

**CENTRAL ELECTRICITY REGULATORY COMMISSION  
NEW DELHI**

**Petition No.283/TT/2018**

**Coram:**

**Shri P.K. Pujari, Chairperson**

**Dr. M. K. Iyer, Member**

**Shri I.S. Jha, Member**

**Date of Order: 5<sup>th</sup> of February, 2020**

**In the matter of**

Approval under regulation-86 of CERC (Conduct of Business) Regulations, 1999 and CERC (Terms and Conditions of Tariff) Regulations, 2014 for determination of Transmission Tariff from DOCO to 31.3.2019 for Asset I: 50 MVAR Line reactor at Jaipur (South) in 400 kV D/C Kota- Jaipur (South) line (Part of 400 kV D/C Rapp-Jaipur TL) utilized as Bus reactor at Jaipur (south) substation (DOCO: 5.3.2018) and Asset II : 400 kV D/C Kota - Jaipur (South) line along with associated bays at Kota and Jaipur(South) (part of RAPP-Jaipur (S) 400 kV D/C line with one ckt LILO at Kota) under "Transmission system associated with RAPP 7 & 8, Part-B" in Northern Region".

**And in the matter of**

Power Grid Corporation of India Limited

"Saudamini", Plot No.2,

Sector-29, Gurgaon -122 001

**....Petitioner**

**Versus**

1. Rajasthan Rajya Vidyut Prasaran Nigam Limited  
Vidyut Bhawan, Vidyut Marg,  
Jaipur - 302 005



2. Jaipur Vidyut Vitran Nigam Ltd.  
132 kV, GSS RVPNL Sub-station Building,  
Malviya Nagar, Jaipur-302017
3. Ajmer Vidyut Vitran Nigam Ltd  
132 kv, GSS RVPNL sub- station building,  
Caligiri road, Malviya Nagar, jaipur-302017 (Rajasthan)...
4. Jodhpur Vidyut Vitran Nigam Ltd  
132 Kv, GSS RVPNL Sub- Station Building,  
Caligiri Road, Malviya Nagar, Jaipur-302017 (Rajasthan)
5. Himachal Pradesh State Electricity Board  
Vidyut Bhawan  
Kumar House Complex Building li  
Shimla-171 004
6. Punjab State Electricity Board  
The Mall, Patiala - 147 001
7. Haryana Power Purchase Centre  
Shakti Bhawan, Sector-6  
Panchkula (Haryana) 134 109
8. Power Development Department  
Govt. of Jammu & Kashmir  
Mini Secretariat,  
Jammu
9. Uttar Pradesh Power Corporation Ltd. (UPPCL)  
Shakti Bhawan, 14, Ashok Marg  
Lucknow - 226 001
10. Delhi Transco Ltd  
Shakti Sadan, Kotla Road,  
New Delhi-110 002
11. BSES Yamuna Power Ltd,  
BSES Bhawan, Nehru Place,  
New Delhi.
12. BSES Rajdhani Power Ltd, (BRPL)  
BSES Bhawan, Nehru Place,  
New Delhi



13. North Delhi Power Ltd,  
Power Trading & Load Dispatch Group  
Cennet Building, Adjacent to 66/11 Kv Pitampura-3  
Grid Building, Pitampura  
New Delhi - 110034
14. Chandigarh Administration  
Sector -9, Chandigarh.  
Represented By Its Chief Engineer
15. Uttarakhand Power Corporation Ltd.  
Urja Bhawan, Kanwali Road  
Dehradun.
16. North Central Railway  
Allahabad.
17. New Delhi Municipal Council  
Palika Kendra, Sansad Marg,  
New Delhi-110002
18. Nuclear Power Corporation of India Limited (NPCIL)  
Corporate Office, Nabhikiya Urja Bhavan,  
Anushaktinagar,  
Mumbai-400094

.... Respondents

**Parties present:**

**For Petitioner:** Shri S.S.Raju, PGCIL  
Shri B.D Das, PGCIL  
Shri A.K Verma, PGCIL  
Shri V.P Rastogi, PGCIL

**For Respondent:** Shri R.B Sharma, Advocate, BRPL & BYPL  
Shri Mohit Mudgal, Advocate, BRPL & BYPL  
Ms. Sanya Sud, Advocate, BRPL & BYPL  
Ms. Shreya Seth, NPCIL

**ORDER**

The present petition has been filed by Power Grid Corporation of India Ltd. ("the Petitioner") for determination of tariff for Asset I: 50 MVAR Line reactor at



Jaipur (South) in 400 kV D/C Kota- Jaipur (South) line (Part of 400 kV D/C Rapp-Jaipur TL) utilized as Bus reactor at Jaipur (south) substation (DOCO: 5.3.2018) and Asset II : 400 kV D/C Kota - Jaipur (South) line along with associated bays at Kota and Jaipur(South) (part of RAPP-Jaipur (S) 400 kV D/C line with one ckt LILO at Kota) under "Transmission system associated with RAPP 7 & 8, Part-B" in Northern Region" (hereinafter referred to as "transmission assets") for 2014-19 tariff period under Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 (hereinafter referred to as "the 2014 Tariff Regulations").

2. The Petitioner has made the following prayers:

- (i) Approve the Transmission Tariff for the tariff block 2014-19 block for the assets covered under this petition,*
- (ii) Admit the capital cost as claimed in the Petition and approve the Additional Capitalisation incurred / projected to be incurred.*
- (iii) Allow tariff up to 90% of the Annual Fixed Charges in accordance with clause 7 (i) of Regulation 7 CERC (Terms and Conditions of tariff) Regulations, 2014 for purpose of inclusion in the PoC charges.*
- (iv) Allow the approach the Commission for suitable revision in the norms for O&M expenditure for claiming the impact of wage hike from 1.1.2017 onwards.*
- (v) Condone the delay in completion of subject assets on merit of the same being out of the control of Petitioner in line with CERC Regulations, 2014 12(2)(i) "uncontrollable factors".*
- (vi) Allow the petitioner to recover the shortfall or refund the excess Annual Fixed Charges, on account of Return on Equity due to change in applicable Minimum Alternate/Corporate Income Tax rate as per the Income Tax Act, 1961 (as amended from time to time) of the respective financial year directly without making any application before the Commission as provided under clause 25 of the Tariff regulations 2014.*
- (vii) Approve the reimbursement of expenditure by the beneficiaries*



*towards petition filing fee, and expenditure on publishing of notices in newspapers in terms of Regulation 52 Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014, and other expenditure ( if any) in relation to the filing of petition.*

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

*(ix) Allow the petitioner to bill and adjust impact on Interest on Loan due to change in Interest rate on account of floating rate of interest applicable during 2014-19 period, if any, from the respondents.*

*(x) Allow the initial spare as procured in the current petition in full as given in para-6 under Regulation 54 of the CERC (Terms and Condition of Tariff) Regulation, 2014, "Power to Relax".*

*(xi) Allow the petitioner to bill and recover GST on Transmission charges separately from the respondents, if GST on Transmission of electricity is withdrawn from the exempted (negative) list at any time in future. Further any taxes and duties including cess, etc. imposed by any Statutory/Govt./Municipal Authorities shall be allowed to be recovered from the beneficiaries.*

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

### **Background**

3. The Investment Approval of the project "Transmission system associated with RAPP 7 & 8, Part-B" was accorded by Board of Directors of the Petitioner in the 318<sup>th</sup> meeting held on 24.7.2015 for ₹30718 lakh including Interest During Construction of ₹1891 lakh based on April, 2015 price level (communicated vide the Memorandum No. C/CP/RAPP 7 & 8-Part-B, dated 28.7.2015).



4. The scope of the scheme was discussed and agreed in 29<sup>th</sup> meeting of Standing Committee on Transmission System planning of Northern Region held on 29.12.2010 and further in 19<sup>th</sup> (Special) meeting of NRPC held on 4.1.2011. The Petitioner has been entrusted with the implementation of the said project.

