CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI

Petition No. 385/GT/2020

Coram:

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

Date of Order: **10th March, 2023**

In the matter of:

Petition for approval of tariff for NLC Thermal Power Station-II, 1470 MW (TPS- II Stage-I (630 MW) and Stage-II (840 MW) for the period 2019-24.

And

In the matter of:

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

Vs

1. Tamilnadu Generation and Distribution Corporation Limited,
   NPKRR Maaligai, 144, Anna Salai,
   Chennai – 600002

2. Transmission Corporation of Andhra Pradesh Limited,
   (APTRANSCO), Vidyut Soudha,
   Hyderabad- 500082

3. Southern Power Distribution Company of Andhra Pradesh Limited,
   Srinivasasa Kalyana Mandapam Backside,
   Tiruchanoor Road, Kesavayana Gunta,
   Tirupati – 517 501, Chittoor District, Andhra Pradesh.

4. Eastern Power Distribution Company of Andhra Pradesh Limited,
   P&T Colony, Seethmmadhara, Vishakhapatnam, Andhra Pradesh - 503013

5. Transmission Corporation of Telangana Limited
   Vidyut Soudha, Khairatabad, Hyderabad-500082

6. Norther Power Distribution Company of Telangana Limited,
   H. No. 1-1-504, Opposite NIT Petrol Pump,
   Chaityanayapuri Colony, Hanmkonda,
   Warangal Telangana - 506004

7. Southern Power Distribution Company of Telangana Limited
6-1-50, MINT Compound, Hyderabad-500 063 (Telangana)

8. Power Company of Karnataka Limited,
KPTCL Complex, Kaveri Bhavan,
Bangalore – 560009

9. Bangalore Electricity Supply Company Limited,
Krishna Rajendra Circle, Bangalore - 560 001

10. Mangalore Electricity Supply Company Limited,
Corporate Office, MESCOM Bhavana, Bejai, Kavoor Cross Road,
Mangalore- 575 004

11. Chamundeshwari Electricity Supply Company Limited
Corporate Office No CA 29, Vijayanagar 2nd Stage
Hinakal, Mysore -570017

12. Gulbarga Electricity Supply Company Limited
Station Main Road, Gulbarga, Gulbarga -585 102
Karnataka

13. Hubli Electricity Supply Company Limited,
Corporate office, P. B. Road, Navanagar, Hubli - 580 025

14. Kerala State Electricity Board Limited,
Vaidyuthi Bhavanam, Pattom,
Thiruvananthapuram-695004

15. Puducherry Electricity Department,
137, NSC Bose Salai, Puducherry – 605 001 **…. Respondents**

Parties Present:

Ms. Anushree Bardhan, Advocate, NLC
Ms. Srishti Khindaria, Advocate, NLC
Shri Ravi Nair, Advocate, NLC
Shri Nambirajan K., NLC
Shri Srinivasan A., NLC
Shri A.K. Sahni, NLC
Shri M. Ravi Kumar, NLC
Shri S. Vallinayagam, Advocate, TANGEDCO
Shri B. Rajeswari, TANGEDCO
Ms. R. Ramalakshmi, TANGEDCO
Ms. R. Alamelu, TANGEDCO
Ms. Srimathi Shashi, PCKL

ORDER

This petition has been filed by the Petitioner, NLC India Limited, for approval of tariff of NLC TPS-II, Stage-I (630 MW) and Stage-II (840 MW) (in short 'the generating stations') for the period 2019-24, in accordance with the provisions of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 (hereinafter referred to as 'the 2019 Tariff Regulations').

Background

2. The generating station with an installed capacity of 1470 MW, comprises of three units with a capacity of 210 MW each under Stage-I and four units with a capacity of 210 MW each under Stage-II. The dates of commercial operation of the units of the generating station of Stage-I and Stage-II are as under:

<table>
<tr><th colspan="2">Stage-I</th><th colspan="2">Stage-II</th></tr>
<tr><td>Unit-I</td><td>29.9.1986</td><td>Unit-I</td><td>25.1.1992</td></tr>
<tr><td>Unit-II</td><td>8.5.1987</td><td>Unit-II</td><td>2.6.1992</td></tr>
<tr><td rowspan="2">Unit-III</td><td rowspan="2">23.4.1988</td><td>Unit-III</td><td>17.3.1993</td></tr>
<tr><td>Unit-IV</td><td>9.4.1994</td></tr>
</table>

