

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 108/TT/2016

Coram:

**Shri A.K. Singhal, Member
Shri A.S. Bakshi, Member
Dr. M.K. Iyer, Member**

Date of Order : 15.05.2018

In the matter of:

Approval of transmission tariff of 400 kV D/C Teesta III-Rangpo Section upto LILO point at Rangpo for 2014-19 period under Section 62 and 79(1)(d) of the Electricity Act, 2003 read with Regulation 86 of Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999 and Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014.

And in the matter of:

Teestavalley Power Transmission Ltd.
2nd Floor, Vijaya Building,
17, Barakhamba Road, New Delhi-110001

.....Petitioner

Vs

1. PTC India Ltd.
2nd Floor, NBCC Tower,
15, Bhikaji Cama Place, New Delhi-10066.
2. Energy and Power Department
Government of Sikkim
Kazi Road, Gangtok-737101.
3. Teesta Urja Ltd.
2nd Floor, Vijaya Building,
17, Barakhamba Road, New Delhi-110001



4. Sneha Kinetic Power Projects Pvt. Ltd.
Sonam Complex, Jeevan Theng Marg Development Area,
Near Little Pixel International School,
Gangtok-737101.
5. Powergrid Corporation of India Ltd.
Saudamini, Plot No. 2, Sector-29,
Near IFFCO Chowk,
Gurgaon-122001.
6. Punjab State Power Corporation Ltd.
The Mall, Patiala-147001.
7. Uttar Haryana Bijli Vitran Nigam Ltd.
Vidyut Sadan, Plot No. C 16, Sector-6,
Panchkula-134109.
8. Dakshin Haryana Bijli Vitran Nigam Ltd.
Vidyut Sadan, Vidyut Nagar,
Hisar-125005.
9. Haryana Power Purchase Centre,
Shakti Bhawan, Sector-6,
Panchkula-134109.
10. Ajmer Vidyut Vitran Nigam Limited,
Vidyut Bhawan, Panchsheel Nagar,
Makawrali Road, Ajmer-305004.
11. Jaipur Vidyut Vitran Nigam Limited,
Vidyut Bhawan, Janpath,
Jaipur-302005.
12. Jodhpur Vidyut Vitran Nigam Limited,
New Power House, Industrial Area,
Jodhpur-342003.
13. Rajasthan Urja Vikas Nigam Limited,
Vidyut Bhawan, Janpath,
Jyoti Nagar, Jaipur - 302 005
14. Uttar Pradesh Power Corporation Ltd.
Shakti Bhawan, 14, Ashoka Marg,
Lucknow-226001.

.....Respondents



For Petitioner : Shri Piyush Shandilya, TPTL
Shri S. K. Bhowmick, TPTL

For Respondents : Shri Aashish Anand Bernad, Advocate, PTC India Ltd.
Shri Paramhans, Advocate, PTC India Ltd.
Shri Vishrov Mukherjee, SKPPPL
Shri Janmati M, SKPPPL

ORDER

The present petition has been filed by Teestavalley Power Transmission Ltd. (“TPTL”), a joint venture company of Power Grid Corporation of India Limited (PGCIL) and Teesta Urja Limited (TUL) seeking approval of transmission charges for 400 kV D/C Teesta III HEP-Rangpo Section upto LILO point at Rangpo under Teesta III-Rangpo Section for the control period of 2014-19 under Section 62 and 79(1)(d) of the Electricity Act, 2003 read with Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 (hereinafter referred to as “the 2014 Tariff Regulations”).

Background

2. The Petitioner, was granted transmission license vide order dated 14.5.2009 in Petition No.116/2008. The Standing Committee on power system planning in Eastern Region in its meeting held on 14.9.2009 decided that 400 kV D/C Teesta-III HEP-Kishanganj transmission line would be LILoed at proposed Mangan Pooling Station at a later date for future generation projects in northern part of Sikkim. The Standing Committee on power system planning in its meeting held on 20.9.2010 decided 400 kV D/C Teesta-III HEP-Kishanganj transmission line to be LILoed at Rangpo Sub-station of PGCIL and the LILo portion was decided to be under the scope of PGCIL.



3. The Commission in its order dated 3.12.2014 in Petition No. 157/MP/2014 filed by Sneha Kinetic Power Projects Private Ltd. ("SKPPPL"), has made the following observations:-

- a. The transmission line from the generating station of Teesta Urja Ltd. (TUL) till Kishanganj is an inter-State transmission system.
- b. LILO of one circuit of 400 kV D/C Teesta-III HEP-Kishanganj transmission line at Dikchu Hydro-Electric Power Project of SKPPPL is allowed as an interim arrangement and the issue of LTA/MTOA/STOA shall be taken up by CTU in Standing Committee/RPC meeting after system study.
- c. There is no technical constraint in the interim arrangement proposed by SKPPPL. SKPPPL is allowed to implement the work of LILO as interim arrangement as a dedicated system which shall be removed once the originally planned scheme is operationalized.
- d. The cost of LILO and associated work shall be borne by SKPPPL.
- e. The configuration of 400 kV D/C Teesta-III HEP-Kishanganj Transmission Line has undergone some change, though there is no change in the scope of work of the Petitioner's transmission project as envisaged in the transmission license granted by the Commission. Further, as against the length of the transmission line envisaged to be 206 km under the license



granted by the Commission, the actual length of the transmission line has increased to 215 km due to change in the location of the PGCIL's Sub-station at Kishanganj and ROW issues.

4. The Board of Directors of the Petitioner in their meeting held on 9.11.2009 granted Investment Approval for Teesta-III-Kishanganj Transmission Line at cost of ₹77080 lakh at debt equity ratio of 75:25 with commissioning schedule of 35 months. As per the memorandum submitted before the Board, project implementation schedule was required to be amended appropriately, to match with the commissioning of the first unit of Teesta-III HEP. The Petitioner vide affidavit dated 16.2.2017 has submitted that the capital cost of ₹70007 lakh is the estimated cost based on 2nd Quarter 2008 price level considering the detailed project report prepared by PGCIL on behalf of the Petitioner in August, 2008. However, the capital cost of ₹77080 lakh is the estimated project completion cost worked out based on the average movement of WPI and CPI duly considering the original commissioning schedule.

5. Further, the Board of Directors of the Petitioner on 26.8.2013 approved the revised cost of the Project of ₹103250 lakh, comprising of hard cost of ₹ 80220 lakh and soft cost of ₹ 23030 lakh with debt:equity ratio of 75:25 i.e. ₹77437 lakh: ₹25813 lakh. The Petitioner further vide affidavit dated 18.11.2016 has submitted that the Petitioner's Board of Directors on 5.1.2016 revised the Project cost to ₹145036 lakh (herein after referred to as RCE) and the SCOD to 31.3.2017. Further, the SCOD of Teesta-III-Rangpo Section has been approved by the Board of Directors as April, 2016



and Board of Directors of the Petitioner vide meeting dated 15.7.2016 have also approved the apportioned cost for Teesta-III-Rangpo Section amounting to ₹ 28093 lakh.

6. The scope of the scheme was discussed and agreed in Standing Committee Meeting on power system planning of Eastern Region on 14.9.2009 and 20.9.2010.

The broad scope of the Project is as follows:-

Transmission Line

- (a) 400 kV D/C transmission line with quad Moose conductor from Teesta-III generating station to LILO Point at Rangpo (36 km)
- (b) 400 kV D/C transmission line with quad Moose conductor from LILO Point at Rangpo to Kishanganj Sub-station of CTU (179 km)

Sub-station Equipment

- (a) 2 Nos. line bays at Kishanganj Sub-station of PGCIL
- (b) 2 Nos. 63 MVAR reactors at Kishanganj Sub-station of PGCIL

7. The Petitioner has also submitted that due to interim arrangement evolved for evacuation of power from Dikchu and Teesta-III HEP and difference in the commercial operation date of the transmission assets, the project has been segregated into two stages as described below:-

- (a) **Teesta-III-Rangpo Section**: Section of 400 kV D/C Quad Moose Transmission Line starting from Teesta-III HEP to LILO Point at Rangpo



- (b) **Rangpo-Kishanganj Section along with line bays & reactors:** Section of 400 kV D/C Quad Moose transmission line starting from LILLO Point at Rangpo to Kishanganj Sub-station along with 2 nos. line bays and 2 nos. 63 MVAR reactors at Kishanganj Sub-station. The single line diagram is attached as Annexure-I.

8. The Petitioner claimed AFC for Teesta-Rangpo section as per Regulation 7(7) of the 2014 Tariff Regulations which was granted by the Commission vide order dated 26.10.2016. Accordingly, the Petitioner requested the validation committee to include one circuit of 400 kV D/C Teesta III-Rangpo line for computation of the PoC charges. The Petitioner was informed that the tariff approved vide order dated 26.10.2016 cannot be considered on pro-rata basis for one circuit of 400 kV D/C Teesta III-Rangpo line and advised to claim tariff separately for Teesta III-Rangpo line. Accordingly, the Petitioner claimed tariff for Circuit-2, Circuit-1(a) and Circuit-1(b) separately. The details of the assets covered in the instant petition are as under:-

Srl. No.	Name of the Asset
1	Circuit-2: 400 kV D/C Teesta III-Rangpo line (One ckt line from Powergrid LILLO point to gantry tower at Teesta-III)
2	Circuit-1(a): 400 kV D/C Dikchu-Teesta-III line (One ckt line from Teesta-III switchyard to LILLO tower of Dikchu)
3	Circuit-1(b): 400 kV D/C Dikchu HEP - Rangpo line (One ckt line)

9. The details of the transmission charges claimed by the Petitioner for the instant assets are as under:-



(₹ in lakh)

Particulars	Circuit 2			Circuit 1(a)	
	2016-17 (pro-rata)	2017-18	2018-19	2017-18 (pro-rata)	2018-19
Depreciation	147.50	777.26	826.97	323.96	350.32
Interest on Loan	255.92	1407.60	1389.47	543.84	599.92
Return on Equity	137.63	725.22	771.60	302.27	326.87
Interest on Working Capital	12.01	64.54	66.27	25.91	28.27
O & M Expenses	4.13	21.08	21.78	7.91	8.47
Total	557.20	2995.70	3076.09	1203.89	1313.85

(₹ in lakh)

Particulars	Circuit-1(b)	
	2017-18 (pro-rata)	2018-19
Depreciation	324.89	449.97
Interest on Loan	606.56	744.78
Return on Equity	389.44	419.85
Interest on Working Capital	29.29	35.88
O & M Expenses	9.67	13.31
Total	1359.85	1663.79

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

(₹ in lakh)

Particulars	Circuit-2			Circuit-1(a)	
	2016-17 (pro-rata)	2017-18	2018-19	2017-18 (pro-rata)	2018-19
Maintenance Spares	0.62	3.16	3.27	1.15	1.23
O & M expenses	0.34	1.76	1.82	0.64	0.68
Receivables	92.87	499.28	512.68	200.65	218.98
Total	93.83	504.20	517.76	202.44	220.89
Interest Rate (%)	12.80%	12.80%	12.80%	12.80%	12.80%
Interest	12.01	64.54	66.27	25.91	28.27

(₹ in lakh)

Particulars	Circuit-1(b)	
	2017-18 (pro-rata)	2018-19
Maintenance Spares	1.40	1.93
O & M Expenses	0.78	1.07
Receivables	226.64	277.30



Total	228.82	280.30
Interest Rate (%)	12.80	12.80
Interest	29.29	35.88

11. 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. Ajmer Vidyut Vitran Nigam Ltd (AVVNL), Jaipur Vidyut Vitran Nigam Ltd (JVNNL), Jodhpur Vidyut Vitran Nigam Ltd (Jd.VVNL) and Rajasthan Urja Vikas Nigam Ltd. (RUVNL), (collectively called Rajasthan Discoms) have filed a combined reply vide affidavit dated 3.10.2016. In response, the Petitioner has filed its rejoinder vide affidavit dated 20.2.2017. Sneha Kinetic Power Projects Pvt. Ltd. (SKPPPL), Respondent No.4, has filed its reply vide affidavit dated 10.7.2017. The Petitioner has filed its rejoinder to the reply filed by SKPPPL vide affidavit dated 19.8.2017. The issues raised by the Rajasthan Discoms and SKPPPL and the clarifications given by the Petitioner are addressed in the relevant paragraphs of this order.

12. The Rajasthan Discoms have submitted that the Petitioner in the instant petition has segregated the project into two stages i.e. Teesta-III-Rangpo Section with anticipated COD on 30.9.2016 and Rangpo-Kishanganj Section along with line bays and reactors with anticipated COD on 31.3.2017. But in terms of order dated 3.12.2014 passed in Petition No. 157/MP/2014, the entire project was constructed as a composite project. In response, the Petitioner, vide affidavit dated 4.1.2017 has submitted that it was decided in the Standing Committee on Power System Planning Meetings held on 20.9.2010 and 28.12.2010 as under:-



- (i) Due to transportation constraints for electrical equipment at New Melli site at Sikkim, the 400/220 kV New Melli Pooling Station shall be shifted to Rangpo. Accordingly, 400 kV Teesta-III-Kishanganj D/C Line and the existing 400 kV Teesta-V-Siliguri D/C Line which were earlier envisaged to be LILoed at New Melli, would be LILoed at 400 kV Rangpo GIS.
- (ii) Considering 400 kV Teesta-III-Kishanganj D/C Quad Moose line (ATS) would not be completed before the commissioning of 1st Unit of Teesta-III HEP, as an interim arrangement, generation from 1st Unit of Teesta-III HEP would be injected to one circuit of 400 kV Teesta-V-Siliguri D/C Line.

Further, it was decided in the Eastern Regional Power Committee meeting held on 30.11.2016 that power from Teesta-III Hydro-Electric Project and Dikchu Hydro-Electric Project shall be evacuated through RANGPO-Siliguri Line.

