

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 204/TT/2016

Coram:

Shri Gireesh B. Pradhan, Chairperson

Shri A.K. Singhal, Member

Shri A.S. Bakshi, Member

Dr. M.K. Iyer, Member

Date of Order : 13.11.2017

In the matter of:

Approval of transmission tariff for 400 kV line bays-I & II (404 & 405) for D/C (Quad) Bassi-Jaipur (Phagi-RVPNL) line at 765/400 kV Jaipur (Phagi-RVPNL) Sub-station (COD: 4.1.2015) under "Vindhayachal-IV (1000 MW)-Rihand-III (1000 MW) Generation Project" in Western and Northern Region from COD to 31.3.2019, under 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:

Power Grid Corporation of India Limited
"Saudamini", Plot No.2,
Sector-29, Gurgaon -122 001

.....Petitioner

Vs

1. Rajasthan Rajya Vidyut Prasaran Nigam Limited,
Vidyut Bhawan, Vidyut Marg,
Jaipur-302 005
2. Ajmer Vidyut Vitran Nigam Limited,
400 kV GSS Building (Ground Floor),
Ajmer Road, Heerapura, Jaipur
3. Jaipur Vidyut Vitran Nigam Limited,
400 kV GSS Building (Ground Floor)
Ajmer Road, Heerapura, Jaipur
4. Jodhpur Vidyut Vitran Nigam Limited,
400 kV GSS Building (Ground Floor),
Ajmer Road, Heerapura, Jaipur



5. Himachal Pradesh State Electricity Board,
Vidyut Bhawan, Kumar House Complex Building II,
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,
Government of Jammu and Kashmir,
Mini Secretariat, Jammu
9. Uttar Pradesh Power Corporation Limited,
(Formerly Uttar Pradesh State Electricity Board),
Shakti Bhawan, 14, Ashok Marg,
Lucknow-226 001
10. Delhi Transco Limited,
Shakti Sadan, Kotla Road,
New Delhi-110 002
11. BSES Yamuna Power Limited,
BSES Bhawan, Nehru Place,
New Delhi
12. BSES Rajdhani Power Limited,
BSES Bhawan, Nehru Place,
New Delhi
13. North Delhi Power Limited,
Power Trading & Load Dispatch Group,
Cennet Building, Adjacent to 66/11kV Pitampura-3 Grid Building,
Near PP Jewellers, Pitampura, New Delhi-110 034
14. Chandigarh Administration,
Sector-9, Chandigarh
15. Uttarakhand Power Corporation Limited,
Urja Bhawan, Kanwali Road,
Dehradun



16. North Central Railway,
Allahabad
17. New Delhi Municipal Council,
Palika Kendra, Sansad Marg,
New Delhi-110 002

.....**Respondents**

For petitioner : Shri Rakesh Prasad, PGCIL
Shri S.S. Raju, PGCIL
Shri V.P. Rastogi, PGCIL
Shri M.M. Mondal, PGCIL
Shri S.K. Venkatesan, PGCIL
Shri K.K Jain, PGCIL

For respondents : Shri R.B. Sharma, Advocate for BRPL

ORDER

The petitioner, Power Grid Corporation of India Limited (“the petitioner”) has filed this petition for approval of the transmission tariff for 400 kV line bays-I & II (404 & 405) for D/C (Quad) Bassi-Jaipur (Phagi-RVPNL) line at 765/400 kV Jaipur (Phagi-RVPNL) Sub-station (hereinafter referred to as “transmission asset”) under “Vindhayachal-IV (1000 MW)-Rihand-III (1000 MW) Generation Project” (hereinafter referred to as “transmission system”) in Western and Northern Region for tariff block 2014-19 in accordance with the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 (hereinafter referred to as “the 2014 Tariff Regulations”).

2. The petitioner has been entrusted with the implementation of Vindhayachal-IV (1000 MW)-Rihand-III (1000 MW) transmission system in Western and Northern Region. The Vindhayachal-IV (1000 MW)--Rihand-III (1000 MW) transmission system was agreed as part of BPTA in the 11th WRPC meeting in Western Region held on 25.9.2009 and 13th NRPC meeting held on 26.6.2009. The Investment Approval (IA) for



the transmission system was accorded by the Board of Directors of the petitioner vide Memorandum No C/CP/Vin-IV & Rih-III dated 17.3.2010 at an estimated cost of ₹467299 lakh including an IDC of ₹29779 lakh (based on 3rd Qtr 2009 price level). The project was scheduled to be commissioned within 32 months from the date of IA. Therefore, the scheduled date of commissioning of the transmission system was 16.11.2012. The scope of work originally covered under the scheme is broadly as follows:-

Part-I: Generation specific Transmission System

A. Rihand –III: For NR only

Transmission Line

- (i) Rihand-III–Vindhyachal Pooling Station 765 kV 2xS/C line
(initially to be operated at 400 kV) : Ckt.-I-32 km (approx.)
: Ckt.-II-31 km (approx.)

Sub-station

- (i) 765/400 kV Vindhyachal Pooling Station (Extension)

B. Vindhyachal–IV : For WR only

Transmission Line

- (i) Vindhyachal-IV– Vindhyachal Pooling Station 400 kV D/C (Quad) line : 31 km

Sub-station

- (i) 765/400 kV Vindhyachal Pooling Station (Extension)

Part-II: Common System For both WR and NR

Transmission Lines

- (i) Vindhyachal Pooling Station-Satna 765 kV 2x S/C line : Ckt.-I-237 km
: Ckt.-II-234 km &
: D/C Portion-12 km
- (ii) Satna-Gwalior 765 kV 2xS/C line : Ckt.-I-360 km
: Ckt.-II-359 km &



- : D/C Portion-30 km
- (iii) Sasan-Vindhyachal Pooling Station 765 kV S/C line : 6 km
(iv) Sasan-Vindhyachal Pooling Station 400 kV D/C line : 5 km

Sub-stations

- (i) Establishment of new 765/400 kV, 2x1500 MVA sub-station at Vindhyachal Pooling Station
(ii) Extension of 765/400 kV Satna Sub-station
(iii) Extension of 765/400 kV Gwalior Sub-station
(iv) Extension of 765/400 kV Sasan Sub-station

Part-III: NR Strengthening in regional pool

Transmission Lines

- (i) Gwalior-Jaipur (RVPN) 765 kV S/C line : 300 km
(ii) Bassi-Jaipur (RVPN) 400 kV D/C (Quad) line : 57 km

