2009	1.2.2018	--	
12	Extended monsoon and HFL	--	--	Year' 2011	Year' 2012	90	
13	Testing and COD	24.1.2013	23.2.2013	1.3.2018	30.3.2018	1861	
14	Any other Activities for time over-run, if any	--	--	--	--	--	

35. We have considered the submissions of the Petitioner and have gone through the documentary evidence on record to justify the time over-run. The Petitioner has submitted that as per the Investment Approval (IA), Asset-I was scheduled to be commissioned within 48 months from the date of Investment Approval. Accordingly, the scheduled COD was 24.2.2013 against which the Asset-I has been put under commercial operation on 30.3.2018 with a delay of about 1860 days and the time over-run is mainly due to (i) Forest clearances, (ii) ROW issues, (iii) Difficult Terrain Conditions, (iv) Law and order situation, (v) Threats from underground organization/deteriorated law and order situation and (vi) Extended monsoon and HFL.

36. The Petitioner has submitted that the proposal for diversion of land relating to forest clearance to Arunachal Pradesh and Assam were submitted on 13.6.2008



and 17.7.2008, respectively. The Petitioner received the final approval from MoE&F on 24.1.2013. As per the Forest (Conservation) Amendment Rules, 2004 notified by MoE&F on 3.2.2004, the timeline for forest approval after submission of proposal is 210 days by the State Government and 90 days by the Forest Advisory Committee of Central Government, resulting in processing time of 300 days. Against the statutory period of 300 days for processing and obtaining the forest clearance, the Forest Authorities took 1430 days beyond IA date (24.2.2009) up to MOE&F approval (24.1.2013). This additional period of 1130 days (1430-300) on account of delay in getting forest clearance is beyond the control of the Petitioner and the same has been condoned.

37. As regards ROW issues faced during construction of the instant asset, the Petitioner has submitted that majority portion of the transmission line passes through forest area in Arunachal Pradesh and Assam and after obtaining the forest clearance, the construction activities like foundation, erection and stringing of the line have been severely hampered by ROW problems due to high demand of compensation. The Petitioner has submitted details of correspondences with various authorities along with supporting documents with respect to the action taken to resolve the ROW issues such as copy of FIRs filed by the Petitioner with the police including the last FIR lodged on 12.3.2018. Perusal of these documents shows that there were severe ROW issues mainly in locations Nos. 76/1, 77/1, 71/1, 72/0 and 71/1, 89/0, 74/0-76/0, 75/0-77/0, 79/0-80/0, 14/0-17/0, 46/0-47/0 and 43/0 in the region. The Petitioner had pursued the matter with the concerned authorities so as to resolve the same. It is observed that the Petitioner has faced ROW issues from 27.5.2014 to 12.3.2018 (1386 days) at various locations thereby affecting the



commissioning of the instant asset. Therefore, the time over-run of 1386 days on account of ROW issues is beyond the control of the Petitioner.

38. Only on these two counts (delay in forest clearance and RoW issues), time over-run condoned is 2516 days (1130 days + 1386 days) while total time over-run is 1860 days. Therefore, we hold that the reasons for time over-run in the transmission asset were beyond the control of the petitioner. Hence, the entire period of time over-run of 1860 days in respect of the asset covered in the instant petition is condoned. The other reasons submitted by the Petitioner are subsumed in the delay in obtaining forest clearance and resolving RoW problems and the same have been not dealt herewith.

Interest During Construction (IDC)

39. The Petitioner has claimed Interest During Construction (IDC) in respect of the transmission asset and submitted Auditor's Certificates dated 12.9.2018 in support of the same. The Petitioner has submitted the statement showing IDC discharged up to COD and IDC discharge details as follows:

(₹ in lakh)			
IDC as per Auditor's certificate	IDC discharged up to COD	IDC discharged during 2017-18	IDC discharged during 2018-19
6011.79	5075.89	0.00	935.90

40. The Petitioner has submitted IDC computation statements which consist of the name of the loan, drawl date, loan amount, interest rate and Interest claimed. IDC is worked out based on the details given in the IDC statement. Further, the loan amount as on COD has been mentioned in Form 6 and Form 9C. While going through these documents, certain discrepancies have been observed such as mismatch in loan amount between IDC statement and in Form 6 & Form 9C.



