CENTRAL ELECTRICITY REGULATORY COMMISSION
NEWDELHI

Petition No. 106/GT/2020

Coram:

Shri P.K.Pujari, Chairperson
Shri I.S.Jha, Member
Shri Arun Goyal, Member
Shri Pravas Kumar Singh, Member

Date of Order: 6th January, 2022

In the matter of:

Petition for truing up of annual fixed charges for the 2014-19 tariff period and for determination of tariff for the 2019-24 period in respect of the Indira Sagar Hydroelectric Project (1000 MW).

AND

In the matter of

NHDC Limited,
(*A JV of NHPC Limited & GoMP*)
NHDC Parisar, Shyamla Hills,
Bhopal - 462013 (M.P) ….**Petitioner**

Vs

1. Madhya Pradesh Power Management Company Limited,
Shakti Bhawan, Vidyut Nagar,
Jabalpur (M.P)

2. Narmada Valley Development Department,
Government of Madhya Pradesh,
Mantralaya, Vallabh Bhawan,
Bhopal (M.P) ….**Respondents**

Parties Present:

Shri Sushil Kumar Verma, NHDC Limited
Shri Prabhakar Rai, NHDC Limited
Shri Ravindra Khare, MPPMCL

ORDER

This petition has been filed by the Petitioner, NHDC Limited , for truing-up of tariff of Indira Sagar Hydroelectric Project (1000 MW) (hereinafter referred to as 'the generating station') for the 2014-19 tariff period, in accordance with the provisions of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 (in short 'the 2014 Tariff Regulations') and for determination of tariff for the 2019-24 tariff period, in accordance with the provisions of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 (in short 'the 2019 Tariff Regulations').

2. This multipurpose project has been constructed by the Petitioner, which is a joint venture company of NHPC Limited and the Government of Madhya Pradesh (GoMP). The generating station was declared under commercial operation on 25.8.2005. The generating station comprises of three units, of which Unit-I comprise of dam and appurtenant works, Unit-II comprise of irrigation system and Unit-III is dedicated to power generation. Unit-I is common to both power generation and irrigation system. Unit-III comprises of power station with installation of 8 machines each of 125 MW installed capacity, associated water conductor system and switchyard.

3. Unit-I and Unit-III are mainly for power generation and named as 'Power Component' and Unit-II is for irrigation system and named as *'Irrigation Component'* of this multi-purpose project. Since Unit-I i.e. am and appurtenant works contribute for power generation as well as for irrigation purpose, its cost has been apportioned for power generation and irrigation system depending upon the proportion of water utilization for two systems. Secondly, Indira Sagar, being the mother reservoir for downstream projects also contributes to the Sardar Sarovar Project (SSP) by its regulated water releases. Accordingly, an apportioned cost towards SSP is credited to Indira Sagar Project as subvention and only the balance cost is accounted towards the cost of *Power Component*.

4. The apportioned cost with respect to Unit-I (Dam) has been arrived at after

deducting 17.63% and 16.75% on account of Sardar Sarovar Project Component and Irrigation Component respectively. These percentages of apportionment are as per CCEA Approval as conveyed by MoP, GoI *vide* its letter dated 28.3.2002 and is based on water usages as envisaged in the Narmada Water Disputes Tribunal (NWDT) award and subsequently approved by the Central Water Commission (CWC).

5. The tariff of the generating station for the 2014-19 tariff period, based on approved capital cost and the projected additional capital expenditure, was determined by the Commission vide its order dated 31.5.2016 in Petition No. 265/GT/2014, as under:

(Rs. in lakh)

	2014-15	**2015-16**	**2016-17**	**2017-18**	**2018-19**
Return on Equity	25183.20	25448.73	26102.33	26570.09	26625.40
Interest on Loan	10986.86	9759.52	9023.59	7974.72	6757.36
Depreciation	12920.03	13075.57	13511.07	13990.38	6804.07
Interest on Working Capital	1605.47	1618.50	1660.32	1693.91	1540.07
O & M Expenses	8607.73	9179.63	9789.52	10439.94	11133.57
Total	**59303.28**	**59081.94**	**60086.83**	**60669.04**	**52860.46**

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

"8. Truing up

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

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

7. The annual fixed charges claimed by the Petitioner for the 2014-19 tariff period (after truing-up) are as under:

(Rs. in lakh)

	2014-15	**2015-16**	**2016-17**	**2017-18**	**2018-19**
Return on Equity	25157.54	25345.45	25420.89	25442.19	25994.30
Interest on Loan	10951.29	9502.81	8013.88	6441.78	5907.41
Depreciation	12933.26	12969.11	13007.52	13002.82	6321.00
Interest on Working Capital	8607.73	9179.63	9789.52	10439.94	11133.57

	2014-15	2015-16	2016-17	2017-18	2018-19
O & M Expenses	1604.36	1607.77	1524.52	1500.30	1347.92
Total	**59254.18**	**58604.76**	**57756.32**	**56827.03**	**50704.21**

8. Reply to the petition has been filed by Respondent No.1, Madhya Pradesh Power Management Company Ltd (MPPMCL) vide affidavit dated 3.6.2020. In response, the Petitioner has filed its rejoinder vide affidavit dated 24.8.2020. The matter was heard on 13.4.2021 and the Commission, after directing the Petitioner to file certain additional information, reserved its order in the petition. In response, the Petitioner vide affidavit dated 24.5.2021 has filed the additional information with copy to the Respondents. The Respondent MPPMCL has filed its reply on the same *vide* affidavit dated 12.7.2021 and the Petitioner has filed its rejoinder to the said reply vide affidavit dated 30.7.2021. Based on the submissions of the parties and the documents available on record, we proceed to examine the claims of the Petitioner, on prudence check, as stated in the subsequent paragraphs.

TRUING-UP OF TARIFF FOR THE 2014-19 TARIFF PERIOD

Capital Cost

9. Regulation 9(3) of the 2014 Tariff Regulations provides as under:

> *"9. Capital Cost:*
> *(3) The Capital cost of an existing project shall include the following:*
> *(a) the capital cost admitted by the Commission prior to 1.4.2014 duly trued up by excluding liability, if any, as on 1.4.2014;*
> *(b) additional capitalization and de-capitalization for the respective year of tariff as determined in accordance with Regulation 14; and*
> *(a) expenditure on account of renovation and modernisation as admitted by this Commission in accordance with Regulation 15."*

10. The Petitioner has claimed the opening capital cost of ₹320700.09 lakh as on 1.4.2014, for the purpose of tariff for Power Component, as allowed by the Commission as on 31.3.2014 in terms of order dated 26.5.2016 in Petition No. 265/GT/2014. The closing capital cost of Rs.320700.09 lakh as on 31.3.2014, has been considered as the opening capital cost as on 1.4.2014, in terms of Regulation

9(3)(a) of the 2014 Tariff Regulations.

