

**CENTRAL ELECTRICITY REGULATORY COMMISSION  
NEW DELHI**

**Petition No. 110/GT/2020**

**Coram:**

**Shri I. S. Jha, Member  
Shri Arun Goyal, Member  
Shri Pravas Kumar Singh, Member**

**Date of Order: 15<sup>th</sup> March, 2023**

**In the matter of**

Petition for revision of tariff for NLC Thermal Power Station (TPS-I) (600 MW) for the period 2014-19 after truing-up exercise.

**And**

**In the matter of**

NLC India Limited,  
135/73, EVR Periyar High Road, Kilpauk,  
Chennai – 600 010, Tamil Nadu

**.... Petitioner**

Vs

Tamil Nadu Generation and Distribution Corporation Limited,  
PKRR Maaligai, 144, Anna Salai,  
Chennai – 600002

**.... Respondent**

**Parties Present:**

Ms. Anushree Bardhan, Advocate, NLC  
Ms. Shikha Sood, Advocate, NLCIL  
Ms. Srishti Khindaria, Advocate, NLCIL  
Ms. Surbhi Kapoor, Advocate, NLCIL  
Shri Nambirajan K., NLCIL  
Shri Ravi S, NLCIL  
Shri A. Srinivasan, NLCIL  
Shri P. Ravikumar, NLCIL  
Shri S. Vallinayagam, Advocate, TANGEDCO  
Ms. B. Rajeswari, TANGEDCO  
Ms. R. Ramalakshmi, TANGEDCO  
Ms. R. Alamelu, TANGEDCO

**ORDER**

This petition has been filed by the Petitioner, NLC India Limited, for truing-up of tariff of NLC Thermal Power Station Stage-I (600 MW) (in short 'the generating station')



for the period 2014-19, in accordance with Regulation 8(1) of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 (in short ‘the 2014 Tariff Regulations’). The generating station with a total capacity of 600 MW, comprises of 6 units of 50 MW each and 3 units of 100 MW each. The date of commercial operation of the units of the generating station is as under:

| Units    | Capacity (MW) | Date of Commercial Operation (COD) |
|----------|---------------|------------------------------------|
| Unit-I   | 50            | 23.5.1962                          |
| Unit-II  | 50            | 23.1.1963                          |
| Unit-III | 50            | 11.6.1963                          |
| Unit-IV  | 50            | 27.10.1963                         |
| Unit-V   | 50            | 29.4.1964                          |
| Unit-VI  | 50            | 24.8.1965                          |
| Unit-VII | 100           | 28.3.1967                          |
| Unit-VII | 100           | 12.2.1969                          |
| Unit- IX | 100           | 21.2.1970                          |

2. The Commission vide its order dated 26.9.2016 in Petition No. 253/GT/2014, had approved the capital cost and annual fixed charges for the generating station for the period 2014-19 as under:

**Capital Cost allowed**

|                                | <i>(Rs. in lakh)</i> |          |          |          |          |
|--------------------------------|----------------------|----------|----------|----------|----------|
|                                | 2014-15              | 2015-16  | 2016-17  | 2017-18  | 2018-19  |
| Opening capital cost           | 46867.55             | 46867.55 | 46867.55 | 46867.55 | 46867.55 |
| Additional Capital Expenditure | 0.00                 | 0.00     | 0.00     | 0.00     | 0.00     |
| Closing capital cost           | 46867.55             | 46867.55 | 46867.55 | 46867.55 | 46867.55 |
| Average capital cost           | 46867.55             | 46867.55 | 46867.55 | 46867.55 | 46867.55 |

**Annual Fixed Charges**

|                             | <i>(Rs. in lakh)</i> |                 |                 |                 |                 |
|-----------------------------|----------------------|-----------------|-----------------|-----------------|-----------------|
|                             | 2014-15              | 2015-16         | 2016-17         | 2017-18         | 2018-19         |
| Depreciation                | 0.00                 | 0.00            | 0.00            | 0.00            | 0.00            |
| Interest on Loan            | 35.00                | 34.00           | 32.00           | 31.00           | 29.00           |
| Return on Equity            | 727.00               | 743.00          | 759.00          | 775.00          | 791.00          |
| Interest on Working Capital | 4774.00              | 4873.00         | 4959.00         | 5061.00         | 5168.00         |
| O&M Expenses                | 22951.00             | 24391.00        | 25921.00        | 27547           | 29275           |
| <b>Total</b>                | <b>28487.00</b>      | <b>30041.00</b> | <b>31671.00</b> | <b>33413.00</b> | <b>35263.00</b> |

**Present Petition**

3. Regulation 8(1) of the 2014 Tariff Regulations provides as under:

“8. *Truing up*



(1) The Commission shall carry out truing up exercise along with the tariff petition filed for the next tariff period, with respect to the capital expenditure including additional capital expenditure incurred up to 31.3.2019, as admitted by the Commission after prudence check at the time of truing up:

Provided that the generating company or the transmission licensee, as the case may be, shall make an application for interim truing up of capital expenditure including additional capital expenditure in FY 2016-17.”

4. In terms of above regulation, the Petitioner vide affidavit dated 24.10.2019 has filed the present Petition for truing up of tariff of the generating station for the period 2014-19 and has claimed capital cost and annual fixed charges as under:

#### **Capital Cost claimed**

|  | 2014-15         | 2015-16         | 2016-17         | 2017-18         | (Rs. in lakh)           |                          |
|--|-----------------|-----------------|-----------------|-----------------|-------------------------|--------------------------|
|  |                 |                 |                 |                 | 2018-19                 |                          |
|  |                 |                 |                 |                 | (1.4.2018 to 21.9.2018) | (22.9.2018 to 31.3.2019) |
| Opening Capital Cost                   | 46867.55        | 46867.55        | 46867.55        | 46867.55        | 46867.55                | 46867.55                 |
| Add: Additions during the year         | 0.00            | 0.00            | 0.00            | 0.00            | 0.00                    | 0.00                     |
| Less: Decapitalization during the year | 0.00            | 0.00            | 0.00            | 0.00            | 0.00                    | 425                      |
| Less: Reversal during the year         | 0.00            | 0.00            | 0.00            | 0.00            | 0.00                    | 0.00                     |
| Add: Discharges during the year        | 0.00            | 0.00            | 0.00            | 0.00            | 0.00                    | 0.00                     |
| <b>Closing capital cost</b>            | <b>46867.55</b> | <b>46867.55</b> | <b>46867.55</b> | <b>46867.55</b> | <b>46867.55</b>         | <b>46442.55</b>          |
| Average capital cost                   | 46867.55        | 46867.55        | 46867.55        | 46867.55        | 46867.55                | 46442.55                 |

