

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 57/TT/2017

Coram:

**Shri Gireesh B. Pradhan, Chairperson
Shri A. K. Singhal, Member
Shri A. S. Bakshi, Member
Dr. M. K. Iyer, Member**

Date of Order : 08.12.2017

In the matter of:

Petition for determination of transmission tariff from COD to 31.3.2019 for Asset I: 125 MVAR Bus Reactor at 400/220 kV Sonepat Sub-station extension; Asset-II:125 MVAR Bus Reactor at 400/220 kV Jaipur (South) Sub-station extension; Asset-III:125 MVAR Bus Reactor at 400/220 kV Bassi Sub-station extension; Asset-IV:125 MVAR Bus Reactor at 400/220 kV Manesar Sub-station extension; Asset-V:125 MVAR Bus Reactor at 400/220 kV Panchkula Sub-station extension; Asset-VI:125 MVAR Bus Reactor at 400/220 kV Kaithal Sub-station extension; Asset-VII:125 MVAR Bus Reactor at 400/220 kV Kanpur Sub-station extension under "Bus Reactor scheme" in Northern Region, Phase-II 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, Janpath, Jaipur - 302 005
Rajasthan, India.
2. Ajmer Vidyut Vitran Nigam Limited,
Vidyut Bhawan, Panchsheel Nagar,
Makarwali Road, Ajmer– 305004 Jaipur
3. Jaipur Vidyut Vitran Nigam Limited,



Vidyut Bhawan, Janpath, Jaipur - 302 005
Rajasthan, INDIA.

4. Jodhpur Vidyut Vitran Nigam Limited,
New Power House, Industrial Area
Jodhpur-342003
5. Himachal Pradesh State Electricity Board,
Vidyut Bhawan Shimla
Himachal Pradesh (India)-171004
6. Punjab State Electricity Board,
1st Floor, Patiala - 147001,
Opposite Kali Mata Mandir
Shakti Sadan
7. Haryana Power Purchase Centre,
Shakti Bhawan, Sector -6
Panchkula-134109
8. Power Development Department,
Exhibition Ground, PDD Building,
Jahangir Chowk - 190001, Srinagar;
9. Uttar Pradesh Power Corporation Ltd.,
Shakti Bhawan, 14, Ashok Marg,
Lucknow - 226001, UP, India.
10. Delhi Transco Limited,
Shakti Sadan, Kotla Marg,
New Delhi-110002
11. BSES Yamuna Power Limited, New Delhi
C-7, Yamuna Vihar, New Delhi - 110053
12. BSES Rajdhani Power limited,
33 KV Grid, BSES Bhawan,
Adchini, New Delhi -110017
13. North Delhi Power Limited,
Shakti Deep Building,
District Office Building,
Rohini Sector 3 New Delhi- 110085
14. Chandigarh Administration,
Union Territory



5th Floor, Secretariat Deluxe Building,
Sector - 9 - D Chandigarh– 160017

15. Uttarakhand Power Corporation Ltd.,
Victoria Cross Vijeyta Gabar Singh Bhawan,
Kanwali Road, Balliwala Chowk,
Dehradun-248001, Uttarakhand
16. North Central Railway,
Subedarganj, Doomanganj, Allahabad
Uttar Pradesh - 211011
17. New Delhi Municipal Council,
Palika Kendra, Parliament Street,
New Delhi-110001

.....Respondents

For Petitioner : Shri S.K. Niranjn, PGCIL
Shri S.K. Venkatesan, PGCIL
Shri Rakesh Prasad, PGCIL
Shri B. Dash, PGCIL
Shri V.P. Rastogi, PGCIL

For Respondents : Shri R.B. Sharma, Advocate, BRPL

ORDER

The instant petition has been filed by Power Grid Corporation of India Ltd. (PGCIL) for approval of the transmission tariff for Asset I: 125 MVAR Bus Reactor at 400/220 kV Sonepat Sub-station extension; Asset-II:125 MVAR Bus Reactor at 400/220 kV Jaipur (South) Sub-station extension; Asset-III:125 MVAR Bus Reactor at 400/220 kV Bassi Sub-station extension; Asset-IV:125 MVAR Bus Reactor at 400/220 kV Manesar Sub-station extension; Asset-V:125 MVAR Bus Reactor at 400/220 kV Panchkula Sub-station extension; Asset-VI:125 MVAR Bus Reactor at 400/220 kV Kaithal Sub-station extension; Asset-VII:125 MVAR Bus Reactor at 400/220 kV Kanpur Sub-station extension (hereinafter referred to as "assets") under "Bus Reactor Scheme in Northern



Region, Phase-II”(hereinafter referred to as “the scheme”) in Northern Region for the 2014-19 tariff period 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 scope of the scheme was discussed and agreed in the 33th Standing Committee meeting on transmission system planning of Northern Region constituents held on 23.12.2013.

3. The Investment Approval for the transmission project was accorded by the Board of Directors of the petitioner vide Memorandum No. C/CP/BR (Phase-II) dated 2.2.2015, at an estimated cost of ₹8727 lakh including an IDC of ₹511 lakh based on October, 2014 price level. Further, Revised Cost Estimate (RCE) of the instant assets was approved by the board of directors of the petitioner vide letter dated 29.8.2017 for ₹10304 lakh including an IDC of ₹164 lakh (based on April, 2017 price level).

4. The scope of work covered under the transmission system is broadly as follows:-

Sub-station works:

a. Panchkula 400/220 kV (POWERGRID) Sub-station (Extension)

400 kV

Bus Reactor bays: 1 no.
400 kV Bus Reactors: 1 nos. of 125 MVAR Bus Reactor

b. Sonapat 400/220 kV (POWERGRID) Sub-station (Extension)

400 kV

Bus Reactor bays : 1 no.
400 kV Bus Reactors: 1 nos. of 125 MVAR Bus Reactor

c. Manesar 400/220 kV (POWERGRID) Sub-station (Extension)

400 kV

Bus Reactor bays : 1 no.



400 kV Bus Reactors: 1 nos. of 125 MVAR Bus Reactor

d. Kaithal 400/220 kV (POWERGRID) Sub-station (Extension)

400 kV

Bus Reactor bays : 1 no.

400 kV Bus Reactors: 1 nos. of 125 MVAR Bus Reactor

e. Kanpur 400/220 kV (POWERGRID) Sub-station (Extension)

400 kV

Bus Reactor bays : 1 no.

400 kV Bus Reactors: 1 nos. of 125 MVAR Bus Reactor

f. Jaipur South 400/220 kV (POWERGRID) Sub-station (Extension)

400 kV

Bus Reactor bays : 1 no.

400 kV Bus Reactors: 1 nos. of 125 MVAR Bus Reactor

g. Bassi 400/220 kV (POWERGRID) Sub-station (Extension)

400 kV

Bus Reactor bays : 1 no.

400 Bus Reactors: 1 nos. of 125 MVAR Bus Reactor

5. The project was scheduled to be commissioned within 30 months from the date of Investment Approval. Therefore, the scheduled date of commissioning of the transmission system was 1.8.2017. The petitioner vide affidavit dated 27.1.2017 has submitted that the instant assets were put under commercial operation as follows:-

SI No.	Assets	Scheduled COD as per IA	COD (Anticipated)	COD
1	Asset-I: 125 MVAR Bus Reactor at 400/220 kV Sonapat Substation Extension	1.8.2017	1.11.2016	24.12.2016
2	Asset-II: 125 MVAR Bus Reactor at 400/220 kV Jaipur (South) Substation Extension	1.8.2017	1.11.2016	1.1.2017
3	Asset-III: 125 MVAR Bus Reactor at 400/220 kV Bassi Substation Extension	1.8.2017	1.10.2016	1.10.2016
4	Asset-IV: 125 MVAR Bus Reactor at 400/220 kV Manesar Substation Extension	1.8.2017	1.12.2016	30.9.2017* (anticipated)
5	Asset-V: 125 MVAR Bus Reactor at 400/220 kV Panchkula Substation Extension	1.8.2017	1.11.2016	23.10.2016



6	Asset-VI: 125 MVAR Bus Reactor at 400/220 kV Kaithal Substation Extension	1.8.2017	1.11.2016	29.10.2016
7	Asset-VII: 125 MVAR Bus Reactor at 400/220 kV Kanpur Substation Extension	1.8.2017	1.12.2016	31.12.2016

6. The petitioner has submitted COD letter, RLDC certificate and CEA energization letter, vide affidavit dated 27.1.2017 for Asset I, II, III, V, VI and VII. The petitioner, vide affidavit dated 6.9.2017, has submitted that Asset IV is anticipated to be put under commercial operation on 30.9.2017 and has prayed to allow tariff on pro-rata basis on revised anticipated COD. Asset IV is yet to be put under commercial operation and its COD is uncertain. Hence, the tariff of Asset IV is not considered at this stage and the petitioner is at liberty to approach the Commission after the COD of Asset IV.