Additional Capital Expenditure

11. Regulation 14(3) of the 2014 Tariff Regulations provides as under:

"14.(3) The capital expenditure, in respect of existing generating station or the transmission system including communication system, incurred or projected to be incurred on the following counts after the cut-off date, may be admitted by the Commission, subject to prudence check:

(i) Liabilities to meet award of arbitration or for compliance of the order or decree of a court of law;
(ii) Change in law or compliance of any existing law;
(iii) Any expenses to be incurred on account of need for higher security and safety of the plant as advised or directed by appropriate Government Agencies of statutory authorities responsible for national security/internal security;
(iv) Deferred works relating to ash pond or ash handling system in the original scope of work;
(v) Any liability for works executed prior to the cut-off date, after prudence check of the details of such undischarged liability, total estimated cost of package, reasons for such withholding of payment and release of such payments etc.;
(vi) Any liability for works admitted by the Commission after the cut-off date to the extent of discharge of such liabilities by actual payments;
(vii) Any additional capital expenditure which has become necessary for efficient operation of generating station other than coal/lignite based stations or transmission system as the case may be. The claim shall be substantiated with the technical justification duly supported by the documentary evidence like test results carried out by an independent agency in case of deterioration of assets, report of an independent agency in case of damage caused by natural calamities, obsolescence of technology, up-gradation of capacity for the technical reason such as increase in fault level;
(viii) In case of hydro generating stations, any expenditure which has become necessary on account of damage caused by natural calamities (but not due to flooding of power house attributable to the negligence of the generating company) and due to geological reasons after adjusting the proceeds from any insurance scheme, and expenditure incurred due to any additional work which has become necessary for successful and efficient plant operation;
(ix) In case of transmission system, any additional expenditure on items such as relays, control and instrumentation, computer system, power line carrier communication, DC batteries, replacement due to obsolesce of technology, replacement of switchyard equipment due to increase of fault level, tower strengthening, communication equipment, emergency restoration system, insulators cleaning infrastructure, replacement of porcelain insulator with polymer insulators, replacement of damaged equipment not covered by insurance and any other expenditure which has become necessary for successful and efficient operation of transmission system; and
(x) Any capital expenditure found justified after prudence check necessitated on account of modifications required or done in fuel receiving system arising due to non-materialization of coal supply corresponding to full coal linkage in respect of thermal generating station as result of circumstances not within the control of the generating station: Provided that any expenditure on acquiring the minor items or the assets including tools and tackles, furniture, air- conditioners, voltage stabilizers, refrigerators, coolers, computers, fans, washing machines, heat convectors, mattresses, carpets etc. brought after the cut-off date shall not be considered for additional capitalization for determination of tariff w.e.f. 1.4.2014:

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

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

12. The additional capital expenditure allowed vide order dated 31.5.2016 in Petition No. 265/GT/2014, with adjustment of Power Component, R&R subvention, adjustment of liabilities etc., are as under:

(Rs. in lakh)

		2014-15	2015-16	2016-17	2017-18	2018-19
A	Additional capital expenditure (Power Component)	1290.43	5737.84	14714.23	0.00	2300.00
B	Deletion during the year	0.00	482.21	100.46	0.00	533.75
	Un-discharged liabilities:					
C	Opening	2307.37	1052.92	373.92	49.87	49.87
D	Closing	1052.92	373.92	49.87	49.87	49.87
E	Undischarged liabilities discharged during the year	1254.45	679.00	324.05	0.00	0.00
F	Additional capital expenditure (*Power Component*) allowed for tariff **(A-B+E)**	**2544.88**	**5934.63**	**14937.82**	**0.00**	**1766.25**

13. The re-conciliation of the additional capital expenditure (prior to adjustment of R&R subvention, Sardar Sarovar Project Component and Irrigation Component) claimed by the Petitioner in Form 9C, for Dam and Power component for the 2014-19 tariff period, duly certified by the Auditor is as under:

(Rs. in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Closing Gross Block	456660.37	459195.55	462486.42	462952.98	479852.66
Less: Opening Gross Block	453563.41	456660.37	459195.55	462486.42	462952.98
Add: Deletions and De-capitalisation of assets	2.39	27.15	4.17	17.02	34.97
Total additions as per books	3099.35	2562.34	3295.04	483.58	16934.65
Net additions pertaining to the project / Unit/Stage	3099.35	2562.34	3295.04	483.58	16934.65
Less: Exclusions (items not allowable / not claimed)	68.54	(-) 9.07	31.37	36.70	64.15
Net additional capital expenditure claimed	**3030.81**	**2571.41**	**3263.67**	**446.88**	**16870.50**

14. The Petitioner has submitted that during the 2014-19 tariff period, the total additional capital expenditure of Rs.26183.27 lakh has been claimed under various provisions of Regulation 14(3) of the 2014 Tariff Regulations. Accordingly, it has submitted that the gross cumulative capitalized cost claimed up to 31.3.2019 is Rs.479852.66 lakh. The Petitioner vide affidavit dated 1.11.2019 has submitted the year-wise details of additional capital expenditure and the capital cost as under:

(Rs. in lakh)

		2014-15	2015-16	2016-17	2017-18	2018-19
Gross Capital Cost as on 31.3.2014: Rs.452824.98						
Opening cumulative capitalized expenditure at the beginning of respective years		452824.98	455924.34	458486.67	461781.71	462265.29
Regulation						
(i)	14(3)(i)	2864.11	2282.31	3123.02	(-) 2055.46	1132.56
(ii)	14(3)(ii)	0.00	0.00	0.00	0.00	0.00
(iii)	14(3)(iii)	100.89	222.24	106.47	(-)348.09	(-)158.08
(v)	14(3)(v)	0.00	0.00	0.00	1851.00	0.00
(vi)	14(3)(vi)	0.00	0.00	0.00	0.00	0.00
(viii)	14(3)(viii)	65.81	66.86	34.18	999.42	15896.03
Total additional capital expenditure incurred during respective years		3030.81	2571.41	3263.67	446.88	16870.50
Minor Assets		68.54	(-) 9.07	31.37	36.70	64.15
Closing cumulative capitalized expenditure at the end of respective years (including minor assets)		**455924.34**	**458486.67**	**461781.71**	**462265.29**	**479199.94**

15. It is noticed that there is variation in the opening gross cumulative capital cost as submitted by the Petitioner above and in Form 9C. As Form 9C has been certified by Auditor, the same has been considered. After deducting the SSP Component, Irrigation Component and GoMP’s 50% Subvention towards increased R&R cost, the cumulative capitalized cost up to 31.3.2019 has been apportioned. The details of the additional cost capitalized vis-à-vis Power component, during the respective years of the 2014-19 tariff period are as under:

(Rs. in lakh)

Period		Additional Cost capitalized	
From	**To**	**Gross**	**Power Component**
1.4.2014	31.3.2015	3099.35	1148.71
1.4.2015	31.3.2016	2562.34	1071.62
1.4.2016	31.3.2017	3295.04	1979.04
1.4.2017	31.3.2018	483.58	448.26
1.4.2018	31.3.2019	16934.65	16126.26

16. The Petitioner has furnished the details of un-discharged liabilities in Power Component, as on 31st March of the respective years of the 2014-19 tariff period as under:

(Rs. in lakh)

Carried Forward as on 1.4.2014	31.3.2015	31.3.2016	31.3.2017	31.3.2018	31.3.2019
2401.94	1825.21	2518.49	2481.73	4695.82	4264.47

17. The summary of the net capital cost and additional capital expenditure (Power Component), after considering the subvention for R&R expenses and for Dam expenses claimed by the Petitioner during the 2014-19 tariff period, after considering un-discharged liabilities is as under:

(Rs. in lakh)

		2014-15	2015-16	2016-17	2017-18	2018-19
A	Net Power Component at the beginning of the year	320700.09	322425.53	322803.88	324819.68	323053.85
B	Additions to Power Component	1148.71	1071.62	1979.04	448.26	16126.26
	Un-discharged liabilities					
C	Opening	2402.00	1825.21	2518.49	2481.73	4695.82
D	Closing	1825.21	2518.49	2481.73	4695.82	4264.47
E	Undischarged liabilities discharged during the year (C-D)	576.79	(-)693.28	36.76	(-)2214.09	431.35
F	Additions in Net Power Component (B+E)	1725.50	378.34	2015.80	(-) 1765.83	16557.61
G	Net Power Component for purpose of tariff at end of the year (A+F)	322425.59	322803.87	324819.68	323053.85	339611.46

18. The year-wise details of the additional capital expenditure including minor assets, claimed by the Petitioner under the provisions of Regulation 14(3) of the 2014 Tariff Regulations are as follows:

a) Gross additional capital expenditure claimed:

(Rs. in lakh)

Year	**Additions**	**Regulation**				**Minor assets**
		14(3) (i)	**14(3) (iii)**	**14(3) (v)**	**14(3) (viii)**	
2014-15	3099.35	2864.11	100.89	0.00	65.81	68.54
2015-16	2562.34	2282.31	222.24	0.00	66.86	(-)9.07
2016-17	3295.04	3123.02	106.47	0.00	34.18	31.37
2017-18	483.58	(-) 2055.46	(-) 348.09	1851.00	999.42	36.70
2018-19	16934.65	1132.56	(-) 158.08	0.00	15896.03	64.15
Total	**26374.96**	**7346.54**	**(-) 76.56**	**1851.00**	**17062.29**	**191.70**

b) Net Power Component claimed, excluding un-discharged and discharged liabilities, are as under:

(Rs. in lakh)

Years	**Regulation 14(3)(i)**	**Regulation 14(3)(iii)**	**Regulation 14(3)(v)**	**Regulation 14(3)(viii)**	**Total**
2014-15	982.00	100.89	0.00	65.81	1148.71
2015-16	782.52	222.24	0.00	66.86	1071.62
2016-17	1838.39	106.47	0.00	39.43	1984.29
2017-18	(-)1472.36	303.22	1269.29	1024.98	1125.12
2018-19	388.31	107.95	0.00	15903.25	16399.51

19. The Respondent MPPMCL has submitted that the claim of the Petitioner for additional capital expenditure under Regulation 14(3)(viii) of the 2014 Tariff Regulations cannot be considered under the said regulation and may, therefore, be disallowed. The Respondent has pointed out that the Petitioner has not furnished proper documents with regard to the claim for expenses on account of higher safety and security of the plant. The Respondent has further submitted that the additional capitalization under Regulation 14(3)(vii) towards efficient operation of the plant provides for submission of test report of the independent agency, which has not been complied with by the Petitioner. Accordingly, the Respondent has prayed that the claim of the Petitioner for additional capitalization may be disallowed. In response, the Petitioner has clarified that it has furnished proper justification for the additional capitalization claimed and has also enclosed necessary documents in support of the same.

20. The matter has been considered. It is noticed that the Petitioner has furnished justification in respect of the additional capital expenditure claimed under the provisions of Regulation 14(3) of the 2014 Tariff Regulations. However, as regards minor assets, it is noticed that the Petitioner has not claimed an amount of Rs.191.70 lakh for purchase of air conditioners, furniture, office equipment, television, etc., for purposes of capitalization and de-capitalization during the 2014-19 tariff period. As capitalization of expenditure incurred towards procurement/ replacement of minor assets, after the cut-off date of the generating station, is not permissible in terms of the provisions of the 2014 Tariff Regulations, the Petitioner has considered these additions under exclusions. In view of this, the exclusion of positive entries under the head is in order and is allowed.

21. The Petitioner has also claimed additional capital expenditure of Rs.106.46 lakh during the 2014-19 tariff period under the head 'Corporate office actual capitalization of main assets'. It is pertinent to mention that the generating companies use Liaison office/ Corporate office/ Regional offices for various activities like operation of existing plants, construction of new plants, consultancy services, etc. As such, the capital cost incurred for creation of these offices cannot form part of a generating station. It is pertinent to mention that the Commission in its order dated 26.4.2006 in Petition No. 3/2006 had disallowed the expenditure for creation of 'Corporate office and other offices' of NTPC and the same was affirmed by the Appellate Tribunal for Electricity in its judgment dated 19.9.2013 in Appeal No.213/2012. In line with the said decision, the additional capital expenditure of Rs. 106.46 lakh claimed under the head 'Corporate Office actual capitalization of main assets' by the Petitioner is not allowed.