Date of commercial operation (COD)

13. The Petitioner vide affidavit dated 6.3.2017 has submitted the status of the instant transmission assets as under:-

Asset	Ckt Length	Status Details
Circuit-2	36 km	<ul style="list-style-type: none"> • Declared under commercial operation on 26.11.2016 on no load. • Power being evacuated from Teesta III HEP since 14.1.2017. • Completed trial operation on 16.1.2017.
Circuit-1(a)	14 km	Successful trial operation shall be concluded on commissioning of 96MW Dikchu HEP.
Circuit-1(b)	22 km	Yet to be energized due to ROW issue.



14. The Petitioner has submitted the ERLDC certificate dated 15.12.2016 certifying that Circuit-2 was charged on “no-load” from Rangpo Sub-station on 24.11.2016 upto gantry terminal of Teesta-III HEP and as the generating units at Teesta-III HEP were not ready, the trial run of Circuit-2 could not be carried out. The Petitioner has prayed for approval of COD as 26.11.2016 under proviso (ii) of Regulation 4(3) of the 2014 Tariff Regulations. The Petitioner has submitted that one generating unit of Teesta-III HEP was synchronized on 14.1.2017 and since then Circuit-2 has been successfully evacuating power of one unit of 200 MW of Teesta-III HEP and trial operation of Circuit-2 was carried out from 23.08 hrs of 15.1.2017 to 23.08 hrs of 16.1.2017 and the requirement of Regulation 4(3) of the 2014 Tariff Regulations of being in regular service after successful trial operation for transmitting electricity and communication signal from sending end to receiving end was fulfilled.

15. As regards Circuit-1(a), the Petitioner submitted that it was ready to be charged on 24.11.2016 but “no-load” trial operation could not be carried out as Dikchu HEP was not commissioned up to 24.11.2016. The Petitioner submitted that trial run of Circuit-1(a) will be carried out after declaration of commercial operation of Dikchu HEP. The Petitioner submitted that transmission charges for Circuit-1(a) for the period that could not be charged due to delay in commissioning of Dikchu HEP, should be borne by Dikchu HEP in terms of the Implementation Agreement dated 11.3.2016 between the Petitioner and SKPPPL, the developer of 96 MW Dikchu HEP. The Petitioner has also submitted that Circuit-1(b) could not be energized due to ROW issue.



16. The Commission vide order dated 12.5.2017 directed the Petitioner to submit the status of commissioning of Circuit-1(a) and Circuit-1(b). In response, the Petitioner vide affidavit dated 2.6.2017 has submitted that the actual COD of Circuit-2 and Circuit-1(a) was 17.1.2017 and 14.4.2017 respectively and the anticipated COD of Circuit-1(b) was 30.6.2017. Further, “no-load” trial operation of Circuit-1(a) could not be carried out as Dikchu HEP was not completed on 24.11.2016.

17. SKPPPL vide affidavit dated 10.7.2017 has submitted that the Petitioner did not carry out the “no-load” charging prior to declaring COD of Circuit 1(a) as on 24.11.2016. SKPPPL has submitted that unlike in the case of Circuit 2, where “no load” Test was conducted, no such test was conducted with respect to Circuit 1(a). SKPPPL has also claimed that even after commissioning of 1st unit of Teesta-III on 14.1.2017, no such testing was carried out on Circuit 1(a). In response, Petitioner vide rejoinder dated 19.8.2017 has submitted that Circuit 1(a) is being used for evacuating the power of Dikchu HEP through Teesta Bus Bar. As such, it is clear that Circuit 1(a) could not have been charged even on “no-load” when the source of generation i.e. 100 MW Dikchu HEP was not commissioned from 24.11.2016 to 30.3.2017. Due to non-commissioning of Dikchu-HEP, the “no load” test could not be carried out during this period. Further, it is also submitted that “no-load” on Circuit-1(a) could not be carried out post synchronization of Teesta-III on 14.1.2017 because the associated cable with Teesta-III HEP was not ready and secondly the work in close vicinity of Dikchu’s dedicated line near the Dikchu LILO point was going on and charging of this



section could have compromised the safety of the people of SKPPPL, who were working in that area. Moreover, as Dikchu itself was not ready during November, 2016 to March, 2017, there was no need to carry out the test charging of this element. Thereafter, the inability of TPTL to test charge of this element also rests with non-commissioning of 100 MW Dikchu HEP.

18. SKPPPL vide its letter dated 11.1.2017 informed the Petitioner that Dikchu HEP line is delayed due to demonetization and asked Petitioner to make Circuit 1 ready or provide alternative arrangement for LILO connection. In response, the Petitioner vide letter dated 21.1.2017 informed SKPPPL that TPTL is ready to transmit the power from Dikchu HEP through Teesta-III-Rangpo Section w.e.f. 24.11.2016 and the inter-connection of LILO transmission line of Dikchu HEP with the Petitioner's transmission line will be done immediately after obtaining all necessary permission from ERLDC/any other statutory body duly following the IEGC. Further, on 14.1.2017, one unit of Teesta-III project was synchronized and thereafter Circuit-2 of the Teesta III-Rangpo transmission line was successfully tested evacuating 200 MW of power from Teesta-III HEP. Further, on 21.1.2017, the Petitioner issued a letter to SKPPPL that Teesta-III-Rangpo was energized on 24.11.2016 and COD will be w.e.f. 26.11.2016. Further, on 27.1.2017, SKPPPL wrote a letter seeking clarity on the evacuation path as Circuit 1(b) was not ready. In response, the Petitioner wrote letter dated 7.2.2017 stating that 400 kV Teesta-III-Rangpo is ready to evacuate power from 24.11.2016. During 34th Commercial sub-committee meeting of ERPC held on 6.2.2017, SKPPPL informed that infirm generation is expected to start by 4th week of February, 2017 and



COD of both units of Dikchu HEP is envisaged within March, 2017. Dikchu HEP (96MW) was commissioned on 30.3.2017 and declared the COD of Dikchu HEP on 31.3.2017 on deemed basis. Further, on 4.4.2017, SKPPPL informed the Petitioner that Circuit 1(a) is not functioning effectively for transmission of power from Dikchu HEP due to frequent tripping faced at Circuit 1(a). Dikchu HEP took up the issue with ERPC for shutdown of the line Circuit 1(a) due to stability reasons. Consequent to this, Circuit 1(a) was declared COD w.e.f. 14.4.2017.

19. The Petitioner was directed vide RoP dated 11.7.2017 to submit the documentary proof or an undertaking mentioning that Circuit 1(a) was ready to be put into commercial operation on 24.11.2016 and also to submit the trial run certificate and RLDC Certificate to show that the asset was commissioned on 13.4.2017.

20. In response, the Petitioner vide affidavit dated 16.9.2017 has submitted that since Teesta-III HEP was synchronized on 14.1.2017 after Teesta-III HEP-Rangpo was completed by TPTL on 24.11.2016, it is clear that TPTL system was ready to evacuate Dikchu HEP power from November, 2016 had Dikchu HEP been commissioned on that date. Dikchu HEP was ready for commissioning on 30.3.2017 and that Teesta-III HEP evacuation commenced from 14.1.2017. Thus, it is clear that the transmission line was in service from 14.1.2017. Both the circuits of the line use the same tower and as such it is natural that both the circuits from Teesta-III HEP to Rangpo were completed simultaneously. The same can be verified from the certificate issued by ERLDC in respect of Circuit 2. The Petitioner further reiterated that Circuit



1(a) could not be charged on 24.11.2016 as there was no source to charge this element as the associated cable Teesta-III HEP was not ready and Dikchu HEP and its LILO transmission line was not completed on 24.11.2016. The Petitioner has submitted the trial run certificate dated 15.12.2016 on “no-load” for 400 kV Teesta III-Rangpo Line (from PGCIL LILO point to Gantry tower at Teesta-III) substantiating that the Circuit-1(a) was commissioned on 13.4.2017.

21. SKPPPL vide affidavit dated 27.10.2017 has submitted that the Petitioner’s contention that Circuit 1(a) could not be charged since Dikchu HEP was not commissioned, is wrong as it is evident from the certificate that Circuit 1(a) was not ready as on 24.11.2016 since the Teesta-III bays and some portion of cables were not ready on 24.11.2016. SKPPPL has submitted that in response to its query regarding evacuation path of the power from the Dikchu HEP since Circuit 1(b) of the Teesta-III-Rangpo was not ready, the Petitioner stated that Teesta III-Rangpo transmission line was ready but do not provide any clarity regarding evacuation path of power from Dikchu HEP. SKPPPL has submitted that it is evident from the Petitioner’s response that the evacuation path through Circuit 1(a) was not ready and the Petitioner never issued any correspondence to Dikchu HEP declaring commercial operations for Circuit 1(a).

22. The Commission vide ROP dated 11.7.2017 directed the Petitioner to submit the commissioning status of Circuit 1(b). In response, the Petitioner vide affidavit dated 16.9.2017 has submitted that work on Dikchu-Rangpo Section i.e. Circuit 1(b) is



physically completed, but has not yet been energized due to resistance by a section of persons near the tower location 36(A), which is in the proximity of a church in East Sikkim. The Petitioner also submitted that TPTL approached the District Collector (East Sikkim) in this regard. However, the matter remains unresolved and the petitioner has approached the authorities in Government of Sikkim.

Analysis and Decision

23. We have considered the submission of the Petitioner and SKPPL. The Petitioner has submitted that Circuit 2 and Circuit 1(a) were ready to be put into commercial operation on 24.11.2016. However, they were not put into commercial operation as the associated generation project was not commissioned till that time. The Petitioner has claimed COD of Circuit 2 and 1(a) under proviso (ii) of Regulation 4(3) of the 2014 Tariff Regulations as the Petitioner was not able to put into commercial operation the Circuit 2 and 1(a) due to reasons not attributable to it. Regulation 4(3) of the 2014 Tariff Regulations, provides as under:-

"(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 substation is dedicated for evacuation of power from a particular generating station, the generating company and transmission licensee shall endeavour 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.”

Subsequently, the Petitioner vide affidavit dated 2.6.2017 has submitted that Circuit 2 and Ckt 1(a) were actually put into commercial operation on 17.1.2017 and 14.4.2017 respectively. The Petitioner has submitted the RLDC Charging Certificate of Circuit 2 dated 15.12.2016 on “no-load” condition. With regard to Circuit 1(a), the Petitioner has submitted that Circuit 1(a) was ready to be charged on 24.11.2016 but “no-load” trial operation could not be carried out as Dikchu HEP was not commissioned on 24.11.2016. Further, the Petitioner vide affidavit dated 19.8.2017 has submitted the ERLDC certificate dated 16.2.2017, for Circuit 2 regarding successful trial run operation held on 16.1.2017. The Petitioner has also submitted CEA certificate (Measures related to safety and electric supply) Regulations, 2010 with respect to Circuit 2 dated 16.11.2016.

24. As per the ERLDC certificate, Circuit 2 and 1(a) were actually put into commercial operation on 17.1.2017 and 14.4.2017 respectively. We are not inclined to approve COD of Circuit 1(a) and Circuit 2 under proviso (ii) of 4(3) of the 2014 Tariff Regulations. Considering ERLDC certificate, the COD of Circuit 2 and 1(a) is approved as 17.1.2017 and 14.4.2017 respectively for the purpose of tariff calculation. It is observed that the Petitioner has not submitted the CMD certificate as required under GRID Code for Circuit 2 and 1(a). The Petitioner is directed to submit CEA certificate for Circuit 1(a) and CMD certificate for Circuit 2 and 1(a) at the time of truing



up. Further, the petitioner will be entitled to claim tariff only after it submits CMD certificate to ERLDC.

25. Circuit 1(b) is not commissioned yet and it is not certain when it will achieve its COD. Accordingly, we are not inclined to grant tariff for Circuit 1(b) in the present petition. The Petitioner is directed to file a fresh petition after the COD of Circuit 1(b).

26. The Petitioner has submitted “no-load” certificate for Circuit 2 dated 15.12.2016 which implies Circuit 2 was ready on 26.11.2016 but could not be declare COD due to delay of associated bays by Teesta III HEP. Therefore, the IDC and IEDC from 26.11.2016 to 16.1.2017 in case of Circuit 2 shall be borne by Teesta Urja Limited and shall not be capitalized in the Tariff computation of Ckt-2.

27. As regards Circuit 1(a), the petitioner has not submitted any documentary evidence to show Circuit 1(a) was ready on 24.11.2016 despite specifically seeking the same. In the absence of documentary proof, we are not inclined to consider that Circuit 1(a) was ready on 24.11.2016. However, since petitioner has claimed that it was ready on 24.11.2016, any time over-run beyond 24.11.2016 cannot be allowed without any justification and the time over-run is considered to be attributable to the Petitioner. Accordingly, the IDC and IEDC for the period 24.11.2016 to 13.4.2017 are not allowed and shall not be capitalized in the Tariff computation of Ckt 1(a).



Implementation Agreement

28. SKPPPL vide affidavit dated 10.7.2017 has submitted that the petitioner is not entitled to Annual Fixed Charges since the transmission line is not ready and the Petitioner is entitled to AFC only after the Project i.e. entire transmission line as per the IA is commissioned. There is no delay on part of the SKPPPL and it is not liable to pay any charges as per the Implementation Agreement (IA). SKPPPL submitted that the Petitioner is obliged to complete the Dikchu-Rangpo transmission line by 30.9.2016. Therefore, the Petitioner is not entitled to any damages under the IA. SKPPPL is not liable to pay damages to the petitioner under the IA for non-commissioning of Dikchu HEP in a timely manner. In terms of the Regulation 4 read with the (iii) proviso to Regulation 12 of the 2014 Tariff Regulations, the generating company is only liable to pay amounts in terms of the Implementation agreement if the transmission system has been commissioned and commissioning of the generating station is delayed.

29. SKPPPL vide affidavit dated 10.7.2017 has submitted that Dikchu HEP was ready for commissioning on 30.3.2017. Neither testing of Circuit 1(a) was conducted prior to 30.3.2017 nor was the Petitioner able to provide stable evacuation and transmission facilities to SKPPPL till 14.04.2017. The generating station was ready prior to availability of the transmission system. Therefore, SKPPPL is not liable to pay any charges towards the mismatch in the commissioning of Dikchu HEP and the transmission facilities. As per the 2014 Tariff Regulations, any claim for transmission charges under the 2010 Sharing Regulations or IA can be made only if the AFC and



COD of the transmission asset are approved by the Commission. However, in case of Circuit 1(a), AFC or COD has not been approved by the Commission. Hence, there is no basis for the Petitioner to claim any transmission charge for Circuit 1(a) from the SKPPPL.

