

CENTRAL ELECTRICITY REGULATORY COMMISSION

NEW DELHI

Petition No. 11/TT/2015

Coram:

Shri Gireesh B. Pradhan, Chairperson

Shri A.K. Singhal, Member

Shri A.S. Bakshi, Member

Dr. M.K. Iyer, Member

Date of Hearing : 22.03.2016

Date of Order : 14.07.2016

In the matter of:

Miscellaneous petition for approval under sub-section 4 of Section 28 of the Electricity Act, 2003 for determination of (i) Truing up of fee and charges for the period 2009-14 block and (ii) fee and charges for the period 2014-19 block for Unified Load Despatch and Communication Scheme (PGCIL portion i.e. Communication system portion and SLDC system retained by PGCIL after formation of POSOCO) in Western Region.

And in the matter of:

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

.....Petitioner

Vs

1. Chhattisgarh State Power Trading Company Limited,
P.O. Sunder Nagar, Dangania,
Raipur-492 013
2. Gujarat Urja Vikas Nigam Limited,
Sardar Patel Vidyut Bhawan,
Race Course Road, Vadodara-390 007
3. Madhya Pradesh Power Trading Company Limited,
Shakti Bhawan, Vidyut Nagar, Rampur,
Jabalpur-482 008
4. Maharashtra State Electricity Distribution Company Limited,
Prakashgad, Bandra (East),
Mumbai-400 051



5. Electricity Department,
Government of Goa,
Vidyut Bhavan, 3rd Floor,
Panaji, Goa
6. Electricity Department,
U.T. of Dadra Nagar Haveli,
Silvassa-396 230
7. Electricity Department,
U.T. of Daman and Diu,
Moti Daman
8. WRTS-I,
Power Grid Corporation of India Limited,
P.O. Uppalwadi, Sampritinagar,
Nagpur-440 026
9. Bhadravathi HVDC,
Power Grid Corporation of India Limited,
Sumthana Village, Bhadravati (Tehsil),
Bhadravati, Chandrapur (Dist.)
Maharashtra-442 902
10. Vindhayachal HVDC,
Power Grid Corporation of India Limited,
P.O. Vindhyanagar, P. Box No. 12,
Singrauli (Dist.), Madhya Pradesh-486 885
11. NTPC Limited,
NTPC Bhawan, Core-7, Scope Complex,
7, Institutional Area, Lodhi Road,
New Delhi-110 003
12. Nuclear Power Corporation of India Limited,
Nabhkiya Bhawan, Anu-Shakti Nagar,
Mumbai-400 094
13. NCA, EMC Office,
D ¾, Narmada Colony scheme,
No. 78, Vijayanagar, Indore-452 010
14. Jindal Power Limited,
O.P. Jindal Super Thermal Power Plant,
Village & P.O. Tamnar, Tehsil-Gharghoda,
Dist. Raigarh, Chattisgarh-496 107
15. LANCO Amarkantak Power Private Limited,
Plot No. 397, Phase-III, Udyog Vihar,
Gurgaon-122 016, Haryana



16. Adani Power Limited,
Shikhar, 9th Floor, Near Mithakhali Road,
Navarangpura, Ahamedabad-380 009

....Respondents

For petitioner : Shri S.S Raju, PGCIL
Shri Jasbir Singh, PGCIL
Shri M.M. Mondal, PGCIL
Shri S.K. Venkatesan, PGCIL
Shri Rakesh Prasad, PGCIL
Shri Anshul Garg, PGCIL
Shri A.M. Pavgi, PGCIL
Shri Mohd. Mohsin, PGCIL
Shri K.K. Choudhary, PGCIL

For respondents : None

ORDER

The petition has been filed by Power Grid Corporation of India Limited (PGCIL) under sub-section (4) of Section 28 of Electricity Act, 2003 for truing up of annual fee and charges for Communication system and SLDC system retained in Western Region for the 2009-14 period based on actual expenditure for the period 1.4.2009 to 31.3.2014 and for determination of tariff for the period from 1.4.2014 to 31.3.2019.

2. The tariff for the 2009-14 tariff period for the instant asset was allowed vide order dated 14.11.2013 in Petition No. 57/TT/2012 and order dated 11.6.2014 in Review Petition No. 3/RP/2014. The details of the asset covered in respect of Communication system and SLDC system in the instant petition are given in the table follows:-



Details of the Asset
Communication & SLDC system retained by PGCIL

3. No comments or suggestions have been received from the general public in response to the notices published by the petitioner under Section 64 of the Electricity Act, 2003 ("the Act"). The petitioner has served the petition on the respondents. None of the respondents have filed any reply.

4. The hearing in the matter was held on 22.3.2016. Having heard the representatives of the petitioner and perused the material on record, we proceed to dispose of the petition.

Brief Background

5. 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.

6. Government of India had also constituted a Task Force to look into the financial aspects for augmentation and up-gradation of the State Load Despatch Centres and issues related to emoluments for the personnel engaged in the system operation. The Task Force made certain recommendations with regard to the ownership of the assets. The petitioner constituted committees at the regional level,



subsequent to the Task Force's report, to identify the assets to be transferred to POSOCO.

7. Thereafter, the petitioner 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 fibre 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 fibre optic system would be beneficial



in the long run as the fibre 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 fibre 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 fibre should be strictly complied with.”

9. In the absence of any provision in the 2009 Tariff Regulations regarding determination of tariff of Communication system and SLDC system of the petitioner and to continue with the levelised tariff for the instant asset, the annual fee and charges of the Communication system and SLDC system retained by PGCIL were approved vide order dated 14.11.2013 in Petition No. 57/TT/2012 and order dated 11.6.2014 in Review Petition No. 3/RP/2014, as per the principles approved by the Commission vide order dated 8.12.2011 in Petition No 68/2010.