Substations

- (i) Extension of 765/400 kV Gwalior Sub-station
(ii) Extension of 765/400 kV Jaipur (RVPN) Sub-station
(iii) Extension of 400/220 kV Bassi Sub-station

3. Subsequently, the Revised Cost Estimate of the transmission project was approved by the Board of Directors of the petitioner vide Memorandum No C/CP/RCE/Vin-IV & Rih-III dated 30.5.2016, issued for 329th meeting held on 26.5.2016, for ₹453121 lakh including an IDC of ₹41998 lakh (based on December, 2015 price level). The revised scope of work covered under the system is broadly as follows:-

Part-I: Generation specific Transmission System

A. Rihand-III: For NR only

Transmission Line

- (i) Rihand-III–Vindhyachal Pooling Station 765 kV D/C (initially to be operated at 400 kV)



As per investment approval, the above line was to be implemented as Rihand-III-Vindhyachal pooling station, 2xS/C 765 kV. To minimize RoW constraint, instead of 2xS/c, 1xD/c line was agreed during 32nd Standing Committee of Western Region held on 13.05.2011.

Sub-station

- (i) 765/400 kV Vindhyachal Pooling Station (Extension)

B. Vindhyachal -IV: For WR only

Transmission Line

- (i) Vindhyachal-IV-Vindhyachal Pooling Station 400 kV D/C (Quad) line

Sub-station

- (i) 765/400 kV Vindhyachal Pooling Station (Extension)

Part-II: Common System For both WR and NR

Transmission Line

- (i) Vindhyachal Pooling Station-Satna 765 kV 2xS/C
- (ii) Satna-Gwalior 765 kV 2xS/C
- (iii) Sasan-Vindhyachal Pooling Station 765 kV S/C;
- (iv) Sasan-Vindhyachal Pooling Station 400 kV D/C;

Sub-station

- (i) Establishment of 765/400 kV, 2x1500 MVA substation at Vindhyachal Pooling Station
- (ii) Extension of 765/400 kV Satna Sub-station
- (iii) Extension of 765/400 kV Gwalior Sub-station
- (iv) Extension of 765/400 kV Sasan Sub-station

Part-III: NR Strengthening in regional pool

Transmission Line

- (i) Gwalior-Jaipur (RVPN) 765 kV S/C line
- (ii) Bassi-Jaipur (RVPN) 400 kV D/C (Quad) line

Sub-station

- (i) Extension of 765/400 kV Gwalior Sub-station
- (ii) Extension of 765/400 kV Jaipur (RVPN) Sub-station



(iii) Extension of 400/220 kV Bassi Sub-station

4. The above project scope has been covered in different petitions. The details of assets covered in the instant transmission system alongwith the petition nos. are summarized below:-

Scope as approved in Investment Approval	COD	Petition No.	Order Date
400 kV D/C (QUAD) Vindhyachal IV-Vindhyachal Pooling Station (Bypassing Vindhyachal Pooling Station) TL	1.1.2013	86/2012	4.9.2014
400 kV D/C Sasan-Vindhyachal Pooling TL	1.1.2013		
400 kV, 1*63 MVAR Bus Reactor along with associated 400 kV bays at Satna Sub-station	1.4.2013	113/2013	18.3.2016
400 KV D/C Quad Bassi-Jaipur(RPVNL) Line along with associated bays at Bassi Sub-station	1.7.2013		
Asset I: 765 kV S/C Satna-Gwalior ckt-I with associated bays at Satna Sub-station and line reactor	1.3.2014	295/2013	17.5.2015
3X80MVAR 765 kV Line reactor along with associated bays at Gwalior Sub-station.	1.1.2014		-
Asset II: 765 kV D/C Rihand III-Vindhyachal Pooling station TL	6.7.2014, 15.10.2015		Removed from 295/2013 and refiled in 71/TT/2015
Asset III: 765 kV S/C Sasan-Vindhyachal Pooling station TL	1.4.2015		
3*80 MVAR, 765 kV Line Reactor along with associated bays at GWALIOR SS only (for 765 S/C Gwalior-Jaipur Part -I Transmission Line)	1.3.2014	192/2014	31.12.2015
765 S/C Satna-Gwalior-Ckt 2 Transmission Line along with associated bays and respective line reactor at Satna & Gwalior Sub-Station	6.8.2014	201/2014	23.5.2016
Asset -1: One Ckt of Rihand III-Vindhyachal PS 765 kV D/C Line	6.7.2014	71/TT/2015	4.1.2016
Asset -2: 3x80 MVAR Line Reactor with Line Bay commissioned as Bus Reactor at Satna Sub-station for 765 kV S/C Vindhyachal PS-Satna Ckt # 1	13.11.2014		
Asset -3: 3x80 MVAR Line Reactor with Line Bay commissioned as Bus Reactor at Satna Sub-station for 765 kV S/C Vindhyachal PS-Satna-Ckt # 2	14.1.2015		
Asset -4: 765 kV S/C Gwalior-Jaipur (RVPN) Ckt 1 Line and Bay Extension of 765/400 kV Phagi (RVPN Jaipur) Sub-station	14.8.2015		
Asset-5 (i): 765/400 kV Vindhyachal PS (New) including 1500 MVA ICT II along with associated	2.4.2015		