30. In response, the petitioner vide affidavit dated 19.8.2017 has made the following submissions:-

(a) Tariff for Circuit 1(a), which evacuates Dikchu power from 14.4.2017 i.e. from 24.11.2016 to 31.3.2017 from SKPPPL, is claimed as per the terms of the bilateral IA dated 11.3.2016 entered into between TPTL and SKPPPL on account of delay on part of SKPPPL in commissioning of the project.

(b) As per the IA, power was to be evacuated from 100 MW Dikchu HEP through the TPTL transmission system through Rangpo Sub-station of PGCIL. IA provides for compensation in case either the generation project or the transmission evacuating systems gets delayed and either of the parties suffers commercial loss.

(c) Dikchu HEP was ready on 30.3.2017 and Teesta-III evacuation commenced from 14.1.2017. The transmission line was in service as on 14.1.2017. Further, ERLDC has issued a certificate of “no-load” charging of Circuit 2 on 24.11.2016. Circuit 1(a) from Dikchu-Teesta-III could not be charged on 24.11.2016 because there was no source to charge this element as the associated cable of Teesta-III



was not ready and also Dikchu generation and LILO transmission line was not completed on 24.11.2016.

(d) TPTL has submitted that Dikchu-Teesta-III line was charged on 31.3.2017 only after Dikchu generation was ready. However, some hot spots and teething troubles were observed in this line and the work was completed on 13.4.2017. Thereafter, Dikchu power is being evacuated from 14.4.2017 onwards on regular basis through Circuit 1(a) through Circuit-2 to Rangpo and the system is evacuating entire power of Dikchu. However, Dikchu had violated some safety clearance norms for the dedicated transmission line constructed by them from 400 kV Dikchu switchyard to the LILO point. Accordingly, ERLDC vide letter dated 2.5.2017 instructed Dikchu to shut down their power station, which remained shut from 2.5.2017 to 16.5.2017. Dikchu was not able to complete the work to maintain the requisite ground clearance and vide letter dated 13.5.2017 requested TPTL to allow them for making modifications under TPTL line. TPTL allowed such modifications with a condition that they would complete the work of excavation for ensuring the necessary ground clearance at their end by 30.6.2017 and restore TPTL line to its original condition. However, till date the same has not been done and SKPPPL has requested the CEA to carry out necessary inspection so that TPTL line can be restored to its original position. Thus, SKPPPL failed to obtain necessary compliances under Section-68 and 164 of Electricity Act, 2003 for the LILO and SKPPPL failed to complete the



portion of line without ensuring necessary ground clearance because of which their generation plant was stopped for about 14 days by ERLDC.

(e) As regards SKPPPL's contention that AFC is not applicable for Circuit 1(b), it is stated that Circuit 1(b) is not commissioned due to *force majeure* condition and tariff for only Circuit 2 and 1(a) is pressed for in the instant petition.

(f) "No-load" test on Circuit 1(a) could not be carried out post synchronization of Teesta-III on 14.1.2017 because the associated cable with Teesta-III was not ready and the work in close vicinity of Dikchu's dedicated line near the Dikchu LILO point was going on and charging of this section could have compromised the safety of the people of SKPPPL. Since Dikchu was not ready from November, 2016 to March, 2017 there was no need to carry out the test charging of this element. Thereafter, the inability of TPTL to test charge of this element also rests with non-commissioning of 100 MW Dikchu HEP.

(g) In terms of IA, the IDC and IEDC for the Circuit 1(a) of TPTL should either be recovered through the tariff or be compensated by the defaulting party i.e. SKPPPL. As Dikchu HEP was not ready from November, 2016 to March, 2017, the compensation to TPTL from SKPPPL is due and the consumers should not be burdened with IDC and IEDC for this period.

(h) The Petitioner is not claiming tariff for Circuit 1(a) for the period 24.11.2016 to 31.03.2017, rather only compensation is sought as per IA.



(i) Norms of releasing Bank Guarantee comes under IA and thus, SKPPPL may be directed to keep their Bank Guarantee of ₹ 2.4 crore in favour of TPTL alive as a payment security mechanism.

31. SKPPPL vide affidavit dated 27.10.2017 has submitted its comments to the petitioner's submission dated 16.9.2017 and the same are as follows:-

(a) As per the IA, the term "transmission lines" means the "400kV Dikchu-Rangpo double circuit section (upto loop-in-loop-out section of Rangpo under the scope of Powergrid) of Teesta III-Kishanganj 400 kV D/C line". It was the Petitioner's sole decision to evacuate power through the alternate arrangement of Circuit 1(a) and Circuit 2 of the Teesta III-Rangpo Transmission Line, instead of the agreed arrangement as per IA. It is the Petitioner's responsibility to ensure that there is an evacuation path for the power from Dikchu HEP. However, no clarification was given by the Petitioner despite various letters.

(b) The alternate power evacuation arrangement is unreliable as compared to the power evacuation arrangement as per IA as it does not provide redundancy in case of outage of one circuit. Therefore, the suggested arrangement cannot be considered as alternate path but only as a contingency path without any reliability in case of outage of one circuit.

(c) The instant transmission line was not part of IA and there is a delay in commissioning of the transmission system specified in the IA. The Petitioner's double circuit transmission system from Dikchu-Rangpo is still incomplete as Circuit 1(b) is yet to be completed. Therefore, SKPPPL is not liable to pay any



charges to the Petitioner.

(d) The Petitioner, vide letter dated 7.2.2017, assured SKPPPL that the evacuation of power shall take place according to the IA. However, no clarity was provided on the evacuation path for the power generated at Dikchu HEP. Despite being aware of the issue of the faulty cables, the Petitioner never intimated the same to SKPPPL and merely stated that the power will be evacuated as agreed in the IA. The change in the evacuation scheme of the power from the Dikchu Project was unilaterally changed by the Petitioner contrary to the terms of the IA. The Petitioner never shared with any statutory authority or the constituents of the Eastern Region regarding the issues in charging/commissioning Circuit 1(a). SKPPPL has incurred financial losses due to non-availability of any transmission line from 30.3.2017 to 14.4.2017. SKPPPL has been adversely impacted and has been forced to occasionally shut down Dikchu HEP due to consistent issues in the alternate evacuation i.e. Circuit 1(a) and Circuit 2 of the Teesta III-Rangpo Transmission Line for the Dikchu HEP.

(e) The instant petition pertains to tariff of the Teesta III-Rangpo and Dikchu-Teesta III Transmission Line and does not pertain to compliance of SKPPPL with the provisions of the Electricity Act, 2003. The Commission has the jurisdiction to decide the issue of date of commissioning of the transmission line and the transmission charges payable by SKPPPL are to be decided in terms of the 2014 Tariff Regulations.

(f) The compensation mechanism under the IA is linked to the commissioning of the



specific transmission system i.e. Circuit 1(b) and the Dikchu generating station. The transmission system as contemplated under the IA is not completed. The Petitioner is wrongly claiming damages from SKPPPL in terms of the IA. The Petitioner is obliged to complete the Dikchu-Rangpo Transmission Line within the agreed timeline i.e. by 30.9.2016.

(g) As on date, the power from Dikchu HEP is being evacuated by way of contingent arrangement i.e. single circuit being Circuit 1(a) and not by the transmission system elements mentioned in the IA. The alternate transmission system i.e. Circuit 1(a) which was commissioned on 14.4.2017 does not have the redundancy of another circuit. The Petitioner has placed on record an ERLDC letter stating that Circuit 1(a) was commissioned on 14.4.2017 when it was ready to be charged for testing and power evacuation, which is after the commissioning of the Dikchu HEP. Therefore, the transmission system under which the power is being evacuated is a contingency arrangement and the Petitioner cannot rely on the IA. As the alternate arrangement is a contingent arrangement, SKPPPL has incurred loss of generation on account of various problems with the said transmission system.

(h) Dikchu HEP was ready on 30.3.2017 but could not evacuate power as Circuit 1(a) was not ready which caused financial loss to SKPPPL. The Petitioner could have easily back charged since Teesta III HEP was already commissioned in January 2017. It is evident that Circuit 1(a) was not available even at that time. The Petitioner has submitted that associated cable of Teesta-III was not ready, then



how Circuit 1(a) would be ready if the associated cable was not ready. Evacuation only through Circuit 1(a) was not part of the IA and SKPPPL was not intimated about the same despite a specific query in letter dated 27.1.2017.

(i) The Circuit 1(a) was not ready since the associated cable with Teesta III was not ready. It is submitted that the back charging of Circuit 1(a) would have been accomplished and once the process was complete, Circuit 1(a) would have been opened from Teesta III end. If the Petitioner completed the Circuit 1(a), then the Petitioner could have applied and got the ERPC/ERLDC certificate.

(j) As per the IA, the Petitioner is not entitled to retain the bank guarantee submitted by SKPPPL as the time prescribed to retain the bank guarantee has expired.

Analysis and Decision

32. We have considered the submissions of the Petitioner and SKPPPL. SKPPPL has contended that the Petitioner is not entitled to AFC since Circuit 1(a) is not ready. The Petitioner has contended that SKPPPL is liable to pay transmission charges for Circuit 1(a) as there is delay in commissioning of Dikchu HEP as provided under the 2014 Tariff Regulations. The transmission tariff for the instant assets, including Circuit 1(a) is to be determined under the 2014 Tariff Regulations. Further, the IA between the Petitioner and SKPPPL also provides for determination for tariff under the 2014 Tariff Regulations. Transmission charges for Circuit 1(a) are payable by the beneficiaries from the actual COD which was 14.4.2017. Post 14.4.2017, the line has



been included in POC charges and hence SKPPPL is not liable to pay any charges to the Petitioner.

33. SKPPPL has contended that as the entire transmission system envisaged in the Implementation Agreement has not been completed, the Petitioner is not entitled for any transmission charges. In this regard, Regulation 6(1) and 6(2) of the 2014 Tariff Regulations provides as under:-

“6. Tariff determination

(1) Tariff in respect of a generating station may be determined for the whole of the generating station or stage or generating unit or block thereof, and tariff in respect of a transmission system may be determined for the whole of the transmission system or transmission line or sub-station or communication system forming part of transmission system.

xxx
xxx

(2) For the purpose of determination of tariff, the capital cost of a project may be broken up into stages, blocks, units, transmission lines and sub-stations, forming part of the project, if required.

xxx
xxx”

As per the above said provision, tariff for the whole transmission system or transmission line or sub-station may be determined as per the 2014 Tariff Regulations and for this purpose, the capital cost of the project may be broken into transmission lines and sub-stations. Accordingly, tariff for Circuit 2 and Circuit 1(a) covered in the instant petition shall be determined on the basis of their COD.

34. The Petitioner has contended that as provided under the IA, SKPPPL is liable to maintain a Bank Guarantee of ₹2.4 crore in favour of the Petitioner as a payment



security mechanism. SKPPPL has submitted that the petitioner is not entitled to retain the bank guarantee as the time prescribed to retain the bank guarantee has expired. We have considered the submissions of the Petitioner and SKPPPL. The IA between TPTL and SKPPPL provides as follows:-

“1(iii)in case SKPPL fail to construct the generating SKPPL project or makes an exit or abandon its SKPPL project, TPTL shall have the right to collect the charges as defined above as the case may be in accordance with the notification/regulation issued by CERC from time to time. The developer shall furnish a without demur Bank Guarantee from a nationalized bank for an amount which shall be equivalent to Rs.2.5 Lakhs(Two Lakhs Fifty Thousand only) /MW to compensate such damages. This bank guarantee would be initially valid for a period upto six months after the expected date of commissioning schedule of generating unit(s) mentioned at Annexure-I.

As per the said provision, SKPPPL has to maintain a Bank Guarantee only if it has failed to construct its generation project or makes an exit or abandons its project. As SKPPPL has completed its project, we are of the view that it is not liable to maintain the Bank Guarantee.

Capital cost

35 Clause (1) and (2) of Regulation 9 of the 2014 Tariff Regulations provides 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.

36. The Petitioner initially, in affidavit dated 24.6.2016, has submitted the approved cost of Teesta III-Rangpo line was ₹ 16461.01 lakh and the estimated completion cost was ₹ 28092.75 lakh. The Petitioner vide affidavit dated 18.11.2016 has submitted RCE-2 and as per RCE-2, the total cost of Teesta-III HEP-Rangpo section was ₹ 28093.00 lakh. In the subsequent affidavit dated 16.2.2017, the Petitioner submitted Auditors certificate indicating the incurred/projected capital costs alongwith the details of IDC from scheduled COD to actual COD. The actual expenditure incurred upto claimed COD i.e. 25.11.2016 was ₹ 28017.88 lakh while the projected expenditure after claimed COD is ₹ 2267.13 lakh. Thus, as per the Auditor certificate the estimated completion cost is ₹ 30285.01 lakh.