#### **Annual Fixed Charges claimed**

|                             | 2014-15         | 2015-16         | 2016-17         | 2017-18         | (Rs. in lakh)           |                          |
|-----------------------------|-----------------|-----------------|-----------------|-----------------|-------------------------|--------------------------|
|                             |                 |                 |                 |                 | 2018-19                 |                          |
|                             |                 |                 |                 |                 | (1.4.2018 to 21.9.2018) | (22.9.2018 to 31.3.2019) |
| Depreciation                | 0.00            | 0.00            | 0.00            | 0.00            | 0.00                    | 0.00                     |
| Interest on Loan            | 35.35           | 33.76           | 32.16           | 30.56           | 13.80                   | 15.15                    |
| Return on Equity            | 875.00          | 730.00          | 730.00          | 730.00          | 349.00                  | 361.00                   |
| Interest on Working Capital | 5396.68         | 5491.94         | 5576.40         | 5684.68         | 2557.03                 | 2358.35                  |
| O&M Expenses                | 23227.72        | 24641.46        | 26174.35        | 27917.24        | 14157.39                | 12994.26                 |
| <b>Total</b>                | <b>29534.76</b> | <b>30897.16</b> | <b>32512.90</b> | <b>34362.48</b> | <b>17077.22</b>         | <b>15728.77</b>          |

5. The Respondent, TANGEDCO has filed its reply vide affidavit dated 5.10.2020 and the Petitioner has filed its rejoinder to the said reply, on 27.5.2021. The Petition was heard through virtual hearing on 14.7.2022 and the Commission, after directing the Petitioner, to submit certain additional information, reserved its order in the petition. In compliance to the directions, the Respondent TANGEDCO has filed the note of



arguments (of the hearing dated 14.7.2022) and the Petitioner has filed the additional information vide affidavit dated 5.8.2022, after serving copies on the Respondents. Based on the submissions of the parties and documents available on record and after prudence check, we proceed for truing up the tariff of the generating station, in this petition, as stated in the subsequent paragraphs.

### **Capital Cost**

6. Clause (1) of Regulation 9 of the 2014 Tariff Regulations provides that the capital cost as determined by the Commission after prudence check, in accordance with this regulation, shall form the basis of determination of tariff for existing and new projects.

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

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

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

*xxxx”*

7. The Commission vide its order dated 26.5.2016 in Petition No.472/GT/2014 had approved the closing capital cost of Rs.46867.55 lakh, as on 31.3.2014. Further, the Commission vide its order dated 29.6.2016 had allowed the opening capital cost of Rs.46867.55 lakh as on 1.4.2014. The Petitioner, in the present petition, has claimed an opening capital cost of Rs.46867.55 lakh, as on 1.4.2014, and the same has been considered, in terms of the above regulations, for truing up of tariff for the period 2014-19.

### **Additional Capital Expenditure**

8. The Commission vide its order dated 26.9.2016 in Petition No. 253/GT/2014 had not allowed any additional capital expenditure for the generating station for the period



2014-19. The Petitioner, in the present petition, has also not claimed any additional capital expenditure for the period 2014-19.

**De-capitalization of Assets**

9. The Petitioner has claimed de-capitalization of assets of Rs.425 lakh in 2018-19 on account of retirement of Unit-VII. In terms of the relevant information furnished vide Form 9Bi of the petition, the de-commissioning of Unit VII on 22.9.2018, as claimed by the Petitioner is allowed.

**Capital Cost**

10. Based on above, the capital cost allowed for the generating station, for the period 2014-19 is as under:

|   | 2014-15         | 2015-16         | 2016-17         | 2017-18         | <i>(Rs. in lakh)</i>        |                              |
|---|-----------------|-----------------|-----------------|-----------------|-----------------------------|------------------------------|
|   |                 |                 |                 |                 | 2018-19                     |                              |
|   |                 |                 |                 |                 | 1.4.2018<br>to<br>21.9.2018 | 22.9.2018<br>to<br>31.3.2019 |
| Opening Capital Cost                    | 46867.55        | 46867.55        | 46867.55        | 46867.55        | 46867.55                    | 46442.55                     |
| Add: Net Additional Capital Expenditure | 0.00            | 0.00            | 0.00            | 0.00            | 0.00                        | 0.00                         |
| Less-Decapitalization                   | <b>0.00</b>     | <b>0.00</b>     | <b>0.00</b>     | <b>0.00</b>     | <b>0.00</b>                 | <b>0.00</b>                  |
| <b>Closing Capital Cost</b>             | <b>46867.55</b> | <b>46867.55</b> | <b>46867.55</b> | <b>46867.55</b> | <b>46867.55</b>             | <b>46442.55</b>              |
| Average Capital Cost                    | 46867.55        | 46867.55        | 46867.55        | 46867.55        | 46867.55                    | 46442.55                     |

**Debt-Equity Ratio**

11. Regulation 19 of the 2014 Tariff Regulations provides as under:

*“19.(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-equity 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 of 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: equity ratio based on actual information provided by the generating company or the transmission licensee as the case may be.

(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.”

12. The Commission has considered the Net Fixed Asset (NFA) method for the generating stations of the Petitioner and the actual source of funding has been considered for calculating debt-equity ratio. Accordingly, the net fixed asset details are as under:

|                         | 2014-15 | 2015-16 | 2016-17 | 2017-18 | <i>(Rs. in lakh)</i>        |                              |
|-------------------------|---------|---------|---------|---------|-----------------------------|------------------------------|
|                         |         |         |         |         | 2018-19                     |                              |
|                         |         |         |         |         | 1.4.2018<br>to<br>21.9.2018 | 22.9.2018<br>to<br>31.3.2019 |
| Opening Net Fixed Asset | 5519.26 | 5519.26 | 5519.26 | 5519.26 | 5519.26                     | 5094.26                      |
| Closing Net Fixed Asset | 5519.26 | 5519.26 | 5519.26 | 5519.26 | 5519.26                     | 5094.26                      |
| Average Net Fixed Asset | 5519.26 | 5519.26 | 5519.26 | 5519.26 | 5519.26                     | 5094.26                      |
| Average Loan            | 1813.12 | 1731.35 | 1649.46 | 1567.58 | 1507.14                     | 1466.14                      |
| Average Equity          | 3706.14 | 3787.91 | 3869.80 | 3951.68 | 4012.11                     | 3628.11                      |

### **Return on Equity**

13. 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 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 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 requirement 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 kilometres.”

14. Regulation 25 of the 2014 Tariff Regulations provides as under:

“25. Tax on Return on Equity:

(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-rata 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.

Illustration.

(i) In case of the generating company or the transmission licensee paying Minimum Alternate Tax (MAT) @ 20.96% including surcharge and cess: Rate of return on equity =  $15.50/(1-0.2096) = 19.610\%$

(ii) In case of generating company or the transmission licensee paying normal corporate tax including surcharge and cess:

(a) Estimated Gross Income from generation or transmission business for FY 2014-15 is



Rs 1000 crore.

(b) Estimated Advance Tax for the year on above is Rs 240 crore.

(c) Effective Tax Rate for the year 2014-15 = Rs 240 Crore/Rs 1000 Crore = 24%

(d) Rate of return on equity =  $15.50 / (1 - 0.24) = 20.395\%$

(3) The generating company or the transmission licensee as the case may be shall true up the grossed up rate of return on equity at the end of every financial year based on actual tax paid together with any additional tax demand including interest thereon duly adjusted for any refund of tax including interest received from the income tax authorities pertaining to the tariff period 2014-15 to 2018-19 on actual gross income of any financial year. However, penalty if any arising on account of delay in deposit or short deposit of tax amount shall not be claimed by the generating company or the transmission licensee as the case may be. Any under-recovery or over recovery of grossed up rate on return on equity after truing up shall be recovered or refunded to beneficiaries or the long-term transmission customers/DICs as the case may be on year to year basis.”