3. The Commission vide order dated 8.3.2017 in Petition No. 256/GT/2014 had approved the tariff of the generating station for the period 2014-19, which was subsequently revised vide corrigendum order 12.6.2017. Thereafter, Petition No. 368/ GT/2020 was filed by the Petitioner for revision of tariff of the generating station, based on truing-up exercise for the period 2014-19, and the Commission vide its order dated 28.2.2023 had approved the capital cost and annual fixed charges as under:

Capital Cost allowed for Stage-I

(Rs. in lakh)

Stage-I	**2014-15**	**2015-16**	**2016-17**	**2017-18**	**2018-19**
Opening Capital Cost	32023.21	32023.21	32023.21	32023.21	32023.21
Add: Additional Capital Expenditure	0.00	0.00	0.00	0.00	0.00
Less: Decapitalization	0.00	0.00	0.00	0.00	0.00
Less: Assumed Deletion	0.00	0.00	0.00	0.00	0.00
Closing Capital Cost	**32023.21**	**32023.21**	**32023.21**	**32023.21**	**32023.21**
Average Capital Cost	32023.21	32023.21	32023.21	32023.21	32023.21

Annual Fixed Charges allowed for Stage-I

(Rs. in lakh)

Stage-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	0.00	0.00	0.00	0.00	0.00
Return on Equity	873.45	732.99	732.99	732.99	734.96
Interest on Working Capital	4108.49	4170.22	4233.44	4292.27	4356.98
O&M Expenses	15492.28	16454.62	17554.84	18501.35	19541.94
Total annual fixed charges approved	**20474.22**	**21357.83**	**22521.27**	**23526.60**	**24633.88**
Special Allowance	4364.88	4642.05	4936.82	5250.31	5583.69
Total	**24839.10**	**25999.88**	**27458.09**	**28776.91**	**30217.57**

Capital Cost allowed for Stage-II

(Rs. in lakh)

Stage-II	**2014-15**	**2015-16**	**2016-17**	**2017-18**	**2018-19**
Opening Capital Cost	118778.71	118778.71	118786.99	118853.85	118853.85
Add: Additional Capital Expenditure	0.00	8.28	66.86	0.00	0.00
Less: Decapitalization	0.00	0.00	0.00	0.00	0.00
Less: Assumed Deletion	0.00	0.00	0.00	0.00	0.00
Closing Capital Cost	**118778.71**	**118786.99**	**118853.85**	**118853.85**	**118853.85**
Average Capital Cost	118778.71	118782.85	118820.42	118853.85	118853.85

Annual Fixed Charges allowed for Stage-II

(Rs. in lakh)

Stage-II	**2014-15**	**2015-16**	**2016-17**	**2017-18**	**2018-19**
Depreciation	1086.28	1087.21	1098.40	1113.30	1113.30
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Return on Equity	3988.03	3133.38	2925.45	2714.13	2501.46
Interest on Working Capital	5567.98	5634.94	5714.71	5788.62	5869.96
O&M Expenses	20656.37	21939.50	23406.45	24668.46	26055.93
Total annual fixed charges approved	**31298.66**	**31795.03**	**33145.01**	**34284.51**	**35540.64**
Compensation Allowance	735.00	840.00	840.00	630.00	210.00
Special Allowance	-	-	-	1,894.49	6,044.37
Total	**32033.66**	**32635.03**	**33985.01**	**36809.00**	**41795.01**

Present Petition

4. The Petitioner has filed the present Petition for approval of tariff of the generating station for the period 2019-24, in accordance with Regulation 9(2) of the 2019 Tariff Regulations and has claimed the following annual fixed charges and capital cost:

Capital Cost claimed for Stage-I

(Rs. in lakh)

Stage-I	2019-20	2020-21	2021-22	2022-23	2023-24
Opening Capital Cost	40,261.21	40,736.07	43,355.50	44,366.50	44,561.50
Add: Additions during the year	474.86	2619.43	1011.00	195.00	0.00
Less: Decapitalization during the year	0.00	0.00	0.00	0.00	0.00
Less: Reversal during the year	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
Closing capital cost	**40,736.07**	**43,355.50**	**44,366.50**	**44,561.50**	**44,561.50**