37. The Petitioner vide affidavit dated 6.3.2017 has submitted the revised tariff forms. The tariff forms comprise of capital cost of both the circuits of Teesta III-Rangpo



section which is 72 ckm long. The breakup of capital cost and additional capital expenditure is as under:-

Particulars	(₹ in lakh)		
	As on 25.11.2016	Additional Capitalization	Total cost
Capital cost including IDC, FC, FERV and hedging Cost	26287.59*	3997.43#	30285.02

*As per Form-5 and

as per Form-7 (vide affidavit dated 16.2.2017)

38. The Petitioner vide affidavit dated 6.3.2017 has divided the capital cost of Teesta III-Rangpo section based on the circuit kilometer of each circuit as under:-

Srl. No	Circuit details	Percentage of capital cost	Circuit Length
1	Circuit-2	(36/72)%	36 km
2	Circuit-1(a)	(14/72)%	14 km
3	Circuit-1(b)	(22/72)%	22 km

39. The Petitioner vide affidavit dated 16.9.2017 and auditor certificate dated 15.09.2017 has submitted the revised tariff forms based on actual COD for Circuit-2 and Circuit-1(a) and the same is as under:-

Asset	(₹ in lakh)					
	Approved apportioned cost as per original estimate	Approved apportioned cost as per RCE-2	Actual Expenditure incurred upto COD	Projected Addcap after COD	Liabilities as on COD	Total completion cost (Including Add-cap)
Circuit-2	8230.51	14046.38	14678.00	984.23	898.61	15662.24
Circuit-1(a)	3200.75	5462.48	6307.58	327.29	218.00	6634.87
Total	11431.26	19508.86	20985.58	1311.52	1116.61	22297.11



40. The estimated completion cost of both Circuit 2 and Circuit 1(a) is higher than the apportioned approved cost given in RCE-2. The Petitioner has submitted the following reasons for the cost over-run:-

(i) **Preliminary works**

The head 'Design & Engineering' under the DPR has not considered any estimates towards consultancy charges. The DPR provides that such consultancy charges shall be considered separately. The actual expenditure incurred upto COD towards consultancy charges for Teesta-III-Rangpo section amounts to ₹296 lakh. As against expenditure envisaged under DPR towards compensation (including Preliminary Investigation, Right of way, forest clearance, PTCC, general civil works etc.) of ₹2.34 lakh for Teesta-III-Rangpo section, actual expenditure incurred amounts to ₹3959 lakh. The increase in cost is due to increase in the compensation amount decided by the Competent Authority. Further, under Para 7.1 of the DPR, it has been stated that preliminary assessment of forest involvement/clearance has been done based on forest atlas, toposheet and walkover survey of the area and the exact extent of forest shall be known only after detailed survey. Relevant extracts of the DPR are as under:-

"7.1 Forest involvement/ Clearance

...As per the preliminary assessment based on Forest Atlas, topo sheet and walk over survey of the area, a total of approximately 13.0 km (59.80 Ha) of forest stretch shall be encountered enroute the transmission line.....

However, exact extent of forest shall be known only after detailed survey."



Only 59.80 Ha of forest stretch was envisaged under the DPR, however during the detailed survey it was found that 95.94 Ha were under forest land.

(ii) Transmission Line Material

This head includes Towers Steel, Conductor, Earth Wire, Insulators, Hardware Fittings, Conductor and Earth-wire accessories, Spares, Erection, Stringing and Civil works including foundation. There was increase in cost of tower steel, hardware fittings, spares, erection, stringing & civil works including foundation by 3.6%, 24.5%, 12.5% and 35.4% respectively.

(a) Tower Steel: Cost of Tower Steel has increased due to change in type of towers. During preliminary survey, DA, DB, DC and DD type towers were envisaged. Subsequently, during the detailed and check survey/contour survey, it was found that at most of the locations in hilly area, towers (>1000 mtr elevation) i.e. DBH, DCH and DDH towers are required to be erected for the technical advantages such as more leg extension, less Base width, more weight span limits. As such, cost of hardware fittings has also increased.

(b) Erection, Stringing and Civil works including foundation:

(i) The transmission line traverses difficult hilly and inaccessible terrain in Sikkim contributing to slow progress of work in the hilly region. Further, due to earthquake in September, 2011, the cut slopes and roads were damaged. As such, the cut slopes in 'Benching' especially were made



milder than what was envisaged earlier with introduction of more berms which contributed to increase in total 'Excavation' quantity.

(ii) Due to undulation of area, as high as 20 Meter, foundations with chimney extensions were required to be casted in all the locations in hilly region falling under Sikkim. In some locations chimney extensions as high as 12 m were constructed, after providing leg extensions up to 9 m. This was not envisaged originally. Construction of chimney extensions in all locations in hilly areas required considerable extension in the time period as envisaged earlier. Further, the movement of machines was also difficult because of the remote locations which were not easily accessible by road and hence many a times, work had to be carried out manually. This has resulted in delay in foundation work of towers.

(iii) As against the quantity envisaged under the DPR for 'Excavation', actual quantity executed for the following components was substantially higher:-

(a) Normal Soil: 24,604 cum as against 5,352 cum under DPR i.e. 5 times higher considering Normal Soil quantity in actual excavation was found more than as envisages under the DPR.

(b) Hard Rock: 31,506 cum as against 562 cum under DPR i.e. 56 times higher considering Hard Rock quantity in actual excavation was found more than as envisages under the DPR.



(iv) As against the quantity envisaged under the DPR for 'Concreting', actual quantity executed for the following components was substantially higher:-

(a) **Concreting 1:1.5:3 (M20):** 14,838 cum as against 10,709 cum under DPR i.e. 1.4 times higher

(b) **Concreting 1:3:6:** 1,229 cum as against 1,109 cum under DPR i.e. 1.1 times higher

(c) **Reinforcement:** 1,565 MT as against 1,239 MT under DPR i.e. 1.3 times higher

Due to increase in Excavation quantity, the quantities for concrete and Reinforcement also increased.

(v) As against the quantity envisaged under the DPR for 'Benching' (Hard Rock), actual quantity executed was substantially higher, i.e. 59,496 cum as against 1,890 cum envisaged under the DPR being 31 times higher. Such deviation in quantity was also envisaged in the DPR. Relevant Para 9.2.1.4 of the DPR provides as under: -

“9.2.1.4 Revetment and benching

As the major portion of the lines is traversing in tough hilly terrain/ undulated stretch revetment & benching shall be provided as per site conditions.”

(vi) As against the quantity envisaged under the DPR for 'Revetment' (Stone bound in galvanized wire netting including excavation), actual quantity executed was substantially higher, i.e. 3850 cum as against



3,100 cum envisaged under the DPR being 1.2 times higher. Such deviation in quantity has also been envisaged in the DPR under Para 9.2.1.4 above.

(vii) In view of the above, cost incurred under the head 'Erection, Stringing and Civil works including foundation' is higher than what was envisaged in the DPR.

(iii) Overheads

The Project has witnessed cost over-run under establishment including Audit and Accounts. However, cost under contingency has substantially reduced. DPR provided for contingency of 3% of the hard cost excluding compensation towards forest land. However, while arriving at the cost upto anticipated COD, contingency has been limited to projected/anticipated hard cost from 1.4.2016 to 30.9.2016. As such, as against DPR cost, some amount of contingency was incurred before 31.3.3016 and forms part of establishment including Audit and Accounts. Therefore, while arriving at actual cost over-run, total overheads needs to be considered. The total cost over-run under overheads amounts to ₹623 lakh which is on account of time over-run not attributable to the Petitioner.

The particulars of cost provided by the Petitioner for Circuit-1(a) and Circuit-2 in affidavit dated 16.9.2017 is summarized below:-



Sri. No.	Particulars	Circuit-1(a)			Circuit-2		
		As per Original Estimate	Actual Capital Expenditure as on COD 14.4.2017 (Excl. Liabilities)	Variation	As per Original Estimate	Actual Capital Expenditure as on COD 17.1.2017 (Excl. liabilities)	Variation
A	TRANSMISSION LINE						
1.0	Preliminary Works						
1.1	Design & Engineering		51.71	51.71		132.98	132.98
1.2	Preliminary Investigation, Right of way, forest clearance, PTCC, general civil works, etc	49.77	1402.29	1352.52	127.99	2421.44	2293.45
1.3	Total Preliminary Works	49.77	1454	1404.23	127.99	2554.42	2426.43
2.0	Transmission Lines Material			0		0	0
2.1	Towers Steel	801.44	872.00	70.56	2060.85	1940.13	-120.72
2.2	Conductor	682.13	399.09	-283.04	1754.06	1026.22	-727.84
2.3	Earth Wire	9.45	7.02	-2.43	24.31	16.38	-7.93
2.4	Insulators	231.43	87.18	-144.25	595.09	215.56	-379.53
2.5	Hardware Fittings	131.65	171.54	39.89	338.53	382.28	43.75
2.6	Conductor & Earth-wire accessories	29.21	28.65	-0.56	75.12	66.87	-8.25
2.7	Spares	27.14	30.49	3.35	69.8	72.53	2.73
2.8	Erection, Stringing & Civil works including foundation	807.08	1024.15	217.07	2075.36	2421.17	345.81
				0.00		0.00	0.00
	Total Transmission Lines Material	2719.53	2620.12	-99.41	6993.12	6141.14	-851.98
3.0	Taxes and Duties			0		0	0
3.1	Custom Duty	Inclusive above	Included above	Inclusive above	Inclusive above	Inclusive above	Inclusive above
3.2	Other Taxes and Duties			0		0	0
	Total Taxes and Duties			0		0	0
	Total Transmission Lines	2769.30	4074.12	1304.82	7121.11	8695.56	1574.45
11.0	Overheads			0		0	0
11.1	Establishment	136.73	356.98	220.25	351.6	0	-351.6
11.2	Audit & Accounts			0	0	858.01	858.01
11.3	Contingency	82.11		-82.11	211.15	0	-211.15
	Total Overheads	218.84	356.98	138.14	562.75	858.01	295.26
13.0	Capital Cost including Plant			0		0	0



	& Machinery							
13.1	Interest During Construction (IDC)	212.58	1804.26	1591.68	546.64	4061.94	3515.30	
13.2	Financing Charges (FC)		72.23	72.23		163.88	163.88	
13.3	Foreign Exchange Rate Variation (FERV)			0		0	0	
13.4	Hedging Cost			0		0	0	
	Total of IDC, FC, FERV & Hedging Cost	212.58	1876.49	1663.91	546.64	4225.82	3679.18	
14.0	Capital cost including IDC, FC, FERV & Hedging Cost	3200.72	6307.59	3106.87	8230.50	13779.39	5548.89	

41. We have considered the submissions of the Petitioner regarding cost over-run. The cost of Design and Engineering & Audit and Accounts and the variation in cost of erection, stringing & civil works including foundation is disallowed. Accordingly, the cost of ₹1336.80 lakh and ₹268.78 lakh in case of Ckt-2 and Ckt-1(a) respectively are not capitalised. The details of the cost disallowed are given in the table below:-

(₹ in lakh)				
Sri. No.	Particular	circuit-1(a)	circuit-2	Remarks
1.1	Design and Engineering	51.71	132.98	The justification given by the Petitioner for increase is not satisfactory.
2.8	Erection, Stringing and Civil works including foundation	217.07	345.81	NER region is earthquake prone. The reasons given are not satisfactory
11.2	Audit and Accounts	0	858.01	The increase is very high and it is not justified. Contingency may cover the Audit and account expenditure.
Total		268.78	1336.8	



Time over-run

42. As per the Investment Approval, the project was scheduled to be commissioned within 35 months from the date of financial closure. The date of financial closure was 31.3.2010. Accordingly, the scheduled date of commercial operation (SCOD) was 28.2.2013. The COD of Circuit 2 and 1(a) has been approved as 17.1.2017 and 14.4.2017. Thus there is a time over-run of 46 months and 20 days in case of Circuit 2 and time over-run of 49 months and 17 days in case of Circuit 1(a).

43. The Petitioner has submitted that the time over-run was due to (a) delay in grant of approval under Section 164 of the Electricity Act, 2003, (b) delay in accord of forest clearance, (c) force majeure events viz. earthquake, collapse of Ranchang Khola Bridge, (d) delay on account of Right of Way issues, (e) delay due to Stay granted by the High Courts of Delhi and Sikkim, (f) blockage of National Highway 31A due to Gorkhaland Movement, and (g) delay in erection, stringing and civil works including foundation due to geological surprise. The detailed justification given by the Petitioner is as follows:-

- a. **Delay in Government Notification under Section 164 of the Electricity Act, 2003:** The Petitioner filed application before CEA on 8.12.2009 for approval under Section 164 of the Electricity Act, 2003 and complied with all the statutory requirements. After continuous follow up, the approval of MOP was granted and Notification under Section 164 of the Electricity Act, 2003 was issued vide letter dated 11.5.2010. The approval under Section 164 by the Government of India for laying of transmission line is a pre-requisite for commencement of work. The



Application for approval under Section 164 was duly applied prior to “Zero Date” of the project i.e. 31.3.2010 (application made to CEA on 8.12.2009, about 4 months prior to “Zero Date”.) Usually it takes about 2 to 2.5 months of obtaining approval. However, it took more than 4 months causing a delay of 1.5 months.

b. **Delay in award of forest clearance:** The proposal of forest clearance was submitted to respective Divisional Forest Officers (DFOs) for North Sikkim; East Sikkim and South Sikkim on 7.12.2009, 21.12.2009 and 11.1.2010 respectively. As per the original Implementation Schedule, it was envisaged that forest clearance would be given within 12 months from date of application. After continuous and vigorous follow up with MOEF, Stage-I Forest Clearance was accorded on 10.1.2011 i.e. after a period of 13 months. Subsequently, concerned Gram Panchayats held Gram Sabha in May, 2011 and 1st week of June, 2011 and submitted Minutes of Gram Sabha to respective District Collectors and Sub-Divisional Magistrates. Finally, Stage-II forest clearance was accorded on 7.9.2011 i.e. after a period of 20 months against the envisaged period of 12 months. Therefore, the construction activities could only be started after 7.9.2011 in this section. The delay of commencement of works was about 8 months from the date of application and 5 months from the date of financial closures (which is the “Zero Date”) on account of delay of award of forest clearance which was beyond the control of the Petitioner.



c. **Force Majeure:** Construction of transmission line was affected by force majeure events like earthquake and collapse of Rangchang Khola Bridge. The details of events are as follows:-

(i) Earthquake: On 18.9.2011, a severe earthquake of 6.8 magnitude on the Richter Scale was experienced in the State of Sikkim covering the entire route of the transmission line resulting in very heavy casualties and damage to life and property. In addition, there were heavy slides and other damages to roads, paralyzing normal life and bringing works to a complete standstill. Ten persons associated with Teesta-III HEP died at the project site. The contractors manpower mobilized for execution of line work fled with fear and there was no way in which any work could be executed immediately after the earthquake. The roads connecting the project site to Siliguri i.e. NH 31 was badly damaged affecting the transportation of man and material to the project site. The Petitioner has submitted the copy of a paper written by officers of Geological Survey of India describing the effect of the earthquake and a report of Government of Sikkim describing the damage caused by the above earthquake. The Contractor could resume normal activities effectively only after 3 months from the date of earthquake i.e. by December, 2011.