5. The scope of work covered under “Transmission system associated with RAPP 7 & 8, Part-B” scheme is as follows:-

**Transmission Lines:**

- (i) Kota-Jaipur (South) 400 kV D/C line (part of RAPP-Jaipur (south) 400 kV D/C line with one ckt LILoed at Kota.

**Substation Works:**

- (ii) Extension of 400/220 kV Jaipur(South) Substation
  - a. 2 nos. of 400 kV line bays at Jaipur (South)
- (iii) Extension of Extension of 400/220 kV Kota Substation
  - a. 1 nos. of 400 kV line bays at Kota
  - b. Realignment line works near Kota so as to achieve the approved system configuration which is RAPP-Jaipur (South) 400KV D/C with one ckt LILoed at Kota.

**Reactive Compensation :**

SI No.	Component	Line Shunt Reactor- from bus (RAPP end) by NPCIL	Line Reactor- To bus (by POWERGRID)
1	RAPP 7&8- Jaipur (South) 400 KV line	50 MVAR	50 MVAR

*Note: Bays & Reactors at generation switchyard would be provided by NPCIL*

6. The Petitioner has submitted that approval of charging 50 MVA line reactor at Jaipur (South) as Bus Reactor was discussed and agreed in 40<sup>th</sup> NRPC meeting held on 28.10.2017.



7. Details of the assets covered in the instant petition are summarized below:-

Asset	Asset Name
Asset I	50 MVAR Line reactor at Jaipur (South) in 400 kV D/C Kota- Jaipur (South) line (Part of 400 kV D/C Rapp- Jaipur TL) utilized as Bus reactor at Jaipur (south) substation
Asset II	400 KV D/C Kota - Jaipur (South) line along with associated bays at Kota and Jaipur(South) (part of RAPP-Jaipur (S) 400KV D/C line with one ckt LILO at Kota)

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

(₹ in lakh)

Particulars	Asset-I		Asset-II
	2017-18 (Pro-Rata)	2018-19	2018-19 (Pro-Rata)
Depreciation	4.79	71.69	9.72
Interest on Loan	5.11	73.20	10.10
Return on Equity	5.34	79.88	10.81
Interest on Working capital	0.58	8.36	0.75
O & M Expenses	4.83	68.71	2.28
<b>Total</b>	<b>20.65</b>	<b>301.84</b>	<b>33.66</b>

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

(₹ in lakh)

Particulars	Asset-I		Asset-II
	2017-18 (Pro-Rata)	2018-19	2018-19 (Pro-Rata)
Maintenance Spares	9.98	10.31	42.41
O&M Expenses	5.55	5.73	23.56
Receivables	47.43	50.31	695.58
<b>Total</b>	<b>62.96</b>	<b>66.34</b>	<b>761.55</b>
Rate of Interest	12.60%	12.60%	12.20%
<b>Interest on working Capital</b>	0.58	8.36	0.75

10. The Petitioner has served a copy of the petition upon the respondents and notice of this tariff application has been published in the newspapers in accordance with Section 64 of the Electricity Act, 2003. No comments or suggestions have been received from the general public in response to the notices published by the Petitioner under Section 64 of the Electricity Act, 2003. Reply to the petition has been filed by UPPCL (Respondent no. 9), BRPL (Respondent no. 12) and NPCIL (Respondent no. 18) vide their affidavit dated 22.10.2018, 8.3.2019 and 27.6.2019 respectively. The Petitioner has filed its rejoinder to the reply of UPPCL, BRPL and NPCIL vide its affidavit dated 8.3.2019, 21.5.2019 and 11.10.2019 respectively.

11. The Petition was last heard on 16.10.2019 and the Commission reserved the order in the Petition.

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

13. This order has been issued after considering the main petition dated 27.7.2018 and Petitioner's affidavits dated 24.8.2018, 7.3.2019, 8.3.2019, 21.5.2019, 22.5.2019, 23.5.2019, 18.6.2019, 11.10.2019, 14.11.2019 and respondents' UPPCL (Respondent no. 9), BRPL (Respondent no. 12) and NPCIL (Respondent no. 18) reply vide their affidavit dated 22.10.2018, 8.3.2019 and 27.6.2019 respectively.

### **Analysis and Decision**

#### **Date of Commercial Operation (COD)**

14. The Petitioner had filed the instant petition claiming anticipated COD of 1.8.2018 in respect of Asset-II. However, vide affidavit dated 7.3.2019, the anticipated COD of 1.8.2018 was changed to anticipated COD of 31.3.2019. The Petitioner vide affidavit dated 22.5.2019 has claimed the actual COD of 29.3.2019 for Asset-II. The details of COD claimed by the Petitioner are summarized as under:-



Asset	Asset Name	COD claimed at the time of filing of instant petition	COD claimed vide affidavit dated 7.3.2019	COD claimed vide affidavit dated 22.5.2019
I	50 MVAR Line reactor at Jaipur (South) in 400 kV D/C Kota- Jaipur (South) line (Part of 400 kV D/C Rapp- Jaipur TL) utilized as Bus reactor at Jaipur (south) substation	5.3.2018	5.3.2018	5.3.2018
II	400KV D/C Kota - Jaipur (South) line along with associated bays at Kota and Jaipur(South) (part of RAPP- Jaipur (S) 400KV D/C line with one ckt LILO at Kota)	1.8.2018 (Anticipated)	31.3.2019 (Revised Anticipated)	29.3.2019

15. BRPL vide its affidavit dated 8.3.2019 has submitted that the Petitioner without mentioning the cause of higher voltage has stated that the voltage profile at Jaipur (South) is more than 410 kV for about 55% of the time. In fact, the Jaipur (South) Substation is operating for quite some time and the Asset-II which may be the potential source of high voltage is yet to come. BRPL further submitted that it seems the whole exercise is designed to serve the commercial interest of the Petitioner.

16. In response, the Petitioner vide affidavit dated 21.5.2019 has submitted that it was discussed in 40<sup>th</sup> NRPC meeting held on 28.10.2017 that the voltage profile at Jaipur (South) used to be more than 410 kV for about 55% of the time. Accordingly, it was agreed to charge the line reactor as bus reactor to control the over-voltage in the subject area. The Petitioner further submitted that after the approval and consent taken in above said NRPC meeting to charge the line Reactor as Bus reactor at Jaipur (South), the work was expedited to commission the line Reactor as bus reactor for voltage stability and was finally commissioned on 5.3.2018. The Petitioner has prayed to approve the COD of the subject asset and allow the transmission tariff as claimed in the instant Petition.

17. We have considered the submissions of the Petitioner and Respondents. We note that the charging of 50 MVAR line reactor at Jaipur (South) as a Bus Reactor



was agreed in the 40th meeting of NRPC held on 28.10.2017 and 37th meeting of TCC held on 27.10.2017 at Srinagar, Jammu and Kashmir. The relevant extract of the meeting is as under:

***TCC Deliberations***

*B.19.1 POWERGRID informed that 50 MVAR line reactor for 400 kV RAPP- Jaipur (South) line at 400/220 kV Jaipur(S) end along with bay was ready however the line was not ready at that time. Considering that the voltage profile at Jaipur (S) has been more than 410kV for about 55% of the time, the line reactor may be charged as bus reactor using the ready line bay at Jaipur(S). The bus reactor would provide a relief of about 1 kV in the area. This bay is for LILO of one ckt. of 400 kV D/C RAPP-Kota line at Jaipur(S). POWERGRID informed that the reactor would be commissioned by November, 2017.*

*B.19.2 TCC recommended the POWERGRID proposal of using line reactor as bus reactor.*

*B.19.3 NRPC agreed with the recommendation of TCC.*

18. After going through the minutes of TCC meeting, it is noted that the charging of 50 MVAR line reactor at Jaipur (South) as a Bus Reactor was agreed in the meetings of TCC and NRPC. Therefore, the contention of the BRPL is not justified that to charge the line Reactor as bus reactor to control the over-voltage in the subject area was not the requirement.