bays at Vindhyachal PS & 765 S/C Vindhyachal PS - Satna Ckt 1 T/L with Bays at Vindhyachal PS along with 3*80 MVAR Switchable Line Reactor & associated line bays at Vindhyachal PS for one ckt of 400 kV D/C Sasan-Vindhyachal PS T/L & 765 kV S/C Sasan-Vindhyachal PS T/L along with associated bays at Reliance Sasan			
Asset -5 (ii): 765 kV, 240 MVAR Bus Reactor #2 at with bay Satna Sub-station	25.6.2015		
Asset -5 (iii): 1500 MVA ICT- 1 with one spare unit along with associated bays at Vindhyachal PS	4.7.2015		
Asset -5 (iv): 765 kV S/C Vindhyachal - Satna ckt-2, with Line Reactor (3*80 MVAR) & 1 spare unit along with Bays at Vindhyachal PS	11.8.2015		
Asset -5 (v): 765 kV 240 MVAR Bus Reactor (3*80) with Bays at Vindhyachal PS	24.8.2015		
Asset -5 (vi): 400 kV Bays at Vindhyachal PS for 400 KV D/C Vindhyachal PS-Sasan Ckt #2 TL and 400 KV D/C Vindhyachal PS - Vindhyachal IV TL	31.8.2015		
Asset -5 (vii): 400kV bay at Vindhyachal PS for 400kV Vindhyachal IV-Vindhyachal PS ckt-I T/L	21.10.2015		
Asset -5 (viii): 400 KV bay (1 No.) at Vindhyachal PS for Ckt-I of 765 KV D/C Rihand-III-Vindhyachal PS TL	6.11.2015		
Asset -5 (ix): 400 kV 63 MVAR Bus Reactor along with Bays at Vindhyachal PS	21.3.2016		
Asset -6: 2 nd Ckt of Rihand III- Vindhyachal PS 765 kV D/C Line and associated bay at Vindhyachal PS	15.10.2015		
400 kV line bays-I & II (404 & 405) for D/C (Quad) Bassi-Jaipur (Phagi-RV PNL) line at 765/400 kV Jaipur (Phagi-RV PNL) Sub-station	4.1.2015	Covered in instant petition	

5. AFC was granted for the instant transmission asset vide order dated 6.1.2017 under the first proviso to Regulation 7(7) of the 2014 Tariff Regulations, subject to proviso (iii) and (iv) of the said Regulation.

6. This order has been issued after considering petitioner's affidavits dated 26.12.2016 and 5.6.2017.



7. The details of the transmission charges claimed by the petitioner for the instant asset are as under:-

Particulars	(₹ in lakh)				
	2014-15 (pro-rata)	2015-16	2016-17	2017-18	2018-19
Depreciation	49.29	203.75	218.95	234.16	234.16
Interest on Loan	65.65	258.53	257.51	254.90	231.10
Return on Equity	54.92	227.02	243.96	260.90	260.90
Interest on Working Capital	5.52	22.75	23.69	24.61	24.31
O & M Expenses	29.18	124.60	128.74	133.02	137.42
Total	204.56	836.65	872.85	907.59	887.89

8. The details submitted by the petitioner in support of its claim for interest on working capital are as under:-

Particulars	(₹ In lakh)				
	2014-15 (pro-rata)	2015-16	2016-17	2017-18	2018-19
Maintenance Spares	18.09	18.69	19.31	19.95	20.61
O & M expenses	10.05	10.38	10.73	11.09	11.45
Receivables	140.92	139.44	145.48	151.27	147.98
Total	169.06	168.51	175.52	182.31	180.04
Interest Rate	13.50%	13.50%	13.50%	13.50%	13.50%
Interest	22.82	22.75	23.69	24.61	24.31

9. 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. The petitioner has served the petition on the respondents. BSES Rajdhani Power Limited (BRPL), Respondent No. 12 has filed reply dated 2.12.2016. U.P. Power Corporation Limited (UPPCL), Respondent No. 9 has filed reply dated 6.1.2017. BRPL has raised the issue of cost over-run, non filing of Transmission Service Agreement (TSA), time over-run, effective tax rates, lack of details regarding communication system, not filing of mandatory certificates required under the 2014 Tariff Regulations, filing fee and expenditure incurred on publication of notices and O&M Expenses.



UPPCL has raised the issue of non-submission of information regarding delegation of powers by the Government of India (GOI) to the Board of Directors of the petitioner for approval of projects, non-submission of technical approval of TCC/NRPC for the instant asset as the decision taken by WRPC cannot be applied in NR without such approval, time over-run, cost over-run, lack of element wise liability flow statement for additional capitalisation, interest on loan, etc. The petitioner has filed rejoinders dated 28.12.2016 and 5.4.2017 to the reply of BRPL and UPPCL respectively. The objections raised by the respondents and the clarifications given by the petitioner are addressed in the relevant paragraphs of this order.

10. BRPL has submitted that the petitioner has not filed the Transmission Service Agreement (TSA) between the transmission licensee and the designated inter-state customers as per provisions of Regulation 3(63) of the 2014 Tariff Regulations. BRPL has further submitted that the petitioner has not filed the details of the communication system in the petition, so as to know if the OPGW in place of earth wire has been used under the project. In response, the petitioner has submitted that as per clause 13(5) of Central Electricity Regulatory Commission (Sharing of Inter State Transmission Charges and Losses) Regulations, 2010, the notified model Transmission Service Agreement shall be the default transmission agreement and shall mandatorily apply to all designated ISTS customers, therefore as per these regulations signing of TSA is not mandatory. The petitioner has further submitted that however, BRPL has already signed TSA on 19.8.2011 and has submitted a copy of the same. The petitioner has also submitted that the instant petition is only for line bays at Phagi Sub-station and hence no OPGW is included in the instant petition.



11. UPPCL has submitted that the petitioner should submit the Office Memorandums vide which the Cabinet Committee for Economic Affairs has granted powers to the Board of Directors of public utilities for all the time to come. The petitioner has submitted the related Office Memorandums, vide which a Navratna Company has been delegated full powers to incur expenditure on purchase of new items or for replacement without any monetary ceiling. This issues has already been considered by the Commission in its order dated ---.8.2017 in Petition No.41/TT/2016. The relevant portion of the said order is as under:-

“UPPCL has submitted that the petitioner should explain whether Government of India has delegated all the powers of Cabinet Committee for Economic Affairs regarding granting of approval of government projects to the Board of Directors of Public Sector Utilities for all times to come and the petitioner should submit the concerned orders of the Government of India. The petitioner has clarified that as per Clause 2 (i) of DPE’s Office Memorandum No. DPE/11(2)/97-Fin dated 22.7.1997 Navratna Company has full power to incur expenditure on purchase of new items or for replacement, without any monetary ceiling. The petitioner has submitted a copy of OM No. 26(3)/2005-GM-GL-92 dated 1.5.2008 and OM No. DPE/11(2)/97-FIN dated 22.7.1997, a copy of which has also been provided to UPPCL. It is observed from the above said Office Memorandums, that the Navratna status of the petitioner and other PSUs is reviewed by the Department of Public Enterprises, Ministry of Heavy Industries and Public Enterprises on yearly basis and if they do not fulfil the conditions laid down the Navratna status is withdrawn. However, this is not a relevant consideration as the approval of the Board of Directors should be accorded when the company is enjoying the Navratna status. In the present case, PGCIL as a Navratna company has approved the investment approval and therefore, the same has been considered for the purpose of tariff. ”

12. UPPCL has further submitted that the instant asset was agreed in the 11th WRPC meeting held on 10.9.2009 and on a query from the petitioner, RRVPNL had stated that the utility who seeks connectivity with its Jaipur South Sub-station would have to bear the cost of bays. UPPCL has also submitted that thereafter the proposal was put up in the 12th TCE meeting and 13th NRPC meeting held on 26/27.6.2009, but there is no technical approval by TCC/NRPC. The petitioner has submitted that the approval for



instant asset was accorded in 12th TCC and 13th NRPC held on 26/27.6.2009 and extract of same has already been submitted alongwith the petition.