Annual Fixed Charges claimed for Stage-I

(Rs. in lakh)

Stage-I	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	778.61	971.20	1,233.43	1,337.20	1,357.94
Interest on Loan	-	-	-	-	-
Return on Equity	2,091.60	2,061.59	2,061.59	2,061.59	1,955.46
Interest on Working Capital	4,821.24	4,867.12	4,914.55	4,959.96	5,002.76
O&M Expenses	21,580.84	22,400.04	23,250.97	24,154.78	25,094.91
Compensation Allowance	5,985.00	5,985.00	5,985.00	5,985.00	5,985.00
Total	**35,257.29**	**36,284.95**	**37,445.55**	**38,498.53**	**39,396.07**

Capital Cost claimed for Stage-II

(Rs. in lakh)

Stage-II	2019-20	2020-21	2021-22	2022-23	2023-24
Opening Capital Cost*	129764.71	129534.85	132164.42	132649.42	132046.42
Add: Additions during the year	633.14	3492.57	1348.00	260.00	0.00
Less: Decapitalization during the year	0.00	0.00	0.00	0.00	0.00
Less: Reversal during the year	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
Closing capital cost	**129534.85**	**132164.42**	**132649.42**	**132046.42**	**131183.42**

***The Petitioner has stated that it has inadvertently submitted the capital cost of Stage-I while providing the details of opening capital cost of Stage-II in Form 1(I). We have considered the claimed opening capital cost for Stage-II from the summary sheet provided by the Petitioner for Stage-II of the generating station.*

Annual Fixed Charges claimed for Stage-II

(Rs. in lakh)

Stage-II	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	20.72	166.30	351.63	418.92	430.92
Interest on Loan	-	-	-	-	-
Return on Equity	2,894.90	3,107.77	3,341.38	3,386.64	3,354.76
Interest on Working Capital	6,414.62	6,476.09	6,538.84	6,600.47	6,660.53
O&M Expenses	28,774.46	29,866.72	31,001.29	32,206.37	33,459.87
Special Allowance	7,980.00	7,980.00	7,980.00	7,980.00	7,980.00
Total	**46,084.69**	**47,596.87**	**49,213.14**	**50,592.41**	**51,886.09**

5. The Respondents, TANGEDCO and Respondent KSEBL have filed their replies vide affidavits dated 21.12.2020 and 15.4.2021 respectively and the Petitioner has filed its rejoinder to the said replies, on 27.5.2021 and 23.6.2021 respectively. This Petition, along with Petition No. 385/GT/2020 (tariff of the generating station for the period 2019-24) was heard through video conferencing, on 15.3.2022, and the Commission, after directing the Petitioner, to submit certain additional information, reserved its order in both petitions. In compliance to the above directions, the Petitioner has filed the additional information vide affidavit dated 2.5.2022, after serving copies to the Respondents. The Respondent TANGEDCO has also filed the note of the arguments made during the hearing on 15.3.2022. 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 19 of the 2019 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 19 of the 2019 Tariff Regulations provides as under:

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

(a) Capital cost admitted by the Commission prior to 1.4.2019 duly trued up by excluding liability, if any, as on 1.4.2019;

(b) Additional capitalization and de-capitalization for the respective year of tariff as determined in accordance with these regulations;

(c) Capital expenditure on account of renovation and modernisation as admitted by this Commission in accordance with these regulations;

(d) Capital expenditure on account of ash disposal and utilization including handling and transportation facility;

(e) Capital expenditure incurred towards railway infrastructure and its augmentation for transportation of coal upto the receiving end of generating station but does not include the transportation cost and any other appurtenant cost paid to the railway; and

(f) Capital cost incurred or projected to be incurred by a thermal generating station, on account of implementation of the norms under Perform, Achieve and Trade

(PAT) scheme of Government of India shall be considered by the Commission subject to sharing of benefits accrued under the PAT scheme with the beneficiaries."