19. The Petitioner has claimed the actual COD of the Assets-I and II as 5.3.2018 and 29.3.2019 respectively.

20. In support of the Actual COD of the Asset-I, the Petitioner has submitted CEA energisation certificate dated 15.9.2017 under Regulation 43 of CEA (Measures Related to Safety and Electricity Supply) Regulations, 2010 dated 15.9.2017, RLDC charging certificate dated 28.3.2018, self-declaration COD letter dated 3.4.2018 and CMD certificate as required under Grid Code.



21. In support of the actual COD of the Asset-II, the Petitioner in affidavit dated 22.5.2019 has submitted CEA energisation certificate under Regulation 43 of CEA (Measures Related to Safety and Electricity Supply) Regulations, 2010 dated 8.2.2019, RLDC charging certificate dated 11.4.2018, self-declaration COD letter dated 12.4.2019 and CMD certificate as required under Grid Code

22. Taking into consideration CEA energisation certificates, RLDC charging certificates and CMD certificate as required under Grid Code, the COD of the Asset-I and Asset-II are approved as 5.3.2018 and 29.3.2019 respectively.

### **Capital Cost**

23. Clause (1) and (2) of Regulation 9 of the 2014 Tariff Regulations provide as follows:-

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

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

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

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

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

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

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

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

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



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

24. The Petitioner has submitted the apportioned approved cost as per Investment Approval, in respect of the assets covered under the instant petition. The Petitioner has submitted Auditor Certificates claiming capital cost incurred as on COD as well as additional capitalization projected to be incurred in respect of the instant assets. The details of apportioned approved cost, capital cost as on COD and estimated additional capital expenditure incurred or projected to be incurred during 2017-18, 2018-19 and 2019-20 along with estimated completion cost as claimed by the Petitioner for the instant assets are as under:

(₹ in lakh)

Asset	Apportioned Approved Cost (FR)	Cost Up to COD	Additional Capitalisation			Estimated Completion Cost
			2017-18	2018-19	2019-20	
Asset I	1614.48	1267.99	64.28	100.00	35.72	1467.99
Asset II	29103.52	23291.50	0.00	0.00	4687.77	27979.28

### Cost Over-run

25. We have considered the submissions of Petitioner and noted that against the total apportioned approved cost as per FR in respect of instant assets as mentioned in the table above, the estimated completion cost including additional capitalization is within the apportioned approved cost. Therefore, there is no cost overrun.

### Time over-run

26. As per the Investment Approval (IA) dated 24.7.2015, the transmission scheme was scheduled to be commissioned within 28 months from the date of IA. Accordingly, the Commissioning Schedule comes to 24.11.2017 against which the Asset-I and Asset-II have been put under commercial operation on 5.3.2018 and 29.3.2019 with time over-run of 101 days and 490 days respectively.



27. The Petitioner has submitted that as per the Implementation agreement signed between Nuclear Power Corporation of India Limited (NPCIL) and the Petitioner dated 19.9.2014, the zero date for Kota-Jaipur(South) 400 kV D/C line (part of RAPP-Jaipur (south) 400 kV D/C line with one ckt. LILoed at Kota along with associated bays at both end is 1.12.2017. The Petitioner has submitted that the Implementation of this line was taken up with completion schedule of 28 months i.e. by 1.12.2017. The LOA (Letter of Award) was issued (dated 3.8.2015) immediately after investment approval was accorded. The Petitioner further submitted that the working gangs were timely mobilized to achieve the scheduled completion target. Proactive actions involving various adaptive and mitigative steps were taken to overcome the hurdles associated with construction of transmission line but in spite of the best efforts of the Petitioner, the completion of transmission line stretched beyond its schedule completion date due to some unforeseen reasons.

28. The Petitioner has submitted the following details to substantiate its claim:

**Asset-I:**

29. The time over-run in commissioning of the Asset-I is mainly attributable to time over-run in commissioning of the transmission line i.e Asset-II. Line reactor is to be commissioned along with the transmission line (Asset-II) and it was getting delayed due to various reasons. Due to the time over-run of Asset-II, the commissioning of the line reactor (Asset-I) at Jaipur (South) also got delayed. However, at later stage considering that the voltage profile at Jaipur (South) was more than 410 kV for about 55% of the time, it was discussed and agreed in 40th NRPC meeting held on 28.10.2017 to charge the line reactor as bus reactor to provide a relief of about 1 kV in the area. Soon after the approval from NRPC to charge the line reactor as Bus reactor at Jaipur (South), the work was expedited to commission the line reactor as bus reactor for voltage stability



and was finally commissioned on 5.3.2018. Thus the time over-run in commissioning of Asset-I was mainly on account of time over-run in commissioning of 400 kV D/C Kota- Jaipur (South) line. Further, the time over-run was also on account of change in orientation of RAPP- KOTA transmission line termination ends at Jaipur south substation due to which cable route, Earth mat layout, SPR panel arrangement got changed which took additional time.

**Asset-II:**

30. The time over-run in commissioning of the Asset-II is due to ROW issues encountered during the construction of the line and delay in obtaining National Highway Clearance.
31. **ROW issues:** (a) The said transmission line is traversing through Bundi, Tonk and Jaipur districts of Rajasthan. The implementation of the transmission line was hampered by the persistent ROW issues at various locations. The ROW issues involved demand of exorbitant amount of crop compensation, land compensation, construction of structures/buildings in Right of way of line, man handling of gang workers, etc. Further, wherever possible, persuasive measures were adopted to pacify the land owners/ villagers agitating against the line construction. However, at certain locations verbal persuasions did not suffice and eventually the help and assistance of District administration and Police was sought to mitigate the ROW issues. The major hindrance occurred at location 44/0 and 45/0. The foundation work started at location 44/0 and 45/0 on 9.5.2017. However, the same was stopped by the local farmers on the very next day. The Petitioner, through its effort, was able to resolve the ROW problem initially. However, very soon the issue recurred and got escalated. This time, in order to resolve the problem, the Petitioner had to take help of various hierarchy of state administration including District Magistrate. Due to



the resistance, foundation work of Location(s) 45 and 44 could be completed only on 24.6.2017 and 18.4.2018 respectively. Further, during erection, ROW problem recurred as the farmers did not allow the work to start. Even after numerous verbal persuasion and several written requests and co-ordination with different level of administration, ROW of location 45/0 is yet to be resolved. Due to this, the erection of Tower Location 45/0 and stringing between 44/0 and 45/0 is still pending. The Petitioner has submitted documentary evidence alongwith the detailed chronology of events in support of the same.

(b) ROW issue was pertaining to location no. 2/0 and also submitted the detailed chronology in support of the same. The Petitioner further submitted that the ROW issue at location no. 2/0 started from 6.8.2018 and resolved on 13.12.2018. After resolving the ROW issue Petitioner has realigned the gang to complete the remaining work at affected areas. The Petitioner has completed the foundation /Erection/ stringing work of affected area in March-2019 and accordingly, COD of Asset-II declared on 29.3.2019.

32. **Delay in NHAI Clearance:** The route of said transmission lines is such that it necessitates crossing of NH-12 (from Jabalpur, Madhya Pradesh to Jaipur, Rajasthan) in Village Gunsli of Rajasthan and NH-116 (from Tonk, Rajasthan to Uniara, Rajasthan) in village Kakod. The clearance for location from 101/0 to 102/0, crossing NH-12 and 69/0 to 70/0, crossing NH-116, was sought from National Highway Authority of India (NHAI) initially on 18.5.2016 and 26.8.2016 respectively. However, owing to administrative clearances and other relevant issues the final approval was accorded on 1.12.2017 and 18.1.2018 for NH-12 and NH-116 respectively. Further, after the receipt of clarification in respect of BG on 23.3.2018 and 3.4.2018, BG was submitted on 30.4.2018 and 1.5.2018



for NH-12 and NH-116 respectively. The Petitioner has submitted the brief chronology of events in support of the same.