Capital cost

13. 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; 39

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

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

14. The details of the apportioned approved capital cost, capital cost as on the date of commercial operation and estimated additional capital expenditure incurred or projected to be incurred for the instant transmission asset as submitted by the petitioner in the



petition vide Auditors' Certificate dated 10.8.2016 and considered for the purpose of tariff are as under:-

(₹ in lakh)				
Approved apportioned cost	Revised approved apportioned cost	Cost as on COD	Additional capital expenditure incurred/ projected during 2016-17	Total estimated completion cost upto 31.3.2018
3030.81	4693.82	3858.87	575.98	4434.85

Cost over-run

15. BRPL has submitted that the projected completion cost of the instant assets is more than the initial approved apportioned cost by 46% which is on a higher side and the revised cost estimates have been approved without submissions of any reasons to the Board of Directors by the petitioner. BRPL has further submitted that the petitioner has not given element wise break-up of project cost Form-5. The petitioner in its rejoinder has submitted that the reasons of cost over-run were already submitted in the petition. The petitioner has further submitted that temporary arrangement was made on the request of RRVPNL for evacuation of power from Kalisindh and Kawai generation station due to non-readiness of 765 kV of Anta and Phagi Sub-station of RRVPNL. The petitioner has also submitted that RCE was made due to price variation, variation in quantities of approved items, addition/deletion of items, increase in land and compensation, foreign exchange rate variation and decrease in IDC and IEDC. UPPCL has submitted that as the estimated completion cost is lower than the RCE, there is no cost over-run.

16. We have considered the submissions of the respondents and the petitioner. There is no cost over-run in the case of instant transmission asset as the total estimated



completion cost is ₹4434.85 lakh against the revised approved apportioned cost of ₹4693.82 lakh for the instant asset.

Time over-run

17. The project was scheduled to be commissioned within 32 months from the date of investment approval dated 17.3.2010. Accordingly, the scheduled COD works out to 16.11.2012. The instant asset was put into commercial operation on 4.1.2015. Thus, there is a total time over-run of 25 months and 18 days in COD of instant asset. The petitioner has submitted that the time overrun was due to following reasons:-

- a) Delay in finalization of MOU for deposit works due to dispute on overhead charges between RRVPNL and the petitioner. The petitioner has submitted time taken to resolve this issue from 17.3.2010 to 1.3.2012;
- b) ROW problem at various locations in Chittora village were resolved in July, 2013 and additional gantry was planned subsequently. The petitioner was required to sign supplementary agreement with RRVPNL to carry out this additional gantry which took additional time period from 8.7.2013 to 13.12.2013;
- c) The delay due to non-readiness of contingency arrangement and, upstream/downstream lines at 765/400 kV RRVPNL's Phagi Sub-station was not ready to evacuate the power further. As Phagi Sub-station was not ready, RRVPNL, vide letter dated 21.11.13, requested to make contingency arrangement for evacuation of power from their Kawai and Kalisindh STPP by connecting 400 kV D/C Bassi-Phagi line with RRVPNL's 765 kV Anta-Phagi line. The petitioner has claimed that the delay from Dec,2013 is due to non readiness of contingency arrangement.



Delay in signing MoU with RRVPNL for deposit works

18. The petitioner vide affidavit dated 5.6.2017 has submitted that there was a substantial delay in signing MOU with RRVPNL for deposit works to be carried out by RRVPNL at Jaipur (Bassi) Sub-station. The petitioner submits that (as per PERT Chart and CPM analysis) last date for MOU signing with RRVPNL was anticipated on 16.8.2010. The petitioner has submitted the following reasons for delay in signing MOU:-

- 1) As per prevailing practice, extension works in a Sub-station is executed through the utility owning the Sub-station on deposit work basis and generally overhead charges @15% are paid to the implementing agency. Since the work was to be executed by RRVPNL on deposit work basis in their Phagi Sub-station, the petitioner requested RRVPNL to construct 400 kV bays for aforesaid assets at their Phagi Sub-station in February, 2010. In this regard, RRVPNL submitted total estimated cost of the deposit works which included overhead charges @40%.
- 2) The petitioner requested RRVPNL to reduce the overhead charges and the matter was raised to JS(Trans) vide letter dated 24.5.2011. This issue was further discussed in 21st and 22nd NRPC meeting dated 2.6.2011 and 29.7.2011 respectively and matter was resolved. Accordingly, agreement was signed between petitioner and RRVPNL for execution work in March, 2012. The petitioner has submitted the chronology of events from 17.3.2010 to 1.3.2012.



The petitioner has claimed that it took around 23 months 14 days to finalize the overhead charges of deposit works.

RoW Problem at Chittora Village:

19. The petitioner has submitted that initial delay of 13 months in commissioning of 400 kV Phagi bays was mainly due to delay in commissioning of associated 400 kV Bassi-Jaipur (Phagi) Transmission Line due to RoW problem at location nos. 42/3 to 43/0, 21/0, 9/2 to 9A/1, 1/0, 2/0, 25/0, 26/0, 42/0 to 43/0. The petitioner submitted the detailed chronology of events and relevant documents. The balance work in respect of 5 towers foundation and stringing took additional 5 months, when RoW issues were cleared in July, 2013. Due to severe RoW issues in Chittora Village, the route of 400 kV D/C Jaipur (Bassi)-Jaipur (Phagi) line was changed near RRVPNL’s Phagi Sub-station. This necessitated additional Gantry and BPI Portion work to facilitate termination of the line in originally designated 400 kV Bassi bays at Phagi Sub-station (RRVPNL). This additional work was also included in the deposit work of RRVPNL vide supplementary agreement. The petitioner has submitted chronology of events as given below:-

