

2. Shri. R.R. Patel, PGCIL
3. Shri M.M. Mondal, PGCIL
4. Shri. H.M. Sharma, ASEB
5. Shri. R.B. Sharma, Advocate, BSEB & JSEB

ORDER

This petition has been filed seeking approval for determination for transmission tariff for the Transmission System associated with Kathalguri Gas based Combined Cycle Project in North Eastern Region and Eastern Region (hereinafter referred to as "transmission system") for the period from 1.4.2009 to 31.3.2014, based on the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations 2009, (hereinafter referred to as "the 2009 regulations"). The petitioner has sought the following additional reliefs:-

(a) Approve the additional capital expenditure/ decapitalisation during 2010-11, 2012-13 and 2013-14;

(b) In case of the assets being combined to calculate the transmission charges, allow the petitioner to recover full depreciation (90% of the Gross Block) of the assets during its useful life (25 years for sub-station and 35 years for Transmission Lines) reckoning from its actual date of commercial operation. Permit the petitioner to treat the recovery of depreciation after achieving the useful life by an asset (to be reckoned from the actual date of commercial operation);

(c) Approve the reimbursement of expenditure by the beneficiaries towards petition filing fee and publishing of notices in newspapers in



terms of Regulation 42 of 2009 regulations and other expenditure (if any) in relation to the filing of petition;

(d) Allow grossing up of base rate of return with the applicable tax rate as per the Finance Act for the relevant year and direct settlement of tax liability between the generating company/ transmission licensee and the beneficiaries/ long term transmission customers on year to year basis;

(e) Allow the petitioner to bill and adjust impact on interest on loan due to change in interest rate on account of floating rate of interest applicable during 2009-14 period, if any, from the respondents;

(f) Allow the petitioner to bill and recover service tax on transmission charges separately from the respondents, if at any time exemption from service tax is withdrawn and transmission is notified as a taxable service; and

(g) Allow the petitioner to bill and recover licensee fee separately from the respondents.

2. The actual date of commercial operation for Asset-I, Asset-II, Asset-III, Asset-IV and Asset-V of the above Transmission System are 1.8.1995, 1.4.1998, 1.2.2000, 1.4.2000 and 1.4.2000 respectively. Notional date of commercial operation for Asset-II & III is 1.2.2000.

3. The transmission tariff for Assets I, II and III of the transmission system for the tariff period 2004-09 was allowed by order dated 7.9.2009 in Petition



No.87/2006 and in the case of Assets IV and V the transmission tariff for the period 2004-09 was allowed by order dated 15.5.2009 in Petition No. 75/2008. Transmission tariff for the period 2009-14 for all the above mentioned five assets have been determined in the instant petition.

4. The petitioner has claimed the following transmission charges:-

(₹ in lakh)

Asset-I					
	2009-10	2010-11	2011-12	2012-13	2013-14
Depreciation	144.98	144.98	144.98	151.83	159.05
Interest on Loan	71.62	62.78	53.94	53.54	52.54
Return on equity	718.41	718.41	718.41	725.99	733.57
Interest on Working Capital	26.43	26.64	26.88	27.62	28.37
O & M Expenses	138.80	146.76	155.17	164.02	173.34
Total	1100.24	1099.57	1099.38	1123.00	1146.87

(₹ in lakh)

Combined Asset-II & III					
	2009-10	2010-11	2011-12	2012-13	2013-14
Depreciation	3210.76	3222.93	3235.09	1168.78	1181.57
Interest on Loan	683.40	487.78	295.28	160.89	105.42
Return on equity	4801.14	4813.22	4825.31	4829.22	4843.37
Interest on Working Capital	256.38	257.12	258.15	217.17	221.64
O & M Expenses	1502.32	1588.39	1679.31	1775.29	1876.58
Total	10454.00	10369.44	10293.14	8151.35	8228.58

(₹ in lakh)

Asset-IV					
	2009-10	2010-11	2011-12	2012-13	2013-14
Depreciation	1089.18	1089.18	1089.18	320.92	320.92
Interest on Loan	286.13	207.12	130.23	79.24	55.15
Return on equity	1232.51	1232.51	1232.51	1232.51	1232.51
Interest on Working Capital	71.65	71.00	70.44	54.47	55.13
O & M Expenses	345.83	365.65	386.59	408.68	431.97
Total	3025.30	2965.46	2908.95	2095.82	2095.68

(₹ in lakh)

Asset-V					
	2009-10	2010-11	2011-12	2012-13	2013-14
Depreciation	763.99	763.99	763.99	192.08	192.08
Interest on Loan	195.52	140.26	86.57	52.16	37.26
Return on equity	844.82	844.82	844.82	844.82	844.82
Interest on Working Capital	44.34	43.57	42.86	30.66	30.80
O & M Expenses	134.63	142.36	150.52	159.11	168.13
Total	1983.30	1935.00	1888.76	1278.83	1273.09

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

(₹ in lakh)

Asset-I					
	2009-10	2010-11	2011-12	2012-13	2013-14
Maintenance Spares	20.82	22.01	23.28	24.60	26.00
O & M expenses	11.57	12.23	12.93	13.67	14.45
Receivables	183.37	183.26	183.23	187.16	191.15
Total	215.76	217.50	219.44	225.43	231.60
Interest	26.43	26.64	26.88	27.62	28.37
Rate of Interest	12.25%	12.25%	12.25%	12.25%	12.25%

(₹ in lakh)

Combined Asset-II & III					
	2009-10	2010-11	2011-12	2012-13	2013-14
Maintenance Spares	225.35	238.26	251.90	266.29	281.49
O & M expenses	125.19	132.37	139.94	147.94	156.38
Receivables	1742.33	1728.24	1715.52	1358.56	1371.43
Total	2092.87	2098.87	2107.36	1772.79	1809.30
Interest	256.38	257.11	258.15	217.17	221.64
Rate of Interest	12.25%	12.25%	12.25%	12.25%	12.25%

(₹ in lakh)

Asset-IV					
	2009-10	2010-11	2011-12	2012-13	2013-14
Maintenance Spares	51.87	54.85	57.99	61.30	64.80
O & M expenses	28.82	30.47	32.22	34.06	36.00
Receivables	504.22	494.24	484.83	349.30	349.28
Total	584.91	579.56	575.04	444.66	450.08
Interest	71.65	71.00	70.44	54.47	55.13
Rate of Interest	12.25%	12.25%	12.25%	12.25%	12.25%

(₹ in lakh)

Asset-V					
	2009-10	2010-11	2011-12	2012-13	2013-14
Maintenance Spares	20.19	21.35	22.58	23.87	25.22
O & M expenses	11.22	11.86	12.54	13.26	14.01
Receivables	330.55	322.50	314.79	213.14	212.18
Total	361.96	355.71	349.91	250.27	251.41
Interest	44.34	43.57	42.86	30.66	30.80
Rate of Interest	12.25%	12.25%	12.25%	12.25%	12.25%

6. 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. Reply to the petition has been filed by Bihar State Electricity Board (BSEB), Respondent No.8 and Assam State Electricity Board (ASEB), Respondent No.1.



7. BSEB submitted, vide its affidavit dated 25.3.2011, that it is a beneficiary of only Assets IV and V and hence would limit its response to those assets. BSEB has submitted as under:-

(a) The petitioner's claim for grossing up the rate of return based on the tax rate of the respective years has been taken care by the Commission's direction, on 3.8.2010 in Petition No.17/2010, to make suitable amendments to the 2009 regulations to cater to the future changes in the tax rate;

(b) The petitioner should avail the benefit of the tax holiday as the date of commercial operation of the both Asset IV and V (1.2.2000) makes it eligible to claim tax holiday under Section 80-IA of the Income Tax Act, 1961;

(c) The petitioner should bear the income tax and it should not pass over the income tax to its beneficiaries;

(d) The calculation of interest on working capital should be based on the short-term prime lending rate as per the 2009 regulations:

(e) That the petitioner's request for reimbursement of application filing fee and the expenses incurred on publication of notices may be dealt as per the Commission's order dated 11.9.2008 in Petition No.129/2005;

(f) The petitioner's request for allowing the licence fee to be recovered separately from the beneficiaries should be rejected as licence fee forms part of the O&M expenses and as there is no provision for recovery of licence fee in the 2009 regulation; and

(g) The petitioner's request for reimbursement of levies, duties, cess or any other statutory tax, etc. should be rejected as there is no provision in the 2009 regulations.

