CENTRAL ELECTRICITY REGULATORY COMMISSION NEW DELHI

Petition No. 283/GT/2014

Coram: Shri Gireesh B. Pradhan, Chairperson Shri A.K.Singhal, Member Shri A.S. Bakshi, Member Dr. M.K. Iyer, Member

Date of Order: 21st January, 2017

IN THE MATTER OF

Approval of tariff of Kahalgaon Super Thermal Power Station Stage-II (1500 MW) for the period from 1.4.2014 to 31.3.2019

AND

IN THE MATTER OF

NTPC Ltd NTPC Bhawan, Core-7, SCOPE Complex, 7, Institutional Area, Lodhi Road, New Delhi-110003

...Petitioner

Vs

- 1. GRIDCO Ltd 24, Janpath Bhubaneshwar-751007
- Power Department,Govt of Sikkim, Kazi Road,GangtokSikkim-737101
- 3. Gujarat Urja Vikas Nigam Limited, VidyutBhavan, Race Course, Vadodara-390 007
- 4. Madhya Pradesh Power Management Company Limited, Shakti Bhavan, Vidyut Nagar, Jabalpur-482 008
- 5. Maharashtra State Electricity Distribution Company Ltd, 'Prakashgad', Bandra (East), Mumbai-400 051
- 6. Chhattisgarh State Power Distribution Company Ltd, Dhagania, Raipur-492 013
- 7. Electricity Department Administration of Dadra and Nagar Haveli, Silvassa Via VAPI



- 8. Electricity Department, Administration of Daman & Diu, Daman-396 210
- 9. Uttar Pradesh Power Corporation Ltd Shakti Bhawan, 14, Ashok Road, Lucknow– 226001
- Uttarakhand Power Corporation Ltd
 Urja Bhawan, Kanwali Road,
 Dehradun 248001
- 11. Jaipur Vidyut Vitran Nigam Ltd Vidyut Bhawan, Janpath, Jaipur 302205
- 12. Ajmer Vidyut Vitran Nigam Ltd Old Power House, Hatthi Bhatta, Jaipur Road, Ajmer – 305001
- 13. Jodhpur Vidyut Vitran Nigam Ltd New Power House, Industrial Area, Jodhpur – 342003
- 14. Power Development Department, Government of J&K, Secretariat, Srinagar-19009
- 15. BSES Rajdhani Power Ltd BSES Bhawan, Nehru Place, New Delhi – 110019
- 16. BSES Yamuna Power Ltd BSES Bhawan, Nehru Place, New Delhi – 110 019
- 17. Tata Power Delhi Distribution Ltd 33 kV Sub-station, Kingsway Camp, Delhi –110009
- 18. Haryana Power Purchase Centre, Shakti Bhawan, Sector-6 Panchkula– 134 109
- 19. Punjab State Power Corporation Ltd The Mall, Secretariat Complex, Patiala 147 001
- 20. Himachal Pradesh State Electricity Board, Vidyut Bhawan, Kumar House, Shimla-171004
- 21. Power Department, Union Territory of Chandigarh, 1st Floor, UT Secretariat, Sector 9D, Chandigarh – 160 009

...Respondents



Parties present:

Shri Ajay Dua, NTPC

Shri Bhupinder Kumar, NTPC

Shri Rajeev Choudhary, NTPC

Shri Sameer Aggarwal, NTPC

Shri Nishant Gupta, NTPC

Shri T. Vinod Kumar, NTPC

Shri Shankar Saran, NTPC

Shri Manoj Sharma, NTPC

Shri R. B. Sharma, Advocate, BRPL & GRIDCO

Shri Abhishek Shrivastava, BYPL

Shri Manish Garg, UPPCL

Shri Arvind Banerjee, CSPDCL

<u>ORDER</u>

This petition has been filed by the petitioner, NTPC for approval of tariff of Kahalgaon Super Thermal Power Station, Stage-II (3 x 500 MW) (hereinafter referred to as "the generating station") for the period 20014-19 in accordance with the provisions of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 (hereinafter referred to as "the 2014 Tariff Regulations").

- 2. The generating station with a capacity of 1500 MW comprises of three units of 500 MW each. Unit-I of the generating station was declared under commercial operation on 1.8.2008, Unit-II on 30.12.2008 and Unit-III on 20.3.2010.
- 3. The Commission vide order dated 22.1.2016 in Petition Nos. 206/GT/2013 and 272/GT/2014 had revised the tariff of the generating station for the period 2009-14 after truing-up of the additional capital expenditure in terms of Regulation 6 (1) of the 2009 Tariff Regulations, considering the capital cost of ₹544756.09 lakh as on 31.3.2014 on cash basis and after deduction of un-discharged liabilities of ₹22571.96 lakh as on 1.4.2009. Accordingly, the annual fixed charges determined by the said order dated 22.1.2016 is as under:

| | | | | | | (₹inlakh) |
|------------------|-----------|-----------|----------|----------|----------|-----------|
| | 200 | 9-10 | 2010-11 | 2011-12 | 2012-13 | 2013-14 |
| | 1.4.2009 | 20.3.2010 | | | | |
| | to | to | | | | |
| | 19.3.2010 | 31.3.2010 | | | | |
| Depreciation | 16349.88 | 24537.81 | 25255.85 | 26321.25 | 27327.15 | 27754.87 |
| Interest on Loan | 13642.96 | 20376.55 | 21010.68 | 22968.56 | 22288.18 | 21953.79 |
| Return on Equity | 22289.18 | 33524.51 | 34111.90 | 35192.10 | 36503.71 | 38239.42 |
| Interest on | 6230.96 | 9485.05 | 9585.86 | 9754.45 | 9837.69 | 9947.62 |

| Working Capital | | | | | | |
|-------------------|----------|-----------|-----------|-----------|-----------|-----------|
| O&M Expenses | 13000.00 | 18850.00 | 19923.00 | 21068.50 | 22272.00 | 23548.00 |
| Cost of Secondary | 1451.72 | 3663.13 | 3663.13 | 3673.17 | 3663.13 | 3663.13 |
| Fuel Oil | | | | | | |
| Total | 72964.70 | 110437.06 | 113550.42 | 118978.02 | 121891.87 | 125106.83 |

4. The petitioner in this petition filed vide affidavit dated on 14.8.2014 has sought approval of tariff in accordance with the provisions of the 2014 Tariff Regulations. Accordingly, the capital cost and the annual fixed charges claimed by the petitioner for the period 2014-19 in this petition are as under:

Capital Cost

(₹inlakh)

| | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
|-------------------------------------|-----------|-----------|-----------|-----------|-----------|
| Opening Capital Cost | 549792.75 | 552457.75 | 555532.75 | 567526.75 | 574966.75 |
| Add: Additional Capital Expenditure | 2665.00 | 3075.00 | 11994.00 | 7440.00 | 1760.00 |
| Closing Capital Cost | 552457.75 | 555532.75 | 567526.75 | 574966.75 | 576726.75 |
| Average Capital Cost | 551125.25 | 553995.25 | 561529.75 | 571246.75 | 575846.75 |

Annual Fixed Charges

(₹in lakh)

| | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
|-----------------------------|-----------|-----------|-----------|-----------|-----------|
| Depreciation | 28195.18 | 28342.01 | 28727.47 | 29224.58 | 29459.91 |
| Interest on Loan | 20670.22 | 18712.66 | 17287.94 | 15593.57 | 13159.90 |
| Return on Equity | 33693.30 | 33868.76 | 34329.38 | 34923.43 | 35204.66 |
| Interest on Working Capital | 15089.51 | 15178.07 | 15232.45 | 15324.84 | 15393.51 |
| O&M Expenses | 24000.00 | 25515.00 | 27120.00 | 28830.00 | 30645.00 |
| Total | 121648.21 | 121616.49 | 122697.24 | 123896.43 | 123862.99 |

- 5. During the pendency of this petition, the petitioner had filed Interlocutory Application (IA No. 64/2014) seeking "in-principle clearance to the work of 400 kV Bus Sectionaliser and capitalisation of the associated expenditure for the purpose of tariff in view of the safe & reliable operation of the grid" and the Commission by order dated 6.2.2015 disposed of the IA.
- 6. Thereafter, the matter was heard on various dates and the Commission after hearing the parties, reserved its order on 7.10.2015 to decide the issue regarding "the stage at which the GCV of coal should be measured on as received basis" in terms of the observations of the Hon'ble High Court of Delhi dated 7.9.2015 in C. M. No. 6643 of 2015 in Writ Petition (c) No.1641/2014 (NTPC Vs CERC). Subsequently, the Commission by order dated 25.1.2016 decided the above said issue in terms of the directions dated 7.9.2015 of the Hon'ble High Court of Delhi. Against the order dated 25.1.2016, the petitioner had filed Review Petition No. (Petition No. 11/RP/2016) on certain

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issues and the Commission after hearing the matter on 31.3.2016 by order dated 30.6.2016 had rejected the prayer of the petitioner for review of the said order dated 25.1.2016. The writ petition is pending before the Hon'ble High Court.

7. Meanwhile, this petition was heard on 24.5.2016 and the Commission after directing the petitioner to file additional information, reserved its order in the petition. The petitioner has filed the additional information in compliance with the directions of the Commission and has served copies of the same on the respondents. The respondents, UPPCL, GRIDCO, BRPL, MPPMCL and CSPDCL have filed their replies and the petitioner has filed its rejoinder to the said replies. Based on the submissions of the parties and the documents available on record, we proceed to determine the tariff of the generating station for the period 2014-19 as stated in the subsequent paragraphs

Capital Cost as on 1.4.2009

8. Clause 3 of Regulation 9 of the 2014 Tariff Regulations provides as under:

"The Capital cost of an existing project shall include the following:

- (a) the capital cost admitted by the Commission prior to 1.4.2014 duly trued up by excluding liability, if any, as on 1.4.2014;
- (b) additional capitalization and de-capitalization for the respective year of tariff as determined in accordance with Regulation 14; and
- (c) expenditure on account of renovation and modernisation as admitted by this Commission in accordance with Regulation 15."
- 9. The annual fixed charges claimed in the petition is based on opening capital cost of ₹549792.75 lakh as on 1.4.2014 as against the admitted capital cost of ₹544756.09 lakh as on 31.3.2014 vide Commission's order dated 22.1.2016 in Petition Nos. 206/GT/2013 and 272/GT/2014. Further, the petitioner vide affidavit dated 14.8.2014 has furnished the value of capital cost and liabilities as on 1.4.2014 as per books of accounts in Form-9E. The details of liabilities and capital cost have been reconciled with the information available with the record of the Commission as under:

(₹inlakh)

| | As per Form-9E | As per records of Commission |
|--|----------------|---------------------------------|
| Capital cost as on 1.4.2014 as per books | 593453.47 | 593453.47 |
| Liabilities included in the above | 24728.01 | 24728.01 |

10. It is evident from the above that there is no variation in the capital cost and the liabilities position as on 1.4.2014 as per the books and records available with the Commission. Further, out of the total liabilities of ₹24728.01 lakh, liabilities amounting to ₹22571.96 lakh corresponds to the admitted capital cost of ₹544756.09 lakh (on cash basis) as on 31.3.2014. Accordingly, the opening capital cost considered as on 1.4.2014, after removal of un-discharged liabilities works out to ₹544756.09 lakh (on cash basis).

Actual/ Projected Additional Capital Expenditure during 2014-19

- 11. Regulations 14 (1) and 14 (3) of the 2014 Tariff Regulations, provides as under:
 - "14.(1) The capital expenditure in respect of the new project or an existing projectincurred or projected to be incurred, on the following counts within the original scopeof work, after the date of commercial operation and up to the cut-off date may beadmitted by the Commission, subject to prudence check:
 - (i) Un-discharged liabilities recognized to be payable at a future date;
 - (ii) Works deferred for execution;
 - (iii) Procurement of initial capital spares within the original scope of work, inaccordance with the provisions of Regulation 13;
 - (iv) Liabilities to meet award of arbitration or for compliance of the order or decree of a court of law, and
 - (v) Change in law or compliance of any existing law.