22. The total additional capital expenditure claimed, and de-capitalization claimed is as under:

(Rs. in lakh)

		2014-15	2015-16	2016-17	2017-18	2018-19
A	Additional capital expenditure claimed including de-capitalization	3030.81	2571.41	3263.67	446.88	16870.50
B	De-capitalization claimed	0.00	0.00	(-) 5.25	(-) 676.86	(-) 273.25
C	Additional capital expenditure claimed without de-capitalization (A-B)	3030.81	2571.41	3268.92	1123.74	17143.75

23. The Commission vide RoP of the hearing dated 13.4.2021 directed the Petitioner to submit the unit-wise breakup of the additional capital expenditure claimed with respect to SSP, Irrigation & R&R subvention components. In compliance, the Petitioner vide affidavit dated 24.5.2021 has furnished the details but without unit-wise breakup of the same. Accordingly, the admissibility of additional capital expenditure, before adjustment of de-capitalization of assets/works, for the respective years of the 2014-19 tariff period is examined as follows:

2014-15

(Rs. in lakh)

Sl. No.	Classification of Works	Works	Claimed	Allowed	Reason for admissibility
A. Regulation 14(3)(i)					
1	Already admitted expenditure	Expenditure on R&R works	2864.11	2864.11	The additional capital expenditure claimed is on account of the balance R&R works which has been incurred in compliance with the MoP, GoI letter dated 28.3.2002 and in terms of the decree issued by the District court – Khandwa, Madhya Pradesh, orders of the Grievance Redressal Authority and other Statutory authority. Further, the Commission vide its order dated 31.5.2016 in Petition No. 265/GT/2014 had allowed the additional capital expenditure for the said work for Rs. 3351.78 lakh. In view of the above and since the amount claimed is within the limit already allowed, the additional capital expenditure claimed is **allowed** under Regulation 14(3)(i) of the 2014Tariff Regulations.
B. Regulation 14(3)(iii)					

Sl. No.	Classification of Works	Works	Claimed	Allowed	Reason for admissibility
2	Already admitted expenditure	Construction of double layer Concertina coil RR Masonary Fencing on Right Bank of Upstream of Indira Sagar Reservoir at the generating station.	63.09	63.09	The additional capital expenditure claimed under this head was allowed on projected basis for Rs.80 lakh vide order dated 31.5.2016 in Petition No. 265/GT/2014. Considering the fact that the additional capital expenditure is considered necessary for safety of the plant and is within the limit already allowed, the additional capital expenditure claimed is **allowed** under Regulation 14(3)(iii) of the 2014 Tariff Regulations.
3	New Item	Pump-60 HP Submersible dewatering pump with control panel	20.72	20.72	The Petitioner has submitted that in order to control the heavy flood situation especially during peak monsoon and for safety of installations, it is important to ensure proper drainage/ dewatering of the seepage water. It has further submitted that the necessity of augmentation of drainage/ dewatering arrangement was felt during floods/ monsoon. The Petitioner has stated that in addition to this, the asset shall provide redundancy of de-watering system and to cater to the eventuality of failure of pumps in continuous operation during floods. It has submitted that the asset is essential to improve the reliability of the dewatering system of dam galleries and Powerhouse of the generating station. In view of this and considering the fact that the additional capital expenditure incurred for the assets/ works are necessary for the safety and security of the generating station, the same is **allowed** under Regulation 14(3)(iii) of the 2014 Tariff Regulations.
4	New Item	CCTV at the generating station	17.08	17.08	The Petitioner has submitted that the additional capital expenditure incurred is related to project security as per requirement/ recommendations of CISF. Considering the fact that the assets/ works are necessary for THE safety and security of the generating station in terms of the recommendations of the Central Security agency, the additional capital expenditure claimed is **allowed** under Regulation 14(3)(iii) of the 2014 Tariff Regulations.
C. Regulation 14(3)(viii)					

Sl. No.	Classification of Works	Works	Claimed	Allowed	Reason for admissibility
5	New Item	Purchase of power quality analyser	6.375	0.00	Considering the fact that the expenditure incurred is not directly related to the operation of the generating station and is in the nature of tools & tackles, the additional capital expenditure claimed is **not allowed**.
6	New Item	Purchase of DC winding resistance meter	18.95	0.00	
7	Corporate Office Expense	Office buildings-permanent	3.21	0.00	Considering the fact that the expenditure incurred is towards Corporate office expenses, the additional capital expenditure claimed is **not allowed**.
8	Corporate office Expense	Networking Devices and Server	37.27	0.00	
Total additional capital expenditure (A+B+C)			**3030.81**	**2965.00**	

24. Accordingly, the total additional capital expenditure allowed for 2014-15 is Rs.2965.00 lakh (Rs.2864.11 lakh + Rs.100.89 lakh + Rs.0.00 lakh).

2015-16

(Rs. in lakh)

Sl. No.	Classification of Works	Works	Claimed	Allowed	Reason for admissibility
A. Regulation 14(3)(i)					
1	Already admitted expenditure	Expenditure on R&R works	2282.31	2282.31	The expenditure claimed is on account of the balance R&R works which has been incurred in compliance with the MoP, GOI letter dated 28.3.2002and in terms of the decree issued by the District court – Khandwa, Madhya Pradesh, orders of the Grievance Redressal Authority and other statutory authority. Further, the Commission vide its order dated 31.5.2016 had allowed the additional capitalisation for this asset/work for Rs.4459.83 lakh, which has been claimed in a phased manner as under: Rs.2282.31 lakh in 2015-16; Rs.884.18 lakh in 2016-17; Rs.183.38 lakh in 2017-18; Rs.1132.56 lakh in 2018-19: totalling to Rs.4482.43 lakh, which is over and above the additional capitalisation allowed, by Rs.22.60 lakh. In compliance to the directions of the Commission vide ROP of the hearing dated 13.4.2021, the Petitioner has submitted

<table>
<tr><th>Sl. No.</th><th>Classification of Works</th><th>Works</th><th>Claimed</th><th>Allowed</th><th>Reason for admissibility</th></tr>
<tr><td></td><td></td><td></td><td></td><td></td><td>that the additional capital expenditure claimed is on the basis of actual capitalisation and public procurement procedures. In consideration of above, the additional capital expenditure incurred is allowed under Regulation 14(3)(i) of the 2014 Tariff Regulations.</td></tr>
<tr><td colspan="6">B. Regulation 14(3)(iii)</td></tr>
<tr><td>2</td><td rowspan="5">Already Admitted</td><td>Providing of fire protection arrangement for radial gates, GNT and intake gates.</td><td>21.35</td><td>21.35</td><td rowspan="3">The Petitioner has submitted that the additional capital expenditure incurred is related to the project security as per requirement/ recommendations of CISF. Further, the additional capital expenditure claimed during 2014-15 under this head was allowed on projected basis vide order dated 31.5.2016 in Petition No. 265/GT/2014, as under:<table><tr><td>Item No. 2</td><td>Rs.22.00 lakh</td></tr><tr><td>Item No. 3</td><td>Rs.3.50 lakh</td></tr><tr><td>Item No. 4</td><td>Rs.30.00 lakh</td></tr></table>Considering the fact that the assets/works are necessary for safety and security of the plant as per recommendations of the statutory authority, the additional capital expenditure claimed is allowed under Regulation 14(3)(iii) of the 2014 Tariff Regulations.</td></tr>
<tr><td>3</td><td>Supply, installation, testing and commissioning of wireless system for CISF at the generating station.</td><td>3.11</td><td>3.11</td></tr>
<tr><td>4</td><td>Providing and fixing 04 automatic sliding gates &03 automatic boom barrier.</td><td>18.85</td><td>18.85</td></tr>
<tr><td>5</td><td>Providing dedicated local control panel to each intake gate with recording facility.</td><td>42.56</td><td>42.56</td><td rowspan="2">The additional capitalisation claimed under this head were allowed on projected basis vide order dated 31.5.2016 in Petition No. 265/GT/2014 as under:<table><tr><td>Item No. 5</td><td>Rs.54 lakh</td></tr><tr><td>Item No. 6</td><td>Rs.85 lakh</td></tr></table>Considering the fact that the assets/works are considered necessary for safety of the plant and is within the admitted additional capital expenditure, the same is allowed under Regulation 14(3)(iii) of the 2014 Tariff Regulations.</td></tr>
<tr><td>6</td><td>Online EMS/ Automatic downloading of Energy meter</td><td>72.87</td><td>72.87</td></tr>
<tr><td>7</td><td>New Items</td><td>Slope Protection work downstream of Dam</td><td>63.51</td><td>0.00</td><td>Considering the fact that the additional capital expenditure claimed under this work is not covered under any of the</td></tr>
</table>