15. As stated, the NFA method has been considered for the generating stations of the Petitioner and the actual source of funding has been considered for calculating debt-equity ratio. The Petitioner has claimed tariff, considering the rate of Return on Equity (ROE) of 23.599% in 2014-15 and 19.705% in 2015-19. The Petitioner has worked out these rates, after grossing up the base rate of ROE of 15.50%, with corporate tax rate of rate of 34.32% in 2014-15 and 21.340% in 2015-19. The Petitioner has furnished effective tax rate for 2014-15, based on the auditor certificate dated 26.8.2019. However, on scrutiny, it is observed that the calculation of effective tax rate is inclusive of penal interest of Rs. 684.30 lakh and the same has not considered for working out the effective tax rate. Accordingly, the effective tax rate works out to 33.99% as considered for the purpose of grossing up. The rate of ROE considered for the purpose of tariff, works out to 23.481% for 2014-15, 19.705% for 2015-18 and 19.758% for 2018-19. Accordingly, ROE has been worked out as under:

|  | 2014-15 | 2015-16 | 2016-17 | 2017-18 | (Rs. in lakh)               |                              |
|--|---------|---------|---------|---------|-----------------------------|------------------------------|
|  |         |         |         |         | 2018-19                     |                              |
|  |         |         |         |         | 1.4.2018<br>to<br>21.9.2018 | 22.9.2018<br>to<br>31.3.2019 |
| Average Normative Equity (A)                   | 3706.14 | 3787.91 | 3869.80 | 3951.68 | 4012.11                     | 3628.11                      |
| Return on Equity (Base Rate) (B)               | 15.500% | 15.500% | 15.500% | 15.500% | 15.500%                     | 15.500%                      |
| Effective Tax Rate (C)                         | 33.990% | 21.342% | 21.342% | 21.342% | 21.549%                     | 21.549%                      |
| Rate of Return on Equity (Pre-Tax) (D=B/(1-C)) | 23.481% | 19.705% | 19.705% | 19.705% | 19.758%                     | 19.758%                      |





|   | 2014-15       | 2015-16       | 2016-17       | 2017-18       | 2018-19                     |                              |
|---|---------------|---------------|---------------|---------------|-----------------------------|------------------------------|
|   |               |               |               |               | 1.4.2018<br>to<br>21.9.2018 | 22.9.2018<br>to<br>31.3.2019 |
| <b>Return on Equity (Pre-Tax) –<br/>(annualized) (E= A*D)</b> | <b>870.24</b> | <b>746.41</b> | <b>762.54</b> | <b>778.68</b> | <b>377.90</b>               | <b>375.11</b>                |

### **Interest on Loan**

16. 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.*

*(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 de-capitalization of such asset.*

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

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

*Provided that the 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.”*

17. The Net Fixed Asset methodology has been considered for the generating station of the Petitioner and the actual loan, actual repayment and the actual rate of interest has been considered for the purpose of calculation of interest on loan. The weighted average rate of interest on loan @ 1.95% considered for the period 2014-19 for calculation of interest, is the same as considered in order dated 26.9.2016 in Petition 253/GT/2014. Necessary calculation of interest on loan is as under:

|   | 2014-15      | 2015-16      | 2016-17      | 2017-18      | <i>(Rs. in lakh)</i>        |                              |
|---|--------------|--------------|--------------|--------------|-----------------------------|------------------------------|
|   |              |              |              |              | 2018-19                     |                              |
|   |              |              |              |              | 1.4.2018<br>to<br>21.9.2018 | 22.9.2018<br>to<br>31.3.2019 |
| Gross opening loan (A)                              | 3896.00      | 3896.00      | 3896.00      | 3896.00      | 3896.00                     | 3896.00                      |
| Cumulative repayment of loan upto previous year (B) | 2042.00      | 2123.77      | 2205.54      | 2287.54      | 2369.31                     | 2408.40                      |
| Net Loan Opening (C=A-B)                            | 1854.00      | 1772.23      | 1690.46      | 1608.46      | 1526.69                     | 1487.60                      |
| Addition due to additional capital expenditure (D)  | 0.00         | 0.00         | 0.00         | 0.00         | 0.00                        | 0.00                         |
| Repayment of loan during the year (E)               | 81.77        | 81.77        | 82.00        | 81.77        | 39.09                       | 42.91                        |
| Net Loan Closing (F=C+D-E)                          | 1772.23      | 1690.46      | 1608.46      | 1526.69      | 1487.60                     | 1444.69                      |
| Average Loan (G=(F+C)/2)                            | 1813.12      | 1731.35      | 1649.46      | 1567.58      | 1507.14                     | 1466.14                      |
| Weighted Average Rate of Interest of loan (H)       | 1.9500%      | 1.9500%      | 1.9500%      | 1.9500%      | 1.9500%                     | 1.9500%                      |
| <b>Interest on Loan (I=H*G)</b>                     | <b>35.36</b> | <b>33.76</b> | <b>32.16</b> | <b>30.57</b> | <b>14.01</b>                | <b>14.96</b>                 |

### **Depreciation**

18. Regulation 27 of 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:*

*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 decapitalized asset during its useful services.”*

19. Since, the entire depreciable value has been depreciated as on 31.3.2014 vide order dated 26.5.2016 in Petition 472/GT/2014 and no additional capital expenditure has been claimed during the period 2014-19, the depreciation for the period 2014-19 is 'nil'.



## Operation & Maintenance Expenses

20. Regulation 29(1)(d) of the 2014 Tariff Regulations specifies following O&M expense norms for the generating station, as under:

*(Rs. in lakh)*

| 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
|---------|---------|---------|---------|---------|
| 38.12   | 40.52   | 43.07   | 45.78   | 48.66   |

21. The Commission in its order dated 26.9.2016 in Petition No. 253/GT/2014 had allowed the total O&M expenses for the generating station, as under:

*(Rs. in lakh)*

|  | 2014-15         | 2015-16         | 2016-17         | 2017-18         | 2018-19         |
|--|-----------------|-----------------|-----------------|-----------------|-----------------|
| O&M expenses allowed under Regulation 29(1)(a) | 22872           | 24312           | 25842           | 27468           | 29196           |
| Water charges allowed under Regulation 29(2)   | 78.89           | 78.89           | 78.89           | 78.89           | 78.89           |
| <b>Total O&amp;M expenses allowed</b>          | <b>22950.89</b> | <b>24390.89</b> | <b>25920.89</b> | <b>27546.89</b> | <b>29274.89</b> |

22. The total O&M expenses claimed by the Petitioner are as under:

*(Rs. in lakh)*

|  | 2014-15         | 2015-16         | 2016-17         | 2017-18         | 2018-19         |
|--|-----------------|-----------------|-----------------|-----------------|-----------------|
| O&M expenses claimed under Regulation 29(1)(a) | 22872.00        | 24312.00        | 25842.00        | 27468.00        | 24330.00        |
| Water charges claimed under Regulation 29(2)   | 355.72          | 329.46          | 332.35          | 449.24          | 501.97          |
| <b>Total O&amp;M expenses claimed</b>          | <b>23227.72</b> | <b>24641.46</b> | <b>26174.35</b> | <b>27917.24</b> | <b>27151.65</b> |