Provided that the details of works asset wise/work wise included in the originalscope of work along with estimates of expenditure, liabilities recognized to be payable at a future date and the works deferred for execution shall be submitted along with the application for determination of tariff

XXX

- 14. (3) The capital expenditure, in respect of existing generating station or the transmission system including communication system, incurred or projected to be incurred on the following counts after the cut-off date, may be admitted by the Commission, subject to prudence check:
- (i) Liabilities to meet award of arbitration or for compliance of the order or decree of a court of law;
- (ii) Change in law or compliance of any existing law;
- (iii) Any expenses to be incurred on account of need for higher security and safety of the plant as advised or directed by appropriate Government Agencies of statutory authorities responsible for national security/internal security;
- (iv) Deferred works relating to ash pond or ash handling system in the original scope of work;
- (v) Any liability for works executed prior to the cut-off date, after prudence check of the details of such un-discharged liability, total estimated cost of package, reasons for such withholding of payment and release of such payments etc.:
- (vi) Any liability for works admitted by the Commission after the cut-off date to the extent of discharge of such liabilities by actual payments;

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- (vii) Any additional capital expenditure which has become necessary for efficient operation of generating station other than coal / lignite based stations or transmission system as the case may be. The claim shall be substantiated with the technical justification duly supported by the documentary evidence like test results carried out by an independent agency in case of deterioration of assets, report of an independent agency in case of damage caused by natural calamities, obsolescence of technology, up-gradation of capacity for the technical reason such as increase in fault level:
- (viii) 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) and due to geological reasons after adjusting the proceeds from any insurance scheme, and expenditure incurred due to any additional work which has become necessary for successful and efficient plant operation;
- (ix) 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 due to obsolesce of technology, replacement of switchyard equipment due to increase of fault level, tower strengthening, communication equipment, emergency restoration system, insulators cleaning infrastructure, replacement of porcelain insulator with polymer insulators, replacement of damaged equipment not covered by insurance and any other expenditure which has become necessary for successful and efficient operation of transmission system; and
- (x) Any capital expenditure found justified after prudence check necessitated on account of modifications required or done in fuel receiving system arising due to non-materialization of coal supply corresponding to full coal linkage in respect of thermal generating station as result of circumstances not within the control of the generating station:

Provided that any expenditure on acquiring the minor items or the assets including tools and tackles, furniture, air-conditioners, voltage stabilizers, refrigerators, coolers, computers, 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. 1.4.2014:

Provided further that any capital expenditure other than that of the nature specified above in (i) to (iv) in case of coal/lignite based station shall be met out of compensation allowance:

Provided also that if any expenditure has been claimed under Renovation and Modernisation (R&M), repairs and maintenance under (O&M) expenses and Compensation Allowance, same expenditure cannot be claimed under this regulation."

12. The break-up of the projected additional capital expenditure claimed during the period 2014-

19 is detailed as under:

(₹in lakh)

| SI. | | Regulations | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
|------|------------------------|----------------|---------|---------|---------|---------|---------|
| No. | | | | | | | |
| 1 | Ash Dyke –III A/B/C | 14(3)(iv) | 1100.00 | 1500.00 | 1100.00 | 1500.00 | 1100.0 |
| 2 | MGR Land | 14(1)(ii) & 54 | 500.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3 | Township | 14(1)(ii) & 54 | 450.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4 | O&M Workshop Building | 14(1)(ii) & 54 | 100.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5 | EOT Crane for Workshop | 14(1)(ii) & 54 | 110.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | Building | | | | | | |
| 6 | MGR (HURRA C Mines) | 14(1)(ii) & 54 | 0.00 | 0.00 | 0.00 | 5940.00 | 660.00 |
| 7 | Additional DM Plant | 14(1)(ii) & 54 | 0.00 | 0.00 | 1000.00 | 0.00 | 0.00 |
| | Stream | | | | | | |
| 8 | Wagon (44 nos) | 14(3)(x) | 405.00 | 1575.00 | 0.00 | 0.00 | 0.00 |
| | Total (2 – 8) | | 2665.00 | 3075.00 | 2100.00 | 7440.00 | 1760.00 |
| Addi | tional works | | | | | • | |

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| 9 | 400 kV Bus Sectionalizer | 14(3)(ii) & 14(3)(ix) | 0.00 | 0.00 | 9894.00 | 0.00 | 0.00 |
|---|--|--------------------------|---------|---------|----------|---------|---------|
| | Total Additional Capital Expenditure claimed | | 2665.00 | 3075.00 | 11994.00 | 7440.00 | 1760.00 |

13. It is observed from the above that the petitioner has claimed total projected additional capital expenditure of ₹10740.00 lakh for the period 2014-19 towards deferred works within the original scope of work and after the cut-off date (31.3.2013) under Regulation 14(1)(ii) read with Regulation 54 of the 2014 Tariff Regulations. We now discuss the claims of the petitioner for projected additional capital expenditure, on prudence check, as under:

Ash Dyke works-III A/B/C

- 14. The petitioner has claimed projected additional capital expenditure of ₹1100.00 lakh in 2014-15, ₹1500.00 lakh in 2015-16, ₹1100.00 lakh in 2016-17, ₹1500.00 lakh in 2017-18 and ₹1100.00 lakh in 2018-19 towards Ash dyke raising works –III A/B/C under Regulation 14(3)(iv) of the 2014 Tariff Regulations. In justification of the same, the petitioner has submitted that the raising of Ash Dyke for ash disposal and Ash pond work are within the original scope of work and deferred for execution and hence the Commission may allow the same. It has also submitted that the projected expenditure is for planned work relating to Ash handling and Ash pond related works which are continuous in nature during the operational life of the generating station. The petitioner has further submitted that the work claimed is as per approved schemes under the original scope of work and the investment of ₹134.75 crore was approved as stated in Form-5B for the ash dyke system. The petitioner has added that an amount of ₹46.80 crore has been capitalized on account of Ash Dyke up to 31.3.2014 and ₹63.00 crore has been projected for capitalization during the period 2014-19.
- 15. The respondents, GRIDCO and BRPL have submitted that the raising Ash Dyke for ash disposal is not deferred work but is a continuous process during the entire operational lifetime of the generating station and hence, it is an O&M expense for which an increased norm in the 2014 Tariff Regulations have been specified. The respondent, MPPMCL has submitted that projected expenditure of ₹63.00 crore towards Ash Dyke-III A/B/C may be allowed only after prudence check. In response, the petitioner has submitted that the projected expenditure relating to raising of Ash dyke is

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within the original scope of work and was deferred for execution and is permissible under 2014 Tariff Regulations.

16. We have examined the matter. In our view, the work of ash dyke for ash disposal is a deferred work within the original scope of work of the project and these works are continuous in nature during the entire operational lifetime of the generating station Accordingly, the projected additional capital expenditure of ₹1100.00 lakh in 2014-15, ₹1500.00 lakh in 2015-16, ₹1100.00 lakhs in 2016-17, ₹1500.00 lakh in 2017-18 and ₹1100.00 lakh in 2018-19 is allowed under Regulation 14(3)(iv) of the 2014 Tariff Regulations. The petitioner is however directed to submit on affidavit, the details of work done under this head along with proper justification for the actual capital expenditure incurred during the period 2014-19, at the time of truing-up in terms of Regulation 8 of the 2014 Tariff Regulations.

Deferred Works within the original scope of work

17. The Commission vide order dated 13.4.2012 in Petition No. 282/2009 had allowed the projected additional capital expenditure of ₹67601.00 lakh towards deferred works up to the cut-off date (31.3.2013) as claimed by the petitioner. However, in Petition No. 272/GT/2014, the petitioner had claimed total actual additional capital expenditure of ₹52605.40 lakh towards deferred liabilities/ deferred works and the Commission vide order dated 22.1.2016 while allowing the actual additional capital expenditure incurred for deferred works within the original scope of work executed within the cut-off date, had disallowed the claim of the petitioner towards deferred works in 2013-14 (Main plant superstructure). In this background, the claim of the petitioner is examined as under:

MGR Land

18. The petitioner has claimed projected additional capital expenditure of ₹500.00 lakh in 2014-15 towards MGR land under Regulation 14(1)(ii) read with Regulation 54 of the 2014 Tariff Regulations. In justification of the same, the petitioner has submitted that this work was allowed by the Commission in order dated 13.4.2012 in Petition No. 282/2009. It has also submitted that the linked mines of the generating station are yet to be developed by ECL so as to avoid pre loading in tariff. The petitioner has further submitted that as per latest status of development of mines, it is envisaged that MGR for Hurra-C is required by 2018-19 and accordingly capitalization of the same

is projected in the years 2017-08 and 2018-19. The petitioner has stated that the expenditure is part of the ongoing works already allowed by the Commission in the original scope of work towards land acquisition including mine end for development of said MGR to facilitate transport of coal from linked mines to the generating station. Accordingly, the petitioner has submitted that the expenditure may be allowed and liberty may be granted to claim the said works on completion and capitalization. It has also submitted that the petitioner shall approach the Commission with revised projections at the time of truing-up of tariff, if any, depending upon the status of development of linked mines.

The respondents, BRPL and GRIDCO have submitted that the grant of liberty/commitment 19. by the petitioner at this point of time is of no consequence as the situation is not yet clear to the petitioner. The respondent, UPPCL had submitted that the capitalization of land acquired for MGR to be done as and when MGR is commissioned. The respondent, CSPDCL has submitted that the claim for the said work may not be allowed as the claim does not qualify under Regulation 14(1)(ii) after the cut-off date. Similar submission has been made by the respondent, MPPMCL. The said respondent has also submitted that even though linked mines could not be developed so far by ECL, still the generating station has achieved PAF more than NAPAF. Accordingly, the respondent has submitted that there is no merit in the claim of the petitioner. In response, the petitioner has submitted that the projected capitalization in 2014-15 for MGR land and for MGR (Hurra C mines) during 2017-18 and 2018-19 is to match completion of MGR with development of associated mines and these works were deferred for execution due to reasons explained in petition. It has also submitted that had the expenditure on MGR been capitalized by cut-off date without development of associated mines, the beneficiaries would be serving the capital cost of MGR without actual usage of MGR. The petitioner vide its affidavit dated 29.5.2015 has submitted that it is envisaged that MGR for Hurra-C is required by 2018-19 and accordingly capitalization towards acquisition of land for development of MGR has been projected in 2014-15 so as to complete development of MGR for Hurra-C by 2018-19. It has further submitted that 71 acres (approx) of land is required for MGR for Hurra -C and capitalization was projected based on the rate of compensation at which other pieces of land at the generating was acquired. The petitioner has clarified that the rate of

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compensation has increased manifold and governmental authorities are in the process of determining the total compensation to be given to the quantum of land to be acquired for MGR and hence it shall approach the Commission with revised projections at the time of truing-up exercise.

- 20. The matter has been examined. It is noticed that the petitioner in Petition No. 282/2009 (tariff for 2009-14) had claimed the actual/projected additional capital expenditure in respect of deferred works within the original scope of work for the period from COD of the unit till 31.3.2013 (i.e upto the cut-off date) and the Commission by order dated 13.4.2012 had allowed the said expenditure upto the cut-off date. In the said petition, no claim was made by the petitioner in respect of deferred works after the cut-off date (2013-14), except for ash dyke/ash handling system which was allowed in the said order. In Petition No. 206/GT/2013 and 272/GT/2014 filed by the petitioner for revision of tariff for 2009-14 after truing up exercise, the Commission by order dated 22.1.2016 the claim of the petitioner for actual additional capitalization in respect of deferred works within the original scope of work till the cut-off date (31.3.2013) was allowed on prudence check. However, the claim of the petitioner for actual additional capitalization in respect of deferred works after the cut-off date (2013-14) was disallowed, except in case of deferred liabilities/ balance payments made for works executed within the cut-off date.
- 21. The petitioner in its claim for MGR system in Petition No. 272/GT/2014, had submitted that the work related for MGR lines was deferred to match with the development of mines in order to benefit the beneficiaries by avoiding pre-loading in tariff and accordingly, the petitioner had prayed for allowing the expenditure and grant liberty to claim the said works on completion and capitalization under the applicable tariff regulations. Based on this submission, the Commission in order dated 22.1.2016 had granted liberty to the petitioner to approach the Commission for capitalization of MGR. The relevant portion of the order is extracted hereunder:
 - "23.......The petitioner has submitted that it has deferred the expenditure on MGR system matching with the development of mines and has sought liberty for capitalizing the expenditure as and when incurred under the applicable tariff regulations. In line with the observations contained in para 44 of this order, the petitioner is granted liberty to approach the Commission for capitalization of MGR and the same shall be dealt as per prevailing regulations."

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22. The petitioner in this petition while claiming projected additional capitalization of ₹500.00 lakh in 2014-15 has stated that the expenditure may be allowed and liberty may be granted to claim the said works on completion and capitalization. It has also submitted that the petitioner shall approach the Commission with revised projections at the time of truing-up of tariff, if any, depending upon the status of development of linked mines. The provisions of Regulations 14 (3) of the 2014 Tariff Regulations do not provide for capitalization of such deferred works after the cut-off date of the generating station. Hence, the claim of the petitioner for capitalization of the said expenditure is not permitted. Though the expenditure for MGR is to facilitate the transportation of coal from linked mines to the generating station, it is noticed that the linked mines are yet to be developed by ECL. In this background, there is no reason to permit the capitalization of the expenditure. Accordingly, the projected additional capital expenditure of ₹500.00 lakh claimed in 2014-15 is not allowed.

