

**CENTRAL ELECTRICITY REGULATORY COMMISSION  
NEW DELHI**

**Petition No. 108/TT/2017**

**Coram:**

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

**Date of Order: 09.07.2018**

**In the matter of:**

Petition for truing up of fees and charges for 2009-14 block and determination of fees and charges for 2014-19 tariff block in respect of 4 nos. of Assets under "Fiber Optic Communication System in lieu of existing Unified Load Despatch and Communication (ULDC) Microwave Links in Northern Region" Scheme

**And in the matter of:**

Power Grid Corporation of India Limited,  
"Saudamini", Plot No. 2,  
Sector 29, Gurgaon-122001  
Haryana

**....Petitioner**

**Vs**

1. National Thermal Power Corporation  
NTPC Bhawan Ltd.  
Core- 7, Scope Complex  
7, Institutional Area, Lodhi Road  
New Delhi- 110003
2. NHPC  
NHPC Office Complex, Sector-33  
Faridabad, Haryana – 121003
3. Satluj Jal Vidyut Nigam Limited  
Satluj Jal Vidyut Nigam Ltd. Power Project,  
Jhakri, Rampur, Distt. Shimla,  
Himachal Pradesh-172201
4. THDC India Limited  
Bhagirath Puram, Tehri,  
Uttarakhand-249001



5. Nuclear Power Corporation of India  
Nabhkiya Bhawan  
Anu-Shakti Nagar  
Mumbai-400094
6. Allain Duhangan Hydro Power Limited  
Bhilwara Towers,  
A-12 Sector-1,  
Noida-201301
7. Indira Gandhi Super Thermal Power Project  
Aravali power Company Private Limited,  
PO-Jharli, District -Jhajjar
8. Jaypee Karcham Hydro Corporation Limited  
Sector-128, Noida-201304
9. Everest Power Private Limited  
1st Floor, Hall-1, NBCC Tower  
Bikaji Cama Place, New Delhi – 110066
10. Shree Cement Limited  
PO Box No. 33, Bangur Nagar,  
Beawar, Ajmer - 305901.  
Rajasthan
11. Chandigarh (Electricity Department),  
Sector-9  
Chandigarh - 160019
12. Delhi Transco Liimited  
Shakti Sadan  
Kotla Road, New Delhi
13. Haryana Vidyut Prasaran Nigam Limited  
Room No-213, Shakti Bhawan, Sector-6  
Panchkula-134109, Haryana
14. Himachal Pradesh State Electricity Board  
Totu, Shimla-171011,  
Himachal Pradesh
15. Power Development Department  
Janipura Grid Station,  
Jammu (Tawi) - 180 007



16. Punjab State Power Corporation limited  
Thermal Shed T-1A,  
Patiala - 147001
17. Rajasthan Control Area  
Vidyut Bhawan, Jyoti Nagar  
Vidyut Marg  
Jaipur-302015, Rajasthan
18. U.P. Power Corporation limited  
11<sup>th</sup> Floor Shakti Bhawan Extension,  
14-Ashok Marg  
Lucknow-226 001
19. DRM Office Northern  
Railways Nawabyusuf Road  
Allahabad, UP
20. Uttaranchal Power Corporation Ltd.  
Kanwli Road, Urja Bhawan  
Dehradun-248001, Utrakhand
21. Powerlinks Transmission Ltd.,  
10th Floor, DLF Tower-A,  
District Centre, Jasola,  
New Delhi-11 0044

...Respondents

**For Petitioner** : Shri A. Choudhary, PGCIL  
Shri S.S. Raju, PGCIL  
Shri V.P. Rastogi, PGCIL  
Shri B. Dash, PGCIL

**For Respondent** : Shri R.B. Sharma, Advocate, BRPL

### **ORDER**

The present petition has been filed by Power Grid Corporation of India Ltd. (“the petitioner”) under sub-section (4) of Section 28 and Section 79(1) (d) of Electricity Act 2003 and Regulation 86 of Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999 for trueing up of capital expenditure of the period 1.4.2013 to 31.3.2014 and determination of tariff for the 2009-14 tariff period for **Asset-I**: 1099.803 km of Fiber Optic Communication system in lieu of existing Microwave,



**Asset-II:** 1628.966 km of Fiber Optic Communication system in lieu of existing Microwave, **Asset-III:** 493.064 km of Fiber Optic Communication system in lieu of existing Microwave and **Asset-IV:** 530.621 km of Fiber Optic Communication System in lieu of existing Microwave under “Fiber Optic Communication system in lieu of existing Unified Load Dispatch & Communication (ULDC) Microwave links in Northern Region” Scheme, under Regulation 6 of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2009 (hereinafter referred to as “the 2009 Tariff Regulations”) and Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 (hereinafter referred to as “the 2014 Tariff Regulations”) for the combined assets.

2. The assets covered under the instant petition and the details of other assets under the same scheme and corresponding petitions under which they were dealt with are specified as under:

<b>Asset</b>	<b>Actual COD</b>	<b>Petition covered under</b>	<b>Truing up status</b>
<b>Asset-I:</b> 1099.803 km of Fiber Optic Communication system in lieu of existing Microwave	1.4.2012	240/TT/2013	Present Petition
<b>Asset-II:</b> 1628.966 km of Fiber Optic Communication system in lieu of existing Microwave	1.1.2013		
<b>Asset-III:</b> 493.064 km of Fiber Optic Communication system in lieu of existing Microwave	1.4.2013		
<b>Asset-IV:</b> 530.621 km of Fiber Optic Communication System in lieu of existing Microwave	1.10.2013	22/TT/2014	
Fiber Optic Communication System in lieu of existing ULDC Microwave I	1.4.2014	139/TT/2014	
<b>Total Optic Fiber</b>	<b>4599.578</b>		

3. 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 of 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 24.6.2018. None of the respondents have filed any reply to the petition. Having heard the representatives of the petitioner and perused the material on record, we proceed to dispose of the petition.

4. The Investment Approval for the Fiber Optic Communication System in lieu of existing ULDC Microwave links was accorded by Board of Directors of the Petitioner company vide letter Reference No. C/CP/ Fiber Optic in NR dated 25.3.2010 at an estimated cost of ₹16131 lakh, including IDC of ₹1474 lakh (based on 4<sup>th</sup> Quarter, 2009 price level).

5. The broad scope of work covered under the project is as follows:-

(i) "Installation of OPGW fiber optic cable on the existing EHV transmission line of Powergrid and constituents, the estimated length of such cable is approximately 4488 km.

(ii) Installation of approximately 18 km underground fiber optic to provide last mile connectivity to the control room where transmission line connectivity is not available. It is also envisaged that portion of the network which involves installation of the underground cable would be provided with radio based communication which operates in free band to back up the underground cable link of the network. Three number of radio links are proposed. Further, in some portions of the proposed network around 14 km of aerial cable is also required.

(iii) The terminal equipment for communication based upon Synchronous Digital Hierarchy (SDH) technology shall be installed in the substations of constituents and POWERGRID. The project would also involve installation of primary multiplexers at the new wide band nodes. To monitor the Network, Network Management System (NMS) would also be required."

### **Brief Background**

6. As per the directives of Government of India vide order dated 4.7.2008, Power System Operation Corporation Ltd. (POSOCO), a wholly owned subsidiary of Power Grid Corporation of India Ltd. was created and POSOCO is responsible for system operation of National Load Despatch Centre (NLDC) and Regional Load Despatch



Centres (RLDCs). Pursuant to Satnam Singh Committee's report, the assets pertaining to system operations have been transferred to POSOCO for which separate tariff orders had been issued by the Commission.

7. The petitioner had filed a Miscellaneous Petition No. 68/2010 under sub-section (4) of Section 28 of Electricity Act 2003 and Regulations 44 "Power to Relax" of the CERC (Terms and Conditions of Tariff) Regulations 2009 for fixation of tariff norms for recovery of cost for the assets ("Communication system" and "Sub-Load Dispatch Centre system") to be retained/to be installed by the petitioner after formation of POSOCO for the period 2009-14 block.

8. The Commission in Petition No. 68/2010 vide order dated 8.12.2011, had observed as under:-

"9.....Since the communication system and SLDC system form part of the assets of the CTU, there is a requirement to specify regulations for determination of tariff of these assets. We direct the staff of the Commission to undertake the exercise separately and include these assets of CTU in the tariff regulations applicable for the next tariff period i.e.2014-19. As regards the tariff of these assets for the period 2009-14, we are not inclined to determine the tariff of these assets by exercising our power to relaxation under Regulation 44 of the 2009 regulations since there is no provision for determination of tariff for the assets covered under the communication system and ULDC system. We are of the view that the tariff of these assets shall be determined under our general power of determination of tariff for inter-State transmission system under section 79(1)(d) of the Act....."

".....It clearly emerges from the above judgment that the Central Commission can specify the terms and conditions of tariff even in the absence of the regulations. Since no regulation was specified for determination of tariff of the communication system and the ULDC system, the Commission determined the tariff of these assets during the period 2004-09 on levelised basis by adopting some of the parameters of 2004 tariff regulations. We have decided to continue with the levelised tariff for the existing assets in the absence of any provision in 2009 regulations regarding determination of tariff of communication system and ULDC system of the petitioner. For the new assets, the tariff will be decided as per the regulations for communication systems to be framed. Accordingly we direct the staff of the Commission to take necessary action to prepare draft regulations for determination of tariff for the communication system and ULDC system of the petitioner."

"21. We have considered the submission of the petitioner and the respondents. We are of the view that replacement of microwave links with fiber optic links should be implemented as agreed by the beneficiaries to ensure safe and reliable operation of the power system. Moreover, the petitioner has submitted that surrender of the microwave frequencies would save substantial cost and the fiber optic system would be beneficial in the long run as the



fiber optic communication network is required for implementation of new technologies like Wide Area Measurement System (WAMS), Special Protection Schemes (SPS) etc. in view of fast development and complexity of the power system in the country. As regards the regulatory approval, we are of the view that since the project has been agreed to be implemented by the constituents of each of the regions, regulatory approval is not considered necessary. The petitioner is granted liberty to approach the Commission for determination of tariff for the fiber optic network being installed in lieu of microwave links for each of the region separately. As regards the submission of UPPTCL, it is clarified that if the state portion is not being implemented by it separately as proposed earlier, the same shall be implemented by the petitioner and UPPTCL would be required to share the tariff in proportion to the assets being utilised by it. It is however made clear that the timeline for replacement of the digital microwave by optical fiber should be strictly complied with.”

9. In terms of the Commission’s order dated 8.12.2011 in Petition No.68/2010, we are of the view to continue with the levelised tariff for the existing assets in the absence of any provision in the 2009 Tariff Regulations regarding determination of tariff of communication system and ULDC system of the petitioner. Accordingly, the annual fees and charges of the optic fiber need to be determined as per the principles approved by the Commission vide order dated 8.12.2011 in Petition No. 68/2010.

10. Accordingly, the Commission vide order dated 1.9.2015 in Petition No. 240/TT/2013 and order dated 27.5.2016 in Petition No. 22/TT/2014 has approved the Fee and Charges, on the basis of the following capital cost incurred/ projected to be incurred as on COD and 31.3.2014 for the assets based on Auditor’s Certificate dated 31.8.2012, 12.3.2013, 9.5.2013 and 25.5.2015 for Asset-I, Asset-II, Asset-III and Asset-IV respectively:-

(₹ in lakh)				
Asset	Capital Cost	Central Portion	State Portion	CERC Order /Petition No.
<b>Asset-I</b>	As on COD	815.97	1859.18	Order dated 1.9.2015 in Petition No. 240/TT/2013
	Additional Capitalization	105.94	260.30	
	As on 31.3.2014	921.91	2119.48	
<b>Asset-II</b>	As on COD	481.66	2741.53	
	Additional Capitalization	89.68	358.24	
	As on 31.3.2014	571.34	3099.77	
<b>Asset-III</b>	As on COD	507.10	1268.50	
	Additional Capitalization	81.17	277.42	



	As on 31.3.2014	588.27	1545.92	Order dated 27.5.2016 in Petition No. 22/TT/2014
<b>Asset-IV</b>	As on COD	407.42	654.89	
	Additional Capitalization	105.32	328.03	
	As on 31.3.2014	512.74	982.92	

11. The Commission under the same order, has approved the Fee and Charges as under:

(₹ in lakh)

<b>Asset-I</b>				
<b>Particulars</b>	<b>Central</b>		<b>State</b>	
	<b>2012-13</b>	<b>2013-14</b>	<b>2012-13</b>	<b>2013-14</b>
Annual Capital Recovery Charge - Loan	70.77	80.26	161.24	184.56
Annual Capital Recovery Charge - Equity	42.12	47.69	95.98	109.67
<b>Annual Capital Recovery Charge - Total</b>	<b>112.89</b>	<b>127.95</b>	<b>257.22</b>	<b>294.23</b>
<b>O&amp;M Expenses</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Interest on Working Capital</b>	<b>2.60</b>	<b>2.95</b>	<b>5.92</b>	<b>6.77</b>
<b>Total Fee &amp; Charges</b>	<b>115.49</b>	<b>130.90</b>	<b>263.14</b>	<b>301.00</b>

(₹ in lakh)

<b>Asset-II</b>				
<b>Particulars</b>	<b>Central</b>		<b>State</b>	
	<b>2012-13</b>	<b>2013-14</b>	<b>2012-13</b>	<b>2013-14</b>
Annual Capital Recovery Charge - Loan	10.44	49.60	59.43	269.03
Annual Capital Recovery Charge - Equity	6.22	29.51	35.38	160.10
<b>Annual Capital Recovery Charge - Total</b>	<b>16.66</b>	<b>79.12</b>	<b>94.81</b>	<b>429.13</b>
<b>O&amp;M Expenses</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Interest on Working Capital</b>	<b>0.38</b>	<b>1.82</b>	<b>2.18</b>	<b>9.88</b>
<b>Total Fee &amp; Charges</b>	<b>17.04</b>	<b>80.94</b>	<b>97.00</b>	<b>439.01</b>

(₹ in lakh)

<b>Asset-III</b>				
<b>Particulars</b>	<b>Central</b>		<b>State</b>	
	<b>2012-13</b>	<b>2013-14</b>	<b>2012-13</b>	<b>2013-14</b>
Annual Capital Recovery Charge - Loan	-	43.60	-	109.06
Annual Capital Recovery Charge - Equity	-	26.18	-	65.48
<b>Annual Capital Recovery Charge - Total</b>	<b>-</b>	<b>69.77</b>	<b>-</b>	<b>174.54</b>
<b>O&amp;M Expenses</b>	<b>-</b>	<b>0.00</b>	<b>-</b>	<b>0.00</b>
<b>Interest on Working Capital</b>	<b>-</b>	<b>1.57</b>	<b>-</b>	<b>3.93</b>
<b>Total Fee &amp; Charges</b>	<b>-</b>	<b>71.34</b>	<b>-</b>	<b>178.47</b>





(₹ in lakh)

Asset-IV				
Particulars	Central		State	
	2012-13	2013-14	2012-13	2013-14
Annual Capital Recovery Charge - Loan	-	17.54	-	28.19
Annual Capital Recovery Charge - Equity	-	10.52	-	16.90
<b>Annual Capital Recovery Charge - Total</b>	-	<b>28.05</b>	-	<b>45.09</b>
<b>O&amp;M Expenses</b>	-	<b>0.00</b>	-	<b>0.00</b>
<b>Interest on Working Capital</b>	-	<b>0.63</b>	-	<b>1.01</b>
<b>Total Fee &amp; Charges</b>	-	<b>28.68</b>	-	<b>46.11</b>

12. The petitioner vide affidavit dated 13.3.2018 has submitted the revised "Fees and Charges" for Central sector portion and State sector portion after adjusting the cost w.r.t. Telecom sharing. The details of revised Annual Fixed charges (AFC) for the period 2009-14 and 2014-19 as under:-

(₹ in lakh)

Asset	Sector	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19
Asset-I	<b>Central</b>	125.64	130.26	123.50	121.41	126.20	126.53	126.87
	<b>State</b>	252.99	293.86	294.05	295.00	297.40	297.39	297.39
Asset-II	<b>Central</b>	20.53	81.40	82.65	83.75	88.35	88.67	88.99
	<b>State</b>	96.32	420.94	421.19	426.48	437.37	437.34	437.32
Asset-III	<b>Central</b>	NA	76.52	75.22	73.15	77.61	77.44	77.56
	<b>State</b>	NA	184.84	225.36	232.23	236.54	236.54	236.54
Asset-IV	<b>Central</b>	NA	28.44	66.42	70.54	57.5	57.72	57.92
	<b>State</b>	NA	48.32	142.91	144.21	149.12	149.12	149.13

NA: Not applicable

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

13. The Commission vide order dated 1.9.2015 in Petition No. 240/TT/2013 had considered the date of commercial operation for Assets - I, II and III as 1.4.2012, 1.1.2013, 1.4.2013 respectively and vide order dated 27.5.2016 in Petition No. 22/TT/2014 the date of commercial operation for Asset-IV is 1.10.2013. The same dates



has been considered in the instant petition for truing-up of transmission tariff for the period 2009-14 and determination of tariff for the period 2014-19.