10. The net capital cost as on 1.4.2009 of the instant asset as approved vide order dated 14.11.2013 in Petition No. 57/TT/2012 and order dated 11.6.2014 in Review Petition No. 3/RP/2014 is as under:-

Particulars	Capital	(₹ in lakh)	
		Non-Microwave	
		Central Portion	State Portion
Retained Gross Capital Cost as on 31.3.2009	Loan	6005.39	5229.29
	Equity	1973.44	1730.53
	Total	7978.83	6959.82
Capital Cost Recovered up to 31.3.2009 (pro-rata)	Loan	837.62	723.15
	Equity	152.48	132.34
	Total	990.10	855.49
Net Capital Cost as on 31.3.2009	Loan	5167.77	4506.14
	Equity	1820.96	1598.19
	Total	6988.73	6104.33



11. The annual fee and charges for 2009-14 as approved, vide order dated 14.11.2013 in Petition No. 57/TT/2012 and order dated 11.6.2014 in Review Petition No. 3/RP/2014 for both Central Portion and State Portion respectively are as hereunder:-

(₹ in lakh)

Particulars	Central Portion				
	2009-10	2010-11	2011-12	2012-13	2013-14
Annual Capital Recovery Charge-Loan	555.86	555.86	555.86	555.86	555.86
Annual Capital Recovery Charge-Equity	336.67	336.67	336.67	336.67	336.67
Annual Capital Recovery Charge-Total	892.53	892.53	892.53	892.53	892.53
O&M Expenses	303.93	206.42	206.92	208.43	225.21
Interest on Working Capital	33.81	28.93	28.95	29.03	29.87
Total Fee & Charges	1230.26	1127.87	1128.40	1129.98	1147.60
Particulars	State Portion				
	2009-10	2010-11	2011-12	2012-13	2013-14
Annual Capital Recovery Charge-Loan	484.69	484.69	484.69	484.69	484.69
Annual Capital Recovery Charge-Equity	295.48	295.48	295.48	295.48	295.48
Annual Capital Recovery Charge-Total	780.17	780.17	780.17	780.17	780.17
O&M Expenses	-	-	-	-	-
Interest on Working Capital	16.26	16.26	16.26	16.26	16.26
Total Fee & Charges	796.43	796.43	796.43	796.43	796.43

Truing-up of Fee and Charges for 2009-14 Tariff Period

Capital cost

12. The net capital cost as approved vide order dated 14.11.2013 in Petition No. 57/TT/2012 and order dated 11.6.2014 in Review Petition No. 3/RP/2014 has been considered as on 1.4.2009 for the purpose of truing up of fee and charges for the instant asset as discussed at para-10. The petitioner has not claimed any additional capital expenditure during 2009-14 tariff period.

Debt-Equity ratio

13. The debt: equity ratio as on 1.4.2009, as approved vide order dated 14.11.2013 in Petition No. 57/TT/2012 and order dated 11.6.2014 in Review Petition No. 3/RP/2014 has been considered for the purpose of truing up and it is as follows:-



(₹ in lakh)

Particulars	Central portion		State portion		Total	
	Amount	%	Amount	%	Amount	%
Loan/Debt	5167.77	73.94	4506.14	73.82	9673.91	73.89
Equity	1820.96	26.06	1598.19	26.18	3419.15	26.11
Total	6988.73	100.00	6104.33	100.00	13093.06	100.00

14. The debt: equity ratio determined as on 31.3.2014 is as follows:-

(₹ in lakh)

Particulars	Central portion		State portion		Total	
	Amount	%	Amount	%	Amount	%
Loan/Debt	3202.19	69.37	2792.22	69.23	5994.40	69.31
Equity	1413.77	30.63	1240.81	30.77	2654.58	30.69
Total	4615.96	100.00	4033.03	100.00	8648.99	100.00

Rates for Recovery of loan and equity

15. The Capital Recovery Factor for loan in respect of instant asset has been calculated by applying weighted average rate of interest on the basis of the impact due to change in floating rate of interest of loan and it works out to be 3.6451%, 3.1080%, 2.9154%, 2.8311% and 2.3444% for 2009-10, 2010-11, 2011-12, 2012-13 and 2013-14 respectively for instant asset. Thus, the rates considered on annual basis, have been converted to monthly rates. The details of weighted average rate of interest calculation are attached at Annexure-3 to this order. Thus, monthly recovery factors for loan for Central Portion and State Portion for instant asset are as under:-

CRF for loan to be considered for Fee & Charges					
Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
Central Portion	0.008680	0.009070	0.009757	0.010674	0.011655
State Portion	0.008680	0.009070	0.009757	0.010674	0.011655

16. The Capital Recovery Factor for equity has been considered on the same basis as approved vide order dated 14.11.2013 in Petition No. 57/TT/2012 and order dated 11.6.2014 in Review Petition No. 3/RP/2014 and on post-tax return on



equity of 15.50%. Thus, monthly recovery factors for equity for Central Portion and State Portion for instant asset are as under:-

CRF for equity to be considered for Fee & Charges					
Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
Central Portion	0.015407	0.015918	0.016559	0.017374	0.018433
State Portion	0.015407	0.015918	0.016559	0.017374	0.018433

17. In view of above, the amount of monthly capital recovery charges for loan and equity both for Central and State portions for instant asset have been considered by using respective Capital Recovery Factors and are as under:-

(₹ in lakh)

Monthly capital recovery charges for loan					
Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
Central Portion	44.86	43.64	43.25	43.09	42.30
State Portion	39.12	38.06	37.71	37.58	36.88

(₹ in lakh)

Monthly capital recovery charges for equity					
Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
Central Portion	28.06	28.06	28.06	28.06	28.06
State Portion	24.62	24.62	24.62	24.62	24.62

18. Accordingly, the recovery of capital during 2009-14 has been worked out. The details are as under:-

(₹ in lakh)

Particulars	Capital	Central Portion	State Portion
	Capital Cost Recovered during 2009-14	Loan	1965.58
	Equity	407.19	357.38
	Total	2372.77	2071.30

Operation & Maintenance Expenses (O&M Expenses)

19. The details of O&M Expenses claimed earlier by the petitioner on actual basis for 2009-10, 2010-11 and 2011-12 but on projected basis for 2012-13 and



2013-14 and allowed vide order dated 14.11.2013 in Petition No. 57/TT/2012 and order dated 11.6.2014 in Review Petition No. 3/RP/2014 are as follows:-

(₹ in lakh)					
Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
Claimed by petitioner in P. No. 57/TT/2012 and 3/RP/2014	304.36	206.42	208.23	302.64	324.66
Amount allowed vide order dated 14.11.2013 and dated 11.6.2014	303.93	206.42	206.92	301.24	323.06
Amount disallowed	0.43	-	1.31	1.40	1.60

20. The petitioner has submitted claim for O&M Expenses for Central Portion as approved vide order dated 14.11.2013 in Petition No. 57/TT/2012 and order dated 11.6.2014 in Review Petition No. 3/RP/2014 for 2009-10, 2010-11 and 2011-12. The petitioner has submitted its revised claim of ₹191.32 lakh and ₹349.56 lakh against O&M Expenses for 2012-13 and 2013-14 respectively on actual basis as per Auditors' Certificate dated 23.9.2014.