33. BRPL vide affidavit dated 8.3.2019 has submitted that time over-run of the transmission asset may be settled between the Petitioner and NPCIL.

34. The Petitioner submitted the following details with regard to time over-run for the instant assets:

Sl. No.	Assets	COD (Actual)	Delay in Months w.r.t. SCOD i.e. 1.12.2017	Remarks
1.	Asset-I: 50 MVAR Line reactor at Jaipur (South) in 400 kV D/C Kota- Jaipur (South) line (Part of 400 kV D/C Rapp- Jaipur TL) utilized as Bus reactor at Jaipur (south) substation	5.3.2018	3 months 4 days	Delay of 3 months 4 days in commissioning of the Asset-I is mainly on account of delay in commissioning of associated transmission line i.e Asset-II. However, Asset-I commissioned prior to Asset-II to control the overvoltage at Jaipur (South) Sub-station
2.	Asset-II:400KV D/C Kota - Jaipur (South) line along with associated bays at Kota and Jaipur(South) (part of RAPP-Jaipur (S) 400KV D/C line with one ckt LILO at Kota)	29.3.2019	15 months 27 days	Delay is mainly due to : <ul style="list-style-type: none"> <li>• ROW issue from 9.5.2017 to 21.6.2018. Chronology of ROW issue from 9.5.2017 to 14.6.2017 has already been submitted in the Petition. However, ROW issue resolved on 21.6.2018.</li> <li>• Delay in getting work permission from National Highway (NH-12 and NH-116): In addition to above, delay in commissioning of instant assets was due to delay in getting Work permission for NH-12 and NH-116 from NHA. At the time of filing Petition, chronology up to May/June-2018 was submitted. However, work permission has been granted in June-2018.</li> </ul>

35. We have considered the submissions made by the Petitioner and the Respondents and perused the documents available on records.



## **Asset-I**

36. As per the investment approval dated 24.7.2015, Asset-I i.e. 50 MVAR line Reactors at Jaipur (south) in 400 kV D/C Kota- Jaipur (South) line were scheduled to be put into commercial operation on 24.11.2017, but the Petitioner was not able to put them into commercial operation due to delay in associated transmission line (Asset-II herein above). The associated transmission line is delayed due to ROW issues and delay in obtaining National Highway clearance. The Petitioner was required to put into commercial operation both line reactors and associated transmission line simultaneously. The Petitioner has submitted CEA energisation certificate dated 15.9.2017 under Regulation 43 of CEA (Measures Related to Safety and Electricity Supply) Regulations, 2010. During 40<sup>th</sup> NRPC meeting held on 28.10.2017, it was agreed to charge Asset-I as bus reactor and accordingly the Petitioner declared commercial operation of the Asset-I on 5.3.2018.

37. We observe that Asset-I comprises of Line reactor and its associated bay at Jaipur and was scheduled to be commissioned alongwith Kota-Jaipur Line. As per CEA Certificate dated 15.9.2017, petitioner completed Asset-I on 15.9.2017 which is prior to its SCOD on 24.11.2017. However, Asset-II was delayed for ROW issues and the Petitioner could not declare its commercial operation. Subsequently, NRPC agreed to charge line reactor as bus reactor on 28.10.2017. However, the Petitioner charged Asset-I as bus reactor only on 5.3.2018. The Petitioner has stated that minutes of NRPC meeting were issued on 11.1.2018 and that delay after NRPC meeting was due to change in orientation of RAPP-Kota T/L termination ends at Jaipur south substation due to which cable route, Earthmat layout, SPR Panel arrangement got changed which took time. The SCOD of Asset-I was 24.11.2017 as line reactor. However, it was subsequently charged as bus reactor after NRPC approval. The delay in the asset has been ascribed to time over-run in Asset-II



which is also owned by the Petitioner. Hence, the time overrun for Asset-1 from SCOD i.e 24.11.2017 to 4.3.2018 is not condoned.

### **Asset-II**

38. The Petitioner has attributed the time delay mainly due to ROW issues encountered during the construction of the line and delay in obtaining National Highway clearance. As per the submissions of the Petitioner, it is observed that the Petitioner has faced ROW problems at various locations 44/0, 45/ and 2/0. The last such Row problem faced by the Petitioner was on 13.12.2018 and after resolving ROW issue, the Petitioner has realigned the gang to complete the remaining work at affected areas.

39. The Petitioner has also submitted details of correspondences with various authorities along with supporting documents. From the submission, it is observed that ROW issues from 10.5.2017 to 13.12.2018 (for 583 days) at various locations affected the commissioning of the instant assets. The time over-run of 583 days on account of ROW problems was beyond the control of the Petitioner. However, the Petitioner has compressed the execution time and commissioned the instant assets (Asset-II) with overall time over-run of 490 days. Therefore, the overall time over-run of 490 days in commissioning of Asset-II is condoned. The time over-run due to other activities like time over-run in NHAI Clearance is not dealt further as the entire time over-run has been condoned on account of time over-run due to ROW issues.

### **Interest During Construction (IDC)**

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



(₹ in lakh)

Asset	IDC as per Auditor Certificate	IDC discharged up to COD	IDC discharged in FY		
			2017-18	2018-19	2019-20
Asset I	90.58	41.56	-	49.02	-
Asset II	2279.72	1777.65	-	-	502.07

41. The Petitioner has submitted the statement showing IDC consisting of the name of the loan, Drawl date, loan amount, interest rate and Interest claimed. The allowable IDC as on COD has been worked out considering the information submitted by the Petitioner. The loan details submitted in Form-9C and date of drawl submitted in IDC statement has been perused for the purpose of calculating IDC for the instant assets. The loan portfolio which is mentioned in IDC statement and in Form 9C are not matching. Hence, for the purpose of determination of allowable IDC, the loan amount as mentioned in Form 9C has been considered. The Petitioner is directed to submit the detailed IDC statement for all assets of the instant petition, by rectifying the above mentioned deviation, at the time of true up of 2014-19.

42. Accordingly, the IDC claimed and considered as on COD and summary of discharge of IDC liability up to COD and thereafter, for the purpose of tariff determination, subject to revision at the time of true up is as below:-

(₹ in lakh)

Assets	IDC as per Auditor certificate	IDC Disallowed due to computation difference and & Time overrun not condoned	IDC admissible	IDC discharged upto COD	Un-discharged IDC as on COD	Year-wise IDC discharged	
						2017-18	2018-19
	1	2	3=(1-2)	4	5=(3-4)	6	7
Asset I	90.58	19.16	71.42	39.17	32.25	-	32.25
Asset II	2279.72	-	2279.72	1777.65	502.07	-	-



## Incidental Expenditure During Construction (IEDC)

43. The Petitioner has claimed Incidental Expenditure during Construction (IEDC) of ₹26.74 lakh, and ₹636.93 lakh for Asset-I, and Asset-II respectively. The claimed IEDC is within the percentage of hard cost of 10.75% as indicated in the FR abstract cost estimate. In respect of Asset-I, the Petitioner has submitted that the entire amount of IEDC has been discharged up to COD. The Petitioner, vide affidavit dated 22.5.2019, has submitted that the entire IEDC claimed for asset II has been discharged up to COD.

44. The details of IEDC claimed and allowed is tabulated below which shall be reviewed at the time of truing up exercise:-

(₹ in lakh)				
Asset	IEDC as per Auditor Certificate	IEDC Admissible	IEDC disallowed due to time over-run	IEDC Allowed (as on COD)
Asset I	26.74	26.74	2.83	23.91
Asset II	636.93	636.93	-	636.93

45. The IEDC allowed for the instant assets will be reconsidered in the light of the directions of Appellate Tribunal for Electricity (APTEL) in judgment dated 2.12.2019 in Appeal Nos. 95 of 2018 and 140 of 2018 against Commission's orders dated 29.7.2016 and 5.10.2017 in Petition Nos. 46/TT/2014 and 2/RP/2017 respectively, at the time of truing up.