Sl. No.	Classification of Works	Works	Claimed	Allowed	Reason for admissibility
					relevant provisions of Regulation 14 of the 2014 Tariff Regulations and rather are in the nature of O&M expenses, the same is **not allowed**.
C. Regulation 14(3)(viii)					
8	Already Admitted	Up gradation of instrumentation system of Intake gate & Radial gates.	14.81	14.81	The expenditure claimed under this head was allowed on projected basis vide order dated 31.5.2016 in Petition No. 265/GT/2014 for Rs.40 lakh. Considering the fact that the assets/ works are necessary for the safety of the generating station and is also within the additional capitalisation allowed earlier, the additional capital expenditure claimed is **allowed** under Regulation 14(3)(viii) of the 2014 Tariff Regulations. Though the additional capital expenditure claimed is on account of up-gradation of the asset, the Petitioner has not furnished the de-capitalised value of the old asset. As such, the value of Rs.9.09 lakh has been worked out in paragraph 39 of this order, and adjusted under 'Assumed deletions'.
9	New Items	Purchase of digital PLCC signal level meter.	9.69	9.69	The Petitioner has submitted that the old analog PLCC signal level meter installed during commissioning of Project has become outdated and non-functional and hence the upgraded Digital PLCC signal Level meter was essential for ensuring healthiness of the PLCC system. Considering that the additional capital expenditure incurred is for assets/works which are necessary for the successful and efficient operation of the generating station, the same is **allowed** under Regulation 14(3)(viii) of the 2014 Tariff Regulations. In compliance to the directions of the Commission, the Petitioner has furnished the de-capitalised value of the old non-functional asset as Rs.1.96 lakh. As the additional capital expenditure

Sl. No.	Classification of Works	Works	Claimed	Allowed	Reason for admissibility
					claimed is on replacement basis, the same has been considered for de-capitalisation in 2015-16.
10		PLCC based exchange (EPAX)	4.12	4.12	The Petitioner has submitted that in order to ensure grid security, effective and reliable communication with Load Dispatch Center is essential. It has also submitted that the PLCC based exchange (EPAX) has been installed for improving communication with the load dispatch center and other power stations on the grid. Therefore, the asset is required to ensure reliable operation of the generating station. Considering that the additional capital expenditure incurred is necessary for the successful and efficient operation of the generating station, the same is **allowed** under Regulation 14(3) (viii) of the 2014 Tariff Regulations.
11		Electrostatic oil mist extractor and precipitator	32.13	32.13	The Petitioner has submitted that the Earth fault in winding is one of the leading causes for outage of the units. It has stated that Oil mist generated during the operation of TG Units, deposit on the windings that attract dust and other foreign contaminations which reduces the "winding to ground" resistance. Considering that the additional capital expenditure incurred is considered necessary for the successful and efficient operation of the generating station, the same is **allowed** under Regulation 14(3)(viii) of the 2014 Tariff Regulations.
12		Purchase of floor cleaning machine	3.41	0.00	Since the additional capital expenditure incurred is not directly related to the operation of the generating station and is minor in nature, the additional capital expenditure claimed is **not allowed**.

Sl. No.	Classification of Works	Works	Claimed	Allowed	Reason for admissibility
13	Corporate office expenses	Fabrication and installation of Parking shed - Office buildings (Temporary)	8.95	0.00	The additional capital expenditure incurred is towards Corporate office expenses and is not related to operation of the generating station, the additional capital expenditure claimed is **not allowed**.
14		Motorcycle/scooter	0.35	0.00	
15		Networking Devices and Server	(-) 6.60	0.00	
Total additional capital expenditure (A+B+C)			**2571.41**	**2501.80**	

25. Accordingly, the total additional capital expenditure allowed in 2015-16 is Rs.2501.80 lakh (Rs.2282.31+ Rs.158.74 lakh + Rs.60.75).

2016-17

(Rs. in lakh)

Sl. No.	Classification of Works	Works	Claimed	Allowed	Reason for admissibility
A. Regulation 14(3)(i)					
1	Already admitted works	Expenditure on R&R works	884.18	884.18	The additional capital expenditure incurred is on account of the balance R&R works in compliance with the MoP, GOI letter dated 28.3.2002 and in terms of the decree issued by the District court – Khandwa, Madhya Pradesh, orders of the Grievance Redressal Authority and other statutory authority. In view of the above, the additional capitalisation of the amount claimed is **allowed** under Regulation 14(3)(i) of the 2014 Tariff Regulations.
2	New Item	Expenditure Incurred by NVDA for Land RTU on X-Environment	2238.84	0.00	The Petitioner has submitted that the adjustment of expenditure of Rs.36.11 crore from Deposit works (X-Environment) has been carried out in compliance of the Environmental and Forest Clearances of Indira Sagar Project to Deposit works (X-Environment) carried out in compliance of the Environmental and Forest Clearances of Omkareshwar