Township

- 23. The petitioner has claimed projected additional capital expenditure of ₹450.00 lakh in 2014-15 towards Township under Regulation 14(1)(ii) read with Regulation 54 of the 2014 Tariff Regulations. In justification of the same, the petitioner has submitted that most part of the work on this head has already been completed and capitalised. The petitioner has also submitted that the capitalization of ₹450.00 lakh towards work of township has also been deferred to the year 2014-15 due to failure of the contractor to deliver in time for which the work was awarded to M/s Sri Ram Enterprises on 23.6.2012 well before the cut-off date. The petitioner has stated that the work is in progress and the balance capitalisation of ₹450.00 lakh is expected in 2014-15. Accordingly, the petitioner has submitted that the delay may be condoned and capitalisation of the said expenditure may be allowed.
- 24. The respondents GRIDCO and BRPL has objected to the above claim of the petitioner and has submitted that Regulation 54 can be invoked for technical and procedural considerations and not for commercial and financial considerations. They have also submitted that once the terms and conditions for determination of tariff have been framed by balancing the divergent interests by the Commission, further benefit over and above the regulatory provisions disturbs the delicate balance which has been maintained and would be unreasonable and unjust. The respondent, CSPDCL has

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submitted that no benefit is going to accrue to the beneficiaries from construction of marriage hall and hence the amount should not be permitted to be capitalised. It has further submitted the claim for the said work may not be allowed as the claim does not qualify under Regulation 14(1)(ii) after the cut-off date. In response, the petitioner vide affidavit dated 22.1.2015 has submitted that the work was included in the original scope of the project and major portion of these packages have been capitalised by cut-off date and only a small portion in the nature of finishing works will be capitalised in the tariff period 2014-19 due to reasons beyond the control of the petitioner. The petitioner has stated that these assets are very much required for smooth and efficient operation of the plant till the useful life of the station. It has also submitted that these assets are being claimed in tariff only after they are pit to use and there is no preloading in tariff and passing of benefits of assets to the beneficiaries without commensurate servicing of expenditure would not be fair and equitable.

The matter has been examined. It is observed that the Commission vide order dated 25. 22.1.2016 had allowed capitalization of these deferred works upto the cut-off date (31.3.2013) under Regulation 9(1)(ii) and for the year 2013-14 as balance final payments towards works completed within the cut-off date under Regulation 9(2)(viii) of the 2009 Tariff Regulations. However, the claim of the petitioner for ₹450.00 lakh in 2014-15 was not allowed by order dated 22.1.2016 with the observation that it would be considered in terms of the provisions of the 2014 Tariff Regulations. It is observed that the petitioner had sufficient time period of three years from the COD of the cut-off date of the generating station in order to execute these works. Also, the reasons for non completion of the said work and deferring the same due to failure on the part of the contractor, cannot in our view, justify the prayer for condonation of the delay in completion of the work and invocation of Regulation 54 for relaxation of the provisions of Regulation 14(3) of the 2014 Tariff Regulations. The petitioner can also seek appropriate remedy against the contractor for non performance / negligence. In our considered view, the respondent beneficiaries cannot be burdened for the delay in completion of the said work by the contractor. Even otherwise, the provisions of Regulation 14 (3) of the 2014 Tariff Regulations do not provide for capitalization of

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such deferred works after the cut-off date of the generating station. In this background, the claim of the petitioner for capitalization of ₹450.00 lakh towards deferred Township work is not allowed.

O&M Workshop Building

- 26. The petitioner has claimed projected additional capital expenditure ₹100.00 lakh towards deferred works of O&M workshop building in 2014-15 under Regulation 14(1)(ii) read with Regulation 54 of the 2014 Tariff Regulations. In justification of the same, the petitioner has submitted that most part of the work on this head had already been completed and capitalised. It has also submitted that the work of construction of the workshop was repeatedly followed up with Ws NPCC who finally completed the work in 2013-14. The petitioner has submitted that this expenditure is towards finishing works of the O&M workshop which is expected to be capitalised in the year 2014-15 and being followed up by petitioner. Accordingly, the petitioner has submitted that the delay may be condoned and capitalisation of the said expenditure may be allowed.
- 27. The respondents GRIDCO and BRPL have objected to the above claim of the petitioner and have submitted that Regulation 54 can be invoked for technical and procedural considerations and not for commercial and financial considerations. They have also submitted that once the terms and conditions for determination of tariff have been framed by balancing the divergent interests by the Commission, further benefit over and above the regulatory provisions disturbs the delicate balance which has been maintained and would be unreasonable and unjust. The respondent, CSPDCL has also submitted that power to relax should not be exercised by the Commission as the petitioner is habitual of making such requests in the past also. The respondent, MPPMCL has submitted that the claim of the petitioner is beyond the scope of the 2014 Tariff Regulations. In response, petitioner has stated that these assets are very much required for smooth and efficient operation of the plant till the useful life of the station. It has also submitted that these assets are being claimed in tariff only after they are pit to use and there is no preloading in tariff and passing of benefits of assets to the beneficiaries without commensurate servicing of expenditure would not be fair and equitable. The petitioner vide affidavit dated 29.5.2015 has submitted that the projected amount in 2014-15 is based on the awarded value of the job and it includes finishing works, painting etc of

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'O&M workshop building', which is the remaining job of 'Main Plant superstructure' package envisaged in the original scope of work and approved by the Commission in order dated 13.4.2012. The petitioner has also submitted that major portion of 'Main plant superstructure' package has already been completed and capitalised by the cut-off date, but however some job of this package could not be completed by the cut-off date for reasons submitted therein. It has submitted that the job has been completed and shall be capitalised in the books of account in 2014-15. Accordingly, the petitioner has prayed that the Commission may allow in exercise of its power to relax and allow the delay in capitalisation towards balance jobs of 'Main Plant Superstructure' package.

28. The matter has been examined. The petitioner has submitted that the projected additional capitalisation of ₹100.00 lakh under this head is the remaining job of 'Main Plant superstructure' package within the original scope of work and approved by the Commission in order dated 13.4.2012 in Petition No. 282/2009. It is observed that against the additional capitalisation of ₹5346.00 lakh for the period 2009-13 allowed in order dated 13.4.2012, the petitioner in Petition No.272/GT/2014 had claimed actual additional capital expenditure of ₹5334.00 lakh under 'Main plant Superstructure' during the period from 2010-14 with a prayer to exercise the power to relax under Regulation 44 of the 2009 Tariff Regulations. However, the Commission by order dated 22.1.2016 while allowing the actual additional capitalisation claimed for the period 2010-13 (within the cut-off date) had rejected the claim of the petitioner for ₹215.00 lakh in 2013-14 (after the cutoff date) on the ground that the petitioner had sufficient time period of 3 years from the COD to the cut-off date of the generating station to execute these works and having failed to do so, the petitioner cannot seek the invocation of Regulation 44 for relaxation of the provisions of the 2009 Tariff Regulations for capitalization of said expenditure. The relevant portion of the order dated 22.1.2016 is extracted as under:

"26.............However, the expenditure of ₹215.00 lakh claimed in 2013-14 under Regulation 9(2) (viii) & 9 (1) read with Regulation 44 of the 2009 Tariff Regulations has not been considered as it appears that the said expenditure pertains to deferred works under 9(1) (ii) of the 2009 Tariff Regulations. Moreover, the petitioner has not specified the sub category of Regulation 9(1) and the bifurcation of the amount under Regulation 9(2) and 9(1). The petitioner had sufficient time period of 3 years from the COD to the cut-off date of the generating station in order to execute these works. Having failed to do so, the petitioner

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cannot in our view, seek the invocation of Regulation 44 for relaxation of the provisions of the 2009 Tariff Regulations for capitalization of said expenditure. Accordingly, the claim of the petitioner for capitalization of ₹215.00 lakh in 2013-14 i.e. after the cut-off date is not allowed."

29. Accordingly, no additional capital expenditure was allowed for this work after the cut-off date (2013-14) in order dated 22.1.2016. The petitioner in this petition has submitted that there has been delay in completion of the said work by M/s NPCC despite repeated reminders and hence the capitalisation of the balance work may be allowed in 2013-14 in exercise of power under Regulation 54 of the 2014 Tariff Regulations. This prayer of the petitioner cannot be accepted. Admittedly there has been delay on the part of the contractor in completion of the said job for which the petitioner can seek appropriate remedy for recovery of the amount from the contractor by way of liquidated damages etc., Moreover, the provisions of the 2014 Tariff Regulations do not provide for capitalisation of such deferred works after the cut-off date of the generating station. As stated in order dated 22.1.2016, the petitioner had sufficient time for completion of the said work within the cut-off date and having failed to do so, the petitioner cannot be permitted the capitalisation of the expenditure by relaxation of the provisions of the 2009 Tariff Regulations. In this background, we find no reason to allow the additional capital expenditure claimed in 2013-14 under Regulation 14(1)(ii) of the 2014 Tariff Regulations.

EOT crane for Workshop

30. The petitioner has claimed projected additional capital expenditure of ₹110.00 lakh towards EOT crane for Workshop in 2014-15 under Regulation 14(1)(ii) read with Regulation 54 of the 2014 Tariff Regulations. In justification of the same, the petitioner has submitted that the crane for O&M workshop was received in 2012-13 before the cut-off date, but it could not be commissioned as the O&M workshop building was not ready due to the delay on the part of the contractor Ws NPCC as stated above. It has also submitted that finishing works of O&M workshop are in the final stage of completion and the crane would be commissioned immediately after O&M workshop buildings finishing works are over and expected to be capitalised in 2014-15. Accordingly, the petitioner has prayed to condone the delay in commissioning the crane and allow the expenditure to be capitalised in 2014-15.

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- The respondents GRIDCO and BRPL have submitted that the claim of the petitioner under 31. Regulation 14 (1) (ii) of the 2014 Tariff Regulations is liable to be rejected, since the expenditure claimed is outside the purview of the said regulation. It has also submitted that Regulation 14 (1) of the 2014 Tariff Regulations covers expenditure in respect of new/ existing projects which are incurred after the commercial operation and upto the cut-off date. The respondent, CSPDCL has also submitted that power to relax should not be exercised by the Commission as the petitioner is habitual of making such requests in the past also. The respondent, MPPMCL has submitted that the claim of the petitioner is beyond the scope of the 2014 Tariff Regulations. In response, the petitioner has stated that these assets are very much required for smooth and efficient operation of the plant till the useful life of the station. It has also submitted that these assets are being claimed in tariff only after they are pit to use and there is no preloading in tariff and passing of benefits of assets to the beneficiaries without commensurate servicing of expenditure would not be fair and equitable. The petitioner vide affidavit dated 29.5.2015 has submitted that the projected additional capitalisation in 2014-15 is based on the awarded value of the job and it includes supply and installation of crane in O&M workshop building. It has also submitted that crane has been received at site but it could not be capitalised because the O&M workshop building was not ready. The petitioner has clarified that this job is balance part of the package 'service and general station equipment' envisaged in the original scope of the project and approved vide Commission's order dated 13.4.2012. Accordingly, the petitioner has prayed to condone the delay in commissioning the crane and allow the expenditure to be capitalised in 2014-15.
- 32. We examined the matter. It is observed that as against the projected additional capital expenditure of ₹251.00 lakh allowed vide Commission's order dated 13.4.2012, the petitioner had claimed total additional capital expenditure of ₹57.00 lakh in 2010-11 in Petition No. 272/GT/2014 under Regulation 9(1) (ii) of the 2009 Tariff Regulations and the same was allowed vide order dated 22.1.2016 as the work was capitalised within the cut-off date. However, the prayer of the petitioner for condonation of delay in commissioning of these cranes and allow capitalisation in 2014-15 was rejected in the said order with the observation that the capitalisation in 2014-15 would

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be considered in terms of the 2014 Tariff Regulations. The petitioner in this petition has submitted that the delay in capitalisation of this work is on account of O&M workshop building not being ready on account of the delay on the part of the contractor Ws NPCC in completion of the work as stated above. As decided earlier, the delay on account of failure in completion of work by the contractor within the cut-off date cannot be a ground to seek capitalisation of the expenditure by invocation of Regulation 54 of the 2014 Tariff Regulations. Having rejected the prayer of the petitioner for capitalisation for O&M workshop building etc., in 2014-15 (after the cut-off date) as above, the consequent delay in capitalisation of EOT crane cannot be condoned. Moreover, there is no provision in the 2014 Tariff Regulations for capitalisation of deferred works after the cut-off date of the generating station. In this background, we are of the view that no case has been made out to invoke the power to relax under Regulation 54 in this case. Accordingly the projected additional capital expenditure claimed in 2014-15 is not allowed.

Additional DM plant Stream

- 33. The petitioner has claimed projected additional capital expenditure of ₹1000.00 lakh in 2016-17 towards Additional DM plant stream under Regulation 14(1)(ii) read with Regulation 54 of the 2014 Tariff regulations. In justification of the same, the petitioner has submitted that timely action for carrying out this work was taken and NIT was issued in January, 2011, however, certain clarifications regarding taxes were sought from the L1 bidder M/s Driplex Ltd. It has also submitted that after the clarifications on certain additional items, the tender had to be closed in 2011-12 because of unacceptable post bid changes by L1 bidder and tender process was reinitiated in July, 2012. The petitioner has further submitted that due to certain discrepancy in the quote by L1 part and after clarification, L1 party became L2 and thereafter, the tender the cancelled. The petitioner has stated that the tender was reinitiated and NIT was issued in July, 2014. It has also submitted that the bids are under finalisation and contract is expected to be awarded In October, 2014. Accordingly, the petitioner has prayed to allow the same and grant liberty to seek capitalisation of this item/work on completion.
- 34. The respondents, GRIDCO and BRPL have submitted that the petitioner has not indicated as to why he needs an additional DM plant stream. They have also submitted that the claim of the

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petitioner under Regulation 14 (1) (ii) of the 2014 Tariff Regulations is liable to be rejected, since the expenditure claimed is outside the purview of the said regulation. It has also submitted that Regulation 14 (1) of the 2014 Tariff Regulations covers expenditure in respect of new/ existing projects which are incurred after the commercial operation and upto the cut-off date. The respondent, MPPMCL has submitted that the claim of the petitioner is beyond the scope of the 2014 Tariff Regulations. The respondent, CSPDCL has also submitted that power to relax should not be exercised by the Commission as the petitioner is habitual of making such requests in the past also. The petitioner vide affidavit dated 29.5.2015 has referred to the affidavit dated 12.2.2015 filed in PetitionNo.206/GT/2013 and has submitted that the requirement of installation of DM plant stream has arisen for reasons beyond the control of the petitioner as stated in the said affidavit and the scheme was subsequently included in the original scope of work. It has further submitted that the estimated capitalisation towards additional DM plant stream is based on the estimates of NIT and hence the Commission may allow the capitalisation towards installation of additional DM plant.