21. Accordingly, the details of O&M Expenses trued-up for the purpose of determination of fee and charges during 2009-14 in the instant petition are as follows:-

(₹ in lakh)					
Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
Claimed by petitioner	303.93	206.40	206.92	191.32	349.56
Amount now allowed	303.93	206.40	206.92	191.32	349.56

Interest on working capital

22. As discussed at para-21 above, the petitioner has claimed O&M Expenses, which has been allowed in case of Central Portion, and accordingly O&M Expenses for 1 month, Maintenance spares @15% of O&M Expenses, receivables for two months and SBI Base Rate as on 1.4.2009 i.e. 8.75% Plus 350 bps (12.25%) have been considered as the rate of interest on working capital for Central Portion. The



necessary computations in support of interest on working capital for Central Portion are as under:-

(₹ in lakh)

Particulars	Non-Microwave-Central Portion				
	2009-10	2010-11	2011-12	2012-13	2013-14
Maintenance Spares	45.59	30.96	31.04	28.70	52.43
O & M Expenses	25.33	17.20	17.24	15.94	29.13
Receivables	202.06	182.51	181.79	178.75	204.82
Total	272.97	230.67	230.07	223.39	286.38
Rate of Interest	12.25%	12.25%	12.25%	12.25%	12.25%
Interest	33.44	28.26	28.18	27.37	35.08

23. Further, the petitioner has not submitted any claim for O&M Expenses in case of State Portion as O&M expenses are to be borne by the concerned states. Accordingly, no O&M expenses and no maintenance spares thereof have been considered for working out interest on working capital. Receivables for two months and SBI Base Rate as on 1.4.2009 i.e. 8.75% Plus 350 bps (12.25%) have been considered as the rate of interest on working capital for State Portion. The necessary computations in support of interest on working capital for State Portion are as under:-

(₹ in lakh)

Particulars	State Portion				
	2009-10	2010-11	2011-12	2012-13	2013-14
Maintenance Spares	-	-	-	-	-
O & M Expenses	-	-	-	-	-
Receivables	130.13	127.97	127.27	126.99	125.58
Total	130.13	127.97	127.27	126.99	125.58
Rate of Interest	12.25%	12.25%	12.25%	12.25%	12.25%
Interest	15.94	15.68	15.59	15.56	15.38

Annual Fee and charges-2009-14

24. The detailed computation of the various components of the trued up annual fee and charges for the instant asset for the tariff period 2009-14 is summarised as follows:-



(₹ in lakh)

Central Portion-fee and charges					
Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
Opening Gross Capital Cost	7978.83	7978.83	7978.83	7978.83	7978.83
Opening Gross Notional Loan	6005.39	6005.39	6005.39	6005.39	6005.39
Opening Gross Equity	1973.44	1973.44	1973.44	1973.44	1973.44
Recovered Gross Capital Cost (As on 1st April)	990.10	1404.39	1852.11	2326.67	2827.55
Recovered Gross Notional Loan	837.62	1193.46	1572.99	1968.01	2376.11
Recovered Gross Equity	152.48	210.93	279.12	358.66	451.44
Opening Net Capital Cost	6988.73	6574.44	6126.72	5652.16	5151.28
Opening Net Notional Loan	5167.77	4811.93	4432.40	4037.38	3629.28
Opening Net Equity	1820.96	1762.51	1694.32	1614.78	1522.00
Recovered Capital Cost (During the Year)	414.29	447.72	474.56	500.88	535.32
Recovered Notional Loan	355.84	379.53	395.02	408.09	427.09
Recovered Equity	58.45	68.19	79.54	92.78	108.23
Closing Net Capital Cost	6574.44	6126.72	5652.16	5151.28	4615.96
Closing Net Notional Loan	4811.93	4432.40	4037.38	3629.28	3202.19
Closing Net Equity	1762.51	1694.32	1614.78	1522.00	1413.77
Additional Capital Cost	0.00	0.00	0.00	0.00	0.00
Additional Notional Loan	0.00	0.00	0.00	0.00	0.00
Additional Equity	0.00	0.00	0.00	0.00	0.00
Years (Capital to be recovered up to 31.3.2012)	11.83	10.83	9.83	8.83	7.83
Months	142.00	130.00	118.00	106.00	94.00
Weighted Average Rate of Interest p.a.	3.6451%	3.1080%	2.9154%	2.8311%	2.3444%
Weighted Average Rate of Interest p.m.	0.3038%	0.2590%	0.2429%	0.2359%	0.1954%
Monthly Recovery Factors-Loan	0.008680	0.009070	0.009757	0.010674	0.011655
Monthly Capital Recovery Charge-Loan	44.86	43.64	43.25	43.09	42.30
Annual Capital Recovery Charge-Loan	538.30	523.71	518.99	517.13	507.61
Rate of Return on Equity p.a.	15.500%	15.500%	15.500%	15.500%	15.500%
Rate of Return on Equity p.m.	1.292%	1.292%	1.292%	1.292%	1.292%
Monthly Recovery Factors-Equity	0.015407	0.015918	0.016559	0.017374	0.018433
Monthly Capital Recovery Charge-Equity	28.06	28.06	28.06	28.06	28.06
Annual Capital Recovery Charge-Equity	336.67	336.67	336.67	336.67	336.67
Monthly Capital Recovery Charge-Total	72.91	71.70	71.30	71.15	70.36