Sl. No.	Classification of Works	Works	Claimed	Allowed	Reason for admissibility
					Project based on the proposal of Member - Finance, NVDA vide letter dated 23.06.2017. As the additional capitalization has been inadvertently booked under the generating station, as per directives of NVDA, the necessary adjustments have been made in books in the year 2017-18 for both stations of the Petitioner (the generating station& OSP). In view of the submissions, the adjustment entry in 2017-18 is ignored/ **not allowed**.
B. Regulation 14(3)(iii)					
3	Already Admitted	Purchase of Gantry crane for draft tube gate	93.35	93.35	The additional capital expenditure claimed under this head was allowed on projected basis vide order dated 31.5.2016 in Petition No. 265/GT/2014 for Rs.133 lakh. Considering that the additional capital expenditure is necessary for safety of the generating station and is within the admitted additional capitalisation allowed earlier, the same is **allowed** under Regulation 14(3)(iii) of the 2014 Tariff Regulations.
4	New Item	Purchase of handheld infrared temperature scanner	7.27	0.00	Considering that the additional capital expenditure incurred is not directly related to the operation of the generating station and is also minor in nature, the additional capital expenditure claimed is **not allowed**.
5		Purchase of diesel de-watering pump for HM division	5.85	5.85	The Petitioner has submitted that it is important to ensure the proper dewatering of the seepage water especially during heavy rains. Considering that the said asset is necessary for the safety of the generating station, the additional capital expenditure claimed is **allowed** under Regulation 14(3)(iii) of the 2014 Tariff Regulations
C. Regulation 14(3)(viii)					

Sl. No.	Classification of Works	Works	Claimed	Allowed	Reason for admissibility
6	Already admitted	Procurement of motors for Intake & Draft Tube Gate Gantry Crane.	7.00	7.00	The Petitioner has submitted that the said assets/works is necessary for the efficient operation of the generating station. It has further submitted that the additional capital expenditure claimed under this head was allowed on projected basis vide order dated 31.5.2016 in Petition No. 265/GT/2014 for Rs.7 lakh. Considering that the additional capital expenditure incurred is necessary for safety of the generating station and is within the admitted additional capital expenditure allowed earlier, the same is **allowed** under Regulation 14(3)(viii) of the 2014 Tariff Regulations.
7	New Items	Construction of toilet near intake structure	4.60	0.00	Considering that the additional capital expenditure for asset/ work claimed is in the nature of O&M expenses and does not relate to the efficient operation of the generating station, the same is **not allowed**.
8		Potentiometer governing Spare, HMC	5.92	0.00	The Petitioner has submitted that these assets were purchased during the years 2009 and 2011 and were lying in stores as on 1.4.2015. It has stated that as per Ind-AS, the same falls within the definition of Property, Plant & Equipment and, therefore, capitalised as on 1.4.2015. Since the claim of the Petitioner is in the nature of initial spares and is after the cut-off date of the generating station, the additional capital expenditure claimed is **not allowed.**
9		Oil safety valve, governing Spare	3.43	0.00	
10	Corporate office expenses	Development work in front of parking area including temporary security hut and wire mesh for electrical metering DP and Misc.	8.79	0.00	Considering that the expenditure incurred on the assets is for Corporate office expenses and is not related to efficient operation of the generating station, the additional capital expenditure claimed is **not allowed**.

Sl. No.	Classification of Works	Works	Claimed	Allowed	Reason for admissibility
		Civil work-office buildings (temporary)			
11		Cars	9.85	0.00	
12		Networking devices and server	(-) 0.17	0.00	
Total additional capital expenditure (A+B+C)			**3268.92**	**990.38**	

26. Accordingly, the total additional capital expenditure allowed in 2016-17 is Rs.990.38 lakh (Rs.884.18 lakh + Rs.99.20 lakh + Rs.7.00 lakh).

2017-18

(Rs. in lakh)

Sl. No	Classification of Works	Works	Claimed	Allowed	Reason for admissibility
A. Regulation 14(3)(i)					
1	Already Admitted	Expenditure on R&R works	183.38	183.38	The additional capital expenditure has already been admitted earlier and is on account of the balance R&R works in compliance with GoI, MoP letter dated 28.3.2002 and in terms of the decree issued by the District court – Khandwa, Madhya Pradesh, the orders of Grievance Redressal Authority and other statutory authority. In view of the above, the additional capital expenditure claimed is **allowed** under Regulation 14(3)(i) of the 2014 Tariff Regulations.
2	New Item	Expenditure Incurred by NVDA for Land RTU On X-Environment	(-) 2238.84	0.00	The Petitioner has submitted that the adjustment of expenditure of Rs.36.11 crore from Deposit works (X-Environment) has been carried out in compliance of the Environmental and Forest Clearances of Indira Sagar Project to Deposit works (X-Environment) carried out in compliance of the Environmental and Forest Clearances of Omkareshwar Project based on the proposal of Member - Finance, NVDA vide letter dated 23.6.2017. As the capitalization has been inadvertently booked

<table>
<tr><th>Sl. No</th><th>Classification of Works</th><th>Works</th><th>Claimed</th><th>Allowed</th><th>Reason for admissibility</th></tr>
<tr><td></td><td></td><td></td><td></td><td></td><td>under the generating station, as per directives of NVDA, the necessary adjustments have been made in the books in the year 2017-18 for both stations of Petitioner (the generating station & OSP). In view of the submissions, the adjustment entry in 2017-18 is ignored/ not allowed.</td></tr>
<tr><td colspan="6">B. Regulation 14(3)(iii)</td></tr>
<tr><td>3</td><td rowspan="2">Already Admitted</td><td>Fire Fighting system for central stores.</td><td>62.58</td><td>62.58</td><td rowspan="2">The additional capital expenditure claimed under this head was allowed on projected basis vide order dated 31.5.2016 in Petition No. 265/GT/2014 as under:<table><tr><td>Item No.3</td><td>Rs.60 lakh in 2014-15</td></tr><tr><td>Item No.4</td><td>Rs.1200 lakh in 2015-16</td></tr></table>As such, in respect of Item no.3 expenditure of Rs.2.58 lakh has been incurred over and above the additional capital expenditure already allowed. In compliance to the directions of the Commission vide RoP of the hearing dated 13.4.2021, the Petitioner has submitted that additional capital expenditure claimed is based on actual capitalisation and public procurement procedures. Considering that the additional capital expenditure is necessary for the safety of the generating station, the same is allowed under Regulation 14(3)(iii) of the 2014 Tariff Regulations.</td></tr>
<tr><td>4</td><td>Replacement of existing SCADA system with upgraded SCADA.</td><td>225.47</td><td>225.47</td></tr>
<tr><td>5</td><td>New Item</td><td>High Intensity, heavy duty, revolving security search light for Dam</td><td>4.75</td><td>4.75</td><td>The Petitioner has submitted that the additional capital expenditure incurred is related to project security as per requirement of CISF. Considering that the said asset is necessary for the safety of the generating station, the additional capital expenditure claimed is allowed under Regulation 14(3)(iii) of the 2014 Tariff Regulations</td></tr>
<tr><td>6</td><td>Corporate Office expenses</td><td>Diesel generating sets</td><td>10.41</td><td>0.00</td><td>Considering the fact that the expenditure incurred is towards assets for Corporate office and</td></tr>
</table>

