CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI

Petition No. 416/GT/2020

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

Date of Order: 5th October, 2023

In the matter of:

Petition for determination of tariff of Ramagundam Super Thermal Power Station Stages-I&II (2100 MW) for the period 2019-24.

AND

In the matter of:

NTPC Limited,
NTPC Bhawan,
Core-7, Scope Complex
7, Institutional Area, Lodhi Road,
New Delhi-110003 **…. Petitioner**

Vs

1. AP Eastern Power Distribution Company Limited,
Corporate Office, P&T Colony, Seethammadhara,
Visakhapatnam – 530 013 - (AP)

2. AP Southern Power Distribution Company Limited,
Corporate Office, Back Side Srinivasa Kalyana Mandapam,
Tiruchhanur Road, Kesavayana Gunta,Tirupathi – 517 503 (AP)

3. Telangana State Northern Power Distribution Company Limited,
H.No. 2-5-31/2, Vidyut Bhavan, Nakkalagutta, Hanamkonda
Warangal – 506 001 (AP)

4. Telangana State Southern Power Distribution Company Limited,
Mint Compound, Corporate Office, Hyderabad (AP) – 500 063

5. Tamil Nadu Generation & Distribution Corporation Limited,
144, Anna Salai, Chennai – 600 002

6. Bangalore Electricity Supply Company Limited,
Krishna Rajendra Circle, Bangalore - 560 009

7. Mangalore Electricity Supply Company Limited,
MESCOM bhavana, Corporate Office, Bejai, kavoor cross road,

Mangaluru,575004, Karnataka

8. Chamundeshwari Electricity Supply Corporation Limited,
Corporate Office, No. 29, Vijayanagar, 2nd stage,
Hinkal, Mysore – 570 017

9. Gulbarga Electricity Supply Company Limited,
Main road, Gulbarga, Karnataka,
Gulbarga – 585 102

10. Hubli Electricity Supply Company Limited,
Corporate office, P.B. Road, Navanagar
Hubli – 580 025.

11. Kerala State Electricity Board Limited,
Vaidyuthi Bhavanam, Pattom
Thiruvananthapuram – 695 004

12. Electricity department, Govt. of Puducherry,
137, Netaji Subhash Chandra Bose Salai,
Puducherry- 605001

13. Electricity Department,
Government of Goa
Vidyut Bhavan ,3rd Floor,
Panaji, Goa -403001 **….Respondent**

Parties Present:

Shri Venkatesh, Advocate NTPC
Shri Anant Singh, Advocate, NTPC
Shri Rishabh Sehgal, Advocate, NTPC
Shri Kartikey Trivedi, Advocate, NTPC
Shri Shahrab Zaheer, NTPC
Shri U.S. Mohanty, NTPC
Shri S. Vallinayagam, Advocate, TANGEDCO
Shri Prabhas Bajaj, Advocate, KSEBL

ORDER

This petition has been filed by the Petitioner, NTPC Limited, for approval of tariff of Ramagundam Super Thermal Power Station Stage-I&II (2100 MW) (in short 'the generating station') for the period 2019-24, in accordance with the provisions of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 (in short 'the 2019 Tariff Regulations').The generating station with a total capacity of 2100 MW comprises of three units of 200 MW each and three units of 500 MW each. The dates of commissioning of various units of the generating station are as under:

	Capacity (MW)	COD
Unit-I	200	1.03.1984
Unit-II	200	1.11.1984
Unit-III	200	1.05.1985
Unit-IV	500	1.11.1988
Unit-V	500	1.09.1989
Unit-VI / Generating station	500	1.04.1991

2. The Commission vide its order dated 26.7.2023 in Petition No. 237/GT/2020, had determined the capital cost and annual fixed charges of the generating station, after truing-up exercise as under:

Capital Cost allowed

(Rs. in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Opening capital cost	230569.84	226733.61	225499.71	224218.30	222684.39
Add: Additional Capital Expenditure	(-) 3836.24	(-) 1233.90	(-) 1281.41	(-) 1533.91	(-) 600.54
Closing capital cost	**226733.61**	**225499.71**	**224218.30**	**222684.39**	**222083.85**
Average capital cost	228651.72	226116.66	224859.00	223451.34	222384.12

Annual Fixed Charges allowed

(Rs. in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	0.00	814.45	0.00	0.00	285.01
Interest on Loan	227.18	175.30	131.11	119.86	109.71
Return on Equity	22282.02	22140.20	22016.29	21877.60	21831.01
Interest on Working Capital	14461.94	14724.57	14809.77	15212.62	15459.81
O&M Expenses	39780.63	43483.03	45511.40	47601.29	51494.06
Compensation Allowance	1000.00	500.00	0.00	0.00	0.00
Special Allowance	7735.54	12214.87	17231.89	18326.11	19489.82
Total	**85487.31**	**94052.42**	**99700.46**	**103137.49**	**108669.43**
Impact of Pay Revision					12494.59
Impact of GST	0.00	0.00	0.00	0.00	0.00

<u>Present Petition</u>

3. The Petitioner has filed the present Petition for determination of tariff for the generating station for the period 2019-24, in accordance with Regulation 9(2) of the 2019 Tariff Regulations. Accordingly, the capital cost and annual fixed charges claimed by the Petitioner are as under:

Capital Cost Claimed

(a) Capital cost eligible for Return on Equity at normal rate:

(Rs. in lakh)

	2019-20	2020-21	2021-22	2022-23	2023-24
Opening capital cost	226904.35	227515.35	228351.35	228497.35	228497.35
Add: Addition during the year	611.00	836.00	146.00	-	-
Less: De-capitalization during the year	-	-	-	-	-
Less: Reversal during the year	-	-	-	-	-
Add: Discharges during the year	-	-	-	-	-
Closing capital cost	**227515.35**	**228351.35**	**228497.35**	**228497.35**	**228497.35**
Average capital cost	227209.85	227933.35	228424.35	228497.35	228497.35

(b) Capital cost eligible for Return on Equity at weighted average rate of interest:

(Rs. in lakh)

	2019-20	2020-21	2021-22	2022-23	2023-24
Opening capital cost	-	-	-	-	-
Add: Addition during the year	-	-	-	-	21000.00
Less: De-capitalization during the year	-	-	-	-	-
Less: Reversal during the year	-	-	-	-	-
Add: Discharges during the year	-	-	-	-	-
Closing capital cost	**-**	**-**	**-**	**-**	**21000.00**
Average capital cost	-	-	-	-	10500.00

Annual Fixed Charges claimed

(Rs. in lakh)

	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	300.57	651.15	441.90	65.70	9450.00
Interest on Loan	84.43	87.00	70.04	53.08	270.29
Return on Equity	12802.37	12843.13	12870.80	12874.91	13194.73
Interest on Working Capital	13934.98	14073.38	14165.34	14284.37	14547.58
O&M Expenses	58374.51	60970.10	62879.37	65390.45	67758.26
Compensation Allowance	-	-	-	-	-
Special Allowance	19950.00	19950.00	19950.00	19950.00	19950.00
Total	**105446.86**	**108574.76**	**110377.45**	**112618.51**	**125170.87**

4. The Respondents TANGEDCO and KSEBL have filed their replies vide affidavits dated 11.1.2021 and 15.4.2021/5.9.2022, respectively and the Petitioner has filed its rejoinder to the abovesaid replies, vide affidavit dated 17.2.2021 (TANGEDCO) and 26.5.2021/19.9.2022 (KSEBL). The Petitioner has also submitted certain additional information vide its affidavits dated 15.5.2021, 17.6.2021, 17.9.2022 and 6.12.2022,

after serving copies on the Respondents. The Petition was heard through video conferencing on 6.12.2022 and during the hearing, the learned counsel for the Petitioner circulated note of arguments and made detailed oral submissions. Accordingly, the Commission after hearing the parties, permitted the Respondents to file their written submissions (not exceeding three pages), to the note of arguments of the Petitioner made during the hearing and accordingly, reserved its order in the matter. In response, the Respondent TANGEDCO has filed its written submissions on 27.12.2022 and the Petitioner has filed its response to the same on 10.1.2023. Taking into consideration the submissions of the parties and the documents available on record and on prudence check, we now proceed to determine the tariff of the generating station for the period 2019-24.