Annual Capital Recovery Charge-Total	874.97	860.38	855.66	853.79	844.27
O&M Expenses (Annualized)	303.93	206.40	206.92	191.32	349.56
Allowable Fee & Charges					
Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
Annual Capital Recovery Charge-Loan	538.30	523.71	518.99	517.13	507.61
Annual Capital Recovery Charge-Equity	336.67	336.67	336.67	336.67	336.67
Annual Capital Recovery Charge-Total	874.97	860.38	855.66	853.79	844.27
O&M Expenses	303.93	206.40	206.92	191.32	349.56
Interest on Working Capital	33.44	28.26	28.18	27.37	35.08
Total Fee & Charges	1212.34	1095.04	1090.76	1072.48	1228.92
State Portion-fee and charges					
Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
Opening Gross Capital Cost	6959.82	6959.82	6959.82	6959.82	6959.82
Opening Gross Notional Loan	5229.29	5229.29	5229.29	5229.29	5229.29
Opening Gross Equity	1730.53	1730.53	1730.53	1730.53	1730.53
Recovered Gross Capital Cost (As on 1st April)	855.49	1217.07	1607.86	2022.11	2459.39
Recovered Gross Notional Loan	723.15	1033.43	1364.37	1708.82	2064.66
Recovered Gross Equity	132.34	183.64	243.49	313.30	394.73
Opening Net Capital Cost	6104.33	5742.75	5351.96	4937.71	4500.43
Opening Net Notional Loan	4506.14	4195.86	3864.92	3520.47	3164.63
Opening Net Equity	1598.19	1546.89	1487.04	1417.23	1335.80
Recovered Capital Cost (During the Year)	361.58	390.79	414.25	437.28	467.40
Recovered Notional Loan	310.28	330.94	344.44	355.85	372.41
Recovered Equity	51.30	59.84	69.81	81.43	94.99
Closing Net Capital Cost	5742.75	5351.96	4937.71	4500.43	4033.03
Closing Net Notional Loan	4195.86	3864.92	3520.47	3164.63	2792.22
Closing Net Equity	1546.89	1487.04	1417.23	1335.80	1240.81
Additional Capital Cost	0.00	0.00	0.00	0.00	0.00
Additional Notional Loan	0.00	0.00	0.00	0.00	0.00
Additional Equity	0.00	0.00	0.00	0.00	0.00
Years (Capital to be recovered up to 31.3.2012)	11.83	10.83	9.83	8.83	7.83
Months	142.00	130.00	118.00	106.00	94.00
Weighted Average Rate of Interest p.a.	3.6451%	3.1080%	2.9154%	2.8311%	2.3444%
Weighted Average Rate of	0.3038%	0.2590%	0.2429%	0.2359%	0.1954%



Interest p.m.					
Monthly Recovery Factors-Loan	0.008680	0.009070	0.009757	0.010674	0.011655
Monthly Capital Recovery Charge-Loan	39.12	38.06	37.71	37.58	36.88
Annual Capital Recovery Charge-Loan	469.38	456.66	452.54	450.92	442.62
Rate of Return on Equity p.a.	15.500%	15.500%	15.500%	15.500%	15.500%
Rate of Return on Equity p.m.	1.292%	1.292%	1.292%	1.292%	1.292%
Monthly Recovery Factors-Equity	0.015407	0.015918	0.016559	0.017374	0.018433
Monthly Capital Recovery Charge-Equity	24.62	24.62	24.62	24.62	24.62
Annual Capital Recovery Charge-Equity	295.48	295.48	295.48	295.48	295.48
Monthly Capital Recovery Charge-Total	63.74	62.68	62.34	62.20	61.51
Annual Capital Recovery Charge-Total	764.86	752.14	748.02	746.40	738.10
O&M Expenses (Annualized)	0.00	0.00	0.00	0.00	0.00
Allowable Fee & Charges					
Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
Annual Capital Recovery Charge-Loan	469.38	456.66	452.54	450.92	442.62
Annual Capital Recovery Charge-Equity	295.48	295.48	295.48	295.48	295.48
Annual Capital Recovery Charge-Total	764.86	752.14	748.02	746.40	738.10
O&M Expenses	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	15.94	15.68	15.59	15.56	15.38
Total Fee & Charges	780.80	767.82	763.61	761.96	753.48

Determination of Annual Fee and Charges for 2014-19

25. As per the directions of the Commission in order dated 8.12.2011 in Petition No.68/2010, the scope of the 2014 Tariff Regulations has been widened to include the Communication system and SLDC system used for inter-State transmission of electricity. However, as per Clause (iii) of Regulation 6(1) of the 2014 Tariff Regulations, the tariff of the existing communication system forming part of the transmission system is to be determined as per the methodology followed prior to 1.4.2014. The said Regulation provides as follows:-



“(iii) the tariff of the existing communication system forming part of transmission system shall be as per the methodology followed by the Commission prior to 1.4.2014.

26. The instant asset was put into commercial operation on 1.2.2006 and in view of above provision in the 2014 Tariff Regulations, the tariff of the Communication system and SLDC system of the petitioner, we continue to allow levelised tariff for the Communication system as per the principles approved by the Commission vide order dated 8.12.2011 in Petition No 68/2010. Accordingly, the annual fee and charges of Communication system are determined in this order.

27. The annual fee and charges claimed by the petitioner are as hereunder:-

(₹ in lakh)

Particulars	Central Portion				
	2014-15	2015-16	2016-17	2017-18	2018-19
Annual Capital Recovery Charges-total	881.90	881.90	881.90	881.90	881.90
O & M Expenses	361.17	373.16	385.54	398.34	411.57
Interest on working capital	40.25	40.91	41.60	42.31	43.04
Total	1283.31	1295.97	1309.04	1322.55	1336.50
Particulars	State Portion				
	2014-15	2015-16	2016-17	2017-18	2018-19
Annual Capital Recovery Charges-total	771.13	771.13	771.13	771.13	771.13
O & M Expenses	-	-	-	-	-
Interest on working capital	17.75	17.75	17.75	17.75	17.75
Total	788.88	788.88	788.88	788.88	788.88

Capital cost

28. The net capital cost as trued-up and allowed in this order for 2009-14 has been considered as on 1.4.2014 for the purpose of determination of fee and charges for the instant asset. The petitioner has not claimed any additional capital expenditure during 2014-19 tariff period. Accordingly, the capital cost considered for determining fee and charges for 2014-19 tariff period is as follows:-