## Initial Spares

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



(₹ in lakh)

Asset	Particulars	Initial Spares Claimed
Asset I	Substation	82.53
Asset II	Substation	86.54
	Transmission line	237.16

47. UPPCL and BRPL has submitted that the Petitioner claim of initial spares is not within the limit in accordance with Regulation 13 of the 2014 Tariff Regulations and same may be allowed up to prescribed limit only in accordance with Regulation 13 of the 2014 Tariff Regulations and further the Petitioner prayer for allowing spares under Regulation 54 of CERC (Terms and Condition of Tariff) Regulation, 2014, i.e. “power to relax” should also be rejected.

48. In response to the above submissions of the Respondents, the Petitioner has submitted that the spare procured in the present assets is under brownfield category and the spares procured are essential spares for smooth running of the grid and may be allowed in full under Regulation 54 of CERC (Terms and Condition of Tariff) Regulation, 2014.

49. The Petitioner vide affidavit dated 14.11.2019 has submitted that the that actual capital cost discharged against initial spares is included in the capital cost shown in auditor certificate for respective period i.e. cost discharged up to DOCO is included in DOCO cost and cost discharged towards initial spares in subsequent period is added in Add: Cap. and balance is shown in anticipated expenses (Liability) and submitted the following year-wise amount of initial spares discharged and:-

(₹ in lakh)

Asset	Particulars	Expenditure up to COD	Expenditure beyond COD in FY			Total Spare Cost
			2017-18	2018-19	2019-20	
Asset I	S/S	64.71	1.25	16.57	-	82.53
Asset II	S/S	70.74	-	-	15.80	86.54
	T/L	90.91	-	-	146.25	237.16



50. The initial spares allowed for the purpose of tariff calculation after considering the Plant and Machinery cost excluding IDC, IEDC and Land expenses up to 31.3.2019, subject to true-up are as under:-

(₹ in lakh)

Asset	Particulars	Plant and Machinery Cost excluding IDC, IEDC and Land expenditure up to 31.3.2019	Initial spares claimed	Initial spares disallowed on account of excess claim	Initial spares allowed	Year-wise Initial spares discharged			
						As on COD	2017-18	2018-19	2019-20
						1	2	4	5
Asset I	Substation	1314.95	82.53	3.86	78.67	60.85	1.25	12.71	-
Asset II	Substation	951.55	86.54	31.33	55.21	55.21	-	-	-
	Transmission	19423.31	237.16	43.36	193.80	90.91	-	-	102.89

### Capital cost as on COD

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

(₹ in lakh)

Asset	Capital Cost claimed as on COD as per Auditor Certificate	IDC Disallowed due to computational difference & Time Overrun	Un-discharged IDC as on COD	IEDC Disallowed due to computational difference & Time Overrun	Excess / un-discharged Initial spares as on COD	Capital Cost as on COD considered for tariff calculation
	1	2	3	4	5	6=(1-2-3-4-5)
Asset-I	1267.99	19.16	32.25	2.83	3.86	1209.89
Asset-II	23291.50	-	502.07	-	74.69	22714.74

### Additional Capital Expenditure (ACE)

52. The Petitioner has claimed the following ACE on estimation basis in respect of the instant assets and submitted the Auditor Certificate in support of the same:-

(₹ in lakh)

Asset	Additional Capital expenditure claimed		Total
	2017-18	2018-19	
Asset-I	64.28	149.02	213.30
Asset-II	-	-	-



53. The Petitioner has also claimed ACE vide Auditor's certificate for the FY 2019-20 in respect of the instant assets. However, as FY 2019-20 and 2020-21 falls beyond the tariff period 2014-19 and is not covered under the 2014 Tariff Regulation, the same has not been taken into consideration for the purpose of tariff and shall be dealt during the next tariff period as per extant tariff Regulations.

54. Respondent, UPPCL has submitted that the Petitioner should submit the liability flow statement for additional capital expenditure incurred for Asset I and II. In response, the Petitioner submitted that the additional capital expenditure claimed is on account of Balance/Retention Payments covered under 14(1) (i) of Tariff Regulations, 2014 in the present case.

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

(₹ in lakh)

Particulars	Regulation	Asset-I		Asset-II
		2017-18	2018-19	2018-19
ACE to the extent of Balance & Retention Payment	14 (1)(i)	64.28	100.00	-
IDC Discharged	14 (1)(i)	-	32.25	-
<b>Total Add-Cap allowed for tariff</b>		<b>64.28</b>	<b>132.25</b>	<b>-</b>

#### Capital cost for the tariff period 2014-19

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

(₹ in lakh)

Asset	Capital Cost allowed as on COD	Add Cap allowed for 2017-18	Add Cap allowed for 2018-19	Total Estimated Completion Cost up to 31.3.2019
Asset I	1209.89	64.28	132.25	1406.42
Asset II	22714.74	-	-	22714.74



## Debt-Equity Ratio

57. Debt-Equity Ratio is considered as per Regulation 19 of the 2014 tariff Regulations. The financial package up to COD as submitted in form 6 has been considered to determine the debt-equity Ratio. The capital cost allowed as on the date of commercial operation arrived at as above and additional capitalization allowed have been considered in the debt-equity ratio of 70:30. The debt-equity as on dates of commercial operation and 31.3.2019 considered on normative basis are as under:-

(₹ in lakh)				
Asset-I	As on COD		As on 31.03.2019	
Debt	846.93	70.00%	984.50	70.00%
Equity	362.96	30.00%	421.92	30.00%
<b>Total</b>	<b>1209.89</b>	<b>100.00%</b>	<b>1406.42</b>	<b>100.00%</b>

(₹ in lakh)				
Asset-II	As on COD		As on 31.03.2019	
Debt	15900.40	70.00%	15900.40	70.00%
Equity	6814.34	30.00%	6814.34	30.00%
<b>Total</b>	<b>22714.74</b>	<b>100.00%</b>	<b>22714.74</b>	<b>100.00%</b>

## Return on Equity (ROE)

58. The Petitioner has submitted that ROE has been calculated at the rate of 19.610% after grossing up the ROE with MAT rate of 20.961% as per the above Regulations. The Petitioner has further submitted that the grossed up ROE is subject to truing up based on the effective tax rate of respective financial year applicable to the Petitioner Company.

59. We have considered the submissions made by the Petitioner and Regulation 24 read with Regulation 25 of the 2014 Tariff Regulations provides for grossing up of return on equity with the effective tax rate for the purpose of return on equity. It further provides that in case the generating company or transmission licensee is



paying Minimum Alternative Tax (MAT), the MAT rate including surcharge and cess will be considered for the grossing up of return on equity. Accordingly, the MAT rate applicable during 2013-14 has been considered for the purpose of return on equity, which shall be trued up with actual tax rate in accordance with Regulation 25 (3) of the 2014 Tariff Regulations.

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

Particulars	(₹ in lakh)		
	Asset-I		Asset-II
	2017-18 (Pro-Rata)	2018-19	2018-19 (Pro-Rata)
Opening Equity	362.96	382.25	6814.34
Addition due to Additional Capitalization	19.28	39.68	0.00
Closing Equity	382.25	421.92	6814.34
Average Equity	372.60	402.08	6814.34
Return on Equity (Base Rate )	15.50%	15.50%	15.50%
MAT rate	20.961%	20.961%	20.961%
Rate of Return on Equity (Pre-tax)	19.610%	19.610%	19.610%
<b>Return on Equity (Pre-tax)</b>	<b>5.41</b>	<b>78.85</b>	<b>10.98</b>

### Interest on Loan (IOL)

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

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



d) Notwithstanding moratorium period availed by the transmission licensee, the repayment of the loan shall be considered from the first year of commercial operation of the asset and shall be equal to the annual depreciation allowed.