8. The petitioner, vide its rejoinder dated 18.5.2011 has submitted the following clarifications to the issues raised by BSEB in its reply:-

(a) The petitioner has claimed ROE @17.481% as per the 2009 regulations based on the MAT rate applicable for the financial year 2008-09;

(b) The petitioner has filed income tax return upto the financial year 2008-09 but has not exercised the option of tax holiday as per section 80 IA of the Income Tax Act as there was no taxable profit as per Income Tax Act. In the absence of any taxable profit, MAT has been paid as per the provisions of Income Tax Act. That it has claimed the benefit of tax holiday in the IT return for the financial year 2009-10 and this has already been informed to BSEB vide letter dated 15.10.2010 in Petition No.103/2010. The ROE for 2004-09 was on post-tax basis whereas for 2009-14 it is on pre-tax basis. While switching over to the system of pre-tax return on equity, the Commission has restricted the burden of income tax to be paid by the beneficiaries only to the extent of ROE and allowed the benefit of tax holiday under section 80 IA to be retained by the utilities. That the benefit of tax holiday under section 80 IA could be passed on only under the post-tax system of ROE that was applicable in the tariff block 2004-09;

- (c) That the State Bank of India Advance Rate of 12.25% claimed is the short term prime lending rate of State Bank of India as on 1.4.2009;
- (d) The request for reimbursement of expenditure towards petition filing fee and publishing of notices in newspapers has been claimed in accordance with Regulation 42 of 2009 regulations;
- (e) The licence fee is not covered in the actual O&M expenses and it is an extra burden on the petitioner and hence it may be reimbursed;
- (f) The compensation allowed in the 2009 regulations on account of employee cost is insufficient to meet the actual expenditure due to wage revision. The petitioner be allowed to approach the Commission with actual manpower costs on account of wage revision during the tariff block 2009-14 for claiming the tariff; and
- (g) That levies, duties, cess or any other statutory tax is not claimed in the instant petition. They are not included in the O&M expenses and if they are imposed in future they are reimbursable to the petitioner.

9. ASEB has raised the following objections, vide its affidavit dated 6.6.2011:-

- (a) The petitioner's claim for additional capital expenditure is not admissible under the regulations and it may be considered only after prudence check as provided in Regulation 9(2) of the 2009 regulations. Usually, there has been cost over-run due to time over-run and therefore additional capital expenditure should be considered in terms of approved investment and timeline;
- (b) The petitioner's claim for additional capital expenditure in 2012-13 for Asset I and in 2012-14 for Asset II and III for tower strengthening on



account of change in wind zone on the basis of Expert Committee Report is vague. The Committee had not examined the changes in wind zone in the North Eastern Region and hence the proposed additional capital expenditure should not be admitted;

(c) Only the pile foundation of LOC 529 was discussed and approved in the 6th NERPC meeting on 8.8.2008 and the issue of LOC 194 was not deliberated and hence the Commission may examine the need and the impact of the LOC 194 and admit it after prudence;

(d) Any error or change in the design criteria is the responsibility of the builder of the transmission system and they should be replaced free of cost. Changes to the transmission lines may be covered under the O&M expenses;

(e) The Committee had not examined the changes in the wind zone of NER and the report is based on the 10 tower failures in other regions. The inference drawn from case studies of other regions cannot be adopted for NER as the weather or wind zone of NER is different from other regions;

(f) The petitioner's request to bill and recover service tax on transmission charges from the beneficiaries in case of withdrawal of service tax on transmission service may be rejected, as at present the transmission service is exempted of service tax; and

(g) To allow realization of finally approved transmission tariff in easy installments and subject to condition that the same is admitted as a pass through item by the State Commission.

10. The petitioner, vide its rejoinder dated 30.8.2011 has submitted the following clarifications to the issues raised by ASEB in its reply:-

(a) A study relating to a line designed for medium wind zone as per old IS-875 and now falling in wind zone-3 as per IS-875: 1987 indicated that strengthening of suspension towers is required due to increased wind loads. 400 kV D/C Kathalguri- Mariani- Misa and 400 kV D/C Misa- Balipara lines which were designed as per IS 802-1977 in Medium wind zone and as per IS 802-1995 would fall in wind zone-5 and are much more critical than the line considered for study. Moreover, there have been three incidents of tower collapse on 400 kV D/C Kathalguri- Mariani line and two incidents of tower collapse on 400 kV D/C Misa- Balipara line of NER. Accordingly, strengthening of towers is required for the following reasons:-

- i) Change in wind zone as per design criteria in IS:802 – 1977 from medium wind zone to wind zone -5 as per design criteria in IS:802 – 1995.
- ii) There were 55 instances of failure of 400 kV suspension towers in different transmission lines of Powergrid with design criteria as per IS: 802 – 1977.
- iii) 400 kV transmission lines transfer bulk amount of power for long distances and outage of these lines due to collapse of towers would be of longer duration and may also affect the grid stability.
- iv) Tower strengthening of transmission lines would improve the stability/reliability of the vulnerable lines resulting to enhance the stability of the grid.

(b) The service tax is reimbursable by the beneficiaries, if the exemption of service tax for transmission service is withdrawn in future.

11. The issues relating to Tax Holiday and payment of Income Tax have been decided in our order dated 8.4.2010 in Petition No.225/2010. The issues pertaining to MAT ratio and the interest rate on SBI PLR have been settled after second amendment to the 2009 regulations. As regards the service tax, the Commission has already decided in its order dated 9.3.2010 in Petition No.62/2009, that consequent to the withdrawal of service tax by the Government of India for transmission services, the prayer of the petitioner for exemption of service tax has been infructuous. Other issues have been dealt with in relevant portions of the order.

12. Having heard the representatives of the parties and perused the material on records, we proceed to dispose of the petition.

CAPITAL COST

13. Proviso of Regulation 7(2) of the 2009 regulations provides as under:-

“Provided also that in case of the existing projects, the capital cost admitted by the Commission prior to 1.4.2009 duly trued up by excluding un-discharged liability, if any, as on 1.4.2009 and the additional capital expenditure projected to be incurred for the respective year of the tariff period 2009-14, as may be admitted by the Commission, shall form the basis for determination of tariff.”

14. The admitted cost as on 31.3.2009 as per the Commission's orders in Petition Nos. 87/2006 and 75/2008 and the projected additional



capitalization/de-capitalisation (as per the petitioner's submission) are as under:-

(₹ in lakh)						
Name of Asset	Admitted Cost as on 31.3.2009	Add-Cap 2010-11	Decap- 2010-11	Add-Cap 2012-13	Add-Cap 2013-14	Estimated completion cost
Asset-I	8219.37	-	-	289.10	-	8508.47
Asset-II	18171.56	-	-	-	390.54	18562.10
Asset-III	43991.94	467.29	-6.57	149.19	-	44601.85
Asset-IV	21109.68	-	-	-	-	21109.68
Asset-V	14469.44	-	-	-	-	14469.44
Total	105961.99	467.29	-6.57	438.29	390.54	107251.54

15. In the instant petition, Asset II and Asset III have been clubbed as Combined Asset II & III for the purposes of tariff calculation as per the Commission's letter Ref. No. C-7/189/2040/2009-CERC dated 23.10.2009, wherein the procedure for combining of assets for the purpose of tariff determination for 2009-14 is prescribed. Accordingly, capital expenditure of ₹ 8219.37 lakh for Asset-I, ₹ 62163.50 lakh for Combined Asset-II & III, ₹ 21109.68 lakh for Asset-IV and ₹ 14469.44 lakh for Asset-V as on 1.4.2009 has been considered for tariff determination for 2009-14 period.

ADDITIONAL CAPITAL EXPENDITURE

16. With regard to additional capital expenditure, Regulation 9(2) of the 2009 regulations provides as under:-

"The capital expenditure incurred on the following counts after the cut-off date may, in its discretion, be admitted by the Commission, subject to prudence check:

(i) Liabilities to meet award of arbitration or for compliance of the order or decree of a court;

(ii) Change in law;

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

(iv) In case of hydro generating stations, any expenditure which has become necessary on account of damage caused by natural calamities (but not due to flooding of power house attributable to the negligence of the generating company) including due to geological reasons after adjusting for proceeds from any insurance

scheme, and expenditure incurred due to any additional work which has become necessary for successful and efficient plant operation; and

(v) In case of transmission system any additional expenditure on items such as relays, control and instrumentation, computer system, power line carrier communication, DC batteries, replacement of switchyard equipment due to increase of fault level, emergency restoration system, insulators cleaning infrastructure, replacement of damaged equipment not covered by insurance and any other expenditure which has become necessary for successful and efficient operation of transmission system:

Provided that in respect sub-clauses (iv) and (v) above, any expenditure on acquiring the minor items or the assets like tools and tackles, furniture, air-conditioners, voltage stabilizers, refrigerators, coolers, fans, washing machines, heat convectors, mattresses, carpets etc. brought after the cut-off date shall not be considered for additional capitalization for determination of tariff w.e.f. 1.4.2009.”