7. The annual fixed charges claimed by the Petitioner, is based on the opening capital cost of Rs.40261.21 lakh for Stage-I and Rs. 129764.71 lakh for Stage-II, as against the closing capital cost of Rs. 32023.21 lakh (for Stage-I) and Rs. 118853.85 lakh (for Stage-II), on cash basis, as on 31.3.2019, as allowed vide Commission's order dated 28.2.2023 in Petition No. 368/GT/2020. Accordingly, in terms of Regulation 19(3) of the 2019 Tariff Regulations, the capital cost of Rs. 32023.21 lakh (for Stage-I) and Rs. 118853.85 lakh (for Stage-II), on cash basis, has been considered as the opening capital cost as on 1.4.2019.

Additional Capital Expenditure

8. Regulation 25 and 26 of the 2019 Tariff Regulations, provides as under:

"25. Additional Capitalisation within the original scope and after the cut-off date:

(1) The additional capital expenditure incurred or projected to be incurred in respect of an existing project or a new project on the following counts within the original scope of work and after the cut-off date may be admitted by the Commission, subject to prudence check:

(a) Liabilities to meet award of arbitration or for compliance of the directions or order of any statutory authority, or order or decree of any court of law;

(b) Change in law or compliance of any existing law;

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

(d) Liability for works executed prior to the cut-off date;

(e) Force Majeure events;

(f) Liability for works admitted by the Commission after the cut-off date to the extent of discharge of such liabilities by actual payments; and

(g) Raising of ash dyke as a part of ash disposal system.

(2) In case of replacement of assets deployed under the original scope of the existing project after cut-off date, the additional capitalization may be admitted by the Commission, after making necessary adjustments in the gross fixed assets and the cumulative depreciation, subject to prudence check on the following grounds:

(a) The useful life of the assets is not commensurate with the useful life of the project and such assets have been fully depreciated in accordance with the provisions of these regulations;

(b) The replacement of the asset or equipment is necessary on account of change in law or Force Majeure conditions;

(c) The replacement of such asset or equipment is necessary on account of obsolescence of technology; and

(d) The replacement of such asset or equipment has otherwise been allowed by the Commission.

26. Additional Capitalisation beyond the original scope

(1) 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 beyond the original scope, may be admitted by the Commission, subject to prudence check:

(a) Liabilities to meet award of arbitration or for compliance of order or directions of any statutory authority, or order or decree of any court of law;

(b) Change in law or compliance of any existing law;

(c) Force Majeure events;

(d) Need for higher security and safety of the plant as advised or directed by appropriate Indian Government Instrumentality or statutory authorities responsible for national or internal security;

(e) Deferred works relating to ash pond or ash handling system in additional to the original scope of work, on case to case basis:

Provided also that if any expenditure has been claimed under Renovation and Modernisation (R&M) or repairs and maintenance under O&M expenses, the same shall not be claimed under this Regulation;

(f) Usage of water from sewage treatment plant in thermal generating station.

(2) In case of de-capitalisation of assets of a generating company or the transmission licensee, as the case may be, the original cost of such asset as on the date of decapitalisation shall be deducted from the value of gross fixed asset and corresponding loan as well as equity shall be deducted from outstanding loan and the equity respectively in the year such de-capitalisation takes place with corresponding adjustments in cumulative depreciation and cumulative repayment of loan, duly taking into consideration the year in which it was capitalised."

9. The Petitioner has claimed the additional capital expenditure for the period 2019-24 as under:

(Rs. in lakh)

Year		**Special Allowance @ Rs 9.5 lakh/MW**	**Balance additional capital expenditure claimed**
Total Additions for Stage-I			
2019-20	6460	5985	475
2020-21	8604	5985	2619
2021-22	6996	5985	1,011
2022-23	6180	5985	195
2023-24	-	5985	-
Total Additions for Stage-II			
2019-20	8613	7980	633
2020-21	11473	7980	493
2021-22	9328	7980	1348
2022-23	8240	7980	260
2023-24	-	7980	-

10. The Petitioner has further submitted that the projected additional capital

expenditure is met through special allowance and the balance, if any, is considered as additional capital expenditure for the units. The Commission vide ROP of the hearing dated 15.3.2022, had directed the Petitioner to submit revised Form-9A clearly indicating the sub-clause of the regulation under which the additional capital expenditure has been claimed. In response, the Petitioner vide its affidavit dated 2.5.2022, has furnished revised Form 9A, wherein, it is observed that the Petitioner has not indicated the break-up details/bifurcation of the additional capital expenditure claimed for assets and the expenditure claimed under Special allowance, in respect of the stages of the generating station.