41. We have considered the submission of the Petitioner. The allowable IDC has been worked out based on the available information and relying on loan amount as per tariff form 9C. However, the Petitioner is directed to submit the detailed IDC statement by rectifying the above mentioned deviation, at the time of true up of 2014-19 period. Accordingly, details of IDC considered for tariff computation, subject to revision at the true up is as follows:

(₹ in lakh)

IDC claimed as per Auditor's certificate	Allowable IDC	Allowable IDC as on COD (Cash basis)	IDC discharged during	
			2017-18	2018-19
6011.79	6011.79	5075.89	0.00	935.90

Incidental Expenditure During Construction (IEDC)

42. The Petitioner has claimed Incidental Expenditure During Construction (IEDC) in respect of the transmission asset and submitted Auditor's Certificates dated 12.9.2018 in support of the same. The Petitioner has submitted that entire IEDC has been discharged up to COD. IEDC claimed is restricted as per the percentage of hard cost up to 31.3.2019 as per RCE-II. Accordingly, IEDC is allowed, subject to true up, as follows:

(₹ in lakh)

IEDC claimed as per Auditor's certificate	Hard cost up to 31.3.2019	Hard Cost as per Abstract Cost estimate (in %) (RCE-II)	Allowable IEDC as on COD	IEDC disallowed as on COD
4710.70	17426.20	4.30	749.89	3960.81

43. IEDC allowed for the transmission asset will be reconsidered in the light of the directions of Appellate Tribunal for Electricity (APTEL) in judgment dated 2.12.2019 in Appeal No. 95 of 2018 and Appeal No. 140 of 2018 as implemented vide Commission's Order dated 4.2.2020 in Petition No. 1/TT/2019, at the time of truing up or after all the assets under the scope of the transmission project achieve



COD and the actual quantum of IEDC is known. The Petitioner is directed to furnish IEDC details of all the assets of the transmission project at the time of true-up.

Initial Spares

44. Regulation 13(d) of the 2014 Tariff Regulations provides that Initial Spares shall be capitalized as a percentage of plant and machinery cost up to cut-off date, subject to following ceiling norms:

*“(d) Transmission System
Transmission line: 1.00%
Transmission sub-station (Green Field): 4.00%
Transmission sub-station (Brown Field): 6.00%
GIS Sub-station: 5.00% Communication System: 3.5%”*

45. The Petitioner has claimed initial spares corresponding to transmission line for instant assets and has submitted Auditor’s Certificates dated 12.9.2018, in support of the same. In response to the direction of Commission vide ROP of hearing dated 11.2.2020, the Petitioner vide affidavit dated 4.5.2020 has submitted details of year-wise capitalisation and discharge of initial spares up to COD. The Petitioner has claimed initial spares of ₹161.52 lakh and entire initial spares have been discharged up to COD. The details of initial spares claimed by the Petitioner are as follows:

(₹ in lakh)		
Element	Plant and machinery Cost excluding IDC, IEDC, Land	Initial spares claimed
Transmission Line	18012.37	161.52

46. We have considered the submissions made by the Petitioner. As per Regulation 13(d) of the 2014 Tariff Regulations, the allowable initial spares for Transmission Line is 1%. Therefore, the initial spares as claimed in the petition is allowed and the same shall be reviewed at the time of truing up for 2014-19 period. The initial spares has been allowed for the purpose of tariff calculation after



considering the Plant and Machinery cost excluding IDC, IEDC and land expenses up to 31.3.2019. Accordingly, the initial spares allowed is as under:

(₹ in lakh)						
Element	Plant and machinery Cost excluding IDC, IEDC, Land Expenditure up to 31.3.2019	Initial spares claimed	Ceiling limit as per the 2014 Tariff Regulations (in %)	Initial spares worked out	Excess Initial spares claimed	Initial spares allowed
Transmission Line	16967.63	161.52	1.00	180.31	0.00	161.52

Capital cost as on COD

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

(₹ in lakh)			
Capital Cost as on COD as per Auditor's Cost Certificate	Less: Un-discharged IDC	Less: IEDC disallowed	Capital Cost as on COD considered for tariff calculation
1	2	3	4=1-2-3
26801.94	935.90	3960.81	21905.23

