CENTRAL ELECTRICITY REGULATORY COMMISSION NEW DELHI

Petition No. 269/TT/2015

Coram:

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

Date of Hearing : 29.04.2016 Date of Order : 23.05.2016

In the matter of:

Determination of transmission tariff for 2019 for Asset (A): 765 kV 03X80 MVAR Bus Reactor at 765/400 kV Jaipur (Phagi-RVPNL) Sub-station and Asset (B): 765 kV Jaipur (Phagi-RVPNL)-Bhiwani transmission line along with 3X80 MVAR switchable line reactor at Jaipur (Phagi-RVPNL) end and 3X80 MVAR nonswitchable reactor at Bhiwani end and its associated bays for the 2014-19 tariff period under Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 and Regulation 86 of Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999.

And in the matter of:

Power Grid Corporation of India Ltd. 'SAUDAMINI', Plot No-2, Sector-29, Gurgaon -122 001 (Haryana).

.....Petitioner

Versus

- Rajasthan Rajya Vidyut Prasaran Nigam Ltd., Vidyut Bhawan, Vidyut Marg, Jaipur - 302 005.
- Ajmer Vidyut Vitran Nigam Ltd., 400 kV GSS Building (Ground Floor), Ajmer Road, Heerapura, Jaipur.
- Jaipur Vidyut Vitran Nigam Ltd.,
 400 kV GSS Building (Gro-und Floor), Ajmer Road,
 Heerapura, Jaipur.

- Jodhpur Vidyut Vitran Nigam Ltd., 400 kV GSS Building (Ground Floor), Ajmer Road, Heerapura, Jaipur
- 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.
- Haryana Power Purchase Centre, Shakti Bhawan, Sector - 6 Panchkula (Haryana) - 134 109
- 8. Power Development Department, Government of Jammu and Kashmir Mini Secretariat, Jammu.
- Uttar Pradesh Power Corporation Ltd., Shakti Bhawan, 14, Ashok Marg, Lucknow - 226 001.
- 10. Delhi Transco Ltd., Shakti Sadan, Kotla Road, New Delhi - 110 002
- BSES Yamuna Power Ltd., Shakti Kiran Building, Karkardooma, Delhi – 110 092.
- 12. BSES Rajdhani Power Ltd., BSES Bhawan, Nehru Place, New Delhi.
- 13. North Delhi Power Ltd., Power Trading & Load Dispatch Group, Cennet Building, Adjacent to 66/11kV Pitampura - , Grid Building, Near PP Jewellers, Pitampura, New Delhi - 110 034
- 14. Chandigarh Administration, Sector - 9, Chandigarh



- 15. Uttarakhand Power Corporation Ltd., Urja Bhawan, Kanwali Road, Dehradun
- 16. North Central Railway, Allahabad
- 17. New Delhi Municipal Council, Palika Kendra, Sansad Marg, New Delhi - 110 002
- 18. GMR KAMALANGA ENERGY LTD. SKIP House, 25/1, Museum Road, Bangalore, Karnataka-560025
- 19. Monnet Power Company Ltd. Monnet Marg, Mandir Hasaud, Raipur, Chattisgarh-560025
- 20. LANCO BABANDH POWER LTD. Plot No. 397, Phase-III, 2nd Floor, Udyog Vlhar, Gurgaon, Haryana- 120016
- 21. IND BARATH ENERGY (UTKAL) LTD. PLOT No., 30-A, Road No. 1, Film Nagar, Jubliee Hills, Hyderabad, Andhra Pradesh-500033
- 22. Navbharat Power Pvt. Ltd.
 Navbharat Chambers, 6-3-1109/1,
 3rd Floor, Left Wing, Rajbhawan Road,
 Somajiguda, Hyderabad, Andhra Pradesh- 500082
- 23. Jindal INDIA Thermal Power Ltd., Plot No. 12, Sector-B, Pocket-1, Local Shopping Complex, Vasant Kunj, New Delhi-110070
- 24. Sterlite Energy Limited, SIPCOT Industrial Complex, Tuticorin, Tamil Nadu-628002

....Respondents



The following were present:-

For Petitioner: Shri S. S. Raju, PGCIL Shri M. M. Mondal, PGCIL Shri Rakesh Prasad, PGCIL Smt. Sangeeta Edwards, PGCIL Shri V.P. Rastogi, PGCIL

For Respondent: Shri Manoj Kumar Sharma, Advocate, Rajasthan Discoms.

<u>ORDER</u>

The present petition has been filed by Power Grid Corporation of India Ltd. ("the petitioner") for determination of tariff for 765 kV 03X80 MVAR Bus Reactor at 765/400 kV Jaipur (Phagi-RVPNL) Sub-station (referred as "Asset A") and 765 kV Jaipur (Phagi-RVPNL)-Bhiwani transmission line along with 3X80 MVAR switchable line reactor at Jaipur (Phagi-RVPNL) end and 3X80 MVAR non switchable reactor at Bhiwani end and its associated bays (referred as "Asset B") under Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 (hereinafter referred to as "the 2014 Tariff Regulations") for the period from date of commercial operation to 31.3.2019.

2. The respondents are distribution licensees or electricity departments or power procurement companies of States, who are procuring transmission service from the petitioner, mainly beneficiaries of Northern Region.

3. The brief facts of the case are as follows:-

(a) The investment approval for the project was accorded by Board of Directors of the petitioner company, vide Memorandum C/CP/Orissa Ph-I IPPs (Part-C), dated 17.3.2011 with an estimated cost of ₹256925.00 lakh includes IDC of ₹ 16902.00 lakh, based on price level of 3rd quarter-2010. The total approved apportioned cost for the instant assets is ₹471.65 lakh.

(b) The scope of work covered under "Transmission system for Phase-I Generation Project in Orissa (Part-C)" is as follows:-

Transmission line

- (i) Jabalpur Pooling station-Bina 765 kV D/ line
- (ii) Bina-Gwalior 765 kV S/C (3rd circuit) line
- (iii) Gwalior-Jaipur 765 kV S/C (2nd circuit) line
- (iv) Jaipur- Bhiwani 765 kV S/C line
- (c) The transmission charges claimed by the petitioner are as under:-

				(₹ in lakh)
	Asset	Α		
Particulars	2015-16 (pro-rata)	2016-17	2017-18	2018-19
Depreciation	152.93	248.29	248.29	248.29
Interest on Loan	164.11	250.09	229.67	208.80
Return on Equity	170.40	276.64	276.64	276.64
Interest on Working Capital	14.33	22.82	22.51	22.20
O&M Expenses	56.27	90.12	93.11	96.20
Total	558.04	887.96	870.22	852.13

Asset B						
Particulars	2015-16 (pro-rata)	2016-17	2017-18	2018-19		
Depreciation	1758.94	2960.60	2960.60	2960.60		
Interest on Loan	1358.56	2236.61	2092.16	1885.01		
Return on Equity	1959.82	3298.70	3298.70	3298.70		
Interest on Working Capital	131.34	220.26	217.76	213.84		
O&M Expenses	261.90	447.17	462.15	477.43		
Total	5470.56	9163.34	9031.37	8835.58		

(d) The details submitted by the petitioner in support of its claim for interest on working capital are given hereunder:-

				(₹ in lakh)			
Asset A							
Particulars	Particulars 2015-16 2016-17 2017-18						
O & M Expenses	7.27	7.51	7.76	8.02			
Maintenance Spares	13.08	13.52	13.97	14.43			
Receivables	144.16	147.99	145.04	142.02			
Total	164.51	169.02	166.76	164.47			
Rate of Interest (%)	13.50	13.50	13.50	13.50			
Interest (pro-rata)	14.33	22.82	22.51	22.20			

				(₹ in lakh)				
	Asset B							
Particulars	2015-16	2016-17	2017-18	2018-19				
O & M Expenses	36.08	37.26	38.51	39.79				
Maintenance Spares	64.95	67.08	69.32	71.61				
Receivables	1507.44	1527.22	1505.23	1472.60				
Total	1608.47	1631.56	1613.06	1584.00				
Rate of Interest (%)	13.50	13.50	13.50	13.50				
Interest (pro-rata)	131.34	220.26	217.76	213.84				

4. The annual fixed charges for the instant assets were allowed under Regulation 7(7) of the 2014 Tariff Regulations for inclusion in the PoC charges vide order dated 17.12.2015 based on the actual COD. The petitioner has submitted the IDC on cash basis, Auditor Certificates and tariff forms and the same has been considered for the purpose of computation of tariff.

5. The petitioner has served the petition to the respondents and notice of this application has been published in the newspapers in accordance with Section 64

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of the Electricity Act, 2003 ("the Act"). No comments have been received from the public in response to the notices published by the petitioner under Section 64 of the Act. The hearing in this matter was held on 29.4.2016. UPPCL, Respondent No.9 has filed its reply vide affidavit dated 28.11.2015 and Ajmer Vidyut Vitran Nigam Limited (AVVNL), Respondent No.2, Jaipur Vidyut Vitran Nigam Limited (JVVNL), Respondent No.3 and Jodhpur Vidyut Vitran Nigam Limited (JdVVNL), Respondent No.4 (collectively referred to as "Rajasthan Discoms") have submitted their reply vide affidavit dated 26.4.2016. The petitioner has submitted the rejoinder to the reply filed by Rajasthan Discoms vide affidavit dated 5.5.2016.

Commercial Operation Date ("COD")

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

"4. Date of Commercial Operation: The date of commercial operation of a generating station or unit or block thereof or a transmission system or element thereof shall be determined as under:

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

XXX XXX"

7. The petitioner has submitted that Assets A and B were put under commercial operation on 9.8.2015 and 24.8.2015 respectively. The petitioner has

also submitted the letter declaring COD and the RLDC trial run certificate dated 1.9.2015 for both the assets in support of claim of commercial operation. Accordingly, the commercial operation date considered for the Assets A and B is 9.8.2015 and 24.8.2015 respectively. The tariff is worked out for the instant assets from the COD to 31.3.2019.

Capital Cost

8. The petitioner has claimed the capital cost ₹4276.66 lakh and ₹54083.53 lakh for Assets A and B respectively as on actual COD. In the auditor certificate and tariff forms the petitioner has claimed the following cost:-

					(< in lakn)	
	Approved apportioned cost	Revised approved apportioned cost	Expenditure upto COD	Proposed expenditure in 2015-16	Estimated completion cost	
Asset-A	2443.91	4702.42	4276.66	425.76	4702.42	
Asset-B	46728.07	56071.84	54083.53	1988.31	56071.84	

9. Regulation 9 (1) and (2) and 10 (1) of the 2014 Tariff Regulations specify

as follows:-

"9. Capital Cost: (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;

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(7 in lakh)

- e) capitalised Initial spares subject to the ceiling rates specified in Regulation 13 of these regulations;
- f) expenditure on account of additional capitalization and de-capitalisation determined in accordance with Regulation 14 of these regulations;
- g) adjustment of revenue due to sale of infirm power in excess of fuel cost prior to the COD as specified under Regulation 18 of these regulations; and
- h) adjustment of any revenue earned by the transmission licensee by using the assets before COD."

"10. Prudence Check of Capital Expenditure: The following principles shall be adopted for prudence check of capital cost of the existing or new projects:

(1) In case of the thermal generating station and the transmission system, prudence check of capital cost may be carried out taking into consideration the benchmark norms specified/to be specified by the Commission from time to time: Provided that in cases where benchmark norms have not been specified, prudence check may include scrutiny of the capital expenditure, financing plan, interest during construction, incidental expenditure during construction for its reasonableness, use of efficient technology, cost over-run and time over-run, competitive bidding for procurement and such other matters as may be considered appropriate by the Commission for determination of tariff:"

10. UPPCL in its reply submitted that the transmission tariff may be determined after the approval of RCE by GOI/MOP. We have considered the respondents view with regard to capital cost. The capital cost claimed by the petitioner is considered for the purpose of tariff subjected to prudence check as discussed in subsequent paragraph. The petitioner vide Auditor certificate dated 22.9.2015 has submitted IEDC and IDC of ₹71.58 and ₹428.69 for Asset A, ₹921.19 lakh and ₹4888.96 lakh for Asset B respectively claimed upto COD has been discharged. For determination of tariff for the 2014-19 tariff period for the instant transmission assets, we have considered the capital cost as on COD after considering the IDC discharged on cash basis.



Cost over-run

11. Rajasthan Discoms have submitted that the reasons for cost variation are vague. Hence the cost variation should not be allowed for the purpose of tariff. UPPCL in its reply has submitted that the time over-run in case of the assets has led to cost over-run to the tune of ₹2258.51 lakh in case of Asset A, which is 48.02% of the initial estimate and in case of Asset B it is ₹9343.77 lakh which is 20% of the initial estimate. With regard to the issue of cost variation in case of Asset B, the petitioner has submitted that increase of ₹8.18 lakh is on account of actual cost paid to statutory authorities on account of crop & forest compensation, increase of ₹18.52 lakh in cost of conductor is due to variation in line length and high bid price, increase of ₹4.61 lakh, ₹8.63 lakh and ₹7.44 lakh in insulator, hardware fitting and erection, stringing & civil works respectively is due to increase of line length from 252 km to 269.32 km S/C and 2.24 km D/C, decrease of ₹2.27 lakh in conductor and earth wire accessories due to low bid price, decrease of ₹2.96 lakh in compensating equipment due to low bid price. The petitioner has further submitted increase of ₹2.18 lakh in Structure for Switchyard due to rate variation received in the bid, increase of ₹42 lakh is due to consultancy work of RRVPNL Sub-station, decrease of ₹2.44 lakh in spares is as per actual spares procured. We have considered the submissions of the respondents and the clarifications given by the petitioner. There is cost over-run as per the initial approved apportioned cost. However, there is no cost over-run as per the revised approved apportioned cost.

12. UPPCL has also submitted its reply that transmission projects requires technical, financial and administrative approval and the same has to be given by the Cabinet Committee of Economic Affairs, Government of India. Finally the Department of Public Enterprises (DPE), Ministry of Heavy Industries will issue memorandum on investment approval. The Respondent submits that the Board of Directors of an investing agency cannot suo-moto issue investment approval of the RCE because the status of financial and administrative approval by Cabinet Committee of Economic Affairs, GOI has not been given. The respondent's concern is the approval of RCE without financial and administrative approval of CCEA, GOI as the capital cost is increasing significantly. We have considered the replies filed by UPPCL. The petitioner has not submitted rejoinder to the reply of UPPCL. However, as per the RCE dated 9.3.2015 submitted by the petitioner is in exercise of powers delegated to it by DPE, Ministry of Heavy Industries and Public Enterprises, Government of India through its Office Memorandum No. 26(3)/2005-GM-GL-92 dated 1.5.2008 and Office Memorandum No.DPE/11(2)/97-Fin.dated 22.7.1997 (modified subsequently through Office Memorandum No. 18(24)/2003-GM-GL.64 dated 5.8.2005). However, the cost overrun is approved.

Time over-run

13. As per the investment approval, the commissioning schedule of the project is 36 months from the date of investment approval. The investment approval was accorded on 17.3.2011 and hence the schedule date of commercial operation was 17.3.2014. The COD for the instant transmission asset was 9.8.2015 and

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24.8.2015. Hence, there is time over-run of 510 days and 525 days in case of Assets A and B respectively.

14. With respect to Asset A, the petitioner has submitted that the 765 kV, 3X80 Bus Reactor was to be installed at Phagi Sub-station of RRVPNL and 765 kV Jaipur (Phagi-RVPNL)-Bhiwani T/L was also to be terminated at Phagi Substation of RRVPNL. 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 depository work basis in their Phagi Sub-station, the petitioner requested RRVPNL to construct 765 kV bays for aforesaid assets at their Phagi Sub-station. RRVPNL claimed overhead charges @40%. The petitioner requested RRVPNL to reduce the overhead charges to minimize the overall cost of the project and the matter was also taken up with the Joint Secretary (Transmission) as reduced overhead charges would reduce the additional burden on the beneficiaries. As regards the time over-run in case of Asset B, ROW problem at various locations were created by the local villagers and concerned land owners from 11.10.2012. The petitioner has submitted detailed chronology of events done to resolve ROW issue. The petitioner has submitted letter dated 20.5.2013 to DC Jaipur, 1.10.2013 to SHO, 5.2.2014 to DC, 18.9.2014 for police protection, 13.2.2015 to Addl. Chief Secretary (Power), Govt. of Haryana and newspaper cutting dated 27.4.2015 in support of ROW problem. The petitioner has submitted that ROW problems persisted from 11.10.2012 to 10.5.2015, for 941 days.

15. Rajasthan Discoms have submitted that the reasons for time over-run submitted by the petitioner are vague. As per Regulation 12 of 2014 Tariff Regulations land acquisition proceedings are controllable factor. Hence, the burden due to delay in implementing the project, i.e. IDC and IEDC for the period of delay should not be allowed. UPPCL in its reply has submitted that the time over-run in case of Asset A is due to RRVPNL and in case of Asset B the time over run is 17.233 months against which the petitioner has explained delay of 13.15 months therefore the IDC and IEDC for the period of delay of 4.08 months not explained by the petitioner as to be borne by the petitioner, the total IDC and IEDC of Asset B is as claimed by the petitioner is ₹5809.87 lakh. The reduction factor of IDC and IEDC is 49.15/53.233 which is 0.923 in this way the proportionate IDC and IEDC to be considered by CERC for payment by the beneficiaries is ₹5364.24 lakh instead of ₹5809.87. The difference of ₹445.62 lakh is to borne by PGCIL.

16. We have considered the submissions of the petitioner and the replies filed by Rajasthan Discoms and UPPCL with regard to time over-run. The delay due to extension work to be carried out by RRVPNL on deposit basis is due to higher supervision charges claimed by the RRVPNL. It is observed from the documents produced by the petitioner that the petitioner took this matter with the Government. The time taken up by the petitioner to convince RRVPNL to reduce the supervision charges from 40% to 15% led to the time over-run. This was done by the petitioner to safeguard the interest of beneficiaries and it is in line with the objective laid down under section 61 of the Act. We are of the view that the time over-run is due to bonafide attempts by petitioner to protect the interest of beneficiaries. As such, the time over-run of 510 days in commissioning of Asset A is condoned.

17. With regard to time over-run in case of Asset B, the petitioner has submitted the letters dated 20.5.2013 and 5.2.2014 to District Collector, Jaipur, 1.10.2013 and 18.9.2014 to respective SHO for police protections and letter dated 13.2.2015 to Addl. Chief Secretary (Power), Govt. of Haryana. As per the timelines submitted by the petitioner, there were ROW problems from 11.10.2012 to 10.5.2015 and the petitioner lost 941 days in solving the ROW issues. We have gone through the documents submitted by the petitioner and the timelines of ROW issues and delay. It has been observed that as per the timeline provided, the petitioner has not submitted the letters dated 10.10.2012, 10.4.2013 and dated 10.5.2015. However in absence of adequate documents/letters, if we consider the documents/letter placed by the petitioner on record, we can conclude that there were ROW problems from 20.5.2013 to 13.2.2015 and the petitioner lost 634 days in solving the ROW issues, which subsumes time overrun of 525 days in case of Asset B. The land acquisition is a controllable factor as per Regulation 12 of the 2014 Tariff Regulations as submitted by the Rajasthan Discoms. However, the land acquisition issues are to be examined on a case to case basis. In the instant case, there were ROW problems in many locations which prevented the petitioner from completing the line within the specified timeline and we are of the view that the time over-run in the instant case, is beyond the control of the petitioner and cannot be attributed to the petitioner.

Accordingly, the time over-run of 525 days in commissioning of Asset B is condoned.

Initial Spares

18. The petitioner has claimed initial spares for Asset B as ₹348.00 lakh. The total initial spares claimed by the petitioner for Asset A is within the limits prescribed under Regulation 13 of the Tariff Regulation, 2014 and therefore allowed for capitalisation. The total initial spares for Asset B (Transmission Line) are in excess by ₹0.02 lakh, Hence it is deducted from the capital cost. The computation of the admissible initial spares is as under:-

			(₹ in lakh)
Particulars (As per Auditor's Certificate)	Asset-A (Sub-station)	Asset-B (Transmission Line)	Asset-B (Sub-station)
Capital Cost upto cut-off date (excluding IDC, IEDC and land and cost of civil works)	4202.14	34798.28	8415.64
Initial Spares Claimed	0.00	348.00	0.00
Norms	4.00%	1.00%	4.00%
Initial Spares as per Norms	175.09	347.98	350.65
Excess	0.00	0.02	0.00

Additional Capital Expenditure

19. The petitioner has proposed additional capitalization of ₹425.76 lakh (for Asset A) and ₹1988.31 lakh (for Asset B) for the year 2015-16 towards balance and retention payment under Regulation 14(1) (i) of 2014 Tariff Regulations.

20. 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".

Provided that the cut-off date may be extended by the Commission if it is proved on the basis of documentary evidence that the capitalisation could not be made within the cut-off date for reasons beyond the control of the project developer;"

21. The cut-off date of the transmission asset is 31.3.2018. It is observed that total estimated completion cost of ₹4702.42 lakh (including the additional capitalization of ₹425.76 lakh) for Asset A as on 31.3.2019 and ₹56071.84 lakh (including the additional capitalization of ₹425.76 lakh) lies within the approved apportioned cost. Accordingly, additional capitalization for the subject asset is allowed under Regulation 14(1)(i) of 2014 Tariff Regulations.

					(in ₹ lakh)
Srl. No	Approved cost for the project	Apportioned cost (as per RCE)*	Exp Up to DOCO	Proposed Exp-2015-16	Estimated completion cost
Asset-A	2443.91	4702.42	4276.66	425.76	4702.42
Asset-B	46728.07	56071.82	54083.51	1988.31	56071.82

Debt: Equity Ratio

22. Regulation 19 (1) of the 2014 Tariff Regulations specifies as under:-

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

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."

23. The petitioner has considered debt:equity ratio as 70:30 as on COD and debt:equity ratio as 70:30 for additional capitalization during 2015-16. Accordingly, we have considered the same for the purpose of tariff computation for the 2014-19 tariff period is as follows:-

(₹ in lakh)								
	Asset A							
Particulars	As on	As on COD capitaliz		on COD Additional during 2014-19		lization	As on 31.3.2019	
	Amount	(%)	Amount	(%)	Amount	(%)		
Debt	2993.66	70.00	298.03	70.00	3291.69	70.00		
Equity	1283.00	30.00	127.73	30.00	1410.73	30.00		
Total	4276.66	100.00	425.76	100.00	4702.42	100.00		

(₹ in lakh)

Asset B								
Particulars As on COD Additional capitalization during 2014-19		capitalizatio		lization	As on	31.3.2019		
	Amount	(%)	Amount	(%)	Amount	(%)		
Debt	16225.05	70.00	1391.82	70.00	39250.29	70.00		
Equity	37858.46	30.00	596.49	30.00	16821.55	30.00		
Total	54083.51	100.00	1988.31	100.00	56071.84	100.00		

Interest on Loan ("IOL")

24. Clause (5) & (6) of Regulation 26 of the 2014 Tariff Regulations provides

as under:-

"(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."

25. We have considered the weighted average rate of IOL on the basis of rate prevailing as on 1.4.2014. Further, the petitioner has prayed to allow it 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. The petitioner has also prayed that they will approach the Commission for suitable revision in the norms of O&M Expenses for claiming the impact of such increase. The IOL has been worked out in accordance with Regulation 26 of the 2014 Tariff Regulations. The petitioner's prayer to bill and adjust the impact on interest on loan due to change in interest rate on account of floating rate of interest applicable during 2014-19 period from the respondents will be considered at the time of truing up. The details of weighted average rate of interest are placed at **Annexure-I** and the IOL has been worked out as follows:-



(₹ in lakh)

Asset A							
Particulars	2015-16 (pro-rata)	2016-17	2017-18	2018-19			
Gross loan opening	2993.66	3291.69	3291.69	3291.69			
Cumulative Repayment upto previous year	0.00	152.85	401.14	649.43			
Net Loan-Opening	2993.66	3138.84	2890.56	2642.27			
Additions during the year	298.03	0.00	0.00	0.00			
Repayment during the year	152.85	248.29	248.29	248.29			
Net Loan-Closing	3138.84	2890.56	2642.27	2393.98			
Average Loan	3066.25	3014.70	2766.41	2518.12			
Rate of Interest (%)	8.2958	8.2958	8.3023	8.2920			
Interest	164.02	250.09	229.68	208.80			

Asset B							
Particulars	2015-16 (pro-rata)	2016-17	2017-18	2018-19			
Gross loan opening	37858.47	39250.29	39250.29	39250.29			
Cumulative Repayment upto previous year	0.00	1755.98	4716.58	7677.17			
Net Loan-Opening	37858.47	37494.30	34533.71	31573.12			
Additions during the year	1391.82	0.00	0.00	0.00			
Repayment during the year	1755.98	2960.59	2960.59	2960.59			
Net Loan-Closing	37494.30	34533.71	31573.12	28612.52			
Average Loan	37676.39	36014.01	33053.41	30092.82			
Rate of Interest (%)	5.9626	6.2118	6.3313	6.2658			
Interest	2246.50	2237.12	2092.70	1885.56			

Return on Equity ("ROE")

26. Clause (1) & (2) of Regulation 24 and Clause (2) of Regulation 25(2) 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:

ххх

XXX"

"25. Tax on Return on Equity:

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

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

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

27. The petitioner has claimed ROE at the rate of 20.961% after grossing up the ROE of 15.5% with MAT rate as per the above said Regulation. 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.

28. 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.

29. 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 return on equity with the effective tax rate for the purpose of return on equity. It further provides that in case the generating company or transmission licensee is paying Minimum Alternative Tax (MAT), the MAT rate including surcharge and cess will be considered for the grossing up of return on equity. The petitioner has submitted that MAT rate is applicable to the petitioner's company. Accordingly, the MAT rate applicable during 2013-14 has been considered for the purpose of return on equity, which shall be trued up with actual tax rate in accordance with Regulation 25 (3) of the 2014 Tariff Regulations. The ROE allowed for the instant transmission asset is given below:-

				(* 111 lakn)
	Asset A			
Particulars	2015-16	2016-17	2017-18	2018-19
	(pro-rata)			
Opening Equity	1283	1410.73	1410.73	1410.73
Additional Capitalization	127.73	0	0	0
Closing Equity	1410.73	1410.73	1410.73	1410.73
Average Equity	1346.86	1410.73	1410.73	1410.73
Return on Equity (Base Rate) (%)	15.50	15.50	15.50	15.50
Tax rate for the year (%)	20.96	20.96	20.96	20.96
Rate of Return on Equity (Pre Tax) (%)	19.61	19.61	19.61	19.61
Return on Equity (Pre Tax)	264.13	276.65	276.65	276.65

(₹ in lakh)

(₹ in lakh)

Asset B						
Particulars	2015-16 (pro-rata)	2016-17	2017-18	2018-19		
Opening Equity	16225.06	16821.55	16821.55	16821.55		
Additional Capitalization	596.49	0.00	0.00	0.00		
Closing Equity	16821.55	16821.55	16821.55	16821.55		
Average Equity	16523.31	16821.55	16821.55	16821.55		
Return on Equity (Base Rate) (%)	15.50	15.50	15.50	15.50		
Tax rate for the year (%)	20.96	20.96	20.96	20.96		
Rate of Return on Equity (Pre Tax) (%)	19.61	19.61	19.61	19.61		
Return on Equity (Pre Tax)	3240.29	3298.78	3298.78	3298.78		

Depreciation

30. Clause (2), (5) and (6) of Regulation 27 of the 2014 Tariff Regulations

provide as follows:-

"27. Depreciation:

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

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

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

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



31. Clause (67) of Regulation 3 of the 2014 Tariff Regulations defines useful

life as follows:-

"(67) **'Useful life'** in relation to a unit of a generating station and transmission system from the COD shall mean the following, namely:

(a) Coal/Lignite based thermal generating station 25 years

(b) Gas/Liquid fuel based thermal generating station 25 years

(c) AC and DC sub-station 25 years

(d) Gas Insulated Substation (GIS) 25 years

(d) Hydro generating station including pumped Storage hydro generating stations 35 years

(e) Transmission line (including HVAC & HVDC) 35 years

(f) Communication system 15 years"

32. The weighted average useful life of the asset has been considered as 33

years in accordance with the above regulation. The details of the depreciation

allowed are given hereunder:-

				(₹ in lakh)
	Asset A			
Particulars	2015-16 (pro-rata)	2016-17	2017-18	2018-19
Opening Gross block	4276.66	4702.42	4702.42	4702.42
Additional Capitalization	425.76	0.00	0.00	0.00
Closing Gross block	4702.42	4702.42	4702.42	4702.42
Average Gross block	4489.54	4702.42	4702.42	4702.42
Rate of Depreciation (%)	5.28%	5.28%	5.28%	5.28%
Depreciable Value	4040.59	4232.18	4232.18	4232.18
Elapsed Life of the assets at beginning of the year	25	24	23	22
Weighted Balance Useful life of the assets	0	1	2	3
Remaining Depreciable Value	4040.59	3995.13	3746.84	3498.55
Depreciation during the year	237.05	248.29	248.29	248.29
Cumulative depreciation	237.05	485.34	733.62	981.91

(₹ in lakh)

Asset B					
Particulars	2015-16 (pro-rata)	2016-17	2017-18	2018-19	
Opening Gross block	54083.53	56071.84	56071.84	56071.84	

	Asset B						
Particulars	2015-16 (pro-rata)	2016-17	2017-18	2018-19			
Additional Capitalization	1988.31	0.00	0.00	0.00			
Closing Gross block	56071.84	56071.84	56071.84	56071.84			
Average Gross block	55077.69	56071.84	56071.84	56071.84			
Rate of Depreciation (%)	5.28	5.28	5.28	5.28			
Depreciable Value	49569.92	50464.66	50464.66	50464.66			
Elapsed Life of the assets at beginning of the year	33	32	31	30			
Weighted Balance Useful life of the assets	0	1	2	3			
Remaining Depreciable Value	49569.92	47556.55	44595.96	41635.37			
Depreciation during the year	2908.10	2960.59	2960.59	2960.59			
Cumulative depreciation	2908.10	5868.69	8829.29	11789.88			

Operation & Maintenance Expenses ("O&M Expenses")

33. The petitioner has submitted that the wage revision of the employees of the petitioner company is due during 2014-19 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 rate specified for the 2014-19 tariff period. The petitioner has also submitted that it will approach the Commission for suitable revision in the norms of O&M Expenses for claiming the impact of such increase.

34. We have considered the submissions of the petitioner and the respondents. We would like to clarify that any application filed by the petitioner for revision of O&M Expenses on account of wage revision will be dealt with in accordance with the appropriate provisions of the 2014 Tariff Regulations. The O&M Expenses are allowed for the instant transmission assets as per the prevailing norms.

35. Clause 3(a) of Regulation 29 of the 2014 Tariff Regulations specify the norms for O&M Expenses for the transmission system. The total allowable O&M Expenses for the instant assets are as follows:-

Asset A						
Particulars	2015-16 (Pro Rata)	2016-17	2017-18	2018-19		
765 kV Bays :						
No. of Bays	1	1	1	1		
Norms (₹ lakh/Bay)	56.24	90.12	93.11	96.2		
Total O&M Expenses	56.27	90.12	93.11	96.20		

Asset B						
Particulars	2015-16 (Pro Rata)	2016-17	2017-18	2018-19		
765 kV Bays :	·					
No. of Bays	3	3	3	3		
Norms (₹ lakh/Bay)	56.24	90.12	93.11	96.2		
Double Circuit (Bundled conductor with four or more sub-conductors)						
Length (KM)	2.25	2.25	2.25	2.25		
Norms (₹ Lakhs/KM))	0.66	1.133	1.171	1.21		
Single Circuit (Bundled conductor with four or more sub-conductors)						
Length (KM)	269.33	269.33	269.33	269.33		
Norms (₹Lakhs/KM))	0.38	0.65	0.67	0.69		
Total O&M Expenses	261.90	447.17	462.15	477.43		

Interest on Working Capital ("IWC")

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

(i) Receivables

As per Regulation 28(1) (c) (i) of the 2014 Tariff Regulations, receivables will be equivalent to two months average billing calculated on target availability level. The petitioner has claimed the receivables on the basis of 2 months transmission charges claimed in the petition. In the tariff being allowed, receivables have been worked out on the basis of 2 months transmission charges.

(ii) Maintenance Spares

Regulation 28 (1) (c) (ii) of the 2014 Tariff Regulations provides for maintenance spares @ 15% per annum of the O&M Expenses from 1.4.2014. The petitioner has claimed maintenance spares for the instant asset and value of maintenance spares has accordingly been worked out as 15% of O&M Expenses.

(iii) O & M Expenses

Regulation 28 (1) (c) (iii) of the 2014 Tariff Regulations provides for operation and maintenance expenses for one month to be included in the working capital. The petitioner has claimed O & M Expenses for the instant asset and value of O & M Expenses has accordingly been worked out by considering 1 month O&M Expenses.

(iv) Rate of interest on working capital

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 transmission system including communication system or element thereof, as the case may be, is declared under commercial operation, whichever is later. Further, the 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. The rate of interest on working capital considered is 13.50% (SBI Base Rate of 10% plus 350 basis points).

Γ				(k in lakn)				
Asset A								
Particulars	2015-16 (pro-rata)	2016-17	2017-18	2018-19				
O & M expenses	7.27	7.51	7.76	8.01				
Maintenance Spares	13.08	13.52	13.97	14.43				
Receivables	93.12	147.99	145.04	142.02				
Total	113.47	169.02	166.76	164.47				
Rate of Interest (%)	13.50	13.50	13.50	13.50				
Interest	15.32	22.82	22.51	22.20				

37. The interest on working capital allowed is shown in the table below:-

/7 in lakh)

Asset B							
Particulars	2015-16	2016-17	2017-18	2018-19			
Falticulars	(pro-rata)	2010-17	2017-10	2010-19			
O & M expenses	36.07	37.25	38.50	39.77			
Maintenance Spares	64.95	67.07	69.32	71.61			
Receivables	911.19	1527.32	1505.33	1472.70			
Total	1012.21	1631.65	1613.15	1584.09			
Rate of Interest (%)	13.50	13.50	13.50	13.50			
Interest	136.65	220.27	217.78	213.85			

Annual Transmission Charges

38. UPPCL in its reply submitted that the transmission tariff may be determined after the approval of RCE by GOI/MOP. WE have considered the submission of the respondents. The detailed computation of the various components of the annual fixed charges for the transmission asset for the tariff period 2014-19 is summarised below:-

				(₹ in lakh)
	Asset A			
Particulars	2015-16	2016-17	2017-18	2018-19
Depreciation				
Opening Gross Block	4276.66	4702.42	4702.42	4702.42
Additional Capitalisation	425.76	0.00	0.00	0.00
Closing Gross Block	4702.42	4702.42	4702.42	4702.42
Average Gross Block	4489.54	4702.42	4702.42	4702.42
Rate of Depreciation (%)	5.28%	5.28%	5.28%	5.28%
Depreciable Value	4040.59	4232.18	4232.18	4232.18
Balance useful life of the asset	25	24	23	22
Elapsed life	0	1	2	3
Remaining Depreciable Value	4040.59	3995.13	3746.84	3498.55
Depreciation during the year	237.05	248.29	248.29	248.29
Cumulative depreciation	237.05	485.34	733.62	981.91

	Asset A						
Particulars	2015-16	2016-17	2017-18	2018-19			
Interest on Loan							
Gross Normative Loan	2993.66	3291.69	3291.69	3291.69			
Cumulative Repayment upto Previous Year	0.00	152.85	401.14	649.43			
Net Loan-Opening	2993.66	3138.84	2890.56	2642.27			
Additions	298.03	0.00	0.00	0.00			
Repayment during the year	152.85	248.29	248.29	248.29			
Net Loan-Closing	3138.84	2890.56	2642.27	2393.98			
Average Loan	3066.25	3014.70	2766.41	2518.12			
Weighted Average Rate of Interest on Loan (%)	8.2958	8.2958	8.3023	8.2920			
Interest on Loan	164.02	250.09	229.68	208.80			
Return on Equity							
Opening Equity	1283.00	1410.73	1410.73	1410.73			
Additions	127.73	0.00	0.00	0.00			
Closing Equity	1410.73	1410.73	1410.73	1410.73			
Average Equity	1346.86	1410.73	1410.73	1410.73			
Return on Equity (Base Rate) (%)	15.500	15.500	15.500	15.500			
MAT rate for the respective year (%)	20.961	20.961	20.961	20.961			
Rate of Return on Equity (%)	19.610	19.610	19.610	19.610			
Return on Equity	264.13	276.65	276.65	276.65			
Interest on Working Capital							
O & M expenses	7.27	7.51	7.76	8.01			
Maintenance Spares	13.08	13.52	13.97	14.43			
Receivables	93.12	147.99	145.04	142.02			
Total	113.47	169.02	166.76	164.47			
Rate of Interest	13.50	13.50	13.50	13.50			
Interest on Working Capital	15.32	22.82	22.51	22.20			
· ·							
Annual Transmission Charges							
Depreciation	152.85	248.29	248.29	248.29			
Interest on Loan	164.02	250.09	229.68	208.80			
Return on Equity	170.31	276.65	276.65	276.65			
Interest on Working Capital	15.32	22.82	22.51	22.20			
O & M Expenses	56.24	90.12	93.11	96.20			
Total	558.74	887.97	870.24	852.14			

	Asset B			
Particulars	2015-16	2016-17	2017-18	2018-19
Depreciation				
Opening Gross Block	54083.53	56071.84	56071.84	56071.84
Additional Capitalisation	1988.31	0.00	0.00	0.00
Closing Gross Block	56071.84	56071.84	56071.84	56071.84
Average Gross Block	55077.69	56071.84	56071.84	56071.84
Rate of Depreciation (%)	5.28	5.28	5.28	5.28
Depreciable Value	49569.92	50464.66	50464.66	50464.66
Balance useful life of the asset	33	32	31	30
Elapsed life	0	1	2	3
Remaining Depreciable Value	49569.92	47556.55	44595.96	41635.37
Depreciation during the year	2908.10	2960.59	2960.59	2960.59
Cumulative depreciation	2908.10	5868.69	8829.29	11789.88
Interest on Loan				
Gross Normative Loan	37858.47	39250.29	39250.29	39250.29
Cumulative Repayment upto Previous Year	0.00	1755.98	4716.58	7677.17
Net Loan-Opening	37858.47	37494.30	34533.71	31573.12
Additions	1391.82	0.00	0.00	0.00
Repayment during the year	1755.98	2960.59	2960.59	2960.59
Net Loan-Closing	37494.30	34533.71	31573.12	28612.52
Average Loan	37676.39	36014.01	33053.41	30092.82
Weighted Average Rate of Interest on Loan (%)	5.9626	6.2118	6.3313	6.2658
Interest on Loan	2246.50	2237.12	2092.70	1885.56
Return on Equity				
Opening Equity	16225.06	16821.55	16821.55	16821.55
Additions	596.49	0.00	0.00	0.00
Closing Equity	16821.55	16821.55	16821.55	16821.55
Average Equity	16523.31	16821.55	16821.55	16821.55
Return on Equity (Base Rate)(%)	15.500	15.500	15.500	15.500
MAT rate for the respective year (%)	20.961	20.961	20.961	20.961
Rate of Return on Equity (%)	19.610	19.610	19.610	19.610
Return on Equity	3240.29	3298.78	3298.78	3298.78
Interest on Working Capital				
O & M expenses	36.07	37.25	38.50	39.77
Maintenance Spares	64.95	67.07	69.32	71.61
Receivables	911.19	1527.32	1505.33	1472.70

Order in Petition No. 269/TT/2015

	Asset B			
Particulars	2015-16	2016-17	2017-18	2018-19
Total	1012.21	1631.65	1613.15	1584.09
Rate of Interest	13.50	13.50	13.50	13.50
Interest on Working Capital	136.65	220.27	217.78	213.85
Annual Transmission Charges				
Depreciation	1755.98	2960.59	2960.59	2960.59
Interest on Loan	1356.49	2237.12	2092.70	1885.56
Return on Equity	1956.57	3298.78	3298.78	3298.78
Interest on Working Capital	136.65	220.27	217.78	213.85
O & M Expenses	261.46	447.17	462.15	477.43
Total	5467.15	9163.93	9032.00	8836.22

Filing Fee and Publication Expenses

39. The petitioner has sought reimbursement of fee paid by it for filing the petition and publication expenses, in terms of Regulation 52 of the 2014 Tariff Regulations. The petitioner shall be entitled for reimbursement of the filing fees and publication expenses in connection with the present petition, directly from the beneficiaries on pro-rata basis in accordance with clause (1) of Regulation 52 of the 2014 Tariff Regulations. UPPCL has submitted its reply that Hon'ble Commission may kindly like to take view in the matter. We have considered the respondent's view.

Licence Fee and RLDC Fees and Charges

40. 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. UPPCL has submitted its reply that Hon'ble Commission may kindly like to take view in the matter. We have considered the respondent's and petitioner's view in the subject matter.

Service Tax

41. The petitioner has sought to recover service tax on transmission charges separately from the respondents, if at any time service tax on transmission is withdrawn from negative list in future. UPPCL has submitted its reply that presently there is no service tax therefore the claim is premture and the same may not be considered by the Hon'ble Commission. We have considered the reply of the respondent and we are of the view that the petitioner's prayer of Service Tax is premature.

Sharing of Transmission Charges

42. 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.

43. This order disposes of Petition No. 269/TT/2015.

(Dr. M. K. Iyer) Member (A.S. Bakshi) Member



ANNEXURE-I

Asset A					
Particulars	Interest Rate (%) Loan deployed as on COD		Additions during the tariff period	Total	
BOND XLIII CHILD 1	7.93	1250.00	0.00	1250.00	
BOND XLIV CHILD 1	8.70	1000.00	0.00	1000.00	
BOND XLVIII	8.20	500.00	0.00	500.00	
BOND XLIX	8.15	173.61	0.00	173.61	
Proposed Loan (2015-16) (10.10)	10.10	70.05	0.00	70.05	
Total		2993.66	0.00	2993.66	

DETAILS OF LOAN BASED ON ACTUAL LOAN PORTFOLIO 2014-19

As	set	В

Asset B					
Particulars	Interest Rate (%)	Loan deployed as on COD	Additions during the tariff period	Total	
BOND XXXVII- DOCO Loan	9.25	236.00	0.00	236.00	
BOND XXXIX- DOCO Loan 2	9.40	33.00	0.00	33.00	
IFC (IFC- A loan) (31419- 00)-DOCO Loan 6-66.98	3.23	243.24	0.00	243.24	
IFC (IFC- B loan) (31419- 01)-DOCO Loan 6-66.98	2.38	4797.80	0.00	4797.80	
IFC (ICFF Loan) (31419- 02)- DOCO Loan 8-66.98	3.23	2084.42	0.00	2084.42	
FC - Bond (17.1.2013)- DOCO Loan 9-66.98	4.10	12318.29	0.00	12318.29	
BOND XLIII- DOCO Loan 3	7.93	14311.00	0.00	14311.00	
BOND XLIV DOCO LOAN 4-	8.70	1915.50	0.00	1915.50	
Proposed Loan (2015-16) (10.10%) Loan 5	10.10	1919.33	0.00	1919.33	
Total		37858.58	0.00	37858.58	

CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN FOR TARIFF PERIOD 2014-19

(₹in	lakh)

Asset A					
Particulars	2015-16	2016-17	2017-18	2018-19	
Gross Opening Loan	2993.66	2993.66	2993.66	2993.66	
Cumulative Repayment of loan upto previous year	0.00	0.00	195.57	401.52	
Net Loan Opening	2231.20	2583.92	2388.35	2182.40	
Additions during the year	352.72	0.00	0.00	0.00	
Repayment during the year	0.00	195.57	205.95	151.22	
Net Loan Closing	2583.92	2388.35	2182.40	2031.18	
Average Loan	2407.56	2486.14	2285.38	2106.79	
Rate of Interest	7.9631	8.0489	8.1411	8.1666	
Interest	191.72	200.11	186.05	172.05	

Asset B					
Particulars	2015-16	2016-17	2017-18	2018-19	
Gross Opening Loan	37858.58	37858.58	37858.58	37858.58	
Cumulative Repayment of loan upto previous year	0.00	2418.57	4837.14	6282.14	
Net Loan Opening	37858.58	35440.01	33021.44	31576.44	
Additions during the year	0.00	0.00	0.00	0.00	
Repayment during the year	2418.57	2418.57	1445.00	2083.51	
Net Loan Closing	35440.01	33021.44	31576.44	29492.93	
Average Loan	36649.30	34230.73	32298.94	30534.69	
Rate of Interest	5.9626	6.2118	6.3313	6.2658	
Interest	2185.26	2126.35	2044.94	1913.25	