11. The Respondent TANGEDCO and Respondent KSEBL have submitted that the additional capital expenditure claimed by the Petitioner, after adjusting the Special allowance eligible to the Petitioner is as under:

(Rs. in lakh)

Year	2019-20	2020-21	2021-22	2022-23	2023-24
Stage I	475	2619	1011	195	-
Stage II	633	3493	1348	260	-

12. The Respondent TANGEDCO has referred to Regulation 28 of the 2019 Tariff Regulations and submitted that in case the Petitioner is opting for Special allowance, then revision of capital cost shall not be allowed. The Respondent KSEB also mentioned that the claim of the Petitioner towards additional capital expenditure under Regulation 25 and Regulation 26 is also not applicable and the Petitioner is only eligible to claim special allowance as compensation for meeting the requirement of expenses including Renovation and modernization beyond useful life of the generating station. Accordingly, the Respondents have prayed that the Commission may reject the claim of the Petitioner for additional capital expenditure for the period 2019-24.

13. We have examined the matter. Regulation 27 of the 2019 Tariff Regulations

provides as under:

"27. Additional Capitalisation on account of Renovation and Modernisation

(1) The generating company or the transmission licensee, as the case may be, intending to undertake renovation and modernization (R&M) of the generating station or unit thereof or transmission system or element thereof for the purpose of extension of life beyond the originally recognised useful life for the purpose of tariff, shall file a petition before the Commission for approval of the proposal with a Detailed Project Report giving complete scope, justification, cost-benefit analysis, estimated life extension from a reference date, financial package, phasing of expenditure, schedule of completion, reference price level, estimated completion cost including foreign exchange component, if any, and any other information considered to be relevant by the generating company or the transmission licensee:

Provided that the generating company making the applications for renovation and modernization (R&M) shall not be eligible for Special Allowance under Regulation 28 of these regulations;

Provided further that the generating company or the transmission licensee intending to undertake renovation and modernization (R&M) shall be required to obtain the consent of the beneficiaries or the long term customers, as the case may be, for such renovation and modernization (R&M) and submit the same along with the petition.

(2) Where the generating company or the transmission licensee, as the case may be, makes an application for approval of its proposal for renovation and modernisation (R&M), approval may be granted after due consideration of reasonableness of the proposed cost estimates, financing plan, schedule of completion, interest during construction, use of efficient technology, cost-benefit analysis, expected duration of life extension, consent of the beneficiaries or long term customers, if obtained, and such other factors as may be considered relevant by the Commission.

(3) In case of gas/ liquid fuel based open/ combined cycle thermal generating station after 25 years of operation from date of commercial operation, any additional capital expenditure which has become necessary for renovation of gas turbines/steam turbine or additional capital expenditure necessary due to obsolescence or non-availability of spares for efficient operation of the stations shall be allowed:

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

(4) After completion of the renovation and modernisation (R&M), the generating company or the transmission licensee, as the case may be, shall file a petition for determination of tariff. Expenditure incurred or projected to be incurred and admitted by the Commission after prudence check, and after deducting the accumulated depreciation already recovered from the admitted project cost, shall form the basis for determination of tariff.

14. Regulation 28 of the 2019 Tariff Regulation provides as under:

"28. Special Allowance for Coal-based/Lignite fired Thermal Generating station;

(1) In case of coal-based/lignite fired thermal generating stations, the generating company, instead of availing renovation and modernization (R&M) may opt to avail a 'special allowance' in accordance with the norms specified in this Regulation, as compensation for meeting the requirement of expenses including renovation and modernisation beyond the useful life of the generating station or a unit thereof and in such an event, upward revision of the capital cost shall not be allowed and the applicable operational norms shall not be relaxed but the Special Allowance shall be included in the annual fixed cost:

Provided that such option shall not be available for a generating station or unit thereof for *which renovation and modernization has been undertaken and the expenditure has been admitted by the Commission before commencement of these regulations, or for a generating station or unit which is in a depleted condition or operating under relaxed operational and performance norms;*

Provided further that special allowance shall also be available for a generating station which has availed the Special Allowance during the tariff period 2009-14 or 2014-19 as applicable from the date of completion of the useful life.