<table>
<tr><th>Sl. No</th><th>Classification of Works</th><th>Works</th><th>Claimed</th><th>Allowed</th><th>Reason for admissibility</th></tr>
<tr><td></td><td></td><td></td><td></td><td></td><td>is not in relation to efficient operation of the generating station, the additional capital expenditure claimed is not allowed.</td></tr>
<tr><td colspan="6">C. Regulation 14(3)(v)</td></tr>
<tr><td>7</td><td>Already Admitted</td><td>Railway Diversion</td><td>1851.00</td><td>1851.00</td><td>The Petitioner vide affidavit dated 24.8.2015 has submitted that the diversion of 57 km long Railway line coming under submergence between section Talwadia – Khirkiya on main Delhi – Mumbai Trunk line (via Itarsi) was completed through West Central Railway (WCR) as deposit work. It has stated that as per final reconciliation and utilization certificate issued by WCR vide letter no. BPL/C/KKN-TLV/Exp dated 17.4.2018, the balance amounthas been claimed. Considering that the additional capital expenditure incurred is towards liability for works executed prior to the cut-off date, the same is allowed under Regulation 14(3)(v) of the 2014 Tariff Regulations.</td></tr>
<tr><td colspan="6">D. Regulation 14(3)(viii)</td></tr>
<tr><td>8</td><td rowspan="3">Already Admitted</td><td>Retrofitting of GE make air circuit breakers installed at UAB & SSB (1250 A & 3200A) of powerhouse with modern air circuit breakers.</td><td>22.04</td><td>22.04</td><td rowspan="3">The Petitioner has submitted that this capital expenditure claimed are necessary for the efficient operation of the generating station. It has further stated that the expenditure claimed under this head were allowed on projected basis vide order dated 31.5.2016 in Petition No. 265/GT/2014, as under:
<table>
<tr><td>Item No. 8</td><td>Rs.50 lakh in 2015-16</td></tr>
<tr><td>Item No. 9</td><td>Rs.100 lakh in 2015-16</td></tr>
<tr><td>Item No. 10</td><td>Rs.20 lakh in 2015-16</td></tr>
<tr><td>Item No. 11</td><td>Rs.20000 lakh in 2016-17</td></tr>
</table>
It is noticed that there is an increase of Rs.20.89 lakh with regard to item No.10. In compliance to the directions of the Commission vide ROP of the hearing dated 13.4.2021, the Petitioner has submitted that the</td></tr>
<tr><td>9</td><td>Construction of Parking shed in H-type colony area.</td><td>22.37</td><td>22.37</td></tr>
<tr><td>10</td><td>Supply, Installation, Testing and Commissioning of Numerical</td><td>40.89</td><td>40.89</td></tr>
</table>

Sl. No	Classification of Works	Works	Claimed	Allowed	Reason for admissibility
		Relay for Bus Protection			additional capital expenditure claimed is on the basis of actual capitalisation and public procurement procedures. Considering that the additional capital expenditure incurred is necessary for successful and efficient operation of the plant, the same is **allowed** under Regulation 14(3)(viii) of the 2014 Tariff Regulations.
11		Up-gradation of Energy Dissipation Arrangement (EDA) System for bucket.	867.81	867.81	
12	New Item	Shell and Tube Heat Exchanger	44.53	44.53	The Petitioner has submitted that high temperature is being observed in bottom bracket of TG units during operation of Units at low head. It has stated that the matter was analysed by MANIT, Bhopal and as per their recommendations, the Heat Exchanger was installed in TG Units and the performance was reported to have improved. Accordingly, the Petitioner has submitted that the said asset is considered necessary for successful and efficient operation of generating station. In view of the above, the additional capital expenditure incurred is **allowed** under Regulation 14(3)(viii) of the 2014 Tariff Regulations.
13		Automatic weather station	2.14	0.00	The Petitioner has submitted that the asset is required for monitoring the weather in the project location during monsoon for prediction of precipitation in the region. This has facilitated the Dam and operation staff. Considering the fact that the additional capital expenditure claimed is in the nature of O&M expenses, the same is **not allowed**
14		Portable Vacuum Plant (transformer evacuation system for generator transformer	8.21	0.00	Considering the fact that the additional capital expenditure incurred are in the nature of O&M expenses, the same is **not allowed.**

Sl. No	Classification of Works	Works	Claimed	Allowed	Reason for admissibility
15	Corporate Office Expense	Cars	16.98	0.00	Considering the fact that the additional capital expenditure incurred is towards Corporate Office expenses and is not related to efficient operation of the generating station, the claim is **not allowed.**
Total additional capital expenditure (A+B+C+D)			**1123.74**	**3324.83**	

27. Accordingly, the total additional capital expenditure allowed in 2017-18 is Rs. 3324.83 lakh (Rs. 183.38 lakh + Rs. 292.80lakh + Rs. 1851.00 lakh + Rs. 997.64 lakh).

<u>2018-19</u>

(Rs. in lakh)

Sl. No.	Classification of Works	Works	Claimed	Allowed	Reason for admissibility
	A. Regulation 14(3)(i)				
1	Already admitted Item	Expenditure on R&R works	1132.56	1132.56	The additional capital expenditure incurred is on account of the balance R&R works in compliance with GoI, MoP letter dated 28.3.2002 and in terms of the decree issued by the District court – Khandwa, Madhya Pradesh, the orders of Grievance Redressal Authority and other statutory authority. Considering the above, the additional capital expenditure claimed is **allowed** under Regulation 14(3)(i) of the 2014 Tariff Regulations.
B. Regulation 14(3)(iii)					
2	Already Admitted Item	Replacement of existing SCADA system with upgraded SCADA.	99.79	99.79	The Petitioner has submitted that the assets/works claimed under this head were allowed on projected basis vide order dated 31.5.2016 in Petition No. 265/GT/2014 for Rs.1200 lakh. However, the Petitioner has claimed the item in phased manner as such in year 2017-18 amount of Rs.225.47 has already been incurred. Accordingly, it has submitted that the balance allowable limit works out to as Rs. 974.53 lakh. In line with the submissions and considering that the additional capital expenditure claimed is necessary for safety of