Sr. No.	Date	Action taken
1	8.7.2013	Approval for rerouting of line due to RoW at Chittora village
2	16.7.2013	POWERGRID requested for cost estimate to RRVPNL
3	4.10.2013	Demand notice given by RRVPNL for additional arrangement made for termination of line through BPI structure
4	27.11.2013	Regarding estimate and consent letter by RRVPNL
5	13.12.2013	Consent letter given by POWERGRID to RRVPNL for using Lattice structure with BPI
6	16.12.2013	CEA approved the energisation of 400 kV Jaipur (RRVPNL)-Jaipur(Bassi) line
7	6.12.2013	MOM for execution of additional work
8	24.12.2013	LOA placed to L&T for Additional work
9	7.8.2014	Supplementary agreement for additional work due to rerouting
10	4.1.2015	Asset commissioned



Contingency Arrangement due to non-readiness of 765 kV Phagi and Anta Bays

of RRVPNL:

20. The 400 kV D/C Bassi-Phagi line was ready in December, 2013. However, upstream/ downstream lines at 765/400 kV RRVPNL's Phagi Sub-station was not ready to evacuate the power further. As Phagi Sub-station was not ready, RRVPNL, vide letter dated 21.11.13, requested to make contingency arrangement for evacuation of power from their Kawai and Kalisindh STPP by connecting 400 kV D/C Bassi-Phagi line with RRVPNL's 765 kV Anta-Phagi line. Accordingly, 400 kV D/C Bassi-Phagi line was charged bypassing non-readied 765 kV bays of Phagi Sub-station and power flow started through 765 kV RRVPNL's Anta-Phagi line to Bassi Sub-station of the petitioner from January, 2014 onwards at 400 kV voltage level. Further, 765 kV Anta-Phagi Transmission line 1 and 2 were charged on 4.1.2015 and 6.1.2015 respectively, 400 kV D/C Bassi-Phagi line was re-terminated on its designated 400 kV Bassi gantry at RRVPNL's Phagi Sub-station and 400 kV D/C Bassi-Phagi line was re-charged on 4.1.2015. The 400 kV Phagi bays of 400 kV Bassi-Phagi Transmission Line could not be charged before 4.1.2015 due to non-readiness of 765 kV Phagi Sub-station of RRVPNL. Such a unique arrangement was done on the request of RRVPNL for evacuation of power from Kalisindh and Kawai Generating Station due to non-readiness of 765 kV of Anta and Phagi Sub-station of RRVPNL.

21. BRPL has submitted that the petitioner has attributed the time over-run was to delay in making contingency arrangement, due to non-readiness of 765 kV of Anta and Phagi Sub-station of RRVPNL and delay due to RoW issues. BRPL has further submitted that the justification for time over-run is not backed by the relevant statutory



documents. Therefore, the time over-run may not be allowed and accordingly IDC and IEDC during the period of time over-run be disallowed. The petitioner has submitted that detailed justification for time over-run has already been given in the petition. The petitioner has further submitted that it co-ordinated with RRVPNL all through till commissioning of the instant asset as is evident from the correspondence submitted in the petition and has submitted that the total delay is on account of RRVPNL.

22. UPPCL has submitted that the petitioner has attributed the time over-run from 13.12.2013 to 4.1.2015 to non-readiness of 765/400 kV Sub-station of RRVPNL due to RoW problem. However, the petitioner has failed to explain the delay for the period from 31.7.2013 to 31.12.2013 i.e. 5 months. UPPCL has submitted that in view of above, IDC and IEDC for 5 months may not be allowed to the petitioner and the transmission charges for the period 31.12.2013 to 4.1.2015 i.e. 1 year 22 days need to be paid by RRVPNL. The petitioner has in its rejoinder submitted that the reasons for delay have been already submitted in the petition and the delay from 31.7.2013 to 31.12.2013 was due to time taken to complete the foundation, erection and stringing works of 5 nos. tower locations.

23. We have considered the submission of the petitioner, BRPL and UPPCL. The petitioner has submitted that it took 23 months and 14 days i.e. from 17.3.2010 to 1.3.2012 to resolve the issue of MOU and to finalize the overhead charges of deposit works. We have perused the correspondences between the petitioner and RRVPNL. We are of the view that 23 months and 14 days is a long period for finalization of MoU. The delay in finalization of MOU is on account of resolving commercial issue of



overhead charges and signing MOU for deposit works. It is observed that it is purely a commercial issue between the petitioner and RRVPNL. We feel that such commercial issues should have been resolved administratively or with the intervention of NRPC within a reasonable period. The bays are owned by the petitioner and it is the decision of the petitioner to implement these bays through RRVPNL. Since the RRVPNL is acting agent of the petitioner for the execution of the bays, the delay on account of finalization of overhead charges and signing of MOU is attributable to the petitioner. Any consequences on delay is to be settled between them. The petitioner has taken long period of 23 months and 14 days to resolve the issue. After considering the submission of the petitioner, we feel that six months is a reasonable period to resolve this kind of commercial issue. Therefore, out of 23 months and 14 days, delay of 6 months is condoned and remaining time delay of 17 months and 14 days is attributable to the petitioner and not condoned.

24. The petitioner has submitted that the delay in completion of bays at Bassi Sub-station was due to ROW problem at Jaipur-Bassi line. We are of the view that the delay of associated Jaipur-Bassi line do not completely halt the work of bays at Sub-station end. The Commission, in its order dated 18.3.2016 in Petition No. 113/TT/2013 for 400 kV Jaipur-Bassi line, addressed the issue of time over run and held as under:

“15. The petitioner has submitted that the delay of 13 months for commissioning of Asset-II is mainly due to ROW problems at location nos. 42/3 to 43/0, 21/0, 9/2 to 9A/1, 1/0, 2/0, 25/0, 26/0, 42/0 to 43/0. The petitioner has submitted the documents in support of the difficulties in development of the transmission system due to ROW problems. It is observed that the ROW issues have persisted from November, 2011 to July, 2013. Thus, the time over-run of 8 months from scheduled date of commissioning to July, 2013 on account of ROW issues is condoned...”