(ii) Collapse of Rangchang Khola Bridge: The Petitioner has stated that Rangchang Khola Bridge is on NH 31 the only connecting road for transportation of material to the project site and this bridge also (linking



Singtam and Mangan) collapsed on 19.12.2011 during the transportation of transformer of Teesta-III HEP. The entire area from Rangchang Khola to Mangan and beyond was cut-off as this was the only bridge connecting Mangan. Supply of essential items, such as cement and steel, got disrupted on way to tower locations AP 1 to 55 falling under Rangpo Section of transmission line, thereby, seriously affecting concreting and tower erection works in December, 2011. Parallel bridge was constructed by BRO within about a month's time for movement of light loads which was limited to 6 tons. Alternative bridge was constructed only in August, 2013. As such, the entire work of transmission line was completely stopped for 1 month and resumed on a restricted basis due to limitation of temporary bridge for a period of about 21 months. Out of a total of 98 towers in this section, work on 55 towers was seriously affected. However, for the purpose of this petition, a delay of 1 month only has been considered on account of this reason.

(d) **Delay on account of Right-of Way (ROW) issues:** The construction activity has been seriously affected due to ROW issues at most of the tower locations out of total 98 tower locations falling within Teesta-III-Rangpo Section.

(i) **Tower Location AP 9/1:** ROW issues have hampered construction activities between tower locations/ span AP 9/1 from 17.5.2013 up to 30.10.2014 for a period more than 17 months (531 days). A house was



built near the location after detailed survey and commencement of works in the preceding locations. However, house owner did not permit construction works. On 17.5.2013, the Petitioner conveyed the ROW issue on this location to the District Collector (DC) stating that it is not possible to technically divert the route near AP 9/1 to avoid house under construction. Subsequently, on 19.7.2013, the Petitioner wrote to DC again referring to the meeting with DC and concerned affected person(s) where decision was taken that construction work of house should stop at AP 9/1 till finalization of matter but construction of house still continued. On 12.8.2013, the Petitioner again filed complaint against the concerned person(s) to DC. On 26.9.2013, DC wrote a letter to the Petitioner enclosing complaint of affected person(s) of AP 9/1 and sought joint inspection on 5.10.2013. Subsequently, the Petitioner requested DC seeking direction to affected person(s) for cooperating during stringing works. However, construction of house still continued. On 30.10.2014, DC forwarded to the Petitioner the valuation of private house in location AP 9/1. The matter was then settled.

(ii) Tower Location AP 13 (old), 14A, 14B, 14C, 14N, 15, 16 (Butterfly Park): ROW issues have hampered construction activities between tower location/ span AP 13 (old), 14A, 14B, 14C, 14N, 15, 16 from January, 2013 to 19.8.2013 for a period more than 7 months (230 days). During a meeting in January, 2013 with the Petitioner, Forest



Department of Government of Sikkim conveyed that route alignment at few locations was required to be re-aligned in view of the proposed Butterfly Park which was planned after the route survey and notification of the transmission line under Section 164 of the Electricity Act, 2003. As a follow up, Joint Inspection was carried out by Forest Dept., and the Petitioner. On 28.2.2013, the Petitioner sought Forest Department's permission to carry out construction work in the re-aligned route. After six months of follow up and correspondence by the Petitioner, the matter was resolved by the DFO and the Petitioner started the work on the alternate alignment after intimation on 19.8.2013. Subsequently, the Petitioner implemented new alignment.

(iii) Tower Location AP 17/1 18, 14N, 17: ROW issues have hampered construction activities between tower location/ span AP 17/1 18, 14N, 17 from 13.8.2013 to 1.3.2014 for a period more than 6 months (200 days). On 13.8.2013, the Petitioner intimated to concerned DC that the land owners were not allowing construction works, specifically, Mr. CT Kazi at AP 17/1, 18 and; Mr. Nudup Sardar/Mr. NT Lachungpa at AP 14N and 17. Unable to resolve the issue in various meetings, the Petitioner placed the matter in writing before the DC on 16.10.2013. The DC issued notice to both the parties to be present in his office on 29.10.2013 and conveyed that for construction of Tower at location/span at AP 17/1, 18 and 14 C, consent has been given to the Petitioner by Mr. C.T. Kazi



and DC has authorized the Petitioner for construction. Despite the authorization by DC to start the construction, the concerned persons continued to create hindrance and did not allow the Petitioner to carry out the work at site. The matter was followed by the Petitioner with DC vide letters dated 5.2.2014 and 1.3.2014 and by personal visits. The work could resume only on 1.3.2014. Foundation work at location 14 N was stopped by Mr. NT Lachungpa without any sufficient cause despite payment of compensation by the Petitioner. The work was resumed by 1.3.2014.

(iv) Tower Location AP 36 A: ROW issues have hampered construction activities between tower location/span AP 36A from 23.1.2013 to 14.10.2015 i.e. for a period more than 33 months (994 days). On 23.1.2013, Elim House of Worship communicated to the Petitioner their terms and conditions before starting works at the Location 36A which was responded to by the Petitioner on 2.2.2013. However, on 23.3.2015 Elim Church filed complaint before District Disaster Management Authority who directed the Petitioner to attend a meeting on 6.4.2015. This was followed by scheduling Joint Inspection on 18.4.2015. However, due to persistence of ROW issue, the Petitioner wrote to Additional District Collector on 4.5.2015 that Elim Church is not letting the Petitioner do foundation work at AP 36A. A meeting was held on 20.6.2015 in the Office of DC between the Petitioner and Elim Church



for final settlement. Elim Church submitted their final demand vide letter dated 27.6.2015. Finally, an Agreement could be entered into between the Petitioner and Elim Church on 14.10.2015.

(v) Tower Location AP 61-62: ROW issues have hampered construction activities the most between tower location/span AP 61-62 since August, 2013 for the period of more than 31 months (955 days). On 26.9.2013, Sh. S T Bhutia ('affected persons') submitted written application to the concerned District Collector raising concern. After more than three months, DC obtained spot verification report from concerned Amin on 10.1.2014. After lapse of another five months (on 3.6.2014), affected persons filed pre-litigation stage petition before High Court Lok Adalat for amicable settlement who vide Order dated 9.8.2014 directed concerned District Collector to make efforts to resolve disputes and submit Compliance Report, which was submitted by the DC on 5.9.2014. However, High Court Lok Adalat disposed of the matter as not settled vide its order dated 6.9.2014. After another three months, affected persons filed Writ Petition before High Court of Sikkim on 12.12.2014. In its hearing on 9.2.2015, High Court directed the Petitioner to maintain status quo in respect of stringing works over land of affected persons. Finally, the High Court of Sikkim vide order dated 26.3.2016 disposed the Writ Petition in favor of the Petitioner. In spite of High Court decision, landowners were not allowing stringing works. The Petitioner vide letter



dated 30.3.2016 requested SP, East Sikkim to intervene to enable completion of priority line. The matter is still unresolved and pending before a Committee formed by Government of Sikkim on 8.4.2016 to resolve ROW issues with intimation to the Petitioner on 3.5.2016.

ROW Issues at other locations are as follows:-

Srl. No.	Tower Location	From	To	Delay (Month)	Remarks
1.	10	12.8.2013	30.10.2014	15	Work stopped by locals who demanded more than the compensation approved by local authority.
2.	AP11	13.8.2011	1.3.2014	31	Jointly inspected with revenue official and land owner on 13.8.2011. But the owner did not sign the NOC even after repeated persuasion. Managing Director of the Petitioner referred letter to DC, North Sikkim on 27.10.2011. The issue persisted for long period as the owner was a very influential person.
3.	12/2, 13	20.4.2013	26.11.2013	7	There is a camp of Indo Tibet Boarder Police Force (ITBP) near the line. Though there is safe distance between line and ITBP camp, local ITBP objected the construction works. Matter was taken up with Head Office of ITBP who finally gave their consent.
4.	17	22.7.2011	1.3.2014	32	Jointly inspected with revenue official & land owner on 13.8.2011. But the owner did not sign the NOC even after repeated persuasion. Managing Director of the Petitioner wrote letter to DC, North Sikkim on 27.10.2011. The issue persisted for long period as the owner was a very influential.



5.	17/1	29.7.2011	1.3.2014	32	Jointly inspected with revenue official and land owner on 29.7.2011. But the owner did not sign the NOC even after repeated persuasion. Managing Director of the Petitioner wrote letter to DC, North Sikkim on 27.10.2011. The issue persisted for long period because the land owner was a very influential person.
6.	AP18	29.7.2011	1.3.2014	32	Jointly inspected with revenue official & land owner on 29.7.2011. But the owner did not sign the NOC even after repeated persuasion. Managing Director of the Petitioner wrote letter to DC, North Sikkim on 27.10.2011. The issue persisted for long period. The land owner was a very influential person.
7.	42 , 43	26.11.2015	Continuing as on date	6	Landowner was not allowing the stringing works in spite of the Petitioner seeking for Police help. (Letter to SP, dated 26.4.2016) DC has reassessed yet the owner is not agreeable. Matter now before the committee constituted by Government of Sikkim on 3.5.2016 to resolve ROW issues in Sikkim.

In view of the difficulties experienced due to ROW Issues in execution of the Project by the Petitioner due to resistance by local persons, the State Government constituted a Committee on 3.5.2016 comprising Additional District Collector; Divisional Forest Officer, Executive Engineer (Building) and GM of the Petitioner to resolve the various issues in the State of Sikkim.

(v) Delay due to Stay granted by the High Court of Delhi and Sikkim:

Stay granted by the High Court of Delhi and Sikkim to maintain status quo following termination of tower packages (services and supply



contract) due to non-performance by the contractor, has resulted in delay of more than 6 months (about 185 days). As a result of the stay order of the High Courts, the new contractor appointed by the Petitioner could not commence the work at site. This delay was caused due to the stay order of the High Courts which was beyond the control of the Petitioner. On 30.5.2014, the Petitioner terminated the contract awarded to DCIL AIPL JV for Tower Package (Service and Supply) due to slow performance of the works and at the same time awarded the contract to a new contractor. On such termination, DCIL AIPL JV filed a petition before Hon'ble High Court of Delhi on 31.5.2014 seeking to pass interim orders restraining the Petitioner from terminating the contract or giving effect to third party rights being created. The High Court through an ad-interim order dated 6.6.2014 directed DCIL AIPL JV and the Petitioner to maintain status quo pursuant to which, the new contractor appointed by the Petitioner could not carry out work. Subsequently, Single Bench of High Court of Delhi vide order dated 3.9.2014 vacated the stay and disposed of the case filed by DCIL AIPL JV passing the judgment in favour of the Petitioner. However, Double Bench of the High Court first stayed the termination of contract on 4.9.2014 and then vacated the stay on 15.9.2014. In the meantime, Sub-Contractor of AIPL approached Sikkim High Court who vide order dated 6.9.2014 stayed the termination of contract for the entire stretch of the transmission line from Teesta-III



HEP to Kishanganj. Such stay on construction of entire line excluding Darjeeling area was vacated by Sikkim High Court on 1.10.2014. Subsequently, stay on Darjeeling area was vacated by Sikkim High Court on 18.10.2014. Thereafter, the new contractor mobilized its man and material and the work commenced on 13.11.2014 in Sikkim. The entire delay claimed by the Petitioner is on account of status quo order granted by the Hon'ble High Court. There was no delay in award of the contract to the new contractor.

(f) Blockage of National Highway–NH 31A due to Gorkhaland Movement:

The National Highway No. 31A which is the only approach to Sikkim for entire supplies covering man and material was blocked due to strikes, on the dates given below:-

Event and Duration of Strike

Month	Description of Event	Duration of Strike
November, 2009	Strike called by Gojmumo Committee in Darjeeling District.	21.11.2009 to 24.11.2009
December, 2009	Strike called by Gojmumo Committee in Darjeeling District.	21.12.2009 to 24.12.2009, 26.12.2010 to 2.1.2010
January, 2010	Strike called by Gojmumo Committee in Darjeeling District.	1.1.2010 to 2.1.2010, 8.1.2010 to 22.1.2010
May, 2010	Strike called by Gojmumo Committee in Darjeeling District.	10.5.2010 to 2.6.2010
June, 2010	Strike called by Gojmumo Committee	1.6.2010 to 2.6.2010, 16.6.2010, 19.6.2010 to 22.6.2010, 28.6.2010 to 30.6.2010
July, 2010	Strike called by Gojmumo Committee	1.7.2010 to 2.7.2010, 6.7.2010 to 28.7.2010, 30.7.2010
August, 2010	Strike called by Gojmumo Committee	6.8.2010 to 28.8.2010



Month	Description of Event	Duration of Strike
December, 2010	Strike called by Gojmumo Committee in Darjeeling District	6.12.2010 to 21.12.2010
January, 2011	Strike called by Gojmumo Committee in Darjeeling District in three phases.	12.1.2011 to 15.1.2011, 18.1.2011 to 25.1.2011, 29.1.2011 to 12.2.2011
	Strike called by Bangla & Bangla Bhasha Bachao Committee	17.1.2011 and 18.1.2011
February, 2011	Strike called for Indefinite period by Gojmumo Committee in Darjeeling District.	9.2.2011 to 18.2.2011, 23.2.2011 to 28.2.2011.
	Strike called by Gojmumo Committee in Darjeeling District.	29.1.2011 to 12.2.2011.

Due to above mentioned Bandhs, Strike etc., the National Highway NH-31A (only Road to Sikkim) was blocked on several occasions snapping supply route for the ongoing construction work of the Petitioner's transmission line. These delays which occurred on this account were beyond the control of the Petitioner and its contractor/sub-contractor.