7. Annual Fixed Charges was granted for the instant transmission assets vide order dated 12.6.2017 under the first proviso to Regulation 7(7) of the 2014 Tariff Regulations, for inclusion in the PoC charges.

8. The petitioner has claimed transmission charges for the instant assets as under:-

(₹ in lakh)						
Particulars	Asset-I			Asset-II		
	2016-17 (pro-rata)	2017-18	2018-19	2016-17 (pro-rata)	2017-18	2018-19
Depreciation	15.09	80.89	100.29	8.80	50.98	60.75
Interest on Loan	15.77	81.32	94.58	8.62	47.70	53.17
Return on Equity	16.81	90.13	111.75	9.81	56.80	67.68
Interest on working capital	1.95	8.98	10.28	1.44	6.87	7.55
O & M Expenses	17.48	66.51	68.71	16.09	66.51	68.71
Total	67.10	327.83	385.61	44.76	228.86	257.86



(₹ in lakh)

Asset-III				Asset-V		
Particulars	2016-17 (pro-rata)	2017-18	2018-19	2016-17 (pro-rata)	2017-18	2018-19
Depreciation	18.14	53.08	62.45	19.86	63.81	69.17
Interest on Loan	18.81	52.53	57.82	20.77	63.68	64.04
Return on Equity	20.21	59.15	69.58	22.13	71.09	77.07
Interest on working capital	2.93	7.07	7.73	2.85	7.81	8.18
O & M Expenses	32.19	66.51	68.71	28.38	66.51	68.71
Total	92.28	238.34	266.29	93.99	272.90	287.17

(₹ in lakh)

Asset-VI				Asset-VII		
Particulars	2016-17 (pro-rata)	2017-18	2018-19	2016-17 (pro-rata)	2017-18	2018-19
Depreciation	17.12	52.82	57.26	9.43	55.39	72.09
Interest on Loan	17.81	52.33	52.64	9.39	52.58	64.45
Return on Equity	19.08	58.85	63.80	10.50	61.72	80.33
Interest on working capital	2.61	7.05	7.38	1.49	7.18	8.32
O & M Expenses	27.34	66.51	68.71	16.27	66.51	68.71
Total	83.96	237.56	249.79	47.08	243.38	293.90

9. The details of the "Interest on Working Capital" claimed by the petitioner for the instant assets are as under:-

(₹ in lakh)

Asset-I				Asset-II		
Particulars	2016-17 (pro-rata)	2017-18	2018-19	2016-17 (pro-rata)	2017-18	2018-19
Maintenance Spares	9.66	9.98	10.31	9.65	9.98	10.31
O & M Expenses	5.36	5.54	5.73	5.36	5.54	5.73
Receivables	41.19	54.64	64.27	29.84	38.14	42.98
Total	56.21	70.16	80.31	44.85	53.66	59.02
Rate of Interest	12.80%	12.80%	12.80%	12.80%	12.80%	12.80%
Interest	7.19	8.98	10.28	5.74	6.87	7.55

(₹ in lakh)

Asset-III				Asset-V		
Particulars	2016-17 (pro-rata)	2017-18	2018-19	2016-17 (pro-rata)	2017-18	2018-19
Maintenance Spares	9.66	9.98	10.31	9.66	9.98	10.31
O & M Expenses	5.37	5.54	5.73	5.36	5.54	5.73
Receivables	30.76	39.72	44.38	35.53	45.48	47.86
Total	45.79	55.24	60.42	50.55	61.00	63.90
Rate of Interest	12.80%	12.80%	12.80%	12.80%	12.80%	12.80%
Interest	5.86	7.07	7.73	6.47	7.81	8.18



(₹ in lakh)

Particulars	Asset-VI			Asset-VII		
	2016-17 (pro-rata)	2017-18	2018-19	2016-17 (pro-rata)	2017-18	2018-19
Maintenance Spares	9.66	9.98	10.31	9.66	9.98	10.31
O & M Expenses	5.36	5.54	5.73	5.37	5.54	5.73
Receivables	32.95	39.59	41.63	31.05	40.56	48.98
Total	47.97	55.11	57.67	46.08	56.08	65.02
Rate of Interest	12.80%	12.80%	12.80%	12.80%	12.80%	12.80%
Interest	6.14	7.05	7.38	5.90	7.18	8.32

10. The petitioner has served the petition on the respondents and notice of this application has been published in the newspapers in accordance with Section 64 of the Electricity Act, 2003 (“the Act”). No comments have been received from the public in response to the notices published by the petitioner. BSES Rajdhani Power Limited (BRPL), Respondent No. 12, has filed reply vide affidavit dated 28.4.2017. BRPL has raised issue of cost over-run, transmission service agreement, additional capital expenditure, initial spares, effective tax rate, filing of mandatory certificates, wage revision, reimbursement of expenditure towards filing fee, license fee etc. The petitioner has filed rejoinder, vide affidavit dated 8.5.2017, to the reply of BRPL. The objections raised by the BRPL and the clarifications given by the petitioner are addressed in the relevant paragraphs of this order.

11. BRPL has submitted that the petitioner has not furnished the Transmission Service Agreement (TSA) and as per Regulation 3(63) of the 2014 Tariff Regulations, the petitioner is required to submit the TSA. In response, the petitioner in its rejoinder has submitted that as per clause 8 of Model TSA, signing of TSA is not mandatory. Further, BRPL has already signed TSA on 19.8.2011 and the petitioner has submitted a copy of TSA with BRPL. BRPL has further submitted that the petitioner has not filed the certificates required under Appendix-VI of the 2014 Tariff Regulations to comply with the



CEA Regulations. In response the petitioner submitted that the CEA certificate has been filed vide affidavit dated 21.1.2017.

12. BRPL further submitted that one of the agencies may be asked to represent the interest of consumer in the instant petition, as the representation and participation in the proceedings is integral part of hearing in terms of Section 94(3) of the Electricity Act, 2003. In response, the petitioner submitted that there is no need to appoint any agency as the petitioner has provided a copy of the petition to the beneficiaries and published notices in newspapers inviting comments of general public.

13. Having heard the petitioner and perused the material on record, we proceed to dispose of the petition.

Capital Cost

14. 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 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."

15. The revised approved apportioned cost of the assets has been submitted vide affidavit dated 6.9.2017. The petitioner, vide affidavit dated 28.7.2017, has submitted Auditor's Certificates dated 13.6.2017 (Asset I & II), 27.1.2017 (Asset III), 21.6.2017 (Asset IV), 7.2.2017 (Asset V & VI) and 31.5.2017 (Asset VIII) for the details of 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 assets. The details submitted by the petitioner are as follows:-

(₹ in lakh)

Assets	Revised Approved Apportioned Cost	Cost incurred up to actual COD	Estimated additional capital expenditure			Total estimated completion cost
			2016-17 (pro-rata)	2017-18	2018-19	
Asset-I	1917.43	960.34	223.47	715.71	-	1899.52
Asset-II	1162.95	561.40	226.74	362.36	-	1150.50
Asset-III	1198.35	552.87	281.81	348.00	-	1182.68
Asset-V	1345.52	578.91	571.08	128.06	64.04	1342.09
Asset-VI	1116.60	594.19	357.98	105.88	52.95	1111.00
Asset-VII	1466.02	630.63	176.66	496.11	124.03	1427.43

Cost Over-Run/Variation

16. The petitioner has submitted that the cost over-run in all the assets has mainly due to price variation of the items based on prevailing market condition. The price variation has due to price difference between the approved cost and the LOA received through



competitive bidding. Further, indices of various major raw materials such as HG Zinc, CRGO and CPI during execution of project increased. The petitioner has submitted that as per its policy, the procurement is carried out under open competitive route by providing equal opportunity to all the eligible firms. The bid prices are invited for the complete scope of work on overall basis and the contracts are awarded to the qualified bidder, whose bid is determined as the lowest evaluated, techno-commercially responsive and, who is considered to have the capacity and capability to perform the contract based on the assessment, if carried out. Thus, the differences in FR cost and awarded/actual cost may be because of various market forces and the pricing strategies followed by bidder(s).