(2) The Special Allowance admissible to a generating station shall be @ Rs 9.5 lakh per MW per year for the tariff period 2019-24.

(3) In the event of a generating station availing Special Allowance, the expenditure incurred upon or utilized from Special Allowance shall be maintained separately by the generating station and details of same shall be made available to the Commission as and when directed.

(4) The Special Allowance allowed under this Regulation shall be transferred to a separate fund for utilization towards Renovation &Modernisation activities, for which detailed methodology shall be issued separately.

15. The COD of the generating station is 9.4.1994 and accordingly the units of Stage-I have completed more than 25 years of useful life as on 1.4.2014 and Units- I, II, III and IV of Stage-II of the generating station, have also completed their useful life of 25 years on 25.1.2017, 2.6.2017, 17.3.2018 and 9.4.2019 respectively. Since the units of both stages of the generating station have completed the useful life during the period 2014-19, except for Unit-IV of Stage-II of the generating station, the Petitioner is at liberty to approach the Commission with a proposal for comprehensive R&M in terms of Regulation 27 of the 2019 Tariff Regulations, for life extension of the project, at the time of truing up of tariff. It is observed that the Petitioner has opted for Special allowance in terms of Regulation 28 of the 2019 Tariff Regulations, as compensation for meeting the requirement of expenses, including R & M, beyond useful life of the unit or the generating station. Also, the units of Stage-I and Stage-II of the generating station have been granted Special allowance as claimed by the Petitioner, in this order. In this background, we find no reason to allow the additional capitalisation of the expenditure beyond the Special allowance granted to the Petitioner. Accordingly, the prayer of the Petitioner for additional capitalization of expenditure is not allowed.

Capital Cost

16. Based on the above, the capital cost allowed for the purpose of tariff for the period 2019-24 is as under:

(Rs. in lakh)

Stage-I	2019-20	2020-21	2021-22	2022-23	2023-24
Opening Capital Cost	32023.21	32023.21	32023.21	32023.21	32023.21
Add: Additional capital expenditure	0.00	0.00	0.00	0.00	0.00
Closing Capital Cost	**32023.21**	**32023.21**	**32023.21**	**32023.21**	**32023.21**
Average Capital Cost	32023.21	32023.21	32023.21	32023.21	32023.21

(Rs. in lakh)

Stage-II	2019-20	2020-21	2021-22	2022-23	2023-24
Opening Capital Cost	118853.85	118853.85	118853.85	118853.85	118853.85
Add: Additional capital expenditure	0.00	0.00	0.00	0.00	0.00
Closing Capital Cost	**118853.85**	**118853.85**	**118853.85**	**118853.85**	**118853.85**
Average Capital Cost	118853.85	118853.85	118853.85	118853.85	118853.85

Debt-Equity Ratio

17. Regulation 18 of the 2019 Tariff Regulations provides as under:

"18. Debt-Equity Ratio: (1) For a new projects, the debt-equity ratio of 70:30 as on date of commercial operation shall be considered. 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, as the case may be, shall submit the resolution of the Board of the company or approval of the competent authority in other cases regarding infusion of funds from internal resources in support of the utilization 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 1.4.2019, debt: equity ratio allowed by the Commission for determination of tariff for the period ending 31.3.2019 shall be considered:

Provided that in case of generating station or a transmission system including communication system which has completed its useful life as on or after 1.4.2019, if the equity actually deployed as on 1.4.2019 is more than 30% of the capital cost, equity in excess of 30% shall not be taken into account for tariff computation;

Provided further that in case of projects owned by Damodar Valley Corporation, the debt: equity ratio shall be governed as per sub-clause (ii) of clause (2) of Regulation 72 of these regulations.

(4) In case of the generating station and the transmission system including communication system declared under commercial operation prior to 1.4.2019, but where debt: equity ratio has not been determined by the Commission for determination of tariff for the period ending 31.3.2019, the Commission shall approve the debt: equity ratio in accordance with clause (1) of this Regulation.

(5) Any expenditure incurred or projected to be incurred on or after 1.4.2019 as may be admitted by the Commission as additional capital expenditure for determination of tariff, and renovation and modernization expenditure for life extension shall be serviced in the manner specified in clause (1) of this Regulation.