23. It is observed that the O&M expenses under Regulation 29(1)(a) allowed for the period 2018-19 by the Commission vide its order dated 26.9.2016 in Petition No.253/GT/2014 is Rs.29196 lakh, while the Petitioner has claimed the same as Rs.24330 lakh. This is on account of the fact that the Petitioner had de-commissioned Unit-VII (100 MW) during the year 2018-19 and therefore. not claimed normative O&M expenses for the same. Considering the fact, that the date of de-commissioning of Unit-VII of the generating station is 22.9.2018, we allow the normative O&M expenses as follows:



| <i>(Rs. in lakh)</i> |          |          |          |                             |                              |
|----------------------|----------|----------|----------|-----------------------------|------------------------------|
| 2014-15              | 2015-16  | 2016-17  | 2017-18  | 2018-19                     |                              |
|                      |          |          |          | 1.4.2018<br>to<br>21.9.2018 | 22.9.2018<br>to<br>31.3.2019 |
| 22872.00             | 24312.00 | 25842.00 | 27468.00 | 13918.09                    | 12731.59                     |

### **Water Charges**

24. Regulation 29(2) of the 2014 Tariff Regulations provide as under:

*“29(2) The Water Charges and capital spares for thermal generating stations shall be allowed separately:*

*Provided that water charges shall be allowed based on water consumption depending upon type of plant, type of cooling water system etc., subject to prudence check. The details regarding the same shall be furnished along with the petition:*

*Provided that the generating station shall submit the details of year wise actual capital spares consumed at the time of truing up with appropriate justification for incurring the same and substantiating that the same is not funded through compensatory allowance or special allowance or claimed as a part of additional capitalization or consumption of stores and spares and renovation and modernization”.*

25. Water charges allowed on projected basis, by order dated 28.9.2016 in Petition

No. 253/GT/2014 is as under:

| <i>(Rs. in lakh)</i> |         |         |         |         |
|----------------------|---------|---------|---------|---------|
| 2014-15              | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
| 78.89                | 78.89   | 78.89   | 78.89   | 78.89   |

26. In terms of the above regulation, water charges are to be allowed based on water consumption, depending upon type of plant, type of cooling water system etc., subject to prudence check.

27. The Petitioner has claimed water charges consisting of pumping cost, incurred by ground water control and storm water control for the year, consent fee payable to Government account, water cess payable to Government and Personnel charges. The Petitioner has submitted the Auditor certificate on water charges for the period 2014-19. The Petitioner has also accordingly sought permission to recover the water charges incurred fully, at actuals from the beneficiaries.



| Period  | Water Quantity | Pumping charges (Rs. 0.376 / KL) | Water Cess | Water Consent Fee | Personnel Charges | Others, if any | Water Charges | Water Charges |
|---------|----------------|----------------------------------|------------|-------------------|-------------------|----------------|---------------|---------------|
|         | (KL)           | (Rs.)                            | (Rs.)      | (Rs.)             | (Rs.)             |                | (Rs.)         | (Rs. In lakh) |
|         | 1              | 2                                | 3          | 4                 | 5                 | 6              | 7=2+3+4+5+6   |               |
| 2014-15 | 14885343       | 5596889.00                       | 2111662    | 368021            | 27431496          | 64240          | 35572308      | 355.72        |
| 2015-16 | 12758758       | 4797293.00                       | 1851085    | 368021            | 25879806          | 50000          | 32946205      | 329.46        |
| 2016-17 | 12140210       | 4564719.00                       | 1821770    | 364049            | 26421505          | 62720          | 33234763      | 332.35        |
| 2017-18 | 12794846       | 4810862.00                       | 452795     | 366265            | 39248666          | 45480          | 44924068      | 449.24        |
| 2018-19 | 11409120       | 4289829.00                       |            | 552190            | 45299543          | 55600          | 50197162      | 501.97        |

28. The Respondent, TANGEDCO has submitted that the Petitioner has not furnished details in respect of water charges claimed namely, such as contracted quantum of water and allocated capacity, actual water consumption for the last 5 years along with copies of notification of water charges etc. The Respondent has further submitted that the Petitioner's claim towards Personnel charges and Water analysis charges are not allowable, as these have already been included in the normative O&M expenses, allowed to the generating station. In response, the Petitioner has submitted that it has not been procuring water from outside sources and is utilizing the aquifer water beneath the lignite seam, which is pumped out to facilitate lignite extraction. The Petitioner has clarified that it is claiming only pumping, statutory charges and personnel charges. The Petitioner, while pointing out that the contracted quantum of water is not applicable for the Petitioner, has submitted that it has furnished details of the Personnel charges incurred for the Personnel deployed in raw water group and other charges, pertaining to the water analysis charges as a part of statutory charges payable/paid to Tamil Nadu Pollution Control Board (TNPCB).

29. We have examined the matter. The Petitioner has claimed actual water charges, based on the auditor's certificate. It is observed that pumping charges has been claimed by the Petitioner, at the rate of Rs.0.376/ KL which is same as approved by order dated 26.9.2016 in Petition 253/GT/2014. As regards water cess, the Commission had



approved water cess @5 paise/ KL. The Petitioner, in the present petition, has claimed water cess based on actual cess paid to TNPCB and has also furnished the copies of assessment orders to substantiate its claim. The Petitioner in Petition No. 253/GT/2014 (i.e., determination of tariff for the period 2014-19) had claimed the total water charges under the heads pumping charges, water cess and water consent fee. Accordingly, the Commission vide its order dated 26.9.2016 had allowed the claim. However, in the present petition, the Petitioner, in addition to above heads has also included Personnel charges and other charges, in the water charges claimed.

30. It is noticed that the Commission, vide its orders dated 9.6.2022 in Petition No. 367/GT/2020 (NLC TPS-II Expansion) had disallowed the Personnel charges claimed by the Petitioner in water charges. Aggrieved by the order dated 9.6.2022 in Petition No. 367/GT/2020, the Petitioner has filed Review Petition No. 33/RP/2022, raising several issues, including the disallowance of Personnel charges in water charges and the same is pending for consideration. In view of this, we are constrained not to allow the Personnel charges claimed in water charges, at this stage. This is however subject to the outcome of the decision in Review Petition No.33/RP/2022. In case, the Personnel charges in the water charges are allowed in Review Petition No. 33/RP/2022, the same shall also be applicable for the present case. As regards other charges, the Petitioner has submitted that the same pertain to water analysis. Since, the other charges pertain to sampling and testing of water (i.e. water analysis), we allow the same in water charges.