25. The RoW problems at various locations in Chittora village were resolved in July, 2013 and balance work in case of 5 towers foundation and stringing took 5 months for completion. Further, due to RoW problem at Chittora village re-routing of line was approved on 8.7.2013, which necessitated additional gantry and BAI portion work. The bays work could not be halted completely due to the ROW problem of associated lines. Further, the Commission in its order dated 18.3.2016 in Petition No. 113/TT/2013 condoned the delay of 8 months out of 13 months. As discussed in para 23, the delay of 6 months has already been condoned out of 23 months and 14 days. The balance delay of 2 months and 4 days is condoned due to delay in commissioning of line as per the order dated 18.3.2016.

26. The petitioner has further submitted that 400 kV D/C Bassi-Phagi line was ready in December, 2013. However, upstream/ downstream lines at 765/400 kV RRVPNL's Phagi Sub-station was not ready to evacuate the power further. As Phagi Sub-station was not ready, RRVPNL, vide letter dated 21.11.13, requested to make contingency arrangement for evacuation of power from their Kawai and Kalisindh STPP by connecting 400 kV D/C Bassi-Phagi line with RRVPNL's 765 kV Anta-Phagi line. The petitioner, on the request of RRVPNL, made contingency arrangement to evacuate power from Kawai and Kalisindh bypassing the bays at Jaipur (Phagi) Sub-station and power flow through 765 kV Anta-Phagi line at 400 kV level. RRVPNL took considerable time in (Engineering and settlement with Contractor) finalization of this additional work and signed the Agreement only on 7.8.14. The petitioner submits that the work was held up on this front in the absence of the agreement. L&T started the work and completed in 4 months after signing of agreement. We are of the view that this additional work could



have been envisaged by the petitioner at the earlier stage and therefore, it cannot be said that the delay on account of additional work through supplementary agreement with RRVPNL is beyond the control of the petitioner. Further, if we calculate the completion time period of 32 months from 1.3.2012 upto COD i.e. 1.4.2015, the petitioner has taken 35 months to complete the commissioning of bays of 400 kV Jaipur-Bassi line at Jaipur Sub-station exceeding 3 months from schedule timeline of 32 months. That means the major delay in completion of the work of bays is attributable to the delay in finalization of MOU for deposit works and delay of few months is on account of commissioning of associated line. The delay due to non readiness of contingency arrangement has no impact on the overall time overrun.

27. As discussed above, out of 25 months and 18 days, delay from 18.9.2010 to 1.3.2012 (17 months and 14 days) is disallowed and remaining period is condoned. Accordingly, IDC and IEDC corresponding is disallowed for 17 months and 14 days as discussed in the subsequent paragraphs.

Treatment of IDC and IEDC

28. The petitioner has claimed Interest During Construction (IDC) of ₹200.92 lakh for the instant asset. The IDC on cash basis has been worked out on the basis of loans deployed for the instant asset as per Form-9C submitted in the petition. Further, the Commission has disallowed time period of 17 months and 14 days. Therefore, IDC amount of ₹200.92 lakh claimed for the instant asset is worked out after reducing the corresponding IDC of disallowed period and considered for tariff computation.



29. The petitioner has claimed ₹60.50 lakh for the instant asset as Incidental Expenditure During Construction (IEDC). The IEDC amount claimed is within the percentage on Hard Cost as submitted in the Abstract Cost Estimate. Further, the Commission has disallowed time period of 17 months and 14 days. Therefore, IEDC amount of ₹60.50 lakh claimed for the instant asset is worked out after reducing the corresponding IEDC of disallowed period and considered for tariff computation.

30. The allowable IDC and IEDC have been worked out as under:-

(₹ in lakh)			
	Claimed	Disallowed *	Admissible
IDC	200.92	141.44	59.48
IEDC	60.50	18.35	42.15

(*IDC and IEDC have been disallowed on pro-rata basis)

The petitioner has not claimed any initial spares for the instant assets.

31. Accordingly, capital cost as on the date of commercial operation for the instant transmission asset after allowing IDC and IEDC is considered as ₹3699.09 lakh, as per Regulation 9(2) of the 2014 Tariff Regulations.

32. The element wise break-up of capital cost as on COD is as under:-

(₹ in lakh)		
Particulars	Capital cost as on COD as per Auditor's certificate dated 10.8.2016 (submitted in the petition)	Admitted capital Cost
Freehold Land	-	-
Leasehold Land	-	-
Building & Other Civil Works	-	-
Transmission Line	-	-
Sub-Station Equipments	3858.87	3699.09
PLCC	-	-
Total	3784.08	3784.08



Additional Capitalisation and De-capitalisation

33. 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.

34. 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”.

35. The “cut-off date” in the case of instant transmission assets is 31.3.2018.

36. UPPCL has submitted that the petitioner should submit element wise liability flow statement. The petitioner has submitted that element wise liability to justify balance and retention payment and additional capitalisation has already been submitted in Form-5 in the petition.

37. The additional capital expenditure of ₹575.98 lakh during 2016-17 has been claimed by the petitioner on account of sub-station equipments. The additional capital



expenditure incurred or projected to be incurred and claimed by the petitioner in respect of the instant transmission asset is within the cut-off date and is on account of balance payments. Thus, the additional capital expenditure of ₹575.98 lakh during 2016-17, claimed in respect of the instant transmission asset is allowed.

38. Based on the above, gross block has been considered as per details given below:-

Cost as on COD	Additional Capital Expenditure Incurred/Projected			Total capital cost as on 31.3.2019
	(₹ in lakh)			
	2014-15	2015-16	2016-17	
3699.09	-	-	575.98	4275.07

39. Thus, the element wise break-up of the gross block considered is as under:-

Particulars	As on COD	Projected Additional Capital Expenditure					As on 31.3.2019
		2014-15	2015-16	2016-17	2017-18	2018-19	
Freehold Land	-	-	-	-	-	-	-
Leasehold Land	-	-	-	-	-	-	-
Building & Other Civil Works	-	-	-	-	-	-	-
Transmission Line	-	-	-	-	-	-	-
Sub-Station Equipments	3699.09	-	-	575.98	-	-	4275.07
PLCC	-	-	-	-	-	-	-
Total	3699.09	-	-	575.98	-	-	4275.07

Debt- Equity Ratio

40. 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.”