(₹ in lakh)

Particulars	Capital	Central Portion	State Portion
Retained Gross Capital Cost as on 31.3.2014	Loan	6005.39	5229.29
	Equity	1973.44	1730.53
	Total	7978.83	6959.82
Capital Cost Recovered up to 31.3.2014	Loan	2803.20	2437.07
	Equity	559.67	489.72
	Total	3362.87	2926.79
Net Capital Cost as on 31.3.2014	Loan	3202.19	2792.22
	Equity	1413.77	1240.81
	Total	4615.96	4033.03

Debt-equity ratio

29. The debt: equity as determined as on 31.3.2014 as discussed at para-14 has been considered as on 1.4.2014 and it is as under:-

(₹ in lakh)

Particulars	Central portion		State portion		Total	
	Amount	%	Amount	%	Amount	%
Loan/Debt	3202.19	69.37	2792.22	69.23	5994.40	69.31
Equity	1413.77	30.63	1240.81	30.77	2654.58	30.69
Total	4615.96	100.00	4033.03	100.00	8648.99	100.00

30. The debt: equity ratio determined as on 31.3.2019 for Communication system is as follows:-

(₹ in lakh)

Particulars	Central portion		State portion		Total	
	Amount	%	Amount	%	Amount	%
Loan/Debt	906.48	62.92	790.42	62.76	1696.91	62.85
Equity	534.30	37.08	468.93	37.24	1003.23	37.15
Total	1440.78	100.00	1259.36	100.00	2700.13	100.00

Rates for Recovery of loan and equity

31. The Capital Recovery Factor for loan in respect of instant asset has been calculated by applying weighted average rate of interest and it works out to be 2.1826% in case of the instant asset. The details are attached at Annexure-4 of the order. Thus, the rates considered on annual basis, have been converted to monthly rates and are as follows:-



CRF for loan to be considered for Fee & Charges					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Central Portion	0.013138	0.015227	0.018182	0.022681	0.030357
State Portion	0.013138	0.015227	0.018182	0.022681	0.030357

32. The Capital Recovery Factor for equity has been considered on the same basis as approved vide order dated 14.11.2013 in Petition No. 57/TT/2012 and order dated 11.6.2014 in Review Petition No. 3/RP/2014d and on post-tax return on equity of 15.50%. Thus, the rates considered on annual basis, have been converted to monthly rates and are as under:-

CRF for equity to be considered for Fee & Charges					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Central Portion	0.019844	0.021790	0.024605	0.028969	0.036528
State Portion	0.019844	0.021790	0.024605	0.028969	0.036528

33. In view of above, the amount of monthly capital recovery charges for loan and equity both for Central and State portions for instant asset have been considered by using respective Capital Recovery Factors and are as under:-

(₹ in lakh)

Monthly capital recovery charges for loan					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Central Portion	42.07	42.07	42.07	42.07	42.07
State Portion	36.68	36.68	36.68	36.68	36.68

(₹ in lakh)

Monthly capital recovery charges for equity					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Central Portion	28.06	28.06	28.06	28.06	28.06
State Portion	24.62	24.62	24.62	24.62	24.62

34. Accordingly, the recovery of capital during 2014-19 has been worked out. The date of commercial operation of instant asset was 1.2.2006, hence, the instant asset shall complete 15 years as on 31.1.2021. Further, in line with order dated



8.12.2011 in Petition No. 68/TT/2010, the total capital cost in respect of Communication system shall be recovered upto 31.1.2021 i.e. during 2020-21. The details are as follows:-

Particulars	Capital	(₹ in lakh)	
		Central Portion	State Portion
Capital Cost Recovered during 2014-19	Loan	2295.71	2001.79
	Equity	879.47	771.88
	Total	3175.18	2773.67

35. The petitioner has submitted that it is liable to pay MAT rate of income tax, as such RoE has been considered post-tax @15.5%. Further, regarding recovery of income tax, vide order dated 14.11.2013 in Petition No. 57/TT/2012 (at para 27) thereof, it has been mentioned that income tax shall be recoverable from the respondents in proportion of the fee and charges shared by them.

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

37. The Commission in its order dated 18.3.2011 in Petition No. 28/2010 approved the fees and charges for the period upto 31.3.2009 by considering CRF corresponding to equity on the basis of return on equity at the rate of 14% per annum (post-tax) in accordance with the terms and conditions for determination of tariff applicable during 2004-09. Whereas, during 2009-14, consequent to creation of POSOCO, fees and charges of the assets transferred to POSOCO were allowed as per RLDC Regulations 2009, the assets retained with the CTU are neither covered under the RLDC Regulations nor under the 2009 Tariff Regulations. The tariff regulations applicable for the period 2009-14 provide for recovery of RoE (pre-



tax), calculated by grossing up the base rate (normally @ 15.5% per annum) with the Corporate Tax/MAT rate for the year 2008-09 and is to be trued up subsequently with reference to the actual tax rate applicable under the provisions of the relevant Finance Act each year during the tariff period. As already mentioned earlier in this order, PGCIL filed a miscellaneous Petition No. 68/2010 for fixation of tariff norms for recovery of cost of assets (“Communication System” and “Sub-Load Despatch Centre System”) to be retained or to be installed by the petitioner after formation of POSOCO for the tariff period 2009-14. It was decided, vide order dated 8.12.2011 in Petition No. 68/2010, 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. In our opinion, the concept of grossing up linked with the tariff determination for ordinary assets cannot *per se* be applied for calculating fees and charges in accordance with the Capital Recovery Factor (CRF) concept. By considering the grossed-up value of RoE, CRF gets distorted because of factoring of tax component. Therefore, in departure from the provisions for recovery of RoE specified under the tariff regulations presently applicable, post-tax RoE of 15.50% per annum, converted to monthly rates has been considered. As RoE has been considered post-tax, the petitioner shall be entitled to recover income-tax from the respondents in proportion of the fees and charges shared by them in accordance with this order.