17. The petitioner has claimed projected additional capital expenditure amounting to ₹ 289.10 lakh for the period 2012-13 for the Asset I and ₹ 467.29 lakh, ₹ 149.19 lakh and ₹ 390.54 lakh for the period 2010-11, 2012-13 and 2013-14 respectively for Combined Asset II & III in accordance with the Regulation 9(2)(v) of 2009 regulations. The category wise break up of additional capital expenditure claimed are as under:-

(₹ in lakh)				
Name of the Asset	Year	Nature	Amount (₹ in lakh)	Details of Expenditure
Asset-I	2009-10	-	NIL	-
	2010-11	-	-	-
	2011-12	-		
	2012-13	TL	289.10	For tower strengthening which has become necessary due to change in the wind zone
	2013-14	TL	-	
Combined Asset-II & III	2009-10	-		
	2010-11	TL	467.29	Pile foundation (2 nos.)
		TL	-6.57	Decapitalisation of towers
	2011-12	-		
	2012-13	-	149.19	For tower strengthening which has become necessary due to change in wind zone
2013-14	TL	390.54	-do-	

18. The petitioner has claimed additional capital expenditure on account of tower strengthening and additional capital expenditure and de-capitalisation on account of pile foundation. It has been submitted that the 400 kV D/C

Kathalguri-Mariani-Misa and 400 kV D/C Misa-Balipara lines were designed as per IS: 802-1977 in medium zone and as per IS: 802-1995, these lines fall in wind zone-5. The Committee constituted by CEA recommended for providing hip bracing up to cross arm in order to increase the strength of suspension towers in some transmission lines with design as per IS: 802-1977, in which tower failures occurred. It has also been submitted that there have been 3 instances of tower failures in 400 kV D/C Kathalguri- Mariani-Misa transmission line in which 6 numbers of towers collapsed. Similarly, in 400 kV D/C Misa- Balipara transmission line there have been 6 tower failures in 2 instances of tower collapse. Details of the towers collapses are as under:-

S. No.	Name of line	Date	No. of towers collapsed
1	400 kV D/C Kathalguri- Mariani	26.01.07	1
2	400 kV D/C Kathalguri- Mariani	24.01.06	1
3	400 kV D/C Kathalguri- Mariani	31.03.05	4
4	400 kV D/C Misa- Balipara	30.03.10	2
5	400 kV D/C Misa- Balipara	14.04.04	4

19. The petitioner submitted that the proposed tower strengthening of 765 Nos. suspension towers in 400 kV D/C Kathalguri- Mariani transmission line would require approximately 820 MT galvanized steel tower members. The proposed tower strengthening of 200 Nos. suspension towers in 400 kV D/C Misa- Balipara transmission line would require approximately 180 MT galvanized steel tower members. It was further submitted that rates / cost has been derived based on the letter of award placed in March, 2010. The petitioner also submitted, vide affidavit dated 23.2.2011, that the committee of experts in the draft report on failure of towers during January to July 2010 had recommended for tower strengthening in 400 kV D/C Misa- Balipara transmission line.

20. Analysis of the effective wind load on the towers according to the design criteria in IS 802:1995 and IS 802:1977 has been carried out by the Commission. It has been observed that the latest code IS 802:1995 considers the ‘Drag Coefficient’ and ‘Gust Response Factor’ while calculating the forces on the towers, conductors and insulators whereas, the earlier code IS 802:1977 considered factor of safety. Based on these two additional factors, the forces calculated on towers, etc., as per IS 802:1995 are more than those calculated as per IS 802:1977.

21. In this regard, we reproduce hereunder the sample calculation for Terrain Category 2:-

Design Wind Pressure, P_d is given in the IS 802:1995 for each of the six wind zones. The wind load on tower body, F_{wt} , as per the IS 802:1995, is calculated by the following formula:-

$$\text{Wind load on tower, } F_{wt} = P_d * C_{dt} * A_o * G_T$$

Where C_{dt} is the Drag Coefficient and the value of C_{dt} ranges from 2 to 3.6 depending upon the solidity ratio of the tower.

G_T is the Gust Response Factor and value of G_T ranges from 1.7 to 3.8 depending upon the height of the panel and terrain category and A_o is the net surface area of the legs, bracings

For terrain category 2 and average height of tower 20 metre, value of G_T is 2.2, approximate value of C_{dt} for lattice type of structures is 3 and P_d for Reliability Level 1 for Terrain Category 2 for Wind Zone 5 is 793 Newton per square metre. [All these figures are available in various Tables in IS 802:1995]

$$F_{wt} = 2.2 * 3 * P_d * A_o = (6.6 * 793 * A_o) = 5233.8 A_o \text{ Newton}$$

[As per the IS 802:1995]

Wind load on tower as per as per the IS 802:1977 is calculated based on the Factor of Safety.

$$\begin{aligned} \text{Wind load on tower} &= (\text{Factor of Safety}) * \text{Wind Pressure} * A_o \\ &= (1.5 * 1910 * A_o) \text{ N} = 2865 A_o \text{ Newton} \end{aligned}$$

[As per the IS 802:1977]

Where 1910 N/m^2 is the wind pressure on towers for medium intensity of pressure upto the 30 metre above Mean Retarding Surface and Factor of Safety is 1.5.

22. Thus, it is seen from the above calculations that wind load on towers as per IS 802:1995 is more than that as per the IS 802:1977. Accordingly, we are convinced about the justification for the projected additional capital expenditure for tower strengthening claimed by the petitioner. As regards cost of the galvanized steel, etc., we direct the petitioner to exercise due diligence on the cot aspect while awarding the contracts for execution of the works. In view of the foregoing discussions, we allow the petitioner's claim for additional capital expenditure on account of tower strengthening under 9(2)(v) of the 2009 regulations as it would lead to successful and efficient operation of the transmission system.

23. As regards the additional capital expenditure for pile foundation, the petitioner has submitted that the pile foundation at Loc No. 529 of Balipara-Bongaigaon Line was endangered due to change in the course of Pahumara River. The proposal for adoption of pile foundation was agreed by the constituents during 6th NERPC meeting held on 8.8.2008. Loc. No. 194 was endangered due to change in the course of Pagaldia River. The petitioner further submitted, vide affidavit dated 23.2.2011, that the construction of pile foundations have been completed in March 2010 and October 2010 at location 529 and 194, respectively. The final cost for the pile foundation at location 529 was ₹ 2,10,33,762 and at location no. 194 was ₹ 1,30,05,794.



24. ASEB in its reply has submitted that the issue of pile foundation at location no. 529 was discussed and approved in NERPC but the pile foundation at location no.194 was not deliberated in NERPC. The petitioner, vide affidavit dated 23.2.2011, submitted that at the time of erection of pile foundation at location no. 194 during 1994-95 the river was quite away and there was no threat. However, due to subsequent change in the course of the river in 2008 the tower foundation required strengthening. Various measures have been taken for the temporary protection of the tower but these measures were found to be ineffective and the tower was in danger. Therefore, as a permanent solution pile foundation was proposed to be constructed for this location.

25. The submission made by the petitioner for additional capital expenditure towards pile foundation at both the locations is justified and accordingly, an amount of ₹ 3,40,39,556 is allowed under 9(2)(v) of the 2009 regulations as it would lead to successful and efficient operation of transmission system. The petitioner has submitted, vide affidavit dated 3.5.2011 that an amount of ₹ 13,00,579 was recovered from the contractors for delay in execution of works for pile foundations at location no. 194. This amount has been adjusted in the additional capital expenditure allowed towards pile foundations.

DEBT- EQUITY RATIO

26. Regulation 12 of the 2009 regulations provides that-

*“12. **Debt-Equity Ratio.** (1) For a project declared under commercial operation on or after 1.4.2009, if the equity actually deployed is more than 30% of the capital cost, equity in excess of 30% shall be treated as normative loan:*



Provided that where equity actually deployed is less than 30% of the capital cost, the actual equity shall be considered for determination of tariff:

Provided further that the equity invested in foreign currency shall be designated in Indian rupees on the date of each investment.

Explanation.- The premium, if any, raised by the generating company or the transmission licensee, as the case may be, while issuing share capital and investment of internal resources created out of its free reserve, for the funding of the project, shall be reckoned as paid up capital for the purpose of computing return on equity, provided such premium amount and internal resources are actually utilised for meeting the capital expenditure of the generating station or the transmission system.

(2) In case of the generating station and the transmission system declared under commercial operation prior to 1.4.2009, debt-equity ratio allowed by the Commission for determination of tariff for the period ending 31.3.2009 shall be considered.

(3) Any expenditure incurred or projected to be incurred on or after 1.4.2009 as may be admitted by the Commission as additional capital expenditure for determination of tariff, and renovation and modernisation expenditure for life extension shall be serviced in the manner specified in clause (1) of this regulation."

27. Details of debt- equity ratio as on 31.3.2009 are given below:-

Asset I	Admitted as on 31.3.2009	
	Amount (₹ in lakh)	%
Debt	4109.69	50.00
Equity	4109.69	50.00
Total	8219.39	100.00
Combined Asset II & III	Admitted as on 31.3.2009	
	Amount (₹ in lakh)	%
Debt	34698.59	55.82
Equity	27464.91	44.18
Total	62163.50	100.00
Asset IV	Admitted as on 31.3.2009	
	Amount (₹ in lakh)	%
Debt	14059.09	66.60
Equity	7050.60	33.40
Total	21109.69	100.00
Asset V	Admitted as on 31.3.2009	
	Amount (₹ in lakh)	%
Debt	9636.67	66.60
Equity	4832.77	33.40
Total	14469.44	100.00

28. Details of debt-equity ratio considered for additional capital expenditure (referred to as "Add-Cap" below) are given as under:-

2012-13	Asset I Notional Add- Cap	
	Amount (₹ in lakh)	%
Debt	202.37	70.00
Equity	86.73	30.00
Total	289.10	100.00
Asset II & III		

Admitted as on 31.3.2009		
2010-11	Amount (₹ in lakh)	%
Debt	224.57	70.00
Equity	96.25	30.00
Total	320.82	100.00
2012-13	Amount (₹ in lakh)	%
Debt	104.43	70.00
Equity	44.76	30.00
Total	149.19	100.00
2013-14	Amount (₹ in lakh)	%
Debt	273.38	70.00
Equity	117.16	30.00
Total	390.54	100.00

29. Details of debt- equity ratio as on 31.3.2014 are given below:-

Asset I	Cost as on 31.3.2014	
	Amount (₹ in lakh)	%
Debt	4312.06	50.68
Equity	4196.42	49.32
Total	8508.48	100.00
Asset II & III	Cost as on 31.3.2014	
	Amount (₹ in lakh)	%
Debt	35300.97	56.01
Equity	27723.07	43.99
Total	63024.05	100.00
Asset IV	Cost as on 31.3.2014	
	Amount (₹ in lakh)	%
Debt	14059.09	66.60
Equity	7050.60	33.40
Total	21109.69	100.00
Asset V	Cost as on 31.3.2014	
	Amount (₹ in lakh)	%
Debt	9636.67	66.60
Equity	4832.77	33.40
Total	14469.44	100.00

RETURN ON EQUITY

30. Regulation 15 of the 2009 regulations provides that:-

“15. (1) Return on equity shall be computed in rupee terms, on the equity base determined in accordance with regulation 12.