(g) Delay in Erection, Stringing and Civil works including foundation due to geological surprises: Difficult hilly and inaccessible terrain in Sikkim contributed to slow progress of work in the hilly region. Further, due to earthquake witnessed in September, 2011, slope stabilization measures and cut slopes required for the foundation works were relooked. Cut slopes in 'Benching' especially were made milder by introducing more beams which also contributed to increase in total 'Excavation' quantity as well as increase in execution time. Further, due to undulation of area, as high as 20 metre, foundations with chimney extensions were required to be casted in all the locations in hilly region falling under Sikkim. In some locations chimney



extensions as high as 12 m were required to be constructed, after providing leg extensions up to 9 m which was not envisaged in the DPR. Construction of chimney extensions in all locations in hilly areas required considerable extension in the time period. Further, the movement of machines was also difficult because of the remote locations which were not easily accessible by road and hence many a times, work had to be carried out manually. This has resulted in delay in foundation work of towers. Further, as against the quantity envisaged under the DPR actual quantity executed was substantially higher under the following heads due to which actual time of execution has also increased.

(h) Delay in supply of materials like tower material, conductor, insulator and associated accessories: All supplies commenced as per schedule. However, supply of tower materials, conductor and insulator packages was rescheduled based on the progress of foundation at project site which was adversely affected due to delay on account of various issues explained above.

Analysis and Decision

44. We have considered the submissions of the Petitioner. As per the Investment Approval dated 9.11.2009, the scheduled COD was 28.2.2013. The petitioner has claimed that the COD of Circuit-2 and Circuit-1(a) was 26.11.2016 and 24.11.2016 respectively. However, the COD of Circuit-2 and Circuit-1(a) is approved as 17.1.2017 and 14.4.2017 respectively. Since the petitioner has claimed that it was ready on 26.11.2016 and 24.11.2016 with Circuit 2 and Circuit 1(a) respectively and as we have



already decided about the treatment of the period beyond 26.11.2016 and 24.11.2016 in case of Circuit 2 and Circuit 1(a) respectively at para 26 and 27, the analysis of time over-run is being done till these dates.

45. As per the Petitioner, there was a delay of 1.5 months due to delay in grant of approval under Section 164 of the Electricity Act, 2003, 8 months due to delay in award of forest clearance, four months due to force majeure issues and more than 63 months (July, 2011 to September, 2016) due to RoW issues. The details of the time over-run are summarized below:-

Srl. No.	Activity	From	To	Time over-run claimed by the Petitioner (in months/days)	Remarks
1	Notification under Section 164 of Electricity Act, 2003	14.1.2010 (Application date)	11.5.2010 (Approval granted)	1.5 months	Time taken for grant of Section 164 approval is subsumed in the time taken for obtaining forest clearance
2	Delay in award of Forest Clearance	7.12.2009 (Applied for Forest clearance)	7.9.2011 (Stage-II clearance obtained)	8 months	
3	Force Majeure				
	Earthquake	18.9.2011	15.12.2011	3 months	
	Collapse of Ranchang Khola Bridge	19.12.2011		1 month	
4	Delay on account of Right-of Way (ROW) issues				
a	17	22.7.2011	1.3.2014	2 years 7 months 7 days	The time taken for solving the RoW issues at location nos. 17./1, AP 11, AP 18, AP13(old), 14A,14B,14C,14N,15,16 (Butterfly Park)is subsumed in the time taken for solving
b	17./1	29.7.2011	1.3.2014	2 years 7 months	
c	AP18	29.7.2011	1.3.2014	2 years 7 months	



d	AP11	13.8.2011	1.3.2014	2 years 6 months 16 days	the RoW issues at location no.17
e	AP13(old), 14A,14B,14C,14N, 15,16 (Butterfly Park)	1.1.2013	19.8.2013	7 months 18 days	
f	36 A	23.1.2013	14.10.2015	2 years 8 months 21 days	The time consumed for resolving the RoW issues at location no.12/2, 13 and 9/1 are subsumed in the time taken for solving the RoW issues at location no 36A
g	12/2, 13	20.4.2013	26.11.2013	7 months 6 days	
h	9/1:	17.5.2013	30.10.2014	1 year 5 months 13 days	
i	AP 61-62	1.8.2013	26.3.2016	2 years 7 months 25 days	The time consumed for solving the RoW issues at location no. AP 16-62 subsumes the time taken for resolving the RoW issues at location no.10, 17/1 18,14N,17 and the delay due to the stay granted by the High Courts.
j	10	12.8.2013	30.10.2014	1 years 2 months 18 days	
k	17/1 18,14N,17	13.8.2013	1.3.2014	6 months 16 days	
5	Delay due to Stay granted by the High Court of Delhi and Sikkim	6.6.2014	18.10.2014	4 months 12 days	

46. The Petitioner was directed to submit the detailed reasons and chronology of time over-run alongwith documentary proof vide “Record of Proceedings” of 11.7.2017. The Petitioner has submitted the same vide affidavit dated 18.9.2017. The



time period envisaged and the actual time consumed for various activities by the
Petitioner in execution of the instant transmission assets are summarised below:-

Srl. No.	Activity	Time envisaged		Actual time taken		Additional time consumed	Remarks
		From - to	Period	From - to	Period		
1.	Forest clearance	14.5.2010 to 9.5.2011	One year	7.12.2009 to 7.9.2011	One year, 8 months	Three months	The petitioner envisaged the receipt of the forest clearance by 9.5.2011 however the clearance was accorded on 7.9.2011. Thus, it took 3 months and 28 days beyond the envisaged date for receipt of forest clearance.
2.	Award of tower supply and erection package	18.11.2009 to 18.11.2009	One day	18.11.2009 to 18.11.2009	One day	One day	-
3.	Tower supply	1.12.2010 to 31.7.2012	One year and eight months	28.4.2010 to 22.3.2013	Two years, ten months and twenty three days)	Seven months and twenty two days	Tower supply was envisaged to be completed by 31.7.2012 however, it was completed on 22.3.2013. Thus, it took 7 months and 22 days beyond the envisaged date.
4.	Supply of conductor	1.2.2011 to 31.5.2012	One year 5 months	13.10.2010 to 15.12.2015	Five years, two months and four days	Forty two months and fifteen days	The conductors were envisaged to be supplied by 31.5.2012 but it continued upto 15.12.2015. It took 42 months and 15 days beyond the envisaged date.
5.	Supply of Insulators	1.2.2011 to 31.5.2012	1 year 5 months	13.9.2011 to 24.1.2013	One year, four months 23 days	Seven months and 24 days	The supply of Insulators was envisaged to be completed by 31.5.2012. But it was completed by 24.1.2013. Thus, it



							took 7 months and 24 days beyond the envisaged date.
6.	Supply of hardware and accessories	1.2.2011 to 31.5.2012	1 year 5 months	28.4.2010 to 22.3.2013	Two years ten months twenty eight days	Nine months and twenty two days	The supply of hardware and accessories was envisaged by 31.5.2012 but it continued upto 31.3.2013. Thus, it took 9 months and 22 days beyond the envisaged date.
7.	Tower foundation and erection	1.12.2010 to 31.12.2012	2 years 1 month	1.12.2010 to 1.6.2016	Five years and six months	Forty one months	Tower foundation and erection was envisaged to be completed by 31.12.2012 but it was completed on 1.6.2016. Thus, it took 41 months beyond the envisaged date.
8.	Stringing	1.6.2011 to 31.1.2013	1 year 8 months	1.12.2011 to 14.11.2016	Four years, eleven months and fourteen days	Three years, ten months and fourteen days	Stringing was envisaged to be completed by 31.1.2013 but, it was completed on 14.11.2016. It took three years, ten months and 14 days beyond the envisaged date.
9.	Testing and commissioning	1.2.2013 to 28.2.2013	1 month	14.11.2016 to 24.11.2016	10 days	-	Testing and commissioning were completed within the time envisaged.

47. We have considered the submissions of the Petitioner. The delay in obtaining the approval under Section 164 of the Electricity Act, 2003 was subsumed by the time taken for obtaining the forest approval. As per the Forest (Conservation) Amendment Rules, 2004 notified by the MoEF dated 3.2.2004, the timeline for forest approval is 210 days by the State Government (Stage-I) and 90 days by Forest Advisory



Committee of the Central Government (Stage-II) i.e. total of 300 days. In the instant case, the Petitioner applied for forest clearance on 7.12.2009, IA on 9.11.2009 and obtained the same on 7.9.2011. Thus, it took 17 months and 6 days, from the date of financial closure, for obtaining the forest clearance. As the timeline specified for issue of forest clearance is 10 months, we are of the view that time period beyond 10 months is not within the control of the Petitioner. Accordingly, 7 months and 6 days taken beyond 12 months for obtaining forest clearance is condoned.

48. The other major reason for time over-run in the instant case is the RoW issues. The Petitioner faced RoW problems from 22.7.2011 to 26.3.2016 at location nos. 9/1, 10, 11, 12/2, 14A, 14B, 14C, 14N, 15, 16, 17/1, 18, 14N, 17, 36A, 42, 4361-62. The Petitioner has submitted the correspondence made with various authorities to sort out the RoW issues and the documents in support of the same. We have considered the justification and the documents submitted by the Petitioner. The Petitioner has faced RoW problems from 22.7.2011 to 26.3.2016 that was beyond the control of the petitioner. As per the Petitioner's affidavit dated 18.9.2017, the tower foundation and erection work was to be completed by 31.12.2012 and stringing was to be completed by 31.1.2013. Thus, the Petitioner provided for one month for completion of stringing after the completion of tower foundation and erection work. But, it is observed that though the RoW issues were resolved on 26.3.2016, the stringing was completed on 14.11.2016 and Circuit 2 and Circuit 1(a) were ready for commissioning only on 26.11.2016 and 24.11.2016 respectively. Even in the instant case, the petitioner completed tower foundation and erection on 1.6.2016. Hence, as per the planned



timeline, it should have completed stringing by 11.7.2016 which was actually completed on 14.11.2016. The petitioner has not explained the reasons for delay in stringing time taken from 1.7.2016 to 14.11.2016. Hence, this period from 1.7.2016 to 14.11.2016 (4 months 13 days) is not condoned for both Circuit 2 and Circuit 1(a).

Treatment of Interest During Construction (IDC)

49. The Petitioner vide affidavit dated 18.9.2017 has submitted part information related to IDC vide Auditor's Certificate dated 15.9.2017, the IDC discharged up to COD and the "IDC to be discharged" after COD i.e. in 2017-18 have also been submitted for both the assets. The Petitioner was repeatedly directed to submit information pertaining to IDC i.e. quarter-wise rates of interest levied on the loans by each of the banks and dates of each drawl for each loan, for the working of IDC for each asset. But the Petitioner has failed to submit the said information. The Petitioner has filed some information in response to the directions issued vide ROP dated 21.7.2017 but the information submitted is not complete and has many gaps. Therefore, in the absence of the relevant information regarding IDC, certain assumptions have been made while working out the IDC, for both the assets, which are as follows:-

- (a) Mid of each quarter has been considered as the date of drawl for each loan.
- (b) Rates of Interest for each loan have been considered as 11.50% and for REC as 12.25%.



50. The loan details submitted in Form-9C, as per the revised tariff forms, vide affidavit dated 18.9.2017, were wrongly mentioned by the Petitioner as total loan drawn on estimated completion cost, instead of total loan drawn as on COD. Therefore, this total loan on estimated completion cost has been reduced on pro-rata basis to total loan drawn (75% of capital cost as on COD) as on COD. The details of the IDC claimed by the petitioner, the allowable/worked out IDC up to 25.11.2016 and 23.11.2016 for Ckt-2 and Ckt-1(a) respectively on cash basis and the IDC disallowed for period 1.7.2016 to 13.11.2016 for both the assets are summarized below:-

(₹ in lakh)

Interest During Construction (IDC)					
Asset	Claimed as on COD as per the respective Auditor's Certificate	Discharged up to COD (as claimed)	Allowed/ Worked out on Cash Basis as on 25.11.2016/ 23.11.2016*	Balance IDC to be discharged during 2017-18 (as claimed)	Balance IDC discharged during 2017-18 for calculation purpose
Ckt - 2	4461.44	4225.82	2988.26	235.62	0.00
Ckt - 1 (a)	1876.49	1853.47	1173.50	23.02	0.00

* IDC has been worked out up to 25.11.2016 for Ckt-2, and up to 23.11.2016 for Ckt-1(a).

51. The balance IDC, which is yet to be discharged by the petitioner as on COD, would be capitalized once the actual payment is made by the petitioner on cash basis. The IDC allowed/ dis-allowed shall be reviewed at the time of truing up, subject to submission of information regarding the actual IDC disbursed/paid against the assets. Further, the petitioner is directed to submit the quarter-wise rates of interest levied on the loans by each of the banks and dates of each drawl for each loan and reconcile the IDC claimed in Auditor's Certificate, claimed in Form-12B and 'IDC working sheet' submitted, for both the assets.



52. There is a difference in the gross loan worked out, as on COD and the gross loan considered for the working of IDC by the Petitioner. The gross loan submitted in 'IDC working sheet' has been considered for the calculation of IDC. Therefore, the Petitioner is directed to reconcile the gross loan for the calculation of weighted average Rate of Interest (as in Form-9C) and for the calculation of IDC, which would be reviewed at the time of truing-up.