41. The capital cost on the dates of commercial operation arrived at as above and additional capitalization allowed have been considered in the normative debt-equity ratio of 70:30. The details of debt-equity as on dates of commercial operation and 31.3.2019 considered on normative basis are as follows:-

Particulars	As on COD		As on 31.3.2019	
	Amount (₹ in lakh)	% age	Amount (₹ in lakh)	% age
Debt	2589.37	70.00	2992.55	70.00
Equity	1109.73	30.00	1282.52	30.00
Total	3699.09	100.00	4275.07	100.00

Return on equity

42. 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.”

43. The petitioner has submitted that RoE has been calculated at the rate of 19.610% after grossing up the RoE with MAT rate as per the above Regulations. The petitioner has further submitted that the grossed up RoE is subject to truing up based on the actual tax paid along with any additional tax or interest, duly adjusted for any refund of tax including the interest received from IT authorities, pertaining to the tariff period 2014-19 on actual gross income of any financial year. Any under-recovery or over-recovery of grossed up ROE after truing up shall be recovered or refunded to the beneficiaries on year to year basis.

44. The petitioner has further submitted that adjustment due to any additional tax demand including interest duly adjusted for any refund of the tax including interest received from IT authorities shall be recoverable/adjustable after completion of income tax assessment of the financial year.

45. BRPL has submitted that the petitioner should furnish details in the working of effective tax rate and the reasons as to why it is opting for MAT. BRPL has further submitted that the instant asset is a new transmission project and is also entitled for Tax Holiday under Section 80 IA of the Income Tax Act, 1961, which needs to be passed on to the concerned respondents. The petitioner has submitted that the rate of RoE has been calculated as per clause 25 of the 2014 Tariff Regulations and as the RoE is grossed up with MAT rate, any tax benefit is already factored into it, MAT rate being the minimum tax rate to be paid by the company not for each asset separately but as a whole.



46. We have considered the submissions made by the petitioner. Regulation 24 read with Regulation 25 of the 2014 Tariff Regulations provides for grossing up of RoE with the effective tax rate for the purpose of RoE. 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 RoE. Accordingly, the MAT rate applicable during 2013-14 has been considered for the purpose of RoE, which shall be trued up with actual tax rate in accordance with Regulation 25 (3) of the 2014 Tariff Regulations. Accordingly, the RoE allowed is as given under:-

Particulars	2014-15 (pro-rata)	2015-16	2016-17	(₹ in lakh)	
				2017-18	2018-19
Opening Equity	1109.72	1109.72	1109.72	1282.52	1282.52
Addition due to Additional Capitalisation	0.00	0.00	172.79	0.00	0.00
Closing Equity	1109.72	1109.72	1282.52	1282.52	1282.52
Average Equity	1109.72	1109.72	1196.12	1282.52	1282.52
Return on Equity (Base Rate)	15.50%	15.50%	15.50%	15.50%	15.50%
Tax rate for the year 2013-14 (MAT)	20.961%	20.961%	20.961%	20.961%	20.961%
Rate of Return on Equity (Pre-tax)	19.610%	19.610%	19.610%	19.610%	19.610%
Return on Equity (Pre-tax)	51.87	217.62	234.56	251.50	251.50

Interest on loan

47. 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 65 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 66 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.”

48. 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) Gross amount of loan, 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 repayment for the tariff period 2014-19 shall to be considered to be equal to the depreciation allowed for that year;

(c) 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 project and shall be equal to the annual depreciation allowed;



(d) 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; and

(e) As per Regulation 26(5) only actual loans have been considered for computation of weighted average rate of interest.

49. The petitioner has prayed that it be allowed 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. UPPCL has submitted that the petitioner has negotiated with SBI, weighted average fixed rate of interest on loan 10.13% and in terms of bond for the tariff period, hence there are no loans having floating rate of interest during the tariff period. The petitioner in its rejoinder has submitted that loans are deployed in combination of fixed interest rate (Bonds) and floating interest rate (SBI), in the instant petition, hence, it has prayed that it be allowed 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. We would like to clarify that the interest on loans has been calculated 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.

50. Detailed calculations in support of interest on loan have been calculated as given at Annexure of this order.

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



(₹ in lakh)

Particulars	2014-15 (pro-rata)	2015-16	2016-17	2017-18	2018-19
Gross Normative Loan	2589.36	2589.36	2589.36	2992.54	2992.54
Cumulative Repayment upto Previous Year	0.00	46.55	241.87	452.38	678.11
Net Loan-Opening	2589.36	2542.80	2347.49	2540.16	2314.44
Addition due to Additional Capitalisation	0.00	0.00	403.19	0.00	0.00
Repayment during the year	46.55	195.31	210.52	225.72	225.72
Net Loan-Closing	2542.80	2347.49	2540.16	2314.44	2088.71
Average Loan	2566.08	2445.15	2443.83	2427.30	2201.58
Weighted Average Rate of Interest on Loan	10.14%	10.14%	10.14%	10.13%	10.13%
Interest	62.01	247.89	247.73	245.98	223.03

Depreciation

52. 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.”

53. The petitioner has claimed actual depreciation as a component of annual fixed charges. In our calculations, depreciation has been calculated in accordance with Regulation 27 of the 2014 Tariff Regulations extracted above.

54. The instant transmission asset was put under commercial operation during 2014-15. Accordingly, it will complete 12 years after 2018-19. As such, depreciation has been calculated annually based on Straight Line Method at the rates specified in Appendix-II to the 2014 Tariff Regulations.

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

Particulars	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19



	(pro-rata)				
Opening Gross Block	3699.08	3699.08	3699.08	4275.06	4275.06
Additional Capital expenditure	0.00	0.00	575.98	0.00	0.00
Closing Gross Block	3699.08	3699.08	4275.06	4275.06	4275.06
Average Gross Block	3699.08	3699.08	3987.07	4275.06	4275.06
Rate of Depreciation	5.2800%	5.2800%	5.2800%	5.2800%	5.2800%
Depreciable Value	3329.17	3329.17	3588.36	3847.56	3847.56
Remaining Depreciable Value	3329.17	3282.62	3346.50	3395.17	3169.45
Depreciation	46.55	195.31	210.52	225.72	225.72

Operation & Maintenance Expenses (O&M Expenses)

56. Regulation 29(4) (a) of the 2014 Tariff Regulations specifies the norms for operation and maintenance expenses for the transmission system based on the type of sub-station and the transmission line. Norms specified in respect of the elements covered in the instant petition are as under:-

Elements	2014-15	2015-16	2016-17	2017-18	2018-19
400 kV bays (₹ lakh per bay)	60.30	62.30	64.37	66.51	68.71