17. BRPL has submitted that there is cost over-run and there is cost variation, though the instant assets are of similar configuration of 125 MVAR bus reactor. Further, the estimated costs vary to a large extent and the petitioner has not provided any proper reason/justification for the same. In response, the petitioner while reiterating the submissions made in the petition, has submitted that for procurement, open competitive bidding route is followed and by providing equal opportunity to all eligible firms, lowest possible market prices for required product/services is obtained and contracts are awarded on the basis of lowest evaluated eligible bidder. The best competitive bid prices against tenders may happen to be lower or higher than the cost estimate depending upon prevailing market conditions. The reasons for item wise cost variation between approved cost and estimated cost as on COD are explained in detail in Form-5 submitted with the petition.



18. The petitioner has submitted, vide affidavit dated 6.9.2017, the RCE for Bus Reactors in Northern Region (Phase-II) at ₹10304 lakh including IDC of ₹164 lakh at April, 2017 price level. The approved apportioned cost and apportioned RCE cost is given below:-

(₹ in lakh)			
Name of Assets	Apportioned approved cost	Revised cost estimates, if applicable	Completed Cost
Asset-I	1439.21	1917.43	1899.52
Asset-II	1091.62	1162.95	1150.50
Asset-III	1060.55	1198.35	1182.68
Asset-V	1105.59	1345.52	1342.09
Asset-VI	843.02	1116.60	1111.00
Asset-VII	1309.58	1466.02	1427.43
Total	6849.57	8206.87	8113.22
As per Investment Approval	8727.00	10304.00	-

19. Though the instant assets are of similar configuration, there is a significant difference in the cost of the 125 MVAR reactor at Sonapat, Panchkula and Kanpur. The cost of Bus Reactors at Sonapat, Panchkula and Kanpur Sub-stations are substantially higher than the cost of Bus Reactors at other sub-stations. The petitioner has submitted in Form 5-B, that it is mainly due to increase in cost of structure switchyard at Sonapat and civil works at Kanpur. However, the petitioner has not submitted the details of the same. The petitioner is directed to submit the reasons for variation of structure switchyard at Sonapat, Panchkula and Civil work at Kanpur alongwith comparison of cost and justification. In view of this, the estimated completion cost of the Assets I, V and VII has been restricted to ₹1200 lakh each on provisional basis based on the average cost of Asset II, III, V and VI (rounded figure). The cost of these Bus Reactors



shall be reviewed on the basis of the information submitted by the petitioner at the time of truing-up.

20. As per para 5 above, all the assets, except Asset IV, have been put into commercial operation before the scheduled COD. Thus, there is no time over-run in case of all the assets, except Asset IV.

Interest During Construction (IDC)

21. The petitioner has claimed Interest during Construction (IDC) of ₹26.69 lakh, ₹7.74 lakh, ₹6.60 lakh, ₹11.13 lakh, ₹9.62 lakh and ₹12.47 lakh in respect for Assets-I, II, III, V, VI and VII respectively. The allowable IDC has been worked out based on the loans deployed for the assets as per Form-9C of the petition. The petitioner, vide affidavit dated 28.7.2017, has submitted the information related to IDC. The IDC discharged up to COD and the “IDC to be discharged” after COD i.e. in , 2016-17 and 2017-18 have also been given for all the assets. Accordingly, the IDC allowed for instant assets has been summarised as under:-

(₹ in lakh)							
Asset	Claimed as on COD as per the respective Auditor's Certificate	Discharged up to COD (as claimed)	Allowed/ Worked out on Cash Basis as on COD	Balance IDC as on COD discharged during FY 2016-17 (as claimed)	Balance IDC discharged during FY 2016-17 for calculation purpose	Balance IDC to be discharged during 2017-18 (as claimed)	Balance IDC discharged during 2017-18 for calculation purpose
I	26.69	7.03	7.01	0.48	0.48	19.17	0.00
II	7.74	0.00	0.00	0.00	0.00	7.74	0.00
III	6.60	0.00	0.00	0.00	0.00	6.60	0.00
V	11.13	0.00	0.00	0.00	0.00	11.13	0.00
VI	9.62	0.00	0.00	0.00	0.00	9.62	0.00
VII	12.47	0.00	0.00	0.00	0.00	12.47	0.00

22. IDC has been worked out up to COD on cash basis and has been capitalized as on COD. The “Balance IDC” which is undischarged as on COD, has not been



capitalized if they were not claimed to be discharged and the IDC claimed to be discharged has been capitalized in the respective years. The balance IDC, which is still to be discharged by the petitioner, would be capitalized once the actual payment is made by the petitioner on cash basis for the instant assets. These allowed/disallowed IDC shall be verified at the time of truing up, subject to submission of information regarding IDCs' actual disbursement/ payment made against each of the asset.

23. It is further observed that there is a difference in the Gross Loan claimed as on COD (as per Form-9C) and the Gross Loan considered for the working of IDC by the petitioner. Therefore, the Gross Loan (as per Form-9C) is considered for the calculation of IDC, as it gives the actual loan deployed for the asset. Accordingly, the petitioner is directed to reconcile the 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.

Incidental Expenditure During Construction (IEDC)

24. The petitioner has claimed IEDC of ₹35.27 lakh, ₹17.76 lakh , ₹16.08 lakh, ₹50.16 lakh, ₹42.57 lakh and ₹63.54 lakh in respect of Assets-I, II, III, V, VI and VII respectively paid during Construction as on COD, which is within the percentage of hard cost (i.e, 10.75%) indicated in the Abstract Cost Estimate. As the IEDC claimed as on COD is lower than 10.75% of the hard cost in case of all the assets except Asset-VII, therefore the IEDC claimed in case of all the Assets except Asset-VII is capitalized in the present case. In case of Asset-VII, the IEDC claimed has been restricted to 10.75% of hard cost.



25. The details of IEDC claimed and allowed are given in the following table:-

(₹ in lakh)		
Assets	Claimed	Allowed
I	35.27	35.27
II	17.76	17.76
III	16.08	16.08
V	50.16	50.16
VI	42.57	42.57
VII	63.54	59.62

Initial Spares

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

“13. Initial Spares

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

(d) Transmission system

- (i) Transmission line-1.00%
- (ii) Transmission Sub-station (Green Field)-4.00%
- (iii) Transmission Sub-station (Brown Field)-6.00%
- (iv) Series Compensation devices and HVDC Station-4.00%
- (v) Gas Insulated Sub-station (GIS)-5.00%
- (vi) Communication system-3.5%

Provided that:

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

(ii) -----

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

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



27. BRPL submitted that initial spares should be allowed within the prescribed ceiling limit and strictly in accordance with Regulation 13 of the 2014 Tariff Regulations. The petitioner has not disclosed if the initial spares are within the ceiling limit prescribed as a percentage of the plant and machinery cost up to the cut-off date under Regulation 13 of the 2014 Tariff Regulations. In response, the petitioner submitted that the amount of initial spare claimed as percentage of plant and machinery cost has been mentioned in the management certificate and in Form-13 submitted with the petition. The petitioner has further submitted that all the sub-stations are brownfield and spares procured are essential spare for smooth and reliable functioning of the grid.

28. The initial spares claimed by the petitioner for all the assets exceed their ceiling limits, except for Asset I where the initial spares claimed is within its ceiling limit of 6% of the plant and machinery cost specified for a Brownfield Sub-station as per Regulation 13 of the 2014 Tariff Regulations.