### 2009-14 Tariff Period

#### Capital Cost

14. The capital cost admitted as on COD after adjustment of IDC, IEDC due to time over-run was disallowed by the Commission vide order dated 1.9.2015 and 27.5.2016 in Petition No. 240/TT/2013 (for Asset-I, II and III) and Petition No. 22/TT/2014 (for Asset-IV) respectively are as under:

(₹ in lakh)

Particulars	Asset-I		Asset-II		Asset-III		Asset-IV	
	Central Portion	State Portion	Central Portion	State Portion	Central Portion	State Portion	Central Portion	State Portion
Expenditure up to COD (claimed) <b>(A)</b>	833.37	1898.83	497.00	2828.45	554.32	1387.22	418.76	684.12
IDC disallowed due to Un-discharged Liability and Time over-run <b>(B)</b>	17.40	39.65	13.91	79.19	42.66	106.77	5.88	18.50
IEDC disallowed due to Time over-run- <b>(C)</b>	—	—	1.42	7.73	4.56	11.96	5.45	10.72
Capital Cost as on COD (allowed) <b>[A-(B+C)]</b>	<b>815.97</b>	<b>1859.18</b>	<b>481.66</b>	<b>2741.53</b>	<b>507.10</b>	<b>1268.50</b>	<b>407.42</b>	<b>654.89</b>

15. The petitioner vide affidavit dated 13.3.2018 has submitted the Auditor certificate dated 12.3.2018 in respect of capital cost and additional capital expenditure based on actual COD to 31.3.2014 which has been allowed in this order as under:-

(₹ in lakh)

Particulars	Capital Cost		Central	State
Asset-I	As on COD		901.41	1830.79
	Additional Capitalization	2012-13	21.56	235.56
		2013-14	(45.73)	-
	<b>As on 31.3.2014</b>		<b>877.24</b>	<b>2066.35</b>



<b>Asset-II</b>	As on COD		599.01	2726.44
	Additional Capitalization	2012-13	(9.93)	246.54
		2013-14	-	-
	<b>As on 31.3.2014</b>		<b>589.08</b>	<b>2972.98</b>
<b>Asset-III</b>	As on COD		554.32	1387.22
	Additional Capitalization	2012-13	-	-
		2013-14	(16.37)	240.54
	<b>As on 31.3.2014</b>		<b>537.95</b>	<b>1627.76</b>
<b>Asset-IV</b>	As on COD		418.76	684.12
	Additional Capitalization	2012-13	-	-
		2013-14	54.99	328.04
	<b>As on 31.3.2014</b>		<b>473.75</b>	<b>1012.16</b>

### **Cost over-run**

16. Against the apportioned approved cost of ₹12468.00 lakh, the total capital cost as on 31.3.2014 is ₹10503.05 lakh which is within the approved cost of ₹12468.00 lakh. The petitioner has claimed capital cost as on COD for Assets – I, II, III and IV of ₹2732.20 lakh (earlier admitted cost was ₹2675.15 lakh), ₹3325.45 lakh (earlier admitted cost was ₹3223.19 lakh), ₹1941.54 lakh (earlier admitted cost was ₹1775.60 lakh) and ₹1102.88 lakh (earlier admitted cost was ₹1062.31 lakh) based on actual respectively for truing-up fees and charges for the period 2009-14. The petitioner has claimed total capital cost as on 31.3.2014 amounting to ₹10503.05 lakh based on actual against the approved capital cost of ₹10342.35 lakh as on 31.3.2014 as considered in Petition No. 240/TT/2013 and in Petition No. 22/TT/2014 after deduction amount of IDC, IEDC and considering the time over-run. Thus, there is an increase in total capital cost based on actual against the considered capital cost as on 31.3.2014 due to increase in additional capital expenditure claimed due to balance and retention payments covered under Regulation 9(1) (i) of the 2009 Tariff Regulations.

### **Time over-run**

17. As per investment approval, the project was scheduled to be commissioned within 30 months from the date of investment approval (i.e. 25.3.2010). Accordingly, the



schedule of completion works out to 25.9.2012. The detail of the assets commissioned in Northern Region under instant petition is as under:

Asset	Name of the Assets	Delay
Asset-I	01.04.2012	N/A
Asset-II	01.01.2013	99 days
Asset-III	01.04.2013	189 days
Asset-IV	01.10.2013	372 days

### **Interest during Construction (IDC)**

18. The petitioner has claimed the following IDC supported by working of IDC calculations as well details of IDC discharged after date of commercial operation.

Asset	(₹ in lakh)		
	Central	State	Total
Asset-I	28.55	65.63	94.18
Asset-II	27.89	151.47	179.36
Asset-III	66.29	173.63	239.92
Asset-IV	26.39	52.00	78.39

19. Accordingly, IDC has been worked out based on the loans deployed for the assets as per submission of the petitioner on cash basis assuming that the petitioner has not made any default in the payment of interest. Further, the amount of IDC for delayed period of 99 days, 189 days and 372 days for Asset-II, Asset-III and Asset-IV respectively, have not been allowed. Thus, on the basis of above, IDC on cash basis up to the actual date of commercial operation i.e 1.4.2012 for Asset-I and scheduled date of commercial operation i.e. 25.9.2012 for Asset-II, Asset-III and Asset-IV worked out as under:-

Asset	(₹ in lakh)		
	Central	State	Total
Asset-I	28.76	80.22	108.98
Asset-II	18.86	182.00	200.86
Asset-III	51.00	90.53	141.53
Asset-IV	3.97	49.38	53.35



20. Accordingly, in view of the above, the IDC considered for fee and charges computation is as under:-

(₹ in lakh)

Asset	Central	State	Total
Asset-1	28.55	65.63	94.18
Asset-2	18.86	151.47	170.33
Asset-3	51.00	90.53	141.53
Asset-4	3.97	49.38	53.35

21. Hence, the following IDC has been disallowed, as on COD, on account of time overrun not condoned:

(₹ in lakh)

Asset	Central	State	Total
Asset-I	-	-	-
Asset-II	9.03	-	9.03
Asset-III	15.29	83.10	98.39
Asset-IV	22.42	2.62	25.04

22. Further, the petitioner has submitted the statement showing un-discharged IDC liability as on COD and to be discharged of the same after COD. Accordingly, in addition to the IDC disallowed, the following IDC has been disallowed as on COD on account of un-discharged liability:

(₹ in lakh)

Asset	Central	State	Total
Asset-I	10.31	46.77	57.08
Asset-II	5.23	9.45	14.68
Asset-III	-	-	-
Asset-IV	-	-	-

23. Therefore, the IDC being considered for fee and charges computation is:

(₹ in lakh)

Particulars	Asset 1		Asset 2		Asset 3		Asset 4	
	Central	State	Central	State	Central	State	Central	State
IDC discharged up to COD	18.24	18.86	13.63	142.02	51.00	90.93	3.97	49.38
IDC Discharged 2012-13	10.31	46.77	5.23	9.45	NA	NA	NA	NA



24. The petitioner has submitted that the un-discharged IDC as on COD as mentioned above has been discharged during 2012-13. Hence, the same have been added to the additional capital expenditure during 2012-13.

### **Incidental Expenditure During Construction (IEDC)**

25. The petitioner has claimed IEDC as on COD, which is within the percentage on hard cost as indicated in the Abstract Cost Estimate. In the instant petition, 10.75% of hard cost is indicated as IEDC in the Abstract Cost Estimate. In line with the decision of the Commission vide order dated 20.5.2015 in Petition No. 109/TT/2013, the amount of IEDC claimed and disallowed on account of time over-run not condoned is as under:

Particulars	IEDC Claimed			IEDC Disallowed		
	Central Portion	State Portion	Total	Central Portion	State Portion	Total
Asset-I	14.26	32.79	<b>47.05</b>	-	-	-
Asset-II	15.66	85.06	<b>100.72</b>	1.53	8.30	<b>9.83</b>
Asset-III	27.38	71.73	<b>99.11</b>	4.69	12.28	<b>16.97</b>
Asset-IV	19.08	37.59	<b>56.67</b>	5.51	10.87	<b>16.38</b>

### **Scrap Value**

26. The petitioner, vide affidavit dated 13.3.2018, has submitted that the scrap value of ₹8.98 lakh has been deducted from expenditure as on COD, as indicated in Auditor's Certificates, while calculating the Fee and Charges for Asset-II. Accordingly, the Scrap Value of ₹8.98 lakh has been deducted to arrive at the capital cost as on COD for Asset-II. Therefore, capital cost as on DOCO considered for the purpose of fee and charges in the instant petition, after scrutiny of IEDC/IDC and scrap value, is as under:

Assets	Particulars	Central		State	
		Central	State	Central	State
Asset-I	(1) Expenditure as on COD (Claimed)	901.41	1830.79		
	(2) IDC Disallowed due to Time Overrun	-	-		
	(3) IDC Disallowed due to Un-discharged Liability	10.31	46.77		
	(4) IEDC Disallowed due to Tme Overrun	-	-		
	<b>(5) Capital Cost as on COD (allowable)[1-(2+3+4)]</b>	<b>891.10</b>	<b>1784.02</b>		



<b>Asset-II</b>	(1) Expenditure as on COD (Claimed)	599.01	2726.44
	(2) IDC Disallowed due to Time Overrun	9.03	-
	(3) IDC Disallowed due to Un-discharged Liability	5.23	9.45
	(4) IEDC Disallowed due to Tme Overrun	1.53	8.30
	(5) Scrap Value	8.98	-
	<b>(6) Capital Cost as on COD (allowable) [1-(2+3+4+5)]</b>	<b>574.24</b>	<b>2708.69</b>
<b>Asset-III</b>	(1) Expenditure as on COD (Claimed)	554.32	1387.22
	(2) IDC Disallowed due to Time Overrun	15.29	83.10
	(3) IDC Disallowed due to Un-discharged Liability	-	-
	(4) IEDC Disallowed due to Tme Overrun	4.69	12.28
	<b>(5) Capital Cost as on COD (allowable)[1-(2+3+4)]</b>	<b>534.34</b>	<b>1291.84</b>
	<b>Asset-IV</b>	(1) Expenditure as on COD (Claimed)	418.76
(2) IDC Disallowed due to Time Overrun		22.42	2.62
(3) IDC Disallowed due to Un-discharged Liability		-	-
(4) IEDC Disallowed due to Tme Overrun		5.51	10.87
<b>(5) Capital Cost as on COD (allowable)[1-(2+3+4)]</b>		<b>390.83</b>	<b>670.64</b>

### **Additional Capital Expenditure (2009-14)**

27. The petitioner has claimed additional capitalization before the cut-off date on account of balance and retention payment within cut-off date under Regulation 9(1) of the 2009 Tariff Regulations. The petitioner has further submitted that there is mismatch in DOCO cost in case of Asset-I and Asset-II allowed by Hon'ble Commission vide order dated 1.9.2016 in Petition No. 240/TT/2013 and claimed cost upto COD, although the total of Central and State upto COD is same in both cases. The petitioner has submitted that this mismatch was because one link was kept under PSEC which was under Central portion. It is prayed to condone the inadvertent error and allow tariff based on auditor certificate submitted with this petition.

28. Clause (1), sub-clause(i) of Regulation 9 of the 2009 Tariff Regulations provides that:-

**“Additional Capitalisation.**(1) The capital expenditure 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...;”



29. Since the total cost for Central and state portion as on COD is same as allowed by the Commission, we accordingly, consider the clarification of the petitioner and mismatch in capital cost as on COD. The claim of additional capitalization falls within the meaning of Regulation 9(1) of the 2009 Tariff Regulations and hence, the additional capital expenditure under Regulation 9(1)(i) of the 2009 Tariff Regulations is worked out as under:-

Asset	(₹ in lakh)		
	Central	State	Total
Asset-I	(13.86)	282.33	268.47
Asset-II	(4.70)	255.99	251.29
Asset-III	(16.37)	240.54	224.17
Asset-IV	54.99	328.04	383.03

30. Therefore, the additional capitalization during 2009-14 period and capital cost as on 31.3.2014 has been considered for the purpose of fee and charges for 2009-14, as under:-

Particulars	Capital Cost	(₹ in lakh)	
		Central	State
Asset-I	As on COD	891.10	1784.02
	Additional Capitalization	(13.86)	282.33
	<b>As on 31.3.2014</b>	<b>877.24</b>	<b>2066.35</b>
Asset-II	As on COD	574.24	2708.69
	Additional Capitalization	(4.70)	255.99
	<b>As on 31.3.2014</b>	<b>569.54</b>	<b>2964.68</b>
Asset-III	As on COD	534.34	1291.84
	Additional Capitalization	(16.37)	240.54
	<b>As on 31.3.2014</b>	<b>517.98</b>	<b>1532.38</b>
Asset-IV	As on COD	390.83	670.64
	Additional Capitalization	54.99	328.04
	<b>As on 31.3.2014</b>	<b>445.82</b>	<b>998.68</b>

### Debt: Equity Ratio

31. The details of Debt-Equity as on COD and as on 31.3.2014 of the asset, calculated in accordance with Regulation 12 of the 2009 Tariff Regulations are as under:-





(₹ in lakh)

Debt-Equity Ratio (as on DCO)								
Particulars	Asset-I		Asset-II		Asset-III		Asset-IV	
	Central Portion	State Portion	Central Portion	State Portion	Central Portion	State Portion	Central Portion	State Portion
Loan	623.77	1248.81	401.97	1896.08	374.04	904.29	273.58	469.44
Equity	267.33	535.21	172.27	812.61	160.30	387.55	117.25	201.19
<b>Total</b>	<b>891.10</b>	<b>1784.02</b>	<b>574.24</b>	<b>2708.69</b>	<b>534.35</b>	<b>1291.84</b>	<b>390.83</b>	<b>670.64</b>
Debt	70.00%	70.00%	70.00%	70.00%	70.00%	70.00%	70.00%	70.00%
Equity	30.00%	30.00%	30.00%	30.00%	30.00%	30.00%	30.00%	30.00%
<b>Total</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>

(₹ in lakh)

Debt-Equity Ratio (as on 31.3.2014)								
Particulars	Asset-I		Asset-II		Asset-III		Asset-IV	
	Central Portion	State Portion	Central Portion	State Portion	Central Portion	State Portion	Central Portion	State Portion
Loan	614.07	1446.45	398.68	2075.27	362.58	1072.67	312.07	699.07
Equity	263.17	619.91	170.86	889.40	155.39	459.72	133.74	299.60
<b>Total</b>	<b>877.24</b>	<b>2066.35</b>	<b>569.54</b>	<b>2964.68</b>	<b>517.98</b>	<b>1532.38</b>	<b>445.82</b>	<b>998.68</b>
Debt	70.00%	70.00%	70.00%	70.00%	70.00%	70.00%	70.00%	70.00%
Equity	30.00%	30.00%	30.00%	30.00%	30.00%	30.00%	30.00%	30.00%
<b>Total</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>

32. The additional capitalisation allowed during 2013-14 has been considered in the debt-equity ratio of 70:30.

### **Rates for Recovery of loan and equity**

33. The Capital Recovery Factor (CRF) for loan in respect of the instant assets has been calculated by applying the year-wise weighted average rate of interest on the basis of the impact due to change in floating rate of interest of loan. Thus, CRF for equity portion, the rate of return on equity of 15.50% has been applied for calculating the CRF for equity as considered by the Commission in Petition Nos. 240/TT/2013 and 22/TT/2014. The rates considered on annual basis, have been converted to monthly rates. The details of loan are attached at Annexure-1 of the order.

### **Monthly Capital Recovery Charges**

34. The monthly capital recovery factors for loan and equity has been worked out



using the following relationship:

$$\text{Recovery Factor} = \frac{i \times (1+i)^n}{(1+i)^n - 1} \quad n = \text{period and } i = \text{rate}$$

35. The monthly recovery factors for loan for Central portion as well as State portion for instant asset have been considered by respective capital recovery factor and are as under:-

<b>Particulars</b>	<b>2012-13</b>	<b>2013-14</b>
Asset-I – Central Portion	0.010262	0.010608
Asset-I – State Portion	0.010357	0.010700
Asset-II – Central Portion	0.010194	0.010275
Asset-II – State Portion	0.010356	0.010437
Asset-III – Central Portion	-	0.010148
Asset-III – State Portion	-	0.010298
Asset-IV – Central Portion	-	0.010172
Asset-IV– State Portion	-	0.010299

36. Similarly, monthly recovery factors for Equity for Central portion as well as State portion for instant asset have been considered by respective capital recovery factor and are as under:

<b>Particulars</b>	<b>2012-13</b>	<b>2013-14</b>
Asset-I – Central Portion	0.014340	0.014608
Asset-I – State Portion	0.014340	0.014608
Asset-II – Central Portion	0.014340	0.014402
Asset-II – State Portion	0.014340	0.014402
Asset-III – Central Portion	-	0.014340
Asset-III – State Portion	-	0.014340
Asset-IV – Central Portion	-	0.014340
Asset-IV– State Portion	-	0.014340

37. Based on the above recovery factors, monthly capital recovery charges for 'Loan' for Central as well as State portion corresponding to instant assets are worked out as under:-



(₹ in lakh)

Particulars	2012-13	2013-14
Asset-I – Central Portion	6.40	6.64
Asset-I – State Portion	12.93	15.05
Asset-II – Central Portion	4.10	4.06
Asset-II – State Portion	19.64	21.51
Asset-III – Central Portion	-	3.80
Asset-III – State Portion	-	9.31
Asset-IV – Central Portion	-	2.78
Asset-IV – State Portion	-	4.84

38. Similarly, monthly capital recovery charges for 'Equity' for Central portion as well as State portion corresponding to instant assets are worked out as under:-

(₹ in lakh)

Particulars	2012-13	2013-14
Asset-I – Central Portion	3.83	3.97
Asset-I – State Portion	7.67	8.91
Asset-II – Central Portion	2.47	2.45
Asset-II – State Portion	11.65	12.76
Asset-III – Central Portion	-	2.30
Asset-III – State Portion	-	5.56
Asset-IV – Central Portion	-	1.68
Asset-IV – State Portion	-	2.89

39. Accordingly, the following recovery of capital during 2009-14 has been worked out as under:-

(₹ in lakh)

Particulars	Capital	Central Portion	State Portion
<b>Asset-I:</b> Capital Cost Recovered during 2009-14	Loan	43.30	91.14
	Equity	10.83	23.12
	<b>Total</b>	<b>54.13</b>	<b>114.26</b>
<b>Asset-II:</b> Capital Cost Recovered during 2009-14	Loan	16.57	82.80
	Equity	4.00	20.48
	<b>Total</b>	<b>20.57</b>	<b>103.28</b>
<b>Asset-III:</b> Capital Cost Recovered during 2009-14	Loan	12.35	29.23
	Equity	2.94	7.11
	<b>Total</b>	<b>15.30</b>	<b>36.34</b>
<b>Asset-IV:</b> Capital Cost Recovered during 2009-14	Loan	4.40	7.41
	Equity	1.03	1.77
	<b>Total</b>	<b>5.43</b>	<b>9.19</b>



40. After considering the capital cost and its recovery during 2009-14 period, the capital cost as on 31.3.2014 for Assets- I, II, III and IV is as under:-

(₹ in lakh)

<b>Asset-I</b>	<b>Capital</b>	<b>Central Portion</b>	<b>State Portion</b>
Gross Capital Cost as on 31.3.2014	Loan	614.07	1446.45
	Equity	263.17	619.91
	<b>Total</b>	<b>877.24</b>	<b>2066.35</b>
Capital Cost Recovered from COD to 31.3.2014	Loan	43.30	91.14
	Equity	10.83	23.12
	<b>Total</b>	<b>54.13</b>	<b>114.26</b>
Net Capital Cost as on 31.3.2014	Loan	570.77	1,355.30
	Equity	252.34	596.79
	<b>Total</b>	<b>823.11</b>	<b>1952.09</b>

(₹ in lakh)

<b>Asset-II</b>	<b>Capital</b>	<b>Central Portion</b>	<b>State Portion</b>
Gross Capital Cost as on 31.3.2014	Loan	398.68	2075.27
	Equity	170.86	889.40
	<b>Total</b>	<b>569.54</b>	<b>2964.68</b>
Capital Cost Recovered from COD to 31.3.2014	Loan	16.57	82.80
	Equity	4.00	20.48
	<b>Total</b>	<b>20.57</b>	<b>103.28</b>
Net Capital Cost as on 31.3.2014	Loan	382.11	1,992.47
	Equity	166.86	868.92
	<b>Total</b>	<b>548.97</b>	<b>2861.40</b>

(₹ in lakh)

<b>Asset-III</b>	<b>Capital</b>	<b>Central Portion</b>	<b>State Portion</b>
Gross Capital Cost as on 31.3.2014	Loan	362.58	1072.67
	Equity	155.39	459.72
	<b>Total</b>	<b>517.98</b>	<b>1532.38</b>
Capital Cost Recovered from COD to 31.3.2014	Loan	12.35	29.23
	Equity	2.94	7.11
	<b>Total</b>	<b>15.30</b>	<b>36.34</b>
Net Capital Cost as on 31.3.2014	Loan	350.23	1,043.44
	Equity	152.45	452.61
	<b>Total</b>	<b>502.68</b>	<b>1496.05</b>



(₹ in lakh)

<b>Asset-IV</b>	<b>Capital</b>	<b>Central Portion</b>	<b>State Portion</b>
Gross Capital Cost as on 31.03.2014	Loan	312.07	699.07
	Equity	133.74	299.60
	<b>Total</b>	<b>445.82</b>	<b>998.68</b>
Capital Cost Recovered from COD to 31.03.2014	Loan	4.40	7.41
	Equity	1.03	1.77
	<b>Total</b>	<b>5.43</b>	<b>9.19</b>
Net Capital Cost as on 31.03.2014	Loan	307.67	691.66
	Equity	132.71	297.83
	<b>Total</b>	<b>440.38</b>	<b>989.49</b>

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

41. The Commission vide order dated 1.9.2015 in Petition No. 240/TT/2013 while disallowing the O&M Expenses for Central and State portion observed as under:-

“31. The petitioner in the original petition has submitted the claim of the O&M Expenses @ 7.5% of the capital cost for the year 2012-13 and has escalated the claim for 2013-14 @5.72% subject to actual expenditure at the time of truing-up. This seems to be as per the norms which had been arrived at on the basis of normalized actual O&M Expenses during the period 2003-04 to 2007-08 and by escalating it by 5.72% per annum for arriving at norms for the tariff period 2009-14. However, subsequently vide affidavit dated 18.3.2014, the petitioner has submitted that no O & M Expenses was incurred during 2012-13 and 2013-14 as the links were under warranty. Accordingly, no O&M Expenses are allowed for the instant assets.”

42. The Commission vide order dated 27.5.2016 in Petition No. 22/TT/2014, while allowing O&M Expenses for central portion only observed as under:-

“27. The petitioner, vide affidavit dated 20.7.2015, has claimed O&M charges @ 7.5% of the capital cost for 2013-14 period for the central portion of the asset, subject to actual expenditure at the time of truing up. However, the petitioner has not claimed any O&M charges for the State portion. The petitioner's claim is based on the normalized actual O&M Expenses during the period 2003-04 to 2007-08 and by escalating it by 5.72% per annum for arriving at norms for the tariff period 2009-14. Accordingly, O&M Expenses are allowed for the Central portion only in the instant asset subject to truing up with actual expenditure.”

43. The O&M Expenses for central portion based on actual are zero for 2009-14 period as the asset were under guarantee during this period. The O&M expenses of State portion is not claimed as it is carried out by State.



### **Interest on working capital (IWC)**

44. IWC has been worked out in line with the methodology considered by the Commission vide order dated 1.9.2015 in Petition No. 240/TT/2013 and in order dated 27.5.2016 in Petition No. 22/TT/2014.

#### **(i) Maintenance Expenses**

The maintenance spares are part of O&M expenses. Accordingly, NIL maintenance spares have been considered at the rate of 15% of O&M expenses each year for the purpose of calculation of working capital.

#### **(ii) O & M Expenses**

One month's O&M Expenses, which is NIL, allowed under O&M Expenses above have been considered as an element of working capital.

#### **(iii) Receivables**

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

#### **(iv) Rate of interest on working capital**

In line with the 2009 Tariff Regulations, the SBI PLR as on 1.4.2012 (i.e.13.50%) for Asset-I and Asset-II and SBI PLR as on 1.4.2013 (i.e.13.20%) for Asset-III and Asset-IV is considered as the rate of interest on working capital .

45. Necessary computations in support of interest on working capital are given under:-

**(₹ in lakh)**

Particular	Asset-I			
	2012-13	2013-14	2012-13	2013-14
	Central		State	
Maintenance Spares (15% of O&M)	0.00	0.00	0.00	0.00
O&M Expenses (1 Month)	0.00	0.00	0.00	0.00
Receivables (2 months)	20.94	21.70	42.17	49.00



<b>Total</b>	<b>20.94</b>	<b>21.70</b>	<b>42.17</b>	<b>49.00</b>
Rate of Interest on Working Capital	13.50%	13.20%	13.50%	13.20%
<b>Total Interest on Working Capital (Annualized)</b>	<b>2.83</b>	<b>2.86</b>	<b>5.69</b>	<b>6.47</b>

(₹ in lakh)

<b>Asset-II</b>				
<b>Particular</b>	<b>2012-13</b>	<b>2013-14</b>	<b>2012-13</b>	<b>2013-14</b>
	<b>Central</b>		<b>State</b>	
Maintenance Spares (15% of O&M)	0.00	0.00	0.00	0.00
O&M Expenses (1 Month)	0.00	0.00	0.00	0.00
Receivables (2 months)	13.44	13.32	64.02	70.07
<b>Total</b>	<b>13.44</b>	<b>13.32</b>	<b>64.02</b>	<b>70.07</b>
Rate of Interest on Working Capital	13.50%	13.20%	13.50%	13.20%
<b>Total Interest on Working Capital (Annualized)</b>	<b>1.81</b>	<b>1.76</b>	<b>8.64</b>	<b>9.25</b>

(₹ in lakh)

<b>Asset-III</b>				
<b>Particular</b>	<b>2012-13</b>	<b>2013-14</b>	<b>2012-13</b>	<b>2013-14</b>
	<b>Central</b>		<b>State</b>	
Maintenance Spares (15% of O&M)	-	0.00	-	0.00
O&M Expenses (1 Month)	-	0.00	-	0.00
Receivables (2 months)	-	12.46	-	30.41
<b>Total</b>	<b>-</b>	<b>12.46</b>	<b>-</b>	<b>30.41</b>
Rate of Interest on Working Capital	-	13.20%	-	13.20%
<b>Total Interest on Working Capital (Annualized)</b>	<b>-</b>	<b>1.65</b>	<b>-</b>	<b>4.01</b>

(₹ in lakh)

<b>Asset-IV</b>				
<b>Particular</b>	<b>2012-13</b>	<b>2013-14</b>	<b>2012-13</b>	<b>2013-14</b>
	<b>Central</b>		<b>State</b>	
Maintenance Spares (15% of O&M)	-	0.00	-	0.00
O&M Expenses (1 Month)	-	0.00	-	0.00
Receivables (2 months)	-	9.13	-	15.79
<b>Total</b>	<b>-</b>	<b>9.13</b>	<b>-</b>	<b>15.79</b>
Rate of Interest on Working Capital	-	13.20%	-	13.20%
<b>Total Interest on Working Capital (Annualized)</b>	<b>-</b>	<b>1.21</b>	<b>-</b>	<b>2.08</b>



## Annual Fees and charges

46. The detailed calculations of fees and charges being allowed for the instant assets are summarized as under:-

(₹ in lakh)

<b>Central Portion- Annual Fee &amp; Charges (2009-14)</b> <b>(Asset- I)</b>		
<b>Particular</b>	<b>As worked out</b> <b>(Month wise Calculation)</b>	
<b>YEAR</b>	<b>2012-13</b>	<b>2013-14</b>
Annual Capital Recovery Charges-Total	122.82	127.34
O&M Expenses	0.00	0.00
Interest on Working Capital	2.83	2.86
<b>Total Fee &amp; Charges</b>	<b>125.64</b>	<b>130.21</b>
<b>State Portion- Annual Fee &amp; Charges (2009-14)</b>		
<b>Particular</b>	<b>As worked out</b> <b>(Month wise Calculation)</b>	
<b>YEAR</b>	<b>2012-13</b>	<b>2013-14</b>
Annual Capital Recovery Charges-Total	247.30	287.54
O&M Expenses	0.00	0.00
Interest on Working Capital	5.69	6.47
<b>Total Fee &amp; Charges</b>	<b>252.99</b>	<b>294.00</b>

(₹ in lakh)

<b>Central Portion- Annual Fee &amp; Charges (2009-14)</b> <b>(Asset- II)</b>		
<b>Particular</b>	<b>As worked out</b> <b>(Month wise Calculation)</b>	
<b>YEAR</b>	<b>2012-13</b>	<b>2013-14</b>
Annual Capital Recovery Charges-Total	19.70	78.17
O&M Expenses	0.00	0.00
Interest on Working Capital	0.45	1.76
<b>Total Fee &amp; Charges</b>	<b>20.16</b>	<b>79.92</b>
<b>State Portion- Annual Fee &amp; Charges (2009-14)</b>		
<b>Particular</b>	<b>As worked out</b> <b>(Month wise Calculation)</b>	
<b>YEAR</b>	<b>2012-13</b>	<b>2013-14</b>
Annual Capital Recovery Charges-Total	93.87	411.19





O&M Expenses	0.00	0.00
Interest on Working Capital	2.16	9.25
<b>Total Fee &amp; Charges</b>	<b>96.03</b>	<b>420.44</b>

(₹ in lakh)

<b>Central Portion- Annual Fee &amp; Charges (2009-14) (Asset- III)</b>		
<b>Particular</b>	<b>As worked out (Month wise Calculation)</b>	
	<b>2012-13</b>	<b>2013-14</b>
Annual Capital Recovery Charges-Total		73.13
O&M Expenses		0.00
Interest on Working Capital		1.65
<b>Total Fee &amp; Charges</b>		<b>74.78</b>
<b>State Portion- Annual Fee &amp; Charges (2009-14)</b>		
<b>Particular</b>	<b>As worked out (Month wise Calculation)</b>	
	<b>2012-13</b>	<b>2013-14</b>
Annual Capital Recovery Charges-Total		178.44
O&M Expenses		0.00
Interest on Working Capital		4.01
<b>Total Fee &amp; Charges</b>		<b>182.46</b>

(₹ in lakh)

<b>Central Portion- Annual Fee &amp; Charges (2009-14) (Asset- IV)</b>		
<b>Particular</b>	<b>As worked out (Month wise Calculation)</b>	
	<b>2012-13</b>	<b>2013-14</b>
Annual Capital Recovery Charges-Total		26.79
O&M Expenses		0.00
Interest on Working Capital		0.60
<b>Total Fee &amp; Charges</b>		<b>27.39</b>
<b>State Portion- Annual Fee &amp; Charges (2009-14)</b>		
<b>Particular</b>	<b>As worked out (Month wise Calculation)</b>	
	<b>2012-13</b>	<b>2013-14</b>



Annual Capital Recovery Charges-Total		46.32
O&M Expenses		0.00
Interest on Working Capital		1.04
<b>Total Fee &amp; Charges</b>		<b>47.36</b>

**Sharing of Charges for Central portion and State portion**

47. The fees and charges for the Central portion for the period 2009-14 shall be shared as per the directions of the Commission in order dated 1.9.2015 and 27.5.2016 in Petition No. 240/TT/2013 (Asset-I, II and III) and Petition No.22/TT/2014(Asset-IV) respectively.

**Determination of Annual Transmission Charges for 2014-19**

48. The petitioner has claimed the transmission charges for instant assets for the period 2014-19 is as under:-

(₹ in lakh)

Particular	Central Portion – Asset-I				
	2014-15	2015-16	2016-17	2017-18	2018-19
Annual Capital Recovery Charges-Total	120.72	113.24	114.03	114.04	114.05
O&M Expenses	0.00	5.28	9.05	9.35	9.66
Interest on Working Capital	2.79	2.90	3.13	3.15	3.17
<b>Total Charges</b>	<b>123.51</b>	<b>121.42</b>	<b>126.21</b>	<b>126.54</b>	<b>126.88</b>
Particular	State Portion – Asset-I				
	2014-15	2015-16	2016-17	2017-18	2018-19
Annual Capital Recovery Charges-Total	287.42	288.34	290.69	290.69	290.69
O&M Expenses	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	6.61	6.63	6.68	6.68	6.68
<b>Total Charges</b>	<b>294.03</b>	<b>294.97</b>	<b>297.37</b>	<b>297.37</b>	<b>297.37</b>

(₹ in lakh)

Particular	Central Portion – Asset-II				
	2014-15	2015-16	2016-17	2017-18	2018-19
Annual Capital Recovery Charges-Total	80.80	77.07	78.18	78.20	78.23



O&M Expenses	0.00	4.64	7.95	8.21	8.49
Interest on Working Capital	1.86	2.02	2.23	2.25	2.27
<b>Total Charges</b>	<b>82.66</b>	<b>83.73</b>	<b>88.36</b>	<b>88.66</b>	<b>88.99</b>
<b>Particular</b>	<b>State Portion – Asset-II</b>				
<b>Year</b>	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Annual Capital Recovery Charges-Total	411.71	416.88	427.53	427.51	427.49
O&M Expenses	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	9.48	9.60	9.85	9.85	9.85
<b>Total Charges</b>	<b>421.19</b>	<b>426.48</b>	<b>437.38</b>	<b>437.36</b>	<b>437.34</b>

(₹ in lakh)

<b>Particular</b>	<b>Central Portion – Asset-III</b>				
<b>Year</b>	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Annual Capital Recovery Charges-Total	73.52	70.14	72.57	71.48	71.44
O&M Expenses	0.00	1.32	3.96	4.09	4.23
Interest on Working Capital	1.69	1.69	1.86	1.86	1.87
<b>Total Charges</b>	<b>75.21</b>	<b>73.15</b>	<b>78.39</b>	<b>77.43</b>	<b>77.54</b>
<b>Particular</b>	<b>State Portion – Asset-III</b>				
<b>Year</b>	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Annual Capital Recovery Charges-Total	220.29	227.01	231.22	231.22	231.22
O&M Expenses	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	5.07	5.22	5.32	5.32	5.32
<b>Total Charges</b>	<b>225.36</b>	<b>232.23</b>	<b>236.54</b>	<b>236.54</b>	<b>236.54</b>

(₹ in lakh)

<b>Particular</b>	<b>Central Portion – Asset-IV</b>				
<b>Year</b>	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Annual Capital Recovery Charges-Total	64.93	65.26	49.89	49.88	49.87
O&M Expenses	0.00	3.58	6.13	6.33	6.54
Interest on Working Capital	1.49	1.70	1.49	1.50	1.51
<b>Total Charges</b>	<b>66.42</b>	<b>70.54</b>	<b>57.51</b>	<b>57.71</b>	<b>57.92</b>
<b>Particular</b>	<b>State Portion – Asset-IV</b>				
<b>Year</b>	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Annual Capital Recovery Charges-Total	139.70	140.96	145.76	145.77	145.77
O&M Expenses	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	3.22	3.25	14.25	3.36	3.36
<b>Total Charges</b>	<b>142.92</b>	<b>144.21</b>	<b>160.01</b>	<b>149.13</b>	<b>149.13</b>



## **Capital Cost**

49. Clause (1) and (3) of Regulation 9 of the 2014 Tariff Regulations specify 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.”

“(3) The Capital cost of an existing project shall include the following:

- (a) the capital cost admitted by the Commission prior to 1.4.2014 duly trued up by excluding liability, if any, as on 1.4.2014;
- (b) additional capitalization and de-capitalization for the respective year of tariff as determined in accordance with Regulation 14; and
- (c) expenditure on account of renovation and modernisation as admitted by this Commission in accordance with Regulation 15.”

50. The petitioner vide Auditor certificate dated 8.9.2016 has submitted the capital cost (Actual COD Cost and additional capital expenditure) based on actual from COD to 31.3.2016 for fees and charges for 2014-19 block as under:-

(₹ in lakh)

Name of Asset	Apportioned approved cost	Total capital Cost as on 31.3.2014	Sector	Additional capital expenditure		Total capital Cost as on 31.3.2017
				2014-15	2015-16	
Asset-I	3589.53	1004.09	Central Portion	1.80	5.04	1010.93
		2066.36	State Portion	5.94	15.20	2087.50
Asset-II	4380.88	669.23	Central Portion	8.26	16.58	694.07
		2972.98	State Portion	34.89	71.43	3079.30
Asset-III	2645.15	626.39	Central Portion	2.05	7.05	635.49
		1627.76	State Portion	8.44	28.44	1664.64
Asset-IV	1852.44	524.08	Central Portion	2.32	8.43	534.83
		1012.16	State Portion	8.65	33.07	1053.88
<b>Total</b>	<b>12468.00</b>	<b>10503.05</b>		<b>72.35</b>	<b>185.24</b>	<b>10760.64</b>



51. It is noticed that the total capital cost claimed by the petitioner as on 31.3.2016 is ₹10760.64 lakh, which is within the apportioned approved cost of ₹12468.00 lakh. Accordingly, the closing capital cost as on 31.3.2014 is considered as admitted opening capital cost as on 1.4.2014 in terms of the provisions of the 2014 Tariff Regulations.

### **Additional Capital Expenditure**

52. The COD of the instant assets is in between 1.4.2012 to 1.10.2013. Accordingly, the cut-off date for Asset-I come out to be 31.3.2015 and for Asset-II to IV come out as 31.3.2016.

53. The petitioner, vide affidavit dated 13.3.2018, has submitted Auditor's certificates dated 12.3.2018, for the period ending 31.3.2016, for expenditure incurred up to 31.3.2016. The following additional capital expenditure for the period 2014-19 is summarized as under:-

<b>Particulars</b>	<b>(₹ in lakh)</b>	
	<b>2014-15</b>	<b>2015-16</b>
Asset-I – Central Portion	(49.43)	5.04
Asset-I – State Portion	5.95	15.20
Asset-II – Central Portion	(25.28)	16.58
Asset-II – State Portion	34.89	71.44
Asset-III – Central Portion	(22.78)	7.05
Asset-III – State Portion	8.44	28.44
Asset-IV – Central Portion	2.32	(103.83)
Asset-IV – State Portion	8.65	33.07

54. The additional capital expenditure incurred during the period 2014-16 of the instant assets are before the cut-off and is covered under Regulation 14(1)(i) of the 2014 Tariff Regulations and the additional capital expenditure incurred during 2015-16 in case of Asset-I and during 2016-17 is after cut-off date and is covered under Regulation 14(3)(iv) of the 2014 Tariff Regulations.

55. Clause 1, sub-clause (i) and clause 3, sub-clause (iv) of Regulation 14 of the 2014



Tariff Regulations provides as follows:-

**“14. Additional Capitalisation and De-capitalisation:**

(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 recognized to be payable at a future date;

xxxx....

(3) The capital expenditure, in respect of existing generating station or the transmission system including communication system, incurred or projected to be incurred on the following counts after the cut-off date, may be admitted by the Commission, subject to prudence check:

xxxx...

(iv) Deferred works relating to ash pond or ash handling system in the original scope of work;”

56. The petitioner has submitted that OPGW was required to be installed on various Transmission Lines to provide reliable communication system required for effective monitoring and control of Power System. The decision to install OPGW was not initiated by the petitioner suo moto but due to systemic requirement and as per directives given in various forums such as RPC, CEA, MOP, CERC from time to time. Further OPGW is serving the dual purpose of earth wire and providing Fiber Optic connectivity. Further scheme for providing reliable communication and links on which fiber optic are to be installed has been prepared in consultation with all constituents and approved by respective RPCs. Subsequently in view of DOT directive to vacate microwave spectrum for broadband wireless access by 2012, new scheme (OPGW installation) under microwave replacement project was implemented in this project. The commission vide its order dated 8.12.2011 in petition no 68/2010 has (i) allowed for accelerate depreciation of unrecovered capital cost of microwave and also (ii) adjustment of salvage value of the microwave links and passing the-Credit to the beneficiary wherever



microwave links are replaced. It is relevant to mention that some of the existing lines on which Earth Wire is replaced are very old (app. 25 years) whereas some are new and commissioned 5 to 10 years back. Recovery of return for these new lines is bare minimum as the life of lines is 35 years.

57. The petitioner has submitted that efforts were made to dispose off the replaced earth wire through bidding process. However due to non-responsiveness of the bidders in the market the entire earth wire could not be disposed off and only scrap of Asset-II Singrauli - Anpara-400 kV line and Bawana-Bahadurgarh-400 kV line (length 76.141 km) of earth wire were sold in 2017 at a scrap value of Rs. 8.98 lakh. The scrap value of the earth wire realized after dismantling shall be credited to the cost of the subject asset of central sector covered under the instant petition on actual basis.

58. Out of 24 fibers in OPGW link 6 fibers are getting used for ULDC requirement. Remaining 18 fibers can be used by constituents / Telecom projects. Wherever Telecom department is utilizing the remaining fibers, sharing of cost shall be carried on as per the following guidelines prescribed in order dated 8.12.2011 in Petition No. 68/2010:

"....Six(6) out of 12/24 fibers installed under this project shall be utilized for ULDC project only. The balance fibers shall be utilized by POWERGRID for telecom purpose. Accordingly, it is proposed to apportion (i) 50% of the optical fiber cost for 24 fiber cable and (ii) 25% of optical fiber cost for 12 fiber cable to the telecom venture. Apportionment as per the above methodology shall be made at the time of submission of tariff proposal to GOI/CERC."

59. It is further submitted that out of 24 links (Central Sector Portion) in the instant petition 16 nos. of OPGW links are being utilized by POWERGRID Telecom department. Accordingly cost of OPGW on all shared links has been apportioned and deducted from the respective add cap cost of central sector portion. After deduction of



the said capital cost revised Auditor certificate for central sector portion along with the revised tariff forms after cash IDC adjustment is submitted. The details of cost adjusted w.r.t. Telecom Sharing is as under:-

<b>Asset</b>	<b>2012-13</b>	<b>2013-14</b>	<b>2014-15</b>	<b>2015-16</b>	<b>Total</b>
<b>Asset-I</b>	81.12	45.73	51.23	0.00	178.08
<b>Asset-II</b>	80.15	0.00	33.54	0.00	113.69
<b>Asset-III</b>	0.00	88.44	24.83	0.00	113.27
<b>Asset-IV</b>	0.00	50.34	0.00	112.26	162.60

### **Debt:Equity Ratio**

60. Clause 3 of Regulation 19 of the 2014 Tariff Regulations specifies as under:-

“(3) In case of the generating station and the transmission system declared under commercial operation prior to 1.4.2014, debt-equity ratio allowed by the Commission for determination of tariff for the period ending 31.3.2014 shall be considered.”

61. The following Debt-Equity ratio has been considered as on 1.4.2014 for the Central as well as State Portion for Asset-I, Asset-II, Asset-III and Asset-IV:

<b>Debt-Equity Ratio (as on 1.4.2014)</b>								
<b>Particulars</b>	<b>Asset-I</b>		<b>Asset-II</b>		<b>Asset-III</b>		<b>Asset-IV</b>	
	<b>Central Portion</b>	<b>State Portion</b>	<b>Central Portion</b>	<b>State Portion</b>	<b>Central Portion</b>	<b>State Portion</b>	<b>Central Portion</b>	<b>State Portion</b>
Loan	614.07	1446.45	398.68	2075.27	362.58	1072.67	312.07	699.07
Equity	263.17	619.91	170.86	889.40	155.39	459.72	133.74	299.60
<b>Total</b>	<b>877.24</b>	<b>2066.35</b>	<b>569.54</b>	<b>2964.68</b>	<b>517.98</b>	<b>1532.38</b>	<b>445.82</b>	<b>998.68</b>
Debt	70.00%	70.00%	70.00%	70.00%	70.00%	70.00%	70.00%	70.00%
Equity	30.00%	30.00%	30.00%	30.00%	30.00%	30.00%	30.00%	30.00%
<b>Total</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>

### **Rates for Recovery of loan and equity**

#### **Capital Recovery for Loan**

62. The year wise Weighted Average Rate of Interest has been calculated on the basis of the impact due to change in floating rate of interest of loan which have been applied for calculating the Capital Recovery Factor for loan.





### **Capital Recovery for Equity**

63. The methodology as used for truing-up calculation for the period 2009-14 has been considered for Capital Recovery of Equity. Hence, post-tax RoE of 15.50%, without grossing has been applied for calculating the Capital Recovery Factor for equity. The details of loan are attached at Annexure-2 of the order.

### **Monthly Capital Recovery Charges**

64. The monthly recovery factors for loan for Central portion and State portion corresponding to instant assets is as under:-

<b>Particulars</b>	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Asset-I – Central Portion	0.011016	0.011500	0.012080	0.012787	0.013662
Asset-I – State Portion	0.011106	0.011587	0.012163	0.012866	0.013737
Asset-II – Central Portion	0.010636	0.011059	0.011564	0.012173	0.012919
Asset-II – State Portion	0.010796	0.011217	0.011717	0.012321	0.013061
Asset-III – Central Portion	0.010499	0.010909	0.011394	0.011974	0.012680
Asset-III – State Portion	0.010645	0.011052	0.011533	0.012111	0.012816
Asset-IV – Central Portion	0.010339	0.010714	0.011154	0.011679	0.012313
Asset-IV – State Portion	0.010468	0.010844	0.011285	0.011811	0.012448

65. Similarly, monthly recovery factors for equity for Central portion and State portion corresponding to instant assets is as under:-

<b>Particulars</b>	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Asset-I – Central Portion	0.014933	0.015332	0.015825	0.016441	0.017224
Asset-I – State Portion	0.014933	0.015332	0.015825	0.016441	0.017224
Asset-II – Central Portion	0.014683	0.015026	0.015445	0.015966	0.016619
Asset-II – State Portion	0.014683	0.015026	0.015445	0.015966	0.016619
Asset-III – Central Portion	0.014608	0.014933	0.015332	0.015825	0.016441
Asset-III – State Portion	0.014608	0.014933	0.015332	0.015825	0.016441
Asset-IV – Central Portion	0.014468	0.014763	0.015122	0.015565	0.016115
Asset-IV – State Portion	0.014468	0.014763	0.015122	0.015565	0.016115

67. Based on the above recovery factors, monthly capital recovery charges for loan for Central as well as State portion corresponding to instant assets are worked out as under:-



(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Asset-I – Central Portion	6.29	5.89	5.93	5.94	5.94
Asset-I – State Portion	15.05	15.10	15.23	15.23	15.23
Asset-II – Central Portion	4.06	3.87	4.00	4.00	4.00
Asset-II – State Portion	21.51	21.78	22.37	22.37	22.37
Asset-III – Central Portion	3.68	3.50	3.56	3.56	3.56
Asset-III – State Portion	11.11	11.18	11.41	11.41	11.41
Asset-IV – Central Portion	3.18	3.20	2.39	2.39	2.39
Asset-IV – State Portion	7.24	7.31	7.57	7.57	7.57

68. Accordingly, monthly capital recovery charges for equity for Central portion and State portion corresponding to instant assets are worked out as below:

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Asset-I – Central Portion	3.77	3.54	3.56	3.56	3.56
Asset-I – State Portion	8.91	8.94	9.01	9.01	9.01
Asset-II – Central Portion	2.45	2.34	2.41	2.41	2.41
Asset-II – State Portion	12.76	12.92	13.25	13.25	13.25
Asset-III – Central Portion	2.23	2.12	2.16	2.16	2.16
Asset-III – State Portion	6.61	6.65	6.78	6.78	6.78
Asset-IV – Central Portion	1.92	1.93	1.46	1.46	1.46
Asset-IV – State Portion	4.31	4.35	4.50	4.50	4.50

69. Accordingly, the following recovery of capital during 2014-19 has been worked out:

(₹ in lakh)

Particulars	Capital	Central Portion	State Portion
<b>Asset-I:</b> Capital Cost Recovered during 2014-19	Loan	137.65	343.75
	Equity	43.54	108.96
	<b>Total</b>	<b>181.19</b>	<b>452.71</b>
<b>Asset-II:</b> Capital Cost Recovered during 2014-19	Loan	86.83	467.44
	Equity	25.99	141.77
	<b>Total</b>	<b>112.82</b>	<b>609.20</b>
<b>Asset-III:</b> Capital Cost Recovered during 2014-19	Loan	76.55	235.93
	Equity	22.48	70.01
	<b>Total</b>	<b>99.02</b>	<b>305.94</b>
<b>Asset-IV:</b> Capital Cost Recovered during 2014-19	Loan	54.49	148.63
	Equity	15.44	42.79
	<b>Total</b>	<b>69.93</b>	<b>191.42</b>



## **O&M Expenses**

70. The petitioner has claimed the O&M Expenses for Central portion on actual basis for the years 2014-15, 2015-16 & 2016-17 and escalated at 3.32% for the years 2017-18 and 2018-19. Accordingly, the actual O&M charges for 2014-19 for Central portion is worked out as under:-

	2014-15	2015-16	2016-17	2017-18 (Escalation @ 3.32%)	2018-19 (Escalation @ 3.32%)
<b>Asset-I</b>	0.00	5.28	9.05	9.35	9.66
<b>Asset-II</b>	0.00	4.64	7.95	8.21	8.49
<b>Asset-III</b>	0.00	1.32	3.96	4.10	4.23
<b>Asset-IV</b>	0.00	3.58	6.13	6.33	6.54
<b>Total</b>	<b>0.00</b>	<b>14.81</b>	<b>27.09</b>	<b>27.99</b>	<b>28.92</b>

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

71. 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**

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

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

(ii) Operation and maintenance expenses for one month”

“(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;”

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



73. The interest on working capital worked is shown in the table below:-

(₹ in lakh)

<b>Asset- I (Central Portion)</b>					
<b>Particular</b>	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Maintenance Spares (15% of O&M)	0.00	0.79	1.36	1.40	1.45
O&M Expenses (1 Month)	0.00	0.44	0.75	0.78	0.81
Receivables (2 months)	20.58	20.23	21.03	21.08	21.14
<b>Total</b>	<b>20.58</b>	<b>21.46</b>	<b>23.14</b>	<b>23.26</b>	<b>23.39</b>
Rate of Interest on Working Capital	13.50%	13.50%	13.50%	13.50%	13.50%
<b>Total Interest on Working Capital (Annualized)</b>	<b>2.78</b>	<b>2.90</b>	<b>3.12</b>	<b>3.14</b>	<b>3.16</b>

(₹ in lakh)

<b>Asset- I (State Portion)</b>					
<b>Particular</b>	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Maintenance Spares (15% of O&M)	0.00	0.00	0.00	0.00	0.00
O&M Expenses (1 Month)	0.00	0.00	0.00	0.00	0.00
Receivables (2 months)	49.03	49.19	49.60	49.60	49.60
<b>Total</b>	<b>49.03</b>	<b>49.19</b>	<b>49.60</b>	<b>49.60</b>	<b>49.60</b>
Rate of Interest on Working Capital	13.50%	13.50%	13.50%	13.50%	13.50%
<b>Total Interest on Working Capital (Annualized)</b>	<b>6.62</b>	<b>6.64</b>	<b>6.70</b>	<b>6.70</b>	<b>6.70</b>

(₹ in lakh)

<b>Asset- II (Central Portion)</b>					
<b>Particular</b>	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Maintenance Spares (15% of O&M)	0.00	0.70	1.19	1.23	1.27
O&M Expenses (1 Month)	0.00	0.39	0.66	0.68	0.71
Receivables (2 months)	13.33	13.51	14.52	14.57	14.62
<b>Total</b>	<b>13.33</b>	<b>14.59</b>	<b>16.38</b>	<b>16.49</b>	<b>16.60</b>
Rate of Interest on Working Capital	13.50%	13.50%	13.50%	13.50%	13.50%
<b>Total Interest on Working Capital (Annualized)</b>	<b>1.80</b>	<b>1.97</b>	<b>2.21</b>	<b>2.23</b>	<b>2.24</b>

(₹ in lakh)

<b>Asset- II (State Portion)</b>					
<b>Particular</b>	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Maintenance Spares (15% of O&M)	0.00	0.00	0.00	0.00	0.00



O&M Expenses (1 Month)	0.00	0.00	0.00	0.00	0.00
Receivables (2 months)	70.12	71.00	72.87	72.87	72.86
<b>Total</b>	<b>70.12</b>	<b>71.00</b>	<b>72.87</b>	<b>72.87</b>	<b>72.86</b>
Rate of Interest on Working Capital	13.50%	13.50%	13.50%	13.50%	13.50%
<b>Total Interest on Working Capital (Annualized)</b>	<b>9.47</b>	<b>9.58</b>	<b>9.84</b>	<b>9.84</b>	<b>9.84</b>

(₹ in lakh)

<b>Asset- III (Central Portion)</b>					
<b>Particular</b>	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Maintenance Spares (15% of O&M)	0.00	0.20	0.59	0.62	0.63
O&M Expenses (1 Month)	0.00	0.11	0.33	0.34	0.35
Receivables (2 months)	12.08	11.75	12.40	12.42	12.44
<b>Total</b>	<b>12.08</b>	<b>12.06</b>	<b>13.32</b>	<b>13.38</b>	<b>13.43</b>
Rate of Interest on Working Capital	13.50%	13.50%	13.50%	13.50%	13.50%
<b>Total Interest on Working Capital (Annualized)</b>	<b>1.63</b>	<b>1.63</b>	<b>1.80</b>	<b>1.81</b>	<b>1.81</b>

(₹ in lakh)

<b>Asset- III (State Portion)</b>					
<b>Particular</b>	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Maintenance Spares (15% of O&M)	0.00	0.00	0.00	0.00	0.00
O&M Expenses (1 Month)	0.00	0.00	0.00	0.00	0.00
Receivables (2 months)	36.25	36.47	37.21	37.21	37.21
<b>Total</b>	<b>36.25</b>	<b>36.47</b>	<b>37.21</b>	<b>37.21</b>	<b>37.21</b>
Rate of Interest on Working Capital	13.50%	13.50%	13.50%	13.50%	13.50%
<b>Total Interest on Working Capital (Annualized)</b>	<b>4.89</b>	<b>4.92</b>	<b>5.02</b>	<b>5.02</b>	<b>5.02</b>

(₹ in lakh)

<b>Asset- IV (Central Portion)</b>					
<b>Particular</b>	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Maintenance Spares (15% of O&M)	0.00	0.54	0.92	0.95	0.98
O&M Expenses (1 Month)	0.00	0.30	0.51	0.53	0.55
Receivables (2 months)	10.44	11.12	8.95	8.98	9.02
<b>Total</b>	<b>10.44</b>	<b>11.96</b>	<b>10.38</b>	<b>10.46</b>	<b>10.54</b>
Rate of Interest on Working Capital	13.50%	13.50%	13.50%	13.50%	13.50%
<b>Total Interest on Working Capital (Annualized)</b>	<b>1.41</b>	<b>1.61</b>	<b>1.40</b>	<b>1.41</b>	<b>1.42</b>



(₹ in lakh)

<b>Asset- IV (State Portion)</b>					
<b>Particular</b>	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Maintenance Spares (15% of O&M)	0.00	0.00	0.00	0.00	0.00
O&M Expenses (1 Month)	0.00	0.00	0.00	0.00	0.00
Receivables (2 months)	23.63	23.85	24.69	24.69	24.69
<b>Total</b>	<b>23.63</b>	<b>23.85</b>	<b>24.69</b>	<b>24.69</b>	<b>24.69</b>
Rate of Interest on Working Capital	13.50%	13.50%	13.50%	13.50%	13.50%
<b>Total Interest on Working Capital (Annualized)</b>	<b>3.19</b>	<b>3.22</b>	<b>3.33</b>	<b>3.33</b>	<b>3.33</b>

**Annual Fees and charges**

74. The detailed calculations of fees and charges being allowed for the instant assets are summarized as under:-

(₹ in lakh)

<b>Asset - I Fee &amp; Charges (2009-14) Central Portion - Charges</b>					
<b>Particulars</b>	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Annual Capital Recovery Charge - Loan	75.45	70.70	71.22	71.23	71.24
Annual Capital Recovery Charge - Equity	45.22	42.49	42.78	42.78	42.78
<b>Annual Capital Recovery Charge - Total</b>	<b>120.67</b>	<b>113.19</b>	<b>114.00</b>	<b>114.01</b>	<b>114.02</b>
<b>O&amp;M Expenses</b>	<b>0.00</b>	<b>5.28</b>	<b>9.05</b>	<b>9.35</b>	<b>9.66</b>
<b>Interest on Working Capital</b>	<b>2.78</b>	<b>2.90</b>	<b>3.12</b>	<b>3.14</b>	<b>3.16</b>
<b>Total Fee &amp; Charges</b>	<b>123.45</b>	<b>121.36</b>	<b>126.17</b>	<b>126.50</b>	<b>126.84</b>

(₹ in lakh)

<b>Asset - I Fee &amp; Charges (2009-14) State Portion - Charges</b>					
<b>Particulars</b>	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Annual Capital Recovery Charge - Loan	180.63	181.23	182.78	182.78	182.77
Annual Capital Recovery Charge - Equity	106.94	107.27	108.14	108.14	108.14
<b>Annual Capital Recovery Charge - Total</b>	<b>287.57</b>	<b>288.50</b>	<b>290.92</b>	<b>290.92</b>	<b>290.91</b>
<b>O&amp;M Expenses</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Interest on Working Capital</b>	<b>6.62</b>	<b>6.64</b>	<b>6.70</b>	<b>6.70</b>	<b>6.70</b>



<b>Total Fee &amp; Charges</b>	<b>294.19</b>	<b>295.14</b>	<b>297.61</b>	<b>297.61</b>	<b>297.61</b>
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(₹ in lakh)

<b>Asset - II</b>					
<b>Fee &amp; Charges (2009-14)</b>					
<b>Central Portion - Charges</b>					
<b>Particulars</b>	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Annual Capital Recovery Charge - Loan	48.77	46.42	48.03	48.03	48.04
Annual Capital Recovery Charge - Equity	29.40	28.03	28.95	28.95	28.95
<b>Annual Capital Recovery Charge - Total</b>	<b>78.17</b>	<b>74.45</b>	<b>76.98</b>	<b>76.99</b>	<b>77.00</b>
<b>O&amp;M Expenses</b>	<b>0.00</b>	<b>4.64</b>	<b>7.95</b>	<b>8.21</b>	<b>8.49</b>
<b>Interest on Working Capital</b>	<b>1.80</b>	<b>1.97</b>	<b>2.21</b>	<b>2.23</b>	<b>2.24</b>
<b>Total Fee &amp; Charges</b>	<b>79.97</b>	<b>81.06</b>	<b>87.14</b>	<b>87.43</b>	<b>87.73</b>

(₹ in lakh)

<b>Asset - II</b>					
<b>Fee &amp; Charges (2009-14)</b>					
<b>State Portion - Charges</b>					
<b>Particulars</b>	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Annual Capital Recovery Charge - Loan	258.13	261.42	268.42	268.40	268.38
Annual Capital Recovery Charge - Equity	153.10	154.99	158.96	158.96	158.96
<b>Annual Capital Recovery Charge - Total</b>	<b>411.23</b>	<b>416.41</b>	<b>427.39</b>	<b>427.37</b>	<b>427.34</b>
<b>O&amp;M Expenses</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Interest on Working Capital</b>	<b>9.47</b>	<b>9.58</b>	<b>9.84</b>	<b>9.84</b>	<b>9.84</b>
<b>Total Fee &amp; Charges</b>	<b>420.70</b>	<b>426.00</b>	<b>437.23</b>	<b>437.20</b>	<b>437.18</b>

(₹ in lakh)

<b>Asset - III</b>					
<b>Fee &amp; Charges (2009-14)</b>					
<b>Central Portion - Charges</b>					
<b>Particulars</b>	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Annual Capital Recovery Charge - Loan	44.12	42.05	42.73	42.73	42.73
Annual Capital Recovery Charge - Equity	26.72	25.50	25.89	25.89	25.89
<b>Annual Capital Recovery Charge - Total</b>	<b>70.85</b>	<b>67.55</b>	<b>68.62</b>	<b>68.62</b>	<b>68.61</b>
<b>O&amp;M Expenses</b>	<b>0.00</b>	<b>1.32</b>	<b>3.96</b>	<b>4.10</b>	<b>4.23</b>
<b>Interest on Working Capital</b>	<b>1.63</b>	<b>1.63</b>	<b>1.80</b>	<b>1.81</b>	<b>1.81</b>
<b>Total Fee &amp; Charges</b>	<b>72.48</b>	<b>70.50</b>	<b>74.37</b>	<b>74.52</b>	<b>74.66</b>



(₹ in lakh)

<b>Asset - III</b>					
<b>Fee &amp; Charges (2009-14)</b>					
<b>State Portion - Charges</b>					
<b>Particulars</b>	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Annual Capital Recovery Charge - Loan	133.29	134.10	136.87	136.87	136.88
Annual Capital Recovery Charge - Equity	79.34	79.79	81.36	81.36	81.36
<b>Annual Capital Recovery Charge - Total</b>	<b>212.63</b>	<b>213.90</b>	<b>218.23</b>	<b>218.23</b>	<b>218.24</b>
<b>O&amp;M Expenses</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Interest on Working Capital</b>	<b>4.89</b>	<b>4.92</b>	<b>5.02</b>	<b>5.02</b>	<b>5.02</b>
<b>Total Fee &amp; Charges</b>	<b>217.52</b>	<b>218.82</b>	<b>223.25</b>	<b>223.26</b>	<b>223.26</b>

(₹ in lakh)

<b>Asset - IV</b>					
<b>Fee &amp; Charges (2009-14)</b>					
<b>Central Portion - Charges</b>					
<b>Particulars</b>	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Annual Capital Recovery Charge - Loan	38.17	38.38	28.64	28.63	28.62
Annual Capital Recovery Charge - Equity	23.04	23.16	17.51	17.51	17.51
<b>Annual Capital Recovery Charge - Total</b>	<b>61.21</b>	<b>61.54</b>	<b>46.16</b>	<b>46.14</b>	<b>46.13</b>
<b>O&amp;M Expenses</b>	<b>0.00</b>	<b>3.58</b>	<b>6.13</b>	<b>6.33</b>	<b>6.54</b>
<b>Interest on Working Capital</b>	<b>1.41</b>	<b>1.61</b>	<b>1.40</b>	<b>1.41</b>	<b>1.42</b>
<b>Total Fee &amp; Charges</b>	<b>62.62</b>	<b>66.74</b>	<b>53.69</b>	<b>53.89</b>	<b>54.10</b>

(₹ in lakh)

<b>Asset - IV</b>					
<b>Fee &amp; Charges (2009-14)</b>					
<b>State Portion - Charges</b>					
<b>Particulars</b>	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Annual Capital Recovery Charge - Loan	86.89	87.70	90.84	90.84	90.84
Annual Capital Recovery Charge - Equity	51.71	52.17	53.97	53.97	53.97
<b>Annual Capital Recovery Charge - Total</b>	<b>138.59</b>	<b>139.86</b>	<b>144.80</b>	<b>144.81</b>	<b>144.81</b>
<b>O&amp;M Expenses</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Interest on Working Capital</b>	<b>3.19</b>	<b>3.22</b>	<b>3.33</b>	<b>3.33</b>	<b>3.33</b>
<b>Total Fee &amp; Charges</b>	<b>141.78</b>	<b>143.08</b>	<b>148.13</b>	<b>148.14</b>	<b>148.14</b>





75. 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 filing fees, license fee, RLDC fees 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 Publication Expenses**

76. 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 is 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**

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

#### **Service Tax**

78. 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. We have considered the submission of the petitioner. Service tax was not levied on transmission service. Further, service tax is subsumed by GST and hence petitioner's prayer is infructuous.

### **Goods and Services Tax**

79. The petitioner has prayed for reimbursement of tax, if any, on account of implementation of GST. TANGEDCO has submitted that the petitioner's claim is premature. GST is not levied on transmission at present and as such we are of the view that petitioner's prayer is premature.

### **Sharing of Charges for Central portion and State portion**

80. The fees and charges for the period 2014-19 for Unified Scheme under the Central Sector shall be recovered on monthly basis in accordance with Regulation 43 of the 2014 Tariff Regulations and shall be shared by the beneficiaries and long term transmission customers in terms of the Central Electricity Regulatory Commission (Sharing of Inter-State Transmission Charges & Losses) Regulations, 2010 as amended time to time. The fees and charges for the Unified Scheme under the State Sector shall be shared by the respective State as provided under Regulation 43 of the 2014 Tariff Regulations.

81. The fees and charges for the period 2009-14 for Fiber Optic Communication system shall be shared on similar lines as system operation charges by the users in the ratio of 45:45:10 as per Regulation 22 (1) of Fees and charges of Regional Load Despatch Centre and other related matters Regulations, 2009 as under:-

Distribution licensees and buyers : 45% of system operation charges;

Generating stations and sellers : 45% of system operation charges;

Inter-state Transmission licensees: 10% of system operation charges"



82. The fees and charges of State portion shall be recovered from respective states. Further, as specified under Regulation 5 of Central Electricity Regulatory Commission (sharing of revenue derived from utilization of transmission assets for other business) Regulations, 2007, The revenue sharable by the transmission owner in accordance with these regulations shall be utilised towards reduction of transmission charges payable by the beneficiaries of the assets utilised for other business in proportion to the transmission charges payable by them to the transmission owner and shall be adjusted on monthly basis in the bills of the respective month

83. This order disposes of Petition No. 108/TT/2017.

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

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

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

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



## (Annexure- 1)

<b>Name of the Element:</b>	<b>Asset-I: 1099.803 km Fiber Optic in lieu of existing Microwave in NR</b>							
<b>Tariff setting Period:</b>	<b>2009-14 (True up)</b>							
<b>Wt. Average Rate of Interest (for 2009-14) - Central Portion</b>								
<b>(Rs. in lakh)</b>								
<b>2012-13</b>								
<b>Loan</b>	<b>Opening</b>	<b>Repayment</b>	<b>Closing</b>	<b>Average</b>	<b>Rate of interest</b>	<b>Interest</b>	<b>Weighted Average Rate of Interest</b>	
Bond XXXII	83.25	0.00	83.25	83.25	8.8400%	7.36		
Bond XXXIV	40.00	0.00	40.00	40.00	8.8400%	3.54		
Bond XXXV	40.00	0.00	40.00	40.00	9.6400%	3.86		
Bond XXXVI	40.00	0.00	40.00	40.00	9.3500%	3.74		
Bond XXXVII	40.00	0.00	40.00	40.00	9.2500%	3.70		
Bond XXXVIII	380.52	0.00	380.52	380.52	9.2500%	35.20		
<b>Total Loan</b>	<b>623.77</b>	<b>0.00</b>	<b>623.77</b>	<b>623.77</b>		<b>57.39</b>	<b>9.2004%</b>	
<b>2013-14</b>								
<b>Loan</b>	<b>Opening</b>	<b>Repayment</b>	<b>Closing</b>	<b>Average</b>	<b>Rate of interest</b>	<b>Interest</b>	<b>Weighted Average Rate of Interest</b>	
Bond XXXII	83.25	6.94	76.31	79.78	8.8400%	7.05		
Bond XXXIV	40.00	0.00	40.00	40.00	8.8400%	3.54		
Bond XXXV	40.00	0.00	40.00	40.00	9.6400%	3.86		
Bond XXXVI	40.00	0.00	40.00	40.00	9.3500%	3.74		
Bond XXXVII	40.00	0.00	40.00	40.00	9.2500%	3.70		
Bond XXXVIII	380.52	0.00	380.52	380.52	9.2500%	35.20		
<b>Total Loan</b>	<b>623.77</b>	<b>6.94</b>	<b>616.83</b>	<b>620.30</b>		<b>57.08</b>	<b>9.2024%</b>	

<b>Name of the Element:</b>	<b>Asset-I: 1099.803 km Fibre Optic in lieu of existing Microwave in NR</b>							
<b>Tariff setting Period:</b>	<b>2009-14 (True up)</b>							
<b>Wt. Average Rate of Interest (for 2009-14) - State Portion</b>								
<b>(Rs. in lakh)</b>								
<b>2012-13</b>								
<b>Loan</b>	<b>Opening</b>	<b>Repayment</b>	<b>Closing</b>	<b>Average</b>	<b>Rate of interest</b>	<b>Interest</b>	<b>Weighted Average Rate of Interest</b>	
Bond XXXII	76.75	0.00	76.75	76.75	8.8400%	6.78		
Bond XXXIV	60.00	0.00	60.00	60.00	8.8400%	5.30		
Bond XXXV	410.00	0.00	410.00	410.00	9.6400%	39.52		
Bond XXXVI	310.00	0.00	310.00	310.00	9.3500%	28.99		
Bond XXXVII	310.00	0.00	310.00	310.00	9.2500%	28.68		
Bond XXXVIII	82.06	0.00	82.06	82.06	9.2500%	7.59		
<b>Total Loan</b>	<b>1248.81</b>	<b>0.00</b>	<b>1248.81</b>	<b>1248.81</b>		<b>116.86</b>	<b>9.3580%</b>	



2013-14							
Loan	Opening	Repayment	Closing	Average	Rate of interest	Interest	Weighted Average Rate of Interest
Bond XXXII	76.75	6.40	70.35	73.55	8.8400%	6.50	
Bond XXXIV	60.00	0.00	60.00	60.00	8.8400%	5.30	
Bond XXXV	410.00	0.00	410.00	410.00	9.6400%	39.52	
Bond XXXVI	310.00	0.00	310.00	310.00	9.3500%	28.99	
Bond XXXVII	310.00	0.00	310.00	310.00	9.2500%	28.68	
Bond XXXVIII	82.06	0.00	82.06	82.06	9.2500%	7.59	
<b>Total Loan</b>	<b>1248.81</b>	<b>6.40</b>	<b>1242.41</b>	<b>1245.61</b>		<b>116.58</b>	<b>9.3593%</b>

Name of the Element:	Asset-II: 1628.966 km Fibre Optic in lieu of existing Microwave in NR							
Tarrif setting Period:	2009-14 (True up)							
Wt. Average Rate of Interest (for 2009-14) - Central Portion								
							(Rs. in lakh)	
2012-13								
Loan	Opening	Repayment	Closing	Average	Rate of interest	Interest	Weighted Average Rate of Interest	
Bond XXXII	9.12	0.00	9.12	9.12	8.8400%	0.81		
Bond XXXIV	20.00	0.00	20.00	20.00	8.8400%	1.77		
Bond XXXV	30.00	0.00	30.00	30.00	9.6400%	2.89		
Bond XXXVI	30.00	0.00	30.00	30.00	9.3500%	2.81		
Bond XXXVII	30.00	0.00	30.00	30.00	9.2500%	2.78		
Bond XXXVIII	69.31	0.00	69.31	69.31	9.2500%	6.41		
Bond XL	40.88	0.00	40.88	40.88	9.3000%	3.80		
Bond XLI	180.01	0.00	180.01	180.01	8.8500%	15.93		
<b>Total Loan</b>	<b>409.32</b>	<b>0.00</b>	<b>409.32</b>	<b>409.32</b>		<b>37.19</b>	<b>9.0858%</b>	
2013-14								
Loan	Opening	Repayment	Closing	Average	Rate of interest	Interest	Weighted Average Rate of Interest	
Bond XXXII	9.12	0.76	8.36	8.74	8.8400%	0.77		
Bond XXXIV	20.00	0.00	20.00	20.00	8.8400%	1.77		
Bond XXXV	30.00	0.00	30.00	30.00	9.6400%	2.89		
Bond XXXVI	30.00	0.00	30.00	30.00	9.3500%	2.81		
Bond XXXVII	30.00	0.00	30.00	30.00	9.2500%	2.78		
Bond XXXVIII	69.31	0.00	69.31	69.31	9.2500%	6.41		
Bond XL	40.88	0.00	40.88	40.88	9.3000%	3.80		
Bond XLI	180.01	0.00	180.01	180.01	8.8500%	15.93		
<b>Total Loan</b>	<b>409.32</b>	<b>0.76</b>	<b>408.56</b>	<b>408.94</b>		<b>37.16</b>	<b>9.0861%</b>	



<b>Name of the Element:</b>	<b>Asset-II: 1628.966 km Fibre Optic in lieu of existing Microwave in NR</b>							
<b>Tarrif setting Period:</b>	<b>2009-14 (True up)</b>							
<b>Wt. Average Rate of Interest (for 2009-14) - State Portion</b>								
								<b>(Rs. in lakh)</b>
<b>2012-13</b>								
<b>Loan</b>	<b>Opening</b>	<b>Repayment</b>	<b>Closing</b>	<b>Average</b>	<b>Rate of interest</b>	<b>Interest</b>	<b>Weighted Average Rate of Interest</b>	
Bond XXXII	100.88	0.00	100.88	100.88	8.8400%	8.92		
Bond XXXIV	40.00	0.00	40.00	40.00	8.8400%	3.54		
Bond XXXV	570.45	0.00	570.45	570.45	9.6400%	54.99		
Bond XXXVI	401.23	0.00	401.23	401.23	9.3500%	37.52		
Bond XXXVII	264.81	0.00	264.81	264.81	9.2500%	24.49		
Bond XXXVIII	340.69	0.00	340.69	340.69	9.2500%	31.51		
Bond XL	159.12	0.00	159.12	159.12	9.3000%	14.80		
Bond XLI	24.71	0.00	24.71	24.71	8.8500%	2.19		
<b>Total Loan</b>	<b>1901.89</b>	<b>0.00</b>	<b>1901.89</b>	<b>1901.89</b>		<b>177.95</b>		<b>9.3567%</b>
<b>2013-14</b>								
<b>Loan</b>	<b>Opening</b>	<b>Repayment</b>	<b>Closing</b>	<b>Average</b>	<b>Rate of interest</b>	<b>Interest</b>	<b>Weighted Average Rate of Interest</b>	
Bond XXXII	100.88	8.41	92.47	96.68	8.8400%	8.55		
Bond XXXIV	40.00	0.00	40.00	40.00	8.8400%	3.54		
Bond XXXV	570.45	0.00	570.45	570.45	9.6400%	54.99		
Bond XXXVI	401.23	0.00	401.23	401.23	9.3500%	37.52		
Bond XXXVII	264.81	0.00	264.81	264.81	9.2500%	24.49		
Bond XXXVIII	340.69	0.00	340.69	340.69	9.2500%	31.51		
Bond XL	159.12	0.00	159.12	159.12	9.3000%	14.80		
Bond XLI	24.71	0.00	24.71	24.71	8.8500%	2.19		
<b>Total Loan</b>	<b>1901.89</b>	<b>8.41</b>	<b>1893.48</b>	<b>1897.69</b>		<b>177.58</b>		<b>9.3578%</b>

<b>Name of the Element:</b>	<b>Asset-II: 1628.966 km Fiber Optic in lieu of existing Microwave in NR</b>							
<b>Tariff Period:</b>	<b>2009-14 (True up)</b>							
<b>Wt. Average Rate of Interest (for 2009-14) - State Portion</b>								
								<b>(Rs. in lakh)</b>
<b>2012-13</b>								
<b>Loan</b>	<b>Opening</b>	<b>Repayment</b>	<b>Closing</b>	<b>Average</b>	<b>Rate of interest</b>	<b>Interest</b>	<b>Weighted Average Rate of Interest</b>	
Bond XXXII	100.88	0.00	100.88	100.88	8.8400%	8.92		
Bond XXXIV	40.00	0.00	40.00	40.00	8.8400%	3.54		
Bond XXXV	570.45	0.00	570.45	570.45	9.6400%	54.99		
Bond XXXVI	401.23	0.00	401.23	401.23	9.3500%	37.52		



Bond XXXVII	264.81	0.00	264.81	264.81	9.2500%	24.49	
Bond XXXVIII	340.69	0.00	340.69	340.69	9.2500%	31.51	
Bond XL	159.12	0.00	159.12	159.12	9.3000%	14.80	
Bond XLI	24.71	0.00	24.71	24.71	8.8500%	2.19	
<b>Total Loan</b>	<b>1901.89</b>	<b>0.00</b>	<b>1901.89</b>	<b>1901.89</b>		<b>177.95</b>	<b>9.3567%</b>
<b>2013-14</b>							
<b>Loan</b>	<b>Opening</b>	<b>Repayment</b>	<b>Closing</b>	<b>Average</b>	<b>Rate of interest</b>	<b>Interest</b>	<b>Weighted Average Rate of Interest</b>
Bond XXXII	100.88	8.41	92.47	96.68	8.8400%	8.55	
Bond XXXIV	40.00	0.00	40.00	40.00	8.8400%	3.54	
Bond XXXV	570.45	0.00	570.45	570.45	9.6400%	54.99	
Bond XXXVI	401.23	0.00	401.23	401.23	9.3500%	37.52	
Bond XXXVII	264.81	0.00	264.81	264.81	9.2500%	24.49	
Bond XXXVIII	340.69	0.00	340.69	340.69	9.2500%	31.51	
Bond XL	159.12	0.00	159.12	159.12	9.3000%	14.80	
Bond XLI	24.71	0.00	24.71	24.71	8.8500%	2.19	
<b>Total Loan</b>	<b>1901.89</b>	<b>8.41</b>	<b>1893.48</b>	<b>1897.69</b>		<b>177.58</b>	<b>9.3578%</b>

<b>Name of the Element:</b>	<b>Asset-III: 493.064 km Fiber Optic in lieu of existing Microwave in NR</b>						
<b>Wt. Average Rate of Interest (for 2009-14) - Central Portion</b>							
							<b>(Rs. in lakh)</b>
<b>2013-14</b>							
<b>Loan</b>	<b>Opening</b>	<b>Repayment</b>	<b>Closing</b>	<b>Average</b>	<b>Rate of interest</b>	<b>Interest</b>	<b>Weighted Average Rate of Interest</b>
Bond XXXII	184.85	15.40	169.45	177.15	8.8400%	15.66	
Bond XXXIV	10.00	0.00	10.00	10.00	8.8400%	0.88	
Bond XXXV	20.00	0.00	20.00	20.00	9.6400%	1.93	
Bond XXXVI	20.00	0.00	20.00	20.00	9.3500%	1.87	
Bond XXXVII	30.00	0.00	30.00	30.00	9.2500%	2.78	
Bond XXXVIII	14.98	0.00	14.98	14.98	9.2500%	1.39	
Bond XL	45.15	0.00	45.15	45.15	9.3000%	4.20	
Bond XLII	57.77	0.00	57.77	57.77	8.8000%	5.08	
<b>Total Loan</b>	<b>382.75</b>	<b>15.40</b>	<b>367.35</b>	<b>375.05</b>		<b>33.79</b>	<b>9.0082%</b>



<b>Name of the Element:</b>	<b>Asset-III: 493.064 km Fibre Optic in lieu of existing Microwave in NR</b>						
<b>Tarrif setting Period:</b>	<b>2009-14 (True up)</b>						
<b>Wt. Average Rate of Interest (for 2009-14) - State Portion</b>							
							<b>(Rs. in lakh)</b>
	<b>2013-14</b>						
<b>Loan</b>	<b>Opening</b>	<b>Repayment</b>	<b>Closing</b>	<b>Average</b>	<b>Rate of interest</b>	<b>Interest</b>	<b>Weighted Average Rate of Interest</b>
Bond XXXII	45.15	3.76	41.39	43.27	8.8400%	3.83	
Bond XXXIV	145.00	0.00	145.00	145.00	8.8400%	12.82	
Bond XXXV	175.00	0.00	175.00	175.00	9.6400%	16.87	
Bond XXXVI	130.00	0.00	130.00	130.00	9.3500%	12.16	
Bond XXXVII	40.00	0.00	40.00	40.00	9.2500%	3.70	
Bond XXXVIII	267.55	0.00	267.55	267.55	9.2500%	24.75	
Bond XL	113.39	0.00	113.39	113.39	9.3000%	10.55	
Bond XLII		0.00	0.00	0.00	8.8000%	0.00	
<b>Total Loan</b>	<b>916.09</b>	<b>3.76</b>	<b>912.33</b>	<b>914.21</b>		<b>84.66</b>	<b>9.2606%</b>

<b>Name of the Element:</b>	<b>Asset-IV: 530.621 km Fibre Optic in lieu of existing Microwave in NR</b>						
<b>Tarrif setting Period:</b>	<b>2009-14 (True up)</b>						
<b>Wt. Average Rate of Interest (for 2009-14) - Central Portion</b>							
							<b>(Rs. in lakh)</b>
	<b>2013-14</b>						
<b>Loan</b>	<b>Opening</b>	<b>Repayment</b>	<b>Closing</b>	<b>Average</b>	<b>Rate of interest</b>	<b>Interest</b>	<b>Weighted Average Rate of Interest</b>
Bond XXXII	1.00	0.08	0.92	0.96	8.8400%	0.08	
Bond XXXIV	2.00	0.00	2.00	2.00	8.8400%	0.18	
Bond XXXV	1.00	0.00	1.00	1.00	9.6400%	0.10	
Bond XXXVI	1.00	0.00	1.00	1.00	9.3500%	0.09	
Bond XXXVII	1.00	0.00	1.00	1.00	9.2500%	0.09	
Bond XXXVIII	2.00	0.00	2.00	2.00	9.2500%	0.19	
Bond XL	131.13	0.00	131.13	131.13	9.3000%	12.20	
Bond XLI	51.00	0.00	51.00	51.00	8.8500%	4.51	
Bond XLII	93.97	0.00	93.97	93.97	8.8000%	8.27	
<b>Total Loan</b>	<b>284.10</b>	<b>0.08</b>	<b>284.02</b>	<b>284.06</b>		<b>25.71</b>	<b>9.0499%</b>





<b>Name of the Element:</b>	<b>Asset-IV: 530.621 km Fiber Optic in lieu of existing Microwave in NR</b>						
<b>Wt. Average Rate of Interest (for 2009-14) - State Portion</b>							
							<b>(Rs. in lakh)</b>
	<b>2013-14</b>						
<b>Loan</b>	<b>Opening</b>	<b>Repayment</b>	<b>Closing</b>	<b>Average</b>	<b>Rate of interest</b>	<b>Interest</b>	<b>Weighted Average Rate of Interest</b>
Bond XXXII	59.00	4.92	54.08	56.54	8.8400%	5.00	
Bond XXXIV	43.00	0.00	43.00	43.00	8.8400%	3.80	
Bond XXXV	99.00	0.00	99.00	99.00	9.6400%	9.54	
Bond XXXVI	74.00	0.00	74.00	74.00	9.3500%	6.92	
Bond XXXVII	34.00	0.00	34.00	34.00	9.2500%	3.15	
Bond XXXVIII	98.00	0.00	98.00	98.00	9.2500%	9.07	
Bond XL	65.89	0.00	65.89	65.89	9.3000%	6.13	
Bond XLI	4.00	0.00	4.00	4.00	8.8500%	0.35	
Bond XLII	2.00	0.00	2.00	2.00	8.8000%	0.18	
<b>Total Loan</b>	<b>478.89</b>	<b>4.92</b>	<b>473.97</b>	<b>476.43</b>		<b>44.13</b>	<b>9.2626%</b>



## (Annexure- 2)

Name of the Element:	Asset-I: 1099.803 km Fibre Optic in lieu of existing Microwave in NR						
Tarrif setting Period:	2014-19						
Wt. Average Rate of Interest (for 2014-19) - Central Portion							
							(Rs. in lakh)
2014-15							
Loan	Opening	Repayment	Closing	Average	Rate of interest	Interest	Weighted Average Rate of Interest
Bond XXXII	76.31	6.94	69.37	72.84	8.8400%	6.44	
Bond XXXIV	40.00	3.33	36.67	38.34	8.8400%	3.39	
Bond XXXV	40.00	0.00	40.00	40.00	9.6400%	3.86	
Bond XXXVI	40.00	0.00	40.00	40.00	9.3500%	3.74	
Bond XXXVII	40.00	0.00	40.00	40.00	9.2500%	3.70	
Bond XXXVIII	380.52	0.00	380.52	380.52	9.2500%	35.20	
<b>Total Loan</b>	<b>616.83</b>	<b>10.27</b>	<b>606.56</b>	<b>611.70</b>		<b>56.32</b>	<b>9.2075%</b>
2015-16							
Loan	Opening	Repayment	Closing	Average	Rate of interest	Interest	Weighted Average Rate of Interest
Bond XXXII	69.37	6.94	62.43	65.90	8.8400%	5.83	
Bond XXXIV	36.67	3.33	33.34	35.01	8.8400%	3.09	
Bond XXXV	40.00	3.33	36.67	38.34	9.6400%	3.70	
Bond XXXVI	40.00	0.00	40.00	40.00	9.3500%	3.74	
Bond XXXVII	40.00	3.33	36.67	38.34	9.2500%	3.55	
Bond XXXVIII	380.52	0.00	380.52	380.52	9.2500%	35.20	
<b>Total Loan</b>	<b>606.56</b>	<b>16.93</b>	<b>589.63</b>	<b>598.10</b>		<b>55.10</b>	<b>9.2125%</b>
2016-17							
Loan	Opening	Repayment	Closing	Average	Rate of interest	Interest	Weighted Average Rate of Interest
Bond XXXII	62.43	6.94	55.49	58.96	8.8400%	5.21	
Bond XXXIV	33.34	3.33	30.01	31.68	8.8400%	2.80	
Bond XXXV	36.67	3.33	33.34	35.01	9.6400%	3.37	
Bond XXXVI	40.00	2.67	37.33	38.67	9.3500%	3.62	
Bond XXXVII	36.67	3.33	33.34	35.01	9.2500%	3.24	
Bond XXXVIII	380.52	0.00	380.52	380.52	9.2500%	35.20	
<b>Total Loan</b>	<b>589.63</b>	<b>19.60</b>	<b>570.03</b>	<b>579.83</b>		<b>53.44</b>	<b>9.2161%</b>
2017-18							
Loan	Opening	Repayment	Closing	Average	Rate of interest	Interest	Weighted Average Rate of



							Interest
Bond XXXII	55.49	6.94	48.55	52.02	8.8400%	4.60	
Bond XXXIV	30.01	3.33	26.68	28.35	8.8400%	2.51	
Bond XXXV	33.34	3.33	30.01	31.68	9.6400%	3.05	
Bond XXXVI	37.33	2.67	34.66	36.00	9.3500%	3.37	
Bond XXXVII	33.34	3.33	30.01	31.68	9.2500%	2.93	
Bond XXXVIII	380.52	0.00	380.52	380.52	9.2500%	35.20	
<b>Total Loan</b>	<b>570.03</b>	<b>19.60</b>	<b>550.43</b>	<b>560.23</b>		<b>51.65</b>	<b>9.2197%</b>
<b>2018-19</b>							
Loan	Opening	Repayment	Closing	Average	Rate of interest	Interest	Weighted Average Rate of Interest
Bond XXXII	48.55	6.94	41.61	45.08	8.8400%	3.99	
Bond XXXIV	26.68	3.33	23.35	25.02	8.8400%	2.21	
Bond XXXV	30.01	3.33	26.68	28.35	9.6400%	2.73	
Bond XXXVI	34.66	2.67	31.99	33.33	9.3500%	3.12	
Bond XXXVII	30.01	3.33	26.68	28.35	9.2500%	2.62	
Bond XXXVIII	380.52	0.00	380.52	380.52	9.2500%	35.20	
<b>Total Loan</b>	<b>550.43</b>	<b>19.60</b>	<b>530.83</b>	<b>540.63</b>		<b>49.86</b>	<b>9.2235%</b>

Name of the Element:	Asset-I: 1099.803 km Fiber Optic in lieu of existing Microwave in NR						
Wt. Average Rate of Interest (for 2014-19) - State Portion							
							(Rs. in lakh)
<b>2014-15</b>							
Loan	Opening	Repayment	Closing	Average	Rate of interest	Interest	Weighted Average Rate of Interest
Bond XXXII	70.35	6.40	63.95	67.15	8.8400%	5.94	
Bond XXXIV	60.00	5.00	55.00	57.50	8.8400%	5.08	
Bond XXXV	410.00	0.00	410.00	410.00	9.6400%	39.52	
Bond XXXVI	310.00	0.00	310.00	310.00	9.3500%	28.99	
Bond XXXVII	310.00	0.00	310.00	310.00	9.2500%	28.68	
Bond XXXVIII	82.06	0.00	82.06	82.06	9.2500%	7.59	
<b>Total Loan</b>	<b>1242.41</b>	<b>11.40</b>	<b>1231.01</b>	<b>1236.71</b>		<b>115.79</b>	<b>9.3630%</b>
<b>2015-16</b>							
Loan	Opening	Repayment	Closing	Average	Rate of interest	Interest	Weighted Average Rate of Interest
Bond XXXII	63.95	6.40	57.55	60.75	8.8400%	5.37	
Bond XXXIV	55.00	5.00	50.00	52.50	8.8400%	4.64	
Bond XXXV	410.00	34.17	375.83	392.92	9.6400%	37.88	
Bond XXXVI	310.00	0.00	310.00	310.00	9.3500%	28.99	
Bond XXXVII	310.00	25.83	284.17	297.09	9.2500%	27.48	



Bond XXXVIII	82.06	0.00	82.06	82.06	9.2500%	7.59	
<b>Total Loan</b>	<b>1231.01</b>	<b>71.40</b>	<b>1159.61</b>	<b>1195.31</b>		<b>111.94</b>	<b>9.3653%</b>
<b>2016-17</b>							
<b>Loan</b>	<b>Opening</b>	<b>Repayment</b>	<b>Closing</b>	<b>Average</b>	<b>Rate of interest</b>	<b>Interest</b>	<b>Weighted Average Rate of Interest</b>
Bond XXXII	57.55	6.40	51.15	54.35	8.8400%	4.80	
Bond XXXIV	50.00	5.00	45.00	47.50	8.8400%	4.20	
Bond XXXV	375.83	34.17	341.66	358.75	9.6400%	34.58	
Bond XXXVI	310.00	20.67	289.33	299.67	9.3500%	28.02	
Bond XXXVII	284.17	25.83	258.34	271.26	9.2500%	25.09	
Bond XXXVIII	82.06	0.00	82.06	82.06	9.2500%	7.59	
<b>Total Loan</b>	<b>1159.61</b>	<b>92.07</b>	<b>1067.54</b>	<b>1113.58</b>		<b>104.29</b>	<b>9.3651%</b>
<b>2017-18</b>							
<b>Loan</b>	<b>Opening</b>	<b>Repayment</b>	<b>Closing</b>	<b>Average</b>	<b>Rate of interest</b>	<b>Interest</b>	<b>Weighted Average Rate of Interest</b>
Bond XXXII	51.15	6.40	44.75	47.95	8.8400%	4.24	
Bond XXXIV	45.00	5.00	40.00	42.50	8.8400%	3.76	
Bond XXXV	341.66	34.17	307.49	324.58	9.6400%	31.29	
Bond XXXVI	289.33	20.67	268.66	279.00	9.3500%	26.09	
Bond XXXVII	258.34	25.83	232.51	245.43	9.2500%	22.70	
Bond XXXVIII	82.06	0.00	82.06	82.06	9.2500%	7.59	
<b>Total Loan</b>	<b>1067.54</b>	<b>92.07</b>	<b>975.47</b>	<b>1021.51</b>		<b>95.66</b>	<b>9.3649%</b>
<b>2018-19</b>							
<b>Loan</b>	<b>Opening</b>	<b>Repayment</b>	<b>Closing</b>	<b>Average</b>	<b>Rate of interest</b>	<b>Interest</b>	<b>Weighted Average Rate of Interest</b>
Bond XXXII	44.75	6.40	38.35	41.55	8.8400%	3.67	
Bond XXXIV	40.00	5.00	35.00	37.50	8.8400%	3.32	
Bond XXXV	307.49	34.17	273.32	290.41	9.6400%	28.00	
Bond XXXVI	268.66	20.67	247.99	258.33	9.3500%	24.15	
Bond XXXVII	232.51	25.83	206.68	219.60	9.2500%	20.31	
Bond XXXVIII	82.06	0.00	82.06	82.06	9.2500%	7.59	
<b>Total Loan</b>	<b>975.47</b>	<b>92.07</b>	<b>883.40</b>	<b>929.44</b>		<b>87.04</b>	<b>9.3648%</b>

<b>Name of the Element:</b>	<b>Asset-II: 1628.966 km Fibre Optic in lieu of existing Microwave in NR</b>						
<b>Tarrif setting Period:</b>	<b>2014-19</b>						
<b>Wt. Average Rate of Interest (for 2014-19) - Central Portion</b>							
							<b>(Rs. in lakh)</b>
<b>2014-15</b>							
<b>Loan</b>	<b>Opening</b>	<b>Repayment</b>	<b>Closing</b>	<b>Average</b>	<b>Rate of interest</b>	<b>Interest</b>	<b>Weighted Average Rate of</b>



							<b>Interest</b>
Bond XXXII	8.36	0.76	7.60	7.98	8.8400%	0.71	
Bond XXXIV	20.00	1.67	18.33	19.17	8.8400%	1.69	
Bond XXXV	30.00	0.00	30.00	30.00	9.6400%	2.89	
Bond XXXVI	30.00	0.00	30.00	30.00	9.3500%	2.81	
Bond XXXVII	30.00	0.00	30.00	30.00	9.2500%	2.78	
Bond XXXVIII	69.31	0.00	69.31	69.31	9.2500%	6.41	
Bond XL	40.88	0.00	40.88	40.88	9.3000%	3.80	
Bond XLI	180.01	0.00	180.01	180.01	8.8500%	15.93	
<b>Total Loan</b>	<b>408.56</b>	<b>2.43</b>	<b>406.13</b>	<b>407.35</b>		<b>37.02</b>	<b>9.0870%</b>

**2015-16**

<b>Loan</b>	<b>Opening</b>	<b>Repayment</b>	<b>Closing</b>	<b>Average</b>	<b>Rate of interest</b>	<b>Interest</b>	<b>Weighted Average Rate of Interest</b>
Bond XXXII	7.60	0.76	6.84	7.22	8.8400%	0.64	
Bond XXXIV	18.33	1.67	16.66	17.50	8.8400%	1.55	
Bond XXXV	30.00	2.50	27.50	28.75	9.6400%	2.77	
Bond XXXVI	30.00	0.00	30.00	30.00	9.3500%	2.81	
Bond XXXVII	30.00	2.50	27.50	28.75	9.2500%	2.66	
Bond XXXVIII	69.31	0.00	69.31	69.31	9.2500%	6.41	
Bond XL	40.88	0.00	40.88	40.88	9.3000%	3.80	
Bond XLI	180.01	0.00	180.01	180.01	8.8500%	15.93	
<b>Total Loan</b>	<b>406.13</b>	<b>7.43</b>	<b>398.70</b>	<b>402.42</b>		<b>36.56</b>	<b>9.0863%</b>

**2016-17**

<b>Loan</b>	<b>Opening</b>	<b>Repayment</b>	<b>Closing</b>	<b>Average</b>	<b>Rate of interest</b>	<b>Interest</b>	<b>Weighted Average Rate of Interest</b>
Bond XXXII	6.84	0.76	6.08	6.46	8.8400%	0.57	
Bond XXXIV	16.66	1.67	14.99	15.83	8.8400%	1.40	
Bond XXXV	27.50	2.50	25.00	26.25	9.6400%	2.53	
Bond XXXVI	30.00	2.00	28.00	29.00	9.3500%	2.71	
Bond XXXVII	27.50	2.50	25.00	26.25	9.2500%	2.43	
Bond XXXVIII	69.31	0.00	69.31	69.31	9.2500%	6.41	
Bond XL	40.88	3.41	37.47	39.18	9.3000%	3.64	
Bond XLI	180.01	15.00	165.01	172.51	8.8500%	15.27	
<b>Total Loan</b>	<b>398.70</b>	<b>27.84</b>	<b>370.86</b>	<b>384.78</b>		<b>34.96</b>	<b>9.0862%</b>

**2017-18**

<b>Loan</b>	<b>Opening</b>	<b>Repayment</b>	<b>Closing</b>	<b>Average</b>	<b>Rate of interest</b>	<b>Interest</b>	<b>Weighted Average Rate of Interest</b>
Bond XXXII	6.08	0.76	5.32	5.70	8.8400%	0.50	
Bond XXXIV	14.99	1.67	13.32	14.16	8.8400%	1.25	
Bond XXXV	25.00	2.50	22.50	23.75	9.6400%	2.29	
Bond XXXVI	28.00	2.00	26.00	27.00	9.3500%	2.52	
Bond XXXVII	25.00	2.50	22.50	23.75	9.2500%	2.20	
Bond XXXVIII	69.31	0.00	69.31	69.31	9.2500%	6.41	



Bond XL	37.47	3.41	34.06	35.77	9.3000%	3.33	
Bond XLI	165.01	15.00	150.01	157.51	8.8500%	13.94	
<b>Total Loan</b>	<b>370.86</b>	<b>27.84</b>	<b>343.02</b>	<b>356.94</b>		<b>32.44</b>	<b>9.0892%</b>
<b>2018-19</b>							
<b>Loan</b>	<b>Opening</b>	<b>Repayment</b>	<b>Closing</b>	<b>Average</b>	<b>Rate of interest</b>	<b>Interest</b>	<b>Weighted Average Rate of Interest</b>
Bond XXXII	5.32	0.76	4.56	4.94	8.8400%	0.44	
Bond XXXIV	13.32	1.67	11.65	12.49	8.8400%	1.10	
Bond XXXV	22.50	2.50	20.00	21.25	9.6400%	2.05	
Bond XXXVI	26.00	2.00	24.00	25.00	9.3500%	2.34	
Bond XXXVII	22.50	2.50	20.00	21.25	9.2500%	1.97	
Bond XXXVIII	69.31	0.00	69.31	69.31	9.2500%	6.41	
Bond XL	34.06	3.41	30.65	32.36	9.3000%	3.01	
Bond XLI	150.01	15.00	135.01	142.51	8.8500%	12.61	
<b>Total Loan</b>	<b>343.02</b>	<b>27.84</b>	<b>315.18</b>	<b>329.10</b>		<b>29.92</b>	<b>9.0928%</b>

<b>Name of the Element:</b>	<b>Asset-II: 1628.966 km Fiber Optic in lieu of existing Microwave in NR</b>						
<b>Wt. Average Rate of Interest (for 2014-19) - State Portion</b>							
							<b>(Rs. in lakh)</b>
<b>2014-15</b>							
<b>Loan</b>	<b>Opening</b>	<b>Repayment</b>	<b>Closing</b>	<b>Average</b>	<b>Rate of interest</b>	<b>Interest</b>	<b>Weighted Average Rate of Interest</b>
Bond XXXII	92.47	8.41	84.06	88.27	8.8400%	7.80	
Bond XXXIV	40.00	3.33	36.67	38.34	8.8400%	3.39	
Bond XXXV	570.45	0.00	570.45	570.45	9.6400%	54.99	
Bond XXXVI	401.23	0.00	401.23	401.23	9.3500%	37.52	
Bond XXXVII	264.81	0.00	264.81	264.81	9.2500%	24.49	
Bond XXXVIII	340.69	0.00	340.69	340.69	9.2500%	31.51	
Bond XL	159.12	0.00	159.12	159.12	9.3000%	14.80	
Bond XLI	24.71	0.00	24.71	24.71	8.8500%	2.19	
<b>Total Loan</b>	<b>1893.48</b>	<b>11.74</b>	<b>1881.74</b>	<b>1887.61</b>		<b>176.69</b>	<b>9.3606%</b>
<b>2015-16</b>							
<b>Loan</b>	<b>Opening</b>	<b>Repayment</b>	<b>Closing</b>	<b>Average</b>	<b>Rate of interest</b>	<b>Interest</b>	<b>Weighted Average Rate of Interest</b>
Bond XXXII	84.06	8.41	75.65	79.86	8.8400%	7.06	
Bond XXXIV	36.67	3.33	33.34	35.01	8.8400%	3.09	
Bond XXXV	570.45	47.54	522.91	546.68	9.6400%	52.70	
Bond XXXVI	401.23	0.00	401.23	401.23	9.3500%	37.52	
Bond XXXVII	264.81	22.07	242.74	253.78	9.2500%	23.47	
Bond XXXVIII	340.69	0.00	340.69	340.69	9.2500%	31.51	
Bond XL	159.12	0.00	159.12	159.12	9.3000%	14.80	



Bond XLI	24.71	0.00	24.71	24.71	8.8500%	2.19	
<b>Total Loan</b>	<b>1881.74</b>	<b>81.35</b>	<b>1800.39</b>	<b>1841.07</b>		<b>172.34</b>	<b>9.3610%</b>
<b>2016-17</b>							
<b>Loan</b>	<b>Opening</b>	<b>Repayment</b>	<b>Closing</b>	<b>Average</b>	<b>Rate of interest</b>	<b>Interest</b>	<b>Weighted Average Rate of Interest</b>
Bond XXXII	75.65	8.41	67.24	71.45	8.8400%	6.32	
Bond XXXIV	33.34	3.33	30.01	31.68	8.8400%	2.80	
Bond XXXV	522.91	47.54	475.37	499.14	9.6400%	48.12	
Bond XXXVI	401.23	26.75	374.48	387.86	9.3500%	36.26	
Bond XXXVII	242.74	22.07	220.67	231.71	9.2500%	21.43	
Bond XXXVIII	340.69	0.00	340.69	340.69	9.2500%	31.51	
Bond XL	159.12	13.26	145.86	152.49	9.3000%	14.18	
Bond XLI	24.71	2.06	22.65	23.68	8.8500%	2.10	
<b>Total Loan</b>	<b>1800.39</b>	<b>123.42</b>	<b>1676.97</b>	<b>1738.68</b>		<b>162.72</b>	<b>9.3589%</b>
<b>2017-18</b>							
<b>Loan</b>	<b>Opening</b>	<b>Repayment</b>	<b>Closing</b>	<b>Average</b>	<b>Rate of interest</b>	<b>Interest</b>	<b>Weighted Average Rate of Interest</b>
Bond XXXII	67.24	8.41	58.83	63.04	8.8400%	5.57	
Bond XXXIV	30.01	3.33	26.68	28.35	8.8400%	2.51	
Bond XXXV	475.37	47.54	427.83	451.60	9.6400%	43.53	
Bond XXXVI	374.48	26.75	347.73	361.11	9.3500%	33.76	
Bond XXXVII	220.67	22.07	198.60	209.64	9.2500%	19.39	
Bond XXXVIII	340.69	0.00	340.69	340.69	9.2500%	31.51	
Bond XL	145.86	13.26	132.60	139.23	9.3000%	12.95	
Bond XLI	22.65	2.06	20.59	21.62	8.8500%	1.91	
<b>Total Loan</b>	<b>1676.97</b>	<b>123.42</b>	<b>1553.55</b>	<b>1615.26</b>		<b>151.14</b>	<b>9.3572%</b>
<b>2018-19</b>							
<b>Loan</b>	<b>Opening</b>	<b>Repayment</b>	<b>Closing</b>	<b>Average</b>	<b>Rate of interest</b>	<b>Interest</b>	<b>Weighted Average Rate of Interest</b>
Bond XXXII	58.83	8.41	50.42	54.63	8.8400%	4.83	
Bond XXXIV	26.68	3.33	23.35	25.02	8.8400%	2.21	
Bond XXXV	427.83	47.54	380.29	404.06	9.6400%	38.95	
Bond XXXVI	347.73	26.75	320.98	334.36	9.3500%	31.26	
Bond XXXVII	198.60	22.07	176.53	187.57	9.2500%	17.35	
Bond XXXVIII	340.69	0.00	340.69	340.69	9.2500%	31.51	
Bond XL	132.60	13.26	119.34	125.97	9.3000%	11.72	
Bond XLI	20.59	2.06	18.53	19.56	8.8500%	1.73	
<b>Total Loan</b>	<b>1553.55</b>	<b>123.42</b>	<b>1430.13</b>	<b>1491.84</b>		<b>139.56</b>	<b>9.3551%</b>



<b>Name of the Element:</b>	<b>Asset-III: 493.064 km Fibre Optic in lieu of existing Microwave in NR</b>						
<b>Tarrif setting Period:</b>	<b>2014-19</b>						
<b>Wt. Average Rate of Interest (for 2014-19) - Central Portion</b>							
							<b>(Rs. in lakh)</b>
	<b>2014-15</b>						
<b>Loan</b>	<b>Opening</b>	<b>Repayment</b>	<b>Closing</b>	<b>Average</b>	<b>Rate of interest</b>	<b>Interest</b>	<b>Weighted Average Rate of Interest</b>
Bond XXXII	169.45	15.40	154.05	161.75	8.8400%	14.30	
Bond XXXIV	10.00	0.83	9.17	9.59	8.8400%	0.85	
Bond XXXV	20.00	0.00	20.00	20.00	9.6400%	1.93	
Bond XXXVI	20.00	0.00	20.00	20.00	9.3500%	1.87	
Bond XXXVII	30.00	0.00	30.00	30.00	9.2500%	2.78	
Bond XXXVIII	14.98	0.00	14.98	14.98	9.2500%	1.39	
Bond XL	45.15	0.00	45.15	45.15	9.3000%	4.20	
Bond XLII	57.77	0.00	57.77	57.77	8.8000%	5.08	
<b>Total Loan</b>	<b>367.35</b>	<b>16.23</b>	<b>351.12</b>	<b>359.24</b>		<b>32.39</b>	<b>9.0157%</b>
	<b>2015-16</b>						
<b>Loan</b>	<b>Opening</b>	<b>Repayment</b>	<b>Closing</b>	<b>Average</b>	<b>Rate of interest</b>	<b>Interest</b>	<b>Weighted Average Rate of Interest</b>
Bond XXXII	154.05	15.40	138.65	146.35	8.8400%	12.94	
Bond XXXIV	9.17	0.83	8.34	8.76	8.8400%	0.77	
Bond XXXV	20.00	1.67	18.33	19.17	9.6400%	1.85	
Bond XXXVI	20.00	0.00	20.00	20.00	9.3500%	1.87	
Bond XXXVII	30.00	2.50	27.50	28.75	9.2500%	2.66	
Bond XXXVIII	14.98	0.00	14.98	14.98	9.2500%	1.39	
Bond XL	45.15	0.00	45.15	45.15	9.3000%	4.20	
Bond XLII	57.77	0.00	57.77	57.77	8.8000%	5.08	
<b>Total Loan</b>	<b>351.12</b>	<b>20.40</b>	<b>330.72</b>	<b>340.92</b>		<b>30.76</b>	<b>9.0216%</b>
	<b>2016-17</b>						
<b>Loan</b>	<b>Opening</b>	<b>Repayment</b>	<b>Closing</b>	<b>Average</b>	<b>Rate of interest</b>	<b>Interest</b>	<b>Weighted Average Rate of Interest</b>
Bond XXXII	138.65	15.40	123.25	130.95	8.8400%	11.58	
Bond XXXIV	8.34	0.83	7.51	7.93	8.8400%	0.70	
Bond XXXV	18.33	1.67	16.66	17.50	9.6400%	1.69	
Bond XXXVI	20.00	1.33	18.67	19.34	9.3500%	1.81	
Bond XXXVII	27.50	2.50	25.00	26.25	9.2500%	2.43	
Bond XXXVIII	14.98	0.00	14.98	14.98	9.2500%	1.39	
Bond XL	45.15	3.76	41.39	43.27	9.3000%	4.02	
Bond XLII	57.77	0.00	57.77	57.77	8.8000%	5.08	
<b>Total Loan</b>	<b>330.72</b>	<b>25.49</b>	<b>305.23</b>	<b>317.98</b>		<b>28.69</b>	<b>9.0235%</b>





2017-18							
Loan	Opening	Repayment	Closing	Average	Rate of interest	Interest	Weighted Average Rate of Interest
Bond XXXII	123.25	15.40	107.85	115.55	8.8400%	10.21	
Bond XXXIV	7.51	0.83	6.68	7.10	8.8400%	0.63	
Bond XXXV	16.66	1.67	14.99	15.83	9.6400%	1.53	
Bond XXXVI	18.67	1.33	17.34	18.01	9.3500%	1.68	
Bond XXXVII	25.00	2.50	22.50	23.75	9.2500%	2.20	
Bond XXXVIII	14.98	0.00	14.98	14.98	9.2500%	1.39	
Bond XL	41.39	3.76	37.63	39.51	9.3000%	3.67	
Bond XLII	57.77	0.00	57.77	57.77	8.8000%	5.08	
<b>Total Loan</b>	<b>305.23</b>	<b>25.49</b>	<b>279.74</b>	<b>292.49</b>		<b>26.39</b>	<b>9.0232%</b>
2018-19							
Loan	Opening	Repayment	Closing	Average	Rate of interest	Interest	Weighted Average Rate of Interest
Bond XXXII	107.85	15.40	92.45	100.15	8.8400%	8.85	
Bond XXXIV	6.68	0.83	5.85	6.27	8.8400%	0.55	
Bond XXXV	14.99	1.67	13.32	14.16	9.6400%	1.36	
Bond XXXVI	17.34	1.33	16.01	16.68	9.3500%	1.56	
Bond XXXVII	22.50	2.50	20.00	21.25	9.2500%	1.97	
Bond XXXVIII	14.98	0.00	14.98	14.98	9.2500%	1.39	
Bond XL	37.63	3.76	33.87	35.75	9.3000%	3.32	
Bond XLII	57.77	0.00	57.77	57.77	8.8000%	5.08	
<b>Total Loan</b>	<b>279.74</b>	<b>25.49</b>	<b>254.25</b>	<b>267.00</b>		<b>24.09</b>	<b>9.0228%</b>

Name of the Element:	Asset-III: 493.064 km Fiber Optic in lieu of existing Microwave in NR						
Wt. Average Rate of Interest (for 2014-19) - State Portion							
							(Rs. in lakh)
2014-15							
Loan	Opening	Repayment	Closing	Average	Rate of interest	Interest	Weighted Average Rate of Interest
Bond XXXII	41.39	3.76	37.63	39.51	8.8400%	3.49	
Bond XXXIV	145.00	12.08	132.92	138.96	8.8400%	12.28	
Bond XXXV	175.00	0.00	175.00	175.00	9.6400%	16.87	
Bond XXXVI	130.00	0.00	130.00	130.00	9.3500%	12.16	
Bond XXXVII	40.00	0.00	40.00	40.00	9.2500%	3.70	
Bond XXXVIII	267.55	0.00	267.55	267.55	9.2500%	24.75	
Bond XL	113.39	0.00	113.39	113.39	9.3000%	10.55	
Bond XLII	0.00	0.00	0.00	0.00	8.8000%	0.00	
<b>Total Loan</b>	<b>912.33</b>	<b>15.84</b>	<b>896.49</b>	<b>904.41</b>		<b>83.80</b>	<b>9.2652%</b>
2015-16							



Loan	Opening	Repayment	Closing	Average	Rate of interest	Interest	Weighted Average Rate of Interest
Bond XXXII	37.63	3.76	33.87	35.75	8.8400%	3.16	
Bond XXXIV	132.92	12.08	120.84	126.88	8.8400%	11.22	
Bond XXXV	175.00	14.58	160.42	167.71	9.6400%	16.17	
Bond XXXVI	130.00	0.00	130.00	130.00	9.3500%	12.16	
Bond XXXVII	40.00	3.33	36.67	38.34	9.2500%	3.55	
Bond XXXVIII	267.55	0.00	267.55	267.55	9.2500%	24.75	
Bond XL	113.39	0.00	113.39	113.39	9.3000%	10.55	
Bond XLII	0.00	0.00	0.00	0.00	8.8000%	0.00	
<b>Total Loan</b>	<b>896.49</b>	<b>33.75</b>	<b>862.74</b>	<b>879.62</b>		<b>81.54</b>	<b>9.2698%</b>
<b>2016-17</b>							
Loan	Opening	Repayment	Closing	Average	Rate of interest	Interest	Weighted Average Rate of Interest
Bond XXXII	33.87	3.76	30.11	31.99	8.8400%	2.83	
Bond XXXIV	120.84	12.08	108.76	114.80	8.8400%	10.15	
Bond XXXV	160.42	14.58	145.84	153.13	9.6400%	14.76	
Bond XXXVI	130.00	8.67	121.33	125.67	9.3500%	11.75	
Bond XXXVII	36.67	3.33	33.34	35.01	9.2500%	3.24	
Bond XXXVIII	267.55	0.00	267.55	267.55	9.2500%	24.75	
Bond XL	113.39	9.45	103.94	108.67	9.3000%	10.11	
Bond XLII	0.00	0.00	0.00	0.00	8.8000%	0.00	
<b>Total Loan</b>	<b>862.74</b>	<b>51.87</b>	<b>810.87</b>	<b>836.81</b>		<b>77.58</b>	<b>9.2710%</b>
<b>2017-18</b>							
Loan	Opening	Repayment	Closing	Average	Rate of interest	Interest	Weighted Average Rate of Interest
Bond XXXII	30.11	3.76	26.35	28.23	8.8400%	2.50	
Bond XXXIV	108.76	12.08	96.68	102.72	8.8400%	9.08	
Bond XXXV	145.84	14.58	131.26	138.55	9.6400%	13.36	
Bond XXXVI	121.33	8.67	112.66	117.00	9.3500%	10.94	
Bond XXXVII	33.34	3.33	30.01	31.68	9.2500%	2.93	
Bond XXXVIII	267.55	0.00	267.55	267.55	9.2500%	24.75	
Bond XL	103.94	9.45	94.49	99.22	9.3000%	9.23	
Bond XLII	0.00	0.00	0.00	0.00	8.8000%	0.00	
<b>Total Loan</b>	<b>810.87</b>	<b>51.87</b>	<b>759.00</b>	<b>784.94</b>		<b>72.78</b>	<b>9.2717%</b>
<b>2018-19</b>							
Loan	Opening	Repayment	Closing	Average	Rate of interest	Interest	Weighted Average Rate of Interest
Bond XXXII	26.35	3.76	22.59	24.47	8.8400%	2.16	
Bond XXXIV	96.68	12.08	84.60	90.64	8.8400%	8.01	
Bond XXXV	131.26	14.58	116.68	123.97	9.6400%	11.95	



Bond XXXVI	112.66	8.67	103.99	108.33	9.3500%	10.13	
Bond XXXVII	30.01	3.33	26.68	28.35	9.2500%	2.62	
Bond XXXVIII	267.55	0.00	267.55	267.55	9.2500%	24.75	
Bond XL	94.49	9.45	85.04	89.77	9.3000%	8.35	
Bond XLII	0.00	0.00	0.00	0.00	8.8000%	0.00	
<b>Total Loan</b>	<b>759.00</b>	<b>51.87</b>	<b>707.13</b>	<b>733.07</b>		<b>67.97</b>	<b>9.2725%</b>

<b>Name of the Element:</b>	<b>Asset-IV: 530.621 km Fibre Optic in lieu of existing Microwave in NR</b>							
<b>Tarrif setting Period:</b>	<b>2014-19</b>							
<b>Wt. Average Rate of Interest (for 2014-19) - Central Portion</b>								
							<b>(Rs. in lakh)</b>	
	<b>2014-15</b>							
<b>Loan</b>	<b>Opening</b>	<b>Repayment</b>	<b>Closing</b>	<b>Average</b>	<b>Rate of interest</b>	<b>Interest</b>	<b>Weighted Average Rate of Interest</b>	
Bond XXXII	0.92	0.08	0.84	0.88	8.8400%	0.08		
Bond XXXIV	2.00	0.17	1.83	1.92	8.8400%	0.17		
Bond XXXV	1.00	0.00	1.00	1.00	9.6400%	0.10		
Bond XXXVI	1.00	0.00	1.00	1.00	9.3500%	0.09		
Bond XXXVII	1.00	0.00	1.00	1.00	9.2500%	0.09		
Bond XXXVIII	2.00	0.00	2.00	2.00	9.2500%	0.19		
Bond XL	131.13	0.00	131.13	131.13	9.3000%	12.20		
Bond XLI	51.00	0.00	51.00	51.00	8.8500%	4.51		
Bond XLII	93.97	0.00	93.97	93.97	8.8000%	8.27		
<b>Total Loan</b>	<b>284.02</b>	<b>0.25</b>	<b>283.77</b>	<b>283.90</b>		<b>25.69</b>	<b>9.0500%</b>	
	<b>2015-16</b>							
<b>Loan</b>	<b>Opening</b>	<b>Repayment</b>	<b>Closing</b>	<b>Average</b>	<b>Rate of interest</b>	<b>Interest</b>	<b>Weighted Average Rate of Interest</b>	
Bond XXXII	0.84	0.08	0.76	0.80	8.8400%	0.07		
Bond XXXIV	1.83	0.17	1.66	1.75	8.8400%	0.15		
Bond XXXV	1.00	0.08	0.92	0.96	9.6400%	0.09		
Bond XXXVI	1.00	0.00	1.00	1.00	9.3500%	0.09		
Bond XXXVII	1.00	0.08	0.92	0.96	9.2500%	0.09		
Bond XXXVIII	2.00	0.00	2.00	2.00	9.2500%	0.19		
Bond XL	131.13	0.00	131.13	131.13	9.3000%	12.20		
Bond XLI	51.00	0.00	51.00	51.00	8.8500%	4.51		
Bond XLII	93.97	0.00	93.97	93.97	8.8000%	8.27		
<b>Total Loan</b>	<b>283.77</b>	<b>0.41</b>	<b>283.36</b>	<b>283.57</b>		<b>25.66</b>	<b>9.0500%</b>	
	<b>2016-17</b>							
<b>Loan</b>	<b>Opening</b>	<b>Repayment</b>	<b>Closing</b>	<b>Average</b>	<b>Rate of interest</b>	<b>Interest</b>	<b>Weighted Average Rate of Interest</b>	
Bond XXXII	0.76	0.08	0.68	0.72	8.8400%	0.06		
Bond XXXIV	1.66	0.17	1.49	1.58	8.8400%	0.14		



Bond XXXV	0.92	0.08	0.84	0.88	9.6400%	0.08	
Bond XXXVI	1.00	0.07	0.93	0.97	9.3500%	0.09	
Bond XXXVII	0.92	0.08	0.84	0.88	9.2500%	0.08	
Bond XXXVIII	2.00	0.00	2.00	2.00	9.2500%	0.19	
Bond XL	131.13	10.93	120.20	125.67	9.3000%	11.69	
Bond XLI	51.00	4.25	46.75	48.88	8.8500%	4.33	
Bond XLII	93.97	0.00	93.97	93.97	8.8000%	8.27	
<b>Total Loan</b>	<b>283.36</b>	<b>15.66</b>	<b>267.70</b>	<b>275.53</b>		<b>24.93</b>	<b>9.0466%</b>
<b>2017-18</b>							
<b>Loan</b>	<b>Opening</b>	<b>Repayment</b>	<b>Closing</b>	<b>Average</b>	<b>Rate of interest</b>	<b>Interest</b>	<b>Weighted Average Rate of Interest</b>
Bond XXXII	0.68	0.08	0.60	0.64	8.8400%	0.06	
Bond XXXIV	1.49	0.17	1.32	1.41	8.8400%	0.12	
Bond XXXV	0.84	0.08	0.76	0.80	9.6400%	0.08	
Bond XXXVI	0.93	0.07	0.86	0.90	9.3500%	0.08	
Bond XXXVII	0.84	0.08	0.76	0.80	9.2500%	0.07	
Bond XXXVIII	2.00	0.00	2.00	2.00	9.2500%	0.19	
Bond XL	120.20	10.93	109.27	114.74	9.3000%	10.67	
Bond XLI	46.75	4.25	42.50	44.63	8.8500%	3.95	
Bond XLII	93.97	0.00	93.97	93.97	8.8000%	8.27	
<b>Total Loan</b>	<b>267.70</b>	<b>15.66</b>	<b>252.04</b>	<b>259.87</b>		<b>23.49</b>	<b>9.0390%</b>
<b>2018-19</b>							
<b>Loan</b>	<b>Opening</b>	<b>Repayment</b>	<b>Closing</b>	<b>Average</b>	<b>Rate of interest</b>	<b>Interest</b>	<b>Weighted Average Rate of Interest</b>
Bond XXXII	0.60	0.08	0.52	0.56	8.8400%	0.05	
Bond XXXIV	1.32	0.17	1.15	1.24	8.8400%	0.11	
Bond XXXV	0.76	0.08	0.68	0.72	9.6400%	0.07	
Bond XXXVI	0.86	0.07	0.79	0.83	9.3500%	0.08	
Bond XXXVII	0.76	0.08	0.68	0.72	9.2500%	0.07	
Bond XXXVIII	2.00	0.00	2.00	2.00	9.2500%	0.19	
Bond XL	109.27	10.93	98.34	103.81	9.3000%	9.65	
Bond XLI	42.50	4.25	38.25	40.38	8.8500%	3.57	
Bond XLII	93.97	0.00	93.97	93.97	8.8000%	8.27	
<b>Total Loan</b>	<b>252.04</b>	<b>15.66</b>	<b>236.38</b>	<b>244.21</b>		<b>22.05</b>	<b>9.0304%</b>



Name of the Element:	Asset-IV: 530.621 km Fiber Optic in lieu of existing Microwave in NR						
Wt. Average Rate of Interest (for 2014-19) - State Portion							
							(Rs. in lakh)
2014-15							
Loan	Opening	Repayment	Closing	Average	Rate of interest	Interest	Weighted Average Rate of Interest
Bond XXXII	54.08	4.92	49.16	51.62	8.8400%	4.56	
Bond XXXIV	43.00	3.58	39.42	41.21	8.8400%	3.64	
Bond XXXV	99.00	0.00	99.00	99.00	9.6400%	9.54	
Bond XXXVI	74.00	0.00	74.00	74.00	9.3500%	6.92	
Bond XXXVII	34.00	0.00	34.00	34.00	9.2500%	3.15	
Bond XXXVIII	98.00	0.00	98.00	98.00	9.2500%	9.07	
Bond XL	65.89	0.00	65.89	65.89	9.3000%	6.13	
Bond XLI	4.00	0.00	4.00	4.00	8.8500%	0.35	
Bond XLII	2.00	0.00	2.00	2.00	8.8000%	0.18	
<b>Total Loan</b>	<b>473.97</b>	<b>8.50</b>	<b>465.47</b>	<b>469.72</b>		<b>43.54</b>	<b>9.2686%</b>
2015-16							
Loan	Opening	Repayment	Closing	Average	Rate of interest	Interest	Weighted Average Rate of Interest
Bond XXXII	49.16	4.92	44.24	46.70	8.8400%	4.13	
Bond XXXIV	39.42	3.58	35.84	37.63	8.8400%	3.33	
Bond XXXV	99.00	8.25	90.75	94.88	9.6400%	9.15	
Bond XXXVI	74.00	0.00	74.00	74.00	9.3500%	6.92	
Bond XXXVII	34.00	2.83	31.17	32.59	9.2500%	3.01	
Bond XXXVIII	98.00	0.00	98.00	98.00	9.2500%	9.07	
Bond XL	65.89	0.00	65.89	65.89	9.3000%	6.13	
Bond XLI	4.00	0.00	4.00	4.00	8.8500%	0.35	
Bond XLII	2.00	0.00	2.00	2.00	8.8000%	0.18	
<b>Total Loan</b>	<b>465.47</b>	<b>19.58</b>	<b>445.89</b>	<b>455.68</b>		<b>42.26</b>	<b>9.2733%</b>
2016-17							
Loan	Opening	Repayment	Closing	Average	Rate of interest	Interest	Weighted Average Rate of Interest
Bond XXXII	44.24	4.92	39.32	41.78	8.8400%	3.69	
Bond XXXIV	35.84	3.58	32.26	34.05	8.8400%	3.01	
Bond XXXV	90.75	8.25	82.50	86.63	9.6400%	8.35	
Bond XXXVI	74.00	4.93	69.07	71.54	9.3500%	6.69	
Bond XXXVII	31.17	2.83	28.34	29.76	9.2500%	2.75	
Bond XXXVIII	98.00	0.00	98.00	98.00	9.2500%	9.07	
Bond XL	65.89	5.49	60.40	63.15	9.3000%	5.87	
Bond XLI	4.00	0.33	3.67	3.84	8.8500%	0.34	
Bond XLII	2.00	0.00	2.00	2.00	8.8000%	0.18	
<b>Total Loan</b>	<b>445.89</b>	<b>30.33</b>	<b>415.56</b>	<b>430.73</b>		<b>39.95</b>	<b>9.2745%</b>



2017-18							
Loan	Opening	Repayment	Closing	Average	Rate of interest	Interest	Weighted Average Rate of Interest
Bond XXXII	39.32	4.92	34.40	36.86	8.8400%	3.26	
Bond XXXIV	32.26	3.58	28.68	30.47	8.8400%	2.69	
Bond XXXV	82.50	8.25	74.25	78.38	9.6400%	7.56	
Bond XXXVI	69.07	4.93	64.14	66.61	9.3500%	6.23	
Bond XXXVII	28.34	2.83	25.51	26.93	9.2500%	2.49	
Bond XXXVIII	98.00	0.00	98.00	98.00	9.2500%	9.07	
Bond XL	60.40	5.49	54.91	57.66	9.3000%	5.36	
Bond XLI	3.67	0.33	3.34	3.51	8.8500%	0.31	
Bond XLII	2.00	0.00	2.00	2.00	8.8000%	0.18	
<b>Total Loan</b>	<b>415.56</b>	<b>30.33</b>	<b>385.23</b>	<b>400.40</b>		<b>37.14</b>	<b>9.2755%</b>
2018-19							
Loan	Opening	Repayment	Closing	Average	Rate of interest	Interest	Weighted Average Rate of Interest
Bond XXXII	34.40	4.92	29.48	31.94	8.8400%	2.82	
Bond XXXIV	28.68	3.58	25.10	26.89	8.8400%	2.38	
Bond XXXV	74.25	8.25	66.00	70.13	9.6400%	6.76	
Bond XXXVI	64.14	4.93	59.21	61.68	9.3500%	5.77	
Bond XXXVII	25.51	2.83	22.68	24.10	9.2500%	2.23	
Bond XXXVIII	98.00	0.00	98.00	98.00	9.2500%	9.07	
Bond XL	54.91	5.49	49.42	52.17	9.3000%	4.85	
Bond XLI	3.34	0.33	3.01	3.18	8.8500%	0.28	
Bond XLII	2.00	0.00	2.00	2.00	8.8000%	0.18	
<b>Total Loan</b>	<b>385.23</b>	<b>30.33</b>	<b>354.90</b>	<b>370.07</b>		<b>34.33</b>	<b>9.2766%</b>