Operation & Maintenance Expenses (O&M Expenses)

38. The petitioner has not claimed O&M Expenses for State Portion. The petitioner has submitted the claim of the O&M Expenses for Central portion by escalating the actual O&M expenditure in 2013-14 @ 3.32% subject to actual



expenditure at the time of truing-up. Accordingly, the O&M Expenses are allowed in this order which shall be subject to review at the time of truing-up. The details are as under:-

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Claimed by petitioner	361.17	373.16	385.54	398.34	411.57
Amount allowed	259.98	268.61	277.53	286.74	296.26

Interest on working capital

39. The petitioner has claimed O&M Expenses in the case of Central Portion and accordingly O&M Expenses for 1 month, Maintenance spares @15% of O&M Expenses, receivables for two months and SBI Base Rate as on 1.4.2014 i.e. 10.00% Plus 350 bps (13.50%) have been considered as the rate of interest on working capital for the Central Portion only.

40. The necessary computations of interest on working capital for Non-Microwave system-Central Portion are as under:-

(₹ in lakh)

Particulars	Central Portion				
	2014-15	2015-16	2016-17	2017-18	2018-19
Maintenance Spares	39.00	40.29	41.63	43.01	44.44
O & M Expenses	21.66	22.38	23.13	23.90	24.69
Receivables	189.21	190.72	192.29	193.91	195.59
Total	249.87	253.40	257.05	260.82	264.71
Rate of Interest	13.50%	13.50%	13.50%	13.50%	13.50%
Interest	33.73	34.21	34.70	35.21	35.74

(₹ in lakh)

Particulars	State Portion				
	2014-15	2015-16	2016-17	2017-18	2018-19
Maintenance Spares	-	-	-	-	-
O & M Expenses	-	-	-	-	-
Receivables	125.44	125.44	125.44	125.44	125.44
Total	125.44	125.44	125.44	125.44	125.44
Rate of Interest	13.50%	13.50%	13.50%	13.50%	13.50%
Interest	16.93	16.93	16.93	16.93	16.93



Annual Fee and charges

41. The detailed calculations of fee and charges being allowed for the instant asset are attached at Annexure-1 to Annexure-2 of this order and are summarized hereinafter:-

(₹ in lakh)

Particulars	Central Portion				
	2014-15	2015-16	2016-17	2017-18	2018-19
Annual capital recovery charge-Loan	504.85	504.85	504.85	504.85	504.85
Annual capital recovery charge-Loan	336.67	336.67	336.67	336.67	336.67
Annual capital recovery charge-Total	841.52	841.52	841.52	841.52	841.52
O&M expenses	259.98	268.61	277.53	286.74	296.26
Interest on working capital	33.73	34.21	34.70	35.21	35.74
Total fee and charges	1135.23	1144.34	1153.75	1163.47	1173.52
Particulars	State Portion				
	2014-15	2015-16	2016-17	2017-18	2018-19
Annual capital recovery charge-Loan	440.22	440.22	440.22	440.22	440.22
Annual capital recovery charge-Loan	295.48	295.48	295.48	295.48	295.48
Annual capital recovery charge-Total	735.70	735.70	735.70	735.70	735.70
O&M expenses	-	-	-	-	-
Interest on working capital	16.93	16.93	16.93	16.93	16.93
Total fee and charges	752.63	752.63	752.63	752.63	752.63

42. The Commission is of the view that there is a need to review the Capital Recovery Factor methodology applied while determining fee and charges for Communication system. Accordingly, Commission directs the staff to examine the issue and submit to the Commission for appropriate directions.

Filing fee and Publication Expenses

43. The petitioner has sought reimbursement of fee paid by it for filing the petition and any other expenditure in relation to the filing of petition. The petitioner



shall be entitled for reimbursement of the filing fees and publication expenses in connection with the present petition, directly from the beneficiaries on pro-rata basis in accordance with clause (1) of Regulation 52 of the 2014 Tariff Regulations.

Licence Fee

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

Service tax

45. The petitioner has made a prayer to be allowed to bill and recover the service tax on transmission charges separately from the respondents, if at any time exemption from service tax is withdrawn from the negative list and any additional taxes are to be paid on account of demand from Government/Statutory authorities. The petitioner has further submitted that fee and charges are exclusive of incentive, late payment surcharge, FERV, any statutory taxes, levies, duties, cess, or any other kind of imposition and/or other surcharge etc. whatsoever imposed/charged by any Government and/or any other local bodies/authorities/regulatory authorities etc. and the same shall be charged separately to the respondents. We consider petitioner's prayer pre-mature and accordingly this prayer is rejected.

Deferred Tax Liability

46. The petitioner has sought recovery of deferred tax liability before 1.4.2009 from the beneficiaries or long term consumers/ DICs as and when materialized. The deferred tax liability shall be dealt as per Regulations 49 of the 2014 Tariff Regulations, as amended. Accordingly, the petitioner is entitled to recover the



deferred tax liability upto 31.3.2009 whenever the same materializes, directly from the beneficiaries or long term transmission customers /DICs.

Sharing of Annual Fees and Charges

47. The fees and charges for Non-microwave 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"

48. The fee & charges for State Sector 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 earned by the petitioner from utilisation of these assets for other business shall be adjusted on monthly basis in the bills of the respective month in the proportion given in para 47 above.

49. This order disposes of Petition No. 11/TT/2015.

sd/-
(M.K. Iyer)
Member

sd/-
(A.S. Bakshi)
Member

sd/-
(A.K. Singhal)
Member

sd/-
(Gireesh B. Pradhan)
Chairperson



(₹ in lakh)