35. The matter has been examined. It is noticed that as against the projected additional capital expenditure of ₹1027.00 lakh allowed for the period 2009-13 vide Commission's order dated 13.4.2012 in Petition No.282/2009, the petitioner in the truing-up petition had claimed total additional capital expenditure of ₹40.00 lakh (₹39.00 lakh in 2011-12 and ₹1.00 lakh in 2013-14) towards Water & Cooling system under Regulation 9(1)(ii) and Regulation 9(2)(viii) of the 2009 Tariff Regulations and had submitted that the projected expenditure of ₹1027.00 lakh allowed in order dated 13.4.2012 includes an amount of ₹1000.00 lakh towards Additional stream of DM plant. The petitioner had also prayed for grant of liberty to seek the capitalisation of the essential Reverse Osmosis (RO) plant on completion. The Commission by order dated 22.1.2016 while allowing the said claim for ₹40.00 lakh observed that the claim of the petitioner with regard to RO system shall be dealt with as per the prevailing tariff regulations. Based on the liberty granted in order dated 22.1.2016, the petitioner has claimed additional capitalisation for the said work. It is noticed that in response to the directions of the Commission to clarify the need for additional stream of DM plant at a cost of ₹10.27 crore towards additional capitalization in Water & cooling

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system when the plant was operating successfully with the existing DM plant, the petitioner in the truing-up petition for 2009-14 vide affidavit dated 12.2.2015 had clarified as under:

.....in view of prevailing better quality of water in 2003, only two stream of DM plant were envisaged for Kahalgaon-II Thermal Power Station. However due to drifting of stream, in 2008 it was observed that TDS of Raw water has been increased considerably. The input water TDS remains up to 600 PPM for 6 to 7 months in a year against the design value of 275 PPM and with this quality of water, the plant is able to discharge 800-900 M3 / Regeneration of DM water and it becomes difficult to meet the requirement of DM make up water to run the power plant. The Committee comprising of NTPC Engineering and NTPC R&D in its report recommended installing of additional DM stream capable to handle raw water of TDS 600 PPM and deliver 1840 M3/ regeneration of DM water and this scheme was subsequently included in the package list of Kahalgaon-II after approval. NIT was floated for supply and installation of additional DM stream designed for handling input raw water TDS of 600 PPM. However due to very poor response of parties to supply this type of plant, it was then decided to instead install a Reverse Osmosis (RO) technology pre-treatment plant in the existing DM stream itself. This RO plant would pre-treat the raw water and bring its TDS below 275 PPM before feeding it to the DM streams. NIT for supply and installation of RO plant has been floated, techno-commercial evaluation has been completed and it is in advanced stage of award. In order to overcome the problem temporarily till the RO plant is installed, dredging of the intake channel from main river course to raw water intake pump house is being carried out as a short term measure from November-May every year to maintain minimum of 50 meter width and 4-6 meters depth of the intake channel. However the dredging activity in the main river course is causing a law & order problem in the area due to requiring of displacement of temporarily settled people & the disposal of large quantity of silt. So the same cannot be adopted as a permanent solution, which necessitates the installation of RO plant.

36. It is observed form the submissions of the petitioner that the installation of RO plant in the existing DM stream is essential to meet the requirement of DM make up water to run the power plant. Accordingly, based on the recommendations of the committee constituted by the petitioners company, this scheme was subsequently included in the package and NIT was floated for the same. Considering the fact that installation of (RO) technology pre-treatment plant in the existing DM stream is necessary for efficient operation of the plant and will handle raw water of TDS 600 PPM and deliver 1840 M3/ regeneration of DM water, as stated by the petitioner, we are inclined to consider the capitalisation of this work on completion, in exercise of the power under Regulation 54, by relaxation of Regulation 14(3)(vii) of the 2014 Tariff Regulations. Accordingly, the expenditure claimed is allowed for this generating station, subject to the condition that capitalisation of the asset is after completion of the said work.

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MGR (Hurra C Mines)

- The petitioner has claimed projected additional capital expenditure of ₹5940.00 lakh in 2017-37. 18 and ₹660.00 lakh in 2018-19 towards MGR (Hurra C Mines) under Regulation 14(1)(ii) read with Regulation 54 of the 2014 Tariff Regulations. In justification of the same, the petitioner has submitted that the work has been allowed by the Commission vide order dated 13.4.2012 in Petition No 282/2009 and that the Linked mines of the generating station are yet to be developed by ECL. The petitioner has also submitted that the expenditure on this head is deferred to match with the development of mines by ECL so as to avoid preloading in tariff. It has also submitted that major portion of MGR for the associated linked mines of Hurra-C Chuperbhita & Rajmahal expansion are kept in abeyance pending development of mines by ECL. The petitioner has stated that since the mines are yet to be developed, it is envisaged to carry out the works like track, railway siding, way side stations, S&T and additional wagons for rakes etc. matching with the development of these mines. It has further submitted that depending upon the status of works it is envisaged that this expenditure towards development of MGR for transportation of coal from linked mines of Hurra (C) may be required from 2017 onwards. The petitioner has submitted that detailed reasons including the benefit to the beneficiaries for such deferment has been placed vide affidavits filed in the truing-up petition for 2009-14. Accordingly, the petitioner has submitted that the expenditure of ₹5940.00 lakh is envisaged to be carried out in 2017-18 to develop the MGR to match with the development of mines. The petitioner has prayed for allowing the expenditure and has submitted that it shall approach the Commission with revised projections, if any, depending upon the status of works and development of mines.
- 38. The respondent, GRIDCO and BRPL have submitted that the claim of the petitioner under Regulation 14 (1) (ii) of the 2014 Tariff Regulations is liable to be rejected, since the expenditure claimed is outside the purview of the said regulation. It has also submitted that Regulation 14 (1) of the 2014 Tariff Regulations covers expenditure in respect of new/ existing projects which are incurred after the commercial operation and upto the cut-off date. The respondent, MPPMCL has submitted that as per details submitted by the petitioner in Form 15, the petitioner has procured

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sufficient quantity of coal to generate electricity equivalent to NAPAF on annual basis during the period of only six months and thus it appears that there is no need to undertake such huge capital expenditure on these heads. The respondent has also submitted that with the existing source of coal and arrangement of MGR and Wagons, the petitioner has been able to handle and procure huge quantity of 10.4 MMT in a short span of six months which is sufficient to cater to the annual coal requirement of petitioner. Accordingly, the respondent has submitted that the claim under this head may be disallowed. The respondent, UPPCL has submitted that the capitalisation of MGR should be done as and when mines are developed and coal is available for transportation through MGR. The petitioner in its rejoinder has objected to the statement of the petitioner and has clarified that the respondent has failed to notice that the said figure includes opening stock also. The petitioner vide affidavit dated 29.5.2015 has submitted that the development of mines was deferred consciously to avoid preloading in tariff and as per latest status of development of mines, it is envisaged that MGR for Hurra C is required by 2018-19 and accordingly capitalisation has been projected in the years 2017-18 and 2018-19. The petitioner has further submitted that as the work of development of MGR was deferred consciously to avoid preloading in tariff, therefore the capitalisation on account of MGR may be treated as if being carried out before the cut-off date.

39. We have examined the matter. It is observed that as against the projected additional capital expenditure of ₹39927.00 lakh allowed vide order dated 13.4.2012 towards Coal transportation system during 2009-13, the petitioner had claimed actual additional capital expenditure of ₹23477.52 lakh during 2010-13 in respect of these deferred works within the original scope of work in truing-up petition and the same was allowed under Regulation 9(1)(ii) of the 2009 Tariff Regulations vide order dated 22.1.2016. However, the claim of the petitioner for ₹685.00 lakh in 2013-14 for 46 wagons in exercise of power to relax was however not considered. The relevant portion of the order dated 22.1.2016 is extracted as under:

"44. In view of above, the petitioner is granted liberty to approach the Commission after completion of work of railway siding, track, way side stations etc. and MGR and the claim of the petitioner including the claim of ₹685.00 lakh capitalized in 2013-14 for 46 wagons will be considered in accordance with the prevailing tariff regulation."

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40. The petitioner has submitted that the work of development of mines has been deferred consciously to avoid preloading in tariff and as per latest status of development of mines, it is envisaged that MGR for Hurra C will be required by 2018-19 and accordingly capitalisation of expenditure has been projected in the years 2017-18 and 2018-19. It is however noticed that in terms of the Commission's order dated 22.1.2016 as quoted above, the petitioner has been granted liberty to approach the Commission after completion of the works, which include MGR. Since the work of MGR has not yet been completed, we are not inclined to consider the claim of the petitioner for additional capitalisation under this head at this stage. However, the petitioner granted liberty to claim the same at the time of truing-up of tariff of this generating station as per actual status and the same will be considered in terms of the prevailing regulations. In view of this, the claim for capitalisation of ₹5940 lakh in 2017-18 and ₹660.00 lakh in 2018-19 is not allowed.

Wagons

- 41. The petitioner has claimed total projected additional capital expenditure of ₹1980.00 lakh in 2014-16 (₹405.00 lakh in 2014-15 for 9 Wagons and ₹1575.00 lakh in 2015-16 for 35 Wagons) under Regulation 14(3)(x) of the 2014 Tariff Regulations. In justification of the same, the petitioner has submitted that the expenditure claimed is towards procurement of 44 nos new wagons necessary for the new MGR system being developed for transportation of coal to generating station from linked mines. It has also submitted that these wagons were ordered considering the lead time and part of the wagons (09 nos) are expected to be received and capitalized in the year 2014-15 and shall be also used for transportation of coal from existing source of coal linkage.
- 42. The respondents CSPDCL, GRIDCO and BRPL have submitted that the claim under Regulation 14(3)(x) can be made only on account of modification required or done in the fuel receiving system at the generating station. They have pointed out that the procurement of wagons is for transporting the coal and such expenditure is not connected with the modification in the fuel receipt system and thus not covered by the provisions of Regulation 14 (3) (x) of the 2014 Tariff Regulations, Accordingly, these respondents have prayed that the expenditure may not be allowed. In its rejoinder, the petitioner has submitted that the linked mines of the generating station

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are yet to be developed and capitalization of associated MGR was deferred for execution to match with the development of mines. It has also clarified that keeping in view the status of development of mines and longer lead time of wagons, the wagons were ordered in advance and expected to be capitalized as claimed. The petitioner has further stated that these wagons shall also be used for transportation of coal from existing source of coal linkage, till development of linked mines and capitalization of these wagons shall enhance the capability of existing coal transportation system. The respondent, MPPMCL has submitted that as per details submitted by the petitioner in Form 15, the petitioner has procured sufficient quantity of coal to generate electricity equivalent to NAPAF on annual basis during the period of only six months and thus it appears that there is no need to undertake such huge capital expenditure on these heads. The respondent has also submitted that with the existing source of coal and arrangement of MGR and Wagons, the petitioner has been able to handle and procure huge quantity of 10.4 MMT in a short span of six months which is sufficient to cater to the annual coal requirement of petitioner. Accordingly, the respondent has submitted that the claim under this head may be disallowed.

43. We have examined the matter. As stated, the Commission in its order dated 22.1.2016 in Petition No.272/GT/2014 (as quoted supra) had granted liberty to the petitioner to approach the Commission after completion of the work of railway siding, track, way side stations and MGR including the claim for 46 wagons. In light of the above order, the capitalization of Wagons by the petitioner will be justifiable only when MGR and its associated systems are complete and ready. As stated above, the claim of the petitioner for capitalization of expenditure towards MGR for Hurra-C Mines (which is required by 2018-19) has not been allowed as the same is yet to be completed, in line with the observations in order dated 22.1.2016. Similarly, in line with decision of the Commission in order dated 22.1.2016, the projected additional capitalization of ₹405.00 lakh in 2014-15 towards 09 Wagons and ₹1575 lakh in 2015-16 towards 35 Wagons which have not been completed and is required to be taken up in 2018-19 has also not been allowed. The petitioner is however granted liberty to claim the same at the time of truing up of tariff as per actual status of the MGR and Mines and the same will be considered in terms of the prevailing regulations.

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Other works

400 kV Bus Sectionaliser

- The petitioner has claimed projected additional capital expenditure of ₹9894.00 lakh in 2016-44. 17 towards 400 KV Bus Sectionaliser under Regulation 14(3)(ii) read with Regulation 14(3)(ix) of the 2014 Tariff Regulations. In justification of the same, the petitioner has submitted that as per CEA recommendation in the Standing Committee on Power System held on 20.9.2010, it was proposed to carry out bus splitting in order to reduce the fault levels for four substations including the generating station, for safe and reliable operation of the GRID. It has submitted that subsequently in the 24th ERPC and 29th NRPC, NTPC was advised to go ahead with the scheme of bus splitting of generating station and constituents also agreed to share the expenditure incurred by NTPC through tariff. The petitioner has further submitted that thereafter, Member Secretary, ERPC vide letter date 24.7.2014 requested NTPC to proceed with the implementation of scheme considering this as essential technical requirement for safe operation of GRID. The petitioner has stated that the necessity of the expenditure has arisen purely of the reason not attributable to NTPC and the statutory agencies like ERPC/NRPC and Standing Committee acknowledging this. have decided to implement this. Accordingly, the petitioner has prayed that the expenditure may be allowed to be capitalised.
- 45. The respondents GRIDCO and BRPL have submitted that the claim of the petitioner to reduce the fault levels at four substations for safe and reliable operation of the grid can be met from the PSDF fund with 100% debt and zero interest rate. It has further submitted that the debt capital shall be utilised to pay back the loan taken for the project from PSDF and the beneficiaries may not face heat in the form of increased tariff as the entire capital expenditure on this account would be at zero interest rate. In response, the petitioner has clarified that an application made to the Ministry of Power, GOI for release of fund from PSDF was turned down by the PSDF appraisal committee stating that the scheme did not qualify for funding from PSDF. The respondent, MPPMCL has submitted that the claim of the petitioner does not qualify as a condition of 'change in law' and the petitioner is unable to establish that the said work can be termed as change in law. It has also submitted that Regulation 14(3)(ix) is applicable for transmission system and is not

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applicable for generating company. In response to this, the petitioner has clarified that the capital expenditure incurred under this scheme has been claimed under change in law because the necessity of this scheme had arisen on account of the directions of the Standing Committee on Power System planning in Eastern Region, a body functioning under the aegis of CEA. The petitioner has also clarified that the switchyard is part of the transmission system even though it is physically located inside the generating station. It has submitted that NTPC has been entrusted to carry out bus splitting in switchyard and the splitting at other sub-stations is to be carried out by powergrid. Accordingly, it has submitted that Regulation 14(3)(ix) would apply to any system which is in the nature of transmission asset though installed by generating company.

- 46. As stated, during the pendency of the petition, the petitioner had filed IA Interlocutory Application (IA No. 64/2014) seeking "in-principle clearance to the work of 400 kV Bus Sectionaliser and capitalisation of the associated expenditure for the purpose of tariff in view of the safe & reliable operation of the grid" and the Commission by order dated 6.2.2015 disposed of the IA as under:
 - "7. It is noted that in Petition No. 283/GT/2014, the petitioner has claimed the projected additional capitalisation of ₹98.94 crore in Form-9A for the year 2016-17 under Regulation 14(3)(ii) read with Regulation 14(3)(ix) of the 2014 Tariff Regulations on the grounds similar to those raised in the I.A. The claim of the petitioner for capitalisation of the said work will be considered after prudence check in terms of the provisions of the 2014 Tariff Regulations. Hence, the prayer of the petitioner for grant of in-principle approval of the work on 400kV Bus Sectionaliser is not allowed."
- 47. As regards the contentions of the respondent, BRPL that the Commission may recommend to the MOP, FGOI for financing of the above scheme from PSDF, the petitioner has submitted that the same has been rejected by the PSDF appraisal committee. Similar submission was made by the respondent in the said IA and the Commission in the said order dated 6.2.2015 had observed as under:
 - "8. The learned counsel for the respondent, BRPL has submitted that the Commission may recommend to the MOP, GOI for financing of the said project from PSDF, in order to reduce the tariff burden on the beneficiaries. The submission of the learned counsel is appreciable. However, it is noticed that the application made by the petitioner for release of funds from PSDF had been rejected by the PSDF appraisal committee on the ground that the scheme did not qualify for the funding from the project. The PSDF appraisal committee having taken a decision in terms of guidelines issued by MOP, GOI, we find no reason to recommend to the MOP, GOI for utilisation of the fund from PSDF for the said Interim order in I.A.No.64/2014 in P.No.283/GT/2014 Page 9 of 9 scheme as prayed by learned counsel for

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respondent, BRPL. Accordingly, the I.A. filed by the petitioner is disposed of in terms of the above."

48. The claim of the petitioner has been examined in the above background. It is observed that the petitioner has proposed to carry out bus splitting in order to reduce the fault levels for four substations including the generating station, for safe and reliable operation of the GRID, as per CEA recommendation in the Standing Committee on Power System. Accordingly, the scheme of bus splitting of generating station was given a go ahead in the ERPC/NRPC meeting, wherein, the constituents also agreed to share the expenditure incurred by the petitioner through tariff. Considering the fact that the scheme is implemented in the 400 kV Switchyard of Kahalgaon STPS and form part of the transmission system and since the expenditure is necessary for successful and efficient operation of transmission system in order to reduce the fault levels for Kahalgaon and for safe and reliable operation of the Grid, we in exercise of the power to relax under Regulation 54 of the 2014 Tariff Regulations, relax the Regulation 14(3)(ix) of the 2014 Tariff Regulations and allow the projected additional capital expenditure of ₹9894.00 lakh claimed in 2016-17. However, as the bus splitting is related to both Stages (i.e Stage-I and Stage-II) of Kahalgaon STPS, the total expenditure is apportioned pro rata based on the capacity of Stage-I (840 MW) and Stage-II (1500 MW) of Kalagaon STPS. Accordingly, out of the total the projected additional capital expenditure of ₹9894.00 lakh, Stage-I of Kahalgaon STPS is apportioned ₹3551.69 lakh and Stage-II of Kahalgaon (this generating station) is apportioned ₹6342.31 lakh in 2016-17. The relaxation and the consequent capitalization allowed as above, is based on the specific facts of the case and cannot be cited as a precedent in future.

49. Based on the above discussions, the projected additional capital expenditure allowed for the period 2014-19 is summarized as under:

(₹ in lakh)

| | (V III lukil) | | | | | | , |
|-----|------------------------|---------|---------|---------|---------|---------|---------|
| SI. | Package Name | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 | Total |
| No. | | | | | | | |
| 1 | Ash Dyke –III A/B/C | 1100.00 | 1500.00 | 1100.00 | 1500.00 | 1100.0 | 6300.00 |
| 2 | MGR Land | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3 | Township | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4 | O&M Workshop Building | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5 | EOT Crane for Workshop | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | Building | | | | | | |
| 6 | MGR (HURRA C Mines) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

| ĺ | | Total | 1100.00 | 1500.00 | 8442.31 | 1500.00 | 1100.00 | 13642.31 |
|---|---|------------------------|---------|---------|---------|---------|---------|----------|
| ĺ | 8 | 400KV Bus Sectionliser | 0.00 | 0.00 | 6342.31 | 0.00 | 0.00 | 6342.31 |
| | | Total(2-7) | 0.00 | 0.00 | 1000.00 | 0.00 | 0.00 | 1000.00 |
| | | Stream | | | | | | |
| Ī | 7 | Additional DM Plant | 0.00 | 0.00 | 1000.00 | 0.00 | 0.00 | 1000.00 |

50. Accordingly, the capital cost allowed for the generating station for the period 2014-19 is as under:

(₹ in lakh)

| | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
|---|-----------|-----------|-----------|-----------|-----------|
| Opening capital cost | 544756.09 | 545916.09 | 545916.09 | 553258.40 | 559198.40 |
| Admitted projected additional capital expenditure | 1100.00 | 1500.00 | 8442.31 | 1500.00 | 1100.00 |
| Closing capital cost | 545856.09 | 547356.09 | 555798.40 | 557298.40 | 558398.40 |

Debt-Equity Ratio

- 51. Regulation 19 of the 2014 Tariff Regulations provides as under:
 - (1) For a project declared under commercial operation on or after 1.4.2014, the debt-equity ratio would be considered as 70:30 as on COD. If the equity actually deployed is more than 30% of the capital cost, equity in excess of 30% shall be treated as normative loan:

Provided that:

- (i) where equity actually deployed is less than 30% of the capital cost, actual equity shall be considered for determination of tariff:
- (ii) the equity invested in foreign currency shall be designated in Indian rupees on the date of each investment:
- (iii) any grant obtained for the execution of the project shall not be considered as a part of capital structure for the purpose of debt-equtiy ratio.

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, only if such premium amount and internal resources are actually utilised for meeting the capital expenditure of the generating station or the transmission system.

- (2) The generating Company or the transmission licensee shall submit the resolution f the Board of the company or approval from Cabinet Committee on Economic Affairs (CCEA) regarding infusion of fund from internal resources in support of the utilisation made or proposed to be made to meet the capital expenditure of the generating station or the transmission system including communication system, as the case may be.
- (3) In case of the generating station and the transmission system including communication system declared under commercial operation prior to 1.4.2014, debt-equity ratio allowed by the Commission for determination of tariff for the period ending 31.3.2014 shall be considered.
- (4) In case of generating station and the transmission system including communication system declared under commercial operation prior to 1.4.2014, but where debt:equity ratio has not been determined by the Commission for determination of tariff for the period ending 31.3.2014, the Commission shall approve the debt:equityration based on actual information provided by the generating company or the transmission licensee as the case may be.

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- (5) Any expenditure incurred or projected to be incurred on or after 1.4.2014 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.
- 52. Accordingly, the gross normative loan and equity amounting to ₹381329.26 lakh and ₹163426.83 lakh, respectively as on 31.3.2014 as considered in order dated 22.1.2016, has been considered as gross normative loan and equity as on 1.4.2014. Hence, the normative debt equity ratio of 70:30 has been considered in the case of additional capital expenditure. This is subject to truing-up in terms of the 2014 Tariff Regulations.

Return on Equity

- 53. Regulation 24 of the 2014 Tariff Regulations provides as under:
 - **"24. Return on Equity**: (1) Return on equity shall be computed in rupee terms, on the equity base determined in accordance with regulation 19.
 - (2) Return on equity shall be computed at the base rate of 15.50% for thermal generating stations, transmission system including communication system and run of the river hydro generating station, and at the base rate of 16.50% for the storage type hydro generating stations including pumped storage hydro generating stations and run of river generating station with pondage:

Provided that:

- i) in case of projects commissioned on or after 1st April, 2014, an additional return of 0.50 % shall be allowed, if such projects are completed within the timeline specified in Appendix-I:
- ii). the additional return of 0.5% shall not be admissible if the project is not completed within the timeline specified above for reasons whatsoever:
- iii). additional RoE of 0.50% may be allowed if any element of the transmission project is completed within the specified timeline and it is certified by the Regional Power Committee/National Power Committee that commissioning of the particular element will benefit the system operation in the regional/national grid:
- iv). the rate of return of a new project shall be reduced by 1% for such period as may be decided by the Commission, if the generating station or transmission system is found to be declared under commercial operation without commissioning of any of the Restricted Governor Mode Operation (RGMO)/ Free Governor Mode Operation (FGMO), data telemetry, communication system up to load dispatch centre or protection system:
- v) as and when any of the above requirements are found lacking in a generating station based on the report submitted by the respective RLDC, RoE shall be reduced by 1% for the period for which the deficiency continues:
- vi) additional RoE shall not be admissible for transmission line having length of less than 50 kilometers.
- 54. Regulation 25 of the 2014 Tariff Regulations provides as under:

"Tax on Return on Equity

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- (1) The base rate of return on equity as allowed by the Commission under Regulation 24 shall be grossed up with the effective tax rate of the respective financial year. For this purpose, the effective tax rate shall be considered on the basis of actual tax paid in the respect of the financial year in line with the provisions of the relevant Finance Acts by the concerned generating company or the transmission licensee, as the case may be. The actual tax income on other income stream (i.e., income of non-generation or non-transmission business, as the case may be) shall not be considered for the calculation of "effective tax rate".
- (2) Rate of return on equity shall be rounded off to three decimal places and shall be computed as per the formula given below:

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

Where "t" is the effective tax rate in accordance with Clause (1) of this regulation and shall be calculated at the beginning of every financial year based on the estimated profit and tax to be paid estimated in line with the provisions of the relevant Finance Act applicable for that financial year to the company on pro-rate basis by excluding the income of non-generation or non-transmission business, as the case may be, and the corresponding tax thereon. In case of generating company or transmission licensee paying Minimum Alternate Tax (MAT), "t" shall be considered as MAT rate including surcharge and cess.