62. The Petitioner has submitted that the IOL has been claimed on the basis of rate prevailing as on COD and the change in interest due to floating rate of interest applicable, if any, needs to be claimed/ adjusted over the tariff block 2014-19. We have calculated IOL on the basis of rate prevailing as on the date of commercial operation. Any change in rate of interest subsequent to the date of commercial operation will be considered at the time of truing-up. The IOL is allowed considering all the loans submitted in Form-9C. The Petitioner is directed to reconcile the total Gross Loan for the calculation of weighted average Rate of Interest and for the calculation of IDC, which would be reviewed at the time of truing-up.

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

Particulars	Asset-I		Asset-II
	2017-18 (Pro-Rata)	2018-19	2018-19 (Pro-Rata)
Gross Normative Loan	846.93	891.92	15900.40
Cumulative Repayment up to previous Year	0.00	4.85	9.87
Net Loan-Opening	846.93	887.07	15890.53
Addition due to Additional Capitalization	45.00	92.58	0.00
Repayment during the year	4.85	70.77	9.87
Net Loan-Closing	887.07	908.88	15880.66
Average Loan	867.00	897.97	15885.59
Weighted Average Rate of Interest on Loan	8.06%	8.05%	7.85%
<b>Interest on Loan</b>	<b>5.17</b>	<b>72.25</b>	<b>10.26</b>

## Depreciation



64. Depreciation has been dealt with in line of Regulation 27 of 2014 Tariff Regulations. The instant assets were put under commercial operation during 2017-18 & 2018-19. Accordingly, it will complete 12 years beyond the tariff period 2014-19 and depreciation has been calculated annually based on Straight Line Method at the rates specified in Appendix-II to the 2014 Tariff Regulations. Details of the depreciation allowed are as under:-

Particulars	Asset-I		Asset-II
	2017-18 (Pro-Rata)	2018-19	2018-19 (Pro-Rata)
Opening Gross Block	1209.89	1274.17	22714.74
Additional Capital expenditure	64.28	132.25	0.00
Closing Gross Block	1274.17	1406.42	22714.74
Average Gross Block	1242.03	1340.29	22714.74
Rate of Depreciation	5.2800%	5.2800%	5.2872%
Depreciable Value	1238.81	1327.25	22714.74
Remaining Depreciable Value	1238.81	1322.40	22704.87
<b>Depreciation</b>	<b>4.85</b>	<b>70.77</b>	<b>9.87</b>

#### Operation and Maintenance Expenses (O&M Expenses)

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

Asset	2018-19	
	2017-18	2018-19
Asset I	4.83	68.71
Asset II	-	2.28

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



revision in norms for O&M Expenses for claiming the impact of wage hike during 2014-19, if any.

67. BRPL and UPPCL have submitted that the increase in the employee cost, if any, due to wage revision must be taken care by improvement in their productivity levels by the Petitioner company so that the beneficiaries are not unduly burdened over and above the provisions made in the Tariff Regulations, 2014. In response, the Petitioner has submitted that the wage revision of the employees of the Petitioner company is due w.e.f. 1.1.2017 and actual impact of wage hike which will be effective from future date has also not been factored in fixation of the normative O&M rates prescribed for the tariff block 2014-19. The scheme of wage revision applicable to CPSUs being binding on the Petitioner, the Petitioner reserves the right to approach the Commission for suitable revision in the norms for O & M expenditure for claiming the impact of wage hike from 1.1.2017 onwards.

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

<b>Element</b>	<b>2017-18</b>	<b>2018-19</b>
400 kV bays (Rs. lakh/bays)	66.51	68.71
Double Circuit-Twin and Triple Conductor (Rs. lakh/km)	0.780	0.806

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

		(₹ in lakh)	
<b>Asset</b>	<b>Details</b>	<b>2017-18 (Pro-rata)</b>	<b>2018-19</b>



<b>Asset</b>	<b>Details</b>	<b>2017-18 (Pro-rata)</b>	<b>2018-19</b>
Asset-I	50 MVAR Line reactor at Jaipur (South) in 400 kV D/C Kota- Jaipur (South) line (Part of 400 kV D/C Rapp- Jaipur TL) utilized as Bus reactor at Jaipur (south) substation	4.83	68.71
Asset-II	400 KV D/C Kota - Jaipur (South) line along with associated bays at Kota and Jaipur(South) (part of RAPP-Jaipur (S) 400KV D/C line with one ckt LILO at Kota)	-	2.28

### **Interest on Working Capital (IWC)**

70. As per the 2014 Tariff Regulations the components of the working capital and the interest thereon are discussed hereinafter:-

**a) Maintenance spares:**

Maintenance spares @ 15% of Operation and maintenance expenses specified in Regulation 28.

**b) O & M expenses:**

Operation and maintenance expenses have been considered for one month of the O&M expenses.

**c) Receivables:**

The receivables have been worked out on the basis of 2 months' of annual fixed cost as worked out above.

**d) Rate of interest on working capital:**

As per Clause 28 (3) of the 2014 Tariff Regulations, SBI Base Rate (9.10%) as on 01.04.2017 Plus 350 Bps i.e. 12.60% has been considered in respect of Asset-I and for Asset-II SBI Base Rate (8.70%) as on 01.04.2018 Plus 350 Bps i.e. 12.20% has been considered as the rate of interest on working capital.



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

(₹ in lakh)

Particulars	Asset-I		Asset-II
	2017-18 (Pro-Rata)	2018-19	2018-19 (Pro-Rata)
Maintenance Spares	9.79	10.31	41.61
O&M Expenses	5.44	5.73	23.12
Receivables	46.94	49.81	692.47
<b>Total</b>	62.18	65.84	757.20
Rate of Interest	12.60%	12.60%	12.20%
<b>Interest on working Capital</b>	<b>0.58</b>	<b>8.30</b>	<b>0.76</b>

### Annual Transmission charges

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

(₹ in lakh)

Particulars	Asset-I		Asset-II
	2017-18 (Pro-Rata)	2018-19	2018-19 (Pro-Rata)
Depreciation	4.85	70.77	9.87
Interest on Loan	5.17	72.25	10.26
Return on Equity	5.41	78.85	10.98
Interest on Working capital	0.58	8.30	0.76
O & M Expenses	4.83	68.71	2.28
<b>Total</b>	<b>20.83</b>	<b>298.87</b>	<b>34.15</b>

### Filing fee and the publication expenses

73. The Petitioner has sought reimbursement of fee paid by it for filing the petition and publication expenses, in terms of Regulation 52 of the 2014 Tariff Regulations. The Petitioner shall be entitled for reimbursement of the filing fees and publication expenses in connection with the present petition, directly from the beneficiaries on

pro-rata basis in accordance with clause (1) of Regulation 52 of the 2014 Tariff Regulations.

### **License fee and RLDC Fees and Charges**

74. The Petitioner has prayed to allow the Petitioner to bill and recover License fee and RLDC fees and charges, separately from the respondents. We are of the view that the Petitioner shall be entitled for reimbursement of license fee and RLDC fees and charges in accordance with Clause (2)(b) and (2)(a) of Regulation 52 in the 2014 Tariff Regulations.

### **Goods and Services Tax**

75. The Petitioner has prayed for reimbursement of tax, if any, on account of implementation of GST. GST is not levied on transmission service at present and we are of the view that Petitioner's prayer is premature.

### **Sharing of Transmission Charges**

76. UPPCL has submitted that NPCIL should bear the transmission tariff of Asset-I and Asset-II from their COD to March-2020 and March-2021 when both the units of RAPP 7 and 8 are expected to be commissioned. In response, the Petitioner has not filed any rejoinder.