Central Portion-Charges-2014-19					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Gross Capital Cost	7978.83	7978.83	7978.83	7978.83	7978.83
Opening Gross Notional Loan	6005.39	6005.39	6005.39	6005.39	6005.39
Opening Gross Equity	1973.44	1973.44	1973.44	1973.44	1973.44
Recovered Gross Capital Cost (As on 1st April)	3362.87	3928.46	4524.76	5155.47	5824.91
Recovered Gross Notional Loan	2803.20	3242.54	3691.56	4150.49	4619.53
Recovered Gross Equity	559.67	685.92	833.19	1004.99	1205.38
Opn.Net Capital Cost	4615.96	4050.37	3454.07	2823.36	2153.92
Opn. Net Notional Loan	3202.19	2762.85	2313.83	1854.90	1385.86
Opn. Net Equity	1413.77	1287.52	1140.25	968.45	768.06
Recovered Capital Cost (During the Year)	565.59	596.30	630.72	669.44	713.14
Recovered Notional Loan	439.34	449.02	458.92	469.04	479.38
Recovered Equity	126.25	147.27	171.79	200.40	233.76
Cl. Net Capital Cost	4050.37	3454.07	2823.36	2153.92	1440.78
Cl. Net Notional Loan	2762.85	2313.83	1854.90	1385.86	906.48
Cl. Net Equity	1287.52	1140.25	968.45	768.06	534.30
Additional Capital Cost	0.00	0.00	0.00	0.00	0.00
Additional Notional Loan	0.00	0.00	0.00	0.00	0.00
Additional Equity	0.00	0.00	0.00	0.00	0.00
Years (Capital to be recovered up to 31.1.2021)	6.83	5.83	4.83	3.83	2.83
Months	82.00	70.00	58.00	46.00	34.00
Weighted Average Rate of Interest p.a.	2.1826%	2.1826%	2.1826%	2.1826%	2.1826%
Weighted Average Rate of Interest p.m.	0.1819%	0.1819%	0.1819%	0.1819%	0.1819%
Monthly Recovery Factors-Loan	0.013138	0.015227	0.018182	0.022681	0.030357
Monthly Capital Recovery Charge-Loan	42.07	42.07	42.07	42.07	42.07
Annual Capital Recovery Charge-Loan	504.85	504.85	504.85	504.85	504.85
Rate of Return on Equity p.a.	15.500%	15.500%	15.500%	15.500%	15.500%
Rate of Return on Equity p.m.	1.292%	1.292%	1.292%	1.292%	1.292%
Monthly Recovery Factors-Equity	0.019844	0.021790	0.024605	0.028969	0.036528
Monthly Capital Recovery Charge-Equity	28.06	28.06	28.06	28.06	28.06
Annual Capital Recovery Charge-Equity	336.67	336.67	336.67	336.67	336.67



Monthly Capital Recovery Charge-Total	70.13	70.13	70.13	70.13	70.13
Annual Capital Recovery Charge-Total	841.52	841.52	841.52	841.52	841.52
Interest on Working Capital					
Particular	2014-15	2015-16	2016-17	2017-18	2018-19
Maintenance Spares (15% of O&M)	39.00	40.29	41.63	43.01	44.44
O&M Expenses (1 Month)	21.66	22.38	23.13	23.90	24.69
Receivables (2 months)	189.21	190.72	192.29	193.91	195.59
Total	249.87	253.40	257.05	260.82	264.71
Rate of Interest on Working Capital	13.50%	13.50%	13.50%	13.50%	13.50%
Total Interest on Working Capital (Annualized)	33.73	34.21	34.70	35.21	35.74
Allowable Fee & Charges-2014-19					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Annual Capital Recovery Charge- Loan	504.85	504.85	504.85	504.85	504.85
Annual Capital Recovery Charge- Equity	336.67	336.67	336.67	336.67	336.67
Annual Capital Recovery Charge- Total	841.52	841.52	841.52	841.52	841.52
O&M Expenses	259.98	268.61	277.53	286.74	296.26
Interest on Working Capital	33.73	34.21	34.70	35.21	35.74
Total Fee & Charges (Applicable)	1135.23	1144.34	1153.75	1163.47	1173.52



(₹ in lakh)

State Portion-Charges-2014-19					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Gross Capital Cost	6959.82	6959.82	6959.82	6959.82	6959.82
Opening Gross Notional Loan	5229.29	5229.29	5229.29	5229.29	5229.29
Opening Gross Equity	1730.53	1730.53	1730.53	1730.53	1730.53
Recovered Gross Capital Cost (As on 1st April)	2926.79	3420.69	3941.48	4492.42	5077.29
Recovered Gross Notional Loan	2437.07	2820.17	3211.70	3611.87	4020.86
Recovered Gross Equity	489.72	600.52	729.78	880.55	1056.44
Opn.Net Capital Cost	4033.03	3539.13	3018.34	2467.40	1882.53
Opn. Net Notional Loan	2792.22	2409.12	2017.59	1617.42	1208.43
Opn. Net Equity	1240.81	1130.01	1000.75	849.98	674.09
Recovered Capital Cost (During the Year)	493.90	520.79	550.94	584.87	623.17
Recovered Notional Loan	383.09	391.54	400.17	408.99	418.01
Recovered Equity	110.81	129.26	150.78	175.88	205.16
Cl. Net Capital Cost	3539.13	3018.34	2467.40	1882.53	1259.36
Cl. Net Notional Loan	2409.12	2017.59	1617.42	1208.43	790.42
Cl. Net Equity	1130.01	1000.75	849.98	674.09	468.93
Additional Capital Cost	0.00	0.00	0.00	0.00	0.00
Additional Notional Loan	0.00	0.00	0.00	0.00	0.00
Additional Equity	0.00	0.00	0.00	0.00	0.00
Years (Capital to be recovered up to 31.1.2021)	6.83	5.83	4.83	3.83	2.83
Months	82.00	70.00	58.00	46.00	34.00
Weighted Average Rate of Interest p.a.	2.1826%	2.1826%	2.1826%	2.1826%	2.1826%
Weighted Average Rate of Interest p.m.	0.1819%	0.1819%	0.1819%	0.1819%	0.1819%
Monthly Recovery Factors-Loan	0.013138	0.015227	0.018182	0.022681	0.030357
Monthly Capital Recovery Charge-Loan	36.68	36.68	36.68	36.68	36.68
Annual Capital Recovery Charge-Loan	440.22	440.22	440.22	440.22	440.22
Rate of Return on Equity p.a.	15.500%	15.500%	15.500%	15.500%	15.500%
Rate of Return on Equity p.m.	1.292%	1.292%	1.292%	1.292%	1.292%
Monthly Recovery Factors-Equity	0.019844	0.021790	0.024605	0.028969	0.036528
Monthly Capital Recovery Charge-Equity	24.62	24.62	24.62	24.62	24.62
Annual Capital Recovery Charge-Equity	295.48	295.48	295.48	295.48	295.48
Monthly Capital Recovery Charge-Total	61.31	61.31	61.31	61.31	61.31