55. The petitioner has claimed return on equity considering base rate of 15.5% and effective tax rate of 23.939%. However, the petitioner in Petition No. 270/GT/2014 (tariff of Simhadri STPS) has submitted that the effective tax rate (MAT) of 20.961% has been considered for the year 2014-15 and 21.342% for the year 2015-16 onwards up to the year 2018-19 for the purpose of grossing up of base rate of 15.5%. Accordingly, the rate of Return on Equity works out to 19.610% for the year 2014-15 and 19.705% for the year 2015-16 onwards. This is however, subject to truing-up. Accordingly, return on equity has been worked out as under:

(₹inlakh)

| | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
|----------------------------|-----------|-----------|-----------|-----------|-----------|
| Opening Normative Equity | 163426.83 | 163756.83 | 164206.83 | 166739.52 | 167189.52 |
| Addition due to Additional | 330.00 | 450.00 | 2532.69 | 450.00 | 330.00 |
| capital expenditure | | | | | |
| Closing Equity | 163756.83 | 164206.83 | 166739.52 | 167189.52 | 167519.52 |
| Average Equity | 163591.83 | 163981.83 | 165473.17 | 166964.52 | 167354.52 |
| Rate of Return on Equity | 15.500% | 15.500% | 15.500% | 15.500% | 15.500% |
| Effective tax rate | 20.961% | 21.342% | 21.342% | 21.342% | 21.342% |
| Return on Equity (Pre-tax) | 19.610% | 19.705% | 19.705% | 19.705% | 19.705% |
| Return on Equity (Pre- | 32080.36 | 32312.62 | 32606.49 | 32900.36 | 32977.21 |
| tax) - Annualized | | | | | |

Interest on Loan

- 56. Regulation 26 of the 2014 Tariff Regulations provides as under:
 - **"26. Interest on loan capital:** (1) The loans arrived at in the manner indicated in regulation 19 shall be considered as gross normative loan for calculation of interest on loan.
 - (2) The normative loan outstanding as on 1.4.2014 shall be worked out by deducting the cumulative repayment as admitted by the Commission up to 31.3.2014 from the gross normative loan.

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- (3) The repayment for each of the year of the tariff period 2014-19 shall be deemed to be equal to the depreciation allowed for the corresponding year/period. In case of de-capitalization of assets, the repayment shall be adjusted by taking into account cumulative repayment on a pro rata basis and the adjustment should not exceed cumulative depreciation recovered upto the date of decapitalization of such asset.
- (4) Notwithstanding any moratorium period availed by the generating company orthe 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 depreciation allowed for the year or part of the year.
- (5) The rate of interest shall be the weighted average rate of interest calculated on the basis of the actual loan portfolio after providing appropriate accounting adjustment for interest capitalized:

Provided that if there is no actual loan for a particular year but normative loan is still outstanding, the last available weighted average rate of interest shall be considered:

Provided further that if the generating station or the transmission system, as the case may be, does not have actual loan, then the weighted average rate of interest of the generating company or the transmission licensee as a whole shall be considered.

- (6) The interest on loan shall be calculated on the normative average loan of the year by applying the weighted average rate of interest.
- (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 refinancing.
- (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 beneficiaries or the long term transmission customers /DICs 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."

- 57. Interest on loan has been worked out as under:
 - (a) The gross normative loan of ₹381329.26 lakh as on 1.4.2014 has been considered.
 - (b) Cumulative repayment of loan of ₹129647.85 lakh as on 31.3.2014 as considered in order dated 22.1.2016 in Petition Nos. 206/GT/2013 and 272/GT/2014 has been considered as on 1.4.2014.
 - (c) Accordingly, the net normative opening loan as on 1.4.2014 works out to ₹251681.41lakh.
 - (d) Addition to normative loan on account of the admitted additional capital expenditure has been considered on year to year basis.
 - (e) Depreciation allowed for the period has been considered as repayment of normative loan during the respective year for the period 2009-14.

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- (f) In line with the provisions of the regulation, the weighted average rate of interest has been calculated applying the actual loan portfolio existing as on 1.4.2014 along with subsequent additions during the period 2014-19, if any, for the generating station. 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.
- 58. The necessary calculation for interest on loan is as under:

(₹in lakh)

| | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
|------------------------------|-----------|-----------|-----------|-----------|-----------|
| Gross Notional Ioan | 381329.26 | 382099.26 | 383149.26 | 389058.88 | 390108.88 |
| Cumulative repayment of loan | 129647.85 | 157519.55 | 185457.69 | 213649.92 | 242096.24 |
| up to previous year | | | | | |
| Net Opening loan | 251681.41 | 224579.71 | 197691.57 | 175408.96 | 148012.64 |
| Addition due to Additional | 770.00 | 1050.00 | 5909.62 | 1050.00 | 770.00 |
| Capitalisation | | | | | |
| Repayment of loan during the | 27871.70 | 27938.14 | 28192.23 | 28446.31 | 28512.76 |
| period | | | | | |
| Net Closing loan | 224579.71 | 197691.57 | 175408.96 | 148012.64 | 120269.88 |
| Average Loan | 238130.56 | 211135.64 | 186550.26 | 161710.80 | 134141.26 |
| Weighted Average Rate of | 8.5425% | 8.7247% | 9.0412% | 9.2252% | 9.2087% |
| Interest on loan | | | | | |
| Interest on loan | 20342.23 | 18421.01 | 16866.35 | 14918.17 | 12352.73 |

Depreciation

- 59. Regulation 27of the 2014 Tariff Regulations provides as under:
 - **"27. Depreciation:** (1) Depreciation shall be computed from the date of commercial operation of a generating station or unit thereof or a transmission system including communication system or element thereof. In case of the tariff of all the units of a generating station or all elements of a transmission system including communication system for which a single tariff needs to be determined, the depreciation shall be computed from the effective date of commercial operation of the generating station or the transmission system taking into consideration the depreciation of individual units or elements thereof.

Provided that effective date of commercial operation shall be worked out by considering the actual date of commercial operation and installed capacity of all the units of the generating station or capital cost of all elements of the transmission system, for which single tariff needs to be determined.

- (2) The value base for the purpose of depreciation shall be the capital cost of the asset admitted by the Commission. In case of multiple units of a generating station or multiple elements of transmission system, weighted average life for the generating station of the transmission system shall be applied. Depreciation shall be chargeable from the first year of commercial operation. In case of commercial operation of the asset for part of the year, depreciation shall be charged on pro rata basis.
- (3) 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 station, the salvage value shall be as provided in the agreement signed by the developers with the State Government for development of the Plant:

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

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Provided also that any depreciation disallowed on account of lower availability of the generating station or generating unit or transmission system as the case may be, shall not be allowed to be recovered at a later stage during the useful life and the extended life.

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

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

- (6) In case of the existing projects, the balance depreciable value as on 1.4.2014 shall be worked out by deducting the cumulative depreciation as admitted by the Commission upto 31.3.2014 from the gross depreciable value of the assets.
- (7) The generating company or the transmission license, as the case may be, shall submit the details of proposed capital expenditure during the fag end of the project(five years before the useful life) along with justification and proposed life extension. The Commission based on prudence check of such submissions shall approve the depreciation on capital expenditure during the fag end of the project.
- (8) In case of de-capitalization of assets in respect of generating station or unit thereof or transmission system or element thereof, the cumulative depreciation shall be adjusted by taking into account the depreciation recovered in tariff by the de-capitalized asset during its useful services."
- 60. The cumulative depreciation amounting to ₹130228.78 lakh as on 31.3.2014 as considered in order dated 22.1.2016 has been considered for the purpose of tariff. Further, the value of freehold land included in the average capital cost has been adjusted while calculating depreciable value for the purpose of tariff. Accordingly, the balance depreciable value (before providing depreciation) for the year 2014-15 works out to ₹360428.16 lakh. Since the used life of the generating station as on 1.4.2014 is 4.98 years, which is less than 12 years from the effective generating station COD of 24.3.2012, depreciation has been calculated by applying the weighted average rate of depreciation for the period 2014-19.
- 61. The petitioner has claimed the depreciation considering the weighted average rate of depreciation of 5.1159% for the period 2014-19. However, considering the rates of depreciation as specified in Appendix-II to the 2014 Tariff Regulations, the weighted average rate of depreciation for the year 2014-15 works out to 5.1112%. This has been considered for calculating depreciation for the year 2014-19. Accordingly, depreciation has been computed as follows:

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| | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
|------------------------------------|-----------|-----------|-----------|-----------|-----------|
| Average Capital Cost | 545306.09 | 546606.09 | 551577.24 | 556548.40 | 557848.40 |
| Freehold land included above | 131.70 | 131.70 | 131.70 | 131.70 | 131.70 |
| Depreciable value @ 90% | 490656.95 | 491826.95 | 496300.99 | 500775.03 | 501945.03 |
| Remaining useful life at the | 20.02 | 19.02 | 18.02 | 17.02 | 16.02 |
| beginning of the year | | | | | |
| Balance depreciable value | 360428.16 | 333726.47 | 310262.36 | 286544.17 | 259267.86 |
| Depreciation (annualized) | 27871.70 | 27938.14 | 28192.23 | 28446.31 | 28512.76 |
| Cumulative depreciation at the end | 158100.48 | 186038.62 | 214230.85 | 242677.17 | 271189.93 |

O&M Expenses

62. Regulation 29 (1) (a) of the 2014 Tariff Regulations provides the year-wise O&M expense norms for 500 MW units of coal based generating station as under:

| | | | | (₹inlakh/MW) |
|---------|---------|---------|---------|--------------|
| 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
| 16.00 | 17.01 | 18.08 | 19.22 | 20.43 |

Proviso to the Regulation 29 (1) (a) of the 2014 Tariff Regulations states as under:

"Provided that the above norms shall be multiplied by the following factors for arriving at norms of O&M expenses for additional units in respective sizes for the units whose COD occurs on or after 1.4.2014 in the same station:

| 200/210/250 MW | Additional 5th & 6th units | 0.9 |
|------------------|------------------------------|------|
| | Additional 7th & more units | 0.85 |
| 300/330/350 MW | Additional 4th & 5th units | 0.9 |
| | Additional 6th & more units | 0.85 |
| 500 MW and above | Additional 3rd & 4th units | 0.9 |
| | Additional 5th & above units | 0.85 |

64. The generating station with a capacity of 1500 MW comprises of three units of 500 MW each was declared under commercial operation on 20.3.2010 and is an expansion project. The question of rationalisation of O&M expenses in respect of expansion units commissioned during the period 2009-14 and continued during the tariff period 2014-19 has been addressed by the Commission in order dated 29.7.2016 in Petition No. 294/GT/2014 (determination of tariff of Simhadri Super Thermal Power Station Stage-II for the period 2014-19) as under:

"It is noticed that under the 2009 Tariff Regulations, any generating station having 3rd and 4th units with a capacity of 500 MW and above, if commissioned on or after 1.4.2009 but before 31.3.2014, shall be entitled to O&M expenses at the rate to be worked out on the basis of normative O&M multiplied by 0.9%. There is no corresponding provision in the 2014 Tariff Regulations for determination of the O&M expenses of the units commissioned on or after 1.4.2009 but before 31.3.2014 during the 2009-14 period. However, in the 2014 Tariff Regulations, the O&M expenses of 3rd and 4th Unit of the generating stations having capacity of 500 MW and above whose COD occurred on or after 1.4.2014 are required to be worked out by multiplying the O&M norms with the factor of 0.9%. This has given rise to a situation where in

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the restrictions imposed on admissible O&M expenses of the 3rd and 4th units of the generating station commissioned during 2009-14 period are not continued during 2014-19 period, though the intent is that the O&M expenses of 3rd and 4th units of a generating station should be rationalized by multiplying with a factor of 0.9 since these units are sharing certain common facilities developed for Units 1 and 2 of the generating station. In our view, this anomalous situation can be addressed if the provision to Regulation 29(a) of 2014 Tariff Regulations is made applicable in respect of generating stations whose additional units have been commissioned on or after 1.4.2009. This in our view, will balance the interest of the generating station and the beneficiaries and will be in conformity with the objective of section 61(d) of the Act.

53. Regulation 55 of the 2014 Tariff Regulations enables the Commission to remove difficulty in giving effect to the objectives of the provisions of the regulations. Regulation 55 provides as under:

"55. Power to Remove Difficulty

If any difficulty arises in giving effect to the provisions of these regulations, the Commission may, by order, make such provision not inconsistent with the provisions of the Act or provisions of other regulations specified by the Commission, as may appear to be necessary for removing the difficulty in giving effect to the objectives of these regulations."

- 54. According to the above regulations, the Commission can make provisions to remove the difficulty in order to give effect to the objectives of the tariff regulations, if it is not inconsistent with the provisions of the Act.
- 55. The Hon'ble Supreme Court in Mahadeva Upendra Sinai etc. Vs Union of India & Ors [1975 AIR 797, 1975 SCR (2) 640] has laid down the scope of the exercise of power to remove difficulty provided in a statute. Relevant observations of the Hon'ble Supreme Court are extracted as under:
 - "......It will be seen that the power given by it is not uncontrolled or unfettered. If is strictly circumscribed, and its use is conditioned and restricted. The existence or arising of a "difficulty" is the sine qua non for the exercise of the power. It this condition precedent is not satisfied as an objective fact, the power under this Clause cannot be invoked at all. Again, the "difficulty" contemplated by the Clause must be a difficulty arising in giving effect to the provisions of the Act and not a difficulty arising aliunde, or an extraneous difficulty. Further, the Central Government can exercise the power under the Clause only to the extent it is necessary for applying or giving effect to the Act etc. and no further. It may slightly tinker with the Act to round off angularities, and smoothen the joints or remove minor obscurities to make it workable, but it cannot change, disfigure or do violence to the basic structure and primary features of the Act. In no case, can it, under the guise of removing a difficulty, change the scheme and essential provisions of the Act."
- 56. As per the above judgment, Power to remove difficulty can be exercised to the extent it is necessary for applying or giving effect to the legislation and in doing so, the authority exercising the power to remove difficulty may slightly tinker with the legislation to round off angularities, or smoothen joints or remove minor obscurities to make it workable, without doing violence to the basic structure and primary features of the regulations. Further, under the guise of removing difficulties, the scheme and essential provisions of the legislations cannot be changed.
- 57. The 2009 Tariff Regulations as well as 2014 Tariff Regulations have been made by the Commission in exercise of its legislative power under Section 178 of the Act read with Section 61 of the Act. Section 61 provides for the guiding principles for specifying the terms and conditions for determination of tariff. Two of the guiding principles enumerated under Section 61 are extracted as under:-

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- "(c) the factors which would encourage competition, efficiency, economical use of the resources, good performance and optimum investments;
- (d) Safeguarding of consumer's' interest and at the same time, recovery of the cost of electricity in a reasonable manner."
- 58. Therefore, some of the relevant factors to be considered while specifying the terms and conditions of tariff would relate to the economical use of resources, efficiency, good performance, safeguarding the consumer interest while ensuring the recovery of the cost of electricity in a reasonable manner. During the making of the 2009 Tariff Regulations, the Commission took note of the facts that the generators like NTPC are going for expansion of the existing generating stations for optimum utilization of the resources. Since, the expansion units would be sharing some of the common facilities already in place and the normative O&M expenses allowed in the regulation captures the economic scale for a capacity range of 1000 to 1200 MW on an average, the Commission felt that the O&M expenses for the extension unit of the same type at the same location should not be of the same order. Accordingly, the Commission provided for multiplying factors to be applied to the normative O&M expenses to arrive at the O&M expenses in respect of future additional units whose COD would occur on or after 1.4.2009. In this connection, Para 20.9 and 20.10 of the Statement of Reasons issued for 2009 Tariff Regulations is extracted below:
 - "20.9 For the generating stations having combination of above sets, the weighted average value for operation and maintenance expenses were to be adopted. It is also felt that O&M expenses for the extension units of the same type at the same location should not be of the same order. The above norms capture economy of scale for a capacity range of 1000 to 1200 Mw on an average. Commission is therefore, providing for following multiplying factors to be applied to the above O&M norms for permissible O&M expenses in respect of future additional units, in respective unit sizes for the units whose COD occurs on or after 1.4.2009:

| 200/210/250 MW | Additional 5 th & 6 th units Additional 7 th & more units | 0.9 0.85 |
|------------------|--|-------------|
| 300/330/350 MW | Additional 4 th & 5 th units Additional 6 th & more units | 0.9 0.85 |
| 500 MW and above | Additional 3 rd & 4 th units Additional 5 th & above units | 0.9 0.85 |

- 20.10 To explain the applicability of above provisions, if a 210 Mw unit comes into operation during 2009-10 in a station already having four or more 200/210 Mw units, then the norm for the extension unit would be calculated as 0.90 X Rs. 18.20 lakh/MW. If 500 MW units come up in a station having only 200/210 MW units, then admissible O&M norm for the extension unit would be Rs. 13.00 lakh/MW during 2009-10."
- 59. It is apparent from the above that the intention of providing multiplying factor for determination of O&M charges for additional units was to pass on the benefits of economic scale to the consumers. The said provisions are also in conformity with the provisions of the Act particularly sub-section (c) and (d) of Section 61 of the Act. However, while framing the 2014 Tariff Regulations, the above aspects could not be captured in respect of the expansion units which were commissioned on or after 1.4.2009 but before 31.3.2014. The Commission considers it appropriate to remove the difficulty by exercise of its power under Regulation 55 of the 2014 Tariff Regulations by providing that the proviso under sub-clause (a) of Clause 1 of Regulation 29 of 2014 Tariff Regulations shall be made applicable to the units whose COD occurred on or after 1.4.2009. We have exercised our power to remove difficulty in order to give effect to the Regulations in the true letter and spirit of the Act. "

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65. Accordingly, in line with the above decision, the normative O&M expenses for additional units of the generating station has been worked out and allowed as under:

| | | | | (₹ in lakh) |
|----------|----------|----------|----------|-------------|
| 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
| 23200.00 | 24664.50 | 26216.00 | 27869.00 | 29623.50 |

66. The petitioner has claimed year-wise normative O&M expenses excluding the water charges. However, the petitioner has submitted that presently water charges have not been billed by the concerned authority and the same has not been claimed. It has however submitted that the petitioner shall approach the Commission as and when water charges are billed by the authority and paid by the petitioner. The prayer of the petitioner is accepted and liberty is granted to the petitioner to approach the Commission for claim of water charges. The petitioner is however directed to submit all relevant information along with documents substantiating its claim for water charges.

Capital spares

67. The petitioner has not claimed capital spares on projection basis during the period 2014-19. Accordingly, the same has not been considered in this order. The claim of the petitioner, if any, at the time of truing-up, shall be considered on merits, after prudence check.

Operational Norms

68. The operational norms in respect of the generating station claimed by the petitioner are as under:

| Target Availability (%) | 83.00 |
|------------------------------------|-------|
| Heat Rate (kcal/kwh) | 2425 |
| Auxiliary Energy Consumption (%) | 5.75 |
| Specific Oil Consumption (ml/ kwh) | 0.50 |

69. The operational norms claimed by the petitioner are discussed as under:

Normative Annual Plant Availability Factor (NAPAF)

- 70. Regulation 36 (A) (a) of the 2014 Tariff Regulations provides as under:
 - (a) All Thermal generating stations, except those covered under clauses (b) (c) (d) &(e) 85%.

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Provided that in view of the shortage of coal and uncertainty of assured coal supply on sustained basis experienced by the generating stations, the NAPAF for recovery of fixed charges shall be 83% till the same is reviewed.

The above provision shall be reviewed based on actual feedback after 3 years from 01.04.2014.

71. The petitioner has considered the target availability of 83% during 2014-19. The Commission due to shortage of domestic coal supply has relaxed target availability norm to 83% for first 3 years from 1.4.2014 and the same shall be reviewed after 3 years. Accordingly, the target availability of 83% is allowed for the period 2014-15 to 2016-17 and 85% for the period 2017-18 & 2018-19.

Heat Rate (kcal/kwh)

- 72. Regulation 36(C)(c) of the 2014 Tariff Regulations provides as under:
 - "36 (c) Thermal Generating Station having COD on or after 1.4.2009 till 31.3.2014
 - (i) Coal-based and lignite-fired Thermal Generating Stations = $1.045 \, x$ Design Heat Rate (kCal/kWh)

Where the Design Heat Rate of a generating unit means the unit heat rate guaranteed by the supplier at conditions of 100% MCR, zero percent make up, design coal and design cooling water temperature/back pressure:

Provided that the heat rate norms computed as per above shall be limited to the heat rate norms approved during FY 2009-10 to FY 2013-14.

73. The petitioner in Form-2 of the affidavit dated 29.5.2015 has claimed the turbine cycle heat rate of 1944.4 Kcal/ kWh and boiler efficiency of 83.29%. Accordingly, the Gross Station Heat Rate (GSHR) of the generating station for the period 2014-19 is worked out as 1.045 x 1944.5/ 0.8329 =2439.55 Kcal/kWh. The Commission vide order dated 13.4.2012 in Petition No. 282/2009 (tariff for 2009-14) had approved the GSHR of 2425 Kcal/ kWh for the period 2009-14 under Regulation 26(B)(a) of 2009 Tariff Regulations. In line with the above, the GSHR of 2425 Kcal/ kWh is considered for the period 2014-19.

Auxiliary Power Consumption

74. Regulation 36(E)(a) of Tariff Regulations, 2014 provides Auxiliary Energy Consumption of 5.75% for coal based generating stations of 500 MW sets with Induced Draft cooling tower or without cooling tower with steam driven BFP. Hence, the Auxiliary Energy Consumption considered by the petitioner is as per norms and is allowed.

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Specific Oil Consumption

75. Regulation 36(D)(a) of the 2014 Tariff Regulations, provides secondary fuel oil consumption of 0.50 ml/kWh for coal-based generating station. Hence, the secondary fuel oil consumption considered by the petitioner is as per norms and is allowed.

Interest on Working Capital

76. Sub-section (c) of clause (1) of Regulation 28 of the 2014 Tariff Regulations provides as under:

"28. Interest on Working Capital:

- (1) The working capital shall cover:
 - (a) Coal-based/lignite-fired thermal generating stations:
 - (i) Cost of coal or lignite and limestone towards stock, if applicable, for 15 days for pit-head generating stations and 30 days for non-pit-head generating stations for generation corresponding to the normative annual plant availability factor or the maximum coal/lignite stock storage capacity whichever is lower:
 - (ii) Cost of coal or lignite and limestone for 30 days for generation corresponding to the normative annual plant availability factor;
 - (iii) 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 secondary fuel oil, cost of fuel oil stock for the main secondary fuel oil;
 - (iv) Maintenance spares @ 20% of operation and maintenance expenses specified in regulation 29;
 - (v) Receivables equivalent to two months of capacity charges and energy charges for sale of electricity calculated on the normative annual plant availability factor; and
 - (vi) Operation and maintenance expenses for one month.

Fuel Components and Energy Charges in working capital

77. The petitioner has claimed cost for fuel components in working capital based on 'as fired' GCV of coal procured and burnt for the preceding three months of January, 2014, February, 2014 and March, 2014 and secondary fuel oil for the preceding three months of January, 2014, February, 2014 and March, 2014, as under:

(₹inlakh)

| | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
|---------------------------------------|----------|----------|----------|----------|----------|
| Cost of Coal for stock (0.5 month) | 11956.78 | 11989.53 | 11956.78 | 11956.78 | 11956.78 |
| Cost of Coal for Generation (1 month) | 23913.55 | 23979.07 | 23913.55 | 23913.55 | 23913.55 |
| Cost of Secondary fuel oil 2 months | 498.29 | 499.66 | 498.29 | 498.29 | 498.29 |

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- 78. The Commission vide ROP of the hearing dated 27.2.2015 directed the petitioner to submit the GCV of coal on 'as received' basis. In response, the petitioner vide affidavit dated 4.6.2015 has submitted that they did not have suitable infrastructure for measurement of representative GCV on 'as received' basis.
- 79. The issue of 'as received' GCV for computation of energy charges was challenged by NTPC and other generating companies through writ petition in the Hon'ble High Court of Delhi. The writ petition was heard on 7.9.2015 and Hon'ble High Court of Delhi had directed that the Commission shall decide the place from where the sample of coal should be taken for measurement of GCV of coal on as received basis within 1 month on the request of petitioners.
- 80. As per the directions of the Hon'ble High Court, the Commission vide order dated 25.1.2016 in Petition No. 283/GT/2014 has decided as under:
 - "58. In view of the above discussion, the issues referred by the Hon'ble High Court of Delhi are decided as under:
 - (a) There is no basis in the Indian Standards and other documents relied upon by NTPC etc. to support their claim that GCV of coal on as received basis should be measured by taking samples after the crusher set up inside the generating station, in terms of Regulation 30(6) of the 2014 Tariff regulations.
 - (b) The samples for the purpose of measurement of coal on as received basis should be collected from the loaded wagons at the generating stations either manually or through the Hydraulic Auger in accordance with provisions of IS 436(Part1/Section1)-1964 before the coal is unloaded. While collecting the samples, the safety of personnel and equipment as discussed in this order should be ensured. After collection of samples, the sample preparation and testing shall be carried out in the laboratory in accordance with the procedure prescribed in IS 436(Part1/Section1)-1964 which has been elaborated in the CPRI Report to PSERC."
- 81. Thereafter the petitioner filed Review Petition No.11/2016 for review of the order dated 25.01.2016 praying for the following reliefs:-
 - "(a) Admit the review petition;
 - (b) Review and rectify the order dated 25.1.2016 in so far as it decides the sampling of the coal for measurement of GCV to be done based on the samples drawn from the railway wagon;
 - (c) Declare that the samples drawn from the crusher house immediately after unloading shall be considered for the purpose of determination of weighted average value of coal on "as received basis" under Regulation 30(6) of the 2014 Tariff Regulations.
 - (d) Pass such other orders as this Hon"ble Commission may deem fit and proper in the circumstances of the case"

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- 82. By order dated 30.6.2016, the prayer of the petitioner was rejected and the review petition filed by the petitioner was accordingly dismissed. The relevant portion of the order dated 30.6.2016 in Review Petition No. 11/2016 is extracted as under:-
 - "18. Under Order 47 Rule 1 of the Civil Procedure Code (CPC), a judgment may be open to review inter alia if there is a mistake or an error apparent on the face of the record. An error which is not self evident and has to be detected by a process of reasoning, can hardly be said to be an error apparent on the face of the record justifying the court to exercise its power of review under Order 47 Rule 1 CPC. In exercise of the jurisdiction under Order 47 Rule 1 CPC it is not permissible for an erroneous decision to be reheard and corrected. A review petition has a limited purpose and cannot be allowed to be an appeal in disguise. The Supreme Court in the case of Lily Thomas etc. vs. Union of India & Ors., JT 2000 Vol.5 SCC 617 held that in exercise of power of review, the Court may correct the mistake but not to substitute the view. The mere possibility of two views on the subject is not a ground for review.
 - 19. We are of the considered view that the review petition does not satisfy the conditions for review laid down under Rule 1, Order 47 of the Code. Also, it is not the case that some new evidence not within the knowledge of the petitioner earlier or which could not be earlier produced by it after exercise of due diligence has come to its knowledge. Similarly, there does not exist some other sufficient cause analogous to the other grounds enumerated in Rule 1, Order 47 of the CPC. In the above background, the submissions of the petitioner for review of order dated 25.1.2016 fails and the review petition is accordingly dismissed."
- 83. The writ petition is pending. However, the petitioner by letter dated 5.9.2016 has informed that in order to implement the directions of the Commission in orders dated 25.1.2016 and 30.6.2016, it has appointed Central Institute of Mining & Fuel Research (CIMFR) to develop an appropriate methodology for drawing samples from railway wagon top and the same is expected to be in place from October, 2016. The petitioner has also submitted that it will measure "as received" GCV from the samples drawn from wagons with effect from October, 2016. In response to the letter dated 5.9.2016, the Commission by letter dated 26.9.2016 has informed that in accordance with the provisions of the Central Electricity Regulatory Commission (Terms and Conditions of tariff) Regulations, 2014, the measurement of GCV of coal has to be taken on "as received " basis for the purpose of computation of energy charges in respect of coal based generating stations and that the petitioner is under a statutory obligation to implement the provisions of the said regulations in respect of all coal based generating stations of NTPC for the tariff period 2014-19 by taking appropriate measures.
- 84. The petitioner has claimed Energy Charge Rate (ECR) of 282.080 Paise /kWh based on the weighted average price, GCV of coal (as fired basis) and oil procured and burnt for the preceding three months. It is observed that the petitioner has not placed on record the GCV of coal on 'as

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received' basis though the petitioner was statutorily required to furnish such information with effect from 1.4.2014. The petitioner has not submitted the required data regarding measurement of GCV of coal in compliance with the directions contained in the said order dated 25.1.2016. The present petition cannot be kept pending till the petitioner submits the required information. Hence, the Commission has decided to compute fuel components and the energy charges in the working capital by provisionally taking the GCV of coal on as 'billed basis' and allowing an adjustment for total moisture as per the formula given as under:

Where: GCV=Gross Calorific value of coal TM=Total moisture IM= Inherent moisture

85. In view of the above, the cost for fuel components in working capital have been computed at 83% NAPAF for the years 2014-15, 2015-16 and 2016-17 and at 85% NAPAF for the year 2017-18 & 2018-19 and based on 'as billed' GCV of coal and price of coal procured and secondary fuel oil for the preceding three months from January 2014 to March 2014 and allowed as under:

(₹inlakh)

| | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
|-------------------------------------|----------|----------|----------|----------|----------|
| Cost of Coal for stock- 15 days | 7815.485 | 7815.485 | 7815.485 | 8003.81 | 8003.81 |
| Cost of Coal for Generation-30 Days | 15630.97 | 15630.97 | 15630.97 | 16007.62 | 16007.62 |
| Cost of Coal for 45 days | 23446.46 | 23446.46 | 23446.46 | 24011.43 | 24011.43 |
| Cost of Secondary fuel oil 2 months | 498.29 | 499.66 | 498.29 | 510.30 | 510.30 |

86. Similarly, the ECR based on operational norms specified in 2014 Regulations and on 'as billed' GCV of coal for preceding 3 months i.e. March to January 2014 is worked out as under:

| Sr. No. | | Unit | 2014-19 |
|---------|--|----------|----------|
| 1 | Capacity | MW | 3x500 |
| 2 | Gross Station Heat Rate | Kcal/kWh | 2425 |
| 3 | Aux. Energy Consumption | % | 5.75 |
| 4 | Weighted average GCV of oil (As fired) | Kcal/lit | 10150.67 |
| 5 | Weighted average GCV of Coal (As Billed) | Kcal/kg | 3921.70 |
| 6 | Weighted average price of oil | ₹/KL | 54826.82 |
| 7 | Weighted average price of Coal | ₹/MT | 2825.90 |
| 8 | Rate of energy charge ex-bus | ₹/kWh | 1.879 |

87. The GCV of coal as computed above shall be adjusted in the light of the GCV of coal on 'as received basis' computed by the petitioner as per our directions in order dated 25.1.2016 in Petition No. 283/GT/2014. The ECR allowed as above is subject to revision based on the GCV of

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coal as on received basis to be submitted by the petitioner in terms of the regulations and the directions of the Commission.

88. Energy charges for 2 months on the basis of 'as billed' GCV for the purpose of interest on working capital has been worked out as under:

(₹ in lakh)

| 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
|----------|----------|----------|----------|----------|
| 32190.69 | 32278.89 | 32190.69 | 32966.37 | 32966.37 |

89. Accordingly, the Fuel component and Energy Charges allowed in working capital is as under:

(₹ in lakh)

| | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
|-------------------------------------|----------|----------|----------|----------|----------|
| Cost of Coal for 45 days | 23446.46 | 23446.46 | 23446.46 | 24011.43 | 24011.43 |
| Cost of Secondary fuel oil 2 months | 498.29 | 499.66 | 498.29 | 510.30 | 510.30 |
| Energy Charges for 2 months | 32190.69 | 32278.89 | 32190.69 | 32966.37 | 32966.37 |

Maintenance Spares

90. The petitioner has claimed maintenance spares in the working capital as under:

(₹in lakh)

| 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
|---------|---------|---------|---------|---------|
| 4800.00 | 5103.00 | 5424.00 | 5766.00 | 6129.00 |

91. Regulation 28(1)(a)(iv) of the 2014 Tariff Regulations provide for maintenance spares @ 20% of the operation & maintenance expenses as specified in Regulation 29. Accordingly, the maintenance spares @ 20 % of the operation & maintenance expenses are allowed as under:

(₹in lakh)

| 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
|---------|---------|---------|---------|---------|
| 4640.00 | 4932.90 | 5243.20 | 5573.80 | 5924.70 |

Receivables

92. Receivables equivalent to two months of capacity charge and energy charges (based on primary fuel only) has been worked out and allowed as under:

(₹inlakh)

| | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
|----------------------------|----------|----------|----------|----------|----------|
| Variable Charges -2 months | 32190.69 | 32278.89 | 32190.69 | 32966.37 | 32966.37 |
| Fixed Charges - 2 months | 19089.51 | 19074.18 | 19175.13 | 19260.14 | 19157.75 |
| | 51280.20 | 51353.07 | 51365.82 | 52226.51 | 52124.12 |

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O & M Expenses (1 month)

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

(₹ in lakh)

| 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
|---------|---------|---------|---------|---------|
| 2000.00 | 2126.25 | 2260.00 | 2402.50 | 2553.75 |

94. Regulation 28(a)(vi) of Tariff Regulations, 2014 provides Operation and maintenance expenses for one month for coal-based generating station. The One (1) month O&M expenses considered by the petitioner are in order and are allowed as under:

(₹ in lakh)

| 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
|---------|---------|---------|---------|---------|
| 1933.33 | 2055.38 | 2184.67 | 2322.42 | 2468.63 |

Rate of interest on working capital

95. Clause (3) of Regulation 28 of the 2014 Tariff Regulations provides as under:

"Interest on working Capital: (3) Rate of interest on working capital shall be on normative basis and shall be considered as the bank rate as on 1.4.2014 or as on 1st April of the year during the tariff period 2014-15 to 2018-19 in which the generating station or a unit thereof or the transmission system including communication system or element thereof, as the case may be, is declared under commercial operation, whichever is later."

96. In terms of the above regulations, SBI PLR of 13.50% (Bank rate 10.00 + 350bps) has been considered for the purpose of calculating interest on working capital. Interest on working capital has been computed as under:

(₹ in lakh)

| | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
|---|----------|----------|----------|----------|----------|
| Cost of coal toward stock – 15 days | 7815.49 | 7815.49 | 7815.49 | 8003.81 | 8003.81 |
| Cost of coal towards generation - 30 days | 15630.97 | 15630.97 | 15630.97 | 16007.62 | 16007.62 |
| Cost of secondary fuel oil - 2 months | 498.29 | 499.66 | 498.29 | 510.30 | 510.30 |
| Maintenance Spares - 20% of O&M | 4640.00 | 4932.90 | 5243.20 | 5573.80 | 5924.70 |
| Receivables | 51280.20 | 51353.07 | 51365.82 | 52226.51 | 52124.12 |
| O&M expenses - 1 month | 1933.33 | 2055.38 | 2184.67 | 2322.42 | 2468.63 |
| Total Working Capital | 81798.29 | 82287.46 | 82738.44 | 84644.46 | 85039.18 |
| Rate of Interest | 13.50% | 13.50% | 13.50% | 13.50% | 13.50% |
| Interest on Working Capital | 11042.77 | 11108.81 | 11169.69 | 11427.00 | 11480.29 |

97. Accordingly, annual fixed charges approved for the generating station for the period from 1.4.2014 to 31.3.2019 is summarized as under:

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(₹ in lakh)

| | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
|-----------------------------|-----------|-----------|-----------|-----------|-----------|
| Depreciation | 27871.70 | 27938.14 | 28192.23 | 28446.31 | 28512.76 |
| Interest on Loan | 20342.23 | 18421.01 | 16866.35 | 14918.17 | 12352.73 |
| Return on Equity | 32080.36 | 32312.62 | 32606.49 | 32900.36 | 32977.21 |
| Interest on Working Capital | 11042.77 | 11108.81 | 11169.69 | 11427.00 | 11480.29 |
| O&M Expenses | 23200.00 | 24664.50 | 26216.00 | 27869.00 | 29623.50 |
| Total | 114537.05 | 114445.08 | 115050.75 | 115560.84 | 114946.49 |

Month to Month Energy Charges

- 98. Clause 6 sub-clause (a) of Regulation 30 of the 2014 Tariff Regulations provides for computation and payment of Capacity Charge and Energy Charge for thermal generating stations:
 - "30(6). Energy charge rate (ECR) in Rupees per kWh on ex-power plant basis shall be determined to three decimal place in accordance with the following formula:
 - (a) For coal based and lignite fired stations

$$ECR = \{(GHR - SFC \times CVSF) \times LPPF / CVPF + SFC \times LPSFi + LC \times LPL\} \times 100 / (100 - AUX) \}$$

Where,

AUX = Normative auxiliary energy consumption in percentage.

CVPF = (a) Gross calorific value of primary fuel as received, in kCal per kg, for coal based stations (b)xxx

(c) In case of blending of fuel from different sources, the weighted average Gross calorific value of primary fuel shall be arrived in proportion to blending ratio.

CVSF = Calorific value of secondary fuel, in kCal per ml.

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

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

 $LC = Normative \ limestone \ consumption \ in \ kg \ per \ kWh.$

LPL = Weighted average landed price of limestone inRupees per kg.

LPPF = Weighted average landed price of primary fuel, in Rupees per kg, per litre or per standard cubic metre, as applicable, during the month (In case of blending of fuel from different so urces, the weighted average landed price of primary fuel shall be arrived in proportion to blending ratio

SFC = Normative Specific fuel oil consumption, in ml per kWh.

LPSFi= Weighted Average Landed Price of Secondary Fuel in Rs/ml during the month."

- 99. The petitioner shall compute and claim the Energy Charges on month to month basis from the beneficiaries based on the formulae given under Regulation 30(6)(a) of the 2014 Tariff Regulations, 2014 read with Commission's order dated 25.1.2016 in Petition No. 283/GT/2014.
- 100. The petitioner has been directed by the Commission in its order dated 19.2.2016 in Petition No. 33/MP/2014, to introduce helpdesk to attend to the queries of the beneficiaries with regard to

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the Energy Charges. Accordingly, contentious issues if any, which arise regarding the Energy Charges, should be sorted out with the beneficiaries at the Senior Management level.

Application Fee and Publication Expenses

101. The petitioner has sought the reimbursement of filing fee and also the expenses incurred towards publication of notices for application of tariff for the period 2014-19. The petitioner has deposited the filing fees of ₹6600000/- for the period 2014-15 in terms of the provisions of the Central Electricity Regulatory Commission (Payment of Fees) Regulations, 2012. Accordingly, in terms of Regulation 52 of the 2014 Tariff Regulations and in line with the decision in Commission's order dated 5.1.2016 in Petition No. 232/GT/2014, we direct that the petitioner shall be entitled to recover *pro rata*, the filing fees and the expenses incurred on publication of notices for the period 2014-15 directly from the respondents on submission of documentary proof. The filing fees for the remaining years of the tariff period 2015-19 shall be recovered *pro rata* after deposit of the same and production of documentary proof.

102. The annual fixed charges approved for the period 2014-19 as above are subject to truing-up in terms of Regulation 8 of the 2014 Tariff Regulations.

103. Petition No.283/GT/2014 is disposed of in terms of the above.

-Sd/-(Dr. M.K.lyer) Member -Sd/-(A. S. Bakshi) Member -Sd/-(A. K. Singhal) Member -Sd/-(Gireesh B. Pradhan) Chairperson