77. NPCIL vide affidavit dated 27.6.2019 has submitted the following:

(i) For evacuation of power from Rajasthan Atomic Power Project (RAPP) -5-8, [RAPP-5 and 6 (2x220 MWe) and RAPP-7 and 8 (2x700 MWe)], following composite system was evolved and was planned to be developed in a phased manner matching with generation schedule:

a) For RAPP-5 and 6

i. RAPP-Kankroli 400kV D/C



- ii. RAPP-Kota 400kV S/C
- b) For RAPP-7 and 8
- i. RAPP-Jaipur (South) 400kV D/C (with one circuit via Kota)
  - ii. RAPP-Shujalpur 400kV D/C (to be implemented through Tariff Based Competitive Bidding) [N.R.- W.R. Tie]
- (ii) RAPP-5 and 6-transmission system along with the generators are in operation after CoD. NPCIL is presently implementing RAPP-7 and 8.
- (iii) In the initial days of Rajasthan Atomic Power Station (RAPS) – 5 and 6 (2x220 MWe), bulk of the power was flowing towards Kota while the lines to Kankroli were almost floating or sometimes importing power. Due to high capacitive loading of Kankroli lines (long lines around 200km), system voltage was remaining high, which forced the opening of one of the Kankroli lines for voltage control under the Northern Regional Load Despatch Centre (hereinafter referred to as ‘NRLDC’) Directive. This reduced the reliability of power evacuation from RAPS-5 and 6 since the stability of the generator was dependent upon availability of the RAPS-Kota Single Circuit (S/C) line. Any transient on this line resulted in loss of evacuation corridor. This had caused outage of RAPS-5 and 6 units in the past, apart from the power-hunting phenomenon experienced on many occasions.
- (iv) Power evacuation lines of Nuclear Power Plants serve twin purposes i.e. the lines are needed not only to evacuate generation but also for drawl of power from the grid (also known as Off-Site Power) during unit outage. This is because the cooling of the reactor is required on a continuous basis to remove the decay heat and to maintain it in a safe shutdown state which is a Regulatory Requirement stipulated by Atomic Energy Regulatory Board (AERB). Since most of the power was flowing towards Kota, it was suggested

that Loop In Loop Out (hereinafter referred to as LILO) of one circuit of 400kV RAPP-Jaipur D/C line (planned for RAPP-7 and 8) may be advanced as it would provide additional corridor for power flow towards Kota and thus ensuring better grid connectivity.

(v) The said asset i.e. 400kV RAPP-Kota S/C along with 400 kV bay at Kota end was put in commercial operation w.e.f. 3.8.2017. Thereafter, a Petition seeking Transmission Charges for the asset was filed before this Commission. The Commission, vide order dated 19.9.2018, disposed-off the Petition No. 206/TT/2017, with directions that the tariff for this line be recovered under Point of Connection (POC) mechanism from the beneficiaries.

(vi) The 400 kV RAPP-Jaipur line along with Kota-Jaipur and associated bay works at Kota and Jaipur have been put in service on 12.4.2019. The RAPP- Jaipur line was put in service to act as an additional corridor for power flow considering benefits from RAPP 7 and 8 (presently under commissioning) and the line is currently being used largely for power evacuation from RAPS, due to the change in the power flow pattern. Due to this change, the RAPP Jaipur line is benefitting RAPS but is also helping stabilise the whole grid and is ultimately benefitting the beneficiaries.

(vii) Following observation are made from the power flow data on all 400kV lines from RAPS-5 to 8 switchyard (post commissioning of RAPP-Jaipur line).

a) Kota-1 and 2 lines are no more evacuating power from RAPS switchyard, instead power is flowing towards RAPS switchyard via these lines.

b) Kankroli-1 and 2 lines (one of them LILoed at Chittorgarh) are now evacuating bulk of the power from RAPS-5 and 6 with maximum power.

c) Shujalpur-1 and 2 (NR-WR Interconnection) lines are evacuating very little power and mostly pushing power towards RAPS switchyards.

d) 400kV RAPP-Jaipur line is evacuating power of RAPS switchyard.

(viii) Based on the above, following inferences emerge in post 400kV RAPP-Jaipur line scenario:

a) Kota s/s, which was a Load Centre earlier, is now injecting power in RAPS switchyard.

b) Kankroli, which was earlier injecting in RAPS switchyard, has now become a Load Centre, to which power is flowing from RAPS-5 and 6.

c) Shujalpur-1 and 2 is also injecting power in RAPS switchyard.

d) Jaipur has become a Load Centre.

e) Availability of Jaipur line has enhanced the stability of power evacuation from the Nuclear Units in compliance with N-1-1 stipulation of CEA Transmission Planning Criteria.

f) When on a D/C line, one circuit trips, the other also trips on power swing. Subsequent to tripping of 400kV APML Tirora Warora line-1, line-2 also tripped on power swing leading to loss of evacuation corridor and outage of all operating units. Carrying this logic to RAPS-5 and 6, any fault on either of the Kankroli lines may lead to power swing and loss of both the lines. However, presence of Jaipur line may

ensure stability of not only RAPS-5 and 6 but also integrated operation of Western and Northern Regions.

g) RAPP-Jaipur line was intended for RAPP-7 and 8, yet it is playing a very pivotal role in stable operation of not only RAPS-5 and 6 but also in integrated operation of Northern and Western Regions.

78. NPCIL has submitted that RAPS-5 and 6 is Central Generating Station (CGS) having allocation to all the constituents of the Northern Region. Thus, with the present power flow configuration/pattern, it enjoys higher comfort level to serve the constituents. It is, therefore, suggested that tariff of all the assets (associated with this Petition) may be recovered under PoC mechanism.

79. The NPCIL has further submitted that on a similar issue, vide order dated 3.10.2018 in Petition No. 118/TT/2017, the Commission directed recovery of transmission tariff for newly commissioned 400 kV double circuit lines for Vapi and Navsari from 400 KV Kakrapar Atomic Power Project (KAPP 3 and 4, 2x700 MW, currently under commissioning) under PoC mechanism as these lines were supporting Gujarat Electricity Transmission Company (GETCO) system for reliability of power flow and to improve the voltage profile in the region.

80. NPCIL has submitted that during the pendency of the present Petition before the Commission, the NPCIL received a letter from the Petitioner having Reference No. C/Comm;/LC/1400MW/NPCIL/2019 dated 19.6.2019 asking it to open a Letter of Credit (LC) for start of 1400 MW Long Term Access granted for RAPP 7 and 8 generation project. This letter is pre-mature as the present Petition has been filed seeking adjudication of the very same issue and as such, it is not open to the Petitioner to approach the NPCIL in an underhanded manner seeking any sort of payment during the pendency of the present Petition. In view of the above, the NPCIL is not liable to open any LC as sought for by the Petitioner.

81. The NPCIL has submitted that the Petition is misconceived and not maintainable on following grounds:

a) The Commissioning of RAPP-7 and 8 lines to Jaipur has significantly improved the reliability margins for inter-regional power import and export and evacuation of power from RAPP complex and is benefiting all the beneficiaries of the region, and therefore the tariff for the line should be under PoC mechanism.

b) The importance of this line in stabilising the grid cannot be overstated. Apart from providing stability to operating units of RAPS 5 and 6, the Jaipur line also ensures that in the event of loss of RAPS Kankroli/Chittorgarh lines (tower failure, or sequential grid transient), Jaipur line may help to cushion the impact of power swing. This will help in supporting power evacuation, not only from RAPS 5 and 6 but also maintaining synchronism between N.R. (RAPP) and W.R. (Shujalpur).

c) The conditions under which the contract was executed have been substantially altered. Due to the subsequent change in power flow pattern, the Jaipur line is being used to stabilize RAPS 5 and 6 along with the interconnected system, as explained earlier.

d) In view of the aforesaid facts, the Respondent, NPCIL is not liable to pay any transmission charges and the same may be directed to be recovered under PoC mechanism, as per the 2010 Sharing Regulations from the beneficiaries.