Annual Capital Recovery Charge-Total	735.70	735.70	735.70	735.70	735.70
Interest on Working Capital					
Particular	2014-15	2015-16	2016-17	2017-18	2018-19
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)	125.44	125.44	125.44	125.44	125.44
Total	125.44	125.44	125.44	125.44	125.44
Rate of Interest on Working Capital	13.50%	13.50%	13.50%	13.50%	13.50%
Total Interest on Working Capital (Annualized)	16.93	16.93	16.93	16.93	16.93
Allowable Fee & Charges-2014-19					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Annual Capital Recovery Charge-Loan	440.22	440.22	440.22	440.22	440.22
Annual Capital Recovery Charge-Equity	295.48	295.48	295.48	295.48	295.48
Annual Capital Recovery Charge-Total	735.70	735.70	735.70	735.70	735.70
O&M Expenses	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	16.93	16.93	16.93	16.93	16.93
Total Fee & Charges (Applicable)	752.63	752.63	752.63	752.63	752.63



Annexure-3

(₹ in lakh)

Wt. Average Rate of Interest (2009-14)							
Loan	2009-10						
	Opening (Net O/S as on 1.4.2009)	Repayment	Closing	Average	Rate of interest	Interest	Weighted Average Rate of Interest
Bond-XIII - Option-I	322.93	35.88	287.05	304.99	8.6300%	26.32	
Bond-XV	587.50	58.75	528.75	558.13	6.6800%	37.28	
IBRD-I	1137.69	221.56	916.13	1026.91	8.4056%	86.32	
IBRD-II	6026.00	328.19	5697.81	5861.91	2.5379%	148.77	
IBRD-II (For add cap from DOCO to 31.3.2006)	677.28	36.89	640.39	658.84	2.5379%	16.72	
IBRD-II (For add cap during 2006-07)	819.90	44.65	775.25	797.58	2.5379%	20.24	
Total Loan	9571.30	725.92	8845.38	9208.34		335.65	3.6451%
2010-11							
Loan	Opening	Repayment	Closing	Average	Rate of interest	Interest	Weighted Average Rate of Interest
Bond-XIII - Option-I	287.05	35.88	251.17	269.11	8.6300%	23.22	
Bond-XV	528.75	58.75	470.00	499.38	6.6800%	33.36	
IBRD-I	916.13	238.33	677.80	796.97	8.7450%	69.69	
IBRD-II	5697.81	349.29	5348.52	5523.17	1.9823%	109.49	
IBRD-II (For add cap from DOCO to 31.3.2006)	640.39	39.26	601.13	620.76	1.9823%	12.31	
IBRD-II (For add cap during 2006-07)	775.25	47.53	727.72	751.49	1.9823%	14.90	
Total Loan	8845.38	769.04	8076.34	8460.86		262.96	3.1080%
2011-12							
Loan	Opening	Repayment	Closing	Average	Rate of interest	Interest	Weighted Average Rate of Interest
Bond-XIII - Option-I	251.17	35.88	215.29	233.23	8.6300%	20.13	
Bond-XV	470.00	58.75	411.25	440.63	6.6800%	29.43	
IBRD-I	677.80	256.33	421.47	549.64	8.9548%	49.22	
IBRD-II	5348.52	371.83	4976.69	5162.61	1.9362%	99.96	
IBRD-II (For	601.13	41.79	559.34	580.24	1.9362%	11.23	



add cap from DOCO to 31.3.2006)							
IBRD-II (For add cap during 2006-07)	727.72	50.59	677.13	702.43	1.9362%	13.60	
	8076.34	815.17	7261.17	7668.76		223.57	2.9154%
2012-13							
Loan	Opening	Repayment	Closing	Average	Rate of interest	Interest	Weighted Average Rate of Interest
Bond-XIII - Option-I	215.29	35.88	179.41	197.35	8.6300%	17.03	
Bond-XV	411.25	58.75	352.50	381.88	6.6800%	25.51	
IBRD-I	421.47	275.76	145.71	283.59	8.9738%	25.45	
IBRD-II	4976.69	395.88	4580.81	4778.75	2.1009%	100.40	
IBRD-II (For add cap from DOCO to 31.3.2006)	559.34	44.49	514.85	537.10	2.1009%	11.28	
IBRD-II (For add cap during 2006-07)	677.13	53.86	623.27	650.20	2.1009%	13.66	
	7261.17	864.62	6396.55	6828.86		193.33	2.8311%
2013-14							
Loan	Opening	Repayment	Closing	Average	Rate of interest	Interest	Weighted Average Rate of Interest
Bond-XIII - Option-I	179.41	35.88	143.53	161.47	8.6300%	13.93	
Bond-XV	352.50	58.75	293.75	323.13	6.6800%	21.58	
IBRD-I	145.71	145.71	0.00	72.86	8.6800%	6.32	
IBRD-II	4580.81	421.35	4159.46	4370.14	1.8170%	79.41	
IBRD-II (For add cap from DOCO to 31.3.2006)	514.85	47.36	467.49	491.17	1.8170%	8.92	
IBRD-II (For add cap during 2006-07)	623.27	57.33	565.94	594.61	1.8170%	10.80	
Total Loan	6396.55	766.38	5630.17	6013.36		140.98	2.3444%



Annexure-4

(₹ in lakh)

Wt. Average Rate of Interest (for 2014-19)				
Loan	2014-19			
	Net Loan o/s as on 1.4.2014	Rate of interest as on 1.4.2014	Interest	Weighted Average Rate of Interest
Bond-XIII -Option-I	143.52	8.6300%	12.39	
Bond-XV	293.75	6.6800%	19.62	
IBRD-I	0.00	0.0000%	0.00	
IBRD-II	4159.46	1.7500%	72.79	
IBRD-II (For add cap from DOCO to 31.3.2006)	467.49	1.7500%	8.18	
IBRD-II (For add cap during 2006-07)	565.94	1.7500%	9.90	
Total Loan	5630.16		122.88	2.1826%