Additional Capital Expenditure (ACE)

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

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

- (i) Undischarged liabilities recognized to be payable at a future date;*
- (ii) Works deferred for execution;*
- (iii) Procurement of initial capital spares within the original scope of work, in accordance with the provisions of Regulation 13;*
- (iv) Liabilities to meet award of arbitration or for compliance of the order or decree of a court of law; and*
- (v) Change in law or compliance of any existing law.”*

49. Clause 13 of Regulation 3 of the 2014 Tariff Regulations defines “cut-off date” as follows:

“Cut - off Date” means 31st March of the year closing after two years of the year of commercial operation of whole or part of the project, and in case the whole or part of the project is declared under commercial operation in the last quarter of a year, the



cut - off date shall be 31st March of the year closing after three years of the year of commercial operation.”

50. In terms of Clause 13 of Regulation 3 of the 2014 Tariff Regulations, the cut-off date for the transmission asset is 31.3.2021. The Petitioner has submitted Auditor’s Certificate in support of ACE claimed for 2018-19, 2019-20 and 2020-21 and the same is summarised as under:

Additional Capital Expenditure				(₹ in lakh)
2017-18	2018-19	2019-20	2020-21	Total
0.00	1346.74	749.21	300.53	29198.43

51. As financial Year 2019-20 and 2020-2021 fall beyond the tariff period 2014-19 and are not covered under the 2014 Tariff Regulations, the projected ACE claimed beyond 2018-19 has not been taken into consideration and the same shall be dealt during the next tariff period as per the provisions of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019.

52. The Petitioner has claimed ACE for the year 2018-19 in respect of the transmission asset under Regulation 14(1)(i) of the 2014 Tariff Regulations for balance and retention payment discharged within cut-off date including IDC discharge for 2018-19. The allowable ACE subject to true up is as follows:

Particulars	Regulation	2017-18	2018-19
ACE to the extent of Balance & Retention Payment and Unexecuted work	14 (1)(i) & (ii)	0.00	1346.74
Add: IDC Discharged	14 (1)(i)	0.00	935.90
Total ACE allowed for tariff		0.00	2282.64

Capital Cost for the tariff period 2014-19

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



(₹ in lakh)

Capital Cost as on COD considered for tariff calculation	ACE allowed during 2017-18	ACE allowed during 2018-19	Total Estimated Completion Cost up to 31.3.2019
21905.23	0.00	2282.64	24187.87

Debt-Equity Ratio

54. Clauses (1) and (3) of Regulation 19 of the 2014 Tariff Regulations provide as under:

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

“(3) In case of the generating station and the transmission system including communication system declared under commercial operation prior to 1.4.2014, debt equity ratio allowed by the Commission for determination of tariff for the period ending 31.3.2014 shall be considered.”

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

55. 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 debt-equity as on dates of commercial operation and 31.3.2019 considered on normative basis are as under:

Particulars	Capital Cost as on COD (₹ in lakh)	(in %)	Capital Cost as on 31.03.2019 (₹ in lakh)	(in %)
Debt	17524.18	80.00	19122.03	79.06
Equity	4381.05	20.00	5065.84	20.94
Total	21905.23	100.00	24187.87	100.00

Depreciation

56. Clauses (2), (5) and (6) of Regulation 27 of the 2014 Tariff Regulations provide that:-

“27. Depreciation:

...(2) The value base for the purpose of depreciation shall be the capital cost of the asset admitted by the Commission. In case of multiple units of a generating station



or multiple elements of transmission system, weighted average life for the generating station of the transmission system shall be applied. Depreciation shall be chargeable from the first year of commercial operation. In case of commercial operation of the asset for part of the year, depreciation shall be charged on pro rata basis”

“(5) Depreciation shall be calculated annually based on Straight Line Method and at rates specified in Appendix-II to these regulations for the assets of the generating station and transmission system: Provided that the remaining depreciable value as on 31st March of the year closing after a period of 12 years from the effective date of commercial operation of the station shall be spread over the balance useful life of the assets.

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

57. Depreciation has been dealt with in line of Regulation 27 of 2014 Tariff Regulations. The transmission asset was put under commercial operation during 2017-18. 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.