Capital Cost

5. 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."*

6. The Commission vide order dated 26.7.2023, had allowed the closing capital cost of Rs. 222083.85 lakh, on cash basis, as on 31.3.2019. Accordingly, in terms of Regulation 19(3) of the 2019 Tariff Regulations, the closing capital cost of Rs. 222083.85 lakh, as on 31.3.2019, has been considered as the opening capital cost as on 1.4.2019, on cash basis, for the purpose of determination of tariff for the period 2019-24.

Additional Capital Expenditure

7. Clauses (1) and (2) of Regulation 25 and Regulation 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."

8. The year-wise projected additional capital expenditure claimed by the Petitioner in respect of the generating station for the period 2019-24, is as under:

(Rs. in lakh)

Head/ Equipment	**Regulation**	**2019-20**	**2020-21**	**2021-22**	**2022-23**	**2023-24**
A. Works under Original scope, Change in law etc. eligible for ROE at Normal Rate						
Fire detection and protection system	26(1) (b) & 26 (1) (d)	611.00	67.00	-	-	-
Medium Velocity Water (MVW) system for CHP		-	283.00	-	-	-
Replacement of Halon system with inert gas system	26(1) (b)	-	486.00	146.00	-	-
Total (A)		611.00	836.00	146.00	-	-
B. Works beyond Original scope excluding add-cap due to Change in law eligible for RoE at Weighed Average rate of Interest						
Ash dyke buttressing/ raising and other related works	26(1) (e)					21000.00
Total (B)		-	-	-	-	21000.00
Total Additional Capital Expenditure claimed		**611.00**	**836.00**	**146.00**	**-**	**21000.00**

9. We now examine the projected additional capital expenditure claimed by the Petitioner for the period 2019-24, as under:

Fire Detection and Protection System

10. The Petitioner has claimed the projected additional capital expenditure of Rs.611 lakh in 2019-20 and Rs.67 lakh in 2020-21, towards Fire detection and Protection system, under Regulation 26(1)(b) and Regulation 26(1)(d) of the 2019 Tariff Regulations. In justification for the same, the Petitioner has submitted that augmentation of Fire Protection system is being carried out, in the cable gallery and Oil tanks, by installing fire protection system viz. Emulsifier, foam system to prevent any catastrophic damage in case fire breaks out in cable gallery since the existence of cables makes it vulnerable to fire hazard and the existing fire protection equipment may not be able to control the spread of fire. It has also submitted that fire detections and protection system is required to be installed for safety and security, as per the Central Electricity Authority (CEA) (Technical standards for construction of Electric plants and lines), Regulations, 2010 and CEA (safety requirement for Construction, Operation and Maintenance of Electric plants and Electric lines), Regulations, 2011. Accordingly, the Petitioner has prayed to allow the capitalisation of the expenditure under Regulations 26(1)(b) and Regulation 26(1)(d) of the 2019 Tariff Regulations.

11. The Respondent TANGEDCO has submitted that six units of the generating station were commissioned during the period from 1984 to 1991. It has further submitted that the Petitioner has not clarified, as to whether any Fire protection system was installed in cable gallery and oil tank areas and also regarding the need for going in for an augmentation of new system at the fag end of the generating station. The Respondent has also submitted that the expenses towards upkeep shall be met out from the Special allowances claimed by the Petitioner and therefore this claim of the Petitioner may be rejected.

12. The matter has been examined. Considering the essentiality of the firefighting equipment in critical areas and in line with Regulation 12(5) of CEA Regulations, 2010, the projected additional capital expenditure claimed is **allowed** under Regulation 26 (1) (b) of 2019 Tariff Regulations.

Medium Velocity Water (MVW) system for CHP package

13. The Petitioner has claimed projected additional capital expenditure of Rs.283 lakh in 2020-21, towards MVW system for CHP package***,*** under Regulation 26(1)(b) read with Regulation 26(1)(d) of the 2019 Tariff Regulations. In justification for the same, the Petitioner has submitted that MVW system is required to be installed for safety and security, as per the Regulation 12(5) of Central Electricity Authority (Technical standards for construction of Electric plants and lines), Regulations, 2010 and Central Electricity Authority (safety requirement for Construction, Operation and Maintenance of Electric plants and Electric lines), Regulations, 2011. The Petitioner has further submitted that augmentation of fire protection system of Coal Handling Plant (CHP) and stacker reclaimer area is required to prevent any catastrophic damage in case fire breaks out in CHP, as existence of coal in CHP area makes it vulnerable to fire hazard and mobile fire protection equipment may not be able to control the spread of fire. Accordingly, it has prayed to allow the capitalisation of the expenditure claimed under Regulation 26(1)(b) and Regulation 26(1)(d) of the 2019 Tariff Regulations.

14. The Respondent TANGEDCO has submitted that MVW system for CHP is neither admissible under change in law, nor eligible to be considered for safety and security of the plant, hence this claim may be dismissed. The Respondent has further

submitted that the Petitioner should meet out this additional capital expenditure, from special allowances.

15. The matter has been examined. Considering the essentiality of the firefighting equipment in critical areas and in line with Regulation 12(5) of CEA Regulations, 2010, the projected additional capital expenditure claimed is **allowed** under Regulation 26 (1) (b) of 2019 Tariff Regulations.

Replacement of Halon system with Inert gas system

16. The Petitioner has claimed projected additional capital expenditure of Rs.486 lakh in 2020-21 and Rs.146 lakh in 2021-22, towards replacement of Halon system with inert gas, under Regulation 26(1)(b) of the 2019 Tariff Regulations. In justification for the same the Petitioner has submitted that Halon fire protection system is provided for permanent firefighting system and uses substances which are ozone depleting in nature. It has further submitted that as per the Environment (Protection) Act 1986, the Central Government laid down rules for Ozone Depleting Substances (ODS) (Regulation and Control) Rules, 2000 and as per the Montreal Protocol on substances that deplete the ozone layer, plants using ozone depleting substances must phase out these systems and adopt systems which use substances that do not deplete the ozone layer. Accordingly, the Petitioner has submitted that the replacement of Halon gas fire protection system with alternate inert gas shall be taken up in line with ODS Rules, 2000, during the period 2019-24 and the capitalisation of Inert gas fire extinguishing system may be allowed under Regulation 26(1)(b) of the 2019 Tariff Regulations.

17. The Respondent TANGEDCO has submitted that the action taken by the Petitioner for replacing the Halon gas fire protection system from 2010 to 2020 has not been explained in the petition. Further, it has stated that since the generating station

has completed 30 years therefore this claim after the useful life of the plant under capital expense may be dismissed. The Respondent KSEBL has submitted that expenses claimed by the Petitioner under Regulation 26(1)(b) of the 2019 Tariff Regulations, do not qualify as additional capital expenses and should be met out from the O&M expenses.

18. The matter has been considered. It is observed that the Commission in its various orders in respect of tariff for thermal generating stations had allowed the expenditure towards the replacement of Halon based fire extinguishing system with Inert gas firefighting system under 'change in law/ compliance of existing law' under the provisions of the 2014 Tariff Regulations and 2019 Tariff Regulations. Since the additional capital expenditure of Rs. 632.00 lakh claimed is required to be incurred under the Rules framed by the Central Government and subsequently incorporated by CEA in its Technical Standards Regulations, the same is **allowed** under Regulation 26(1)(b) of the 2019 Tariff Regulations.

Ash dyke buttressing/ raising and other related works

19. The Petitioner has claimed projected additional capital expenditure of Rs.21000 lakh in 2023-24, towards Ash dyke buttressing/raising and other related works, under Regulation 26(1)(e) of the 2019 Tariff Regulations. In justification for the same, the Petitioner has submitted that capacity of existing lagoons for disposal of ash is exhausted as the generating station has operated at much higher levels than that envisaged in early periods when this station was planned. The Petitioner has further submitted that to enhance the capacity of existing lagoons and further disposal of ash, consultancy project was awarded to IIT Kanpur and it was advised by the consultants to construct a peripheral Buttressing Dyke from the downstream of the Starter Dyke where sufficient space is available for downstream raising and where there is no space

available, the buttressing to start above the existing Starter Dyke. The Petitioner has submitted that it was also advised that after buttressing is done, the dyke should be raised in multiple stages and the committee also recommended for new ash dyke. It is further submitted by the Petitioner that the ash related works are of continuous nature and are beyond the original scope of work. Accordingly, the Petitioner has emphasized that these works are necessarily required for sustainable generation and hence may be allowed.

20. The Respondent TANGEDCO has submitted that the claim of the Petitioner for dyke buttressing cannot be allowed after having completed more than 30 years since commissioning and the said expense must be met out from the Special allowance. The Respondent KSEBL has submitted that this claim under regulation 26(1)(e) of the 2019 Tariff Regulations do not qualify as additional capital expense and it must be met out from the O&M expenses.

21. The matter has been considered. It is observed from the CEA Report on "Fly Ash Generation at Coal/Lignite based Thermal Power Stations and it's utilization in the country" from 2017-18 to 2021-22 that the entire generating station (i.e., 2600 MW) has been meeting the fly ash utilization target as under:

Year	Fly ash generation (MT)	Fly ash Utilization (MT)	Utilization (%)
2017-18	4.5470	4.5910	100.97
2018-19	4.2750	4.7150	110.29
2019-20	3.8163	4.5118	118.23
2020-21	3.8570	4.2860	111.12
2021-22	3.9383	5.5501	140.92

22. It is further observed from the CEA/NPP Reports, that the Plant Load Factor (PLF) for entire generating station (i.e., 2600 MW) is as under:

Year	PLF (%)
2019-20	74.99
2020-21	73.37
2021-22	76.62

23. Thus, as per the report of the CEA above, the percentage utilization of ash for the last 5 (five) years for the generating station is more than 100% (average is 116.30%). Despite such utilization of ash, the Petitioner has not justified as to why there is a need for such expenditure for ash dyke raising. In the background of increased ash utilization and a stable PLF, we do not find enough justification to allow the total projected additional capital expenditure of Rs.21000.00 lakh claimed by the Petitioner during 2023-24. However, in case the Petitioner is required to incur the expenditure for ash dyke raising, the Petitioner is granted liberty to approach the Commission at the time of true-up along with proper justification and its claim shall be considered in accordance with the relevant regulations. Accordingly, the claim of the Petitioner is **not allowed** at present, on projected basis.

24. Accordingly, the additional capital expenditure allowed for the period 2019-24 is summarized as under:

(Rs. in lakh)

Head/ Equipment	2019-20	2020-21	2021-22	2022-23	2023-24
A. Works under Original scope, Change in Law etc. eligible for ROE at Normal Rate					
Fire detection and protection system	611.00	67.00	0.00	0.00	0.00
Medium Velocity Water (MVW) system for CHP	0.00	283.00	0.00	0.00	0.00
Replacement of Halon system with inert gas system	0.00	486.00	146.00	0.00	0.00
Total (A)	**611.00**	**836.00**	**146.00**	**0.00**	**0.00**
B. Works beyond Original scope excluding add-cap due to Change in law eligible for ROE at Weighted Average rate of Interest					
Ash dyke buttressing/ raising and other related works	0.00	0.00	0.00	0.00	0.00
Total (B)	0.00	0.00	0.00	0.00	0.00
Total Additional Capital Expenditure Allowed	**611.00**	**836.00**	**146.00**	**0.00**	**0.00**

Capital cost allowed for the period 2019-24

25. Based on above, the capital cost allowed for the generating station is as under:

(Rs. in lakh)

	2019-20	2020-21	2021-22	2022-23	2023-24
Opening capital cost	* 222083.85	222694.85	223530.85	223676.85	223676.85
Add: Additional capital expenditure	611.00	836.00	146.00	0.00	0.00
Closing capital cost	**222694.85**	**223530.85**	**223676.85**	**223676.85**	**223676.85**
Average capital cost	222389.35	223112.85	223603.85	223676.85	223676.85

** for existing assets as on 1.4.2019*

Debt Equity Ratio

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

"18. Debt-Equity Ratio: (1) For a new project, 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.

27. The gross normative loan and equity of the generating station as on 31.3.2019, as approved by order dated 26.7.2023, is Rs.111741.97 lakh (i.e., 50.32% of the admitted capital cost as on 31.3.2019) and Rs.110341.88 lakh (i.e., 49.68% of the admitted capital cost as on 31.3.2019), respectively. Accordingly, in terms of Regulation 18(3) of the 2019 Tariff Regulations, the gross normative loan and equity to be considered as on 1.4.2019, works out to Rs.111741.97 lakh and Rs.110341.88 lakh, respectively. However, considering the first proviso to Regulation 18(3) of the 2019 Tariff Regulations, the equity considered for the purpose of tariff, as on 1.4.2019, works out to Rs.66625.15 lakh. Accordingly, the gross normative loan of Rs.111741.97 lakh and net equity of Rs.66625.15 lakh, has been considered for the purpose of tariff as on 1.4.2019. Further, the projected additional capital expenditure approved above, has been allocated to debt and equity in debt: equity ratio of 70:30. Accordingly, the details of debt-equity ratio in respect of the generating station as on 1.4.2019 and 31.3.2024, are as under:

(Rs. in lakh)

	Capital cost as on 1.4.2019	**(%)**	**Additional capital expenditure**	**(%)**	**Total cost as on 31.3.2024**	**(%)**
Debt	111741.97	50.32%	1115.10	70.00%	112857.07	50.46%
Equity	110341.88	49.68%	477.90	30.00%	110819.78	49.54%
Total	**222083.85**	**100.00%**	**1593.00**	**100.00%**	**223676.85**	**100.00%**

Return on Equity (ROE)

28. 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.

29. 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%.

(2) 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."

30. The Petitioner has claimed ROE considering base rate of 15.50% and effective tax rate of 17.472% 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. The same has been considered for the purpose of tariff. Further, for additional capital expenditure claimed beyond the original scope of work (excluding additional capital expenditure due to change in law) the Petitioner has claimed ROE after grossing up WAROI of 8.379% in 2023-24 with the effective tax rate of 17.472%. Since no additional capital expenditure has been allowed beyond the original scope of work, for the period 2019-24, no ROE has been allowed at WAROI. Accordingly, ROE at the normal rate has been worked out as under:

(Rs. in lakh)

	2019-20	**2020-21**	**2021-22**	**2022-23**	**2023-24**
Notional Equity- Opening	110341.88	110525.18	110775.98	110819.78	110819.78
Less: Adjustment to equity in terms of 1st proviso to Regulation 18(3)	43716.72	43716.72	43716.72	43716.72	43716.72
Normative Equity- Opening	66625.15	66808.45	67059.25	67103.05	67103.05

Add: Addition of Equity due to additional capital expenditure	183.30	250.80	43.80	0.00	0.00
Normative Equity – Closing	66808.45	67059.25	67103.05	67103.05	67103.05
Average Normative Equity	66716.80	66933.85	67081.15	67103.05	67103.05
Return on Equity (Base Rate)	15.500%	15.500%	15.500%	15.500%	15.500%
Effective Tax Rate for respective years	17.472%	17.472%	17.472%	17.472%	17.472%
Rate of Return on Equity (Pre-tax)	18.782%	18.782%	18.782%	18.782%	18.782%
Return on Equity (Pre-tax) - (annualised)	**12530.75**	**12571.52**	**12599.18**	**12603.30**	**12603.30**

Interest on loan

31. Regulation 32 of the 2019 Tariff Regulations provides as under:

"32. Interest on loan capital: (1) The loans arrived at in the manner indicated in Regulation 18 of these regulations shall be considered as gross normative loan for calculation of interest on loan.

(2) The normative loan outstanding as on 1.4.2019 shall be worked out by deducting the cumulative repayment as admitted by the Commission up to 31.3.2019 from the gross normative loan.

(3) The repayment for each of the year of the tariff period 2019-24 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 changes to the terms and conditions of the loan shall be reflected from the date of such re-financing."

32. The details of the gross normative loan, cumulative repayment, net normative opening loan and cumulative depreciation as on 1.4.2019 (i.e. pertaining to existing assets), as considered in order dated 26.7.2023, along with depreciable value and remaining depreciable value has considered and worked out as on 1.4.2019 as under:

(Rs. in lakh)

Gross normative loan (A)	111741.97
Cumulative repayment of loan (B)	110552.31
Net normative loan (C = A-B)	1189.66
Cumulative depreciation (D)	197228.08
Capital cost as on 1.4.2019 (E)	222083.85
Value of freehold land (F)	2641.27
Depreciable value [G = (E-F) x 0.9]	197498.32
Balance depreciable value (H = G-D)	270.24

33. From the above table, it is observed that as on 1.4.2019, the balance depreciable value at the beginning of 1.4.2019 is Rs.270.24 lakh and the net normative outstanding loan balance is Rs.1189.66 lakh. This situation normally does not happen as depreciation is allowed to the extent of 90% of the value of an asset and normative debt is normally allowed equivalent to 70% of the value of an asset and repayment of normative loan is now (since 1.4.2009) linked to depreciation allowed during the respective year. Prior to 1.4.2009, the normative repayment used to be calculated based on actual loan portfolio as under:

$$\textbf{Normative Repayment} = \frac{\textbf{Repayment of actual loan X Normative loan outstanding}}{\textbf{Actual loan outstanding}}$$

34. Prior to 1.4.2009, the repayment of normative loan was not linked to the depreciation allowed; resultantly, this could also be one of the reasons for the current situation, wherein, the normative loan is still outstanding even though the entire asset has been fully depreciated, as on 1.4.2019. Further, during the periods 2004-09 and 2009-14, the Petitioner was allowed cumulative repayment adjustment equivalent to 70% of the value of asset de-capitalised, irrespective of the quantum of the repayments actually considered corresponding to that asset, subject to outcome of Civil Appeal No. 5437/2007 & batch filed by the Commission before the Hon’ble Supreme Court, which also contributed to the creation of gap between balance

depreciable value and net normative loan outstanding corresponding to existing assets as on 1.4.2019.

35. The assets allowed to the generating station is almost fully depreciated, with balance depreciable value of Rs. 270.24 lakh only, as on 1.4.2019 and the corresponding net normative loan of Rs.1189.66 lakh is still outstanding, as on 1.4.2019. This situation is generally not contemplated as repayments are now (since the period 2009 -14) linked to depreciation allowed for the purpose of tariff. Further, prior to 1.4.2009, the repayment of normative loans was linked to repayment of actual loan and as on 1.4.2019, the actual loan balance attributable to assets existing as on 1.4.2009, is 'nil'. The Electricity Act, 2003 provides for safeguarding of consumers interest and at the same time recovery of cost of electricity in a reasonable manner. Accordingly, considering the fact that Petitioner has already recovered almost 90% depreciation towards allowed assets and the actual interest outgo towards loan corresponding to assets existing as on 1.4.2009 is 'nil', the cumulative repayment as on 1.4.2019, is revised to Rs.111471.13 lakh (Rs.110552.31 lakh cumulative repayment balance as on 31.3.2019 plus Rs.919.41 lakh) so as to serve only the net normative outstanding loan of Rs.270.24 lakh, as on 1.4.2019, being equivalent to the balance depreciable value as on 1.4.2019.

36. As stated above, the gross normative loan amounting to Rs.111741.97 lakh, has been considered, as on 1.4.2019. Further, the cumulative repayment of Rs.111471.73 lakh, has been considered, as on 1.4.2019. Accordingly, the net normative outstanding loan, as on 1.4.2019, works out to Rs.270.24 lakh. Also, the addition to normative loan on account of additional capital expenditure approved above has been considered. Depreciation allowed has been considered as repayment of normative loan during the respective year of the period 2019-24. The Petitioner has

claimed tariff considering the weighted average rate of interest (WAROI) of 8.3706% in 2019-20, 8.3719% in 2020-21, 8.3737% in 2020-21, 8.3763% in 2022-23 and 8.3790% in 2023-24, and the same has been considered.

37. Necessary calculation of interest of loan is as under:

(Rs. in lakh)

		2019-20	2020-21	2021-22	2022-23	2023-24
A	**For existing assets (i.e. assets existing as on 1.4.2019)**					
a	Gross opening loan	111741.97	111741.97	111741.97	111741.97	111741.97
b	Cumulative repayment of loan upto previous year	111471.73	111741.97	111741.97	111741.97	111741.97
c	**Net Loan Opening (a-b)**	**270.24**	**0.00**	**0.00**	**0.00**	**0.00**
d	Addition on account of additional capital expenditure	0.00	0.00	0.00	0.00	0.00
e	Repayment of loan during the year	270.24	0.00	0.00	0.00	0.00
f	Repayment adjustment on account of de-capitalisation	0.00	0.00	0.00	0.00	0.00
g	Net repayment of loan during the year (e-f)	270.24	0.00	0.00	0.00	0.00
h	**Net Loan Closing (c+d-g)**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
i	Average Loan [(c+h)/2]	135.12	0.00	0.00	0.00	0.00
j	WAROI	8.3706%	8.3719%	8.3737%	8.3763%	8.3790%
k	**Interest on Loan (i x j)**	**11.31**	**0.00**	**0.00**	**0.00**	**0.00**
B	**For other assets (i.e. assets admitted on or after 1.4.2019 or new assets)**					
l	Gross opening loan	0.00	427.70	1012.90	1115.10	1115.10
m	Cumulative repayment of loan upto previous year	0.00	16.13	70.46	150.72	234.83
n	**Net Loan Opening (l-m)**	**0.00**	**411.57**	**942.44**	**964.38**	**880.27**
o	Addition on account of additional capital expenditure	427.70	585.20	102.20	0.00	0.00
p	Repayment of loan during the year	16.13	54.33	80.26	84.11	84.11
q	Repayment adjustment on account of de-capitalisation	0.00	0.00	0.00	0.00	0.00
r	Net repayment of loan during the year (p-q)	16.13	54.33	80.26	84.11	84.11
s	**Net Loan Closing (n+o-r)**	**411.57**	**942.44**	**964.38**	**880.27**	**796.16**
t	Average Loan [(n+s)/2]	205.78	677.00	953.41	922.33	838.22
u	WAROI	8.3706%	8.3719%	8.3737%	8.3763%	8.3790%
v	**Interest on Loan (t x u)**	**17.23**	**56.68**	**79.84**	**77.26**	**70.23**
C	**For total admitted assets (A+B)**					
w	Gross opening loan (a+l)	111741.97	112169.67	112754.87	112857.07	112857.07
x	Cumulative repayment of loan upto previous year (b+m)	111471.73	111758.10	111812.43	111892.69	111976.80
y	**Net Loan Opening (c+n)**	**270.24**	**411.57**	**942.44**	**964.38**	**880.27**
z	Addition on account of additional capital expenditure (d+o)	427.70	585.20	102.20	0.00	0.00

aa	Repayment of loan during the year (e+p)	286.37	54.33	80.26	84.11	84.11
ab	Repayment adjustment on account of de-capitalisation (f+q)	0.00	0.00	0.00	0.00	0.00
ac	Net repayment of loan during the year (g+r)	286.37	54.33	80.26	84.11	84.11
ad	**Net Loan Closing (h+s)**	411.57	942.44	964.38	880.27	796.16
ae	Average Loan (i+t)	340.91	677.00	953.41	922.33	838.22
af	WAROI	8.3706%	8.3719%	8.3737%	8.3763%	8.3790%
ag	**Interest on Loan (k x v)**	**28.54**	**56.68**	**79.84**	**77.26**	**70.23**

Depreciation

38. Regulation 33 of the 2019 Tariff Regulations provides as under:

"33. Depreciation: (1) Depreciation shall be computed from the date of commercial operation of a generating station or unit thereof or a transmission system or element thereof including communication system. 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:

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 a 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 the salvage value for IT equipment and software shall be considered as NIL and 100% value of the assets shall be considered depreciable;

Provided further that in case of hydro generating stations, the salvage value shall be as provided in the agreement, if any, signed by the developers with the State Government for development of the generating station:

Provided also 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 unit or transmission system as the case may be, shall not be allowed to be recovered at a later stage during the useful life or 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-I 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 1.4.2019 shall be worked out by deducting the cumulative depreciation as admitted by the Commission upto 31.3.2019 from the gross depreciable value of the assets.

(7) The generating company or the transmission licensee, as the case may be, shall submit the details of proposed capital expenditure five years before the completion of useful life of the project along with justification and proposed life extension. The Commission based on prudence check of such submissions shall approve the depreciation on capital expenditure.

(8) In case of de-capitalization of assets in respect of generating station or unit thereof or transmission system or element thereof, the cumulative depreciation shall be adjusted by taking into account the depreciation recovered in tariff by the de-capitalized asset during its useful services."

39. Cumulative depreciation amounting to Rs.197228.08 lakh and the value of freehold land amounting to Rs.2641.27 lakh, as considered, as on 31.3.2019, in order dated 26.7.2023, has been considered, as on 1.4.2019 (i.e. corresponding to "existing assets"). Further, since the generating station has outlived its useful life the depreciation for the assets admitted in the 2019-24 tariff period is allowed at the weighted average rate of depreciation (WAROD) of 5.28%. Accordingly, depreciation has been computed and allowed as under:

(Rs. in lakh)

		2019-20	2020-21	2021-22	2022-23	2023-24
A	**For existing assets**					
a	Opening capital cost	222083.85	222083.85	222083.85	222083.85	222083.85
b	Additional capital expenditure	0.00	0.00	0.00	0.00	0.00
c	Closing capital cost (a+b)	222083.85	222083.85	222083.85	222083.85	222083.85
d	Average capital cost [(a+c)/2]	222083.85	222083.85	222083.85	222083.85	222083.85
e	Freehold land	2641.27	2641.27	2641.27	2641.27	2641.27
f	Depreciable Value [(d-e) x 0.9]	197498.32	197498.32	197498.32	197498.32	197498.32
g	Cumulative depreciation at the beginning of the year (Previous year's 'm')	197228.08	197498.32	197498.32	197498.32	197498.32
h	Balance depreciable value (f-g)	270.24	0.00	0.00	0.00	0.00
i	Balance useful life at the beginning of the year	0.00	0.00	0.00	0.00	0.00
j	Depreciation Rate (k/d)	0.12%	0.00%	0.00%	0.00%	0.00%
k	**Depreciation for the year (h/i)**	**270.24**	**0.00**	**0.00**	**0.00**	**0.00**
l	Cu. depreciation adjustment on account of de-capitalisation	0.00	0.00	0.00	0.00	0.00
m	Cu. Depreciation at end of the year (g+k-l)	197498.32	197498.32	197498.32	197498.32	197498.32
B	**For other assets (i.e. assets admitted on or after 1.4.2019 or new assets)**					
n	Opening capital cost	0.00	611.00	1447.00	1593.00	1593.00

o	Additional capital expenditure	611.00	836.00	146.00	0.00	0.00
p	Closing capital cost (n+o)	**611.00**	**1447.00**	**1593.00**	**1593.00**	**1593.00**
q	Average capital cost [(n+p)/2]	305.50	1029.00	1520.00	1593.00	1593.00
r	Freehold land	0.00	0.00	0.00	0.00	0.00
s	Depreciable Value [(q-r) x 0.9]	274.95	926.10	1368.00	1433.70	1433.70
t	Cumulative depreciation at the beginning of the year (Previous year's 'z')	0.00	16.13	70.46	150.72	234.83
u	Balance depreciable value (s-t)	274.95	909.97	1297.54	1282.98	1198.87
v	Balance useful life at the beginning of the year	0.00	0.00	0.00	0.00	0.00
w	Depreciation Rate	5.28%	5.28%	5.28%	5.28%	5.28%
x	**Depreciation for the year (q x w)**	**16.13**	**54.33**	**80.26**	**84.11**	**84.11**
y	Cu. depreciation adjustment on account of de-capitalisation	0.00	0.00	0.00	0.00	0.00
z	Cu. Depreciation at end of the year (t+x-y)	16.13	70.46	150.72	234.83	318.94
C	**For total admitted assets (A+B)**					
aa	Opening capital cost (a+n)	222083.85	222694.85	223530.85	223676.85	223676.85
ab	Additional capital expenditure (b+o)	611.00	836.00	146.00	0.00	0.00
ac	Closing capital cost (c+p)	222694.85	223530.85	223676.85	223676.85	223676.85
ad	Average capital cost (d+q)	222389.35	223112.85	223603.85	223676.85	223676.85
ae	Freehold land (e+r)	2641.27	2641.27	2641.27	2641.27	2641.27
af	Depreciable Value (f+s)	197773.27	198424.42	198866.32	198932.02	198932.02
ag	Cumulative depreciation at the beginning of the year (g+t)	197228.08	197514.45	197568.78	197649.04	197733.15
ah	Balance depreciable value (h+u)	545.19	909.97	1297.54	1282.98	1198.87
ai	Balance useful life at the beginning of the year ('i' or 'v')	0.00	0.00	0.00	0.00	0.00
aj	Depreciation Rate (aj/ad)	0.13%	0.02%	0.04%	0.04%	0.04%
ak	**Depreciation for the year (k+x)**	**286.37**	**54.33**	**80.26**	**84.11**	**84.11**
al	Cu. depreciation adjustment on account of de-capitalisation (l+y)	0.00	0.00	0.00	0.00	0.00
am	Cu. Depreciation at end of the year (m+z)	197514.45	197568.78	197649.04	197733.15	197817.26

Operation & Maintenance Expenses

40. Regulation 35(1)(1) of the 2019 Tariff Regulations provides for the following O&M expenses:

Year	200 MW (lakh/ MW)	500 MW (lakh/ MW)
2019-20	32.96	22.51
2020-21	34.12	23.30
2021-22	35.31	24.12
2022-23	36.56	24.97
2023-24	37.84	25.84

41. The O&M expenses claimed by the Petitioner is as under:

(Rs. in lakh)

	2019-20	2020-21	2021-22	2022-23	2023-24
Normative O&M expenses claimed under Regulation 35(1)(1) of the 2019 Tariff Regulations **(a)**	53541.00	55422.00	57366.00	59391.00	61464.00
O&M expenses under Regulation 35(1)(6) of the 2019 Tariff Regulations:					
- Water Charges	1863.63	2049.99	2049.99	2254.99	2254.99
- Security Expenses	2969.88	3498.11	3463.38	3744.46	4039.27
- Capital Spares consumed	-	-	-	-	-
Total O&M Expenses	**58374.51**	**60970.10**	**62879.37**	**65390.45**	**67758.26**

42. The normative O&M expenses claimed in terms of the Regulation 35(1)(1) of the 2019 Tariff Regulations, is found to be in order and is allowed. The Petitioner has also claimed Water Charges and Security Expenses, which are discussed below.

Water Charges

43. The first proviso to Regulation 35(1)(6) of the 2019 Tariff Regulations provides for claim towards water charges, security expenses and capital spares as under:

> *"35(1)(6) The Water, Security Expenses and Capital Spares for thermal generating stations shall be allowed separately and after prudence check:*
>
> *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;*
> *Xxxxx"*

44. The actual water charges claimed by the Petitioner in Petition No. 237/GT/2020 for the period 2014-19 and allowed by order dated 26.7.2023 is as under:

(Rs. in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Water charges claimed	1474.25	1559.58	2262.76	1588.13	1863.63
Water charges allowed	1440.63	1492.86	2191.40	1511.83	1800.12

45. In terms of the above regulation, water charges are to be allowed separately, based on water consumption depending upon type of plant, type of cooling water system etc., subject to prudence check. The Petitioner has claimed water charges for the period 2019-24 on the basis of water charges claimed for FY 2018-19 as under:

(Rs. in lakh)

2019-20	2020-21	2021-22	2022-23	2023-24
1863.63	2049.99	2049.99	2254.99	2254.99

46. It is observed that the water charges for the period 2019-24 has been arrived on the basis of water charges claimed for 2018-19 with escalation of 10% after every 2 years. The Petitioner has submitted that State Government of Telangana, has approved 10% increase in water charges for every alternate year vide order dated 27.6.2015. Accordingly, we allow the water charges during 2018-19 as allowed in Petition No. 237/GT/2020 with escalation of 10% in alternate year as claimed by the Petitioner. Accordingly, the water charges claimed and allowed, for the period 2019-24 is as under:

(Rs. in lakh)

	2019-20	2020-21	2021-22	2022-23	2023-24
Water charges claimed	1863.63	2049.99	2049.99	2254.99	2254.99
Water charges allowed	**1800.12**	**1980.13**	**1980.13**	**2178.15**	**2178.15**

47. However, the Petitioner, at the time of truing up, shall furnish the detail of actual water consumption and rate of water charges along with all the requisite documents clearly bifurcating the quantum and water charges supplied to the generating station and water supplied to the township. The water charges allowed are subject to the truing up as per actual water charges paid after prudence check.

Capital Spares

48. The Petitioner has not claimed any capital spares during the period 2019-24, but has submitted that the same shall be claimed at the time of truing up of tariff, in terms of proviso to Regulation 35(1)(6) of the 2019 Tariff Regulations, based on actual consumption of spares. Accordingly, the same has not been considered in this order. The claim of the Petitioner, if any, at the time of truing up shall be considered on merits, after prudence check.

Security Expenses

49. The second proviso to Regulation 35(1)(6) of the 2019 Tariff Regulations provides as under:

> "*(6) The Water Charges, Security Expenses and Capital Spares for thermal generating stations shall be allowed separately after prudence check:*
> *xxxx;*
> *Provided further that the generating station shall submit the assessment of the security requirement and estimated expenses;*
> *Xxxx"*

50. The security expenses claimed by the Petitioner is as under:

(Rs. in lakh)

2019-20	2020-21	2021-22	2022-23	2023-24
2969.88	3498.11	3463.38	3744.46	4039.27

51. The Petitioner has submitted that above expenses has been claimed based on the estimated expenses for the period 2019-24 and shall be subject to retrospective adjustment based on actuals at the time of truing up.

52. The matter has been considered. The Petitioner has not furnished the assessment of security requirement as required under the 3rd proviso of the 2019 Tariff Regulations. For the present petition, we provisionally allow the security expenses for the period 2019-24 with 5% escalation per year, on the actual expenses incurred for 2018-19 (i.e.2954.11 lakh). The Petitioner shall, at the time of truing up, furnish the actual security expenses incurred along with proper justification and assessment in terms of Regulation 35(1)(6) of the 2019 Tariff Regulations. Accordingly, the security expenses claimed and allowed, is as under:

(Rs. in lakh)

	2019-20	2020-21	2021-22	2022-23	2023-24
Security expenses claimed	2969.88	3498.11	3463.38	3744.46	4039.27
Security expenses allowed	2954.11	3101.82	3256.91	3419.75	3590.74

53. Accordingly, the total O&M expenses allowed to the generating station for the period 2019-24, is summarized as under:

(Rs. in lakh)

	2019-20	2020-21	2021-22	2022-23	2023-24
Normative O&M expenses claimed under Regulation 35(1)(1) of the 2019 Tariff Regulations **(a)**	53541.00	55422.00	57366.00	59391.00	61464.00
Normative O&M expenses allowed under Regulation 35(1)(1) of the 2019 Tariff Regulations (b)	53541.00	55422.00	57366.00	59391.00	61464.00
Water Charges claimed under Regulation 35(1)(6) of the 2019 Tariff Regulations (c)	1863.63	2049.99	2049.99	2254.99	2254.99
Water Charges allowed under Regulation 35(1)(6) of the 2019 Tariff Regulations (d)	1800.12	1980.13	1980.13	2178.15	2178.15
Security Expenses claimed under Regulation 35(1)(6) of the 2019 Tariff Regulations (e)	2969.88	3498.11	3463.38	3744.46	4039.27
Security Expenses allowed under Regulation 35(1)(6) of the 2019 Tariff Regulations (f)	2954.11	3101.82	3256.91	3419.75	3590.74
Total O&M expenses claimed under Regulation 35 of the 2019 Tariff Regulations (a + c + e)	58374.51	60970.10	62879.37	65390.45	67758.26
Total O&M expenses allowed under Regulation 35 of the 2019 Tariff Regulations (b + d + f)	**58295.23**	**60503.95**	**62603.04**	**64988.90**	**67232.88**

Additional expenditure towards Fly ash transportation

54. The Petitioner has not claimed additional expenditure towards Fly Ash transportation during the periods 2019-24, but has submitted that the same shall be provided at the time of truing up. Accordingly, the claims of the Petitioner, if any, towards additional expenditure towards Fly ash transportation at the time of truing up shall be considered on merits, after prudence check. The Petitioner has further submitted that pursuant to issuance of Notification dated 25.1.2016 by MOEFCC, the Petitioner had filed Petition No. 172/MP/2016 seeking recovery of additional expenditure incurred due to sharing of fly ash transportation cost as “Change in Law” event. The Commission vide its order dated 5.11.2018 in Petition No. 172/MP/2016 recognised Notification dated 25.1.2016 as ‘Change in Law’ event and admitted the claims that is amount spent over and above ash sale fund on account of ash transportation and has directed as under:

> *“31. Accordingly, we in exercise of the regulatory power hold that the actual additional expenditure incurred by the Petitioner towards transportation of ash in terms of the*

MOEFCC Notification is admissible under "Change in Law" as additional O&M expenses. However, the admissibility of the claims is subject to prudence check of the following conditions on case to case basis for each station:
a) Award of fly ash transportation contract through a transparent competitive bidding procedure. Alternatively, the schedule rates of the respective State Governments, as applicable for transportation of fly ash.
b) Details of the actual additional expenditure incurred on Ash transportation after 25.1.2016, duly certified by auditors.
c) Details of the Revenue generated from sale of fly ash/ fly ash products and the expenditure incurred towards Ash utilisation up to 25.1.2016 and from 25.1.2016 to till date, separately.
d) Revenue generated from fly Ash sales maintained in a separate account as per the MoEF notification."

55. The Petitioner on the issue of reimbursement of Ash Transportation Charges, has submitted that ash transportation charges are recurring in nature. Accordingly, the expenditure, which is due recovery from the beneficiary, will get accumulated and would also attract carrying cost, if recovery is allowed at the time of truing up. Therefore, it has submitted that in order to avoid the interest payment/carrying cost liability of the beneficiaries, therefore the Petitioner may be allowed to recover/ pass on the ash transportation charges after adjusting the revenue earned from sale of ash subject to true-up at the end of the period. The Petitioner has also submitted that billing & recovery of Ash Transportation expenditure provisionally on monthly basis may be allowed based on self-certification, the recovery shall be subject to truing up at the end of financial year based on auditor certificate. The Petitioner has further added that the issue of monthly recovery and the procedure for recovery of costs is no more res-integra as this Commission in its order dated 22.3.2021 in Petition No. 405/MP/2019 (GKEL & Anr. v. DHBVNL & Ors) had devised a mechanism for the generator therein to recover future expenditure incurred on transportation of fly ash, wherein, the Commission has directed recovery of expenditure on transportation of fly ash on a monthly basis with reconciliation on an annual basis. The Petitioner has prayed that a similar procedure may also be made applicable in the case of the Petitioner.

56. The matter has been examined. The Commission vide its order dated 5.11.2018 in Petition No. 172/MP/2016 had decided Notification dated 25.1.2016 regarding revised ECS as ‘change in law’ event. It is however observed that the Commission vide its order dated 28.10.2022 in Petition 205/MP/2021 filed by the Petitioner for recovery of additional expenditure incurred due to Ash transportation charges consequent to MOEF&CC, GOI Notification dated 3.11.2009 and Notification dated 25.1.2016, on a recurring basis, had allowed the expenditure incurred towards the Ash transportation expenses for 2019-20, 2020-21 and 2021-22, as under:

> *“Petitioner has furnished the details of the distance to which fly ash has been transported from the generating station, schedule rates applicable for transportation of fly ash, as notified by the State Governments along with details, including Auditor certified accounts. These documents have been examined and accordingly, the total fly ash transportation expenditure allowed to the Petitioner generating station wise for the period 2019-22 is as per the table in para 38 above totalling to Rs.309704.03 lakh and the same shall be recovered from the beneficiaries of the respective generating stations in 6 (six) equal monthly instalments. However, the Petitioner is directed to submit details regarding award of transportation contracts, distance to which fly ash has been transported along with duly reconciled statements of expenditure incurred on ash transportation at the time of filing petitions for truing up of tariff for the 2019-24 tariff period of the generating stations.”*

57. Since the issue has already considered and disposed of by the Commission in its order dated 28.10.2022. The claim of the Petitioner shall be governed by the findings of the Commission in the said order.

Operational Norms

58. The Petitioner has considered following norms of operation:

Normative Annual Plant Availability Factor (NAPAF) (%)	85
Heat Rate (kCal/kwh)	2401.43
Auxiliary Power Consumption (%)	7.04
Specific Oil Consumption (ml/kwh)	0.50

Normative Annual Plant Availability Factor (NAPAF)

59. In terms of Regulation 49(A)(a) of the 2019 Tariff Regulations, the Petitioner has considered Normative Annual Plant Availability Factor of 85% during the 2019-24 tariff period and hence, the same is allowed.

Gross Station Heat Rate (kCal/kWh)

(a) Regulation 49(C)(a)(i) of 2019 Tariff Regulations provides as under:

"(i) For existing Coal-based Thermal Generating Stations, other than those covered under clauses (ii) and (iii) below:

200/210/250 MW Sets	***500 MW Sets (Sub-critical)***
2430kCal/kWh	*2390kCal/kWh*

In respect of 500 MW and above units where the boiler feed pumps are electrically operated, the gross station heat rate shall be 40 kCal/kWh lower than the gross stationheat rate specified above.
Note 2
For the generating stations having combination of 200/210/250 MW sets and 500 MW and above sets, the normative gross station heat rate shall be the weighted average gross station heat rate of the combinations."

60. In terms of Regulation 49(C)(a)(i) Note 2, of the 2019 Tariff Regulations, Petitioner has considered the Gross Station Heat Rate (GSHR) of 2401.43 kCal/kWh during the period 2019-24. The generating station consists of three units of 200 MW each and three units of 500 MW each. Accordingly, in line with the Note 2 of the Regulation 49(C)(a)(i) of the 2019 Tariff Regulations, the weighted average GSHR of the generating station is as under:

Unit Size (MW)	**No. of Units**	**Type of Boiler feed pump**	**Unit wise heat rate (kCal/kWh)**	**Wt. avg. gross station heat rate (kCal/kWh)**
200	3	Electrical	2430	2401.43
500	3	Steam	2390	

61. Accordingly, GSHR of 2401.43 kCal/kWh is allowed for the period 2019-24.

Specific Oil Consumption

62. In terms of Regulation 49(D)(a) of the 2019 Tariff Regulations, the Petitioner has considered secondary fuel oil consumption of 0.50 ml/kWh during the period 2019-24 and hence, the same is allowed.

Auxiliary Power Consumption

63. Regulation 49(E)(a) of 2019 Tariff Regulations provides as under:

"(a) For Coal-based generating stations except at (b) below:

S. No.	*Generating Station*	*With Natural Draft cooling tower or without cooling tower*
(i)	*200 MW series*	*8.50%*
(ii)	*300 MW and above*	
	Steam driven boiler feed pumps	*5.75%*
	Electrically driven boiler feed pumps	*8.00%*

Provided that for thermal generating stations with induced draft cooling towers and where tube type coal mill is used, the norms shall be further increased by 0.5% and 0.8%, respectively:

Provided further that Additional Auxiliary Energy Consumption as follows shall be allowed for plants with Dry Cooling Systems:

Type of Dry Cooling System	*(% of gross generation)*
Direct cooling air cooled condensers with mechanical draft fans	*1.0%*
Indirect cooling system employing jet condensers with pressure recovery turbine and natural draft tower	*0.5%*

Note: The auxiliary energy consumption for the unit capacity of less than 200 MW sets shall be dealt on case-to-case basis."

64. In terms of Regulation 49(E)(a) of the 2019 Tariff Regulations, the Petitioner has considered auxiliary energy consumption of 7.04%, during the period 2019-24.

65. The generating station consists of three units of 200 MW each and three units of 500 MW each. Accordingly, auxiliary energy consumption for the generating station is worked out as under:

Unit Size (MW)	No. of Units	AEC With Natural Draft cooling tower or without cooling tower	Wt. avg. AEC With Natural Draft cooling tower (%)
200	3	8.50	6.5357
500	3	5.75	

66. Further, the proviso to 49(E)(a) of the 2019 Tariff Regulations provides for additional 0.5% of AEC for thermal generating stations with induced draft cooling towers. Accordingly, the auxiliary energy consumption of 7.0357% (6.5357+0.5) for the period 2019-24, is allowed.

Interest on Working Capital

67. Regulation 34 of the 2019 Tariff Regulations provides as under:

*"34. **Interest on Working Capital**: (1) The working capital shall cover:*
(a) For Coal-based/lignite-fired thermal generating stations:

(i) Cost of coal or lignite and limestone towards stock if applicable for 10 days for pit-head generating stations and 20 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) Advance payment for 30 days towards cost of coal or lignite and limestone 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 including water charges and security expenses;

(v) Receivables equivalent to 45 days of capacity charge and energy charge for sale of electricity calculated on the normative annual plant availability factor; and

(vi) Operation and maintenance expenses including water charges and security expenses for one month.

(b) ***xxx***

(3) Rate of interest on working capital shall be on normative basis and shall be considered as the bank rate as on 1.4.2019 or as on 1st April of the year during the tariff period 2019-24 in which the generating station or a unit thereof or the transmission system including communication system or element thereof as the case may be is declared under commercial operation whichever is later.

Provided that in case of truing-up the rate of interest on working capital shall be considered at bank rate as on 1st April of each of the financial year during the tariff period 2019-24.

(4) Interest on working capital shall be payable on normative basis notwithstanding that the generating company or the transmission licensee has not taken loan for working capital from any outside agency."

Fuel Cost and Energy Charges in Working Capital

68. Regulation 34(2) of the 2019 Tariff Regulations provides that the computation of cost of fuel as part of Interest on Working Capital (IWC) is to be based on the landed price and GCV of fuel as per actuals, for the third quarter of preceding financial year in case of each financial year for which tariff is to be determined. Regulation 43(2) of the 2019 Tariff Regulations provides as under:

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

(a) For coal based and lignite fired stations*:*

ECR = {(SHR – SFC x CVSF) x LPPF / CVPF + SFC x LPSFi + LC x LPL} x 100 / (100 – AUX)

xxxx

Where,

AUX = Normative auxiliary energy consumption in percentage.

CVPF = (a) Weighted Average Gross calorific value of coal as received, in kCal per kg for coal based stations less 85 Kcal/Kg on account of variation during storage at generating station;

(b) Weighted Average Gross calorific value of primary fuel as received, in kCal per kg, per litre or per standard cubic meter, as applicable for lignite, gas and liquid fuel based stations;

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

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

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

SHR = Gross station heat rate, in kCal per kWh;

LC = Normative limestone consumption in kg per kWh;

LPL = Weighted average landed cost of limestone in Rupees per kg;

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

SFC= Normative specific fuel oil consumption, in ml per kWh;

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

Provided that energy charge rate for a gas or liquid fuel based station shall be adjusted for open cycle operation based on certification of Member Secretary of respective Regional Power Committee during the month."

69. The Petitioner has claimed the cost of fuel component in working capital and Energy Charge Rate (ECR) based on followings:

(a) Operational norms as per the 2019 Tariff Regulations.

(b) Price and "as received GCV" of coal (after reducing the same by 85 kCal/kWh in terms of above quoted Regulation) procured for the three months of October 2018, November 2018 and December 2018.

(c) Price and GCV of secondary fuel oil for the three months of October 2018, November 2018 and December 2018.

70. Accordingly, the Petitioner has claimed ECR of Rs.2.612 per kWh and the following fuel cost component in working capital for the period 2019-24:

(Rs. in lakh)

	2019-20	**2020-21**	**2021-22**	**2022-23**	**2023-24**
Cost of coal for 40 days	41284.65	41284.65	41284.65	41284.65	41284.65
Cost of secondary fuel oil for 2 months	495.93	494.57	494.57	494.57	495.93

71. On perusal of the Form-15, it is observed that the Petitioner has included opening stock of coal and oil and its corresponding value while computing weighted average

price of coal and oil for the month of October 2018, November 2018 and December 2018. However, in terms of Regulation 34(2) of the 2019 Tariff Regulations, the computation of cost of fuel as part of IWC is to be based on the landed price and GCV of fuel as per actuals, which means that only fuel received during these three months is only to be considered and no opening stock shall be included therein. However, the Petitioner has not furnished revised Form-15 for coal and secondary fuel oil specifying separate details in respect of opening stock for the month of October 2018, November 2018 and December 2018. For the present petition the weighted average price and GCV of coal and oil as furnished by the Petitioner has been considered and the Petitioner is directed to furnish Form-15, in respect of both coal and secondary fuel oil, only based on fuels received during the respective years of the period 2019-24, at the time of truing up. Accordingly, the weighted average price and GCV of coal and oil claimed and allowed for the period 2019-24, is as under:

	Claimed	**Allowed**
Weighted average price of coal (Rs. /MT)	3651.31	3651.31
Weighted average GCV of coal (kCal/kg) *	3632.00	3626.89
Weighted average price of oil (Rs. /KL)	37955.05	37955.05
Weighted average GCV of oil (kCal/Ltr.)	9870.00	9870.00

** Weighted average GCV of coal as received net of 85 kCal/kg.*

72. The difference between the weighted average GCV of coal as claimed and as allowed, is due to the fact that the Petitioner has considered the simple average for three months of coal received including the opening cost and considered the margin of 85 k Cal/kg. However, we have considered the weighted average GCV of coal for the said months and adjusted the margin of 85 kCal/Kg.

73. Accordingly, the fuel component in working capital, energy charges and ECR claimed and allowed for the period 2019-24 is as under:

(Rs. in lakh)

	Claimed	Allowed
	2019-24	**2019-24**
Cost of coal for 40 days corresponding to NAPAF	41284.65	41342.78
Cost of secondary fuel oil for 2 months corresponding to NAPAF	495.93	495.93 for leap years and 494.57 for non-leap years
Energy charges for 45 days corresponding to NAPAF	46811.08	46883.05
ECR (Rs. /kWh)	2.612	2.616

74. The Petitioner, on a month-to-month basis, shall compute and claim the energy charges from the beneficiaries based on formulae given under Regulation 43 of the 2019 Tariff Regulations.

Working Capital for Maintenance Spares

75. The Petitioner has claimed the maintenance spares in the working capital as under:

(Rs. in lakh)

2014-15	2015-16	2016-17	2017-18	2018-19
11674.90	12194.02	12575.87	13078.09	13551.65

76. Regulation 34(1)(a)(iv) of the 2019 Tariff Regulations provide for maintenance spares @ 20% of the O&M expenses (including water charges and security expenses). Accordingly, maintenance spares @ 20% of the O&M expenses (including the water charges and security expenses) allowed is as under:

(Rs. in lakh)

2019-20	2020-21	2021-22	2022-23	2023-24
11659.05	12100.79	12520.61	12997.78	13446.58

Working Capital for Receivables

77. In terms of Regulation 34(1)(a)(v) of the 2019 Tariff Regulations, the receivables equivalent to 45 days of capacity charges and energy charges is worked out and allowed as under:

(Rs. in lakh)

	2019-20	2020-21	2021-22	2022-23	2023-24
Variable Charges - for 45 days	46883.05	46883.05	46883.05	46883.05	46883.05
Fixed Charges - for 45 days	10460.99	10638.86	10809.29	11116.84	11596.06
Total	**57344.04**	**57521.91**	**57692.34**	**57999.89**	**58479.10**

Working Capital for O&M Expenses (1 month)

78. The Petitioner has claimed the O&M expenses for 1 month in the working capital as under:

(Rs. in lakh)

2019-20	2020-21	2021-22	2022-23	2023-24
4864.54	5080.84	5239.95	5449.20	5646.52

79. Regulation 34(1)(a)(vi) of the 2019 Tariff Regulations provide for O&M expenses equivalent to 1 month of the O&M expenses (including water charges and security expenses). Accordingly, O&M expenses equivalent to 1 month of the O&M expenses (including water charges and security expenses) allowed is as under:

(Rs. in lakh)

2019-20	2020-21	2021-22	2022-23	2023-24
4857.94	5042.00	5216.92	5415.74	5602.74

Rate of intertest on working capital

80. In line with the Regulation 34(3) of the 2019 Tariff Regulations, the rate of interest on working capital is considered as 12.05% (i.e. 1 year SBI MCLR of 8.55% as on 1.4.2019 + 350 bps) for the year 2019-20, 11.25% (i.e. 1 year SBI MCLR of 7.75% as on 1.4.2020 + 350 bps) for the year 2020-21, 10.50% (i.e. 1 year SBI MCLR of 7.00% as on 1.4.2021 / 1.4.2022 + 350 bps) for the period 2021-23 and 12.00% (i.e. 1 year SBI MCLR of 8.50% as on 1.4.2023 + 350 bps) for the year 2023-24. Accordingly, interest on working capital is allowed as under:

(Rs. in lakh)

	2019-20	2020-21	2021-22	2022-23	2023-24
Working Capital for Cost of Coal towards Stock - (10 days generation corresponding to NAPAF)	10335.70	10335.70	10335.70	10335.70	10335.70

Working Capital for Cost of Coal towards Generation – (30 days generation corresponding to NAPAF)	31007.09	31007.09	31007.09	31007.09	31007.09
Working Capital for Cost of Secondary fuel oil - (2 months generation corresponding to NAPAF)	495.93	494.57	494.57	494.57	495.93
Working Capital for Maintenance Spares @ 20% of O&M expenses	11659.05	12100.79	12520.61	12997.78	13446.58
Working Capital for Receivables – (45 days of sale of electricity at NAPAF	57344.04	57521.91	57692.34	57999.89	58479.10
Working Capital for O&M expenses - 1 month	4857.94	5042.00	5216.92	5415.74	5602.74
Total Working Capital	**115699.73**	**116502.05**	**117267.23**	**118250.76**	**119367.13**
Rate of Interest	12.0500%	11.2500%	10.5000%	10.5000%	12.0000%
Interest on Working Capital	**13941.82**	**13106.48**	**12313.06**	**12416.33**	**14324.06**

Special Allowance

81. Regulation 28 of the 2019 Tariff Regulation for special allowances 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."

82. The Petitioner has claimed Special allowance for the generating station as under:

(Rs. in lakh)

2019-20	2020-21	2021-22	2022-23	2023-24
19950.00	19950.00	19950.00	19950.00	19950.00

83. Accordingly, in terms of the aforesaid regulations, Special Allowance @Rs.9.5 lakh per MW per year is allowed to the generating station as under:

(Rs. in lakh)

2019-20	2020-21	2021-22	2022-23	2023-24
19950.00	19950.00	19950.00	19950.00	19950.00

84. However, the Petitioner is directed to furnish the details of the expenditure incurred upon or utilized from special allowance as per Regulation 28(3) of the 2019 Tariff Regulation. Further, the Petitioner is also directed to furnish the impact of special allowance on the useful life of the generating station at the time of truing up of tariff.

Annual Fixed Charges approved for the period 2019-24

85. Accordingly, the annual fixed charges approved for the generating station for the period 2019-24, is summarized as under:

(Rs. in lakh)

	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	286.37	54.33	80.26	84.11	84.11
Interest on Loan	28.54	56.68	79.84	77.26	70.23
Return on Equity	12530.75	12571.52	12599.18	12603.30	12603.30
Interest on Working Capital	13941.82	13106.48	12313.06	12416.33	14324.06
O&M Expenses	58295.23	60503.95	62603.04	64988.90	67232.88
Special Allowance	19950.00	19950.00	19950.00	19950.00	19950.00
Total	**105032.71**	**106242.95**	**107625.37**	**110119.89**	**114264.58**

Note: *(1) All figures are on annualized basis. (2) 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.*

86. The annual fixed charges approved as above, is subject to truing up in terms of Regulation 13 of the 2019 Tariff Regulations.

Application Fee and Publication expenses

87. The Petitioner has sought reimbursement of fee paid by it for filing the petition for the period 2019-24 and for publication expenses. The Petitioner shall be entitled for reimbursement of the filing fees and publication expenses in connection with the

present petition, directly from the beneficiaries on pro-rata basis in accordance with Regulation 70(1) of the 2019 Tariff Regulations.

88. Similarly, RLDC Fees & Charges paid by the Petitioner in terms of the Central Electricity Regulatory Commission (Fees and Charges of Regional Load Dispatch Centre and other related matters) Regulations, 2019, shall be recovered from the beneficiaries. In addition, the Petitioner is entitled for recovery of statutory taxes, levies, duties, cess etc., levied by the statutory authorities in accordance with the 2019 Tariff Regulations.

89. Petition No. 416/GT/2020 is disposed of in terms of the above.

Sd/-	***Sd/-***	***Sd/-***
(Pravas Kumar Singh)	**(Arun Goyal)**	**(I.S. Jha)**
Member	**Member**	**Member**

CERC Website S. No. 444/2023