(2) Return on equity shall be computed on pre-tax basis at the base rate of 15.5% to be grossed up as per clause (3) of this regulation:

*Provided that in case of projects commissioned on or after 1st April, 2009, an additional return of 0.5% shall be allowed if such projects are completed within the timeline specified in **Appendix-II**:*

Provided further that the additional return of 0.5% shall not be admissible if the project is not completed within the timeline specified above for reasons whatsoever.

“(3) The rate of return on equity shall be computed by grossing up the base rate with the Minimum Alternate/Corporate Income Tax Rate for the year 2008-09, as per the



Income Tax Act, 1961, as applicable to the concerned generating company or the transmission licensee, as the case may be.

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

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

Where "t" is the applicable tax rate in accordance with clause (3) of this regulation.

(5) The generating company or the transmission licensee as the case may be, shall recover the shortfall or refund the excess Annual Fixed charge on account of Return on Equity due to change in applicable Minimum Alternate/ Corporate Income Tax Rate as per the Income Tax Act, 1961 (as amended from time to time) of the respective financial year directly without making any application before the Commission.

Provided further that Annual Fixed charge with respect to the tax rate applicable to the generating company or the transmission licensee, as the case may be, in line with the provisions of the relevant Finance Acts of the respective financial year during the tariff period shall be trued up in accordance with Regulation 6 of these regulations"

31. In this order, Return on Equity has been calculated as per Regulation 15 of the 2009 regulations with pre-tax ROE of 17.481%.

32. Petitioner's prayer to allow grossing up the base rate of ROE based on the tax rates viz., MAT, surcharge, any other cess, charges, levies etc., as per the relevant Finance Act, shall be settled in accordance with the provisions of Regulation 15 of 2009 regulations as amended by Central Electricity Regulatory Commission (Terms and Conditions of Tariff) (Second Amendment) Regulations, 2011.

33. Details of return on equity calculated are overleaf:-

(₹ in lakh)					
Asset I					
	2009-10	2010-11	2011-12	2012-13	2013-14
Opening Equity	4109.69	4109.69	4109.69	4109.69	4196.42
Addition due to additional capital expenditure	0.00	0.00	0.00	86.73	0.00
Closing Equity	4109.69	4109.69	4109.69	4196.42	4196.42
Average Equity	4109.69	4109.69	4109.69	4153.05	4196.42
Return on Equity (Base Rate)	15.50%	15.50%	15.50%	15.50%	15.50%
Tax rate for the year 2008-09	11.330%	11.330%	11.330%	11.330%	11.330%
Rate of Return on Equity (Pre Tax)	17.481%	17.481%	17.481%	17.481%	17.481%
Return on Equity (Pre Tax)	718.41	718.41	718.41	725.99	733.58



(₹ in lakh)

Combined Assets II & III					
	2009-10	2010-11	2011-12	2012-13	2013-14
Opening Equity	27464.91	27464.91	27561.16	27561.16	27605.91
Addition due to additional capital expenditure	0.00	96.25	0.00	44.76	117.16
Closing Equity	27464.91	27561.16	27561.16	27605.91	27723.07
Average Equity	27464.91	27513.03	27561.16	27583.53	27664.49
Return on Equity (Base Rate)	15.50%	15.50%	15.50%	15.50%	15.50%
Tax rate for the year 2008-09	11.330%	11.330%	11.330%	11.330%	11.330%
Rate of Return on Equity (Pre Tax)	17.481%	17.481%	17.481%	17.481%	17.481%
Return on Equity (Pre Tax)	4801.14	4809.55	4817.97	4821.88	4836.03

(₹ in lakh)

Assets IV					
	2009-10	2010-11	2011-12	2012-13	2013-14
Opening Equity	7050.59	7050.59	7050.59	7050.59	7050.59
Addition due to additional capital expenditure	0.00	0.00	0.00	0.00	0.00
Closing Equity	7050.59	7050.59	7050.59	7050.59	7050.59
Average Equity	7050.59	7050.59	7050.59	7050.59	7050.59
Return on Equity (Base Rate)	15.50%	15.50%	15.50%	15.50%	15.50%
Tax rate for the year 2008-09	11.330%	11.330%	11.330%	11.330%	11.330%
Rate of Return on Equity (Pre Tax)	17.481%	17.481%	17.481%	17.481%	17.481%
Return on Equity (Pre Tax)	1232.51	1232.51	1232.51	1232.51	1232.51

(₹ in lakh)

Asset V					
	2009-10	2010-11	2011-12	2012-13	2013-14
Opening Equity	4832.77	4832.77	4832.77	4832.77	4832.77
Addition due to additional capital expenditure	0.00	0.00	0.00	0.00	0.00
Closing Equity	4832.77	4832.77	4832.77	4832.77	4832.77
Average Equity	4832.77	4832.77	4832.77	4832.77	4832.77
Return on Equity (Base Rate)	15.50%	15.50%	15.50%	15.50%	15.50%
Tax rate for the year 2008-09	11.330%	11.330%	11.330%	11.330%	11.330%
Rate of Return on Equity (Pre Tax)	17.481%	17.481%	17.481%	17.481%	17.481%
Return on Equity (Pre Tax)	844.82	844.82	844.82	844.82	844.82

INTEREST ON LOAN

34. Regulation 16 of the 2009 regulations provides that-

"16. (1) The loans arrived at in the manner indicated in regulation 12 shall be considered as gross normative loan for calculation of interest on loan.

(2) The normative loan outstanding as on 1.4.2009 shall be worked out by deducting the cumulative repayment as admitted by the Commission up to 31.3.2009 from the gross normative loan.



(3) *The repayment for the year of the tariff period 2009-14 shall be deemed to be equal to the depreciation allowed for that year:*

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

(5) *The rate of interest shall be the weighted average rate of interest calculated on the basis of the actual loan portfolio at the beginning of each year applicable to the project:*

Provided that if there is no actual loan for a particular year but normative loan is still outstanding, the last available weighted average rate of interest shall be considered: Provided further that if the generating station or the transmission system, as the case may be, does not have actual loan, then the weighted average rate of interest of the generating company or the transmission licensee as a whole shall be considered.

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

(7) *The generating company or the transmission licensee, as the case may be, shall make every effort to re-finance the loan as long as it results in net savings on interest and in that event the costs associated with such re-financing shall be borne by the beneficiaries and the net savings shall be shared between the beneficiaries and the generating company or the transmission licensee, as the case may be, in the ratio of 2:1.*

(8) *The changes to the terms and conditions of the loans shall be reflected from the date of such re-financing.*

(9) *In case of dispute, any of the parties may make an application in accordance with the Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999, as amended from time to time, including statutory re-enactment thereof for settlement of the dispute:*

Provided that the beneficiary or the transmission customers shall not withhold any payment on account of the interest claimed by the generating company or the transmission licensee during the pendency of any dispute arising out of re-financing of loan."

35. Interest on loan has been worked out as per Regulation 16 of 2009 regulations as detailed hereunder:-

(i) Details of net outstanding loan as on 31.3.2009, cumulative repayment up to 31.3.2009, repayment schedule for the loans, rate of interest etc. have been taken from order dated 7.9.2009 in Petition No 87/2006 for Asset –I, II, & III, and for Assets-IV and V from order dated 15.5.2009 in Petition No. 75/2008 for working out weighted average rate of interest.

(ii) Tariff is worked out considering normative loan and normative repayments. Depreciation allowed has been taken as normative repayment for the tariff period 2009-14.

(iii) Weighted average rate of interest on actual loan worked out as above has been applied on the notional average loan during the year to arrive at the interest on loan.

(iv) Proposed loans corresponding to the additional capital expenditure in 2012-13 against Asset I and for Combined Asset II & III for 2012-13 and 2013-14 have not been considered for calculating weighted average rate of interest.

(v) For loans with floating rates of interest, rates as on 1.4.2009 have been considered.

36. Detailed calculations of the weighted average rate of interest are annexed to this order as Annexure I to V.

36. Details of the calculation of interest on loan are given under:-

(₹ in lakh)

Asset I					
	2009-10	2010-11	2011-12	2012-13	2013-14
Gross Normative Loan	4109.69	4109.69	4109.69	4109.69	4312.06
Cumulative Repayment upto Previous Year	2863.06	3008.04	3153.01	3297.99	3449.81
Net Loan-Opening	1246.63	1101.65	956.67	811.70	862.25
Addition due to Additional Capitalisation	0.00	0.00	0.00	202.37	0.00
Repayment during the year	144.98	144.98	144.98	151.82	159.05
Net Loan-Closing	1101.65	956.67	811.70	862.25	703.20
Average Loan	1174.14	1029.16	884.19	836.97	782.72
Weighted Average Rate of Interest on Loan	6.1000%	6.1000%	6.1000%	6.1000%	6.1000%
Interest	71.62	62.78	53.94	51.06	47.75

(₹ in lakh)

Combined Asset II & III					
	2009-10	2010-11	2011-12	2012-13	2013-14
Gross Normative Loan	34698.59	34698.59	34923.16	34923.16	35027.60
Cumulative Repayment upto Previous Year	22210.38	25421.14	28640.37	31868.07	33031.11
Net Loan-Opening	12488.21	9277.45	6282.79	3055.09	1996.48
Addition due to Additional Capitalisation	0.00	224.57	0.00	104.43	273.38
Repayment during the year	3210.76	3219.23	3227.70	1163.04	1175.82
Net Loan-Closing	9277.45	6282.79	3055.09	1996.48	1094.04
Average Loan	10882.83	7780.12	4668.94	2525.79	1545.26
Weighted Average Rate of Interest on Loan	6.2796%	6.2230%	6.1427%	5.9522%	5.7803%
Interest	683.40	484.16	286.80	150.34	89.32

(₹ in lakh)

Asset IV					
	2009-10	2010-11	2011-12	2012-13	2013-14
Gross Normative Loan	14059.09	14059.09	14059.09	14059.09	14059.09
Cumulative Repayment upto Previous Year	9210.23	10299.41	11388.59	12477.77	12798.69
Net Loan-Opening	4848.87	3759.68	2670.50	1581.32	1260.40
Addition due to Additional Capitalisation	0.00	0.00	0.00	0.00	0.00
Repayment during the year	1089.18	1089.18	1089.18	320.92	320.92
Net Loan-Closing	3759.68	2670.50	1581.32	1260.40	939.48
Average Loan	4304.28	3215.09	2125.91	1420.86	1099.94
Weighted Average Rate of Interest on Loan	6.6475%	6.4419%	6.1257%	5.5765%	5.0139%
Interest	286.13	207.11	130.23	79.23	55.15

(₹ in lakh)

Asset V					
	2009-10	2010-11	2011-12	2012-13	2013-14
Gross Normative Loan	9636.67	9636.67	9636.67	9636.67	9636.67
Cumulative Repayment upto Previous Year	6313.41	7077.40	7841.38	8605.37	8797.45
Net Loan-Opening	3323.26	2559.28	1795.29	1031.30	839.22
Addition due to Additional Capitalisation	0.00	0.00	0.00	0.00	0.00
Repayment during the year	763.99	763.99	763.99	192.08	192.08
Net Loan-Closing	2559.28	1795.29	1031.30	839.22	647.15
Average Loan	2941.27	2177.28	1413.30	935.26	743.19
Weighted Average Rate of Interest on Loan	6.6477%	6.4422%	6.1260%	5.5768%	5.0142%
Interest	195.53	140.26	86.58	52.16	37.27



DEPRECIATION

38. Regulation 17 of the 2009 regulations provides for computation of depreciation in the following manner, namely:-

“17. (1) The value base for the purpose of depreciation shall be the capital cost of the asset admitted by the Commission.

(2) The salvage value of the asset shall be considered as 10% and depreciation shall be allowed up to maximum of 90% of the capital cost of the asset.

Provided that in case of hydro generating stations, the salvage value shall be as provided in the agreement signed by the developers with the State Government for creation of the site:

Provided further that the capital cost of the assets of the hydro generating station for the purpose of computation of depreciable value shall correspond to the percentage of sale of electricity under long-term power purchase agreement at regulated tariff.

(3) Land other than the land held under lease and the land for reservoir in case of hydro generating station shall not be a depreciable asset and its cost shall be excluded from the capital cost while computing depreciable value of the asset.

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

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

(5) In case of the existing projects, the balance depreciable value as on 1.4.2009 shall be worked out by deducting the cumulative depreciation as admitted by the Commission up to 31.3.2009 from the gross depreciable value of the assets.

(6) Depreciation shall be chargeable from the first year of commercial operation. In case of commercial operation of the asset for part of the year, depreciation shall be charged on pro rata basis.”

39. For Asset-I, the remaining depreciable value was spread over the balance useful life of the asset in Petition No. 87/2006 and the same has been considered in the instant petition. Combined Asset II & III (notional date of commercial operation, 1.2.2000) and Asset IV, Asset V (date of commercial operation, 1.4.2000) completes 12 years during 2009-14 period. For these assets, on completion of 12 years, depreciation has been calculated based on the remaining depreciable value to be recovered in the remaining life of the asset.

40. Details of the depreciation worked out are as under:-

(₹ in lakh)

Asset I					
	2009-10	2010-11	2011-12	2012-13	2013-14
Opening Gross Block	8219.37	8219.37	8219.37	8219.37	8508.47
Addition due to Projected Additional Capitalisation	0.00	0.00	0.00	289.10	0.00
Closing Gross Block	8219.37	8219.37	8219.37	8508.47	8508.47
Average Gross Block	8219.37	8219.37	8219.37	8363.92	8508.47
Rate of Depreciation	5.2839%	5.2839%	5.2839%	5.2839%	5.2838%
Depreciable Value	7397.43	7397.43	7397.43	7527.53	7657.62
Elapsed Life (Beginning of the year)	13	14	15	16	17
Balance Useful life of the asset	22	21	20	19	18
Remaining Depreciable Value	3189.46	3044.49	2899.51	2884.63	2862.90
Depreciation	144.98	144.98	144.98	151.82	159.05

(₹ in lakh)

Combined Asset II & III					
	2009-10	2010-11	2011-12	2012-13	2013-14
Opening Gross Block	62163.50	62163.50	62484.32	62484.32	62633.51
Addition due to Projected Additional Capitalisation	0.00	320.82	0.00	149.19	390.54
Closing Gross Block	62163.50	62484.32	62484.32	62633.51	63024.05
Average Gross Block	62163.50	62323.91	62484.32	62558.91	62828.78
Rate of Depreciation	5.1650%	5.1653%	5.1656%	5.1658%	5.1662%
Depreciable Value	55900.56	56044.93	56189.29	56256.43	56499.31
Elapsed Life (Beginning of the year)	9	10	11	12	13
Balance Useful life of the asset	23	22	21	20	19
Remaining Depreciable Value	32560.53	29496.23	26421.37	23260.81	22340.65
Depreciation	3210.76	3219.23	3227.70	1163.04	1175.82

(₹ in lakh)

Asset IV					
	2009-10	2010-11	2011-12	2012-13	2013-14
Opening Gross Block	21109.69	21109.69	21109.69	21109.69	21109.69
Addition due to Projected Additional Capitalisation	0.00	0.00	0.00	0.00	0.00
Closing Gross Block	21109.69	21109.69	21109.69	21109.69	21109.69
Average Gross Block	21109.69	21109.69	21109.69	21109.69	21109.69
Rate of Depreciation	5.1596%	5.1596%	5.1596%	5.1596%	5.1596%
Depreciable Value	18896.16	18896.16	18896.16	18896.16	18896.16
Elapsed Life (Beginning of the year)	9	10	11	12	13
Balance Useful life of the asset	23	22	21	20	19
Remaining Depreciable Value	9685.94	8596.75	7507.57	6418.39	6097.47
Depreciation	1089.18	1089.18	1089.18	320.92	320.92



(₹ in lakh)

Asset V					
	2009-10	2010-11	2011-12	2012-13	2013-14
Opening Gross Block	14469.44	14469.44	14469.44	14469.44	14469.44
Addition due to Projected Additional Capitalisation	0.00	0.00	0.00	0.00	0.00
Closing Gross Block	14469.44	14469.44	14469.44	14469.44	14469.44
Average Gross Block	14469.44	14469.44	14469.44	14469.44	14469.44
Rate of Depreciation	5.2800%	5.2800%	5.2800%	5.2800%	5.2800%
Depreciable Value	13022.50	13022.50	13022.50	13022.50	13022.50
Elapsed Life (Beginning of the year)	9	10	11	12	13
Balance Useful life of the asset	26	25	24	23	22
Remaining Depreciable Value	6709.74	5945.76	5181.77	4417.78	4225.71
Depreciation	763.99	763.99	763.99	192.08	192.08

OPERATION & MAINTENANCE EXPENSES

41. Clause (g) of Regulation 19 of the 2009 regulations prescribes the norms for operation and maintenance expenses based on the type of sub-station and line. Norms prescribed in respect of the elements covered in the instant petition are as under:-

Element	2009-10	2010-11	2011-12	2012-13	2013-14
400 kV D/C twin conductor, T/line (₹ Lakh/ Kms.)	0.627	0.663	0.701	0.741	0.783
220 kV S/C single conductor, T/line (₹ Lakh/ Kms.)	0.179	0.189	0.200	0.212	0.224
400 kV bay (₹ Lakh/ bay)	52.40	55.40	58.57	61.92	65.46
220 kV bay (₹ Lakh/ bay)	36.68	38.78	41.00	43.34	45.82
132 kV & below bay (₹ Lakh/bay.)	26.20	27.70	29.28	30.96	32.73

42. As per the existing norms the allowable O&M expenses for the assets covered in the instant petition are as follows:-

(₹ in lakh)					
Assets	2009-10	2010-11	2011-12	2012-13	2013-14
Asset-I:					
162.864 Kms 400 kV D/C twin conductor, T/line	102.12	107.98	114.17	120.68	127.52
1 no. 220 kV bay	36.68	38.78	41.00	43.34	45.82
Total O&M for Asset-I	138.80	146.76	155.17	164.02	173.34
Asset-II & III					
605.128 (95.407+289.721+220.0) Kms 400 kV D/C twin conductor	379.42	401.20	424.19	448.40	473.82



T/Line					
8.623 Kms. 220 kV S/C single conductor T/Line	1.54	1.63	1.72	1.83	1.93
15 Nos. 400 kV bays	786.00	831.00	878.55	928.80	981.90
7 Nos. 220 kV bays	256.76	278.46	287.00	303.38	320.74
3 Nos. 33 kV bays	78.60	83.10	87.84	92.88	98.19
Total O&M for Assets-II & III	1502.32	1588.39	1679.31	1775.29	1876.58
Asset-IV:					
217.275 Kms. 400 kV D/C twin conductor T/Line	136.23	144.05	152.31	161.00	170.13
4 Nos. 400 kV bays	209.60	221.60	234.28	247.28	261.84
Total O&M for Asset-IV	345.83	365.65	386.59	408.68	431.97
Asset-V:					
214.725 Kms. 400 kV D/C twin conductor T/Line	134.63	142.36	150.52	159.11	168.13
Total O&M for Asset-V	134.63	142.36	150.52	159.11	168.13

43. The petitioner has submitted that O&M expenditure for the year 2009-14 had been arrived at on the basis of normalized actual O&M expenses during the period 2003-04 to 2007-08. The wage hike of 50% on account of pay revision of the employees of public sector undertaking has also been considered while calculating the O&M charges for the tariff period 2009-14. The petitioner has further submitted that it would approach the commission for suitable revision in the norms for O&M expenditure in case the impact of wage hike with effect from 1.1.2007 is more than 50%. It is clarified that, if any, such application is filed in future, it will be dealt with in accordance with law.

INTEREST ON WORKING CAPITAL

44. As per the 2009 regulations the components of the working capital and the interest thereon are discussed hereunder:-

- (i) **Receivables** As per Regulation 18(1) (c) (i) of the 2009 regulations, receivables will be equivalent to two months of fixed cost. The petitioner has claimed the receivables on the basis of 2 months

transmission charges claimed in the petition. In the tariff being allowed, receivables have been worked out on the basis of 2 months transmission charges.

(ii) Maintenance spares Regulation 18(1)(c)(ii) of the 2009 regulations provides for maintenance spares @ 15% per annum of the O & M expenses from 1.4.2009. The value of maintenance spares has accordingly been worked out.

(iii) O & M expenses Regulation 18(1) (c) (iii) of the 2009 regulations provides for operation and maintenance expenses for one month as a component of working capital. The petitioner has claimed O&M expenses for 1 month of the respective year as claimed in the petition. This has been considered in the working capital.

(iv) Rate of interest on working capital The petitioner's request to bill and adjust impact on interest on loan due to change in interest rate on account of floating rate of interest has been taken care by the second amendment to the 2009 regulations notified in June 2011. According to the amended Regulation 18(3) of the 2009 regulations, rate of interest on working capital shall be on normative basis and shall be equal to the short-term Prime Lending Rate of State Bank of India as on 1.4.2009 or on 1st April of the year in which the project or part thereof (as the case may be) is declared under commercial operation, whichever is later. The interest on working capital is payable on normative basis notwithstanding that the transmission licensee has not taken working capital loan from any outside agency. The petitioner has claimed interest on working

capital @ 12.25% based on SBI PLR as on 1.4.2009, which is in accordance with the 2009 regulations and has been allowed.

45. Necessary computations in support of interest on working capital are appended herein below:-

(₹ in lakh)

Asset I					
	2009-10	2010-11	2011-12	2012-13	2013-14
Maintenance Spares	20.82	22.01	23.28	24.60	26.00
O & M expenses	11.57	12.23	12.93	13.67	14.45
Receivables	183.37	183.26	183.23	186.74	190.33
Total	215.76	217.51	219.44	225.01	230.78
Rate of Interest	12.25%	12.25%	12.25%	12.25%	12.25%
Interest	26.43	26.64	26.88	27.56	28.27

(₹ in lakh)

Combined Asset II & III					
	2009-10	2010-11	2011-12	2012-13	2013-14
Maintenance Spares	225.35	238.26	251.90	266.29	281.49
O & M expenses	125.19	132.37	139.94	147.94	156.38
Receivables	1742.33	1726.37	1711.57	1354.54	1366.46
Total	2,092.87	2,096.99	2,103.41	1,768.77	1,804.33
Rate of Interest	12.25%	12.25%	12.25%	12.25%	12.25%
Interest	256.38	256.88	257.67	216.67	221.03

(₹ in lakh)

Asset IV					
	2009-10	2010-11	2011-12	2012-13	2013-14
Maintenance Spares	51.87	54.85	57.99	61.30	64.80
O & M expenses	28.82	30.47	32.22	34.06	36.00
Receivables	504.22	494.24	484.83	349.30	349.28
Total	584.91	579.56	575.03	444.66	450.07
Rate of Interest	12.25%	12.25%	12.25%	12.25%	12.25%
Interest	71.65	71.00	70.44	54.47	55.13

(₹ in lakh)

Asset V					
	2009-10	2010-11	2011-12	2012-13	2013-14
Maintenance Spares	20.19	21.35	22.58	23.87	25.22
O & M expenses	11.22	11.86	12.54	13.26	14.01
Receivables	330.55	322.50	314.79	213.14	212.18
Total	361.96	355.72	349.92	250.26	251.41
Rate of Interest	12.25%	12.25%	12.25%	12.25%	12.25%
Interest	44.34	43.58	42.86	30.66	30.80

TRANSMISSION CHARGES

46. The transmission charges being allowed for the transmission lines are summarized below:-

(₹ in lakh)

Asset I					
	2009-10	2010-11	2011-12	2012-13	2013-14
Depreciation	144.98	144.98	144.98	151.82	159.05
Interest on Loan	71.62	62.78	53.94	51.06	47.75
Return on equity	718.41	718.41	718.41	725.99	733.58
Interest on Working Capital	26.43	26.64	26.88	27.56	28.27
O & M Expenses	138.80	146.76	155.17	164.02	173.34
Total	1100.24	1099.57	1099.38	1120.46	1141.98

(₹ in lakh)

Combined Asset II & III					
	2009-10	2010-11	2011-12	2012-13	2013-14
Depreciation	3210.76	3219.23	3227.70	1163.04	1175.82
Interest on Loan	683.40	484.16	286.80	150.34	89.32
Return on equity	4801.14	4809.55	4817.97	4821.88	4836.03
Interest on Working Capital	256.38	256.88	257.67	216.67	221.03
O & M Expenses	1502.32	1588.39	1679.31	1775.29	1876.58
Total	10454.00	10358.21	10269.44	8127.22	8198.79

(₹ in lakh)

Asset IV					
	2009-10	2010-11	2011-12	2012-13	2013-14
Depreciation	1089.18	1089.18	1089.18	320.92	320.92
Interest on Loan	286.13	207.11	130.23	79.23	55.15
Return on equity	1232.51	1232.51	1232.51	1232.51	1232.51
Interest on Working Capital	71.65	71.00	70.44	54.47	55.13
O & M Expenses	345.83	365.65	386.59	408.68	431.97
Total	3025.30	2965.46	2908.95	2095.82	2095.69

(₹ in lakh)

Asset V					
	2009-10	2010-11	2011-12	2012-13	2013-14
Depreciation	763.99	763.99	763.99	192.08	192.08
Interest on Loan	195.53	140.26	86.58	52.16	37.27
Return on equity	844.82	844.82	844.82	844.82	844.82
Interest on Working Capital	44.34	43.58	42.86	30.66	30.80
O & M Expenses	134.63	142.36	150.52	159.11	168.13
Total	1983.30	1935.00	1888.77	1278.82	1273.09

Filing fee and the publication expenses

47. The petitioner has sought reimbursement of fee paid by it for filing the petition and publication expenses. In accordance with the Commission's decision in order dated 11.1.2010 in Petition No. 109/2009, the petitioner shall be entitled to recover the filing fee directly from the beneficiaries on *pro-rata*

basis. The petitioner shall also be entitled for reimbursement of the publication expenses in connection with the present petition directly from the beneficiary on *pro-rata* basis.

LICENCE FEE

48. As regards the prayer for reimbursement of licence fee, it is clarified that the same shall be dealt with in accordance with our order dated 25.10.2011 in Petition No.21/2011 and 22/2011.

SHARING OF TRANSMISSION CHARGES

49. The transmission charges allowed shall be recovered on monthly basis in accordance with Regulation 23 and shared by the beneficiaries in accordance with Regulation 33 of the 2009 regulations upto 30.6.2011. With effect from 1.7.2011, the billing, collection and disbursement of the transmission charges shall be governed by the provisions of Central Electricity Regulatory Commission (Sharing of Inter-State Transmission Charges and Losses) Regulations, 2010 and the Removal of Difficulties orders issued thereunder.

50. This order disposes Petition No.313/2010.

Sd/-

(M. Deena Dayalan)
Member

Sd/-

(V.S. Verma)
Member

Sd/-

(S. Jayaraman)
Member



Asset I

CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN					
(₹ in lakh)					
Details of Loan	2009-10	2010-11	2011-12	2012-13	2013-14
1 Bond XIV (Replaced GOI)					
Gross loan opening	3299.00	3299.00	3299.00	3299.00	3299.00
Cumulative Repayment upto DOCO/previous year	1951.90	2144.34	2336.78	2529.23	2721.67
Net Loan-Opening	1347.10	1154.66	962.22	769.78	577.33
Additions during the year	0.00	0.00	0.00	0.00	0.00
Repayment during the year	192.44	192.44	192.44	192.44	192.44
Net Loan-Closing	1154.66	962.22	769.78	577.33	384.89
Average Loan	1250.88	1058.44	866.00	673.55	481.11
Rate of Interest	6.10%	6.10%	6.10%	6.10%	6.10%
Interest	76.30	64.56	52.83	41.09	29.35
Rep Schedule	12 Annual instalments from 17.07.2004				
Total Loan					
Gross loan opening	3299.00	3299.00	3299.00	3299.00	3299.00
Cumulative Repayment upto DOCO/previous year	1951.90	2144.34	2336.78	2529.23	2721.67
Net Loan-Opening	1347.10	1154.66	962.22	769.78	577.33
Additions during the year	0.00	0.00	0.00	0.00	0.00
Repayment during the year	192.44	192.44	192.44	192.44	192.44
Net Loan-Closing	1154.66	962.22	769.78	577.33	384.89
Average Loan	1250.88	1058.44	866.00	673.55	481.11
Rate of Interest	6.1000%	6.1000%	6.1000%	6.1000%	6.1000%
Interest	76.30	64.56	52.83	41.09	29.35

Combined Asset II & III

CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN					
(₹ in lakh)					
Details of Loan	2009-10	2010-11	2011-12	2012-13	2013-14
1 Bond XIV					
Gross loan opening	20545.60	20545.60	20545.60	20545.60	20545.60
Cumulative Repayment upto DOCO/previous year	10861.28	12244.76	13628.24	15011.72	16395.20
Net Loan-Opening	9684.32	8300.84	6917.36	5533.88	4150.40
Additions during the year	0.00	0.00	0.00	0.00	0.00
Repayment during the year	1383.48	1383.48	1383.48	1383.48	1383.48
Net Loan-Closing	8300.84	6917.36	5533.88	4150.40	2766.92
Average Loan	8992.58	7609.10	6225.62	4842.14	3458.66
Rate of Interest	6.10%	6.10%	6.10%	6.10%	6.10%
Interest	548.55	464.16	379.76	295.37	210.98
Rep Schedule	12 Annual instalments from 17.07.2004				
2 PNB-I					
Gross loan opening	465.00	465.00	465.00	465.00	465.00
Cumulative Repayment upto DOCO/previous year	279.00	325.50	372.00	418.50	465.00
Net Loan-Opening	186.00	139.50	93.00	46.50	0.00
Additions during the year	0.00	0.00	0.00	0.00	0.00
Repayment during the year	46.50	46.50	46.50	46.50	0.00
Net Loan-Closing	139.50	93.00	46.50	0.00	0.00
Average Loan	162.75	116.25	69.75	23.25	0.00
Rate of Interest	9.41%	9.41%	9.41%	9.41%	9.41%
Interest	15.31	10.94	6.56	2.19	0.00
Rep Schedule	10 Annual Installments from 30.03.2004				
3 IOB-II					
Gross loan opening	3293.00	3293.00	3293.00	3293.00	3293.00
Cumulative Repayment upto DOCO/previous year	1975.80	2305.10	2634.40	2963.70	3293.00
Net Loan-Opening	1317.20	987.90	658.60	329.30	0.00
Additions during the year	0.00	0.00	0.00	0.00	0.00
Repayment during the year	329.30	329.30	329.30	329.30	0.00
Net Loan-Closing	987.90	658.60	329.30	0.00	0.00
Average Loan	1152.55	823.25	493.95	164.65	0.00
Rate of Interest	9.90%	9.90%	9.90%	9.90%	9.90%
Interest	114.10	81.50	48.90	16.30	0.00
Rep Schedule	10 annual Instalments from 11.02.2004				
4 Corporation Bank					
Gross loan opening	233.00	233.00	233.00	233.00	233.00
Cumulative Repayment upto DOCO/previous year	128.15	151.45	174.75	198.05	221.35
Net Loan-Opening	104.85	81.55	58.25	34.95	11.65
Additions during the year	0.00	0.00	0.00	0.00	0.00
Repayment during the year	23.30	23.30	23.30	23.30	11.65
Net Loan-Closing	81.55	58.25	34.95	11.65	0.00



Average Loan	93.20	69.90	46.60	23.30	5.83
Rate of Interest	11.40%	11.40%	11.40%	11.40%	11.40%
Interest	10.62	7.97	5.31	2.66	0.66
Rep Schedule	10 annual Instalments from 10.03.2004				
5 BOI (Foreign Currency)					
Gross loan opening	1683.34	1683.34	1683.34	1683.34	1683.34
Cumulative Repayment upto DOCO/previous year	442.98	531.58	620.18	708.77	797.37
Net Loan-Opening	1240.35	1151.76	1063.16	974.56	885.97
Additions during the year	0.00	0.00	0.00	0.00	0.00
Repayment during the year	88.60	88.60	88.60	88.60	88.60
Net Loan-Closing	1151.76	1063.16	974.56	885.97	797.37
Average Loan	1196.06	1107.46	1018.86	930.27	841.67
Rate of Interest	3.32%	3.32%	3.32%	3.32%	3.32%
Interest	39.66	36.73	33.79	30.85	27.91
Rep Schedule	38 Half yearly Instalments from 10.06.2004				
Bond XXXIII					
Gross loan opening	0.00	0.00	327.10	327.10	327.10
Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	0.00	0.00
Net Loan-Opening	0.00	0.00	327.10	327.10	327.10
Additions during the year	0.00	327.10	0.00	0.00	0.00
Repayment during the year	0.00	0.00	0.00	0.00	0.00
Net Loan-Closing	0.00	327.10	327.10	327.10	327.10
Average Loan	0.00	163.55	327.10	327.10	327.10
Rate of Interest	8.64%	8.64%	8.64%	8.64%	8.64%
Interest	0.00	14.13	28.26	28.26	28.26
Rep Schedule	12 annual Instalments from 08.07.2014				
Total Loan					
Gross loan opening	26219.94	26219.94	26547.04	26547.04	26547.04
Cumulative Repayment upto DOCO/previous year	13687.21	15558.39	17429.57	19300.74	21171.92
Net Loan-Opening	12532.72	10661.55	9117.47	7246.29	5375.12
Additions during the year	0.00	327.10	0.00	0.00	0.00
Repayment during the year	1871.18	1871.18	1871.18	1871.18	1483.73
Net Loan-Closing	10661.55	9117.47	7246.29	5375.12	3891.39
Average Loan	11597.14	9889.51	8181.88	6310.71	4633.25
Rate of Interest	6.2796%	6.2230%	6.1427%	5.9522%	5.7803%
Interest	728.25	615.42	502.59	375.63	267.82



Combined Assets II & III

	DOC0	Asset II 01.04.1988	Asset III 01.02.2000	Total
(₹ in lakh)				
	Details of Loan	2008-09		
1	Bond XIV			
	Gross Loan	7398.00	13147.60	20545.60
	Rep. upto previous year	3945.60	5532.20	9477.80
	OB-31.3.03.08	3452.40	7615.40	11067.80
	Additions during the year	0.00	0.00	0.00
	ER-31.3.04	1.0000	1.0000	1.00
	R1	431.55	951.93	1383.48
	R2	0.0000	0.0000	0.00
	R3	0.0000	0.0000	0.00
	R4	0.0000	0.0000	0.00
	RT	431.5500	951.9300	1383.48
	OB-31.3.03.09	3020.8500	6663.4700	9684.32
	Rate		6.10%	
2	PNB-I			
	Gross Loan	0.00	465.00	465.00
	Rep. upto previous year	0.00	232.50	232.50
	OB-31.3.03.08	0.00	232.50	232.50
	Additions during the year	0.00	0.00	0.00
	ER-31.3.04	1.0000	1.0000	1.00
	R1	0.00	46.50	46.50
	R2	0.0000	0.0000	0.00
	R3	0.0000	0.0000	0.00
	R4	0.0000	0.0000	0.00
	RT	0.0000	46.5000	46.50
	OB-31.3.03.09	0.0000	186.0000	186.00
	Rate		9.41%	
3	IOB-II			
	Gross Loan	0.00	3293.00	3293.00
	Rep. upto previous year	0.00	1646.50	1646.50
	OB-31.3.03.08	0.00	1646.50	1646.50
	Additions during the year	0.00	0.00	0.00
	ER-31.3.04	1.0000	1.0000	1.00
	R1	0.00	329.30	329.30
	R2	0.0000	0.0000	0.00
	R3	0.0000	0.0000	0.00
	R4	0.0000	0.0000	0.00
	RT	0.0000	329.3000	329.30
	OB-31.3.03.09	0.0000	1317.2000	1317.20
	Rate		9.90%	
4	Corporation Bank			
	Gross Loan	0.00	233.00	233.00
	Rep. upto previous year	0.00	104.85	104.85
	OB-31.3.03.08	0.00	128.15	128.15
	Additions during the year	0.00	0.00	0.00
	ER-31.3.04	1.0000	1.0000	1.00

	R1	0.00	23.30	23.30
	R2	0.0000	0.0000	0.00
	R3	0.0000	0.0000	0.00
	R4	0.0000	0.0000	0.00
	RT	0.0000	23.3000	23.30
	OB-31.3.03.09	0.0000	104.8500	104.85
	Rate		11.40%	
5	BOI (Foreign Currency)			
	Gross Loan	0.00	37.99	37.99
	Rep. upto previous year	0.00	8.00	8.00
	OB-31.3.03.08	0.00	29.99	29.99
	Additions during the year	0.00	0.00	0.00
	ER-31.3.04	1.0000	44.3100	44.31
	R1	0.00	0.9997	1.00
	R2	0.0000	0.9997	1.00
	R3	0.0000	0.0000	0.00
	R4	0.0000	0.0000	0.00
	RT	0.0000	1.9995	2.00
	OB-31.3.03.09	0.0000	27.9926	27.99
	Rate		3.32%	



Asset IV

CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN						
						(₹ in lakh)
	Details of Loan	2009-10	2010-11	2011-12	2012-13	2013-14
1	Bond XIV					
	Gross loan opening	4934.61	4934.61	4934.61	4934.61	4934.61
	Cumulative Repayment upto DOCO/previous year	2398.12	2760.48	3122.84	3485.20	3847.56
	Net Loan-Opening	2536.49	2174.13	1811.77	1449.41	1087.05
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	362.36	362.36	362.36	362.36	362.36
	Net Loan-Closing	2174.13	1811.77	1449.41	1087.05	724.69
	Average Loan	2355.31	1992.95	1630.59	1268.23	905.87
	Rate of Interest	6.10%	6.10%	6.10%	6.10%	6.10%
	Interest	143.67	121.57	99.47	77.36	55.26
	Rep Schedule	12 Annual instalments from 17.07.2004				
2	Corporation Bank					
	Gross loan opening	206.47	206.47	206.47	206.47	206.47
	Cumulative Repayment upto DOCO/previous year	113.55	134.20	154.84	175.49	196.14
	Net Loan-Opening	92.92	72.27	51.63	30.98	10.33
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	20.65	20.65	20.65	20.65	10.32
	Net Loan-Closing	72.27	51.63	30.98	10.33	0.01
	Average Loan	82.60	61.95	41.30	20.66	5.17
	Rate of Interest	11.40%	11.40%	11.40%	11.40%	11.40%
	Interest	9.42	7.06	4.71	2.35	0.59
	Rep Schedule	20 half yearly instalments from 10.03.2004				
3	Punjab National Bank					
	Gross loan opening	413.54	413.54	413.54	413.54	413.54
	Cumulative Repayment upto DOCO/previous year	248.12	289.48	330.83	372.19	413.54
	Net Loan-Opening	165.42	124.06	82.71	41.35	0.00
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	41.35	41.35	41.35	41.35	0.00
	Net Loan-Closing	124.06	82.71	41.35	0.00	0.00
	Average Loan	144.74	103.39	62.03	20.68	0.00
	Rate of Interest	9.41%	9.41%	9.41%	9.41%	9.41%
	Interest	13.62	9.73	5.84	1.95	0.00
	Rep Schedule	10 annual instalments from 30.03.2004				
4	Indian Overseas Bank II					
	Gross loan opening	2927.42	2927.42	2927.42	2927.42	2927.42
	Cumulative Repayment upto DOCO/previous year	1756.45	2049.19	2341.94	2634.68	2927.42
	Net Loan-Opening	1170.97	878.23	585.48	292.74	0.00
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	292.74	292.74	292.74	292.74	0.00
	Net Loan-Closing	878.23	585.48	292.74	0.00	0.00



	Average Loan	1024.60	731.86	439.11	146.37	0.00
	Rate of Interest	9.90%	9.90%	9.90%	9.90%	9.90%
	Interest	101.44	72.45	43.47	14.49	0.00
	Rep Schedule	10 annual Instalments from 11.02.2004				
5	BOI(Foreign Currency)					
	Gross loan opening	1197.70	1197.70	1197.70	1197.70	1197.70
	Cumulative Repayment upto DOCO/previous year	315.04	378.08	441.12	504.15	567.19
	Net Loan-Opening	882.66	819.62	756.58	693.54	630.51
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	63.04	63.04	63.04	63.04	63.04
	Net Loan-Closing	819.62	756.58	693.54	630.51	567.47
	Average Loan	851.14	788.10	725.06	662.03	598.99
	Rate of Interest	3.3163%	3.3163%	3.3163%	3.3163%	3.3163%
	Interest	28.23	26.14	24.05	21.95	19.86
	Rep Schedule	38 Equal Half yearly instalment from 10.06.2004				
	Total Loan					
	Gross loan opening	9679.74	9679.74	9679.74	9679.74	9679.74
	Cumulative Repayment upto DOCO/previous year	4831.29	5611.43	6391.57	7171.71	7951.85
	Net Loan-Opening	4848.45	4068.31	3288.17	2508.03	1727.89
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	780.14	780.14	780.14	780.14	435.72
	Net Loan-Closing	4068.31	3288.17	2508.03	1727.89	1292.17
	Average Loan	4458.38	3678.24	2898.10	2117.96	1510.03
	Rate of Interest	6.6475%	6.4419%	6.1257%	5.5765%	5.0139%
	Interest	296.37	236.95	177.53	118.11	75.71



Asset V

CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN						
						(₹ in lakh)
	Details of Loan	2009-10	2010-11	2011-12	2012-13	2013-14
1	Bond XIV					
	Gross loan opening	3382.39	3382.39	3382.39	3382.39	3382.39
	Cumulative Repayment upto DOCO/previous year	1643.76	1892.14	2140.52	2388.90	2637.28
	Net Loan-Opening	1738.63	1490.25	1241.87	993.49	745.11
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	248.38	248.38	248.38	248.38	248.38
	Net Loan-Closing	1490.25	1241.87	993.49	745.11	496.73
	Average Loan	1614.44	1366.06	1117.68	869.30	620.92
	Rate of Interest	6.10%	6.10%	6.10%	6.10%	6.10%
	Interest	98.48	83.33	68.18	53.03	37.88
	Rep Schedule	12 Annual instalments from 17.07.2004				
2	Corporation Bank					
	Gross loan opening	141.53	141.53	141.53	141.53	141.53
	Cumulative Repayment upto DOCO/previous year	77.84	91.99	106.15	120.30	134.45
	Net Loan-Opening	63.69	49.54	35.38	21.23	7.08
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	14.15	14.15	14.15	14.15	7.08
	Net Loan-Closing	49.54	35.38	21.23	7.08	0.00
	Average Loan	56.61	42.46	28.31	14.15	3.54
	Rate of Interest	11.40%	11.40%	11.40%	11.40%	11.40%
	Interest	6.45	4.84	3.23	1.61	0.40
	Rep Schedule	20 half yearly instalments from 10.03.2004				
3	Punjab National Bank					
	Gross loan opening	283.46	283.46	283.46	283.46	283.46
	Cumulative Repayment upto DOCO/previous year	170.08	198.42	226.77	255.11	283.46
	Net Loan-Opening	113.38	85.04	56.69	28.35	0.00
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	28.35	28.35	28.35	28.35	0.00
	Net Loan-Closing	85.04	56.69	28.35	0.00	0.00
	Average Loan	99.21	70.87	42.52	14.17	0.00
	Rate of Interest	9.41%	9.41%	9.41%	9.41%	9.41%
	Interest	9.34	6.67	4.00	1.33	0.00
	Rep Schedule	10 annual instalments from 30.03.2004				
4	Indian Overseas Bank II					
	Gross loan opening	2006.58	2006.58	2006.58	2006.58	2006.58
	Cumulative Repayment upto DOCO/previous year	1203.95	1404.61	1605.26	1805.92	2006.58
	Net Loan-Opening	802.63	601.97	401.32	200.66	0.00
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	200.66	200.66	200.66	200.66	0.00
	Net Loan-Closing	601.97	401.32	200.66	0.00	0.00



	Average Loan	702.30	501.65	300.99	100.33	0.00
	Rate of Interest	9.90%	9.90%	9.90%	9.90%	9.90%
	Interest	69.53	49.66	29.80	9.93	0.00
	Rep Schedule	10 annual Instalments from 11.02.2004				
5	BOI(Foreign Currency)					
	Gross loan opening	821.06	821.06	821.06	821.06	821.06
	Cumulative Repayment upto DOCO/previous year	216.23	259.45	302.66	345.87	389.09
	Net Loan-Opening	604.83	561.62	518.40	475.19	431.98
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	43.21	43.21	43.21	43.21	43.21
	Net Loan-Closing	561.62	518.40	475.19	431.98	388.76
	Average Loan	583.22	540.01	496.80	453.58	410.37
	Rate of Interest	3.3163%	3.3163%	3.3163%	3.3163%	3.3163%
	Interest	19.34	17.91	16.48	15.04	13.61
	Rep Schedule	Equal Half yearly instalment from 10.06.2004				
	Total Loan					
	Gross loan opening	6635.02	6635.02	6635.02	6635.02	6635.02
	Cumulative Repayment upto DOCO/previous year	3311.86	3846.61	4381.36	4916.11	5450.86
	Net Loan-Opening	3323.17	2788.42	2253.66	1718.91	1184.16
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	534.75	534.75	534.75	534.75	298.67
	Net Loan-Closing	2788.42	2253.66	1718.91	1184.16	885.49
	Average Loan	3055.79	2521.04	1986.29	1451.54	1034.83
	Rate of Interest	6.6477%	6.4422%	6.1260%	5.5768%	5.0142%
	Interest	203.14	162.41	121.68	80.95	51.89