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

(Rs. in lakh)

Stage-I	**2019-20**	**2020-21**	**2021-22**	**2022-23**	**2023-24**
Opening Net Fixed Asset (A)=Opening Capital Cost-Cumulative depreciation up to previous year	3719.81	3719.81	3719.81	3719.81	3719.81
Closing Net Fixed Asset (B)=Closing capital cost-Cumulative depreciation up to current year	3719.81	3719.81	3719.81	3719.81	3719.81
Average Net Fixed Asset (C)=(A+B)/2	3719.81	3719.81	3719.81	3719.81	3719.81
Average Loan (D)(Based on actual)	0.00	0.00	0.00	0.00	0.00
Average Equity (E)=C-D	3719.81	3719.81	3719.81	3719.81	3719.81

(Rs. in lakh)

Stage-II	**2019-20**	**2020-21**	**2021-22**	**2022-23**	**2023-24**
Opening Net Fixed Asset (A)=Opening Capital Cost-Cumulative depreciation up to previous year	12103.85	12081.59	12081.59	12081.59	12081.59
Closing Net Fixed Asset (B)=Closing capital cost-Cumulative depreciation up to current year	12081.59	12081.59	12081.59	12081.59	12081.59
Average Net Fixed Asset (C) = (A+B)/2	12092.72	12081.59	12081.59	12081.59	12081.59

Stage-II	2019-20	2020-21	2021-22	2022-23	2023-24
Average Loan (D) (Based on actual)	0.00	0.00	0.00	0.00	0.00
Average Equity (E)=C-D	12092.72	12081.59	12081.59	12081.59	12081.59

Return on Equity

19. Regulation 30 of the 2019 Tariff Regulations provides as under:

"30. Return on Equity:

(1) Return on equity shall be computed in rupee terms on the equity base determined in accordance with Regulation 18 of these regulations.

(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 return on equity in respect of additional capitalization after cut-off date beyond the original scope excluding additional capitalization due to Change in Law shall be computed at the weighted average rate of interest on actual loan portfolio of the generating station or the transmission system;

Provided further that:

(i) In case of a new project the rate of return on equity shall be reduced by 1.00% 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) or Free Governor Mode Operation (FGMO) data telemetry communication system up to load dispatch centre or protection system based on the report submitted by the respective RLDC;

(ii) in case of existing generating station as and when any of the requirements under (i) above of this Regulation are found lacking based on the report submitted by the concerned RLDC rate of return on equity shall be reduced by 1.00% for the period for which the deficiency continues;

(iii) in case of a thermal generating station with effect from 1.4.2020:

(a) rate of return on equity shall be reduced by 0.25% in case of failure to achieve the ramp rate of 1% per minute;

(b) an additional rate of return on equity of 0.25% shall be allowed for every incremental ramp rate of 1% per minute achieved over and above the ramp rate of 1% per minute subject to ceiling of additional rate of return on equity of 1.00%:

Provided that the detailed guidelines in this regard shall be issued by National Load Dispatch Centre by 30.6.2019.

20. Regulation 31 of the 2019 Tariff Regulations provides as under:

"31. Tax on Return on Equity:

(1) The base rate of return on equity as allowed by the Commission under Regulation 30 of these regulations 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 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 paid on income from other businesses including deferred

tax liability (i.e. income from business other than business of generation or transmission as the case may be) shall be excluded 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) @ 21.55% including surcharge and cess:

Rate of return on equity = 15.50/(1-0.2155) = 19.758%

(ii) In case of a 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 2019-20 is Rs 1000 crore;

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

(c) Effective Tax Rate for the year 2019-20 = 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 2019-24 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 as the case may be on year to year basis."

21. As the Commission has considered the Net Fixed Asset (NFA) method in the case of the generating stations of the Petitioner, the actual source of funding has been considered for calculating the debt-equity ratio. The Petitioner has claimed Return on Equity (ROE) considering the base rate of 15.50% and effective tax rate of 19.758% for the opening equity as on 1.4.2019 and projected additional capital expenditure claimed under original scope of work, change in law etc., for the period 2019-24. For grossing up of ROE, for the period 2019-24 the effective tax rate as MAT rate of 17.472% has been considered. Accordingly, ROE has been worked out as under: