

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 258/2009

**Coram: 1. Shri S. Jayaraman, Member
2. Shri M.Deena Dayalan, Member**

**[Date of Hearing: 6.5.2010]
[Date of Order: 26.12.2011]**

IN THE MATTER OF

Approval of tariff of Vindhyachal Super Thermal Power Station, Stage-II (1000 MW) for the period from 1.4.2009 to 31.3.2014

AND

IN THE MATTER OF

NTPC Ltd, New Delhi

...Petitioner

Vs

1. Madhya Pradesh Power Trading Ltd, Jabalpur
2. Maharashtra State Electricity Distribution Company Ltd, Mumbai
3. Gujarat Urja Vikas Nigam Limited, Vadodara
4. Chhattisgarh State Power Distribution Company Ltd, Raipur.
5. Electricity Department, Govt. of Goa, Panaji, Goa
6. Electricity Department, Administration of Daman & Diu, Daman
7. Electricity Department Administration of Dadra and Nagar Haveli, Silvassa

....Respondents

Parties Present:

1. Shri V.K.Padha, NTPC
2. Shri S.K.Sharma, NTPC
3. Shri Ajay Dua, NTPC
4. Shri Manoj Saxena, NTPC
5. Shri Sankar Saran, NTPC
6. Shri S.Agarwal, NTPC
7. Shri Sachin Jain, NTPC
8. Ms. Shilpa Agarwal, NTPC

ORDER

This petition has been filed by the petitioner, NTPC, for approval of tariff for Vindhyachal STPS, Stage-II (1000 MW) (hereinafter referred to as “the generating station”) 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”).

2. The generating station with a capacity of 1000 MW comprises of two units of 500 MW each. The dates of commercial operation of the different units of the generating station are as under:

| | Date of commercial operation |
|----------------------------|-------------------------------------|
| Unit-I | 1.7.2000 |
| Unit-II/Generating Station | 1.10.2000 |

3. The tariff of the generating station for the period from 1.4.2004 to 31.3.2009 was determined by Commission’s order dated 21.8.2006 in Petition No.146/2004 considering the capital cost of ₹255124.25 lakh as on 31.3.2004. The petitioner had not claimed additional capital expenditure for the period 2004-09. Subsequently, the Commission by its order dated 3.8.2011 in Petition No. 146/2004 revised the tariff of the generating station taking into consideration the principles contained in the judgment of the Appellate Tribunal for Electricity (the Tribunal) dated 13.6.2007 in Appeal Nos.139 to 142 etc of 2006 and the judgments dated 10.12.2007 and 16.3.2009 in Appeal Nos.151 & 152/2007 and Appeal Nos. 133, 135 etc., of 2008 of the Tribunal, subject to the final outcome of the Civil Appeals filed by the Commission against these judgments which are pending before the Hon’ble Supreme Court. The annual fixed charges determined by order dated 3.8.2011 based on the capital cost of ₹255124.25 lakh as on 31.3. 2009 are as under:

| | <i>(₹ in lakh)</i> | | | | |
|------------------------------|--------------------|-----------------|-----------------|-----------------|-----------------|
| | 2004-05 | 2005-06 | 2006-07 | 2007-08 | 2008-09 |
| Interest on loan | 7609.07 | 6594.07 | 5535.29 | 4414.20 | 3381.14 |
| Interest on Working Capital | 2585.00 | 2606.00 | 2630.68 | 2663.73 | 2603.12 |
| Depreciation | 9263.65 | 9263.65 | 9263.65 | 9263.65 | 9263.65 |
| Advance Against Depreciation | 5128.64 | 5685.42 | 6400.22 | 7344.63 | 3149.67 |
| Return on Equity | 10715.22 | 10715.22 | 10715.22 | 10715.22 | 10715.22 |
| O & M Expenses | 9360.00 | 9730.00 | 10120.00 | 10520.00 | 10950.00 |
| Total | 44661.58 | 44594.36 | 44665.06 | 44921.43 | 40062.80 |

4. The annual fixed charges claimed by the petitioner for 2009-14 are as stated under:

| | (₹ in lakh) | | | | |
|-----------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| | 2009-10 | 2010-11 | 2011-12 | 2012-13 | 2013-14 |
| Depreciation | 13109.00 | 13130.00 | 13132.00 | 13155.00 | 5681.00 |
| Interest on Loan | 2004.00 | 1251.00 | 639.00 | 172.00 | 5.00 |
| Return on Equity | 18000.00 | 18030.00 | 18033.00 | 18063.00 | 18103.00 |
| Interest on Working Capital | 4672.00 | 4699.00 | 4749.00 | 4778.00 | 4669.00 |
| O&M Expenses | 13000.00 | 13740.00 | 14530.00 | 15360.00 | 16240.00 |
| Cost of secondary fuel oil | 1692.00 | 1692.00 | 1697.00 | 1692.00 | 1692.00 |
| Compensation Allowance | 0.00 | 0.00 | 150.00 | 150.00 | 150.00 |
| Total | 52478.00 | 52543.00 | 52930.00 | 53370.00 | 46540.00 |

5. Reply to the petition has been filed by the respondent No.1, MPPTCL.

CAPITAL COST

6. Regulation 7 (1) (a) of the 2009 regulations provides as under:

*"7. **Capital Cost.** (1) Capital cost for a project shall include: (a) the expenditure incurred or projected to be incurred, including interest during construction and financing charges, any gain or loss on account of foreign exchange risk variation during construction on the loan - (i) being equal to 70% of the funds deployed, in the event of the actual equity in excess of 30% of the funds deployed, by treating the excess equity as normative loan, or (ii) being equal to the actual amount of loan in the event of the actual equity less than 30% of the funds deployed, - up to the date of commercial operation of the project, as admitted by the Commission, after prudence check;"*

7. The annual fixed charges claimed in the petition is based on opening capital cost of ₹255125.00 lakh as on 1.4.2009. As stated earlier, the annual fixed charges of the generating station was revised by order dated 3.8.2011 considering the capital cost of ₹255124.25 lakh as on 31.3.2009. As such, the opening capital cost as on 1.4.2009 is ₹255124.25 lakh.

8. The petitioner vide its affidavit dated 27.6.2011 has furnished the value of capital cost and liabilities as on 1.4.2009 as per books of accounts in Form-9A. The details of liabilities and capital cost which have been reconciled with the records of the Commission are as under:

| | (₹ in lakh) | | |
|---|----------------|------------------------------|------------|
| | As per Form-9A | As per records of Commission | Difference |
| Capital cost as on 1.4.2009, as per books | 248603.10 | 248603.10 | 0.00 |
| Liabilities included in the above | 7826.18 | 7826.18 | 0.00 |

9. Out of the total liabilities of ₹7826.18 lakh included in the gross block as on 1.4.2009, the approved capital cost of ₹255124.25 lakh is inclusive of un-discharged liabilities of ₹7820.25 lakh (pertaining to period prior to 1.4.2004). The balance liabilities pertain to assets disallowed/not claimed for capitalization.

10. The last proviso to Regulation 7 of the 2009 regulations, as amended on 21.6.2011, 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.”

11. Clause (2) of Regulation 3 of the 2009 regulations define the term 'expenditure incurred' as under:

“expenditure incurred means the fund, whether the equity or debt or both, actually deployed and paid in cash or cash equivalent, for creation or acquisition of a useful asset and does not include commitments or liabilities for which no payment has been released”

12. Accordingly, in terms of the last proviso to Regulation 7 of the 2009 regulations as amended on 21.6.2011 read with Clause (2) of Regulation 3 of the 2009 regulations, the capital cost, after removal of un-discharged liabilities of ₹7820.25 lakh, works out to ₹247304.00 lakh, on cash basis, as on 1.4.2009. The discharge of un-discharged liabilities, if any, made by the petitioner would be included in the capital base as additional capital expenditure, in the year of discharge.

13. The petitioner vide its affidavit dated 6.9.2011 has furnished the details of the liabilities discharged during 2009-11. Out of the un-discharged liabilities deducted as on 1.4.2009, the petitioner has discharged an amount of ₹17.30 lakh during 2009-10 and ₹4.61 lakh during 2010-11 (pertaining to liabilities corresponding to assets capitalized prior to 1.4.2004). The discharge of the above liabilities during 2009-10 and 2010-11 has been allowed during the respective years, in addition to the projected additional capital expenditure allowed for the generating station.

Projected Additional Capital Expenditure

14. Regulation 9 of the 2009 regulations, as amended on 21.6.2011, provides as under:

“9. Additional Capitalisation. (1) *The capital expenditure incurred or projected to be incurred, on the following counts within the original scope of work, after the date of commercial operation and up to the cut-off date may be admitted by the Commission, subject to prudence check:*

- (i) *Un-discharged liabilities;*
- (ii) *Works deferred for execution;*
- (iii) *Procurement of initial capital spares within the original scope of work, subject to the provisions of regulation 8;*
- (iii) *Liabilities to meet award of arbitration or for compliance of the order or decree of a court; and*
- (v) *Change in law;*

Provided that the details of works included in the original scope of work along with estimates of expenditure, un-discharged liabilities and the works deferred for execution shall be submitted along with the application for determination of tariff.

(2) *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.

- (vi) *In case of gas/liquid fuel based open/ combined cycle thermal generating stations, any expenditure which has become necessary on renovation of gas turbines after 15 year of operation from its COD and the expenditure necessary due to obsolescence or non-availability of spares for successful and efficient operation of the stations.*

Provided that any expenditure included in the R&M on consumables and cost of components and spares which is generally covered in the O&M expenses during the major overhaul of gas turbine shall be suitably deducted after due prudence from the R&M expenditure to be allowed.

- (vii) *Any capital expenditure found justified after prudence check necessitated on account of modifications required or done in fuel receipt system arising due to non-materialisation of full coal linkage in respect of thermal generating station as result of circumstances not within the control of the generating station.*
- (viii) *Any un-discharged liability towards final payment/withheld payment due to contractual exigencies for works executed within the cut-off date, after prudence check of the details of such deferred*

liability, total estimated cost of package, reason for such withholding of payment and release of such payments etc.”

15. The projected additional capital expenditure claimed by the petitioner is as under:

| | <i>(in lakh)</i> | | | | |
|--|-------------------|----------------|----------------|----------------|----------------|
| | 2009-10 | 2010-11 | 2011-12 | 2012-13 | 2013-14 |
| Projected Additional capital expenditure | 807.56 | 36.00 | 50.00 | 810.00 | 320.00 |

16. The date of commercial operation of the generating station is 1.10.2000. The cut-off date of the generating station has expired and hence the petitioner's claim for additional capital expenditure is required to be considered in terms of Regulation 9(2) of the 2009 regulations. In this connection, we examine the submissions of the petitioner as regards the admissibility of the additional capital expenditure in the subsequent paragraphs.

Submissions of the petitioner

17. In its petition, the petitioner has submitted that the estimated capital expenditure claims are of the following nature:

- (i) The additional capital expenditure (as per Regulation 9 (1) and 9 (2) of the Tariff Regulations, 2009 as per the original scope of work of the generating station which has been put to use;
- (ii) The other additional capital expenditure in respect of the existing generating stations which have to be done on on-going basis.

18. The petitioner has submitted that in addition to the capital expenditure covered by Regulation 9 (1) and 9(2) and 19(e) of the 2009 regulations, there will be capital expenditure of different nature which would be necessary for the efficient operation of the generating station during its life time. Additional capital expenditure for this purpose had constantly been allowed by the Commission under the 2001 and 2004 tariff regulations. However, additional capital expenditure on this head has not been included in Regulation 9 of 2009 regulations. Accordingly, the petitioner has claimed additional capital expenditure on 'works considered necessary for the efficient

operation of the generating stations' in addition to those specified under Regulation 9 (1) and (2) and Regulation 19 (e) of the 2009 regulations.

19. The petitioner has further submitted that Regulation 3 (8) defines the capital cost to mean the capital cost as per Regulation 7. Regulation 7 deals with the capital cost of generating station which would come into operation between 1.4.2009 and 31.3.2014. Clause (b) of Regulation 7 (1) refers to the capitalized spares as specified in Regulation 8 and Clause (c) refers to additional capitalization as determined under Regulation 9.

20. According to the petitioner, Regulations 7(1), 8 and 9 of the 2009 regulations pertain to the capital cost of new generating station commissioned after 1.4.2009 and does not cover the existing projects commissioned prior to 1.4.2009. The petitioner has submitted that the last proviso to Regulation 7 is an independent provision dealing with the existing projects and additional capitalization for the existing projects was comprehensively covered by the said provision. Moreover, the term 'additional capital expenditure' defined in Regulation 3 (3) was the additional capital expenditure incurred or projected to be incurred, after the date of commercial operation of the project and admitted by the Commission after prudence check, subject to Regulation 9. According to the petitioner, the scope and meaning of additional capitalization was not confined to Regulation 9 but subject to Regulation 9 which would mean that if additional capitalization was of the nature as referred to in Regulation 9, it would be read subject to the provisions of Regulation 9 and if the additional capitalization was not of the nature as referred to in Regulation 9, the provisions of Regulation 9 could not be applied. The petitioner has also submitted that in respect of the existing projects, the additional capital expenditure projected to be incurred from 1.4.2009 till 31.3.2014 and admitted by the Commission after prudence check would qualify to be capitalized, notwithstanding the fact that this expenditure was not covered under Regulation 9 (1) and (2).

21. As Regulation 19(e) provides for a compensation allowance to meet the expenses of new assets of capital nature including in the nature of minor assets, the petitioner has submitted that the normative compensation allowance under Regulation 19(e) has no relevance to the additional capitalization of a substantive nature incurred by the generating company from time to time. It has further submitted that as the Regulations 9 (1) and (2) and 19(e) do not exclude the additional capital expenditure of substantial nature in respect of the existing generating stations, the additional capital expenditure as projected by the petitioner, to be incurred during the tariff period 2009-14 for the existing generating stations, may be considered and allowed by the Commission.

22. The respondent, No.1, MPPTCL vide its reply dated 16.2.2010 has submitted that the prayer of the petitioner in its petition to consider other additional capital expenditure' in addition to the capital expenditure covered under Regulations 9(1), 9(2) and 19 (e) of the 2009 regulation amounts to additional capitalization over and above the provisions under the 2009 regulations. The respondent has objected to the claims of the petitioner and has prayed that the Commission may not allow such additional capital expenditure. In response, the petitioner has reiterated its submissions as made in paragraphs 8 to 15 of the original petition and has submitted that the projected additional capital expenditure has been filed in accordance with the existing tariff regulations. It has also submitted that it has claimed additional capital expenditure for Ash Dyke & Ash handling system and to meet the environmental norms, which are in strict conformity with the provisions of Regulation 9(2)(ii) and 9(2)(iii). It has prayed that the objections of the said respondent be rejected.

Analysis

23. We now analyze the scheme of the 2009 regulations. Regulation 3(8) defines the capital cost as defined in Regulation 7. Regulation 7(1) provides that the capital cost shall consist of three elements, namely:

(i) the expenditure incurred or projected to be incurred including IDC, financing charges and loss or gain on account of FERV up to the date of commercial operation as admitted by the Commission;

(ii) capitalized initial spares subject to ceiling rates as specified in Regulation 8;

(iii) additional capital expenditure as determined under regulation 9.

24. Regulation 7(2) provides that the capital cost admitted by the Commission after prudent check shall form the basis for determination of tariff. The last proviso to Regulation 7 of the 2009 regulations, as amended on 21.6.2011 provides that 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 years of the tariff period 2009-14, as may be admitted by the Commission, shall form the basis for determination of tariff.

25. We are of the view that the provisions of Regulation 7 does not make any exception to the word “project” to mean new project or existing project while laying down that “*Capital cost for a project shall include.....additional capital expenditure determined under regulation 9*”. {Emphasis supplied}. It follows therefrom that additional capital expenditure would be determined under the Regulation 9 for new project and existing projects. Regulation 9 is an independent substantive provision as regards treatment of additional capital expenditure. The petitioner has contended that there is a reference in Regulation 7 of any additional capital expenditure with specific reference to Regulation 9 but in the case of existing project there is no reference to Regulation 9 in the context of additional capitalization. We do not sustain this argument as Regulation 9 does not make any distinction between the existing projects or the new projects. We are of the view therefore, that additional capital expenditure whether for the existing project or for new projects would have to be determined under Regulation 9. The words “as may be admitted by the Commission” in the last proviso to Regulation 7 must be read harmoniously with Regulation 7(1)(c) and Regulation 9. Therefore, in case of the existing projects also, additional capital expenditure

projected to be incurred for the respective year of the tariff period 2009-14 may be admitted by the Commission having regard to Regulation 9. The Commission has to determine the additional capital expenditure in accordance with the regulations that have been notified in this regard. In view of the above, we do not sustain the contention of the petitioner that Regulation 9 has no application whatsoever to the existing projects and it does not limit the additional capitalization in case of existing projects. This is for the simple reason that any additional capital expenditure which was not originally conceived must be regulated and such regulatory exercises must be undertaken in terms of specific regulations made in this behalf. The petitioner cannot demand that in respect of the existing projects any additional capital expenditure from 1.4.2009 to 31.3.2014 would qualify notwithstanding that it was not covered by Regulation 9(1) and (2). The term 'additional capital expenditure' as defined in Regulation 3 (3) prior to its amendment, provided that for additional capital expenditure incurred or projected to be incurred, after the date of commercial operation of the project and admitted by the Commission after prudence check, subject to Regulation 9. According to the petitioner, the scope and meaning of additional capitalization was not confined to Regulation 9 but subject to Regulation 9 which would mean that if additional capitalization was of the nature as referred to in Regulation 9, it would be read subject to the provisions of Regulation 9 and if the additional capitalization was not of the nature as referred to in Regulation 9, the provisions of Regulation 9 could not be applied. The Commission by its amendment dated 21.6.2011 has amended the said definition by excluding the phrase 'subject to Regulation 9'. Thus, the contention of the petitioner bears no weight and the additional capital expenditure for existing generating stations under the last proviso to Regulation 7 need to be considered only in terms of Regulations 9(1) and 9 (2) of the 2009 regulations.

26. Under the 2009 regulations, the Commission decided to enhance the cut-off date by one more year in order that the un-discharged liabilities and works deferred for execution are completed within the cut-off date and the generating company/transmission licensee, as the case may be, was able to claim the additional capital expenditure under Regulation 9 (1). In so far as the additional works and services that are necessary for efficient and successful operation of the generating station was concerned, the same has been taken care of in Regulation 19 (e) of the 2009 regulations, which provides as under:

“(e) In case of coal-based or lignite-fired thermal generating station a separate compensation allowance unit-wise shall be admissible to meet expenses on new assets of capital nature including in the nature of minor assets, in the following manner from the year following the year of completion of 10, 15, or 20 years of useful life:

| Years of operation | Compensation Allowance (Rs lakh/MW/year) |
|---------------------------|---|
| 0-10 | Nil |
| 11-15 | 0.15 |
| 16-20 | 0.35 |
| 21-25 | 0.65 |

27. In response to the Commission’s notification for amendment of Regulation 9 of the 2009 regulations for additional capitalization on R&M of Gas Turbines, the petitioner had urged for extension of a similar provision for coal based stations. It also submitted that the compensation allowance in case of coal based stations were not sufficient. However, the Commission while amending the provisions of Regulation 9 of the 2009 regulations vide notification dated 21.6.2011 rejected the prayers of the petitioner. The provision for compensatory allowance for coal based stations was made in the 2009 regulations based on additional capitalization data of the said generating stations from 1992 onwards as available with Commission and which covered the following heads of expenditure:

- (a) Balance payments on works within original scope of works;*
- (b) Expenditure related to Environment Action Plan (EAP) on new assets;*
- (c) Expenditures on account of design deficiencies or unexpected expenditures which does not occur in normal course;*
- (d) Expenditure on minor assets; and*
- (e) R&M Expenditure due to obsolescence or non-availability of spares.*

28. The data relied upon by the Commission to arrive at the compensatory allowance in the 2009 regulations has not been contested by the petitioner. Thus, it is clear from the provisions of Regulation 19 (e) that compensation allowance should be admissible to meet the expenses of new asset of capital nature, including minor assets.

29. It is a settled law that what cannot be directly ought not to be allowed to be achieved indirectly. In view of the settled principle of law and in light of the clear cut scheme of the 2009 Regulations, the claim of the petitioner for additional expenditure beyond the scope of Regulation 9 and 19(e) of the 2009 regulations, in respect of the existing generating stations is untenable.

30. The petitioner, by affidavit dated 25.3.2010, has made its submissions on the admissibility of additional capitalization under the 2009 Regulations and has contended that the last proviso to Regulation 7 is an exception and deals with the existing projects. The last proviso of Regulation 7 as amended on 21.6.2011 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.”

31. The petitioner has contended that the said proviso is an independent substantive proviso applicable to existing generating stations, independent of the other provisions of the Regulation 9 which was applicable to new generating stations, i.e. generating stations commissioned after 1.4.2009.

32. We are not inclined to agree with the submissions and the interpretations made by the petitioner. In the present case, the last proviso to Regulation 7 carves out an exception in case of the existing projects, but under no stretch of imagination can it be construed as an exception to other provisions, namely, Regulation 8 and Regulation 9 of 2009 regulations. The words *“as may be admitted by the Commission”*

in the last proviso to Regulation 7 must be read harmoniously with Regulation 7(1)(c) and Regulation 9.

33. The petitioner has further submitted that Regulations 7 (1) (b) and (c) controls Regulations 8 and 9 respectively, and therefore, was applicable only to new generating stations. We are of the view that the provisions of Regulation 7 does not make any exception to the word “project” to mean new project or existing project while laying down that “Capital cost for a *project* shall include.....*additional capital expenditure determined under regulation 9*”. Regulations 8 and 9 are independent provisions. Additional capitalization not within the original scope of work of new generating stations and existing generating stations has to be determined under Regulation 9. Also, despite payment of balance amounts for works within the original scope of works, certain payments may remain withheld due to contractual exigencies pertaining to works executed within the cut-off date and capitalization of such un-discharged liabilities has also been allowed after cut-off date as additional capitalization for discharging the said liabilities. A provision in this regard with the additional requirement of verification based on the details of such un-discharged liability, cost of contract package, reason for withholding of payment and release of payments etc. has been made under the 2009 regulations, amended on 21.6.2011.

34. Therefore, the contentions of the petitioner that the last proviso of Regulation 7 of the 2009 regulations is independent of Regulation 8 and 9 is not tenable. We discuss the claim of the petitioner for additional capital expenditure and its admissibility in the subsequent paragraphs.

Actual/projected additional capital expenditure for 2009-14

35. The petitioner has claimed the actual capital expenditure for the period 2009-10 and projected additional capital expenditure for the years 2010-11, 2011-12, 2012-13 and 2013-14 as under:

(₹ in lakh)

| Sl.No | | Actual/Projected Capitalization | | | | | Regulation |
|----------|---|---------------------------------|--------------|--------------|---------------|---------------|------------|
| | | 2009-10 | 2010-11 | 2011-12 | 2012-13 | 2013-14 | |
| A | Ash handling system | | | | | | |
| 1 | Ash Dyke Raising Works (V-2) -1st Raising | 297.56 | 10.00 | 0.00 | 0.00 | 0.00 | 9(2)(iii) |
| 2 | Ash Dyke Raising Works (V-2) -2nd Raising | 0.00 | 0.00 | 20.00 | 460.00 | 220.00 | |
| 3 | Ash Slurry Pumps & Piping System | 0.00 | 0.00 | 0.00 | 100.00 | 100.00 | |
| | Total | 297.56 | 10.00 | 20.00 | 560.00 | 320.00 | |
| B | Environmental System | | | | | | |
| 1 | TAC system of Stage-II | 510.00 | 0.00 | 0.00 | 0.00 | 0.00 | 9(2)(ii) |
| 2 | ETP for Stage-II | 0.00 | 0.00 | 0.00 | 250.00 | 0.00 | |
| 3 | On line CO ₂ Monitoring | 0.00 | 0.00 | 30.00 | 0.00 | 0.00 | |
| 4 | Chlorine absorption system | 0.00 | 26.00 | 0.00 | 0.00 | 0.00 | |
| | Total | 510.00 | 26.00 | 30.00 | 250.00 | 0.00 | |
| | Grand Total | 807.56 | 36.00 | 50.00 | 810.00 | 320.00 | |

Deferred works relating to ash pond or ash handling system in the original scope of work- Regulation 9(2)(iii)

36. The petitioner has claimed actual/projected capital expenditure of ₹297.56 lakh, ₹10.00 lakh, ₹20.00 lakh, ₹460.00 lakh and ₹220.00 lakh during the years 2009-10, 2010-11, 2011-12, 2012-13 and 2013-14 respectively, towards Ash Dyke raising works (V2) 1st raising and 2nd raising and ₹100.00 lakh each for the years 2012-13 and 2013-14 respectively towards Ash slurry pumps and piping system. The petitioner has submitted that these works are in progress and the 2nd raising is required after 2011-12 as the existing dyke will not be available for further use. The respondent No.1, MPPTCL has submitted that the expenditure cannot be considered as deferred work under this head and is covered under Regulation 19(e) of the 2009 regulations. In response, the petitioner has submitted that the said works are within the original scope of work and is permissible after the cut-off date without any time limitation. The petitioner has reiterated that the expenditure is squarely covered under Regulation 9(2)(iii) of the 2009 regulations and has prayed that the contentions of the respondents are unwarranted. We agree with the submissions of the petitioner. The work relating to raising of Ash dykes form part of the original approved scope of works and normally taken up in stages, as and when required. In view of this, the expenditure claimed is allowed to be capitalized under this head.

Change in law -Regulation 9(2) (ii)

37. The petitioner has claimed actual/projected capital expenditure of ₹510.00 lakh for Transport Air Compressor (TAC) system for the generating station, ₹26.00 lakh for chlorine absorption system, ₹30.00 lakh for Online CO₂ monitoring system and ₹250.00 lakh for Effluent Treatment Plant (ETP) for the generating station, during the years 2009-10, 2010-11, 2011-12 and 2012-13 respectively, under this head.

38. The respondent No.1, MPPTCL has submitted that the claim of the petitioner under Environmental systems cannot be considered under change-in-law. It has also submitted that recommendations of the Empowered Committee and Environmental consent order of the Ministry of Environment & Forests, Government of India, cannot be considered a change in law conditions.

39. As regards the claim for TAC system, the petitioner was directed vide letter dated 22.3.2010 to furnish information on the following:

(a) Constitution of the Empowered Committee and recommendations of the Committee in respect of improvement in Fire Fighting system as per TAC guidelines. Further, the petitioner shall provide the detailed break-up of assets/ works which will be the part of TAC system amounting to Rs.510 lakhs. Petitioner shall also justify as to how the expenditure falls under Regulation 9(2)(ii) i.e change of law.

(b) Further, the petitioner shall clarify as to how the new Environmental Consent order of MoEF in respect of Stage-IV of the station has made it mandatory on the part of the petitioner to make expenditure at Stage-II of the station on Effluent Treatment Plant, Online CO₂ monitoring system and Chlorine absorption system.

40. In response to the above, the petitioner vide its affidavit dated 8.4.2010 has submitted information as under:

"The Petitioner respectfully submits that there is an inadvertent error in form-9 while justifying an expenditure of Rs.510 lakh in respect of TAC System of Stage-II. The Petitioner sincerely regrets the mistake. It is submitted that Rs.510 lakh expenditure is planned for supply, erection & commissioning of Transport Air Compressor (TAC). This system is required for augmentation of Dry Ash Extraction system. The present dry ash extraction system is capable of handling only 50% capacity of ESP dry ash. Madhya Pradesh Pollution Control Board while renewing the consent for operation of Vindhyachal Stage-II vide its letter reference no. 4035/Ts/MPPCB/2007 dated 04.06.2007 at Para 4 has directed to comply with MoEF guidelines. In this context it is submitted that as per Ministry of Environment and Forest guidelines 100% fly ash produced in power station needs to be compulsorily and fully utilized. The proposed 100% fly ash utilization system is under implementation and will help in full utilization of ash produced in stage-II. This is in compliance to MoEF letter no. J-13011/ 56 / 2008-IA.II (T) dated 5th February, 2009

clause (viii) and (ix) (Copy enclosed and marked as ANNEXURE-A) regarding clearance of Vindhyachal STPP stage-IV (1000 MW). Hon'ble Commission may be pleased to consider and allow this expenditure of Rs. 510 Lakh under Tariff Regulations, 2009, Clause 9 (2) (ii), Change in Law.

As regards information desired by Hon'ble Commission at Para (ii) it is submitted that Madhya Pradesh pollution Control Board while renewing the consent for operation of Vindhyachal Stage-II vide its letter reference no 4033/Ts/MPPCB/2007 dated 04.06.2007 at Para 2 has directed to treat and utilize the effluents with in plant premises and should not discharge it outside. Further, Ministry of Environment and Forest also while granting clearance for Vindhyachal STPP Stage-IV vide their letter reference No. J-13011/56/2008-IA.II (T) dated 5th February, 2009 at clause (xi) has indicated that the treated effluents conforming to the prescribed standards shall be re-circulated and reused within the plant. Accordingly, an action plan was prepared to install effluent treatment plant prior to the expected commissioning dated of Vindhyachal Stage-IV which is being set up within the premises of existing power plant.

As regards expenditure of Rs. 30 lakhs towards online CO2 monitoring system, it is submitted that in order to monitor the combustion quality of fossil fuel in the boiler, this system needs to be installed and is in procurement stage. It will help in optimizing the coal combustion and cutting the CO₂ gas emission which is a green house gas. India being a signatory of Kyoto protocol is committed to reduce the emission of green house gases. Therefore, this expenditure has become necessary.

Chlorine gas leakage is a health and environmental hazard affecting not only people working in the plant but nearby population also. At Vindhyachal STPS, presently Chlorine leak absorption system was installed at Stage-I and III only. As per disaster management plan a safety and technical audit was conducted to ensure compliance of MOEF guidelines and it was recommended by committee members to install a separate Chlorine Absorption System for Stage-II also. The MOEF letter dated 5th February 2009 at clause (xxiii) also provides for the same.

It is therefore, requested that Hon'ble Commission may be pleased to consider and allow the projected expenditure as claimed"

41. Paragraphs 2 and 4 of the letter dated 4.6.2007 of the Madhya Pradesh Pollution Control Board reads as under:

2. Extensive tree plantation shall be carried out in open areas available within the factory premises and good housekeeping practices shall be maintained."

4. Management of fly ash shall be done as per the directions of MoEF, notified in the Gazette of India dated 14.09.99 (amended on 27.08.03) and regular progress shall be submitted to the MoEF / CPCB and this Board."

42. Further, clauses (viii) and (ix) of the letter dated 5.2.2009 of the Ministry of Environment & Forests, Government of India, provides as under:

(viii) Adequate dust extraction system such as cyclones/bag filters and water spray system in dusty areas such as in coal handling and ash handling points, transfer areas and other vulnerable dusty areas shall be provided.

(ix) Fly ash shall be collected in dry form and storage facility (silos) shall be provided. The provisions stipulated in the fly ash notification of September, 1999 and as amended in August, 2003 in regard to fly ash utilization shall be adhered to. Unutilized fly ash and bottom ash shall be disposed off in the ash pond duly lined to avoid any groundwater contamination.

43. Pursuant to the hearing on 6.5.2010, the petitioner was directed to submit information on the following.

(a) *As regards the expenditure of Rs.5.10 crores on erection and commissioning of Transport Air Compressor (TAC), required for augmentation of dry ash extraction, the techno-economic details of the system/assets proposed to be installed, need to be furnished. Also, petitioner to clarify as to whether the said amount pertains to the cost of one or more TAC, along with other assets required for the augmentation of dry ash extraction system;*

44. In compliance with the above, the petitioner vide its affidavit dated 24.5.2010 has submitted information as under:

(ii)..The Dry Ash Evacuation System (DAES) has been already commissioned and is operational. The existing DAE System comprises of three Transport Air Compressors, Driers, Receivers, Pipelines and Ash Silos etc. The installed and operational system for Stage-II has a capacity to transport the total amount of fly ash generated in one unit only (approximately 2100 Tones/ day on continuous running basis) with two transport air compressors in service and one standby.

The augmentation is required to cater the need for handling dry ash system in both the units of Stage-II simultaneously to have 100% ash utilization as per mandatory legal requirements, that 100% utilization of ash has been stipulated by MoEF, GoI, vide notifications dated 14.09.1999 and 27.08.2003. The necessary details are given hereunder.

The Capital expenditure incurred for erection & commissioning of TAC is Rs. 510 lakhs. The augmentation of dry ash extraction system is required for enhancing system capacity to transport the total quantity of Ash generated in both the units. For augmentation of system following equipments shall be installed:

- 1. Transport Air Compressors with motors (input power 570 KW. Nominal working pressure 2.5 bar, & Nominal capacity 9950 CUM/Hr.) - Two Nos.*
- 2. Transport Air Drier - Two Nos. (Nominal capacity 9950CUM/Hr, Input power 75 KW & Nominal working pressure 2.5 bar).*
- 3. Air Receiver - Two Nos. (Capacity 05 CUM)*
- 4. Necessary Electrical, Control & Instrumentation, Piping & Cables etc.*

45. Based on the clarification/justification submitted by the petitioner as above, the claim for an expenditure of ₹510.00 lakh towards augmenting the dry ash extraction system for 100% ash utilization system is allowed to be capitalized under this head.

46. As regards, the expenditure on Effluent Treatment Plant (ETP), the petitioner was directed to submit information on the following, pursuant to the hearing on 6.5.2010.

(b) As regards the expenditure of Rs.2.50 crore on ETP, petitioner to clarify as to whether a common ETP was constructed for all the Stages (I to IV) of the generating station or separate ETPs were envisaged for individual stages. Also, in case if a common ETP was planned for all the stages, then the petitioner to clarify as to whether the said expenditure pertains to the apportioned cost of the generating station or the cost of common ETP.

47. The petitioner vide its affidavit dated 24.5.2010 has submitted the information as under:

“(iii)...ETP (Effluent Treatment Plant) for Stage-I was commissioned during Fin. Year 2001-2002. ETP for Stage-III was commissioned in Fin. Year 2007-08 and for Stage-IV ETP will come along with the project itself whereas the ETP for Stage-II is yet to be procured, installed and commissioned. As per prevailing regulations all effluents of the Stations are to be treated and reused within the plant premises. The MoEF, GoI while granting clearance for Stage-IV of VSTPS vide letter dated 05.09.2009 stipulated that treated effluents shall be re-circulated and reused within the Plants. This has necessitated installation of ETP for Stage-II also. An expenditure of Rs. 250 lakh is planned for the procurement and installation of Stage-II ETP only. The detailed engineering & procurement process is under approval.”

48. Taking into consideration the clarification/justification submitted by the petitioner, and in view of the fact that the expenditure is towards compliance of requirements of the Environmental consent order of the Ministry of Environment & Forests, Government of India, which are statutory in nature, the claim for an expenditure of ₹250.00 lakh towards ETP is allowed to be capitalized under this head.

49. The petitioner's claim for expenditure of ₹30.00 lakh under this head towards On-line CO₂ monitoring system in terms of the Environmental consent Order of the Ministry of Environment & Forests, Government of India, has been examined in terms of the clarification submitted vide affidavit dated 8.4.2010 (*as quoted in paragraph 40 above*) and no reference of this work/asset has been found in the said environmental consent order referred to by the petitioner. Hence, the expenditure of ₹30.00 lakh is not allowed for capitalization under this head.

50. The petitioner's claim for expenditure of ₹26.00 lakh under this head, towards Chlorine absorption system as per Environmental consent order of Ministry of Environment & Forests, Government of India, has also been examined in terms of its

clarification submitted vide affidavit dated 8.4.2010 (*paragraph 40 above*) and the same is in order. Hence, capitalization is allowed.

51. Based on the above discussions, the additional capital expenditure allowed for 2009-14, is as under.

| | | Actual/Projected Capitalization | | | | | Regulation |
|-------------------------------|---|---------------------------------|--------------|--------------|---------------|---------------|------------|
| Sl.No | | 2009-10 | 2010-11 | 2011-12 | 2012-13 | 2013-14 | |
| A Ash handling system | | | | | | | |
| 1 | Ash Dyke Raising Works (V-2) -1st Raising | 297.56 | 10.00 | 0.00 | 0.00 | 0.00 | 9(2)(iii) |
| 2 | Ash Dyke Raising Works (V-2) -2nd Raising | 0.00 | 0.00 | 20.00 | 460.00 | 220.00 | |
| 3 | Ash Slurry Pumps & Piping System | 0.00 | 0.00 | 0.00 | 100.00 | 100.00 | |
| | Total | 297.56 | 10.00 | 20.00 | 560.00 | 320.00 | |
| B Environmental System | | | | | | | |
| 1 | TAC system of Stage-II | 510.00 | 0.00 | 0.00 | 0.00 | 0.00 | 9(2)(ii) |
| 2 | ETP for Stage-II | 0.00 | 0.00 | 0.00 | 250.00 | 0.00 | |
| 3 | On line CO ₂ Monitoring | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 4 | Chlorine absorption system | 0.00 | 26.00 | 0.00 | 0.00 | 0.00 | |
| | Total | 510.00 | 26.00 | 0.00 | 250.00 | 0.00 | |
| | Grand Total | 807.56 | 36.00 | 20.00 | 810.00 | 320.00 | |

52. The additional capital expenditure allowed for the purpose of tariff, including the liabilities discharged, is as under:

| | (₹ in lakh) | | | | |
|---|---------------|--------------|--------------|---------------|---------------|
| | 2009-10 | 2010-11 | 2011-12 | 2012-13 | 2013-14 |
| Projected additional capital expenditure allowed | 807.56 | 36.00 | 20.00 | 810.00 | 320.00 |
| Add: Liabilities discharged | 17.30 | 4.61 | 0.00 | 0.00 | 0.00 |
| Net Additional capital expenditure allowed | 824.86 | 40.61 | 20.00 | 810.00 | 320.00 |

Capital Cost for 2009-14

53. Accordingly, the capital cost considered for the purpose of tariff for 2009-14 is as under:

| | (₹ in lakh) | | | | |
|--|------------------|------------------|------------------|------------------|------------------|
| | 2009-10 | 2010-11 | 2011-12 | 2012-13 | 2013-14 |
| Opening Capital cost | 247304.00 | 248128.86 | 248169.47 | 248189.47 | 248999.47 |
| Projected Additional capital expenditure allowed | 824.86 | 40.61 | 20.00 | 810.00 | 320.00 |
| Closing Capital cost | 248128.86 | 248169.47 | 248189.47 | 248999.47 | 249319.47 |
| Average Capital cost | 247716.43 | 248149.17 | 248179.47 | 248594.47 | 249159.47 |

54. The capital cost allowed above is subject to truing-up in terms of the provisions contained in Regulation 6 of the 2009 regulations

Debt- Equity Ratio

55. Regulation 12 of the 2009 regulations provides as under:

“(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 utilized 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 modernization expenditure for life extension shall be serviced in the manner specified in clause (1) of this regulation.”

56. The gross loan and equity amounting to ₹178586.98 lakh and ₹76537.28 lakh, respectively, as on 31.3.2009 approved vide order dated 3.8.2011 in Petition No.146/2004, has been considered as gross loan and equity as on 1.4.2009. However, un-discharged liabilities of ₹7820.25 lakh deducted from the capital cost as on 1.4.2004 has been adjusted to debt and equity in the ratio of 70:30. As such, the gross normative loan and equity as on 1.4.2009 is revised to ₹173112.80 lakh and ₹74191.20 lakh, respectively. Further, the projected additional expenditure admitted as above has been allocated in the debt-equity ratio of 70:30. The same is subject to truing-up in terms of the provisions contained in Regulation 6 of the 2009 regulations.

Return on Equity

57. Regulation 15 of the 2009 regulations provides as under:

“(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:

$$\text{Rate of pre-tax return on equity} = \text{Base rate} / (1-t)$$

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 year during the tariff period shall be tried up in accordance with Regulation 6 of these regulations.”

58. Return on equity has thus been worked out @23.481% per annum on the normative equity after accounting for the admitted additional capital expenditure.

| | (₹ in lakh) | | | | |
|--|-----------------|-----------------|-----------------|-----------------|-----------------|
| | 2004-05 | 2005-06 | 2006-07 | 2007-08 | 2008-09 |
| Notional Equity- Opening | 74191.20 | 74438.66 | 74450.84 | 74456.84 | 74699.84 |
| Addition of Equity due to Additional capital expenditure | 247.46 | 12.18 | 6.00 | 243.00 | 96.00 |
| Normative Equity-Closing | 74438.66 | 74450.84 | 74456.84 | 74699.84 | 74795.84 |
| Average Normative Equity | 74314.93 | 74444.75 | 74453.84 | 74578.34 | 74747.84 |
| Return on Equity (Base Rate) | 15.500% | 15.500% | 15.500% | 15.500% | 15.500% |
| Tax Rate for the year 2008-09 | 33.990% | 33.990% | 33.990% | 33.990% | 33.990% |
| Rate of Return on Equity (Pre Tax) | 23.481% | 23.481% | 23.481% | 23.481% | 23.481% |
| Return on Equity (Pre Tax)- (annualised) | 17449.89 | 17480.37 | 17482.51 | 17511.74 | 17551.54 |

Interest on loan

59. Regulation 16 of the 2009 regulations provides as under:

“(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.”

60. Interest on loan has been worked out as mentioned below:

(a) The gross normative loan of ₹173112.80 lakh as on 1.4.2009 has been considered.

(b) Cumulative repayment as on 31.3.2009 works out to ₹131508.53 lakh as per order dated 3.8.2011 in Petition No.146/2004 and the same has been considered as cumulative repayment as on 1.4.2009. However, after taking in to account the proportionate adjustment (taking into account the liability and debt position as on 1.4.2004 along with additions during the period 2004-09, if any) to the cumulative repayment on account of un-discharged liabilities deducted from the capital cost as on 1.4.2009, the cumulative repayment as on 1.4.2009 is revised as ₹127477.44 lakh.

(c) Accordingly, the net normative opening loan as on 1.4.2009 works out to ₹45635.36 lakh.

(d) Addition to normative loan to the tune of 70% of the admitted additional capital expenditure above has been considered.

(e) Depreciation allowed has been considered as repayment of normative loan during the respective year of the period 2009-14. Further, proportionate adjustment has been made to the repayments corresponding to the discharge of liabilities considered during the respective years on account of cumulative repayment adjusted as on 1.4.2009.

(f) In line with the first proviso to Regulation 16(5) of the 2009 regulations, the weighted average rate of interest has been calculated applying the actual loan portfolio existing as on 1.4.2009, for the generating station and the same is enclosed as Annexure-I to this order. In case of loans carrying floating rate of interest, the rate of interest as provided by the petitioner has been considered for the purpose of tariff, and the same is subject to truing-up.

61. The calculations for Interest on loan are as under:

| | (₹ in lakh) | | | | |
|---|----------------|----------------|---------------|---------------|-------------|
| | 2009-10 | 2010-11 | 2011-12 | 2012-13 | 2013-14 |
| Gross opening loan | 173112.80 | 173690.20 | 173718.63 | 173732.63 | 174299.63 |
| Cumulative repayment of loan upto previous year | 127477.44 | 140183.53 | 152905.27 | 165626.18 | 174299.63 |
| Net Loan Opening | 45635.36 | 33506.67 | 20813.36 | 8106.45 | 0.00 |
| Addition due to additional capitalisation | 577.40 | 28.43 | 14.00 | 567.00 | 224.00 |
| Repayment of loan during the year | 12697.18 | 12719.36 | 12720.91 | 8673.45 | 224.00 |
| Add: Repayment adjustment on discharges corresponding to undischarged liabilities deducted as on 1.4.2009 | 8.92 | 2.38 | 0.00 | 0.00 | 0.00 |
| Net Repayment | 12706.10 | 12721.74 | 12720.91 | 8673.45 | 224.00 |
| Net Loan Closing | 33506.67 | 20813.36 | 8106.45 | 0.00 | 0.00 |
| Average Loan | 39571.02 | 27160.02 | 14459.91 | 4053.23 | 0.00 |
| Weighted Average Rate of Interest on Loan | 4.7843% | 4.5156% | 4.3815% | 4.2900% | 4.2900% |
| Interest on Loan | 1893.18 | 1226.43 | 633.56 | 173.88 | 0.00 |

Depreciation

62. Regulation 17 of the 2009 regulations provides as under:

“(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 longterm 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 including Advance against Depreciation as admitted by the Commission upto 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.”

63. Cumulative depreciation as on 31.3.2009 as per order dated 3.8.2011 in Petition No. 146/2004 is ₹106241.15 lakh. Further, proportionate adjustment has been made to the cumulative depreciation on account of un-discharged liabilities deducted as on 1.4.2009. Accordingly, the revised cumulative depreciation as on 1.4.2009 works out to ₹102984.57 lakh. The value of freehold land as considered in said order as on 31.3.2009 is ₹2187.61 lakh and the same has been considered for the purpose of calculating depreciable value. Accordingly the balance depreciable value (before providing depreciation) for the year 2009-10 works out to ₹117983.59 lakh. Since, the elapsed life of the generating station is less than 12 years (i.e 8.63 years) as on 1.4.2009, from the date of commercial operation i.e 16.8.2000, the depreciation has been calculated considering the weighted average rate of depreciation as 5.1257%, for the years 2009-10, 2010-11, 2011-12 and 2012-13. However, as the elapsed life of the generating station as on 1.4.2013 (i.e. 12.62 years) would be more than 12 years from the date of commercial operation, i.e 16.8.2000, depreciation has been calculated by spreading over the balance depreciable value, for the year 2013-14. The balance useful life as on 1.4.2013 works out to 12.38 years. Further, proportionate adjustment has been made to the cumulative depreciation corresponding to

discharges of liabilities considered during the respective years on account of cumulative depreciation adjusted as on 1.4.2009. The necessary calculations in support of depreciation are as under:

| | (₹ in lakh) | | | | |
|--|-----------------|-----------------|-----------------|-----------------|----------------|
| | 2009-10 | 2010-11 | 2011-12 | 2012-13 | 2013-14 |
| Opening capital cost | 247304.00 | 248128.86 | 248169.47 | 248189.47 | 248999.47 |
| Closing capital cost | 248128.86 | 248169.47 | 248189.47 | 248999.47 | 249319.47 |
| Average capital cost | 247716.43 | 248149.17 | 248179.47 | 248594.47 | 249159.47 |
| Depreciable value @ 90% | 220975.94 | 221365.40 | 221392.68 | 221766.18 | 222274.68 |
| Remaining useful life at the beginning of the year | 16.38 | 15.38 | 14.38 | 13.38 | 12.38 |
| Balance depreciable value | 117991.37 | 105676.45 | 92982.45 | 80635.04 | 68401.35 |
| Depreciation (annualized) | 12697.18 | 12719.36 | 12720.91 | 12742.18 | 5527.38 |
| Cumulative depreciation at the end | 115681.75 | 128408.31 | 141131.14 | 153873.32 | 159400.71 |
| Add: Cumulative depreciation adjustment on account of discharges out of un-discharged liabilities deducted as on 1.4.2009 | 7.20 | 1.92 | 0.00 | 0.00 | 0.00 |
| Net Cumulative depreciation (at the end of the period) | 115688.95 | 128410.23 | 141131.14 | 153873.32 | 159400.71 |

O & M Expenses

64. Clause (a) of Regulation 19 of the 2009 regulations provide the following O&M expense norms for 500 MW Coal based and lignite fired generating stations as under:

| | (₹ in lakh/MW) | | | | |
|--|----------------|---------|---------|---------|---------|
| | 2009-10 | 2010-11 | 2011-12 | 2012-13 | 2013-14 |
| O&M expenses for 500 MW units | 13.00 | 13.74 | 14.53 | 15.36 | 16.24 |

65. The petitioner has claimed the following O&M expenses for the generating station of 1000 MW (2 x 500 MW) for the period 2009-14:

| | (₹ in lakh) | | | | |
|--------------|-------------|----------|----------|----------|----------|
| | 2009-10 | 2010-11 | 2011-12 | 2012-13 | 2013-14 |
| O&M expenses | 13000.00 | 13740.00 | 14530.00 | 15360.00 | 16240.00 |

66. Based on above norms, the operation & maintenance expense claimed by the petitioner is in order and has been allowed.

Target Availability

67. The Target Availability of the generating station is considered as 85% for the period 1.4.2009 to 31.3.2014.

Interest on Working Capital

68. Regulation 18(1)(a) of the 2009 regulations provides that the working capital for coal based generating stations shall cover:

(i) Cost of coal for 1.5 months for pit-head generating stations and two months for non-pithead generating stations, for generation corresponding to the normative annual plant availability factor;

(ii) Cost of secondary fuel oil for two months for generation corresponding to the normative annual plant availability factor, and in case of use of more than one liquid fuel oil, cost of fuel oil stock for the main secondary fuel oil;

(iii) Maintenance spares @ 20% of operation and maintenance expenses specified in regulation 19.

(iv) Receivables equivalent to two months of capacity charge and energy charge for sale of electricity calculated on normative plant availability factor; and

(v) O&M expenses for one month.

69. Clause (3) of Regulation 18 of the 2009 regulations as amended on 21.6.2011 provides as under:

"Rate of interest on working capital shall be on normative basis and shall be considered as follows:

(i) SBI short-term Prime Lending Rate as on 01.04.2009 or on 1st April of the year in which the generating station or unit thereof or the transmission system, as the case may be, is declared under commercial operation, whichever is later, for the unit or station whose date of commercial operation falls on or before 30.06.2010.

(ii) SBI Base Rate plus 350 basis points as on 01.07.2010 or as on 1st April of the year in which the generating station or a unit thereof or the transmission system, as the case may be, is declared under commercial operation, whichever is later, for the units or station whose date of commercial operation lies between the period 01.07.2010 to 31.03.2014.

Provided that in cases where tariff has already been determined on the date of issue of this notification, the above provisions shall be given effect to at the time of truing up.

70. Working capital has been calculated considering the following elements, as under:

Fuel Components in working capital

71. The petitioner has claimed the cost for fuel component in working capital in its petition, based on price and GCV of coal & oil for the preceding three months, of January, 2009 to March, 2009 as stated overleaf:

| | (₹ in lakh) | | | | |
|-------------------------------------|-------------|----------|------------------------|----------|----------|
| | 2009-10 | 2010-11 | 2011-12 (leap year) | 2012-13 | 2013-14 |
| Cost of coal for 1.5 months | 10898.99 | 10898.99 | 10928.85 | 10898.99 | 10898.99 |
| Cost of secondary fuel oil 2 months | 282.00 | 282.00 | 283.00 | 282.00 | 282.00 |

72. The claim of the petitioner for cost of coal is found to be in order. Considering the cost of secondary oil for the month of January, 2009 (as the quantity & price of Secondary Fuel Oil in February, 2009 and March, 2009 seems to be adjustment of purchases made earlier), as the latest procurement price for the generating station, the cost of coal and secondary fuel oil is worked out as under and the same is allowed for the purpose of tariff.

| | (₹ in lakh) | | | | |
|-------------------------------------|-------------|----------|----------|----------|----------|
| | 2009-10 | 2010-11 | 2011-12 | 2012-13 | 2013-14 |
| Cost of coal for 1.5 months | 10898.99 | 10898.99 | 10928.85 | 10898.99 | 10898.99 |
| Cost of secondary fuel oil 2 months | 275.03 | 275.03 | 275.78 | 275.03 | 275.03 |

Maintenance Spares

73. The petitioner has claimed the following maintenance spares in the working capital.

| | (₹ in lakh) | | | | |
|----------------------------|-------------|---------|---------|---------|---------|
| | 2009-10 | 2010-11 | 2011-12 | 2012-13 | 2013-14 |
| Cost of maintenance spares | 2600.00 | 2748.00 | 2936.00 | 3102.00 | 3278.00 |

74. The 2009 regulations provide for maintenance spares @ 20% of the operation and maintenance expenses as specified in Regulation 19. Accordingly, the maintenance spares allowed for the purpose of tariff is worked out as under:

| | (₹ in lakh) | | | | |
|----------------------------|-------------|---------|---------|---------|---------|
| | 2009-10 | 2010-11 | 2011-12 | 2012-13 | 2013-14 |
| Cost of maintenance spares | 2600.00 | 2748.00 | 2906.00 | 3072.00 | 3248.00 |

Receivables

75. Receivables have been worked out on the basis of two months of fixed and energy charges (based on primary fuel only) as under:

| | (₹ in lakh) | | | | |
|-----------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| | 2009-10 | 2010-11 | 2011-12 | 2012-13 | 2013-14 |
| Variable Charges - 2 months | 14531.99 | 14531.99 | 14571.80 | 14531.99 | 14531.99 |
| Fixed Charges - 2 months | 8556.46 | 8582.26 | 8648.85 | 8723.11 | 7627.69 |
| Total | 23088.45 | 23114.24 | 23220.65 | 23255.10 | 22159.67 |

O&M Expenses

76. O & M expenses for 1 month claimed by the petitioner for the purpose of working capital are as under:

| | (₹ in lakh) | | | | |
|-------------------|-------------|---------|---------|---------|---------|
| | 2009-10 | 2010-11 | 2011-12 | 2012-13 | 2013-14 |
| O & M for 1 month | 1083.00 | 1145.00 | 1223.00 | 1293.00 | 1366.00 |

77. However, O&M expenses for one month considered for working capital based on the provisions of the 2009 regulations is as under:

| | (₹ in lakh) | | | | |
|-------------------|-------------|---------|---------|---------|---------|
| | 2009-10 | 2010-11 | 2011-12 | 2012-13 | 2013-14 |
| O & M for 1 month | 1083.33 | 1145.00 | 1210.83 | 1280.00 | 1353.33 |

78. SBI PLR of 12.25% has been considered in the computation of the interest on working capital. Necessary computations in support of calculation of interest on working capital are as under as under:

| | (₹ in lakh) | | | | |
|--------------------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| | 2009-10 | 2010-11 | 2011-12 | 2012-13 | 2013-14 |
| Cost of coal -1.1/2 months | 10898.99 | 10898.99 | 10928.85 | 10898.99 | 10898.99 |
| Cost of secondary fuel oil - 2 month | 275.03 | 275.03 | 275.78 | 275.03 | 275.03 |
| O&M expenses - 1 month | 1083.33 | 1145.00 | 1210.83 | 1280.00 | 1353.33 |
| Maintenance Spares | 2600.00 | 2748.00 | 2906.00 | 3072.00 | 3248.00 |
| Receivables - 2 months | 23088.45 | 23114.24 | 23220.65 | 23255.10 | 22159.67 |
| Total working capital | 37945.80 | 38181.26 | 38542.11 | 38781.11 | 37935.03 |
| Rate of interest | 12.2500% | 12.2500% | 12.2500% | 12.2500% | 12.2500% |
| Interest on working capital | 4648.36 | 4677.20 | 4721.41 | 4750.69 | 4647.04 |

Cost of secondary fuel oil

79. Clause (1) of Regulation 20 of the 2009 regulations provides as under:

“20. Expenses on secondary fuel oil consumption for coal-based and lignite-fired generating station. (1) Expenses on secondary fuel oil in Rupees shall be computed corresponding to normative secondary fuel oil consumption (SFC) specified in clause (iii) of regulation 26, in accordance with the following formula:

SFC – Normative Specific Fuel Oil consumption in ml/kWh

= SFC x LPSFi x NAPAF x 24 x NDY x IC x 10

Where,

LPSFi – Weighted Average Landed Price of Secondary Fuel in Rs/ml considered initially.

NAPAF – Normative Annual Plant Availability Factor in percentage

NDY – Number of days in a year

IC - Installed Capacity in MW.

80. In terms of the above, the cost of secondary fuel oil has been calculated on the normative specific fuel oil consumption, the weighted average landed price of secondary fuel price adopted and NAPF of 85%. Accordingly, the cost of secondary fuel is as under:

| | <i>(₹ in lakh)</i> | | | | |
|----------------------------|--------------------|----------------|----------------|----------------|----------------|
| | 2009-10 | 2010-11 | 2011-12 | 2012-13 | 2013-14 |
| Cost of secondary fuel oil | 1650.17 | 1650.17 | 1654.69 | 1650.17 | 1650.17 |

81. The cost of secondary fuel oil arrived at as above shall be subject to fuel price adjustment at the end of each year of tariff period in terms of the proviso to Regulation 20(2) as per the following formula:

$$SFC \times NAPAF \times 24 \times NDY \times IC \times 10 \times (LPSF_y - LPSF_i)$$

Where,

LPSF_y = The weighted average landed price of secondary fuel oil for the year in Rs./ml

82. Regulation 19 (e) of the 2009 Regulations provides as **Compensation Allowance** under:

“In case of coal-based or lignite-fired thermal generating station a separate compensation allowance unit-wise shall be admissible to meet expenses on new assets of capital nature including in the nature of minor assets, in the following manner from the year following the year of completion of 10, 15, 20 years of useful life.”

| Years of operation | Compensation allowance <i>(₹ lakh/MW/Year)</i> |
|---------------------------|--|
| 0-10 | Nil |
| 11-15 | 0.15 |
| 16-20 | 0.35 |
| 21-25 | 0.65 |

83. The petitioner has claimed following compensation allowance during the 2009-14 as stated overleaf:

| | (₹ in lakh) | | | | |
|------------------------|-------------|---------|---------|---------|---------|
| | 2009-10 | 2010-11 | 2011-12 | 2012-13 | 2013-14 |
| Compensation Allowance | 0.00 | 0.00 | 150.00 | 150.00 | 150.00 |

84. The date of commercial operation of the generating station is 1.10.2000. Since, the claim of the petitioner for compensation allowance is in terms of the above said regulations, the same is allowed.

Annual Fixed charges for 2009-14

85. The annual fixed charges for the period 2009-14 in respect of the generating station are summarized as under:

| | (₹ in lakh) | | | | |
|-----------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| | 2009-10 | 2010-11 | 2011-12 | 2012-13 | 2013-14 |
| Depreciation | 12697.18 | 12719.36 | 12720.91 | 12742.18 | 5527.38 |
| Interest on Loan | 1893.18 | 1226.43 | 633.56 | 173.88 | 0.00 |
| Return on Equity | 17449.89 | 17480.37 | 17482.51 | 17511.74 | 17551.54 |
| Interest on Working Capital | 4648.36 | 4677.20 | 4721.41 | 4750.69 | 4647.04 |
| O&M Expenses | 13000.00 | 13740.00 | 14530.00 | 15360.00 | 16240.00 |
| Cost of Secondary fuel oil | 1650.17 | 1650.17 | 1654.69 | 1650.17 | 1650.17 |
| Compensation Allowance | 0.00 | 0.00 | 150.00 | 150.00 | 150.00 |
| Total | 51338.77 | 51493.54 | 51893.07 | 52338.66 | 45766.13 |

Note: (i) All figures are on annualized basis. (ii) All the figures under each head have been rounded. (ii) The figure in total column in each year is also rounded. Because of rounding of each figure the total may not be arithmetic sum of individual items in columns.

86. The recovery of the annual fixed charges shall be subject to truing up, in terms of Regulation 6 of the 2009 regulations.

Energy Charge Rate (ECR)

87. Sub-clause (b) of clause (6) of Regulation 21 of the 2009 regulations provides as under:

“Energy charge rate (ECR) in Rupees per kWh on ex-power plant basis shall be determined to three decimal places in accordance with the following formulae:

$$ECR = GHR \times LPPF \times 100 / \{CVPF \times (100 - AUX)\}$$

Where,

AUX = Normative auxiliary energy consumption in percentage.

CVPF = Gross calorific value of primary fuel as fired, in kCal per kg, per litre or per standard cubic metre, as applicable.

ECR = Energy charge rate, in Rupees per kWh sent out.

GHR = Gross station heat rate, in kCal per kWh.

LPPF = Weighted average landed price of primary fuel, in Rupees per kg, per litre or per standard cubic metre, as applicable, during the month.

88. The petitioner has claimed an energy charge rate (ECR) of 125.24 paisa/kWh, based on the weighted average price, GCV of fuel procured and burnt for the preceding three months of January, 2009 to March, 2009. The calculations for ECR are based on the price & GCV of coal for the preceding three months i.e. January, 2009, February, 2009 and March, 2009. It is observed that the price of Secondary oil was very high during February and March, 2009, as compared to January 2009 and the quantity procured was very less. As the oil prices were showing a declining trend during this period, it appears that the quantity & price of SFO during February, 2009 and March, 2009 is on account of adjustment of the purchases made earlier. Therefore, it would not be appropriate for us to consider these data for computation of ECR and hence, the price & GCV during January, 2009 has only been considered. The Energy Charge Rate of 125.24 paise/kWh, as calculated by the petitioner is found to be in order. However, in terms of the provisions of the 2009 regulations, ECR calculated up to three (3) decimal places are to be considered, instead of two (2) decimal places, as calculated by the petitioner. Accordingly, the ECR is worked out as 125.239 paise/kWh. The relevant calculations are as under:

| | Unit | 2009-14 |
|---------------------------------------|-------------|----------------|
| Capacity | MW | 2X500=1000 |
| Gross Station Heat Rate | Kcal/kWh | 2425 |
| Auxiliary Energy Consumption | % | 6.50 |
| Weighted average GCV of coal | Kcal/kg | 3528.67 |
| Weighted average price of coal | Rs/MT | 1710.81 |
| Rate of Energy Charge (Ex-bus) | Paise/kWh | 125.239 |

89. The petitioner shall be entitled to compute and recover the annual fixed charges and energy charges in accordance with Regulation 21 of the 2009 regulations.

90. The petitioner has also prayed for the following reliefs, which are disposed of as stated overleaf:

(a) **Recovery of RLDC Fees and Charges:** The claim of the petitioner towards recovery of RLDC fees & charges incurred by the petitioner pursuant to the notification of the Central Electricity Regulatory Commission (Fees and Charges of Regional Load Despatch Centre and other related matters) Regulations, 2009, has not been considered at this stage and the same would be dealt with separately in accordance with law.

(b) **Expenditure incurred for implementation of scheme for provision of supply of electricity in 5 km area around Central Power plants:** The petitioner has submitted that in terms of the notification dated 27.4.2010 of the Government of India of a scheme for provision of supply of electricity in 5 km area around Central Power plants, the petitioner is required to create infrastructure for supply of reliable power to the rural households of the villages within a radius of 5 km of existing and new power stations and as per the scheme, the Appropriate Commission shall consider the expenditure incurred for implementation of such scheme for the purpose of determining tariff of the generating station. The petitioner has submitted that DPR for implementation of the scheme is under preparation and it was not possible to estimate the projected expenditure at this stage. The petitioner has further submitted that it would approach the Commission for consideration of the cost incurred in implementation of this scheme for tariff purpose thereafter. The petitioner is at liberty to approach the Commission through an appropriate application, which would be considered in accordance with law.

Application fee and the publication expenses

91. The petitioner has sought approval for the reimbursement of fees amounting to ₹20.00 lakh each for the years 2009-10, 2010-11 and 2011-12 towards filing the petition and towards expenses incurred for publication of notices in connection with the petition. The petitioner by its affidavit dated 23.4.2010 has submitted that an expenditure of ₹2,51,629/- has been incurred by it for publication of notice in the newspapers.

92. Regulation 42 of the 2009 regulations provides as under:

“The application filing fee and the expenses incurred on publication of notices in the application for approval of tariff, may in the discretion of the Commission, be allowed to be recovered by the generating company or the transmission licensee, as the case may be, directly from the beneficiaries or the transmission customers, as the case may be.”

93. In terms of our decision contained in order dated 11.1.2010 in Petition No.109/2009, the expenses towards filing of tariff application and the expenses incurred on publication of notices are to be reimbursed. Accordingly, the expenses incurred by the petitioner for petition filing fees for the years 2009-10, 2010-11 and

2011-12 and for publication of notices in connection with the present petition shall be directly recovered from the beneficiaries, on *pro rata* basis. The filing fees in respect of the balance years would be recoverable as and when paid by the petitioner in terms of the Central Electricity Regulatory Commission (Payment of Fees) Regulations, 2008 and /or its amendments thereof.

94. In addition to the above, the petitioner is entitled to recover other taxes etc., levied by statutory authorities in accordance with the 2009 regulations, as applicable.

95. The petitioner is already billing the respondents on provisional basis in accordance with the Commission's order dated 6.7.2011. The provisional billing of tariff shall be adjusted in the light of our order dated 26.8.2011 in Petition No. 175/2011(*suo motu*)

96. This order disposes of Petition No.258/2009.

Sd/-
[M.DEENA DAYALAN]
MEMBER

Sd/-
[S.JAYARAMAN]
MEMBER

Annexure-I**Calculation of weighted Average Rate of Interest on loan***(₹ in lakh)*

| Sl. no. | Name of loan | Particulars | 2009-10 | 2010-11 | 2011-12 | 2012-13 | 2013-14 |
|---------|-----------------------|--------------------------------|-----------------|-----------------|-----------------|----------------|----------|
| 1 | Loan-1 IBRD Main | Net opening loan | 41706.92 | 34358.89 | 26454.78 | 17951.97 | 8805.62 |
| | | Add: Addition du. the period | - | - | - | - | - |
| | | Less: Repayment du. the period | 7348.02 | 7904.11 | 8502.81 | 9146.35 | 8805.62 |
| | | Net Closing Loan | 34358.89 | 26454.78 | 17951.97 | 8805.62 | - |
| | | Average Loan | 38032.90 | 30406.83 | 22203.37 | 13378.79 | 4402.81 |
| | | Rate of Interest | 4.2900% | 4.2900% | 4.2900% | 4.2900% | 4.2900% |
| | | Interest | 1631.61 | 1304.45 | 952.52 | 573.95 | 188.88 |
| 2 | HDFC-II (T1, D1 & D2) | Net opening loan | 572.71 | - | - | - | - |
| | | Add: Addition du. the period | - | - | - | - | - |
| | | Less: Repayment du. the period | 572.71 | - | - | - | - |
| | | Net Closing Loan | - | - | - | - | - |
| | | Average Loan | 286.36 | - | - | - | - |
| | | Rate of Interest | 10.4000% | 10.4000% | 10.4000% | 10.4000% | 10.4000% |
| | | Interest | 29.78 | - | - | - | - |
| 3 | SBI-I (T1, D1,3,4,5) | Net opening loan | 1507.57 | - | - | - | - |
| | | Add: Addition du. the period | - | - | - | - | - |
| | | Less: Repayment du. the period | 1507.57 | - | - | - | - |
| | | Net Closing Loan | - | - | - | - | - |
| | | Average Loan | 753.79 | - | - | - | - |
| | | Rate of Interest | 11.6500% | 11.6500% | 11.6500% | 11.6500% | 11.6500% |
| | | Interest | 87.82 | - | - | - | - |
| 4 | UBI (T1, D2) | Net opening loan | 200.00 | 100.00 | - | - | - |
| | | Add: Addition du. the period | - | - | - | - | - |
| | | Less: Repayment du. the period | 100.00 | 100.00 | - | - | - |
| | | Net Closing Loan | 100.00 | - | - | - | - |
| | | Average Loan | 150.00 | 50.00 | - | - | - |
| | | Rate of Interest | 7.3060% | 7.3060% | 7.3060% | 7.3060% | 7.3060% |
| | | Interest | 10.96 | 3.65 | - | - | - |
| 5 | SBT (T1, D1) | Net opening loan | 285.71 | 142.86 | - | - | - |
| | | Add: Addition du. the period | - | - | - | - | - |
| | | Less: Repayment du. the period | 142.86 | 142.86 | - | - | - |
| | | Net Closing Loan | 142.86 | - | - | - | - |
| | | Average Loan | 214.29 | 71.43 | - | - | - |
| | | Rate of Interest | 7.3100% | 7.3100% | 7.3100% | 7.3100% | 7.3100% |
| | | Interest | 15.66 | 5.22 | - | - | - |
| 6 | SBH (T1, D1) | Net opening loan | 214.29 | 71.43 | - | - | - |
| | | Add: Addition du. the period | - | - | - | - | - |
| | | Less: Repayment du. the period | 142.86 | 71.43 | - | - | - |
| | | Net Closing Loan | 71.43 | - | - | - | - |
| | | Average Loan | 142.86 | 35.71 | - | - | - |
| | | Rate of Interest | 7.3100% | 7.3100% | 7.3100% | 7.3100% | 7.3100% |
| | | Interest | 10.44 | 2.61 | - | - | - |

| | | | | | | | |
|----|--------------------|-----------------------------------|-----------------|-----------------|-----------------|----------------|----------|
| 7 | SBI-II (T1, D3) | Net opening loan | 513.14 | 341.71 | 170.29 | - | - |
| | | Add: Addition du. the period | - | - | - | - | - |
| | | Less: Repayment du. the period | 171.43 | 171.43 | 170.29 | - | - |
| | | Net Closing Loan | 341.71 | 170.29 | - | - | - |
| | | Average Loan | 427.43 | 256.00 | 85.14 | - | - |
| | | Rate of Interest | 11.6500% | 11.6500% | 11.6500% | 11.6500% | 11.6500% |
| | | Interest | 49.80 | 29.82 | 9.92 | - | - |
| 8 | SBP (T1, D3) | Net opening loan | 657.14 | 328.57 | - | - | - |
| | | Add: Addition during the period | - | - | - | - | - |
| | | Less: Repayment during the period | 328.57 | 328.57 | - | - | - |
| | | Net Closing Loan | 328.57 | - | - | - | - |
| | | Average Loan | 492.86 | 164.29 | - | - | - |
| | | Rate of Interest | 7.3053% | 7.3053% | 7.3053% | 7.3053% | 7.3053% |
| | | Interest | 36.00 | 12.00 | - | - | - |
| 9 | Bond XII | Net opening loan | 1500.00 | 1000.00 | 500.00 | - | - |
| | | Add: Addition du. the period | - | - | - | - | - |
| | | Less: Repayment du. the period | 500.00 | 500.00 | 500.00 | - | - |
| | | Net Closing Loan | 1000.00 | 500.00 | - | - | - |
| | | Average Loan | 1250.00 | 750.00 | 250.00 | - | - |
| | | Rate of Interest | 10.0300% | 10.0300% | 10.0300% | 10.0300% | 10.0300% |
| | | Interest | 125.38 | 75.23 | 25.08 | - | - |
| 10 | Gross Total | Net opening loan | 47157.49 | 36343.46 | 27125.06 | 17951.97 | 8805.62 |
| | | Add: Addition during the period | - | - | - | - | - |
| | | Less: Repayment during the period | 10814.02 | 9218.40 | 9173.10 | 9146.35 | 8805.62 |
| | | Net Closing Loan | 36343.46 | 27125.06 | 17951.97 | 8805.62 | - |
| | | Average Loan | 41750.48 | 31734.26 | 22538.51 | 13378.79 | 4402.81 |
| | | Rate of Interest | 4.7843% | 4.5156% | 4.3815% | 4.2900% | 4.2900% |
| | | Interest | 1997.45 | 1432.99 | 987.52 | 573.95 | 188.88 |