

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 442/GT/2020

Coram:

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

Date of Order : 29th March, 2023

In the matter of:

Petition for determination of tariff of Kahalgaon Super Thermal Power Station, Stage-II (1500 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-110 003.

...Petitioner

Vs

1. GRIDCO Limited,
24, Janpath, Bhubaneswar-751007
2. Power Department,
Government of Sikkim, Kazi RoadGangtok, Sikkim-737101
3. Gujarat Urja Vikas Nigam Limited,
Sardar Patel Vidyut Bhawan,Race Course, Baroda-390007
4. Madhya Pradesh Power Transmission Corporation Limited,
Shakti Bhawan, Vidyut Nagar, Jabalpur-482008
5. Maharashtra State Electricity Distribution Company Limited,
'Prakashgarh', Bandra (East), Mumbai-400 051
6. Chhatisgarh State Power Trading Company Limited,
PO. Sundernagar, Dhangania, Raipur-492013
7. Electricity Department,
Administration of Dadra and Nagar Haveli, Silvassa, VAPI
8. Electricity Department,
Administration of Daman & Diu, Daman-396210



9. Uttar Pradesh Power Corporation Limited,
Shakti Bhawan, 14, Ashok Marg, Lucknow-226001
10. Uttaranchal Power Corporation Limited,
Urja Bhawan, Kanwali Road, Dehradun-248001
11. Jaipur Vidyut Vitran Nigam Limited,
Vidyut Bhawan, Janpath, Jaipur-302005
12. Ajmer Vidyut Vitran Nigam Limited,
Old Power House, Hathi Bhata, Jaipur Road, Ajmer-305001
13. Jodhpur Vidyut Vitran Nigam Limited,
New Power House Road, Industrial Area, Jodhpur-342003
14. Power Development Department,
Government of J&K, Secretariat, Srinagar-190009
15. BSES Rajdhani Power Limited,
BSES Bhawan, Nehru Place, New Delhi-110019
16. BSES Yamuna Power Limited,
Shakti Kiran Building., Karkardooma, Delhi-110006
17. North Delhi Power Limited,
33 kV Sub Station Building.,
Hudson Lane, Kingsway Camp, Delhi-110009
18. Haryana Power Purchase Centre Limited,
Shakti Bhawan, Sector-VI, Panchkula, Haryana-134109
19. Punjab State Electricity Board,
The Mall, Secretariat Complex, Patiala-147001
20. Himachal Pradesh State Electricity Board,
Vidyut Bhawan, Shimla-171004
21. Power Department,
Union Territory of Chandigarh,
Additional Office Building,
Sector-9D, Chandigarh-160009

...Respondents

Parties Present:

Shri Venkatesh, Advocate, NTPC
Shri Ashutosh Shrivastava, Advocate, NTPC
Shri Siddharth Nigotia, Advocate, NTPC
Shri Kartikay Trivedi, Advocate, NTPC
Shri Jayant Bajaj, Advocate, NTPC
Shri Nihal Bhardwaj, Advocate, NTPC
Shri Prashant Chaturvedi, NTPC
Shri Vijendra Singh, NTPC
Shri R.K Mehta, Advocate, GRIDCO
Ms. Himanshi Andley, Advocate, GRIDCO
Shri Mohit K. Mudgal, Advocate, BRPL
Shri Sachin Dubey, Advocate, BRPL



Ms. Aanchal, Advocate, BRPL
 Shri Buddy Ranganadhan, Advocate, BYPL
 Shri Anupam Varma, Advocate, BYPL
 Shri Rahul Kinra, Advocate, BYPL
 Shri Aditya Ajay, Advocate, BYPL
 Shri Aashwyn Singh, Advocate, BYPL
 Shri Sameer Singh, BYPL
 Shri Abhishek, BYPL

ORDER

The Petitioner, NTPC Ltd has filed this petition, for determination of tariff of Kahalgaon Super Thermal Power Station, Stage-II (3 x 500 MW) (in short “the generating station”) for the period 2019-24, in terms of the provisions of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 (in short ‘the 2019 Tariff Regulations’). The generating station is a pit head station with a capacity of 1500 MW comprising three units, each of 500 MW. The date of commercial operation of the units of the generating station are as under:

	Actual COD
Unit I	1.8.2008
Unit II	30.12.2008
Unit III / Generating station	20.3.2010

2. The Commission vide order dated 21.1.2017 in Petition No. 283/GT/2014, had determined the tariff of the generating station for the period 2014-19. Subsequently, vide order dated 21.4.2022 in Petition No. 362/GT/2020, the tariff of the generating station for the period 2014-19, was revised, based on truing-up exercise. Accordingly, the capital cost and annual fixed charges approved vide order dated 21.4.2022 are as under:

Capital Cost allowed

	<i>(Rs. in lakh)</i>				
	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Capital Cost	544756.09	545431.52	545250.85	545788.44	545945.20
Add: Additional Capital Expenditure allowed	675.43	(-)180.67	537.59	156.76	24.68
Closing Capital Cost	545431.52	545250.85	545788.44	545945.20	545969.88
Average Capital Cost	545093.80	545341.18	545519.64	545866.82	545957.54



Annual Fixed Charges allowed

(Rs. in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	27859.74	27933.18	28023.59	28068.26	28078.32
Interest on Loan	20440.24	17800.25	15555.83	12785.90	10454.94
Return on Equity	32067.87	32237.84	32248.39	32268.92	32361.09
Interest on Working Capital	13665.76	13721.17	13758.34	14063.43	14110.91
O&M Expenses	24000.00	25515.00	27171.15	29078.98	30668.32
Total	118033.61	117207.45	116757.30	116265.49	115673.57

Present Petition

3. The capital cost and annual fixed charges claimed by the Petitioner for the period 2019-24 are as under:

Capital Cost claimed

(Rs. in lakh)

	2019-20	2020-21	2021-22	2022-23	2023-24
Opening Capital Cost	555695.69	560495.69	561836.69	567063.69	574413.69
Add: Addition during the year/period	4800.00	1341.00	5227.00	7350.00	18472.00
Closing Capital Cost	560495.69	561836.69	567063.69	574413.69	592885.69
Average Capital Cost	558095.69	561166.19	564450.19	570738.69	583649.69

Annual Fixed Charges claimed

(Rs. in lakh)

	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	28730.77	28888.84	29057.90	12920.30	13974.74
Interest on Loan	8621.30	6450.55	4283.62	2951.01	2601.56
Return on Equity	31446.46	31619.47	31804.51	32158.84	32886.33
Interest on Working Capital	9575.14	9622.57	9669.21	9488.59	9586.54
O&M Expenses	36104.74	37523.72	39011.09	40569.20	42185.62
Total	114478.41	114105.14	113826.32	98087.95	101234.79

4. The Respondent UPPCL has filed its reply vide affidavit dated 9.10.2020 and the Petitioner has filed its rejoinder to the same on 2.2.2021. The Petitioner vide affidavit dated 14.5.2021, has filed certain additional information, after serving copies to the Respondents. The Respondent MSEDCL and Respondent BYPL have filed their replies vide affidavit dated 4.6.2021. The Petitioner vide affidavit dated 4.6.2021 has filed the additional information along with Annexure (Form-15) with regard to computation of energy charges. Subsequently, this petition was heard through video conferencing, on 11.6.2021, and the Commission, after permitting the Respondent MPPMCL and



Respondent GRIDCO to file their replies and rejoinder thereof by the Petitioner, reserved its order in the matter. The Respondent MPPMCL and the Respondent GRIDCO, have filed their replies vide affidavits dated 9.7.2021 and 11.7.2021 respectively. The Respondent BYPL vide affidavit dated 12.7.2021 has made additional submissions and the Respondent BRPL has filed its reply vide affidavit dated 12.7.2021. In response, the Petitioner has filed its rejoinders to the replies of these respondents vide separate affidavits dated 19.7.2021. However, as the order in the petition could not be issued, prior to the Chairperson Shri P.K. Pujari demitting office, the Petition was re-listed and heard through virtual hearing on 24.6.2022 and the Commission, directing/permitting the Petitioner to file certain additional information, directed the listing of the petition for hearing the Respondents limited to the additional submissions filed by the Petitioner. The Petitioner has filed additional information on 15.7.2022. The Respondent, GRIDCO, vide affidavit dated 9.11.2022, has filed its reply to the additional submissions of the Petitioner. Thereafter, the matter was heard on 9.11.2022, and the Commission, after permitting the Respondents to file short written submissions and the Petitioner its response, to the same, reserved its order in the petition. The Petitioner vide affidavit dated 10.11.2022 filed its written submissions and the Respondent, MPPMCL, vide affidavit dated 5.12.2022 has filed its written submissions. Subsequently, the Petitioner vide affidavit dated 15.12.2022 has filed certain additional submissions. Taking into consideration the submissions of the parties and the documents available on record, we proceed to examine the claims of the Petitioner, in this petition, on prudence check, as stated in the subsequent paragraphs.

Capital Cost

5. Clauses (1), (3) and (5) of Regulation 19 of the 2019 Tariff Regulations provide as under:



“19. Capital Cost: (1) The Capital cost of the generating station or the transmission system, as the case may be, as determined by the Commission after prudence check in accordance with these regulations shall form the basis for determination of tariff for existing and new projects.

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(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.*

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(5) The following shall be excluded from the capital cost of the existing and new projects:

- (a) The assets forming part of the project, but not in use, as declared in the tariff petition;*
- (b) De-capitalised Assets after the date of commercial operation on account of replacement or removal on account of obsolescence or shifting from one project to another project:*

Provided that in case replacement of transmission asset is recommended by Regional Power Committee, such asset shall be de-capitalised only after its redeployment;

Provided further that unless shifting of an asset from one project to another is of permanent nature, there shall be no de-capitalization of the concerned assets.

- (c) In case of hydro generating stations, any expenditure incurred or committed to be incurred by a project developer for getting the project site allotted by the State Government by following a transparent process;*
- (d) Proportionate cost of land of the existing project which is being used for generating power from generating station based on renewable energy; and*
- (e) Any grant received from the Central or State Government or any statutory body or authority for the execution of the project which does not carry any liability of repayment.”*

6. The Petitioner has claimed capital cost of Rs.555695.69 lakh, as on 1.4.2019.

However, the Commission in its order dated 21.4.2022 in Petition No. 362/GT/2020 had approved the closing capital cost of Rs.545969.88 lakh, as on 31.3.2019. Accordingly,



the same has been considered as the opening capital cost, as on 1.4.2019, for determination of tariff for the period 2019-24, in accordance with the 2019 Tariff Regulations.

Additional Capital Expenditure

7. Regulations 25 and 26 of the 2019 Tariff Regulations provides for determination of tariff shall be based on admitted capital cost, including any additional capital expenditure already admitted up to 31.3.2019 (either based on actual or projected additional capital expenditure) and estimated additional capital expenditure for the respective years of the 2019- 24 tariff period. Clauses (1) and (2) of Regulations 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 de-capitalisation 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 projected additional capital expenditure claimed for the period 2019-24 is as under:

SI. No	Head of Work /Equipment	Regulation	Projected Additional Capital Expenditure					Total
			2019-20	2020-21	2021-22	2022-23	2023-24	
1	Ash Dyke/ash related works	25(1) (c) & 25(1)(g)	800.00	841.00	0.00	6000.00	8000.00	15641.00
2	MGR Doubling S&T System	25(1)(e)	0.00	0.00	1882.00	0.00	0.00	1882.00
3	Land for MGR system for Hurra-C mines	25(1) & 76	0.00	0.00	0.00	0.00	4000.00	4000.00



SI. No	Head of Work /Equipment	Regulation	Projected Additional Capital Expenditure					Total
			2019-20	2020-21	2021-22	2022-23	2023-24	
4	MGR Transportation system upto- Hurra-C Mines	25(1) & 76	0.00	0.00	0.00	0.00	5000.00	5000.00
5	RO Plant DM stream	25(1) & 76	0.00	500.00	433.00	0.00	0.00	933.00
6	400 kV/ 132 kV Switchyard extension package	26(1)(b)	4000.00	0.00	2342.00	0.00	0.00	6342.00
7	Upgradation of DCS Controllers and HMI	25(2)(c)	0.00	0.00	0.00	600.00	712.00	1312.00
8	Online coal analyser	26(1)(b)	0.00	0.00	570.00	0.00	0.00	570.00
9	CIO2 System	26(1)(b) & 26(1)(d)	0.00	0.00	0.00	750.00	760.00	1510.00
	Total (A)		4800.00	1341.00	5227.00	7350.00	18472.00	37190.00

a) Ash Dyke/ash related works

9. The Petitioner has claimed total projected additional capital expenditure of Rs.15641 lakh during the period 2019-24 (Rs 800 lakh in 2019-20, Rs 841 lakh in 2020-21, Rs 6000 lakh in 2022-23, and Rs 8000 lakh in 2023-24) under Regulation 25(1)(c) read with Regulation 25(1)(g) of the 2019 Tariff Regulations towards Ash Dyke / Ash related works. In justification for the same, the Petitioner has submitted that the projected additional capital expenditure claimed is towards Ash Dyke raising and other Ash dyke related works, which are within the original scope of work. The Petitioner has also submitted that these works include Ash dyke raising, earth covering, construction of sand blanket, sand chimney, construction of rock toe, inner slope with flat ash brick pitching, outer slope with grass, construction of decanting well for the collection of decanted water for re-use, buttressing, laying of hume pipe for drainage of toe drain water, slope drain on each embankment to escape the rainwater from road, construction of toe guard on each embankment, etc. The Petitioner has further submitted that these



works are required for the disposal of ash, during the life of the plant, for sustained operation.

10. The Respondent, GRIDCO and Respondent MPPMCL have submitted that the MoEFCC Notification, 2016 mandates 100% ash utilization by the generators, but the generating station has achieved 100% Ash utilization by 2014, i.e., four years from the COD (i.e 20.3.2010) prior to such notification by MoEF&CC. Accordingly, they have stated that since there is no need for the raising of ash dyke, the claims may not be allowed. The Respondent BRPL and Respondent BYPL have submitted that the Petitioner in Petition No. 362/GT/2020 (truing-up of tariff for the period 2014-19) had claimed a total amount of Rs. 5663.28 lakh, towards Ash dyke related works and in addition, a total claim of Rs. 15641.00 lakh has been projected under Regulation 25(1)(c) & 25(1)(g) of the 2019 Tariff Regulations, for the said works, for the period 2019-24. The Respondents, BYPL and BRPL, have further submitted that the Petitioner may be directed to furnish detailed justification / documents for the said claim. In response, the Petitioner has submitted that to keep the generating station running and to enhance the capacity of Ash dyke, frequent raising works are required and therefore, the expenses are to be incurred. They have also submitted that the Respondent's contention that no additional capital expenditure for ash dyke/ash disposal can be permitted on account of 100% ash utilisation, is contrary to the 2019 Tariff Regulations which, unequivocally, entitles the Petitioner to claim additional capital expenditure for ash disposal. The Petitioner has further submitted that it has prudently taken all possible steps and making best efforts for selling fly ash from the generating station, but due to the remote location of the plant, particularly the unavailability of ash-based projects in the vicinity of the plant i.e. demand – supply mismatch, it is not been possible to achieve the prescribed fly ash utilization. The Petitioner has stated that that ash generated must



be stored in an ash dyke, and the raising of ash dykes must be planned ahead of time to account for the ash that must be stored.

11. In response to the directions of the Commission for furnishing information, regarding ash dyke capacity, ash transportation charges, ash produced etc, the Petitioner vide affidavit dated 15.7.2022, has submitted that the total existing capacity of all Ash dyke lagoons of the generating station is 405 lakh m³, and is expected to be 431 lakh m³ increase by March, 2023. The Petitioner has also submitted that the envisaged ash transportation charges for the generating station, after adjusting ash fund, during the period 2019-24 is [2019-20 (ni), 2020-21 (Rs 72.46 cr), 2021-22(Rs 136.28 cr), 2022-23(Rs. 243 cr) and for 2023-24 (Rs 283 cr)]. The Petitioner has also furnished the actual ash produced and utilized from 2014-15 to 2018-19 as well as the ash envisaged to be produced and utilized from 2019-20 to 2023-24 as under:

Year	Total Ash produced (Lakh Ton)	Total Ash utilised (Lakh Ton)	Year	Total Ash produced / likely to be produced (Lakh Ton)	Total Ash utilised / likely to be utilised (Lakh Ton)
2014-15	36.20	10.81	2019-20	31.08	23.78
2015-16	32.80	13.46	2020-21	25.75	26.63
2016-17	32.40	14.28	2021-22	27.12	21.33
2017-18	26.83	12.30	2022-23	32.84	32.92
2018-19	27.68	13.39	2023-24	32.58	36.55

12. The Petitioner has further submitted that in terms of the MoEF&CC Notification dated 31.12.2021, it has about 3-4 years to achieve 100% fly ash disposal and the subject notification also permits the construction / establishment of an ash pond. Accordingly, the Petitioner has stated that being a statutory mandate, the projected additional capital expenditure may be allowed under Regulation 25(1)(c) read with Regulation 25 (1)(g) of the 2019 Tariff Regulations.



13. The matter has been examined. It is noted that with increased contribution of renewable energy, the PLF of thermal power plants is decreasing and the MoEFCC notifications dated 25.1.2016 and 31.12.2021, have mandated the generating companies to ensure 100% ash utilisation and also penalty for shortfall thereof. Accordingly, in future it is expected that the coal based generating stations utilize / dispose of complete ash, produced from their generating stations. As regards the claim of the Petitioner that the notification dated 31.12.2021 permits for ash pond, it is noted that the same was for emergency or temporary purpose and the Petitioner already has the minimum ash dyke capacity, as envisaged in the said notification. However, considering the generation report and fly ash utilisation report of the CEA and the information furnished by Petitioner, it is observed that even though the average PLF of generating station (Kahalgaon 1 and 2) for the last five years (2016-21) is around 76.53%, the average ash utilisation of these generating station (Kahalgaon 1 and 2) during the same period was around 63.6 % and is improving year on year. The generating station being a pit-head station, the PLF of the generating station is envisaged to be more than the other plants during the period 2019-24, but being remotely located, its ash utilisation may be lower, as compared to other generating stations. It is further noticed that the original estimated cost for ash dyke was around Rs. 134.75 crore and the Commission had allowed around Rs. 69.17 crore, towards Ash dyke expenses from the COD of Unit-I (1.8.2008) till 31.3.2019. Accordingly, the projected additional capital expenditure claimed by the Petitioner is **allowed** under Regulation 25(1)(c) read with Regulation 25(1)(g) of the 2019 Tariff Regulations. However, the Petitioner is directed to furnish the auditor certified details such as existing ash dyke and pond capacity, raisings completed and their respective heights, actual generation, ash produced, total ash utilised locally, quantity of ash transported, ash



transportation charges, net quantity of ash available at plant, balance capacity of ash dyke and ash pond etc, along with supporting documents at the time of truing up of tariff.

b) MGR Doubling Signalling & Telecommunication (S&T) system

14. The Petitioner has claimed projected additional capital expenditure of Rs.1882 lakh for MGR Doubling Signalling and Telecommunication (S&T) system in 2021-22 under Regulation 25(1)(e) of the 2019 Tariff Regulations. In justification for the same, the Petitioner has submitted that the MGR Doubling S&T system form part of the MGR doubling package, under the original scope of work, which was awarded to M/s RITES. The Petitioner has also submitted that this work is required for the safety, security, and efficient operation of the MGR track. It has stated that presently, rakes are running in manual mode of operation and after the commissioning of the S&T system, the rakes will be operated in automatic mode, thereby safety, reliability, and efficiency of MGR track operation will improve and the speed of rakes will also increase, thereby more coal can be transported to generating station. The Petitioner has further submitted that the delay in commissioning of the MGR S&T system, is due to the stoppage of work by M/s Kalindee, which is a sub-agency of M/s RITES. The Petitioner has stated that since complete land was not available (which was beyond the control of the Petitioner), the Petitioner had to change the layout. It has stated that M/s Kalindee had approached the National Company Law Tribunal (NCLT) for compensation against M/s RITES and the Petitioner. It has also submitted that with a lot of persuasion with M/s RITES, it is expected that M/s RITES will commence the work with other sub-agencies and commission the S&T system in 2021-22. Accordingly, the Petitioner has prayed that the additional capital expenditure may be allowed as it is related to the security and reliability of the movement of rakes.



15. The Respondent, GRIDCO has submitted that Petitioner has not furnished the details of cost, for which the work was to be executed by the sub-contractor of M/s RITES and the claim made on account of force majeure, but the conditions for the same are not specified. The Respondent, MPPMCL has submitted that since the plant has been running smoothly and PLF up to 2019-20, was in the range of 76% to 80%, there is no necessity for the expenditure on MGR doubling S&T works, and further no justification has been provided for the subject works. The Respondent UPPCL, Respondent BRPL and Respondent BYPL have submitted that the Commission may direct the Petitioner to mention the 'force majeure condition' which has necessitated the said expenditure on MGR doubling S&T system. In addition, Respondents BRPL and BYPL submitted that MGR system is in operation for more than 25 years, without any issues. Thus, there is no requirement for the proposed additional capitalization.

16. In response, the Petitioner vide additional submissions dated 15.7.2022, has submitted that the doubling of MGR track and In-plant railway siding, was awarded to M/s RITES Ltd, which includes S&T and the same is for safety, security and efficient operation of MGR track. This will increase the speed of rakes and more coal can be transported thereof. It has submitted that M/s RITES has awarded the work of S & T to M/s Kalindee, but due to land acquisition issues i.e. complete land was not available, the layout was changed and necessitated change in Bill of Quantities (BoQ). Subsequently, a dispute aroused and M/s Kalindee approached NCLT, which was later resolved bilaterally and the work was again started, however, due to COVID – 19 work got hampered and is expected to be completed by 2022-23. The Petitioner has added that since the land acquisition is beyond the control of Petitioner and the proceedings before NCLT as well as COVID-19 are force majeure events, the claim may be allowed.



17. We have considered the matter. On pursuing information furnished by parties, it is noted that the existing MGR is in operation since long and is a common facility for the both Stage I & II of Kahalgaon STPS and in addition, Petitioner has plan to develop another MGR for Hurra C mines, which was allocated but not yet operationalized. Considering the claim, it appears to be associated with existing MGR system, however, as per the justification furnished for the delay in the works, it is appears to be associated with Hurrah C mines. Further, the petitioner has not furnished any details regarding the apportionment of this projected additional capital to Stage I and II. In addition, in reference to various claims associated with MGR system, it is also observed that the Commission in its order dated 21.1.2017 in Petition No. 283/GT/2014, had granted liberty to the Petitioner to approach the Commission for capitalization, after completion of the MGR system as under:

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

18. Considering the above, as the information furnished by the Petitioner is insufficient and inconsistent, the projected additional capital expenditure for the said work is **not allowed**. However, the Petitioner is granted liberty to claim the same along with all relevant documents, particularly, the projected expenditure pertains to existing MGR or new MGR associated with Hurrah C Mines, apportionment of the same to Stage I and Stage II in case expenditure pertains to existing MGR, the auditor certified original estimated cost, the quantum of work completed by M/s Kalindee, the expenditure



already incurred, IDC, interest, the damages recovered, etc, for consideration of Commission at the time of truing up of tariff for the period 2019-24.

c) Land for MGR system for Hurra-C Mines

19. The Petitioner has claimed projected additional capital expenditure of Rs.4000 lakh towards Land for MGR system, associated with Hurra-C Mines, in 2023-24 under Regulation 25(1) read with Regulation 76 of the 2019 Tariff Regulations. In justification for the same, the Petitioner has submitted that the Commission vide its order dated 26.9.2017 in Review Petition No. 13/RP/2017, had granted liberty to the Petitioner to claim MGR related works, during the period 2014-19. It has also submitted that the Petitioner had capitalized some of the works related to MGR land, during the period 2014-19 and has claimed the same in Petition No. 362/GT/2020. It has however submitted that further expenditure could not be done, due to some land related issues. The Petitioner has stated that the physical possession of land is in process and considering the present status of work, it is envisaged that the land for development of MGR for transportation of coal from linked mines of Hurra (C), may be required during the year 2023-24. The Petitioner has therefore submitted that the expenditure may be allowed, and liberty be granted to claim the said works on completion and subsequent capitalization.

20. The Respondent, GRIDCO has submitted that no liberty was granted to the Petitioner vide Commission's order dated 26.9.2017 in Review Petition No.13/RP/ 2017 to claim the additional capitalization for land for MGR system for Hurra-C mines during the year 2023-24, under Regulation 25(1) of the 2019 Tariff Regulations. In response, the Petitioner has submitted that it has claimed the expenditure on the basis of order dated 26.9.2017 in Review Petition No. 13/RP/2017 and in terms of the 2019 Tariff Regulations. Subsequently, the Petitioner vide additional submissions dated 15.7.2022



has submitted that the Commission vide order dated 21.4.2022 in Petition No.362/GT/2020 had granted liberty to the Petitioner, to approach the Commission after completion of works of the MGR system and development of linked mines. It was also pointed out that ECL has awarded construction, O & M of CHP, SILO etc, and coal supply may commence during the period 2019-24. It was further submitted that the coal production in existing alternative coal source i.e. Rajmahal mines decreasing, and hence the current system is to be kept in place to ensure fuel supply in future. Accordingly, the Petitioner has stated that the claims towards MGR land and MGR system may be allowed.

21. The matter has been considered. It is observed that though the Petitioner has claimed the additional capitalisation under Regulation 25(1) read with Regulation 26 of the 2019 Tariff Regulations, it has not indicated the relevant sub-clauses of the said Regulation, under which the claim has been made. It is noticed that the Petitioner in Petition No. 362/GT/2020 had claimed total actual additional capital expenditure of Rs. 20.41 lakh towards MGR land under Regulation 14(1)(ii) read with Regulation 54 of the 2014 Tariff Regulations and the Commission vide its order dated 21.4.2022 had disposed of the claim as under:

‘48. We have considered the matter. It is observed that MGR related work is the deferred work within the original scope of work of the project. It is pertinent to mention that the Commission in its order dated 26.9.2017 in Petition No. 13/RP/2017 (in Petition No.283/GT/2014) had granted liberty to the Petitioner to approach the Commission for capitalization of MGR land after completion of the works of MGR system, as under:

“14.However, the Commission in the 2014-19 tariff order dated 21.1.2017 in petition No.283./GT/2014, while deliberating on the claim of petitioner for additional capitalization on MGR system (other than the cost of land) for MGR line under Regulation 14(1)(ii) (i.e. works deferred for execution within original scope & within in cut of date), granted liberty to the petitioner to claim the same at the time of truing up after completion of work. No such liberty was however, given for additional capitalization of MGR land which was also a part of the total MGR system. . To this extent we find that there is an error apparent in the order dated 21. 1.2017. 15. Accordingly, the petitioner is granted liberty to claim the expenditure of MGR Land since it forms part of the total MGR system at the time of truing-up of tariff of this generating station provided supplies from linked mines get started.”



49. As stated in paragraph 26 above, the Petitioner has envisaged the major expenditure towards development of MGR for transportation of coal from linked mines of Hurra (C) during the 2019-24 tariff period, in order to match with the development of ECL coal mines. Accordingly, considering the fact that MGR system is yet to be completed and the MGR assets corresponding to the additional capital expenditure of Rs.150.75 lakh claimed are not rendering any service in the generation of electricity from the generating station, the additional capital expenditure claimed is not allowed. However, the Petitioner is granted liberty to approach the Commission after completion of the works of MGR system and development of linked mines.'

22. It is evident from the above that the Petitioner had been granted liberty to approach the Commission for MGR land, after completion of the works of MGR system, development of linked mines and commencement of supply from the same. Considering the information furnished by the Petitioner, it is noted that the MGR system and the linked mines are yet to be completed / developed. Hence, the asset for which additional capitalization has been claimed, has not been put to use and does not also contribute to the generation of electricity from the generating station, at this stage, we find no reason to allow the additional capital expenditure claimed on this count, by invoking Regulation 76 (power to relax) of the 2019 Tariff Regulations. In this background, the claim for projected additional capital of the expenditure is **not allowed**. However, the Petitioner is granted liberty to approach the Commission, after completion of the works of MGR system, development of linked mines and commencement of the supply thereof, along with supporting documents including details of item-wise / component-wise expenses, IDC, interest, incurred with respect to original scope of works and audited certificate thereof.

d) MGR Transportation system upto Hurra-C Mines

23. The Petitioner has claimed projected additional capital expenditure of Rs. 5000 lakh for MGR Transportation system upto Hurra-C mines, in 2023-24, under Regulation 25(1) read with Regulation 76 of the 2019 Tariff Regulations. In justification for the



same, the Petitioner has submitted that the Commission vide its order dated 21.1.2017 in Petition No. 283/GT/2014 had granted liberty to claim the expenditure related with MGR of Hurra-C mines at the time of truing-up of tariff of the generating station, as per actual status. It has also submitted that the Petitioner had capitalized some of the works related to MGR land during the period 2014-19 and has claimed the same in Petition No. 362/GT/2020 for the period 2014-19. It has however submitted that further expenditure could not be done, due to some land related issues. The Petitioner has stated that the physical possession of land is in process and considering the present status of work, it is envisaged that the land for development of MGR for transportation of coal from linked mines of Hurra (C) may be required during the year 2023-24. The Petitioner has also submitted that in order to match with the development of ECL coal mines, it has postponed the said additional capital expenditure in 2023-24. The Petitioner has therefore prayed to allow the additional capital expenditure and also to grant the liberty to claim the said works, on completion and capitalization.

24. The Respondent, GRIDCO has submitted that the Petitioner's claim for MGR transportation system does not satisfy the conditions under Regulation 25(1) of the 2019 Tariff Regulations. The Respondent, UPPCL has submitted that the Petitioner has claimed additional expenditure on anticipation that Hurra-C mines shall become operational and further, the average landed cost of coal from both sources (MGR & Railways) is Rs. 2671.95 / MT, whereas, the landed cost of coal from MGR works out to Rs. 2329.21/MT, a 13% reduction in cost. Accordingly, the Respondent has submitted that the Petitioner may be directed to factor in, the impact of reduction in the landed cost of coal on interest on working capital for 2023-24. The Respondent, BRPL and Respondent BYPL have submitted that in order dated 21.1.2017 in Petition No. 283/GT/2014, the expenditure for MGR system was disallowed and the Petitioner has



also not furnished the relevant provision of the regulation, under which the proposed expenditure is to be incurred, after the cut-off date. In response, the Petitioner has submitted that its claim is in terms of the 2019 Tariff Regulations and has computed interest on working capital as per Regulation 34 of the 2019 Tariff Regulations.

25. Subsequently, the Petitioner vide its additional affidavit dated 15.7.2022 has submitted that the Commission vide its order dated 21.4.2022 in Petition No. 362/ GT/ 2020 had granted liberty to the Petitioner to approach the Commission after completion of works of MGR system and development of linked mines. It has further submitted that ECL has awarded construction, O & M of CHP, SILO etc, and coal supply may commence during the period 2019-24. It has also mentioned that coal production in existing alternative coal source i.e. Rajmahal mines decreasing, so current system is to be kept in place to ensure fuel supply in future. Accordingly, the Petitioner has prayed that the claims towards MGR land and MGR system may be allowed.

26. The matter has been considered. It is observed that the Petitioner has not indicated the relevant sub-clause of Regulation 25(1) of the 2019 Tariff Regulations under which the additional capital expenditure has been claimed. It is noticed that the claim of the Petitioner towards development of MGR system to transport the coal from linked mines of Hurra (C) in Petition No. 362/GT/2020, was not allowed during the period 2014-19 vide order dated 21.4.2022, however, the Petitioner was granted liberty to approach the Commission after completion of MGR system and development of linked mines. The relevant is extracted below:

“49. As stated in paragraph 26 above, the Petitioner has envisaged the major expenditure towards development of MGR for transportation of coal from linked mines of Hurra (C) during the 2019-24 tariff period, in order to match with the development of ECL coal mines. Accordingly, considering the fact that MGR system is yet to be completed and the MGR assets corresponding to the additional capital expenditure of Rs.150.75 lakh claimed are not rendering any service in the generation of electricity



from the generating station, the additional capital expenditure claimed is not allowed. However, the Petitioner is granted liberty to approach the Commission after completion of the works of MGR system and development of linked mines.”

27. It is evident from the above that the Petitioner was granted liberty to approach the Commission for MGR system after development of linked mines and commencement of supply from the same. Considering the information furnished by the Petitioner, it is noticed that the work of MGR has not yet been completed / developed. Hence, the asset for which additional capitalization has been claimed, has not been put to use and does not also contribute to the generation of electricity from the generating station, at this stage, we find no reason to allow the additional capital expenditure claimed on this count, by invoking Regulation 76 (power to relax) of the 2019 Tariff Regulations. In this background, the claim of the Petitioner for projected additional capital expenditure is **not allowed**. However, the Petitioner is granted liberty to approach the Commission, after completion of the works of MGR system, development of linked mines and commencement of the supply thereof, along with supporting documents including details of item-wise / component-wise expenses incurred, IDC, interest, with respect to original scope of works and audited certificate thereof.

e) RO Plant DM Stream

28. The Petitioner has claimed total projected additional capital expenditure of Rs.933 lakh (i.e. Rs. 500 lakh in 2020-21 and Rs. 433 lakh in 2021-22) for RO Plant DM stream during the period 2020-22 under Regulation 25(1) read with Regulation 76 of the 2019 Tariff Regulations. In justification for the same, the Petitioner has submitted that the Commission in its order dated 21.1.2017 in Petition No. 283/GT/2014 had observed that the installation of RO plant in the existing DM stream is essential to meet the requirement of DM make up water, to run the power plant, and had allowed the same under Regulation 14(3)(vii) of the 2014 Tariff Regulations, in exercise of its powers



under Regulation 54 of the 2014 Tariff Regulations (power to relax), subject to the condition that the capitalisation of the asset is after completion of the said work. The Petitioner has submitted that it had awarded the work to M/s Aqua Design, but the same was not completed as the said contractor became insolvent. In view of this, the Petitioner has submitted that it is in the process of engaging other agency for completion of the remaining work. It has added that the said work is necessary for the sustained operation of the generating station and the delay in completion of the said work is beyond the control of the Petitioner.

29. The Respondent, MPPMCL has submitted that the Petitioner's claim for RO plant DM system is beyond the original scope of work and since the plant has been running smoothly with PLF in the range of 76% to 80% up to 2019-20, the claim for the asset / work stating that the same is essential to meet the requirement of DM make up water to run the power plant, is baseless. It has submitted that the Petitioner cannot seek relaxation under Regulation 76 of the 2019 Tariff Regulations to justify its claim, since the power of relaxation, once exercised in relation to a claim, cannot thereafter continue in perpetuity. The Respondent, BRPL and Respondent, BYPL have submitted that the Commission had earlier allowed the completion of the said work, in exercise of its judicial discretion, under Regulation 14(3)(vii) in exercise of the power to relax under Regulation 54 of the 2014 Tariff Regulations and the delay in the work is solely attributable to the Petitioner, since despite the relaxation granted, the installation of RO plant was not completed. They have also submitted that the relevant provision of the regulation, under which the expenditure is proposed to be incurred, after the cut-off date, has not been provided by the Petitioner.

30. In response to the directions of the Commission vide RoP dated 30.6.2022, the



Petitioner has submitted that 'Design, Engineering, Supply, Erection & Commissioning of RO plant in Stage-II DM plant' was awarded to M/s Aqua Designs India Pvt. Ltd. in February, 2015 and the same was allowed by order 21.1.2017 in Petition No. 283/GT/2014. It has however stated that due to underground ganga make up line passing, the location for RO plant was changed. The Petitioner has also submitted that subsequently, the supply and erection of major equipment was completed by the agency, but for some critical equipment's, for which, the same was pending. It has stated that since, October, 2017, the agency had not responded for the balance works and has undergone Corporate Insolvency Resolution and NCLT has ordered the liquidation of the said agency. The Petitioner has further submitted that it has invoked the security deposit, PBG etc., and has also made efforts to complete the balance works, but due to design patent issues and amount of works being small, reputed agencies were unwilling to take up the balance works, in addition to the delay of works due to COVID-19. The Petitioner, while stating that the delay in completion of work of RO plant is beyond its reasonable control has also furnished the following details .

Sl. No.		Submissions
1	Original estimation cost	Rs 9,44,67,378/- (taxes extra) A true copy of the Service Purchase Order (SPO) dated 16.02.2015 has been submitted
2	Total expenditure incurred	Rs. 8,25,24,473/-
3	Percentage of works completed by original contractor- M/s Aqua Design	87.36 % (In terms of monetary value of total supplies and erection work executed by M/s Aqua Design)
4	Payments made thereof, the penalty recovered	The Petitioner has paid the Agency for the executed work mentioned at Sl. No. 2 of the table. Further, Retention amount, security deposit, PG test liability amount and encashment of Bank Guarantee amount as mentioned below has been retained from above payment as per the provisions of the Contract signed between the Petitioner and Agency: Total amount withheld is Rs 187.73 lakhs as per following details: - (a) Retention Amount: - Rs. 11.89 lakhs (b) Security Deposit: - Rs. 79.84 lakh (c) PG test liability: - Rs. 2.69 lakhs



Sl. No.	Submissions	
	(d) Performance BG encashed: Rs.93.31 lakhs	
5	Details of assigning balance works to other Contractor, payments made thereof etc	Petitioner is in process of assigning balance works to another agency. Therefore, no payment has been made to any other agency.

31. The matter has been considered. It is noticed that the additional capitalisation of this work was allowed in order dated 21.1.2017 in Petition No. 283/GT/2014, subject to completion of the same by the Petitioner. The relevant extract from the above-mentioned order is as follows:

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

32. It is evident from the submissions of the Petitioner that the said work was discontinued by the contractor, M/s Aqua Design, and the Petitioner is in the process of engaging other agency for completion. However, the Petitioner has not mentioned the relevant sub-clause of Regulation 25(1) of the 2019 Tariff Regulations, under which the claim has been made. It is pertinent to mention that in the original Petition, the Petitioner had claimed additional capital expenditure of Rs. 933.00 lakh, but in additional submissions it was mentioned that the original estimated cost is Rs. 944.67 lakh. It is also noted that the Petitioner has already incurred an expenditure of Rs. 825.24 lakh for the same and has withheld / recovered an amount of Rs. 187.73 lakh. Accordingly, we **allow** the total additional capital expenditure claimed for Rs 637.51 lakh (after adjusting withheld amount) during the period 2020-22 (Rs. 312.27 lakh in 2020-21 and Rs. 325.24



lakh in 2021-22) under Regulation 26 (1) (c) of the 2019 Tariff Regulations, in exercise of the 'Power to Relax' under Regulation 76 of the 2019 Tariff Regulations. This is however, subject to the condition that the capitalisation of the said asset is only after completion of the said work. The Petitioner is also directed to submit year wise auditor certified details of actual additional capital expenditure, IDC, interest, penalty recovered, advance made etc, along with supporting documents at the time of truing up tariff for the period 2019-24.

f) 400 kV / 132 kV Switchyard extension package

33. The Petitioner has claimed total projected additional capital expenditure of Rs.6342 lakh (i.e. Rs. 4000 lakh in 2019-20 and Rs. 2342 lakh in 2021-22) for 400 kV / 132 kV Switchyard extension package under Regulation 26(1)(b) of the 2019 Tariff Regulations. In justification for the same, the Petitioner has submitted that the Commission in its order dated 21.1.2017 in Petition No. 283/GT/2014, had allowed expenditure for 400 kV Bus splitting work for safe and reliable operation of the grid and accordingly, 400 kV buses have been split at the switchyard. It has submitted that the bus splitting is related to both Stages (i.e. Stage-I and Stage-II) of Kahalgaon STPS, and the total expenditure has been apportioned, based on the installed capacity of Stage-I (840 MW) and Stage-II (1500MW). The Petitioner has further submitted that though bus splitting has been done, the auxiliary power supply of the generating station could not be segregated due to unavailability of ICT at site, on account of vendor M/s EMCO Limited, Thane and the vendor had not responded to the request to resolve the matter. Accordingly, the Petitioner has submitted that the contract of M/s EMCO was terminated and is in process of awarding the works to new contractor.

34. The Respondent, GRIDCO has submitted that the package work was allowed in order dated 21.1.2017 in Petition No. 283/GT/2014 by relaxing Regulation 14(3)(ix) of



the 2014 Tariff Regulations. It has however submitted that since no such provision existed under the 2019 Tariff Regulations, the Petitioner has switched its claim for capitalisation of the expenditure under Regulation 26(1)(b) of the 2019 Tariff Regulations, which is *pari materia* with Regulation 14(3)(ii) of the 2014 Tariff Regulations. The Respondent has stated that since the order dated 21.1.2017 is limited to Regulation 14(3)(ix) of the 2014 Tariff Regulations, the claim of the Petitioner herein, may not be allowed. It has further stated that the Petitioner may be directed to furnish the details of the compensation / penalty / liquidated damages recovered from the concerned vendor as well as the terms and conditions of the terminated contract for a prudence check. The Respondent, MPPMCL has submitted that the expenditure claimed by the Petitioner is beyond the original scope of work and as there is no incidence of change in law, the claim of the Petitioner may be rejected. It has further submitted that since MOP, GOI had not allowed the bus splitting work at 400 kV S/S of Kahalgaon STPS under PSDF scheme earlier, but, with the change in the tariff period, there may be some change in the outlook of MOP, GOI as regards the usage under the PSDF scheme. Accordingly, the Respondent has submitted that the Petitioner may reprocess its claim under the PSDF scheme, as the same is in the interest of grid and to avoid burdening the beneficiaries on this count. The Respondent MPPMCL has added that the Petitioner may be directed to submit the element-wise, work-wise detailed scope of work of bus splitting. The Respondent, BRPL and Respondent BYPL, have submitted that the Commission in its order dated 21.1.2017 in Petition No. 283/GT/2014 had allowed the expenditure of Rs. 6342.21 lakh for the completion of the work pertaining to 'Bus splitting' in 2016-17, in exercise of its judicial discretion by relaxation of Regulation 14(3)(ix) of the 2014 Tariff Regulations. However, these works have run into problem once again and the Petitioner alone is to be held responsible for



the same. Accordingly, the Respondent has stated that the request of the Petitioner to exercise judicial discretion under Regulation 76 of the 2019 Tariff Regulations may be rejected.

35. In response, the Petitioner has submitted that Regulation 25(2) of the 2019 Tariff Regulations, is para-materia to Regulation 14(3)(ix) of the 2014 Tariff Regulations, and therefore, the expenditure claimed may be considered under Regulation 25(2)(d) of the 2019 Tariff Regulations. Subsequently, the Petitioner, in response to directions of the Commission vide ROP dated 30.6.2022, has submitted that Kahalgaon Stage-I and Stage-II units, are connected to the 400 kV switchyard under one and half beaker scheme, and 132 kV switchyard providing supply to the stations in Bihar and Jharkhand. Considering the accumulation of generators, short circuit levels, splitting of few 400 kV switchyards, including 400 kV switchyard of Kahalgaon STPS was agreed by the Standing Committee on Power System Planning in Eastern Region in 2010 and the same was deliberated in ERPC, wherein, it was agreed that initially the cost shall be borne by constituents, and will be reimbursed, if scheme is agreed under PSDF. However, the proposal was not considered under PSDF. In the meantime, considering the prayers of the Petitioner, the Commission vide order dated 21.1.2017 in Petition No. 283/GT/2014 had allowed the projected additional capital expenditure. It has also submitted that the 400 kV bus splitting, shifting lines etc., were awarded to M/s GE T & D (India) for Rs. 75 Cr (exclusive of taxes), the same was completed and charged. Further, erection, testing and commissioning of new 132 kV were completed, but bus couldn't be charged due to non availability of 2 no. of 200 MVA ICTs by supplier EMCO Ltd. As EMCO was not responding, the contract was terminated and an amount of Rs 4.6 crore was recovered, while, Rs. 3.17 crore was deposited as advance. Further, as the segregation of auxiliary power supply of the generating station is equally critical at



site, to overcome the phase difference, which may arise between the unit and generating station power supply (in Stage-II) under the split bus scenario, the contract was awarded to the new supplier i.e. M/s BHEL on 19.3.2020. However, due to Covid-19 pandemic during 2020 and 2021, the supplies of transformer from M/s BHEL got delayed. After resumption of work and expediting the supplies, both the ICT's have been received at site and the work has been resumed and the Petitioner is putting all its efforts to complete the minor balance works by March, 2023. The Petitioner has submitted that the following details pertains to two nos. of ICT's equipment (400/132/33 KV) awarded to M/s EMCO:

Sl. No.		Submissions
1)	Original estimation cost	Rs 22 crore
2)	Total expenditure incurred till 30.06.2022	NIL for M/s EMCO
3)	Percentage of works completed by M/s EMCO limited & Payments made thereof	0% work completed by M/s EMCO Rs 3.17 Cr. Released to M/s EMCO as advance against BG.
4)	Penalty recovered from M/s EMCO	INR 4.6 Cr – BG encashment
5)	Details of assigning balance work to other contractor & payments made thereof	Package was re-awarded to M/s BHEL who has already supplied the Transformers. Erection & commissioning of same is in progress. Details of award & payment made to BHEL are as under: - Award value – Rs 18.38 Cr (GST extra) Amount released: - Rs 20.80 Cr (With GST) Both the ICT's have been received at site and Erection work is in progress. All balance works targeted to be complete by March 2023.

36. The matter has been considered. Considering the interconnections of the plant with other generating stations / grid (Barh, Maithon, Bihar Sharif and Farakka), the bus splitting has been agreed by the Standing Committee on Power System Planning in Eastern Region in 2010. In this context, it also noticed that the additional capitalisation of this work was allowed vide order dated 21.1.2017 in Petition No. 283/GT/2014 as under:



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

37. As per submissions of the Petitioner, it is noticed that 400 kV bus splitting was already completed. With regard to 132 kV, it is observed that though the Petitioner has executed the said works, the same was not to be implemented due to issues related with vendor and non-availability of ICT. Considering the same, the Petitioner has awarded the contract to a new supplier M/s BHEL, who had supplied both the ICTs and the erection work is in progress. The Petitioner has also recovered penalty by encashing the BG given by M/s EMCO. It is also noticed that earlier, the Petitioner has released Rs. 3.17 crore as advance to M/s EMCO and the Petitioner has encashed the BG of EMCO for Rs. 4.60 crore. The original estimated cost awarded to EMCO was Rs. 22 crore, whereas, the subject work awarded to new contractor, BHEL, was for Rs. 18.38 crore and had released Rs. 20.80 crore (with GST). However, the Petitioner has not furnished any information as to how the advance amount of Rs. 3.17 crore was accounted, the year of BG encashment and the revised claim on account of lower awarded cost and BG encashment.



38. Considering the submissions of the Petitioner, it is noticed that the additional capital expenditure of Rs 9631.00 lakh (Rs 9894.00 lakh – Rs 143.00 lakh – Rs. 120.00 lakh) is required for the subject works of Kahalgaon 400/132 kV bus splitting associated with Stages- I and II. The apportioned additional capitalization for Stages- I and II, based on the installed capacity, is Rs. 3457.28 lakh and Rs. 6173.12 lakh, respectively. Accordingly, the additional capital expenditure of Rs. 6173.12 lakh (i.e. Rs. 3831.12 lakh in 2019-20 and Rs 2342 lakh in 2021-22) for the generating station (Kahalgaon Stage II) towards 400 kV / 132 kV Switchyard extension package during 2019-22 is allowed under Regulation 26(1)(b) of the 2019 Tariff Regulations, in exercise of the power under Regulation 76 of the 2019 Tariff Regulations. However, the Petitioner is directed to furnish detailed additional information i.e. scope of works, original estimated cost, total expenditure incurred excluding the advance made of Rs. 3.17 Cr to the agency, IDC, interest, penalty recovered and year thereof etc., along with the supporting documents including audited certificate at the time of truing-up of tariff.

g) Upgradation of DCS Controllers and HMI

39. The Petitioner has claimed total projected additional capital expenditure of Rs.1312 lakh (i.e. Rs. 600 lakh in 2022-23 and Rs. 712 lakh in 2023-24) for Upgradation of DCS controllers and HMI during the period 2022-24 under Regulation 25(2)(c) of the 2019 Tariff Regulations. In justification for the same, the Petitioner has submitted that the said work is to overcome obsolescence of software and spares. The Petitioner has stated that the upgradation involves only obsolete portion, of the complete system and is to be implemented by OEM. It has also submitted that M/s BHEL's DCS controllers having processor DPU 4E and HMI, were supplied with DDCMIS / HMIPIS and were based on Windows 2000/Windows XP, which were the latest state of the art technology at the time of engineering. However, Microsoft Operating System (OS) support for



Windows 2000 (for server machines), ended on 13.7.2010 and the support for Windows XP (for workstations) ended in April, 2014. The Petitioner has also submitted that Microsoft, no longer provides security updates or technical support for these operating systems. Thus, it has submitted that due to component obsolescence, M/s BHEL have phased out DPE-4E processors and withdrawn spares and service support to DCS, since 2015 (the letter of the OEM has been submitted for consideration of the Commission). The Petitioner has added that the availability of spares and service support to DCS controller and HMI system is therefore a constraint for the safe and uninterrupted operation of units of the generating station. It has further stated that the said upgradation will enhance its reliability / safety and overcome the subject obsolescence.

40. The Respondent, GRIDCO has submitted that in terms of the Electricity Act 2003 and the 2019 Tariff Regulations, the CEA is the competent authority to advice on technical matters and not M/s BHEL. The Respondent, MPPMCL has submitted that the Petitioner's claim may not be permitted, since there is no need for replacement of an existing system within 7-8 years and since the work is minor in nature, the same may be covered under O&M expenses. The Respondent, BRPL and Respondent, BYPL have submitted that the Petitioner has not furnished any details or the documents pertaining to the additional capitalization claimed.

41. In response to the directions of the Commission, the Petitioner has submitted that the works are going on and the details of decapitalization of old asset will be provided, after completion of works, at the time of truing up of tariff. Subsequently, the Petitioner vide additional submissions dated 15.12.2022, has submitted that as the work is yet to be completed, the actual decapitalized value could not be ascertained at present.



However, as per the assumed deletion methodology (as per para 50 below) adopted by the Commission, the estimated de-capitalised value is Rs. 645.52 lakhs (i.e., Rs. 303.04 lakhs in 2022-23 and Rs. 342.48 lakhs in 2023-24).

42. We have examined the matter. According to the Petitioner, M/s BHEL (OEM) has phased out DPE-4E processors and has withdrawn spares and service support, since 2015. The upgradation involves only the obsolete portion of complete system. Since the additional capital expenditure to be incurred is on account of obsolescence of technology (based on letter of OEM), we **allow** the claim of the Petitioner under Regulation 25(2)(c) of the 2019 Tariff Regulations. However, as the Petitioner has submitted that the actual decapitalisation value can be provided only after completion of the works we consider the estimated decapitalisation value (in the absence of the original value), under 'Assumed Deletions'. The Petitioner is however directed to furnish the actual decapitalisation value, the original value of complete DCS system and other relevant information at the time of truing-up of tariff for the period 2019-24.

h) Online coal analyser

43. The Petitioner has claimed projected additional capital expenditure of Rs.570 lakh for Online coal analyser in 2021-22, under Regulation 26(1)(b) of the 2019 Tariff Regulations. In justification for the same, the Petitioner has furnished copy of the OM dated 26.8.2015 of MOEF&CC, GOI which mandates the coal-based thermal power plants, with an installed capacity of 100 MW and above, and located at a distance of 500 km and above from coal source, to have coal with ash content less than 34%. It has also submitted that in order to assess the same, the sampling and analysis of the coal shall be carried out online and compliance is to be furnished. The Petitioner has further submitted that the said OM directs the real-time monitoring, using auto



mechanical sampling (online) from moving stream of coal. The Petitioner has stated that in case of coal supply constraint from linked mines, the Petitioner may have to procure coal from e-auction or from other sources including the MoU route, imported coal, etc. and the same may be sourced from different locations, having a distance of 500 km and more, from the generating station. Accordingly, the Petitioner has submitted that as the 'Online coal analyzer' is being installed to meet the statutory directions of MOEF&CC, the expenditure claimed may be allowed.

44. The Respondent, GRIDCO has submitted that the Petitioner may be directed to confirm as to whether the coal analyzer for real-time monitoring, can monitor and record GCV of coal by auto mechanical sampling (online) from moving stream of coal. The Respondent, MPPMCL has submitted that since the Petitioner is in the process of installing FGD and NO_x reduction system as notified by the GOI, the claim for capitalization of the said works is barred in terms of the proviso to point (2) of the OM dated 26.8.2015. The Respondent, BRPL and Respondent, BYPL have submitted that the expenditure claimed was effective from 5.6.2016 in terms of the MOEF&CC notification dated 26.8.2015, but no justification has been submitted by the Petitioner for claiming the additional expenditure, after three years from the date of compliance. In response, the Petitioner has submitted that considering the nature of the mandate, the expenditure may be allowed under 'change in law' in terms of Regulation 26(1)(b) of the 2014 Tariff Regulations.

45. The matter has been considered. It is observed that MOEF&CC Notification dated 26.8.2015 mandates all coal-based thermal power plants, with an installed capacity of 100 MW & above and located at a distance of 500 km & above from coal source, to have coal with ash content less than 34% and the same shall be complied by sampling



and analysis of the coal. However, it is observed that the generating station is a pit head plant and the coal source is less than 500 km. Moreover, the Petitioner has not demonstrated that the ash content exceeds 34% as stipulated in the said notification and has also not justified the requirement of the said expenditure for the generating station. In this context, it is noticed that MoEF&CC vide Notification dated 21.5.2020 has allowed the usage of coal, without any stipulation to ash content for thermal plants, subject to certain measures including setting up technology solutions for emission norms etc, and the generating station is in process of installing FGD and De-NOx system. In view of the above facts, the projected additional capital expenditure claimed by the Petitioner is **not allowed**.

i) ClO₂ System

46. The Petitioner has claimed total projected additional capital expenditure of Rs.1510 lakh (Rs. 750 lakh in 2022-23 and Rs. 760 lakh in 2023-24) in 2022-24 for ClO₂ system 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 at present Chlorine gas is being dozed directly at various stages of water treatment to maintain water quality and to inhibit organic growth in the water retaining structures / equipment such as clarifiers, storage tanks, cooling towers, condenser tubes & piping, etc. It has also submitted that Chlorine dosing is carried out from chlorine stored in cylinders / tonners and as chlorine gas is very hazardous, it may prove fatal in case of leakage, also, handling and storage of chlorine gas involve risk to the life of public at large. Therefore, considering public safety, the chlorine dosing system is being replaced by Chlorine Dioxide (ClO₂) system, which is much safer and less hazardous than chlorine. The Petitioner has further submitted that the Department of Factories, Boiler, Industrial Safety and Health, Govt of Karnataka at Kudgi NTPC project, has asked the Petitioner



to replace a highly hazardous gas chlorination system with a ClO₂ system. The Petitioner has also submitted a copy of OM dated 28.2.2014 from SPCB, Odisha which asked NTPC to explore the possibility of installing a ClO₂ system instead of a Chlorine gas system while issuing consent to Darlipalli generating station.

47. The Respondent, GRIDCO has submitted that the Petitioner's claim for replacement of the existing system with ClO₂ does not fall under Regulation 26(1)(b) or Regulation 26 (1)(d) of the 2019 Tariff Regulations. The Respondent, MPPMCL, has submitted that the Petitioner's claim for the ClO₂ package may be disallowed, since it does not form part of the original scope of work and there is also no change in law or compliance of any existing law. The Respondent has further submitted that Regulation 26(1)(d) of the 2019 Tariff Regulations, is applicable for considering the expenditure for higher security and safety of the plant, if advised or directed by statutory authorities, for which no documentary proof has been submitted by the Petitioner. The Respondent, UPPCL has submitted that the Petitioner may be directed to submit details of law / policy / direction, based on which claim is allowable under 'change in law' or otherwise disallow the same. It has also submitted that the Petitioner has not considered the corresponding decapitalization and may direct the Petitioner to provide details of the original gross value to determine the amount decapitalized. In response, the Petitioner has submitted that in terms of clause 6(1)(a) and clause 6(1)(d) of "The Occupational Safety, Health and Working Conditions Code, 2020" notified by Ministry of Law & Justice, GOI vide Notification dated 29.9.2020, the Petitioner, as a responsible employer took cognizance of the requirement of the ClO₂ system and decided to install the same. Subsequently, the Petitioner vide additional submissions dated 15.7.2022 has reiterated its submissions made in the original petition.



48. The matter has been considered. The Petitioner has relied on Directorate of Factories, Industrial Safety & Health, State Government of Karnataka's letter dated 23.9.2019 and SPCB, Odisha's OM dated 28.2.2014, which are associated with Kudgi Super Thermal Power station and Darlipali power plant, respectively. However, these, in no manner, can be termed as a change in law event or for compliance with any existing law in respect of the generating station, warranting the additional capitalization of the expenditure in terms of Regulation 26(1)(b) of the 2019 Tariff Regulations. As regards the claim of the Petitioner under Regulation 26(1)(d) of the 2019 Tariff Regulations, we find no specific direction or advice from any Governmental or statutory authorities as regards the requirement of this item i.e. (chlorine dosing system to be replaced by Chlorine Dioxide (ClO₂) system) for safety and security of the generating station. Accordingly, the projected additional capital expenditure claimed by the Petitioner is **not allowed**.

Assumed Deletion

49. As per consistent methodology adopted by the Commission, the expenditure on replacement of assets, if found justified, is allowed for the purpose of tariff provided that the capitalization of the said asset, is followed by de-capitalization of the gross value of the old asset. However, in certain cases, where the de-capitalization is proposed to be affected during the future years to the year of capitalization of the new asset, the de-capitalization of the old asset for the purpose of tariff, is shifted to the very same year in which the capitalization of the new asset is allowed. Such de-capitalization which is not a book entry in the year of capitalization is termed as "Assumed Deletion". Therefore, the methodology of arriving at the fair value of the de-capitalized asset, i.e., an escalation rate of 5% per annum from the COD has been considered in order to arrive at the gross value of the old asset in comparison to the cost of the new asset. In



the present petition, the year of COD of the generating station was in 2009-10. We have considered the value of the asset under consideration on COD as 100% and escalated it @5% per annum till the year during which additional capital expenditure is claimed against replacement of the same. The amount claimed for additional capital expenditure against the asset, is multiplied by the derived ratio from the above two values i.e., value in year of COD divided by the value in capitalized year.

50. The Petitioner, in this petition, has claimed upgradation of DCS Controllers and HMI on obsolescence basis, but has not furnished the actual de-capitalized value of the old assets. It has however mentioned that as the same will be submitted after completion of works and the estimated decapitalized value of old assets may be considered, as per assumed deletion methodology of the Commission i.e. Rs. 645.52 Lakhs (i.e., Rs. 303.04 lakh in 2022-23 and Rs. 342.48 lakh in 2023-24) (as stated in paragraph 41 above). Accordingly, the decapitalized value of the assets / works has been calculated in terms of the above-mentioned methodology and the same is as under:

(Rs. In lakh)

	Year of claim	Additional capital expenditure allowed (on accrual basis)	Assumed deletion
Upgradation of DCS Controllers and HMI	2022-23	600.00	318.19
	2023-24	712.00	359.61

51. Based on the above, the additional capital expenditure allowed for the period 2019-24 is summarised below:

(Rs. in lakh)

Sl. No	Head of Work /Equipment	Additional Capital Expenditure allowed					Total
		2019-20	2020-21	2021-22	2022-23	2023-24	
1	Ash Dyke / ash related works	800.00	841.00	0.00	6000.00	8000.00	15641.00
2	MGR Doubling S&T System	0.00	0.00	0.00	0.00	0.00	0.00



Sl. No	Head of Work /Equipment	Additional Capital Expenditure allowed					Total
		2019-20	2020-21	2021-22	2022-23	2023-24	
3	Land for MGR system for Hurra-C Mines	0.00	0.00	0.00	0.00	0.00	0.00
4	MGR Transportation system upto- Hurra-C Mines	0.00	0.00	0.00	0.00	0.00	0.00
5	RO Plant DM Stream	0.00	312.27	325.24	0.00	0.00	637.51
6	400 KV/ 132 KV Switchyard extension package	3831.12	0.00	2342.00	0.00	0.00	6173.12
7	Upgradation of DCS Controllers and HMI	0.00	0.00	0.00	600.00	712.00	1312.00
8	Online coal analyzer	0.00	0.00	0.00	0.00	0.00	0.00
9	CIO2 System	0.00	0.00	0.00	0.00	0.00	0.00
10	Total Additional Capital Expenditure	4631.12	1153.27	2667.24	6600.00	8712.00	23763.63
11	Assumed Deletion	0.00	0.00	0.00	318.19	359.61	677.80
12	Net Additional Capital expenditure allowed (10)-(11)	4631.12	1153.27	2667.24	6281.81	8352.39	23085.83

Capital cost allowed for the period 2019-24

52. Based on the above, the capital cost approved for the generating station for the period 2019-24 is summarized below:

	<i>(Rs in lakh)</i>				
	2019-20	2020-21	2021-22	2022-23	2023-24
Opening Capital Cost	545969.88	550601.00	551754.27	554421.51	560703.32
Add: Additional Capital Expenditure allowed	4631.12	1153.27	2667.24	6281.81	8352.39
Closing Capital Cost	550601.00	551754.27	554421.51	560703.32	569055.71
Average Capital Cost	548285.44	551177.64	553087.89	557562.42	564879.52

Debt-Equity Ratio

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

“18. Debt-Equity Ratio: (1) For 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 a 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 modernisation expenditure for life extension shall be serviced in the manner specified in clause (1) of this Regulation.”

54. The details of the debt and equity in respect of the generating station is as under:

	Capital Cost as on 1.4.2019 (Rs. in lakh)	(%)	Additional Capital Expenditure 2019-24 (Rs. in lakh)	(%)	Capital Cost as on 31.3.2024 (Rs. in lakh)	(%)
Debt	382178.92	70.00%	16160.08	70.00%	398339.00	70.00%
Equity	163790.97	30.00%	6925.75	30.00%	170716.71	30.00%
Total	545969.88	100.00%	23085.83	100.00%	569055.71	100.00%

Return on Equity



55. Regulations 30 and Regulations 31 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 station, 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 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.”

“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 a generating company or a 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 a 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 1,000 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 trueing up, shall be recovered or refunded to beneficiaries or the long term customers, as the case may be, on year to year basis.”

56. The Respondent, MPPMCL has submitted that the base rate of Return on Equity (ROE) @ 15.5% as specified in Regulation 30(2) of the 2019 Tariff Regulations is excessively high, when compared with the rate of fixed deposit for a 5 to 10-year period, i.e., 5.40%, especially given the economic hit from Covid-19 pandemic and ought to be relaxed. It has also submitted that the Commission may review and revise Regulation 31 of the 2019 Tariff Regulations as it permits the levy of income tax of the generating company upon the beneficiaries, which amounts to unjust enrichment. The Respondent, MSEDCL has submitted that the Petitioner’s claim for effective tax rate of 17.4720% is premature for computation of ROE considering that the tax liability of the generating



station is 'nil' as on 31.3.2014 till 31.3.2018. The Respondent has submitted that only an effective tax rate of 15.50% should be allowed, subject to truing-up, based on the actual tax paid. The Respondent, BRPL and Respondent BYPL have submitted that Regulation 67 of the 2019 Tariff Regulations provides for adjustment of liability, whether positive or negative, for the tariff periods before 31st March 2009, which means the period 2001-04 and the period 2004-09. They have also stated that the Regulations, under both the aforesaid tariff periods, provides for benefits under the Income Tax, 1961 related to tax holiday and other benefits available to the Petitioner, which are to be passed on to the beneficiaries. Accordingly, they have submitted that additional amount collected from the beneficiaries during the period 2004-09 is required to be paid back to the beneficiaries. In response, the Petitioner has submitted that the tax leviable on ROE is claimed by the Petitioner in terms of Regulation 31(2) of the 2019 Tariff Regulations. It has further submitted that the base rate of ROE, as allowed, shall be grossed up with the effective tax rate of the respective financial year, and for this purpose, the effective tax rate shall be considered on the basis of actual tax paid, in the financial year, in line with the relevant provisions of the Finance Act, by the concerned generating company.

The Petitioner has also submitted that:

- (a) NTPC is a corporate legal entity who is obligated to pay tax and not the Generating Station, i.e., Kahalgaon STPS Stage-II. Therefore, as long as the Tax Liability is imposed upon the Generating Company, i.e. NTPC, the same is liable to be grossed up as per the Tariff Regulations.
- (b) It is imperative to note that Kahalgaon STPS Stage-II is neither a Generating Company and nor a corporate legal entity, rather it is only a division / Generating Station of NTPC.
- (c) Therefore, in accordance with the provision of the Tariff Regulations, NTPC was justified and correct to claim Minimum Alternate Tax ("MAT") basis its consolidated Financial Statement owing to the fact that MAT is paid by a Company as a whole. Therefore, the aforesaid consideration of Kahalgaon STPS Stage-II to be an entity taxable under the Income Tax Act for the purpose of payment of MAT is completely erroneous and without merit.
- (d) Respondent has failed to appreciate that Kahalgaon STPS Stage-II is not a corporate



legal entity/Company but it is only a division/Generating station of NTPC and hence is not liable or eligible to pay MAT.

57. We have considered the matter. It is noticed that for grossing up of ROE, during the period 2019-24, the Petitioner has applied the MAT rate of 17.472%. The same is allowed, subject to revision, if any, at the time of truing up of tariff. Accordingly, ROE has been worked out and allowed as follows:

		<i>(Rs. in lakh)</i>				
		2019-20	2020-21	2021-22	2022-23	2023-24
Normative Equity-Opening	A	163790.97	165180.30	165526.28	166326.46	168211.00
Addition of Equity due to additional capital expenditure	B	1389.34	345.98	800.17	1884.54	2505.72
Normative Equity-Closing	C=A+B	165180.30	165526.28	166326.46	168211.00	170716.72
Average Normative Equity	D=Average (A,C)	164485.64	165353.29	165926.37	167268.73	169463.86
Return on Equity (Base Rate)	E	15.500%	15.500%	15.500%	15.500%	15.500%
Effective Tax Rate for the year	F	17.472%	17.472%	17.472%	17.472%	17.472%
Rate of Return on Equity (Pre-Tax)	G=E/(1-F)	18.782%	18.782%	18.782%	18.782%	18.782%
Return on Equity (Pre Tax) annualized	H=D*G	30893.69	31056.66	31164.29	31416.41	31828.70

Interest on Loan

58. 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-capitalisation 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 loans shall be reflected from the date of such re-financing.”

59. Interest on loan has been computed as under:

- i. Gross normative loan amounting to Rs. 382178.92 lakh as on 31.3.2019 as considered in order dated 21.4.2022 in Petition No. 362/GT/2020 has been considered as on 1.4.2019;
- ii. Cumulative repayment amounting to Rs. 268995.59 lakh as on 31.3.2019 as considered in order dated 21.4.2022 in Petition No. 362/GT/2020 has been considered as on 1.4.2019;
- iii. Accordingly, the net normative opening loan considered as on 1.4.2019, is Rs. 113183.32 lakh.
- iv. Addition to normative loan on account of additional capital expenditure approved above has been considered;
- v. The repayments for the respective years of the 2019-24 tariff period, has been considered equal to the depreciation allowed for that year. Further, repayments have been adjusted for de-capitalization of assets considered for the purpose of tariff.
- vi. The Petitioner has claimed interest on loan considering WAROI of 8.1559% in 2019-20, 8.1606% in 2020-21, 8.1794% in 2020-21, 8.2468% in 2022-23 and 8.2921% in 2023-24, the same has been considered.

60. Interest on loan has been worked out as follows:

		<i>(Rs. in lakh)</i>				
		2019-20	2020-21	2021-22	2022-23	2023-24
Gross opening loan	A	382178.92	385420.70	386227.99	388095.06	392492.32
Cumulative repayment of loan upto previous year	B	268995.59	297193.63	325540.42	353985.45	366020.69
Net Loan Opening	C=A-B	113183.32	88227.07	60687.57	34109.61	26471.64
Addition due to additional capital expenditure	D	3241.78	807.29	1867.07	4397.27	5846.67



		2019-20	2020-21	2021-22	2022-23	2023-24
Repayment of loan during the year	E	28198.04	28346.79	28445.03	12243.10	12859.74
Less: Repayment adjustment on account of de-capitalization	F	0.00	0.00	0.00	207.89	242.99
Net Repayment of loan during the year	G=E-F	28198.04	28346.79	28445.03	12035.21	12616.75
Net Loan Closing	H=C+D-G	88227.07	60687.57	34109.61	26471.66	19701.59
Average Loan	I=Average (C, H)	100705.20	74457.32	47398.59	30290.63	23086.62
Weighted Average Rate of Interest of loan	J	8.1559%	8.1606%	8.1794%	8.2468%	8.2921%
Interest on Loan	K=I*J	8213.44	6076.13	3876.91	2498.00	1914.36

Depreciation

61. 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.”

62. Depreciation has been worked out considering the admitted capital cost of Rs.545969.88 lakh, as on 1.4.2019, and the cumulative depreciation of Rs.269576.52 lakh, as on 31.3.2019, as considered in order dated 21.4.2022 in Petition No. 362/ GT/ 2020. Since, as on 1.4.2019, the elapsed life of the generating station is 9.98 years, which is less than 12 years from the effective station COD of 7.4.2009, depreciation has been calculated by applying weighted average rate of depreciation (WAROD) for the period 2019-22. Further, as on 1.4.2022, the used life of the generating station (i.e. 12.98 years) is more than 12 years from the effective station COD, and therefore, depreciation has been calculated by spreading over of the balance depreciable value for the period 2022-24. Accordingly, depreciation allowed for the generating station is as under:

(Rs. in lakh)

		2019-20	2020-21	2021-22	2022-23	2023-24
Average Capital Cost	A	548285.44	551177.64	553087.89	557562.42	564879.52
Value of freehold land	B	131.70	131.70	131.70	131.70	131.70



		2019-20	2020-21	2021-22	2022-23	2023-24
Aggregated Depreciable Value	$C=(A-B)*90\%$	493338.37	495941.34	497660.57	501687.65	508273.03
Remaining Aggregate Depreciable value at the beginning of the year	$D=C-$ (Cumulative Depreciation (shown at J) at the end of Previous year)	223761.85	198166.78	171539.23	147121.27	141671.42
No. of completed years at the beginning of the year	E	9.98	10.98	11.98	12.98	13.98
Balance useful life at the beginning of the year	$F=25-E$	15.02	14.02	13.02	12.02	11.02
Weighted Average Rate of Depreciation (WAROD)	G	5.1429%	5.1429%	5.1429%	-	-
Depreciation (annualized)	$H=(A*G)$ for the period 2019-22 and (D/F) for the period 2022-24	28198.04	28346.79	28445.03	12243.10	12859.74
Less: Cumulative depreciation adjustment on account of de-capitalization	I	0.00	0.00	0.00	207.89	242.99
Cumulative depreciation (at the end of the period)	$J=(\text{Cumulative Depreciation at the end of Previous year}) + H-I$	297774.56	326121.35	354566.38	366601.59	379218.34

Operation & Maintenance Expenses

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

<i>(Rs. in lakh)</i>				
2019-20	2020-21	2021-22	2022-23	2023-24
33765.00	34950.00	36180.00	37455.00	38760.00

64. The Respondent, GRIDCO has submitted that the O&M expenses should be computed as per order dated 21.1.2017 in the Petition No. 283/GT/2014. It has submitted that the Petitioner has claimed normative expenses for the period 2019-24 under Regulation 35(1) of the 2019 Tariff Regulations, without considering the



multiplying factor for additional units in the same station, whose COD occurred on or after 1.4.2019. The Respondent has stated that since the third 500 MW unit of the Petitioner, is the extension of the first and second 500 MW units, it would share the facilities of the first two units. In response, the Petitioner has submitted that the Commission in its order dated 29.7.2017 in the Petition No. 294/GT/2014 had applied 0.9 factor for additional units in terms of proviso to Regulation 29(1) of the 2014 Tariff Regulations and against this order, the Petitioner has filed Appeal No. 101/2017 before the Appellate Tribunal for Electricity (APTEL) and the same is pending adjudication.

65. The matter has been considered. It is noticed that APTEL vide its judgement dated 11.1.2022 in Appeal No. 101/2017 has set-aside the Commission's order relating to the period 2014-19, to apply the multiplying factor for the generating station. The relevant extract of the said judgment is quoted below:

"8.1(a) The Normative O&M charges for 2014-19 control period are determined on the basis of O&M charges incurred during the 2009-2014 control period. Xxx (b) Further, the O&M charges for the past years are collected as consolidated charges for the complete project /generating station irrespective of new /additional units during that period or existing units.

8.2. From the above, it is crystal clear that the Normative O&M charges are determined based on the actual consolidated O&M charges for the past five years for a specific project having similar unit sizes.

8.3 Also, the Normative O&M charges are determined for the complete Generating Station including all the units which achieve COD prior to 1.4.2014. The multiplication factor is to be applied for new units which achieve COD after 1.4.2014 and during the control period 2014-19."

xxxx

8.7 We agree with the submissions made by the Appellant that considering the above COD, only the revised O&M norms for units existing as on 01.04.2014, as laid down in Regulation 29 (1) (a) of the 2014 Tariff Regulations are to be applied in case of the Appellant. As such any other interpretation of the aforesaid regulations is contrary to the plain text and meaning.

xxx

8.13 We decline to accept the said contention as the provisions of the Tariff Regulations, 2014 have already been deliberated in the foregoing paras and there is no doubt that the Normative O&M charges are determined by consolidating the actual O&M charges for the past five years (the last control period) thus considering the actual sharing benefits by the additional units for that period and rationalising the expenditure



xxx

8.15 We do not find any relevance to the above submission as the benefit of sharing of resources by the additional units have already been factored in the actual O&M charges considered for the past years

xxx

8.17 There is no denial that the benefit of sharing of resources by the additional units should be passed on to the consumers, however, once already factored into the actual O&M charges which is the basis for determination of Normative O&M charges for the next control period, such a benefit becomes the integral part of O&M charges.

xxx

8.25 However, in the Impugned Order, CERC has essentially amended Proviso to Regulation 29 (1) (a) of the Tariff Regulations, 2014 without providing an opportunity to the Appellant to make submissions on this issue of Proviso to Regulation 29 (1)(a) of the Tariff Regulations, 2014. It is apposite to mention that in the entire proceedings no party had even whispered that the Proviso to Regulation 29 (1)(a) ought to be made applicable to units achieving COD Prior to 01.04.2014. Hence, there was no occasion for the Appellant to even respond to such a course being adopted by Central Commission. Even Central Commission at no stage indicated that it is seeking to apply to Proviso to Regulation 29 (1)(a) to Units achieving COD before 01.04.2014. Such a course adopted by Central Commission violates the principle of Natural Justice and for this ground alone the Impugned Order is liable to be set aside.

xxx

8.30 We agree that in the present case the said power cannot be invoked to substantially amend proviso to Regulation 29 (1) read with Proviso to Regulation 1(2) of the Tariff Regulations, 2014. The Power to Remove Difficulty must be exercised in exceptional circumstance where the Regulation could not be implemented. ORDER In light of the above, we are of the considered view that the issues raised in the Batch of Appeals have merit and hence Appeals are allowed. The impugned order dated 21.01.2017 in Petition No. 283/GT/2014 and order dated 06.02.2017 in Petition No. 372/GT/2014 ("Petition 372"), are hereby set aside to the extent of our findings. The matter is remitted back to the Central Commission for passing a reasoned order pursuant to our observations are scrupulously complied with expeditiously and in a timebound manner."

66. In view of the above, the contention of the Respondent, GRIDCO, is not acceptable. Regulation 35(1)(1) of the 2019 Tariff Regulations provides as under:

"35(1)(1) Thermal Generating Station: Normative Operation and Maintenance expenses of thermal generating stations shall be as follows: (1) Coal based and lignite fired (including those based on Circulating Fluidised Bed Combustion (CFBC) technology) generating stations, other than the generating stations or units referred to in clauses (2), (4) and (5) of this Regulation:

(in Rs. lakh/MW)

Year	200/210/250 MW Series	300/330/350 MW Series	500 MW Series	600 MW Series	800 MW Series and above
FY 2019-20	32.96	27.74	22.51	20.26	18.23
FY 2020-21	34.12	28.71	23.30	20.97	18.87



FY 2021-22	35.31	29.72	24.12	21.71	19.54
FY 2022-23	36.56	30.76	24.97	22.47	20.22
FY 2023-24	37.84	31.84	25.84	23.26	20.93

Provided that where the date of commercial operation of any additional unit(s) of a generating station after first four units occurs on or after 1.4.2019, the O&M expenses of such additional unit(s) shall be admissible at 90% of the operation and maintenance expenses as specified above;

xxxxxx ”

67. It is observed that the generating station has three units of 500 MW capacity each and the COD of these units are all prior to 1.4.2019. Accordingly, the year-wise O&M expenses allowed in terms of Regulation 35(1)(1) of the 2019 Tariff Regulations are as under.

<i>(Rs. in lakh)</i>				
2019-20	2020-21	2021-22	2022-23	2023-24
33765.00	34950.00	36180.00	37455.00	38760.00

Water Charges

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

“35(1)(6) The Water Charges, Security Expenses and Capital Spares for thermal generating stations shall be allowed separately after prudence check:

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

xxxxx.”

69. The Petitioner has submitted that presently water charges are not being billed by the concerned authorities for water consumed and therefore water charges have not been claimed in the present petition. It has however submitted that the Petitioner shall claim water charges, as and when the same is billed by the authority and paid by the Petitioner. The Respondent, MPPMCL has objected to the submission of the Petitioner on the ground that it would result in a huge accumulation of arrears, compounded with



a levy of arbitrarily high rate of interest, causing unexpected financial burden on the beneficiaries. It has further submitted that the Petitioner may be directed to assess the exact water requirement @Rs. 3.5 m³/MWh, in terms of the notification dated 7.12.2015 issued by MoEF&CC. The Respondent, MPPMCL has submitted that the Petitioner may be directed to enter into a contract for optimum quantity of water to ensure the timely billing at reasonable rates and it has further submitted that Respondents are not be liable to pay any arrears of water charges and interest thereon for the previous period.

70. We have considered the matter. As the Petitioner has not claimed any water charges in this petition, we are inclined to grant the liberty to the Petitioner to approach the Commission as and when water charges are billed by the concerned authority. The payments made and interest paid thereof by the Petitioner will be considered in accordance with relevant Regulations.

Security Expenses

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

“35(1)(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;

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

Provided further that the generating station shall submit the assessment of the security requirement and estimated expenses;

xxx”

72. The Petitioner, in terms of the above, has claimed projected security expenses, as under:



<i>(Rs. in lakh)</i>				
2019-20	2020-21	2021-22	2022-23	2023-24
2339.74	2573.72	2831.09	3114.20	3425.62

73. The Respondent, GRIDCO, and Respondent, MPPMCL have submitted that the Petitioner may be directed to submit the details of the security expenses covering cadre-wise total number of personnel, their salary etc. The Respondents have also submitted that the justification of the number of personnel required is to be submitted as mandated by the second proviso to Regulation 35(6) of the Tariff Regulations, 2019. In response, the Petitioner has submitted that the claimed security expenses are estimations based on the actual expenditure incurred during 2018-19 of Rs 3247.93 lakh for the Kahalgaon Stage I & II and apportioned amount of Rs 2082.00 lakh to the generating station, on the basis of installed capacity. Further, these projections are in compliance to Regulation 35(6) of the 2019 Tariff Regulations and are subject to the prudence check. The Petitioner has further submitted that the actual security expenses incurred for Kahalgaon station during the years 2019-20 and 2020-21 is Rs 3864.00 lakh and Rs 4060.97 lakh, respectively and the share for this generating station works out as Rs 2476.92 lakh and Rs 2603.18 lakh, respectively.

74. The matter has been considered. It is observed that the Petitioner had earlier claimed security expenses, on projection basis, based on the actual expenses incurred in 2018-19 with an annual escalation of around 10%. Subsequently, the Petitioner vide affidavit dated 19.7.2021, has submitted that the actual security expenses (apportioned on the basis of installed capacity) incurred for the generating station is Rs 2476.92 lakh in 2019-20 and Rs.2603.18 lakh in 2020-21. In view of this, the actual security expenses incurred for the period 2019-21 is allowed. However, for the period 2021-24, the projected security expenses claimed by the Petitioner, as above, is allowed. The Petitioner is directed to submit the actual bills with audited accounts at the time of truing-



up of tariff, for the period 2019-24 along with other relevant details in terms of Regulation 35(1)(6) of the 2019 Tariff Regulations. Accordingly, the security charges allowed are as under:

<i>(Rs. in lakh)</i>				
2019-20	2020-21	2021-22	2022-23	2023-24
2476.92	2603.18	2831.09	3114.20	3425.62

Capital Spares

75. As regards to capital spares consumed, the Petitioner has submitted that the same shall be claimed at the time of truing up of tariff in terms of the last proviso to Regulation 35(6) of the 2019 Tariff Regulations, based on actual consumption of capital spares during the period 2019-24. In view of this, the Petitioner is allowed to claim actual capital spares consumed, at the time of truing-up of tariff, along with list of items, quantity, proper justification, relevant documents and submit an undertaking that the claimed items are not part of O & M as well as additional capitalization.

76. Accordingly, the total O&M expenses allowed for the period 2019-24 is summarised as under:

<i>(Rs. In lakh)</i>					
	2019-20	2020-21	2021-22	2022-23	2023-24
O&M expenses allowed under Regulation 35(1)(3)	33765.00	34950.00	36180.00	37455.00	38760.00
O&M expenses allowed under Regulation 35(6)					
Water Charges	0.00	0.00	0.00	0.00	0.00
Security Expenses	2476.92	2603.18	2831.09	3114.20	3425.62
Capital Spares	0.00	0.00	0.00	0.00	0.00
Total O&M expenses allowed	36241.92	37553.18	39011.09	40569.20	42185.62

Fly Ash Transportation charges

77. The Petitioner has submitted that fly ash transportation charges will be claimed at the time of truing up of tariff, based on the actual expenses incurred. It is however noticed that the Petitioner has filed Petition No. 205/MP/2021 with regard to



reimbursement of fly ash transportation charges in respect of its generating stations for the period 2019-24 and the Commission had disposed of the same vide its order dated 28.10.2022. The claim of the Petitioner shall therefore be governed by the findings of the Commission, in the said order and latest MoP guidelines.

Operational Norms

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

Normative Annual Plant Availability Factor (NAPAF) %	85.00
Gross Station Heat Rate (kcal/kwh)	2471.31
Auxiliary Power Consumption %	6.25
Specific Fuel Oil Consumption (ml/kwh)	0.50

79. The Respondent, MPPMCL has submitted that Petitioner's claim for Auxiliary Consumption @ 6.25% is in gross contravention to the Tariff Policy of the Government of India and the Electricity Act, 2003, which provides that the norms should reflect progressively improved efficiency. It has therefore submitted that the auxiliary consumption @ 5.75% may only be allowed. In response, the Petitioner has submitted that Regulation 49(E) of the 2019 Tariff Regulations, provides for auxiliary consumption of 5.75% for thermal units above 300 MW, with natural draft cooling and additional 0.5% for induced draft cooling tower. It has stated that since the generating station has induced draft cooling tower, it has claimed auxiliary consumption of 6.25%.

80. As regards Gross Station Heat Rate, the Respondent, GRIDCO, Respondent MPPMCL, Respondent MSEDCL, Respondent BRPL and Respondent BYPL have submitted that since the COD of the generating station is 20.3.2010, Regulation 49 (C)(b)(i) of 2019 Tariff Regulations is applicable and accordingly, considering the guaranteed Turbine Cycle Heat Rate of 1944.4kCal/kWh and Boiler Efficiency of 86%, the Design Heat Rate is 2260.93 kCal/kWh. They have further submitted that with an



operating margin of 5%, the Gross Station Heat Rate (GSHR) for the generating station is 2373.98 kCal/kWh and therefore, the GSHR of 2471.25kCal/kWh as claimed by the Petitioner may not be allowed, as the same is contrary to the provisions of the 2019 Tariff Regulations. The Respondent, UPPCL has submitted that the GSHR of 2425 kCal/kWh was considered for the period 2014-19 and hence the same may be considered for the period 2019-24 also. In response, the Petitioner has submitted that the Commission has prescribed boiler efficiency and turbine heat rate separately for deriving the unit heat rate where the unit Heat Rate is not guaranteed by the suppliers. It has stated that since this generating station was envisaged during the period 2009-14, the equipment, including Steam Generator and Turbine Generator specifications, for tendering/award was stipulated considering the boiler efficiency and the turbine heat rate prescribed in the Tariff Regulations prevalent at that time. Based on this, it has submitted that the equipment was ordered through international competitive bidding and it was not possible for the Petitioner to specify the efficiency parameters at the time of finalizing the contracts for the generating station, as per the efficiency parameters specified in the 2019 Tariff Regulations, which are more stringent. The Petitioner has further submitted that there is no prejudice being caused to the Respondent as:

(a) The benefit of lower capital cost due to lower efficiency parameters has been passed onto beneficiaries in terms of lower capital cost.

(b) The boiler efficiency for working out the normative heat rate is considered as 86% instead of the actual design efficiency of 82.73% (for Unit- I & II) and 82.385% (for Unit-III), the unit heat rate would work out to be 2350.3 Kcal/kwh (Unit I & II) and 2360.3 Kcal/kwh (Unit- III). The operating margin available over the design heat rate would be 1%, which is much less than the operating margin of 5% allowed in terms of 2019 Tariff Regulations.

81. The Petitioner has stated that considering the above facts and circumstances, the GSHR may be allowed based on guaranteed turbine cycle heat rate of 1944.4 Kcal/kwh and boiler efficiency of 82.73% (for Unit- I & II) and 82.385% (for Unit-III) with an



operating margin of 5% from the guaranteed design value. The Petitioner has also submitted that in Commission's order dated 20.2.2014 in the Petition No. 160/GT/2012, the Commission had considered GSHR based on guaranteed turbine cycle heat rate and boiler efficiency.

82. The matter has been considered. As regards to submission of the Petitioner that the plant was envisaged during the period 2009-14, the Petitioner has not furnished the basis for such a claim. It is also observed that as per SCOD of the units of the generating station, the plant was envisaged during the period 2004-09. In contrast to claim of the Petitioner that the designed boiler efficiency for Units I & II is 82.73% and that of Unit-III is 82.385%, it is noticed that the Petitioner vide its submission dated 22.11.2010 in I.A. 33/2010 in Petition No. 282/2009, had furnished the designed boiler efficiency for Unit I, II & III as 83.29%. However, Petitioner has not furnished any reasons for its claim now, which is in variance to the information furnished in I.A. 33/2010 in Petition No. 282/2009. The Petitioner is therefore directed to submit the OEM certificate for the design boiler efficiency of Units- I, II & III along with detailed justification for claiming boiler efficiency, in variation to its submissions in I.A. 33/2010 and the OEM, at the time of truing up of tariff.

83. As regards the submission of the Petitioner to consider the GSHR based on guaranteed turbine cycle heat rate and boiler efficiency as allowed by order dated 20.2.2014 in Petition No. 160/GT/2012, it is noticed that the said order pertains to the period 2009-14, whereas the present petition relates to tariff for the period 2019-24. Further, the 2019 Tariff Regulations, which were notified after extensive stakeholders' consultations, provides that where the boiler efficiency is lower than 86% for sub-bituminous Indian coal, the same shall be considered as 86% for the computation of



station heat rate. Regulation 49(C)(a)(i) and 49(C)(b)(i) of the 2019 Tariff Regulations, provides as follows:

*“49 (C) Gross Station Heat Rate:
 (a) Existing Thermal Generating Stations
 (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)
2,430kCal/kWh	2,390 kCal/kWh

...xxx

*49(C)(b)(i) For Coal-based and lignite-fired Thermal Generating Stations:
 1.05 X Design Heat Rate (kCal/kWh)*

....xxx

Provided also that where the boiler efficiency is lower than 86% for Subbituminous Indian coal and 89% for bituminous imported coal, the same shall be considered as 86% and 89% for Sub-bituminous Indian coal and bituminous imported coal respectively, for computation of station heat rate.

...xxx

Provided also that in case of coal based generating station if one or more generating units were declared under commercial operation prior to 1.4.2019, the heat rate norms for those generating units as well as generating units declared under commercial operation on or after 1.4.2019 shall be lowest of the heat rate norms considered by the Commission during tariff period 2014-19 or those arrived at by above methodology or the norms as per the sub-clause (C)(a)(i) of this Regulation.”

84. It is observed that the Regulation 49(C)(a)(i) of the 2019 Tariff Regulations provides for GSHR for the generating station as 2390 kCal/kWh. Regulation 49(C)(b)(i) of the 2019 Tariff Regulations along with the proviso for minimum boiler efficiency as 86% provides for GSHR of 2373.98 kCal/kWh (1.05x1944.4 /0.86). The Commission had allowed the GSHR of 2425 kCal/kWh for the generating station during the period 2014-19. The proviso to Regulation 49(C)(b)(i) of the 2019 Tariff Regulations, provides for consideration of lowest of the heat rate norms considered by the Commission during the period 2014-19 or those arrived as per methodology given under Regulation 49(C)(b)(i) or Regulation 49(C)(a)(i) of the 2019 Tariff Regulations. Accordingly, the GSHR of 2373.98 kCal/kWh has been considered for the generating station during the period 2019-24.



85. It is noticed that the claim of the Petitioner for Normative Annual Plant Availability Factor, Specific Oil Consumption and Auxiliary Power Consumption are in terms of Regulation 49 of the 2019 Tariff Regulations and are therefore allowed.

86. Accordingly, the operational norms allowed for the generating station for the period 2019-24 are as under:

Normative Annual Plant Availability Factor (NAPAF) %	85.00
Gross Station Heat Rate (kCal/kWh)	2373.98
Auxiliary Power Consumption %	6.25
Specific Fuel Oil Consumption (ml/kwh)	0.50

Interest on Working Capital

87. Regulation 34(1)(a) of the 2019 Tariff Regulations provide as under:

“34. Interest on Working Capital: (1) The working capital shall cover:

(b)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. ”*

88. Clause (3) and (4) of Regulation 34 of the 2019 Tariff Regulations provides as under:

“(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.”

89. Regulation 3(7) of the 2019 Tariff Regulations defines Bank Rate as under :

“In these regulations, unless the context otherwise requires: -
Bank Rate’ means the one-year marginal cost of lending rate (MCLR) of the State Bank of India issued from time to time plus 350 basis points;”

90. The Petitioner has claimed interest on working capital as follows:

	<i>(Rs. in lakh)</i>				
	2019-20	2020-21	2021-22	2022-23	2023-24
Cost of Coal - 10 days for stock	6413.29	6413.29	6413.29	6413.29	6413.29
Cost of Coal - 30 days for generation	19239.88	19239.88	19239.88	19239.88	19239.88
Cost of secondary fuel oil - 2 months	370.54	369.53	369.53	369.53	370.54
Maintenance Spares - 20% of O&M	7220.95	7504.74	7802.22	8113.84	8437.12
Receivables	43208.38	43200.92	43166.54	41226.20	41580.06
O&M expenses - 1 month	3008.73	3126.98	3250.92	3380.77	3515.47
Total Working Capital	79461.76	79855.34	80242.38	78743.50	79556.36
Rate of Interest	12.05%	12.05%	12.05%	12.05%	12.05%
Total Interest on Working capital	9575.14	9622.57	9669.21	9488.59	9586.54

Working Capital for Fuel Cost and Cost of Liquid stock

91. The Petitioner has claimed the following fuel components as part of working capital as under:

	<i>(Rs. in lakh)</i>				
	2019-20	2020-21	2021-22	2022-23	2023-24
Cost of coal for generation- 30 days	6413.29	6413.29	6413.29	6413.29	6413.29
Cost of coal stock for 10 days	19239.88	19239.88	19239.88	19239.88	19239.88
Cost of secondary fuel oil for 2 months	370.54	369.53	369.53	369.53	370.54

92. The Respondent, GRIDCO has submitted that the Commission vide its order dated 21.1.2017 in the Petition No. 283/GT/2014 had adopted a formula for calculation of “as



received” GCV by subjecting the “billed” GCV to total moisture correction. Accordingly, it has submitted that the “as received” GCV on total moisture basis, as determined at the colliery end, may be adopted for calculation of energy charge for billing the beneficiaries. The Respondent has submitted that this due to fact that payment is made to the coal supplier for the weight of the coal (including moisture and impurities) as received by the Petitioner at the colliery end, but the Petitioner has not considered GCV at the colliery end, which led to a large disparity between “as billed” GCV calculated at the mines end, and GCV received at the generating station end, i.e., variation of 463 kCal/kg to 732 kCal/kg. It has also stated that such GCV is not justified, as coal may be subjected to high moisture level through addition of moisture to coal delivered at the colliery end and this increased level of moisture will lower the GCV and increase the energy charge. The Respondent, MPPMCL has submitted that as per the Form -15 of 2019, Tariff Regulations, the Petitioner shall furnish information pertaining to fuel for January, 2019 to March, 2019, however, the Petitioner has furnished information for October, 2018 to December, 2018. It has further submitted that there is huge grade slippage of about 500-700 kcal in respect of GCV as billed by coal company and GCV of coal as received at the plant, and in view of grade slippage, energy charges should be determined considering the GCV of coal on “as billed” basis. The Respondent, MSEDCL has submitted that in terms of the 2019 Tariff Regulations, the details of source-wise fuel for computation of energy charges of the preceding three months from COD or from 1.4.2019 may be considered, whereas, the Petitioner, has considered details of fuel for the period from October 2018, November 2018 and December 2018. It has thus stated that the computation of energy charges is to be done basis the parameters for January 2019, February 2019 and March 2019 only. The Respondent has further submitted that the weighted average cost of coal and secondary fuel for



three months, as well as weighted average GCV of secondary fuel, is different from the actual billed parameters, but the Petitioner has not given any reasons for change in the value of the parameters. The Respondent, UPPCL has submitted that it is not clear as to whether the Petitioner has accounted for grade slippages at the time of purchase i.e., on accrual basis or is accounting as and when credit notes are issued by the coal supply company. The Respondent has therefore prayed that the Petitioner may be directed to provide details of accounting treatment followed for grade slippages and if required, direct the Petitioner to account for grade slippages on accrual basis.

93. In response, the Petitioner has submitted that variable charges have been computed by the Petitioner for calculation of interest on working capital (IWC) based on Form-15A for three preceding months of COD. It has submitted that the coal received during the construction period of the project is non-FSA coal and no bill (as there was no energy supplied before COD) was issued to the Respondents, based on Form-15A. The Petitioner has further submitted that in terms of the 2019 Tariff Regulations, IWC is to be revised annually based on the coal supplied during the third quarter of the financial year and accordingly, IWC is to be trued-up, based on FSA coal, being received post COD of unit(s). It has also stated that GCV, “as billed”, is based on the Equilibrated Moisture (“EM”) measured at mine end, whereas the GCV “as received” is based on Total Moisture (TM) basis measured at station end. The Petitioner further submitted that coal as billed is different from the GCV of coal burnt. Therefore, the GCV ‘as billed’ and GCV ‘as received’ cannot be compared and for the purpose of energy charges / IWC computation, the coal parameters are to be considered on ‘as received’ basis at station end. The Petitioner has also submitted that accounting for grade slippage is done on accrual basis for the generating station.



94. Though the Petitioner vide additional submissions dated 5.6.2021, has revised Form 15, it has not furnished any reasons for the same. In response to the directions of the Commission, the Petitioner vide additional submissions dated 15.7.2022 has clarified that that while the opening stock and value of coal were considered in the Form 15 submitted with the original petition, these details have been shown separately in the revised Form 15.

95. The matter has been considered. It is observed that the COD of the generating station is 20.3.2010 (2009-10) and the fuel details submitted is for the months of October, 2018 to December, 2018. Accordingly, the information furnished from October, 2018 to December, 2018 is considered. It is noticed that the Petitioner had procured coal through Railways as well as MGR and has furnished the coal quantity and expenses thereof. However, the Petitioner has furnished only one GCV, instead of furnishing separate GCV for MGR and Railways. Even though in the revised forms, the Petitioner has segregated the opening stock and its value, the GCV submitted in the original petition was unaltered and retained in the revised forms, which is inconsistent. However, the computations are to be reviewed and revised at the time of truing up of tariff, based on the actual values after prudence check. However, in order to dispose of the petition, the GCV (as received) furnished by the Petitioner has been considered. The Petitioner is therefore, directed to submit the year wise audited form 15 in terms of the 2019 Tariff Regulations clearly mentioning the details, excluding the opening stock, GCV determined by CIMFR / third party for coal sample taken through hydraulic auger along with supporting documents, including the coal sample reports, bills raised by coal company etc, at the time of truing up of tariff.

96. Regulation 43(2)(b) of the 2019 Tariff Regulation provides as follows:



“43(2)(b) For gas and liquid fuel based stations:
 $ECR = SHR \times LPPF \times 100 / \{(CVPF) \times (100 - AUX)\}$
 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;”

97. Accordingly, in terms of the 2019 Tariff Regulations, including the above proviso, which mention for a margin of 85 kCal/kg in GCV of coal and considering the information for the preceding three months from October, 2018 to December, 2018 furnished by the Petitioner, in the relevant forms, excluding the opening stock and its value, we have determined the weighted average price of the coal (Rs. 2670.73/MT), the weighted average price of secondary fuel (Rs. 39702.14/kL), weighted average GCV of coal (3140.03 kCal/kg, after adjusting 85 kCal/kg) and weighted average GCV of secondary fuel oil (9874.40 kCal/lt) and has computed the fuel components thereof. In terms of the sub-clause (i), (ii) and (iii) of Regulation 34(1)(a) of the 2019 Tariff Regulations, the coal cost for 30 days, the cost of coal stock for 10 days (pit head) and cost of secondary fuel oil for 2 months, are allowed as part of working capital as under:

	<i>(Rs. in lakh)</i>				
	2019-20	2020-21	2021-22	2022-23	2023-24
Cost of coal for generation- 30 days corresponding to NAPAF	18497.41	18497.41	18497.41	18497.41	18497.41
Cost of coal stock for 10 days corresponding to NAPAF	6165.80	6165.80	6165.80	6165.80	6165.80
Cost of secondary fuel oil for 2 months corresponding to NAPAF	370.54	369.53	369.53	369.53	370.54

Energy Charge Rate (ECR) for Working Capital

98. The Petitioner has claimed Energy Charge Rate (ECR) as follows:

Landed Fuel Cost (Domestic coal)	Rs./Ton	2671.95
Energy Charge Rate Secondary fuel-ex-bus	Rs./kWh	0.020
Energy Charge Rate Primary fuel-ex-bus	Rs./kWh	2.257



99. Considering the operational norms, the provisions of the 2019 Tariff Regulations, the weighted average price and weighted average GCV of primary and secondary fuel of the generating station, during the preceding three months i.e., October 2018, November 2018 and December 2018, the ECR, for the purpose of working capital, has been worked out and allowed as under:

Parameters	Unit	2019-24
Capacity	MW	1500
Gross Station Heat Rate	kCal/kWh	2373.98
Aux. Energy Consumption	%	6.25
Weighted average GCV of Oil	kCal/lit	9874.40
Weighted average GCV of Coal (with margin of 85 kCal/kg)	kCal/kg	3140.03
Weighted average price of Oil	Rs/KL	39702.14
Weighted average price of Coal	Rs./Ton	2670.73
Energy Charge Rate ex-bus (Secondary fuel)	Rs./kWh	0.021
Energy Charge Rate ex-bus (Primary fuel)	Rs./kWh	2.149
Energy Charge Rate ex-bus (Rounded off to three decimals)	Rs./kWh	2.170

Working Capital for Maintenance spares

100. The Petitioner has claimed the following working capital for the maintenance spares expenses:

(Rs. in lakh)

2019-20	2020-21	2021-22	2022-23	2023-24
7220.95	7504.74	7802.22	8113.84	8437.12

101. Maintenance spares @20% of O&M expenses including security expenses has been worked out and allowed as follows:

(Rs. in lakh)

2019-20	2020-21	2021-22	2022-23	2023-24
7248.38	7510.64	7802.22	8113.84	8437.12

a) Working Capital for Receivables

102. Receivables equivalent to 45 days of capacity charge and energy charges for the purpose of working capital has been worked out and allowed as follows:



	<i>(Rs. in lakh)</i>				
	2019-20	2020-21	2021-22	2022-23	2023-24
Energy Charges (45 days)	28013.34	28013.34	28013.34	28013.34	28013.34
Capacity Charges (45 days)	13874.82	13777.07	13643.05	11679.01	11909.49
Total	41888.17	41790.42	41656.39	39692.36	39922.84

b) Working Capital for O & M Expenses (one month)

103. The O&M expenses claimed by the Petitioner for the purpose of working capital is as under:

<i>(Rs. in lakh)</i>				
2019-20	2020-21	2021-22	2022-23	2023-24
3008.73	3126.98	3250.92	3380.77	3515.47

104. The working capital for O&M expenses (for one month) including security expenses is allowed as under:

<i>(Rs. in lakh)</i>				
2019-20	2020-21	2021-22	2022-23	2023-24
3020.16	3129.43	3250.92	3380.77	3515.47

Rate of Interest on Working Capital

105. As regards the rate of Interest on Working Capital, the Respondent MPPMCL has submitted that tariff for the period 2019-22 shall be calculated considering IWC as per the prevailing MCLR as on 1st April of 2019-20, 2020-21 and 2021-22 and for the years 2022-23 and 2023-24, the IWC of 10.50% pertaining to 2021-22 may be considered. It has also submitted that the margin of 3.5% is high and leads to an unjust enrichment for the Petitioner at the cost of the beneficiaries. Accordingly, the Respondent has submitted that the Commission may revisit the issue of normative rate of IWC for downward revision invoking the “Power to Remove Difficulty” and “Power to Relax” under Regulation 76 and 77 respectively of the 2019 Tariff Regulations. In response, the Petitioner has submitted that it has claimed IWC as per Regulation 34(1)



of the 2019 Tariff Regulations and that the Respondent has sought amendment of regulations, which is not permissible.

106. We have considered the matter. The submissions of the Respondent MPPMCL to revisit the rate of normative IWC cannot be accepted since the regulations notified by the Commission, is after extensive stakeholder consultations. In accordance with terms of 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 and 10.50% (i.e. 1-year SBI MCLR of 7.00% as on 1.4.2021 + 350 bps) for the period 2021-24. Accordingly, Interest on working capital has been computed as under:

	<i>(Rs. in lakh)</i>				
	2019-20	2020-21	2021-22	2022-23	2023-24
Working capital for coal cost stock in 10 days corresponding to NAPAF	6165.80	6165.80	6165.80	6165.80	6165.80
Working capital for coal cost expenses 30 days corresponding to NAPAF	18497.41	18497.41	18497.41	18497.41	18497.41
Working capital for cost of secondary oil for 2 months corresponding to NAPAF	370.54	369.53	369.53	369.53	370.54
Working capital for O & M expenses 1 month	3020.16	3129.43	3250.92	3380.77	3515.47
Working capital for Maintenance Spares (20% of O&M expenses)	7248.38	7510.64	7802.22	8113.84	8437.12
Working capital for Receivables for 45 days corresponding to NAPAF	41888.17	41790.42	41656.39	39692.36	39922.84
Total Working Capital	77190.46	77463.22	77742.27	76219.70	76909.18
Rate of Interest	12.05%	11.25%	10.50%	10.50%	10.50%
Total Interest on Working capital	9301.45	8714.61	8162.94	8003.07	8075.46

Annual Fixed Charges for the period 2019-24

107. Based on the above discussion, the annual fixed charges allowed for the generating station for the period 2019-24 is summarised below:



(Rs. in lakh)

	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	28198.04	28346.79	28445.03	12243.10	12859.74
Interest on Loan	8213.44	6076.13	3876.91	2498.00	1914.36
Return on Equity	30893.69	31056.66	31164.29	31416.41	31828.70
O & M Expenses	36241.92	37553.18	39011.09	40569.20	42185.62
Interest on Working Capital	9301.45	8714.61	8162.94	8003.07	8075.46
Total Annual Fixed Charges	112848.55	111747.36	110660.26	94729.78	96863.89

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.

Application filing fees and Publication Expenses

108. The Petitioner has sought the reimbursement of filing fees paid by it for filing the tariff petition and for publication expenses. The Petitioner shall be entitled for reimbursement of the tariff petition filing fees along with the publication expenses incurred 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.

109. The annual fixed charges approved above are subject to truing-up in terms of Regulation 13 of the 2019 Tariff Regulations.

110. Petition No. 442/GT/2020 is disposed of in terms of the above.

Sd/
(Pravas Kumar Singh)
Member

Sd/
(Arun Goyal)
Member

Sd/
(I.S. Jha)
Member