Treatment of Incidental Expenditure During Construction (IEDC)

53. Like the other transmission tariff petitions, the "IEDC limit" indicated in the 'Abstract Cost Estimate', which is 5.00% of the hard cost is considered in the instant case. As the IEDC claimed for both the assets as on COD is higher than 5.00% of the hard cost, the claimed IEDC has been reduced to 5.00% of the hard cost. Further, IEDC had been worked out up to 25.11.2016 and 23.11.2016 for Ckt-2 and Ckt-1(a) respectively and the IEDC for period 1.7.2016 to 13.11.2016, for both the assets have been reduced on pro-rata basis, from the allowed IEDC. The IEDC claimed by the petitioner and allowed are given below:-

(₹ in lakh)

Asset	IEDC				
	Claimed as on COD (Accrual Basis)	Claimed as on COD (Cash Basis)	Claimed to be discharged in 2017-18	Allowed as on COD (Cash Basis)*	Allowed to be capitalized in 2017-18
Ckt - 2	871.74	858.01	13.73	401.70	0.00
Ckt - 1 (a)	356.98	346.96	10.03	173.43	0.00

*Reduced as per IEDC limit of 5.00%

54. The Commission in order dated 5.10.2017 in Review Petition No. 02/RP/2017 in Petition No. 46/TT/2014 observed that IEDC shall be revisited at



the time of true-up on the basis of the completion cost actually incurred. Accordingly, the IEDC allowed/dis-allowed shall be reviewed at the time of true-up on the submission of actual IEDC incurred by the petitioner for both the assets.

Initial Spares

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

“13. Initial Spares

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

(d) Transmission system

(i) Transmission line - 1.00%

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

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

(vi) Series Compensation devices and HVDC Station - 4.00%

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

(vi) Communication system-3.5%

Provided that:

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

(ii) -----

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



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

56. The Petitioner vide affidavit dated 16.9.2017 has submitted the break-up of initial spares for Circuit-2 and Circuit-1(a) based on actuals and same is as follows:-

(₹ in lakh)

Asset	Plant & Machinery Cost (excluding IDC & IEDC) up to COD	Initial spares claimed	
		Transmission line	Sub-station
Circuit-2	9344.82	78.40 (0.84%)	00 (0.00%)
Circuit-1(a)	4074.11	30.49 (0.75%)	0.00 (0.00%)

57. The Petitioner has claimed initial spares for both the assets as per the 2014 Tariff Regulations. Both the assets are transmission lines, therefore the ceiling limit for the assets is 1.00% of the plant and machinery cost. The cost of initial spares claimed by the Petitioner for both the assets is within their ceiling limits. Therefore, it has been allowed to be capitalized. Following is the allowable capital cost as on COD after taking the cognizance of the IDC and IEDC on cash basis and allowable initial spares as on COD:-

(₹ in lakh)

Asset	Capital cost as per CA Cft as on COD (Accrual Basis)	Capital cost as per CA Cft as on COD (Cash Basis)	Hard Cost to be deducted as on COD (as per para 3 (v) of Finance's NOTE dated 29.1.2018)	Less: Total IDC & IEDC claimed as on COD (Cash Basis)	Add: IDC allowed on cash basis as on COD	Add: IEDC allowed as on COD	Less: Excess Initial spares	Capital Cost as on COD
Ckt 2	14678.00	13779.39	1336.80	5083.83	2988.26	401.70	0.00	10748.72
Ckt 1 (a)	6307.58	6089.57	268.78	2200.42	1173.50	173.43	0.00	4967.30



Additional Capital Expenditure

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

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

(i) Undischarged liabilities recognised to be payable at a future date;

(ii) Works deferred for execution;

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

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

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

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

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

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

60. The cut-off date in the case of instant transmission assets is 31.3.2020.

61. There is cost over-run in both of the assets. The estimated completion costs of both the assets are required to be adjusted so that they remain within the respective revised approved apportioned costs. The petitioner vide its affidavit dated



16.9.2017 has mentioned that all the liabilities i.e. ₹ 898.61 lakh and ₹ 218.01 lakh pertaining to both the Ckt-2 and Ckt-1(a) respectively will be discharged in FY 2017-18. Therefore, these amounts have been considered to be discharged in 2017-18 after deducting the accrued IDC and accrued IEDC in case of both the assets. Accordingly, the add-cap allowed in 2017-18 is ₹ 649.26 lakh (₹ 898.61 lakh - ₹ 235.62 lakh - ₹ 13.73 lakh) and ₹ 184.96 lakh (₹ 218.01 lakh - ₹ 23.02 lakh - ₹ 10.03 lakh) in case of Ckt-2 and Ckt-1(a) respectively. The petitioner has not clearly mentioned that the years in which the add-cap of ₹ 984.23 lakh and ₹ 327.29 lakh would be discharged in case of Ckt-2 and Ckt-1(a) respectively. Therefore, we have assumed them to be discharged in 2018-19 in case of both the assets. The details of the capital cost as on COD and additional capital expenditure considered for the purpose of tariff calculations as per Regulation 14 of the 2014 Tariff Regulations is as follows:-

Asset (Ckt)	Capital cost as on COD	Estimated Additional Capital expenditure		Total estimated completion cost
		2017-18 (Allowed)	2018-19	
		2	10748.72	649.26
1 (a)	4967.30	184.96	310.22	5462.48

The same shall be reviewed at the time of truing-up on submission of the actual additional capital expenditure incurred during the 2014-19 period.

Debt- Equity ratio

62. Clause 1 and 5 of Regulation 19 of the 2014 Tariff Regulations specifies as follows:-



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

Provided that:

- i. where equity actually deployed is less than 30% of the capital cost, actual equity shall be considered for determination of tariff:
- ii. the equity invested in foreign currency shall be designated in Indian rupees on the date of each investment:
- iii. any grant obtained for the execution of the project shall not be considered as a part of capital structure for the purpose of debt : equity ratio.

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

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

63. The Petitioner has claimed Debt-Equity as on COD and for additional capital expenditure 75:25. Therefore, as per Regulation 19 of the 2014 Tariff Regulations, the debt:equity as on COD and for additional capitalization is considered as 75:25. The details of debt-equity as on date of commercial operation and 31.3.2019 considered on normative basis are as follows:-

(₹ in lakh)

Circuit-2	As on COD		As on 31.3.2019	
	Amount	% age	Amount	% age
Debt	8061.54	75.00	9286.66	75.00
Equity	2687.18	25.00	3095.55	25.00
Total	10748.72	100.00	12382.21	100.00
Circuit-1(a)	As on COD		As on 31.3.2019	
	Amount	% age	Amount	% age
Debt	3725.48	75.00	4096.86	75.00
Equity	1241.83	25.00	1365.62	25.00
Total	4967.30	100.00	5462.48	100.00



Return on equity

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

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

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

Provided that:

- (i) in case of projects commissioned on or after 1st April, 2014, an additional return of 0.50 % shall be allowed, if such projects are completed within the timeline specified in **Appendix-I**:
- (ii) the additional return of 0.5% shall not be admissible if the project is not completed within the timeline specified above for reasons whatsoever:
- (iii) additional RoE of 0.50% may be allowed if any element of the transmission project is completed within the specified timeline and it is certified by the Regional Power Committee/National Power Committee that commissioning of the particular element will benefit the system operation in the regional/national grid:
- (iv) the rate of return of a new project shall be reduced by 1% for such period as may be decided by the Commission, if the generating station or transmission system is found to be declared under commercial operation without commissioning of any of the Restricted Governor Mode Operation (RGMO)/ Free Governor Mode Operation (FGMO), data telemetry, communication system up to load dispatch centre or protection system:
- (v) as and when any of the above requirements are found lacking in a generating station based on the report submitted by the respective RLDC, RoE shall be reduced by 1% for the period for which the deficiency continues:
- (vi) additional RoE shall not be admissible for transmission line having length of less than 50 kilometers.



“25. Tax on Return on Equity:

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

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

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

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

65. The Petitioner has submitted that it is liable to pay income tax at MAT rate and thus the RoE has been calculated @ 19.713% after grossing up the RoE with MAT rate of 21.342% as provided under Regulation 25 of the 2014 Tariff Regulations. The Petitioner has also submitted that the RoE shall be tried up based on the actual tax paid alongwith any additional tax demand including interest thereon duly adjusted for any refund including interest received at the end of every financial year pertaining to the tariff period upto 2018-19 on actual gross income in any financial year.

66. We have considered the submissions made by the Petitioner. The RoE has been worked out in accordance with Regulation 24 and Regulation 25 of the 2014



Regulations. The rate of pre-tax return on equity for 2014-19 period has been determined by grossing up the base rate of 15.50% with effective tax rate of 20.961% (i.e. MAT rate applicable for the financial year 2013-14). This rate of pre-tax return on equity is subject to true up based on the effective tax rate of respective financial year applicable to the Petitioner.

67. Accordingly, the following ROE is allowed for the instant assets for the 2014-19 tariff period:-

(₹ in lakh)

Particulars	Circuit-2		
	2016-17 (pro-rata)	2017-18	2018-19
Opening Equity	2687.18	2687.18	2849.50
Additional Capitalization	0.00	162.32	246.06
Closing Equity	2687.18	2849.50	3095.55
Average Equity	2687.18	2768.34	2972.52
Return on Equity (Base Rate) (%)	15.50%	15.50%	15.50%
MAT rate for the financial year 2013-14 (%)	20.961%	20.961%	20.961%
Rate of Return on Equity (Pre Tax) (%)	19.610%	19.610%	19.610%
Return on Equity (Pre-tax)	106.83	542.87	582.91

(₹ in lakh)

Particulars	Circuit-1(a)	
	2017-18 (pro-rata)	2018-19
Opening Equity	1241.83	1288.06
Additional Capitalization	46.24	77.56
Closing Equity	1288.06	1365.62
Average Equity	1264.94	1326.84
Return on Equity (Base Rate) (%)	15.50%	15.50%
MAT rate for the financial year 2013-14 (%)	20.961%	20.961%
Rate of Return on Equity (Pre Tax) (%)	19.610%	19.610%
Return on Equity (Pre-tax)	239.22	260.19



68. The Petitioner is directed to submit "Tax Audited Report" to confirm that it is paying Minimum Alternate Tax (MAT) on Profit Before Tax (PBT), which would be reviewed at the time of truing-up.

Interest on Loan

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

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

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

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

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

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

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

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

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

70. The Petitioner's entitlement to interest on loan has been calculated as per the provisions of Regulation 26 of the 2014 Tariff Regulations as detailed below:-



(a) The Gross amount of loan submitted by the Petitioner in Form-9C was 75% of the estimated completion cost, instead of 75% of the capital cost as on COD. Therefore, the gross amount of loan as on COD was corrected and was worked out on pro-rata basis. Repayment of instalments and rate of interest and weighted average rate of interest on actual average loan have been considered as per the petition;

(b) The yearly repayment for the tariff period 2014-19 has been considered to be equal to the depreciation allowed for that year;

(c) Weighted average rate of interest on actual average loan worked out as per (a) above is applied on the notional average loan during the year to arrive at the interest on loan.

71. The Petitioner is directed to submit actual loan details as on COD, repayment schedule for each loan, documentary proofs of rate of interest of each loan, for both the assets and also to reconcile the gross loan as on COD at Form-9C and gross loan considered as on COD for the calculation of IDC.

72. Detailed calculations in support of Interest on Loan have been calculated as given at **Annexure II to Annexure III** of this order.

73. The details of Interest on Loan calculated are as under:-



(₹ in lakh)

Particulars	Circuit-2		
	2016-17 (pro-rata)	2017-18	2018-19
Gross Normative Loan	8061.54	8061.54	8548.49
Cumulative Repayment upto Previous Year	0.00	115.06	699.73
Net Loan-Opening	8061.54	7946.48	7848.75
Addition due to Additional Capitalisation	0.00	486.95	738.17
Repayment during the year	115.06	584.67	627.80
Net Loan-Closing	7946.48	7848.75	7959.13
Average Loan	8004.01	7897.61	7903.94
Weighted Average Rate of Interest on Loan	13.2448%	13.2448%	13.2448%
Interest	214.93	1046.02	1046.86

(₹ in lakh)

Particulars	Circuit-1(a)	
	2017-18 (pro-rata)	2018-19
Gross Normative Loan	3725.48	3864.19
Cumulative Repayment upto Previous Year	0.00	257.64
Net Loan-Opening	3725.48	3606.55
Addition due to Additional Capitalisation	138.72	232.67
Repayment during the year	257.64	280.23
Net Loan-Closing	3606.55	3558.99
Average Loan	3666.01	3582.77
Weighted Average Rate of Interest on Loan	13.3277%	13.3277%
Interest	471.19	477.50

Depreciation

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

"27. Depreciation:

(1) Depreciation shall be computed from the date of commercial operation of a generating station or unit thereof or a transmission system including communication



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

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

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

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

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

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

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

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

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

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



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

75. The depreciation for both the circuits has been allowed per Regulation 27 of the 2014 Tariff Regulations, where Straight Line Method is considered till first 12 years and after that the remaining depreciable value of the assets would be spread over the remaining useful life of the asset.

76. The details of the depreciation worked out are as under:-

(₹ in lakh)

Particulars	Circuit-2		
	2016-17 (pro-rata)	2017-18	2018-19
Opening Gross Block	10748.72	10748.72	11397.98
Addition during 2014-19 due to Projected Additional Capitalisation	0.00	649.26	984.23
Closing Gross Block	10748.72	11397.98	12382.21
Average Gross Block	10748.72	11073.35	11890.10
Rate of Depreciation	5.2800%	5.2800%	5.2800%
Depreciable Value	9673.85	9966.01	10701.09
Remaining Depreciable Value	9673.85	9850.95	10001.35
Depreciation	115.06	584.67	627.80

(₹ in lakh)

Particulars	Circuit-1(a)	
	2017-18 (pro-rata)	2018-19
Opening Gross Block	4967.30	5152.26
Addition during 2014-19 due to Projected Additional Capitalisation	184.96	310.22
Closing Gross Block	5152.26	5462.48
Average Gross Block	5059.78	5307.37
Rate of Depreciation	5.2800%	5.2800%
Depreciable Value	4553.80	4776.63
Remaining Depreciable Value	4553.80	4518.99
Depreciation	257.64	280.23



Operation & Maintenance Expenses (O&M Expenses)

77. The O&M Expenses claimed by the Petitioner vide affidavit dated 16.9.2017 for Circuit-2 and Circuit-1(a) is as follows:-

(₹ in lakh)			
Asset	2016-17	2017-18	2018-19
Circuit-2	4.13	21.08	21.78
Circuit-1(a)	0.00	7.91	8.47

78. The O&M Expenses norms specified in Regulation 29(3)(a) of the 2014 Tariff Regulations for the years 2016-17, 2017-18 and 2018-19 for the Double Circuit Bundled conductor with four or more sub-conductors are as follows:-

(₹ in lakh)			
Particulars	2016-17	2017-18	2018-19
Norms for AC lines (in ₹lakh per km)			
Double Circuit (Bundled conductor with four or more sub-conductors)	1.133	1.171	1.210

79. Accordingly, the O&M Expenses allowed for the instant assets is as follows:-

(₹ in lakh)			
Asset	2016-17 (pro-rata)	2017-18	2018-19
Circuit-2			
Line length 18 km	$1.133 \times 18 = 20.394$	$1.171 \times 18 = 21.078$	$1.210 \times 18 = 21.78$
Total	$20.394 \times 74 / 365 = 4.13$	21.08	21.78
Circuit-1(a)			
4 no. of D/C sub-conductors		$1.171 \times 4 = 4.684$	$1.210 \times 4 = 4.84$
Line length 7 km		$1.171 \times 7 = 8.197$	$1.210 \times 7 = 8.47$
Total		$12.881 \times 352 / 365 = 7.905$	8.47

Note: For circuit-2, total no of days taken from 17.1.2017 to 31.3.2017= 74days and for circuit-1(a), total no. of days taken from 14.4.2017 to 31.3.2018=352 days.



Interest on working capital

80. Clause 1 (c) of Regulation 28 and Clause 5 of Regulation 3 of the 2014 Tariff

Regulations specify as follows:-

“28. Interest on Working Capital

(1) The working capital shall cover:

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

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

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

(iii) Operation and maintenance expenses for one month”

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

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

81. The Petitioner is entitled to claim interest on working capital as per Regulation

28(1)(c) of the 2014 Tariff Regulations. The components of the working capital and the

Petitioner’s entitlement to interest thereon are discussed hereunder:-

(i) Receivables

Receivables has been worked out on the basis of two annual transmission charges.



(ii) Maintenance spares

Maintenance spares has been worked out @ 15% per annum of the O&M expenses.

(iii) O & M Expenses

O&M Expenses have been considered for one month as a component of working capital.

(iv) Rate of Interest on Working Capital

As per proviso 3 of Regulation 28 of the 2014 Tariff Regulations, SBI Base rate of 9.30% as on 1.4.2016 plus 350 Bps i.e. 12.80% has been considered for both the assets, as the rate of Interest on Working Capital.

82. The IWC allowed for the instant assets is shown in the table below:-

(₹ in lakh)

Particulars	Circuit-2		
	2016-17 (pro-rata)	2017-18	2018-19
Maintenance Spares	3.06	3.16	3.27
O & M expenses	1.70	1.76	1.82
Receivables	370.50	373.85	388.28
Total	375.26	378.77	393.36
Interest	9.74	48.48	50.35

(₹ in lakh)

Particulars	Circuit-1(a)	
	2017-18 (pro-rata)	2018-19
Maintenance Spares	1.23	1.27
O & M expenses	0.68	0.71
Receivables	172.39	174.84
Total	174.30	176.81
Interest	21.52	22.63



Transmission charges

83. The transmission charges allowed for the instant transmission assets are summarized as under:-

(₹ in lakh)

Particulars	Circuit-2		
	2016-17	2017-18	2018-19
Depreciation	115.06	584.67	627.80
Interest on Loan	214.93	1046.02	1046.86
Return on Equity	106.83	542.87	582.91
Interest on Working Capital	9.74	48.48	50.35
O & M Expenses	4.13	21.08	21.78
Total	450.70	2243.12	2329.70

(₹ in lakh)

Particulars	Circuit-1(a)	
	2017-18 (pro-rata)	2018-19
Depreciation	257.64	280.23
Interest on Loan	471.19	477.50
Return on Equity	239.22	260.19
Interest on Working Capital	21.52	22.63
O & M Expenses	7.91	8.47
Total	997.48	1049.03

Filing Fee and the Publication Expenses

84. 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. Rajasthan Discoms have submitted that filing fee and the publication may not be allowed. 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.



Licence Fee and RLDC fees and Charges

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

Sharing of Transmission Charges

86. The transmission charges 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.

87. This order disposes of Petition No. 108/TT/2016.

**sd/-
(M.K. Iyer)
Member**

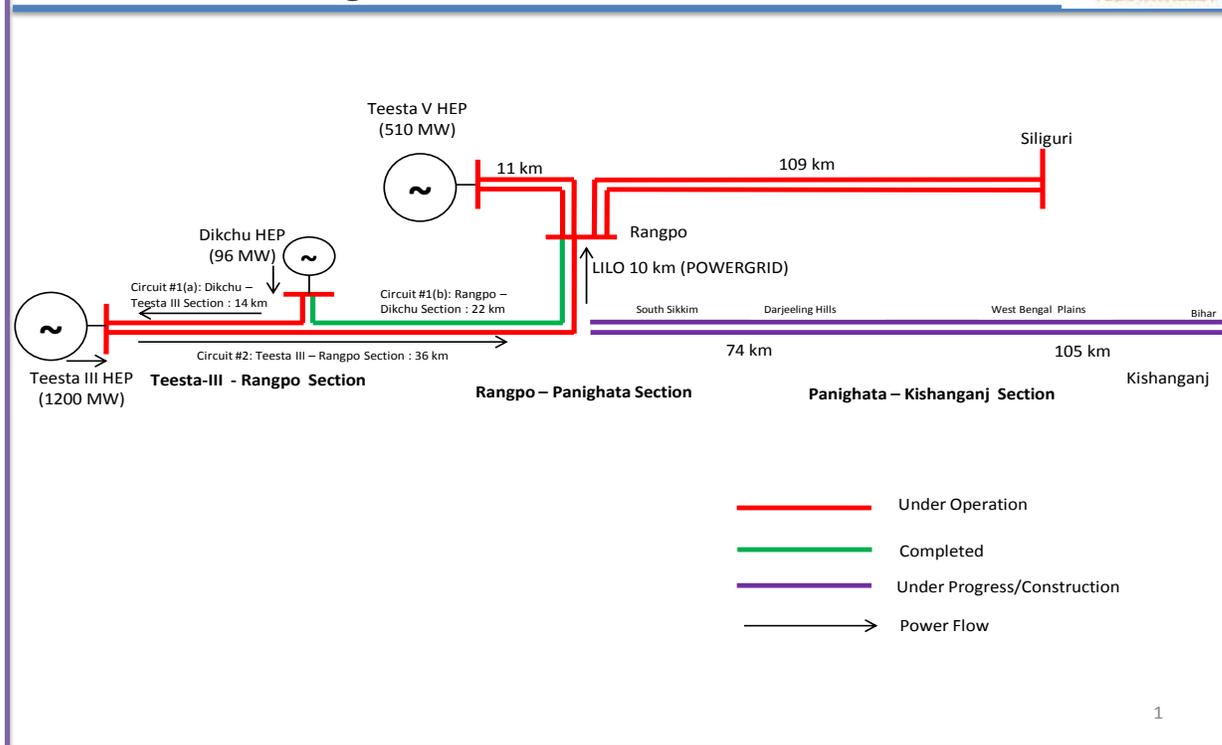
**sd/-
(A.S. Bakshi)
Member**

**sd/-
(A.K. Singhal)
Member**





Schematic Line Diagram



CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN

Circuit-2

(₹ in lakh)

	Details of Loan	2016-17	2017-18	2018-19
1	Bank of Baroda			
	Gross loan opening	3541.43	3541.43	3541.43
	Cumulative Repayment upto COD/previous year	0.00	0.00	0.00
	Net Loan-Opening	3541.43	3541.43	3541.43
	Additions during the year	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	328.60
	Net Loan-Closing	3541.43	3541.43	3212.83
	Average Loan	3541.43	3541.43	3377.13
	Rate of Interest	13.40%	13.40%	13.40%
	Interest	474.55	474.55	452.54
	Rep Schedule	46 Quarterly installments from 1.4.2018		
2	Bank of India			
	Gross loan opening	1431.11	1431.11	1431.11
	Cumulative Repayment upto COD/previous year	0.00	0.00	0.00
	Net Loan-Opening	1431.11	1431.11	1431.11
	Additions during the year	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	132.79
	Net Loan-Closing	1431.11	1431.11	1298.32
	Average Loan	1431.11	1431.11	1364.71
	Rate of Interest	13.40%	13.40%	13.40%
	Interest	191.77	191.77	182.87
	Rep Schedule	46 Quarterly installments from 1.4.2018		
3	United Bank of India			
	Gross loan opening	1153.69	1153.69	1153.69
	Cumulative Repayment upto COD/previous year	0.00	0.00	0.00
	Net Loan-Opening	1153.69	1153.69	1153.69
	Additions during the year	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	107.05
	Net Loan-Closing	1153.69	1153.69	1046.64
	Average Loan	1153.69	1153.69	1100.17
	Rate of Interest	13.40%	13.40%	13.40%
	Interest	154.59	154.59	147.42
	Rep Schedule	46 Quarterly installments from 1.4.2018		



4	Rural Electrification Corporation			
	Gross loan opening	1486.15	1486.15	1486.15
	Cumulative Repayment upto COD/previous year	0.00	0.00	0.00
	Net Loan-Opening	1486.15	1486.15	1486.15
	Additions during the year	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	137.90
	Net Loan-Closing	1486.15	1486.15	1348.25
	Average Loan	1486.15	1486.15	1417.20
	Rate of Interest	12.25%	12.25%	12.25%
	Interest	182.05	182.05	173.61
	Rep Schedule	46 Quarterly installments from 1.4.2018		
5	Andhra Bank			
	Gross loan opening	1760.26	1760.26	1760.26
	Cumulative Repayment upto COD/previous year	0.00	0.00	0.00
	Net Loan-Opening	1760.26	1760.26	1760.26
	Additions during the year	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	163.33
	Net Loan-Closing	1760.26	1760.26	1596.93
	Average Loan	1760.26	1760.26	1678.59
	Rate of Interest	13.40%	13.40%	13.40%
	Interest	235.87	235.87	224.93
	Rep Schedule	46 Quarterly installments from 1.4.2018		
6	Union Bank of India			
	Gross loan opening	1635.87	1635.87	1635.87
	Cumulative Repayment upto COD/previous year	0.00	0.00	0.00
	Net Loan-Opening	1635.87	1635.87	1635.87
	Additions during the year	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	151.79
	Net Loan-Closing	1635.87	1635.87	1484.08
	Average Loan	1635.87	1635.87	1559.97
	Rate of Interest	13.40%	13.40%	13.40%
	Interest	219.21	219.21	209.04
	Rep Schedule	46 Quarterly installments from 1.4.2018		
	Total Loan			
	Gross loan opening	11008.50	11008.50	11008.50
	Cumulative Repayment upto COD/previous year	0.00	0.00	0.00
	Net Loan-Opening	11008.50	11008.50	11008.50



Additions during the year	0.00	0.00	0.00
Repayment during the year	0.00	0.00	1021.45
Net Loan-Closing	11008.50	11008.50	9987.05
Average Loan	11008.50	11008.50	10497.78
Rate of Interest	13.2448%	13.2448%	13.2448%
Interest	1458.05	1458.05	1390.40



CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN

Circuit-1(a)

(₹ in lakh)

	Details of Loan	2017-18	2018-19
1	Bank of Baroda		
	Gross loan opening	1587.59	1587.59
	Cumulative Repayment upto COD/previous year	0.00	0.00
	Net Loan-Opening	1587.59	1587.59
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	1587.59	1587.59
	Average Loan	1587.59	1587.59
	Rate of Interest	13.50%	13.50%
	Interest	214.33	214.33
	Rep Schedule	46 Quarterly installments from 1.4.2018	
2	Bank of India		
	Gross loan opening	591.09	591.09
	Cumulative Repayment upto COD/previous year	0.00	0.00
	Net Loan-Opening	591.09	591.09
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	591.09	591.09
	Average Loan	591.09	591.09
	Rate of Interest	13.50%	13.50%
	Interest	79.80	79.80
	Rep Schedule	46 Quarterly installments from 1.4.2018	
3	United Bank of India		
	Gross loan opening	477.97	477.97
	Cumulative Repayment upto COD/previous year	0.00	0.00
	Net Loan-Opening	477.97	477.97
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	477.97	477.97
	Average Loan	477.97	477.97
	Rate of Interest	13.50%	13.50%
	Interest	64.53	64.53
	Rep Schedule	46 Quarterly installments from 1.4.2018	



4	Rural Electrification Corporation		
	Gross loan opening	595.81	595.81
	Cumulative Repayment upto COD/previous year	0.00	0.00
	Net Loan-Opening	595.81	595.81
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	595.81	595.81
	Average Loan	595.81	595.81
	Rate of Interest	12.25%	12.25%
	Interest	72.99	72.99
	Rep Schedule	46 Quarterly installments from 1.4.2018	
5	Andhra Bank		
	Gross loan opening	776.52	776.52
	Cumulative Repayment upto COD/previous year	0.00	0.00
	Net Loan-Opening	776.52	776.52
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	776.52	776.52
	Average Loan	776.52	776.52
	Rate of Interest	13.50%	13.50%
	Interest	104.83	104.83
	Rep Schedule	46 Quarterly installments from 1.4.2018	
6	Union Bank of India		
	Gross loan opening	701.70	701.70
	Cumulative Repayment upto COD/previous year	0.00	0.00
	Net Loan-Opening	701.70	701.70
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	701.70	701.70
	Average Loan	701.70	701.70
	Rate of Interest	13.40%	13.40%
	Interest	94.03	94.03
	Rep Schedule	46 Quarterly installments from 1.4.2018	
	Total Loan		
	Gross loan opening	4730.68	4730.68
	Cumulative Repayment upto COD/previous year	0.00	0.00
	Net Loan-Opening	4730.68	4730.68
	Additions during the year	0.00	0.00



Repayment during the year	0.00	0.00
Net Loan-Closing	4730.68	4730.68
Average Loan	4730.68	4730.68
Rate of Interest	13.3277%	13.3277%
Interest	630.49	630.49