29. The details of initial spares allowed are given below:-

(₹ in lakh)		
Assets	Financial Year from which the excess Initial Spares is deducted	Excess Initial Spares deducted from the Add-cap
I	NIL	0.00
II	2017-2018	11.71
III	2017-2018	9.48
V	2017-2018	11.22
VI	2018-2019	0.11
VII	2017-2018	4.22

* The above mentioned excess initial spares have been deducted from the respective add-cap of the assets.

30. It is further observed that the allowed/disallowed Initial Spares shall be reviewed at



the time of truing-up on the submission of the audited year-wise breakup of the Initial Spares claimed.

Capital cost allowed as on COD

31. Based on the above, the capital cost allowed as on COD under Regulation 9(2) of the 2014 Tariff Regulation is summarized as under:-

(₹ in lakh)						
Assets	Capital cost as on COD claimed	Less: total IDC and IEDC	Add: IDC allowed on cash basis	Add: IEDC allowed on COD.	Less: Excess initial spare as on COD	Capital cost as on COD considered for tariff
I	960.34	61.96	7.01	35.27	0.00	940.66
II	561.40	25.50	0.00	17.76	0.00	553.66
III	552.87	22.68	0.00	16.08	0.00	546.27
V	578.91	61.29	0.00	50.16	0.00	567.78
VI	594.19	52.19	0.00	42.57	0.00	584.57
VII	630.63	76.01	0.00	59.62	0.00	614.24

Additional Capital Expenditure

32. 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.



33. 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”.

34. The “cut-off date” in the case of Assets I, III, V, VI and VII is 31.3.2019 and in case of Asset II is 31.3.2020.

35. The petitioner has claimed additional capital expenditure as per Auditor Certificate. The additional capital expenditure claimed by the petitioner are summarized below:-

(₹ in lakh)

Asset	Additional Capital Expenditure claimed		
	2016-17	2017-18	2018-19
Asset-I	223.47	715.71	-
Asset-II	226.74	362.36	-
Asset-III	281.81	348.00	-
Asset-V	571.08	128.06	64.04
Asset-VI	357.98	105.88	52.95
Asset-VII	176.66	496.11	124.03

36. The additional capital expenditure approved for the period from COD to 31.3.2019 is as follows:-

(₹ in lakh)

Asset	Estimated Additional Capital expenditure			Total estimated completion cost
	2016-17	2017-18	2018-19	
I	223.95	35.39	0.00	1200.00
II	226.74	350.65	0.00	1131.05
III	281.81	338.52	0.00	1166.60
V	571.08	49.84	0.00	1188.70
VI	357.98	105.88	52.84	1101.27
VII	176.66	404.88	0.00	1195.78



Debt- Equity Ratio

37. 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 maybe admitted by the Commission as additional capital expenditure for determination of tariff, and renovation and modernisation expenditure for life extension shall be serviced in the manner specified in clause (1) of this regulation.”

38. The capital cost as on the date 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 under:-

(₹ in lakh)

Asset-I				
Particulars	Capital cost as on COD		Capital cost as on 31.3.2019	
	Amount	%	Amount	%
Debt	658.46	70.00	840.00	70.00
Equity	282.20	30.00	360.00	30.00
Total	940.66	100.00	1200.00	100.00



(₹ in lakh)

Asset-II				
Particulars	Capital cost as on COD		Capital cost as on 31.3.2019	
	Amount	%	Amount	%
Debt	387.56	70.00	791.73	70.00
Equity	166.10	30.00	339.32	30.00
Total	553.66	100.00	1131.05	100.00

(₹ in lakh)

Asset-III				
Particulars	Capital cost as on COD		Capital cost as on 31.3.2019	
	Amount	%	Amount	%
Debt	382.39	70.00	816.62	70.00
Equity	163.88	30.00	349.98	30.00
Total	546.27	100.00	1166.60	100.00

(₹ in lakh)

Asset-V				
Particulars	Capital cost as on COD		Capital cost as on 31.3.2019	
	Amount	%	Amount	%
Debt	397.45	70.00	832.09	70.00
Equity	170.33	30.00	356.61	30.00
Total	567.78	100.00	1188.70	100.00

(₹ in lakh)

Asset-VI				
Particulars	Capital cost as on COD		Capital cost as on 31.3.2019	
	Amount	%	Amount	%
Debt	409.20	70.00	770.89	70.00
Equity	175.37	30.00	330.38	30.00
Total	584.57	100.00	1101.27	100.00

(₹ in lakh)

Asset-VII				
Particulars	Capital cost as on COD		Capital cost as on 31.3.2019	
	Amount	%	Amount	%
Debt	429.97	70.00	837.04	70.00
Equity	184.27	30.00	358.73	30.00
Total	614.24	100.00	1195.77	100.00

Return on Equity (RoE)

39. 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:

Rate of pre-tax return on equity = Base rate / (1-t)

Where “t” is the effective tax rate in accordance with Clause (1) of this regulation and shall be calculated at the beginning of every financial year based on the estimated profit and tax to be paid estimated in line with the provisions of the relevant Finance Act applicable for that financial year to the company on pro-rata basis by excluding the income of 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.”

40. The petitioner has further 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.

41. BRPL submitted that the petitioner has not mentioned the effective tax rate for each year of tariff period for all the assets. The petitioner may be directed to furnish details in the working of effective tax rate along with tax audit report for financial year 2014-15 and the reasons for opting MAT. The petitioner may also be directed to submit the details of deferred tax liability and its treatment in the books of account for the period 2014-19. Since, the petitioner is entitled for Tax Holiday for new transmission project, the petitioner may be directed to supply the information from the date the petitioner intends to claim the benefits of section 80 IA of the Income Tax Act, 1961. In response, the petitioner submitted that the petitioner is availing tax benefits under provision of Section 80 IA of Income Tax Act, for computing normal income tax.



However, the petitioner is liable for payment of MAT at 18.5 % plus surcharge and cess as applicable. Any over/under recovery of grossed up rate on ROE is subject to truing up based on the actual tax paid along with any additional tax or interest. The tax audit report will be submitted at the time of truing up.

42. 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, RoE allowed for the assets covered in the instant petition is as follows:-

(₹ in lakh)

Asset-I			
Particulars	2016-17 (pro-rata)	2017-18	2018-19
Opening Equity	282.20	349.38	360.00
Addition due to Additional Capitalization	67.19	10.62	0.00
Closing Equity	349.38	360.00	360.00
Average Equity	315.79	354.69	360.00
Return on Equity (Base Rate)	15.50%	15.50%	15.50%
Tax rate for the year 2013-14 (MAT)	20.961%	20.961%	20.961%
Rate of Return on Equity (Pre Tax)	19.610%	19.610%	19.610%
Return on Equity (Pre Tax)	16.63	69.56	70.60

(₹ in lakh)

Asset-II			
Particulars	2016-17 (pro-rata)	2017-18	2018-19
Opening Equity	166.10	234.12	339.31
Addition due to Additional	68.02	105.19	0.00



Capitalization			
Closing Equity	234.12	339.31	339.31
Average Equity	200.11	286.72	339.31
Return on Equity (Base Rate)	15.50%	15.50%	15.50%
Tax rate for the year 2013-14 (MAT)	20.961%	20.961%	20.961%
Rate of Return on Equity (Pre Tax)	19.610%	19.610%	19.610%
Return on Equity (Pre Tax)	9.68	56.23	66.54

(₹ in lakh)

Asset-III			
Particulars	2016-17 (pro-rata)	2017-18	2018-19
Opening Equity	163.88	248.42	349.98
Addition due to Additional Capitalization	84.54	101.56	0.00
Closing Equity	248.42	349.98	349.98
Average Equity	206.15	299.20	349.98
Return on Equity (Base Rate)	15.50%	15.50%	15.50%
Tax rate for the year 2013-14 (MAT)	20.961%	20.961%	20.961%
Rate of Return on Equity (Pre Tax)	19.610%	19.610%	19.610%
Return on Equity (Pre Tax)	20.16	58.67	68.63

(₹ in lakh)

Asset-V			
Particulars	2016-17 (pro-rata)	2017-18	2018-19
Opening Equity	170.33	341.66	356.61
Addition due to Additional Capitalization	171.32	14.95	0.00
Closing Equity	341.66	356.61	356.61
Average Equity	256.00	349.13	356.61
Return on Equity (Base Rate)	15.50%	15.50%	15.50%
Tax rate for the year 2013-14 (MAT)	20.961%	20.961%	20.961%
Rate of Return on Equity (Pre Tax)	19.610%	19.610%	19.610%
Return on Equity (Pre Tax)	22.01	68.47	69.93

(₹ in lakh)

Asset-VI			
Particulars	2016-17 (pro-rata)	2017-18	2018-19
Opening Equity	175.37	282.77	314.53
Addition due to Additional Capitalization	107.39	31.76	15.85
Closing Equity	282.77	314.53	330.38
Average Equity	229.07	298.65	322.46
Return on Equity (Base Rate)	15.50%	15.50%	15.50%
Tax rate for the year 2013-14 (MAT)	20.961%	20.961%	20.961%
Rate of Return on Equity (Pre Tax)	19.610%	19.610%	19.610%
Return on Equity (Pre Tax)	18.95	58.56	63.23



(₹ in lakh)

Asset-VII			
Particulars	2016-17 (pro-rata)	2017-18	2018-19
Opening Equity	184.27	237.27	358.73
Addition due to Additional Capitalization	53.00	121.46	0.00
Closing Equity	237.27	358.73	358.73
Average Equity	210.77	298.00	358.73
Return on Equity (Base Rate)	15.50%	15.50%	15.50%
Tax rate for the year 2013-14 (MAT)	20.961%	20.961%	20.961%
Rate of Return on Equity (Pre Tax)	19.610%	19.610%	19.610%
Return on Equity (Pre Tax)	10.30	58.44	70.35

Interest on Loan (IoL)

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

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

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

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

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

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

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

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

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



44. The petitioner's entitlement to IoL has been calculated as per the provisions of Regulation 26 of the 2014 Tariff Regulations as detailed below:-

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

45. Detailed calculations in support of IoL in case of the instant assets are given at Annexure I to VI of this order. The details of IoL allowed are as under:-

(₹ in lakh)

Asset-I			
Particulars	2016-17 (pro-rata)	2017-18	2018-19
Gross Normative Loan	658.46	815.23	840.00
Cumulative Repayment upto Previous Year	0.00	14.92	77.35
Net Loan-Opening	658.46	800.31	762.65
Addition due to Additional Capitalisation	156.77	24.77	0.00
Repayment during the year	14.92	62.43	63.36
Net Loan-Closing	800.31	762.65	699.29
Average Loan	729.39	781.48	730.97
Weighted Average Rate of Interest on Loan	7.9631%	7.9962%	7.9911%
Interest on Loan	58.08	62.49	58.41

(₹ in lakh)

Asset-II			
Particulars	2016-17 (pro-rata)	2017-18	2018-19
Gross Normative Loan	387.56	546.28	791.73
Cumulative Repayment upto Previous Year	0.00	8.68	59.15
Net Loan-Opening	387.56	537.60	732.59



Addition due to Additional Capitalisation	158.72	245.45	0.00
Repayment during the year	8.68	50.46	59.72
Net Loan-Closing	537.60	732.59	672.87
Average Loan	462.58	635.09	702.73
Weighted Average Rate of Interest on Loan	7.4591%	7.4352%	7.4341%
Interest on Loan	34.50	47.22	52.24

(₹ in lakh)

Asset-III			
Particulars	2016-17 (pro-rata)	2017-18	2018-19
Gross Normative Loan	382.39	579.66	816.62
Cumulative Repayment upto Previous Year	0.00	18.09	70.75
Net Loan-Opening	382.39	561.56	745.87
Addition due to Additional Capitalisation	197.27	236.96	0.00
Repayment during the year	18.09	52.66	61.60
Net Loan-Closing	561.56	745.87	684.27
Average Loan	471.98	653.72	715.07
Weighted Average Rate of Interest on Loan	7.9700%	7.9700%	7.9700%
Interest on Loan	37.61	52.10	56.99

(₹ in lakh)

Asset-V			
Particulars	2016-17 (pro-rata)	2017-18	2018-19
Gross Normative Loan	397.45	797.20	832.09
Cumulative Repayment upto Previous Year	0.00	19.75	81.20
Net Loan-Opening	397.45	777.45	750.89
Addition due to Additional Capitalisation	399.76	34.89	0.00
Repayment during the year	19.75	61.45	62.76
Net Loan-Closing	777.45	750.89	688.13
Average Loan	587.45	764.17	719.51
Weighted Average Rate of Interest on Loan	8.0205%	8.0185%	8.0165%
Interest on Loan	47.11	61.27	57.68

(₹ in lakh)

Asset-VI			
Particulars	2016-17 (pro-rata)	2017-18	2018-19
Gross Normative Loan	409.20	659.79	733.90
Cumulative Repayment upto Previous	0.00	17.01	69.57



Year			
Net Loan-Opening	409.20	642.77	664.33
Addition due to Additional Capitalisation	250.59	74.12	36.99
Repayment during the year	17.01	52.56	56.75
Net Loan-Closing	642.77	664.33	644.57
Average Loan	525.99	653.55	654.45
Weighted Average Rate of Interest on Loan	7.9708%	7.9693%	7.9679%
Interest on Loan	41.92	52.08	52.15

(₹ in lakh)

Asset-VII			
Particulars	2016-17 (pro-rata)	2017-18	2018-19
Gross Normative Loan	429.97	553.63	837.04
Cumulative Repayment upto Previous Year	0.00	9.25	61.70
Net Loan-Opening	429.97	544.38	775.35
Addition due to Additional Capitalisation	123.66	283.41	0.00
Repayment during the year	9.25	52.45	63.14
Net Loan-Closing	544.38	775.35	712.21
Average Loan	487.18	659.87	743.78
Weighted Average Rate of Interest on Loan	7.5864%	7.5408%	7.5382%
Interest on Loan	36.95	49.76	56.07

Depreciation

46. 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.”

47. 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.



48. The instant transmission assets were put under commercial operation during the 2014-19 tariff period. Accordingly, it will complete 12 years beyond the 2014-19 tariff period. As such, depreciation has been calculated annually based on Straight Line Method at the rates specified in Appendix-II to the 2014 Tariff Regulations.

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

(₹ in lakh)

Asset-I			
Particulars	2016-17 (pro-rata)	2017-18	2018-19
Gross Block as on COD	940.66	1164.61	1200.00
Addition during 2014-19 due to Projected Additional Capitalisation	223.95	35.39	0.00
Gross Block as on 31 st March	1164.61	1200.00	1200.00
Average Gross Block	1052.64	1182.31	1200.00
Rate of Depreciation	5.2800%	5.2800%	5.2800%
Depreciable Value	947.37	1064.08	1080.00
Remaining Depreciable Value	947.37	1049.15	1002.65
Depreciation	14.92	62.43	63.36

(₹ in lakh)

Asset-II			
Particulars	2016-17 (pro-rata)	2017-18	2018-19
Gross Block as on COD	553.66	780.40	1131.05
Addition during 2014-19 due to Projected Additional Capitalisation	226.74	350.65	0.00
Gross Block as on 31 st March	780.40	1131.05	1131.05
Average Gross Block	667.03	955.72	1131.05
Rate of Depreciation	5.2800%	5.2800%	5.2800%
Depreciable Value	600.33	860.15	1017.94
Remaining Depreciable Value	600.33	851.47	958.80
Depreciation	8.68	50.46	59.72

(₹ in lakh)

Asset-III			
Particulars	2016-17 (pro-rata)	2017-18	2018-19
Gross Block as on COD	546.27	828.08	1166.60
Addition during 2014-19 due to Projected Additional Capitalisation	281.81	338.52	0.00
Gross Block as on 31 st March	828.08	1166.60	1166.60
Average Gross Block	687.18	997.34	1166.60
Rate of Depreciation	5.2800%	5.2800%	5.2800%



Depreciable Value	618.46	897.61	1049.94
Remaining Depreciable Value	618.46	879.51	979.19
Depreciation	18.09	52.66	61.60

(₹ in lakh)

Asset-V			
Particulars	2016-17 (pro-rata)	2017-18	2018-19
Gross Block as on COD	567.78	1138.86	1188.70
Addition during 2014-19 due to Projected Additional Capitalisation	571.08	49.84	0.00
Gross Block as on 31 st March	1138.86	1188.70	1188.70
Average Gross Block	853.32	1163.78	1188.70
Rate of Depreciation	5.2800%	5.2800%	5.2800%
Depreciable Value	767.99	1047.40	1069.83
Remaining Depreciable Value	767.99	1027.65	988.63
Depreciation	19.75	61.45	62.76

(₹ in lakh)

Asset-VI			
Particulars	2016-17 (pro-rata)	2017-18	2018-19
Gross Block as on COD	584.57	942.55	1048.43
Addition during 2014-19 due to Projected Additional Capitalisation	357.98	105.88	52.84
Gross Block as on 31 st March	942.55	1048.43	1101.27
Average Gross Block	763.56	995.49	1074.85
Rate of Depreciation	5.2800%	5.2800%	5.2800%
Depreciable Value	687.20	895.94	967.37
Remaining Depreciable Value	687.20	878.93	897.79
Depreciation	17.01	52.56	56.75

(₹ in lakh)

Asset-VII			
Particulars	2016-17 (pro-rata)	2017-18	2018-19
Gross Block as on COD	614.24	790.90	1195.78
Addition during 2014-19 due to Projected Additional Capitalisation	176.66	404.88	0.00
Gross Block as on 31 st March	790.90	1195.78	1195.78
Average Gross Block	702.57	993.34	1195.78
Rate of Depreciation	5.2800%	5.2800%	5.2800%
Depreciable Value	632.31	894.01	1076.20
Remaining Depreciable Value	632.31	884.76	1014.50
Depreciation	9.25	52.45	63.14



Operation & Maintenance Expenses (O&M Expenses)

50. Regulation 29(4) (a) of the 2014 Tariff Regulations specifies the norms for O&M Expenses for the transmission system based on the type of bays and GIS bays. Norms specified in respect of the elements covered in the instant petition are as under:-

(₹ in lakh)

Element	2016-17	2017-18	2018-19
400 kV bays	64.37	66.51	68.71

51. The petitioner has claimed O&M Expenses as per sub-clause (a) of clause (4) of Regulation 29 of the 2014 Tariff Regulations. The allowable O&M Expenses for the instant transmission asset are as under:-

(₹ in lakh)

Assets	2016-17	2017-18	2018-19
Asset-I	17.28	66.51	68.71
Asset-II	15.87	66.51	68.71
Asset-III	32.09	66.51	68.71
Asset-V	28.22	66.51	68.71
Asset-VI	27.16	66.51	68.71
Asset-VII	16.05	66.51	68.71

52. 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.



53. BRPL has submitted that any increase in the employee cost due to wage revision must be taken care by increasing the productivity levels of the petitioner company and the beneficiaries should not be burdened over and above the provisions in the 2014 Tariff Regulations. The petitioner in its rejoinder has submitted that the wage revision of the employees of the petitioner company is due with effect from 1.1.2017 and actual impact of wage hike which will be effective from a 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 is binding on the petitioner and hence the petitioner would 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.

54. We have considered the submissions of the petitioner and respondent. The O&M Expenses have been worked out as per the norms 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 (IWC)

55. 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;”

56. The petitioner is entitled to claim IWC as per the 2014 Tariff Regulations. The components of the working capital and the petitioner’s entitlement to interest thereon are discussed hereunder:-

(i) Receivables

Receivables as a component of working capital will be equivalent to two months of annual transmission charges.

(ii) Maintenance spares

Regulation 28 of the 2014 Tariff Regulations provides for maintenance spares @ 15% per annum of the O&M Expenses. The value of maintenance spares has accordingly been worked out.

(iii) O&M Expenses

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



(iv) Rate of Interest on Working Capital

As per proviso 3 of Regulation 28 of the 2014 Tariff Regulations, SBI base rate of 9.30% as on 1.4.2016 plus 350 bps i.e. 12.80% has been considered for the asset, as the rate of IWC.

57. Accordingly, the IWC as determined is as under:-

(₹ in lakh)

Asset-I			
Particulars	2016-17 (pro-rata)	2017-18	2018-19
Maintenance Spares	9.65	9.98	10.31
O & M expenses	5.36	5.54	5.73
Receivables	41.19	44.78	44.81
Total	56.20	60.30	60.84
Interest Rate	12.80%	12.80%	12.80%
Interest	7.19	7.72	7.79

(₹ in lakh)

Asset-II			
Particulars	2016-17 (pro-rata)	2017-18	2018-19
Maintenance Spares	9.65	9.98	10.31
O & M expenses	5.36	5.54	5.73
Receivables	29.84	37.88	42.45
Total	44.86	53.39	58.48
Interest Rate	12.80%	12.80%	12.80%
Interest	1.42	6.83	7.49

(₹ in lakh)

Asset-III			
Particulars	2016-17 (pro-rata)	2017-18	2018-19
Maintenance Spares	9.66	9.98	10.31
O & M expenses	5.36	5.54	5.73
Receivables	30.76	39.50	43.93
Total	45.78	55.02	59.97
Interest Rate	12.80%	12.80%	12.80%
Interest	2.92	7.04	7.68

(₹ in lakh)

Asset-V			
Particulars	2016-17 (pro-rata)	2017-18	2018-19
Maintenance Spares	9.66	9.98	10.31
O & M expenses	5.36	5.54	5.73
Receivables	35.54	44.22	44.47
Total	50.56	59.74	60.50
Interest Rate	12.80%	12.80%	12.80%
Interest	2.84	7.65	7.74

(₹ in lakh)

Asset-VI			
Particulars	2016-17 (pro-rata)	2017-18	2018-19
Maintenance Spares	9.66	9.98	10.31
O & M expenses	5.36	5.54	5.73
Receivables	32.95	39.46	41.36
Total	47.97	54.98	57.40
Interest Rate	12.80%	12.80%	12.80%
Interest	2.59	7.04	7.35

(₹ in lakh)

Asset-VII			
Particulars	2016-17 (pro-rata)	2017-18	2018-19
Maintenance Spares	9.66	9.98	10.31
O & M expenses	5.36	5.54	5.73
Receivables	30.94	39.02	44.33
Total	45.96	54.54	60.36
Interest Rate	12.80%	12.80%	12.80%
Interest	1.47	6.98	7.73

Transmission charges

58. The transmission charges allowed for the instant transmission asset are summarized as under:-

(₹ in lakh)

Asset-I			
Particulars	2016-17 (pro-rata)	2017-18	2018-19
Depreciation	14.92	62.43	63.36
Interest on Loan	15.59	62.49	58.41
Return on Equity	16.63	69.56	70.60
Interest on Working Capital	1.93	7.72	7.79
O & M Expenses	17.28	66.51	68.71
Total	66.36	268.70	268.87



(₹ in lakh)

Asset-II			
Particulars	2016-17 (pro-rata)	2017-18	2018-19
Depreciation	8.68	50.46	59.72
Interest on Loan	8.51	47.22	52.24
Return on Equity	9.68	56.23	66.54
Interest on Working Capital	1.42	6.83	7.49
O & M Expenses	15.87	66.51	68.71
Total	44.15	227.25	254.70

(₹ in lakh)

Asset-III			
Particulars	2016-17 (pro-rata)	2017-18	2018-19
Depreciation	18.09	52.66	61.60
Interest on Loan	18.76	52.10	56.99
Return on Equity	20.16	58.67	68.63
Interest on Working Capital	2.92	7.04	7.68
O & M Expenses	32.10	66.51	68.71
Total	92.03	236.99	263.60

(₹ in lakh)

Asset-V			
Particulars	2016-17 (pro-rata)	2017-18	2018-19
Depreciation	19.75	61.45	62.76
Interest on Loan	20.65	61.27	57.68
Return on Equity	22.01	68.47	69.93
Interest on Working Capital	2.84	7.65	7.74
O & M Expenses	28.22	66.51	68.71
Total	93.47	265.34	266.83

(₹ in lakh)

Asset- VI			
Particulars	2016-17 (pro-rata)	2017-18	2018-19
Depreciation	17.01	52.56	56.75
Interest on Loan	17.69	52.08	52.15
Return on Equity	18.95	58.56	63.23
Interest on Working Capital	2.59	7.04	7.35
O & M Expenses	27.16	66.51	68.71
Total	83.40	236.76	248.19

(₹ in lakh)

Asset- VII			
Particulars	2016-17 (pro-rata)	2017-18	2018-19
Depreciation	9.25	52.45	63.14
Interest on Loan	9.21	49.76	56.07



Return on Equity	10.30	58.44	70.35
Interest on Working Capital	1.47	6.98	7.73
O & M Expenses	16.05	66.51	68.71
Total	46.28	234.14	265.99

59. 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 and charges or any other kind of impositions etc. The same if imposed shall be borne and additionally paid by the respondents. The petitioner is entitled to FERV as provided under Regulation 50 of the 2014 Tariff Regulations and the petitioner can make other claims as per the 2014 Tariff Regulations.

Filing Fee and the Publication Expenses

60. The petitioner has sought reimbursement of fee paid by it for filing the petition and publication expenses, in terms of Regulation 52 of the 2014 Tariff Regulations. BRPL has submitted that filing fee and other expenses may not be allowed. Further as per Commissions order dated 11.9.2008 in Petition No. 129/2005, the Central Power Sector undertakings are statutory required to approach the Commission for determination and approval of the tariff. 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

61. The petitioner has requested to allow the petitioner to bill and recover License fee and RLDC fees and charges, separately from the respondents. The petitioner shall be entitled for reimbursement of licence fee and RLDC fees and charges in accordance



with Clause (2)(b) and (2)(a), respectively, of Regulation 52 of the 2014 Tariff Regulations.

Sharing of Transmission Charges

62. Transmission Charges shall be recovered on monthly basis in accordance with Regulation 43 of the 2014 Tariff Regulations and shall be included in PoC as per Central Electricity Regulatory Commission (Sharing of Inter-State Transmission Charges & Losses) Regulations, 2010 as amended time to time.

63. This order disposes of Petition No. 57/TT/2017.

sd/-
(M.K. Iyer)
Member

sd/-
(A.S. Bakshi)
Member

sd/-
(A.K. Singhal)
Member

sd/-
(Gireesh B Pradhan)
Chairperson



ANNEXTURE -I

CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN				
(₹ in lakh)				
	Details of Loan	2016-17	2017-18	2018-19
1	Bond LIII			
	Gross loan opening	222.25	222.25	222.25
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00
	Net Loan-Opening	222.25	222.25	222.25
	Additions during the year	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00
	Net Loan-Closing	222.25	222.25	222.25
	Average Loan	222.25	222.25	222.25
	Rate of Interest	8.13%	8.13%	8.13%
	Interest	18.07	18.07	18.07
	Rep Schedule	12 annual equal instalments from 25.4.2020		
2	Bond LVIII			
	Gross loan opening	0.00	83.00	83.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00
	Net Loan-Opening	0.00	83.00	83.00
	Additions during the year	83.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00
	Net Loan-Closing	83.00	83.00	83.00
	Average Loan	41.50	83.00	83.00
	Rate of Interest	7.89%	7.89%	7.89%
	Interest	3.27	6.55	6.55
	Rep Schedule	Redeemable at par on 9.3.2027		
3	Bond LIV			
	Gross loan opening	101.92	101.92	101.92
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00
	Net Loan-Opening	101.92	101.92	101.92
	Additions during the year	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00
	Net Loan-Closing	101.92	101.92	101.92
	Average Loan	101.92	101.92	101.92
	Rate of Interest	7.97%	7.97%	7.97%
	Interest	8.12	8.12	8.12
	Rep Schedule	Redeemable at par in 3 equal instalments on 15.7.2021, 15.7.2026 & 15.7.2031		
4	Bond LVI			
	Gross loan opening	248.22	248.56	261.97



	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00
	Net Loan-Opening	248.22	248.56	261.97
	Additions during the year	0.34	13.41	0.00
	Repayment during the year	0.00	0.00	0.00
	Net Loan-Closing	248.56	261.97	261.97
	Average Loan	248.39	255.27	261.97
	Rate of Interest	7.36%	7.36%	7.36%
	Interest	18.28	18.79	19.28
	Rep Schedule	Redeemable at par on 18.10.2026		
5	SBI 10000 (01.05.2014)			
	Gross loan opening	86.09	86.09	86.09
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00
	Net Loan-Opening	86.09	86.09	86.09
	Additions during the year	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00
	Net Loan-Closing	86.09	86.09	86.09
	Average Loan	86.09	86.09	86.09
	Rate of Interest	8.90%	8.90%	8.90%
	Interest	7.66	7.66	7.66
	Rep Schedule	20 half yearly equal instalments from 15.6.2019		
6	SBI (2016-2017) (Q4)			
	Gross loan opening	0.00	73.43	73.43
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00
	Net Loan-Opening	0.00	73.43	73.43
	Additions during the year	73.43	0.00	0.00
	Repayment during the year	0.00	0.00	0.00
	Net Loan-Closing	73.43	73.43	73.43
	Average Loan	36.72	73.43	73.43
	Rate of Interest	8.90%	8.90%	8.90%
	Interest	3.27	6.54	6.54
	Rep Schedule	20 half yearly equal instalments from 15.6.2019		
	Total Loan			
	Gross loan opening	658.48	815.25	828.66
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00
	Net Loan-Opening	658.48	815.25	828.66
	Additions during the year	156.77	13.41	0.00
	Repayment during the year	0.00	0.00	0.00
	Net Loan-Closing	815.25	828.66	828.66
	Average Loan	736.87	821.96	828.66
	Rate of Interest	7.9631%	7.9962%	7.9911%
	Interest	58.68	65.73	66.22



ANNEXTURE-II

CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN				
(₹ in lakh)				
	Details of Loan	2016-17	2017-18	2018-19
1	Bond LIII			
	Gross loan opening	104.15	104.15	104.15
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00
	Net Loan-Opening	104.15	104.15	104.15
	Additions during the year	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00
	Net Loan-Closing	104.15	104.15	104.15
	Average Loan	104.15	104.15	104.15
	Rate of Interest	8.13%	8.13%	8.13%
	Interest	8.47	8.47	8.47
	Rep Schedule	12 annual equal instalments from 25.4.2020		
2	Bond LVII			
	Gross loan opening	183.41	332.56	337.98
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00
	Net Loan-Opening	183.41	332.56	337.98
	Additions during the year	149.15	5.42	0.00
	Repayment during the year	0.00	0.00	0.00
	Net Loan-Closing	332.56	337.98	337.98
	Average Loan	257.99	335.27	337.98
	Rate of Interest	7.20%	7.20%	7.20%
	Interest	18.57	24.14	24.33
	Rep Schedule	Redeemable at par on 21.12.2021		
3	Bond LVI			
	Gross loan opening	100.00	100.00	100.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00
	Net Loan-Opening	100.00	100.00	100.00
	Additions during the year	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00
	Net Loan-Closing	100.00	100.00	100.00
	Average Loan	100.00	100.00	100.00
	Rate of Interest	7.36%	7.36%	7.36%
	Interest	7.36	7.36	7.36
	Rep Schedule	Redeemable at par on 18.10.2026		
4	SBI (2016-2017) (Q4)			
	Gross loan opening	0.00	9.57	9.57
	Cumulative Repayment upto	0.00	0.00	0.00

DOCO/previous year			
Net Loan-Opening	0.00	9.57	9.57
Additions during the year	9.57	0.00	0.00
Repayment during the year	0.00	0.00	0.00
Net Loan-Closing	9.57	9.57	9.57
Average Loan	4.79	9.57	9.57
Rate of Interest	8.90%	8.90%	8.90%
Interest	0.43	0.85	0.85
Rep Schedule	20 half yearly equal instalments from 15.6.2019		
Total Loan			
Gross loan opening	387.56	546.28	551.70
Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00
Net Loan-Opening	387.56	546.28	551.70
Additions during the year	158.72	5.42	0.00
Repayment during the year	0.00	0.00	0.00
Net Loan-Closing	546.28	551.70	551.70
Average Loan	466.92	548.99	551.70
Rate of Interest	7.4591%	7.4352%	7.4341%
Interest	34.83	40.82	41.01



ANNEXTURE-III

CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN				
(₹ in lakh)				
	Details of Loan	2016-17	2017-18	2018-19
1	Bond LIV			
	Gross loan opening	382.39	382.39	387.01
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00
	Net Loan-Opening	382.39	382.39	387.01
	Additions during the year	0.00	4.62	0.00
	Repayment during the year	0.00	0.00	0.00
	Net Loan-Closing	382.39	387.01	387.01
	Average Loan	382.39	384.70	387.01
	Rate of Interest	7.97%	7.97%	7.97%
	Interest	30.48	30.66	30.84
	Rep Schedule	Redeemable at par in 3 equal instalments on 15.7.2021, 15.7.2026 & 15.7.2031		
	Total Loan			
	Gross loan opening	382.39	382.39	387.01
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00
	Net Loan-Opening	382.39	382.39	387.01
	Additions during the year	0.00	4.62	0.00
	Repayment during the year	0.00	0.00	0.00
	Net Loan-Closing	382.39	387.01	387.01
	Average Loan	382.39	384.70	387.01
	Rate of Interest	7.9700%	7.9700%	7.9700%
	Interest	30.48	30.66	30.84



ANNEXTURE-IV

CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN				
(₹ in lakh)				
	Details of Loan	2016-17	2017-18	2018-19
1	Bond LIII			
	Gross loan opening	125.50	125.50	125.50
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00
	Net Loan-Opening	125.50	125.50	125.50
	Additions during the year	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00
	Net Loan-Closing	125.50	125.50	125.50
	Average Loan	125.50	125.50	125.50
	Rate of Interest	8.13%	8.13%	8.13%
	Interest	10.20	10.20	10.20
	Rep Schedule	12 annual equal instalments from 25.4.2020		
2	Bond LIV			
	Gross loan opening	271.95	271.95	277.68
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00
	Net Loan-Opening	271.95	271.95	277.68
	Additions during the year	0.00	5.73	0.00
	Repayment during the year	0.00	0.00	0.00
	Net Loan-Closing	271.95	277.68	277.68
	Average Loan	271.95	274.82	277.68
	Rate of Interest	7.97%	7.97%	7.97%
	Interest	21.67	21.90	22.13
	Rep Schedule	Redeemable at par in 3 equal instalments on 15.7.2021, 15.7.2026 & 15.7.2031		
3	Bond LVI			
	Gross loan opening	0.00	0.00	2.06
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00
	Net Loan-Opening	0.00	0.00	2.06
	Additions during the year	0.00	2.06	0.00
	Repayment during the year	0.00	0.00	0.00
	Net Loan-Closing	0.00	2.06	2.06
	Average Loan	0.00	1.03	2.06
	Rate of Interest	7.36%	7.36%	7.36%
	Interest	0.00	0.08	0.15
	Rep Schedule	Redeemable at par on 18.10.2026		
	Total Loan			
	Gross loan opening	397.45	397.45	405.24

Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00
Net Loan-Opening	397.45	397.45	405.24
Additions during the year	0.00	7.79	0.00
Repayment during the year	0.00	0.00	0.00
Net Loan-Closing	397.45	405.24	405.24
Average Loan	397.45	401.35	405.24
Rate of Interest	8.02%	8.02%	8.02%
Interest	31.88	32.18	32.49

ANNEXTURE-V

CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN				
(₹ in lakh)				
	Details of Loan	2016-17	2017-18	2018-19
1	Bond LIII			
	Gross loan opening	2.00	2.00	2.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00
	Net Loan-Opening	2.00	2.00	2.00
	Additions during the year	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00
	Net Loan-Closing	2.00	2.00	2.00
	Average Loan	2.00	2.00	2.00
	Rate of Interest	8.13%	8.13%	8.13%
	Interest	0.16	0.16	0.16
	Rep Schedule	12 annual equal instalments from 25.4.2020		
2	Bond LIV			
	Gross loan opening	407.20	407.20	411.96
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00
	Net Loan-Opening	407.20	407.20	411.96
	Additions during the year	0.00	4.76	0.00
	Repayment during the year	0.00	0.00	0.00
	Net Loan-Closing	407.20	411.96	411.96
	Average Loan	407.20	409.58	411.96
	Rate of Interest	7.97%	7.97%	7.97%
	Interest	32.45	32.64	32.83
	Rep Schedule	Redeemable at par in 3 equal instalments on 15.7.2021, 15.7.2026 & 15.7.2031		
3	Bond LVI			
	Gross loan opening	0.00	0.00	1.97
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00
	Net Loan-Opening	0.00	0.00	1.97
	Additions during the year	0.00	1.97	0.00
	Repayment during the year	0.00	0.00	0.00
	Net Loan-Closing	0.00	1.97	1.97
	Average Loan	0.00	0.99	1.97
	Rate of Interest	7.36%	7.36%	7.36%
	Interest	0.00	0.07	0.14
	Rep Schedule	Redeemable at par on 18.10.2026		
	Total Loan			
	Gross loan opening	409.20	409.20	415.93



Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00
Net Loan-Opening	409.20	409.20	415.93
Additions during the year	0.00	6.73	0.00
Repayment during the year	0.00	0.00	0.00
Net Loan-Closing	409.20	415.93	415.93
Average Loan	409.20	412.57	415.93
Rate of Interest	7.97%	7.97%	7.97%
Interest	32.62	32.88	33.14

ANNEXTURE-VI

CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN				
(₹ in lakh)				
	Details of Loan	2016-17	2017-18	2018-19
1	Bond LIII			
	Gross loan opening	143.05	143.05	143.05
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00
	Net Loan-Opening	143.05	143.05	143.05
	Additions during the year	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00
	Net Loan-Closing	143.05	143.05	143.05
	Average Loan	143.05	143.05	143.05
	Rate of Interest	8.13%	8.13%	8.13%
	Interest	11.63	11.63	11.63
	Rep Schedule	12 annual equal instalments from 25.4.2020		
2	Bond LIV			
	Gross loan opening	28.67	28.67	28.67
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00
	Net Loan-Opening	28.67	28.67	28.67
	Additions during the year	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00
	Net Loan-Closing	28.67	28.67	28.67
	Average Loan	28.67	28.67	28.67
	Rate of Interest	7.97%	7.97%	7.97%
	Interest	2.28	2.28	2.28
	Rep Schedule	Redeemable at par in 3 equal instalments on 15.7.2021, 15.7.2026 & 15.7.2031		
5	Bond LVII			
	Gross loan opening	36.12	159.78	168.51
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00
	Net Loan-Opening	36.12	159.78	168.51
	Additions during the year	123.66	8.73	0.00
	Repayment during the year	0.00	0.00	0.00
	Net Loan-Closing	159.78	168.51	168.51
	Average Loan	97.95	164.15	168.51
	Rate of Interest	7.20%	7.20%	7.20%
	Interest	7.05	11.82	12.13
	Rep Schedule	Redeemable at par on 21.12.2021		
3	Bond LVI			
	Gross loan opening	224.87	224.87	224.87



Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00
Net Loan-Opening	224.87	224.87	224.87
Additions during the year	0.00	0.00	0.00
Repayment during the year	0.00	0.00	0.00
Net Loan-Closing	224.87	224.87	224.87
Average Loan	224.87	224.87	224.87
Rate of Interest	7.36%	7.36%	7.36%
Interest	16.55	16.55	16.55
Rep Schedule	Redeemable at par on 18.10.2026		
Total Loan			
Gross loan opening	432.71	556.37	565.10
Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00
Net Loan-Opening	432.71	556.37	565.10
Additions during the year	123.66	8.73	0.00
Repayment during the year	0.00	0.00	0.00
Net Loan-Closing	556.37	565.10	565.10
Average Loan	494.54	560.74	565.10
Rate of Interest	7.59%	7.54%	7.54%
Interest	37.52	42.28	42.60