82. In response, the Petitioner vide affidavit dated 11.10.2019 submitted the following:-



(i) The scope of the scheme was discussed and agreed in 29th Standing Committee meeting (SCM) on Transmission System planning of Northern Region held on 29.12.2010. As per paragraph 18 of the said SCM, instant scheme was approved as Associated Transmission System for RAPP 7 and 8 (2x700 MW). Extract of the discussion is as under:

**Quote**

**“18. Transmission system for RAPP – 7&8 (2x700 MW)**

*POWERGRID stated that M/s NPCIL was developing a 1400 MW (2x700MW) Nuclear power plant in Rawatbhata, Chittorgarh in Rajasthan scheduled for commissioning by Jun-2016 and Dec-2016. The studies were carried out and following Transmission system was propped for RAPP-7&8:*

- *RAPP-Jaipur (South) 400 kV D/c line which one circuit to be LILO at Kota*
- *RAPP-Shujalpur (WR) 400 kV D/c*

*POWERGRID also stated that NPCIL would had to provide 125 MVAR Bus Reactor at their generation switchyard. NPCIL informed about space constraint at switchyard.*

*Chief Engineer (SP&PA), CEA stated that the above bus reactor is necessary and NPCIL should accommodate the same by carrying out requisite reorientation/ modification in switchyard. He further stated that if required a joint survey by a team consisting of CEA, POWERGRID & RAPP engineers could be arranged for identifying space for installing proposed bus reactor in RAPP-7&8 switchyard.*

*POWERGRID requested NPCIL to submit the Long Term Access Application and stated that the above scheme would be taken up after the grant of LTA. Members agreed for the above proposal.”*

(ii) Subsequently, NRPC also concurred this proposal in 19th (Special) meeting held on 4.1.2011. Further, COD of the subject assets has been declared on 5.3.2018 and 29.3.2019 respectively and LTA quantum of 1400 MW is operationalized from 12.4.2019. However, NPCIL generation



pertaining to RAPP 7 and 8 are yet to be commissioned. The anticipated Commissioning is March'2020. As per the implementation agreement signed between Nuclear Power Corporation of India Limited (NPCIL) and the Petitioner, the zero date for Kota-Jaipur(South) 400 kV D/C line (part of RAPP-Jaipur (south) 400 kV D/C line with one ckt LILOed at Kota] along with associated bays at both end is 1.12.2017.

(iii) In the instant case Petitioner has filed the tariff Petition for transmission Assets associated with RAPP 7 and 8. Therefore, linking the instant assets with RAPP 5 and 6 is not just and proper. Further, NPCIL is describing the power flow and Grid stability related issues which are dependent on various other factors in the Grid, which may change from time to time.

(iv) With regard to "RAPP– Kota 400 kV D/C line (part of RAPP-Jaipur(South) 400kV D/C line with one ckt LILOed at Kota)" covered in Petition no. 206/TT/2017, it is pertinent to mention that it was initially included in the LTA granted to RAPP 7 and 8 vide initiation letter reference no. C/SEF/LTA/N/2011/007 dated 4.5.2011. Subsequently, considering the system requirement, in 25th NRPC meeting held on 23-24.2.2012 and 31st Northern Region Standing Committee held on 2.1.2013, the commissioning of instant line was de-linked from the evacuation system of RAPP (7 and 8) of Generation. Accordingly, LTA was not applicable for "RAPP– Kota 400 kV D/C line (part of RAPP-Jaipur (South) 400kV D/C line with one ckt LILOed at Kota)". Accordingly, the Commission has approved transmission tariff under POC for "RAPP– Kota 400 kV D/C line (part of RAPP-Jaipur (South) 400kV D/C line with one ckt LILOed at Kota)" vide order dated 5.11.2018 in Petition no. 206/TT/2017.



(v) Further, in case of “400 kV D/C Kakrapar APP-Navsari T/L along with associated bays at Navsari GIS and 400 kV D/C Kakrapar APP-Vapi transmission line along with associated bays at Vapi sub-station” covered in Petition no. 118/TT/2017 , it is submitted that it has been commissioned as contingency scheme as agreed in 41st Standing Committee Meeting of Power System Planning of Western Region held on 21.12.2016 in the interest of power system and the asset is being utilized as 400 kV D/C Vapi-Kakrapar-Navsari transmission line wherein there is average power flow of approximately 200 MW. Accordingly, the Commission has approved transmission tariff under POC for “400 kV D/C Kakrapar APP-Navsari transmission line along with associated bays at Navsari GIS and 400 kV D/C Kakrapar APP-Vapi transmission line along with associated bays at Vapi sub-station” vide order dated 3.10.2018 in Petition no. 118/TT/2017.

83. We have considered the submissions made by the Petitioner and respondents. The scope of the project under “Transmission system associated with RAPP 7 and 8, Part-B” in Northern Region” has been discussed and agreed in 29th Standing Committee meeting on Transmission System planning of Northern Region held on 29.12.2010 and in the 40<sup>th</sup> meeting of NRPC held on 28.10.2017 and 37<sup>th</sup> meeting of TCC held on 27.10.2017.

84. The Petitioner in the main Petition has submitted that the transmission charges for the instant assets should be shared in accordance with Regulation 43 of the 2014 Tariff Regulations. The Petitioner during the hearing dated 24.5.2019 has submitted that the transmission charges for Asset-I will go into POC and for Asset-II, the transmission system (Kota-Jaipur line) has been executed and implemented as per implementation agreement with NPCIL, therefore, NPCIL should bear transmission charges till COD of generating station.



85. The Respondent, UPPCL vide affidavit dated 15.11.2018 has submitted that NPCIL should bear the transmission charges for Asset-I and Asset-II from their COD to March-2008 and March-2021 when both the units of RAPP 7& 8 are expected to be commissioned.

86. The Respondent, NPCIL has submitted that NPCIL is not liable to pay any transmission charges and the same may be directed to be recovered under PoC mechanism, as per the 2010 Sharing Regulations.

87. With regard to Asset-I, the line reactor as bus reactor has been approved in the 40<sup>th</sup> NRPC meeting held on 28.10.2017 and accordingly, the Asset-I was put into commercial operation and put into use from 5.3.2018. Therefore, the Transmission Charges for Assets-I allowed in this order shall be recovered in accordance with Regulation 43 of the 2014 Tariff Regulations.

88. Regulation 8(5) of the Central Electricity Regulatory Commission (Sharing of inter State Transmission Charges and Losses) Regulations, 2010, (Sharing Regulations) provides as under:

*"Where the Approved Withdrawal or Approved Injection in case of a DIC is not materializing either partly or fully for any reason whatsoever, the concerned DIC shall be obliged to pay the transmission charges allocated under these regulations:*

*Provided that in case the commissioning of a generating station or unit thereof is delayed, the generator shall be liable to pay withdrawal charges corresponding to its Long term Access from the date the Long Term Access granted by CTU becomes effective. The Withdrawal Charges shall be at the average withdrawal rate of the target region*

89. In the instant case, the Asset-II i.e. 400 kV D/C Kota - Jaipur (South) line along with associated bays at Kota and Jaipur (South) (part of RAPP-Jaipur (S) 400 kV D/C line with one ckt LILO at Kota) has been put into use w.e.f. 29.3.2019 but



the associated generation under the scope of NPCIL is not yet ready. Thus, we note that the facts of the case in petition no. 118/TT/2017 and 206/TT/2017 are distinct from the instant petition and are not applicable. Therefore, the tariff allowed for the Asset-II will be borne by RAPP-7&8 from the COD of the Asset-II till the COD of the RAPP-7&8, as provided under Regulation 8(5) of the Central Electricity Regulatory Commission (Sharing of inter-State Transmission Charges and Losses Regulations), 2010 (hereinafter referred to as "2010 Sharing Regulations) as amended from time to time. Thereafter billing, collection and disbursement of the transmission charges shall be governed by the provisions of the 2010 Sharing Regulations. Further, the transmission charges allowed in this order shall be subject to adjustment as per Regulation 7(7) of the 2014 Tariff Regulations.

90. This order disposes of Petition No.283/TT/2018.

**Sd**  
**(I. S. Jha)**  
**Member**

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

**Sd/-**  
**(P. K. Pujari)**  
**Chairperson**