58. The Gross Block has been depreciated at weighted average rate of depreciation (WAROD) at Annexure-1. WAROD has been worked out after taking into account the depreciation rates of assets as specified in the 2014 Tariff Regulations and depreciation allowed are as follows:

Particulars	(₹ in lakh)	
	2017-18 (pro-rata-2 days)	2018-19
Opening Gross Block	21905.23	21905.23
Additional Capital expenditure	0.00	2282.64
Closing Gross Block	21905.23	24187.87
Average Gross Block	21905.23	23046.55
Freehold Land	0.00	0.00
Weighted Average Rate of Depreciation (WAROD) (in %)	5.2865	5.2864
Balance useful life of the asset at the beginning of the year (Year)	35	35
Lapsed life of the asset at the beginning of the year	0	0
Aggregated Depreciable Value	19714.71	20741.89
Combined Depreciation during the Year	6.35	1218.32



Aggregate Cumulative Depreciation	6.35	1224.67
Remaining Depreciable Value	19714.71	20735.55

Interest on Loan (IOL)

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

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

60. The Petitioner has submitted that IOL has been claimed on the basis of rate prevailing as on COD and the change in interest due to floating rate of interest applicable, if any, needs to be claimed/ adjusted over the tariff block 2014-19.

61. The details of IOL calculated in respect of the transmission asset are as follows:

Particulars	(₹ in lakh)	
	2017-18 (pro-rata-2 days)	2018-19
Gross Normative Loan	17524.18	17517.84
Cumulative Repayment up to previous Year	0.00	6.35
Net Loan-Opening	17524.18	17511.49
Addition due to Additional Capitalization	0.00	1597.85
Repayment during the year	6.35	1218.32
Net Loan-Closing	17517.84	17891.02
Average Loan	17521.01	17701.26
Weighted Average Rate of Interest on Loan (in %)	8.4110	8.3732
Interest on Loan	8.08	1482.15



Return on Equity (ROE)

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

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

(2) Return on equity shall be computed at the base rate of 15.50% for thermal generating stations, transmission system including communication system”

“25. Tax on Return on Equity: (2) Rate of return on equity shall be rounded off to three decimal places and shall be computed as per the formula given below: Rate of pre-tax return on equity = Base rate / (1-t)

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

63. Regulation 24 read with Regulation 25 of the 2014 Tariff Regulations provides for grossing up of RoE with the effective tax rate for the purpose of return on equity. It further provides that in case the generating company or the 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, MAT rate applicable during the year 2017-18 and 2018-19 has been considered for the purpose of return on equity, which shall be trued-up with actual tax rate in accordance with Regulation 25(3) of the 2014 Tariff Regulations.

Particulars	(₹ in lakh)	
	2017-18 (pro-rata-2 days)	2018-19
Opening Equity	4381.05	4381.05
Addition due to Additional Capitalization	0.00	684.79
Closing Equity	4381.05	5065.84
Average Equity	4381.05	4723.44
Return on Equity (Base Rate) (in %)	15.50	15.50
MAT rate for the FY (in %)	21.342	21.549



Rate of Return on Equity (Pre-tax) (in %)	19.705	19.758
Return on Equity (Pre-tax)	4.73	933.26

Operation and Maintenance Expenses (O&M Expenses)

64. The Petitioner has claimed the O&M Expenses of ₹0.96 lakh and ₹183.52 lakh for 2017-18 and 2018-19 respectively as per sub-clause (a) of clause (4) of Regulation 29 of the 2014 tariff regulations:

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

66. Norms for O&M Expenses for the instant transmission element have been specified under Regulation 29(4) of Tariff Regulations as follows:

Element	2017-18	2018-19
Sub-station: 400 kV bay - (₹ lakh/bay)	66.51	68.71
Transmission Line: Double Circuit, Twin & Triple Conductor – (₹ lakh/Km)	0.780	0.806

67. We have considered the submissions of the Petitioner. The O&M Expenses have been worked out as per the norms specified in the 2014 Tariff Regulations. As regards the impact of wage revision, any application filed by the Petitioner in this



regard will be dealt with in accordance with the appropriate provisions of the 2014 Tariff Regulations. Accordingly, the O&M Expenses are as follows:

Details	(₹ in lakh)	
	2017-18 (Pro-rata-2 days)	2018-19
Kameng-Balipara double circuit transmission line with 2 numbers of sub-conductors - 57.20 km	0.24	46.10
2 numbers of 400 kV bays	0.72	137.42
Total O&M Expenses allowed	0.96	183.52

Interest on Working Capital (IWC)

68. As per the 2014 Tariff Regulations, the components of the working capital and the interest thereon are worked out as follows:

a) Maintenance spares:

Maintenance spares @ 15% of O&M Expenses as 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 Regulation 28(3) of the 2014 Tariff Regulations, SBI Base Rate as on 1.4.2017 (9.10%) plus 350 BPS i.e. 12.60% has been considered as the rate of interest on working capital for FY 2017-18.

69. Accordingly, IWC in respect of the transmission asset for 2017-18 and 2018-19 is as follows:

Particulars	(₹ in lakh)	
	Asset-I	
	2017-18 (pro-rata-2 days)	2018-19
Maintenance Spares	26.28	27.53
O&M expenses	14.60	15.29



Receivables	625.70	650.77
Total	666.58	693.60
Rate of Interest (in %)	12.60	12.60
Interest on working capital	0.46	87.39

Annual Transmission Charges

70. Accordingly, the annual transmission charges allowed for the transmission asset are as follows:

Particulars	(₹ in lakh)	
	Asset-I	
	2017-18 (pro-rata-2 days)	2018-19
Depreciation	6.35	1218.32
Interest on Loan	8.08	1482.15
Return on Equity	4.73	933.26
Interest on Working Capital	0.46	87.39
O & M Expenses	0.96	183.52
Total	20.57	3904.65

Filing fee and the publication expenses

71. 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

72. The Petitioner has prayed 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) of Regulation 52 in the 2014 Tariff Regulations.



Goods and Services Tax

73. 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

74. The Petitioner has submitted that the transmission Charges for the instant assets shall be recovered on monthly basis in accordance with Regulation 43 of the 2014 Tariff Regulations.

75. We have considered the submissions of the petitioner. COD of the transmission asset has been approved as 30.3.2018 under proviso (ii) of Regulation 4(3) of the 2014 Tariff Regulations due to non-commissioning of associated generation under the scope of NEEPCO. Hence, the transmission charges from COD of the transmission asset shall be borne by NEEPCO till COD of the associated generation under the scope of NEEPCO. Thereafter, 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, 2020.

76. To summarise:

- a) ATC allowed for the transmission asset for 2014-19 tariff period in this order are:

(₹ in lakh)	
Asset-I	
2017-18 (pro-rata-2 days)	2018-19
20.57	3904.65



77. Annexure-1 given hereinafter shall form part of the order.

78. This order disposes of Petition No.121/TT/2019 in terms of the above discussions and findings.

sd/-
(Arun Goyal)
Member

sd/-
(I. S. Jha)
Member

sd/-
(P. K. Pujari)
Chairperson



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

Asset-I (2014-19) Capital Expenditure	Admitted Capital Cost as on COD	Admitted Additional Capitalisation during tariff period 2014-19	Admitted Capital Cost as on 31.3.2019	Rate of Depreciation as per Regulations	Annual Depreciation as per Regulations	
					2017-18	2018-19
Freehold Land	0.00	0.00	0.00	0.00%	--	0.00
Leasehold Land	0.00	0.00	0.00	3.34%	--	0.00
Building & Other Civil Works	0.00	0.00	0.00	3.34%	--	0.00
Transmission Line	21330.95	2236.91	23567.86	5.28%	1126.27	1185.33
Sub-Station Equipment	438.85	37.81	476.66	5.28%	23.17	24.17
PLCC	135.43	7.92	143.35	6.33%	8.57	8.82
IT Equipment	0.00	0.00	0.00	15.00%	0.00	0.00
Total	21905.23	2282.64	24187.87	Total	1158.02	1218.32
Average Gross Block (₹ in lakh)					21905.23	23046.55
Weighted Average Rate of Depreciation (WAROD)					5.2865%	5.2864%