57. The petitioner has computed normative O&M Expenses as per sub-clause (a) of clause (4) of Regulation 29 of the 2014 Tariff Regulations. Accordingly, the petitioner's entitlement to O&M Expenses have been worked out and the allowable O&M Expenses for the instant transmission asset are as under:-

Particulars	(₹ in lakh)				
	2014-15 (pro-rata)	2015-16	2016-17	2017-18	2018-19
2 nos. 400 kV bays	28.76	124.60	128.74	133.02	137.42

58. The petitioner has submitted that O&M Expenses for the tariff period 2014-19 had been arrived at on the basis of normalized actual O&M Expenses during the period 2008-09 to 2012-13. The petitioner has further submitted that the wage revision of the employees is due during 2014-19 and actual impact of wage hike effective from a future



date has not been factored in fixation of the normative O&M rates specified for the tariff block 2014-19. The petitioner has submitted that it would approach the Commission for suitable revision in norms for O&M Expenses for claiming the impact of wage hike during 2014-19, if any.

59. BRPL has submitted that the increase in the employee cost, if any, due to wage revision must be taken care of by improvement in productivity levels by the petitioner. The petitioner in its rejoinder has reiterated his submissions made in the petition.

60. The O&M Expenses have been worked out as per the norms of O&M Expenses specified in the 2014 Tariff Regulations. As regards impact of wage revision, any application filed by the petitioner in this regard will be dealt with in accordance with the appropriate provisions of the 2014 Tariff Regulations.

Interest on working capital

61. 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 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;”

62. The interest on working capital is worked out in accordance with Regulation 28 of the 2014 Tariff Regulations. The rate of interest on working capital considered is 13.50% (SBI Base Rate of 10% plus 350 basis points). The interest on working capital determined is as under:-

Particulars	(₹ in lakh)				
	2014-15 (pro-rata)	2015-16	2016-17	2017-18	2018-19
Maintenance Spares	18.10	18.69	19.31	19.95	20.61
O & M expenses	10.05	10.38	10.73	11.09	11.45
Receivables	135.98	134.59	140.77	146.70	143.56
Total	164.14	163.66	170.81	177.74	175.63
Interest	5.28	22.09	23.06	24.00	23.71

Transmission charges

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

Particulars	(₹ in lakh)				
	2014-15 (pro-rata)	2015-16	2016-17	2017-18	2018-19
Depreciation	46.55	195.31	210.52	225.72	225.72
Interest on Loan	62.01	247.89	247.73	245.98	223.03
Return on equity	51.87	217.62	234.56	251.50	251.50
Interest on Working Capital	5.28	22.09	23.06	24.00	23.71
O & M Expenses	28.76	124.60	128.74	133.02	137.42
Total	194.48	807.52	844.61	880.23	861.39

64. The petitioner has submitted that the claim for transmission charges and other charges is exclusive of incentive, late payment surcharge, FERV, any statutory taxes,



levies, duties, cess, or any other kind of impositions etc. The same, if imposed shall be borne and additionally paid by the respondents. We have considered the submissions of the petitioner. The petitioner is entitled for late payment surcharge and FERV as per Regulations 45 and 50 respectively of the 2014 Tariff Regulations.

Filing Fee and the Publication Expenses

65. 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. BRPL has submitted that the filing fee and publication expenses 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

66. 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.

Service Tax

67. The petitioner has made a prayer to be allowed to bill and recover the service tax on transmission charges separately from the respondents, if service tax on transmission is withdrawn from negative list at any time in future. The petitioner has further prayed that if any taxes and duties including cess etc. are imposed by any



statutory/Government/municipal authorities, it shall be allowed to be recovered from the beneficiaries. In view of abolishment of service tax w.e.f. 1.7.2017, we consider petitioner's prayer infructuous and accordingly this prayer is rejected.

Sharing of Transmission Charges

68. The billing, collection and disbursement of the transmission charges approved shall be governed by the provisions of Central Electricity Regulatory Commission (Sharing of Inter-State Transmission Charges and Losses) Regulations, 2010, as amended from time to time, as provided in Regulation 43 of the 2014 Tariff Regulations.

69. This order disposes of Petition No. 204/TT/2016.

sd/-
(M.K. Iyer)
Member

sd/-
(A.S. Bakshi)
Member

sd/-
(A.K. Singhal)
Member

sd/-
(Gireesh B. Pradhan)
Chairperson



Annexure

CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN						
	Details of Loan	2014-15	2015-16	2016-17	2017-18	2018-19
1	Bond XXXVI					
	Gross loan opening	335.55	335.55	335.55	335.55	335.55
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	22.37	44.74
	Net Loan-Opening	335.55	335.55	335.55	313.18	290.81
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	22.37	22.37	22.37
	Net Loan-Closing	335.55	335.55	313.18	290.81	268.44
	Average Loan	335.55	335.55	324.37	302.00	279.63
	Rate of Interest	9.35%	9.35%	9.35%	9.35%	9.35%
	Interest	31.37	31.37	30.33	28.24	26.14
	Rep Schedule	15 Annual instalments from 29.8.2016				
2	SBI (21.3.2012)					
	Gross loan opening	2365.66	2365.66	2365.66	2365.66	2365.66
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	215.06	430.12
	Net Loan-Opening	2365.66	2365.66	2365.66	2150.60	1935.54
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	215.06	215.06	215.06
	Net Loan-Closing	2365.66	2365.66	2150.60	1935.54	1720.48
	Average Loan	2365.66	2365.66	2258.13	2043.07	1828.01
	Rate of Interest	10.25%	10.25%	10.25%	10.25%	10.25%
	Interest	242.48	242.48	231.46	209.41	187.37
	Rep Schedule	22 half yearly instalment from 31.08.2016				
	Total Loan					
	Gross loan opening	2701.21	2701.21	2701.21	2701.21	2701.21
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	237.43	474.86
	Net Loan-Opening	2701.21	2701.21	2701.21	2463.78	2226.35
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	237.43	237.43	237.43
	Net Loan-Closing	2701.21	2701.21	2463.78	2226.35	1988.92
	Average Loan	2701.21	2701.21	2582.50	2345.07	2107.64
	Weighted Average Rate of Interest	10.14%	10.14%	10.14%	10.13%	10.13%
	Interest	273.85	273.85	261.79	237.65	213.52