31. Accordingly, the water charges allowed to the generating station for the period 2014-19 is as under:



(Rs. in lakh)

| Period  | Water Quantity | Pumping charges (Rs. 0.376 / KL) | Water Cess | Water Consent Fee | Others If any | Water Charges | Water Charges |
|---------|----------------|----------------------------------|------------|-------------------|---------------|---------------|---------------|
|         | (KL)           | (Rs.)                            | (Rs.)      | (Rs.)             |               | (Rs.)         | (Rs. in lakh) |
|         | 1              | 2                                | 3          | 4                 |               | 6=2+3+4+5     |               |
| 2014-15 | 14885343       | 5596889.00                       | 2111662    | 368021            | 64240         | 8140812.00    | 81.41         |
| 2015-16 | 12758758       | 4797293.00                       | 1851085    | 368021            | 50000         | 7066399.00    | 70.66         |
| 2016-17 | 12140210       | 4564719.00                       | 1821770    | 364049            | 62720         | 6813258.00    | 68.13         |
| 2017-18 | 12794846       | 4810862.00                       | 452795     | 366265            | 45480         | 5675402.00    | 56.75         |
| 2018-19 | 11409120       | 4289829.00                       |            | 552190            | 55600         | 4897619.00    | 48.98         |

32. Further, due to de-commissioning of Unit-VII of the generating station, the water charges for the period 2018-19 has been prorated to the number of days. Accordingly, the water charges allowed for the period 2014-19 is as under:

| (Rs. in lakh) |         |         |         |                       |                        |
|---------------|---------|---------|---------|-----------------------|------------------------|
| 2014-15       | 2015-16 | 2016-17 | 2017-18 | 2018-19               |                        |
|               |         |         |         | 1.4.2018 to 21.9.2018 | 22.9.2018 to 31.3.2019 |
| 81.41         | 70.66   | 68.13   | 56.75   | 23.35                 | 25.63                  |

### **Capital Spares**

33. The last proviso to Regulation 29(2) of the 2014 Tariff Regulations provides as under:

*“Provided that the generating station shall submit the details of year wise actual capital spares consumed at the time of truing up with appropriate justification for incurring the same and substantiating that the same is not funded through compensatory allowance or special allowance or claimed as a part of additional capitalization or consumption of stores and spares and renovation and modernization”.*

34. In terms of the above proviso, capital spares consumed, are admissible separately, at the time of truing up of tariff, based on the details furnished by the Petitioner. As regards the claim of Petitioner for capital spares as additional capital expenditure, the Commission vide its order dated 26.9.2016 in Petition No.253/GT/2014 decided as under:

*“7. However, the petitioner is granted liberty to claim replacement of any components/ system on need basis for the period 2014-19 under capital spares as per the proviso under Regulation 29(2) of the 2014 Tariff Regulations and the same can be claimed at the time of truing up of tariff with appropriate justification for incurring such expenditures”*





35. Accordingly, the capital spares claimed by the Petitioner are as under:

*(Rs. in lakh)*

|  | <b>2014-15</b> | <b>2015-16</b> | <b>2016-17</b> | <b>2017-18</b> | <b>2018-19</b> |
|--|----------------|----------------|----------------|----------------|----------------|
| Capital Spares consumed                          | 369.07         | 730.83         | 389.95         | 206.51         | 103.43         |
| Capital Spares as additional capital expenditure | 121.90         | 291.27         | 272.41         | 99.15          | 77.33          |
| Total  | 490.98         | 1,022.10       | 662.37         | 305.66         | 180.76         |

36. The Petitioner has furnished the justification for incurring the expenditure and has also substantiated that the same is not funded through compensatory allowance or special allowance or claimed as a part of additional capitalisation or consumption of stores and spares and renovation and modernization.

37. The Respondent, TANGEDCO has submitted that the generating station undertook R&M in 1994 and the Commission, considering the phasing out and the life served by the generating station, did not allow any additional capital expenditure during the period 2014-19. It has further submitted that the PPA executed with the generating station expired on 31.3.2019, and the Respondent has stopped procuring power from the station. Accordingly, the Respondent has submitted that the necessity for incurring the additional expenditure for capital spares, at the final stage, does not arise.

38. We have considered the matter. As evident from the regulation, capital spares are allowed on consumption basis only and not on procurement basis. Hence, any capital spares procured for consumption in future cannot be allowed for the purpose of tariff.

39. We now proceed on the capital spares claimed by the Petitioner on consumption basis. The capital spares claimed do not form part of the capital cost of the generating station. It is pertinent to mention that the term 'capital spares' has not been defined in the 2014 Tariff Regulations. The term capital spares, in our view, is a piece of equipment, or a spare part, of significant cost that is maintained in inventory for use in the event that a similar piece of critical equipment fails or must be rebuilt. Keeping in



view the principle of materiality and to ensure standardized practices in respect of earmarking and treatment of capital spares, the value of capital spares exceeding Rs.1.00 lakh, on prudence check of the details furnished by the Petitioner in Form-17 of the Petition, has been considered for the purpose of tariff. Based on this, the details of capital spares consumption allowed for the period 2014-19 is summarized as under:

|   | <i>(Rs. in lakh)</i> |                |                |                |                |
|---|----------------------|----------------|----------------|----------------|----------------|
|   | <b>2014-15</b>       | <b>2015-16</b> | <b>2016-17</b> | <b>2017-18</b> | <b>2018-19</b> |
| Total capital spares consumed claimed   | 369.07               | 730.83         | 389.95         | 206.51         | 103.43         |
| Less: Value of capital spares below Rs.1.00 lakh disallowed on individual basis | 0.00                 | 0.00           | 0.00           | 0.00           | 0.00           |
| <b>Net total value of capital spares considered</b>                             | <b>369.07</b>        | <b>730.83</b>  | <b>389.95</b>  | <b>206.51</b>  | <b>103.43</b>  |

40. Further, we are of the view that spares do have salvage value. Accordingly, in line with the practice of considering salvage value, presumed to be recovered by the Petitioner on sale of other capital assets, on becoming unserviceable, the salvage value of 10% has been deducted from the cost of capital spares considered above for period 2014-19. Therefore, on prudence check of the information furnished by the Petitioner in Form-17 and on applying the said ceiling limit along with deduction of the salvage value @10%, the net capital spares allowed in terms of Regulation 29(2) of 2014 Tariff Regulations is as under:

|  | <i>(Rs. in lakh)</i> |                |                |                |                |
|--|----------------------|----------------|----------------|----------------|----------------|
|  | <b>2014-15</b>       | <b>2015-16</b> | <b>2016-17</b> | <b>2017-18</b> | <b>2018-19</b> |
| Net total value of capital spares considered | 369.07               | 730.83         | 389.95         | 206.51         | 103.43         |
| Less: Salvage value @ 10%                    | 36.91                | 73.08          | 39.00          | 20.65          | 10.34          |
| <b>Net capital spares allowed</b>            | <b>332.17</b>        | <b>657.74</b>  | <b>350.96</b>  | <b>185.85</b>  | <b>93.09</b>   |

41. In view of the decommissioning of Unit-VII on 22.9.2018, the capital spares prorated for 2018-19 and allowed for the period 2014-19 is as under:



*(Rs. in lakh)*

| 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19                     |                              |
|---------|---------|---------|---------|-----------------------------|------------------------------|
|         |         |         |         | 1.4.2018<br>to<br>21.9.2018 | 22.9.2018<br>to<br>31.3.2019 |
| 332.17  | 657.74  | 350.96  | 185.85  | 44.38                       | 48.71                        |

42. Accordingly, the total O&M expenses allowed to the generating station in terms of Regulation 29 of the 2014 Tariff Regulations are as under:

*(Rs. in lakh)*

|   |                | 2014-15         | 2015-16         | 2016-17         | 2017-18         | 2018-19                     |                              |
|---|----------------|-----------------|-----------------|-----------------|-----------------|-----------------------------|------------------------------|
|   |                |                 |                 |                 |                 | 1.4.2018<br>to<br>21.9.2018 | 22.9.2018<br>to<br>31.3.2019 |
| Normative O&M expenses under Regulation 29(1)(a) of the 2014 Tariff Regulations | Claimed        | 22872.00        | 24312.00        | 25842.00        | 27468.00        | 24330.00                    |                              |
|   | <b>Allowed</b> | <b>22872.00</b> | <b>24312.00</b> | <b>25842.00</b> | <b>27468.00</b> | <b>13918.09</b>             | <b>12731.59</b>              |
| Water charges under Regulation 29(2) of the 2014 Tariff Regulations             | Claimed        | 355.72          | 329.46          | 332.35          | 449.24          | 501.97                      |                              |
|   | <b>Allowed</b> | <b>81.41</b>    | <b>70.66</b>    | <b>68.13</b>    | <b>56.75</b>    | 23.35                       | 25.63                        |
| Capital spares under Regulation 29(2) of the 2014 Tariff Regulations            | Claimed        | 490.98          | 1,022.10        | 662.37          | 305.66          | 180.76                      |                              |
|   | <b>Allowed</b> | <b>332.17</b>   | <b>657.74</b>   | <b>350.96</b>   | <b>185.85</b>   | 44.38                       | 48.71                        |
| Total O&M Expenses Claimed  | Claimed        | 23718.70        | 25663.56        | 26836.72        | 28222.90        | 25012.73                    |                              |
| Total O&M Expenses allowed  | <b>Allowed</b> | <b>23285.58</b> | <b>25040.40</b> | <b>26261.09</b> | <b>27710.60</b> | <b>13985.82</b>             | <b>12805.93</b>              |

### Operational Norms

43. The operational norms claimed by the Petitioner are as under:

- (a) Target Availability of 72%.
- (b) Gross Station Heat rate of 4000 kcal/kwh.
- (c) Auxiliary Power Consumption of 12.00%.
- (d) Specific oil consumption (SFC) for 1.5 ml/kWh.

44. The Petitioner has submitted that during November, 2015 unprecedented heavy rains had severely damaged the mines and power stations and due to this, the activities at the mine and the generating station came to a halt. It has also submitted that the



primary fuel, Lignite, was drowned and was not in the condition for normal use, thereby affecting the operational period from November, 2015 to December, 2016. The Petitioner has submitted that these events resulted in increase in specific oil consumption and also reduced plant availability. Hence, the Petitioner has prayed the to allow the recovery of expenditure incurred due to abnormal aspects, which were beyond the control of the Petitioner, under power to relax and power to remove difficulty.

45. The Respondent, TANGEDCO has submitted that the Petitioner has not communicated the force majeure event to the beneficiary or to the Commission earlier. It has also submitted that the force majeure condition can be applied for delay in completion of the projects only and the implications due to rains and weather are not applicable under force majeure, for day to day functioning.

46. The matter has been examined. We notice that the Petitioner, though has claimed relief under power to relax, has not substantiated its claim of force majeure with relevant documents. It is also noticed that the Petitioner has already been granted a margin of 28% in the Normative Plant Availability Factor for the generating station and has accordingly been allowed the NAPAF of 72%. In this background, we are not inclined to allow the prayer for recovery of expenditure due to abnormal aspects, in exercise of the power to relax. As the operational norms claimed by the Petitioner are in terms of the Regulation 36 of the 2014 Tariff Regulations the same are allowed

### **Interest on Working Capital**

47. Regulation 28 of the 2014 Tariff Regulations provides as under:

*“28. Interest on Working Capital:*

*(1) The working capital shall cover*

*(b) 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 Cost and Energy Charges in working capital**

48. The Petitioner has claimed following cost for fuel components:

(a) Cost of lignite and Secondary fuel oil based on the rates for January 2014, February 2014 and March 2014 has been adopted in the computation of interest on working capital and energy charges in respect of the generating station for the period 1.4.2014 to 31.3.2019.

(b) The cost of fuel claimed by the Petitioner in the computation of working capital is as under:

*(Rs in lakh)*

|   | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
|---|---------|---------|---------|---------|---------|
| Cost of lignite towards stock           | 11782   | 11814   | 11782   | 11782   | 11782   |
| Cost of secondary fuel oil for 2 months | 490.64  | 491.98  | 490.64  | 490.64  | 490.64  |

49. The Petitioner in the truing up petition has claimed standalone lignite transfer price of Rs 1668.81 per tonne inclusive of additional O&M as per 32/MP/2018 and taxes and duties.

### **Lignite Transfer Price and Energy Charges**

50. In case of the generating stations of the Petitioner, the price of fuel for the preceding three months i.e., January, 2014, February, 2014 and March, 2014 would mean the standalone price of lignite for the year 2013-14. In case of the generating station the lignite is supplied through Mine-I of NLCIL for which standalone lignite transfer price is determined. The standalone lignite transfer price claimed by the



Petitioner in Petition No.149/MP/2015 (for truing up of lignite transfer price for the period 2009-14) was Rs 1535/ tonne which was exclusive of additional O&M as per order dated 9.7.2018 in Petition No. 32/MP/2018 and taxes & duties. The Commission vide its order dated 20.3.2017 had directed the Petitioner to revise the standalone and pooled lignite transfer price based on actual capacity utilization and allowed O&M cost of Mine-I as under:

| O&M Cost                | 2009-10 | 2010-11 | 2011-12 | 2012-13 | 2013-14 |
|-------------------------|---------|---------|---------|---------|---------|
| <b>Standalone Mines</b> |         |         |         |         |         |
| Mine-I                  | 44011   | 48491   | 53350   | 58338   | 64357   |

51. The Commission vide its order dated 20.3.2017 with regard to O&M expenses of Mine-I (Standalone) had observed as under:

*26. With regard to the O&M cost of the Mine-I (standalone) and Mine-I (Expansion), there will be no change in the O&M cost of the Mine-I and Mine-I (Expansion) as the increase in the O&M cost for the period 2009-14 is within the escalation rate of 11.5% on previous years actuals.,....*

52. Since the O&M cost for Mine-I (standalone) claimed was within the normative limit of 11.5%, the Commission vide its order dated 20.3.2017 in Petition No. 149/MP/ 2015, had allowed the O&M expenses, as claimed by the Petitioner.

53. Further, the Commission in the said order, had also directed the Petitioner to work out the lignite transfer price based on actual capacity utilization. The relevant paragraph in the said order dated 20.3.2017 is reproduced as under:

*“28. The Petitioner has not provided actual capacity utilization in respect of different mines. Para 4.1 of MOC Guidelines dated 11-06-2009 states as follows:*

*4.1 Capacity Utilization*

*"The existing guidelines of 85% capacity utilization are to be retained, as this is a basis on which projects are formulated and economic evaluation of the project is done. Also, capacity utilization is heavily dependent on various mining operational conditions, land availability, space constraints and availability of main mining equipment's etc. SEBs had suggested adoption of marginal costing norms for pricing of lignite produced at 85% of capacity utilization, while NLC insisted on retained existing guidelines of 85% capacity utilization. Since inception, mines have achieved mine capacity utilization of less than 85% cumulatively. The performance of mines over its entire life has to be taken into consideration while fixing parameters and should not be based on sporadic performance. The said norms were also the basis on which earlier agreements with SEBs were settled and agreed to by SEBs. Therefore, the extant guidelines shall be retained, as this would also act as an incentive to NLC to achieve higher capacity utilization, which would be in the interest of all stakeholders."*

*As per para 4.1 of the guidelines, 100% O & M cost shall be recovered at 85% capacity utilization. In case the mines have achieved lower capacity utilization, the O & M cost shall*



*be proportionately reduced based on actual capacity utilization and lignite transfer price shall be worked out accordingly. In line with MOC guidelines, we have not gone into the detailed prudence of numbers/values as given in the auditor's certificate. Therefore, the Petitioner shall ensure that proportionate reduction in the O & M cost is done in case the capacity utilization is less than 85%.*

*29. The Petitioner is directed to calculate the impact on variable charge for the tariff period 2009-14 and in capacity charge during 2014-19 for its different generating stations within three months and adjust the same in the tariff accordingly.”*

54. The Petitioner, in the present petition, has considered the average price for January, 2014, February, 2014 and March, 2014 of lignite as Rs.1668.81 per tonne for computation of working capital. However, in case of the Petitioner's generating station, the average price of January, 2014, February, 2014 and March, 2014 means the cost of lignite transfer price for the year 2013-14. The Lignite transfer price for the year 2013-14 is to be considered as per directions in order dated 20.3.2017 in Petition No.149/MP/2015. The Commission in the said order for Mine-I had allowed the O&M expenses as claimed by the Petitioner. However, the Petitioner has not submitted the details of Capacity utilization as per direction in the said order dated 20.3.2017. It is not clear, whether the NLCIL Mine-I has achieved normative capacity utilization of 85% for the year 2013-14. However, the total landed cost of lignite considered by the Petitioner for the period 2013-14 is Rs 1668.814/ton (including base transfer price of Rs 1535/ton, Additional O&M cost of Rs 60.48 as per Petition no 32/MP/2018, Clean Energy cess of Rs 50.00 and Weighted average excise duty paid of Rs 23.33). Since, the O&M expenses allowed to the Standalone Mine-I for the period 2013-14 vide order dated 20.3.2017 in Petition No. 149/MP/2015, was well within the escalation norm of 11.5% as per MoC guidelines, we allow the standalone Lignite transfer price of Rs 1668.814 per ton as claimed by the Petitioner. However, the Petitioner and the Respondents can sit together and come to a conclusion towards the landed cost of lignite as per the actual details (capacity utilization, corresponding O&M cost, additional O&M as per Petition



No. 32/MP/2018, and taxes & duties etc.). The price & GCV of lignite and secondary oil as adopted by the Commission are as under:

|                                      | <i>(Rs. in lakh)</i> |          |          |          |          |
|--------------------------------------|----------------------|----------|----------|----------|----------|
|                                      | 2014-15              | 2015-16  | 2016-17  | 2017-18  | 2018-19  |
| Price of Lignite (Rs. / Tonne)       | 1668.814             | 1668.814 | 1668.814 | 1668.814 | 1668.814 |
| GCV of Lignite (kCal/kg)             | 2670.34              | 2670.34  | 2670.34  | 2670.34  | 2670.34  |
| Price of Secondary fuel oil (Rs./kL) | 51859.92             | 51859.92 | 51859.92 | 51859.92 | 51859.92 |
| GCV of secondary fuel oil (kCal/kg)  | 9769.28              | 9769.28  | 9769.28  | 9769.28  | 9769.28  |

55. It is observed that, the Petitioner, in Form-15, has submitted the details of secondary fuel oil for the months of February and March 2014 only. However, it has not furnished the details of secondary fuel with regard to January, 2014. Accordingly, we have considered the details of oil for the two months only. Based on the weighted average GCV and price of fuels for two months as considered, the cost for fuel components in working capitals and two months of Energy charge works out as under:

|   | 2014-15  | 2015-16  | 2016-17  | 2017-18  | <i>(Rs. in lakh)</i>        |                              |
|---|----------|----------|----------|----------|-----------------------------|------------------------------|
|   |          |          |          |          | 2018-19                     |                              |
|   |          |          |          |          | 1.4.2018<br>to<br>21.9.2018 | 22.9.2018<br>to<br>31.3.2019 |
| Cost of Lignite for 45 days             | 11620.22 | 11620.22 | 11620.22 | 11620.22 | 5539.50                     | 5067.26                      |
| Cost of secondary fuel oil for 2 months | 490.64   | 491.98   | 490.64   | 490.64   | 233.89                      | 213.95                       |
| Energy Charge for 2 months              | 16199.45 | 16243.83 | 16199.45 | 16199.45 | 7722.48                     | 7064.14                      |

### **Working capital for Maintenance Spares**

56. Regulation 28(1)(a)(iv) of the 2014 Tariff Regulations provides for Maintenance spares @ 20% of the O&M expenses. Accordingly, maintenance spares have been worked out and allowed as follows:

| 2014-15 | 2015-16 | 2016-17 | 2017-18 | <i>(Rs. in lakh)</i>     |                           |
|---------|---------|---------|---------|--------------------------|---------------------------|
|         |         |         |         | 2018-19                  |                           |
|         |         |         |         | 1.4.2018 to<br>21.9.2018 | 22.9.2018 to<br>31.3.2019 |
| 4657.11 | 5008.08 | 5252.22 | 5542.12 | 2797.16                  | 2561.19                   |





### **Working capital for Receivables**

57. Regulation 28(1)(a)(v) of the 2014 Tariff Regulations provides for Receivables for two months. Accordingly, the Receivable component for working capital is allowed as follows:

|                             | 2014-15         | 2015-16         | 2016-17         | 2017-18         | <i>(Rs. in lakh)</i><br>2018-19 |                              |
|-----------------------------|-----------------|-----------------|-----------------|-----------------|---------------------------------|------------------------------|
|                             |                 |                 |                 |                 | 1.4.2018<br>to<br>21.9.2018     | 22.9.2018<br>to<br>31.3.2019 |
| Energy Charges (two months) | 16199.45        | 16243.83        | 16199.45        | 16199.45        | 7722.48                         | 7064.14                      |
| Fixed Charges (two months)  | 4928.17         | 5218.49         | 5436.01         | 5695.09         | 2853.30                         | 2617.64                      |
| <b>Total</b>                | <b>21127.63</b> | <b>21462.32</b> | <b>21635.46</b> | <b>21894.54</b> | <b>10575.78</b>                 | <b>9681.78</b>               |

### **Working Capital for O&M Expenses (1 month)**

58. Regulation 28(1)(a)(vi) of the 2014 Tariff Regulations provides for O&M Expenses for one month. Accordingly, the O&M expenses for working capital is allowed as follows:

| 2014-15 | 2015-16 | 2016-17 | 2017-18 | <i>(Rs. in lakh)</i><br>2018-19 |                              |
|---------|---------|---------|---------|---------------------------------|------------------------------|
|         |         |         |         | 1.4.2018<br>to<br>21.9.2018     | 22.9.2018<br>to<br>31.3.2019 |
| 1940.46 | 2086.70 | 2188.42 | 2309.22 | 1165.48                         | 1067.16                      |

### **Rate of Interest on Working Capital**

59. In terms of clause (3) of Regulation 28 of the 2014 Tariff Regulations, the Bank rate of 13.50% as on 1.4.2014, tariff has been considered. Accordingly, Interest on working capital has been allowed as follows:

|   | 2014-15 | 2015-16 | 2016-17 | 2017-18 | <i>(Rs. in lakh)</i><br>2018-19 |                              |
|---|---------|---------|---------|---------|---------------------------------|------------------------------|
|   |         |         |         |         | 1.4.2018<br>to<br>21.9.2018     | 22.9.2018<br>to<br>31.3.2019 |
| Working capital for Cost of lignite towards Stock (15 days generation corresponding to NAPAF) (A) | 3873.41 | 3873.41 | 3873.41 | 3873.41 | 1846.50                         | 1689.09                      |
| Working capital for Cost of lignite towards Generation (30  | 7746.81 | 7746.81 | 7746.81 | 7746.81 | 3693.00                         | 3378.18                      |



|   |                 |                 |                 |                 |                 |                 |
|---|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| days generation corresponding to NAPAF) (B)   |                 |                 |                 |                 |                 |                 |
| Working capital for Cost of Secondary fuel oil (2 months generation corresponding to NAPAF) (C) | 490.64          | 491.98          | 490.64          | 490.64          | 233.89          | 213.95          |
| Working capital for Maintenance Spares (20% of O&M expenses) (D)                                | 4657.11         | 5008.08         | 5252.22         | 5542.12         | 2797.16         | 2561.19         |
| Working capital for Receivables (2 months of sale of electricity at NAPAF) (E)                  | 21127.63        | 21462.32        | 21635.46        | 21894.54        | 10575.78        | 9681.78         |
| Working capital for O&M expenses (1 month of O&M expenses) (F)                                  | 1940.46         | 2086.70         | 2188.42         | 2309.22         | 1165.48         | 1067.16         |
| <b>Total Working Capital (G = A+B+C+D+E+F)</b>  | <b>39836.06</b> | <b>40669.31</b> | <b>41186.96</b> | <b>41856.73</b> | <b>20311.82</b> | <b>18591.35</b> |
| <b>Rate of Interest (H)</b>   | 13.5000%        | 13.5000%        | 13.5000%        | 13.5000%        | 13.5000%        | 13.5000%        |
| <b>Interest on Working Capital (I = G x H)</b>  | <b>5377.87</b>  | <b>5490.36</b>  | <b>5560.24</b>  | <b>5650.66</b>  | <b>2742.10</b>  | <b>2509.83</b>  |

### Annual Fixed Charges

60. Based on the above, the annual fixed charges approved for the generating station for the period 2014-19 are summarised as follows:

|  | 2014-15         | 2015-16         | 2016-17         | 2017-18         | (Rs. in lakh)         |                        |
|--|-----------------|-----------------|-----------------|-----------------|-----------------------|------------------------|
|  |                 |                 |                 |                 | 2018-19               |                        |
|  |                 |                 |                 |                 | 1.4.2018 to 21.9.2018 | 22.9.2018 to 31.3.2019 |
| Depreciation                               | 0.00            | 0.00            | 0.00            | 0.00            | 0.00                  | 0.00                   |
| Interest on Loan                           | 35.36           | 33.76           | 32.16           | 30.57           | 14.01                 | 14.96                  |
| Return on Equity                           | 870.24          | 746.41          | 762.54          | 778.68          | 377.90                | 375.11                 |
| Interest on Working Capital                | <b>5377.87</b>  | <b>5490.36</b>  | <b>5560.24</b>  | <b>5650.66</b>  | <b>2742.10</b>        | <b>2509.83</b>         |
| O&M Expenses                               | 23285.57        | 25040.41        | 26261.09        | 27710.61        | 13985.82              | 12805.93               |
| <b>Total annual fixed charges approved</b> | <b>29569.04</b> | <b>31310.93</b> | <b>32616.04</b> | <b>34170.51</b> | <b>17119.82</b>       | <b>15705.84</b>        |

Note: All figures under each head have been rounded. The figure in total column in each year is also rounded. As such, the sum of individual items may not be equal to the arithmetic total of the column.

### KFW Loan

61. The Petitioner has submitted that it has availed KFW loan for funding of various projects including the generating station. It has also stated that a portion of loan was allocated to TPS-I Life Extension Programme (LEP), which was carried out to cater to the power requirement of the beneficiaries. The Petitioner has stated that, as on 31.3.2019, the tenure of PPA was completed, however, the principal amount of



Rs.14.44 crore, was outstanding. It has further stated that there is no provision for pre-payment of loan, as per the terms and condition of KfW loan agreement. The Petitioner has further submitted that the generating station will be replaced by Neyveli New Thermal Power Plant (NNTP) and the funding arrangements for NNTP have already been made, and hence, the outstanding loan amount cannot be allocated to NNTP. The Petitioner has, therefore prayed to allow the recovery of the outstanding KfW loan considering the balance loan tenure, average rate of foreign exchange fluctuation, discounted with one-year SBI MCLR, which works out as Rs.24.91 crore from the beneficiaries.

62. The Respondent TANGEDCO has submitted that the PPA executed between the Respondent and the Petitioner had expired on 31.3.2019 and therefore, TANGEDCO has discontinued the procurement of power from this plant, with effect from 31.3.2019. It has stated that with effect from 1.4.2019 onwards, the power generated from the station, is being sold in Power exchange and is also being utilised for colony consumption inside NLC campus. It has therefore submitted that the Petitioner cannot claim the unsettled portion of Rs.24.91 crore from the beneficiaries. The Respondent has stated that the power sold in the market is inclusive of all the expenditures incurred towards fixed cost and variable cost and therefore, the Petitioner should recover the outstanding KfW loan, if any, from the tariff fixed for the energy generated from the station and sold in power exchange.

63. We have considered the matter. The generating station has served 50 years of its life and the PPA between the Respondent and Petitioner had expired on 31.3.2019. Therefore, we are of the considerate view that the Petitioner should recover the outstanding loan from the revenue earned from the energy sold in the market.



64. The difference between the annual fixed charges already recovered by the Petitioner in terms of the Commission's order dated 28.9.2016 in Petition No.253/GT/2014 and the annual fixed charges determined by this order, as above, shall be adjusted in terms of Regulation 8(13) of the 2014 Tariff Regulations.

### **Summary**

65. The annual fixed charges claimed by the Petitioner and those approved for the generating station, for the period 2014-19 (after trueing-up) is summarised below:

| Annual Fixed Charges | 2014-15         | 2015-16         | 2016-17         | 2017-18         | <i>(Rs in lakh)</i>         |                              |
|----------------------|-----------------|-----------------|-----------------|-----------------|-----------------------------|------------------------------|
|                      |                 |                 |                 |                 | 2018-19                     |                              |
|                      |                 |                 |                 |                 | 1.4.2018<br>to<br>21.9.2018 | 22.9.2018<br>to<br>31.3.2019 |
| Claimed              | 29534.76        | 30897.16        | 32512.90        | 34362.48        | 17077.22                    | 15728.77                     |
| <b>Approved</b>      | <b>29569.04</b> | <b>31310.93</b> | <b>32616.04</b> | <b>34170.51</b> | <b>17119.82</b>             | <b>15705.84</b>              |

66. Petition No. 110/GT/2020 is disposed of in terms of the above.

**Sd/-**  
**(Pravas Kumar Singh)**  
**Member**

**Sd/-**  
**(Arun Goyal)**  
**Member**

**Sd/-**  
**(I.S. Jha)**  
**Member**