Sl. No.	Classification of Works	Works	Claimed	Allowed	Reason for admissibility
					the generating station and is under earlier allowed limit of Rs. 974.53 lakh as discussed above, the expenditure of Rs.99.79 lakh claimed is **allowed** under Regulation 14(3)(iii) of the 2014 Tariff Regulations.
3	New Item	Purchase of digital TDMA based handheld Radio (Walky Talky system)	3.32	3.32	The Petitioner has submitted that the asset is required for establishing reliable communication within the power station. It has stated that as ISPS is a semi underground type power station, the reception of signals for mobile communication is very poor and the communication through land line is desk to desk and not suitable during emergency situation and maintenance of units at various locations. In line with the submissions and considering that the additional capital expenditure incurred is necessary for the safety of the generating station, the same is **allowed** under Regulation 14(3)(iii) of the 2014 Tariff Regulations.
4		Purchase of 02 nos motorcycle for CISF	1.29	1.29	The Petitioner has submitted that the additional capital expenditure incurred is towards project security as per requirement/ recommendations of CISF. Considering that the additional capital expenditure incurred is necessary for the safety and security of the generating station, the same is **allowed** under Regulation 14(3)(iii) of the 2014 Tariff Regulations
5	Corporate Expense	Networking Devices and Server	3.55	0.00	Considering that these assets are towards Corporate office expenses and is not related to efficient operation of the generating station, the additional capitalization of the same is **not allowed**.
C. Regulation 14(3)(viii)					
6	Already admitted Item	Construction of Parking shed in H-type colony area.	11.19	11.19	The Petitioner has submitted that the additional capital expenditure claimed is necessary for the efficient operation of the generating station. It has

<table>
<tr><th>Sl. No.</th><th>Classification of Works</th><th>Works</th><th>Claimed</th><th>Allowed</th><th>Reason for admissibility</th></tr>
<tr><td>7</td><td rowspan="3"></td><td>Supply, Installation, Testing and Commissioning of 125 MVAr Shunt Reactor at Switchyard</td><td>1462.30</td><td>1462.30</td><td rowspan="3">submitted that the additional capital expenditure claimed under this head was allowed on projected basis vide order dated 31.5.2016 in Petition No. 265/GT/2014as under:
<table><tr><td>Item No. 6</td><td>Rs.77.63 lakh (balance limit available) during 2015-16</td></tr><tr><td>Item No. 7</td><td>Rs.1250 lakh during 2015-16</td></tr><tr><td>Item No. 8</td><td>Rs.500 lakh during 2016-17</td></tr><tr><td>Item No. 9</td><td>Rs.19132.19 lakh (balance limit available) during 2016-17</td></tr></table>It is noticed that for item no. 7, there is an increase of Rs. 212.30 lakh over and above the amount allowed earlier. The Petitioner has submitted that the additional capital expenditure claimed is on the basis of actual capitalisation and as per public procurement procedures. It has stated that the additional expenditure incurred for Items 6,8,9 is within the additional capitalisation allowed earlier. In line with the above submissions and considering that the additional capital expenditure is necessary for the efficient operation of the generating station, the same is allowed under Regulation 14(3)(viii) of the 2014 Tariff Regulations.</td></tr>
<tr><td>8</td><td>Construction of 30 units of F Type Quarters</td><td>190.00</td><td>190.00</td></tr>
<tr><td>9</td><td>Up-gradation of EDA System for bucket.</td><td>14115.77</td><td>14115.77</td></tr>
<tr><td>10</td><td rowspan="2">New Item</td><td>Purchase of Three nos. of LV bushing for generating transformer</td><td>45.23</td><td>0.00</td><td>Considering the fact that the expenditure incurred for assets are in the nature of O&M expenses, the additional capitalization of the same is not allowed.</td></tr>
<tr><td>11</td><td>Supply, Installation, Testing and Commissioning of 220 V, 600 AH & 48 V, 600 AH battery bank at 400 KV</td><td>36.60</td><td>36.60</td><td>The Petitioner has submitted that the DC distribution system was commissioned in the year 2003 (battery bank almost 14years old). CPRI, Bangalore and third-party protection audit of the Protection System of the generating station had proposed to replace the existing batteries. It has also stated that the said</td></tr>
</table>

Sl. No.	Classification of Works	Works	Claimed	Allowed	Reason for admissibility
		Switchyard of the generating station			asset is essential to ensure reliable system operations. In line with the submissions and considering the fact that the additional capital expenditure claimed is necessary for efficient operation of the generating station, the same is **allowed** under Regulation 14(3)(viii) of the 2014 Tariff Regulations.
12		Purchase of 60 HP high head Dewatering Pumps	28.31	28.31	The Petitioner has submitted that during the monsoon season in 2015, the access tunnel got flooded and water entered the service power bay area and created panic situation and the same was handled by deploying pumps removed from other areas. Accordingly, detailed analysis of the requirement of dewatering pumps was carried out and 5 Nos. of 60 HP high head pumps have been procured and installed at various critical locations. In line with the submissions and considering the additional capital expenditure incurred is necessary for the efficient operation of the generating station, the same is **allowed** under Regulation 14(3)(iii) of the 2014 Tariff Regulations.
13	Corporate Expense	Development of food zone area and shed near kitchen - Office Buildings (Temporary)	4.71	0.00	Considering the fact that these assets are towards Corporate office expenses and are not related to efficient operation of the the generating station, the additional capitalization is **not allowed**.
14	Corporate Expense	Cars	9.14	0.00	
Total additional capital expenditure (A+B+C)			**17143.76**	**17081.12**	

28. Accordingly, the total additional capital expenditure allowed in 2018-19 is Rs. 17081.12 lakh (Rs. 1132.56lakh + Rs. 104.40 lakh + Rs. 15844.17).

29. Based on the above discussion, the total additional capital expenditure claimed

and allowed for the 2014-19 tariff period, before adjustment of subventions, is summarized as under:

(Rs. in lakh)

Regulation			**2014-15**	**2015-16**	**2016-17**	**2017-18**	**2018-19**	**Total**
14(3)(i) (R&R expenses)	(a)	Claimed	2864.11	2282.31	3123.02	(-)2055.46	1132.56	7346.54
	(b)	Allowed	2864.11	2282.31	884.18	183.38	1132.56	7346.54
14(3)(v)	(c)	Claimed	0.00	0.00	0.00	1851.00	0.00	1851.00
	(d)	Allowed	0.00	0.00	0.00	1851.00	0.00	1851.00
14(3)(iii)	(e)	Claimed	100.89	222.24	106.47	303.22	107.95	840.77
	(f)	Allowed	100.89	158.74	99.20	292.80	104.40	756.03
14(3)(viii)	(g)	Claimed	65.81	66.86	39.43	1024.98	15903.25	17100.32
	(h)	Allowed	0.00	60.75	7.00	997.64	15844.17	16909.57
Additional capital expenditure allowed, other than R&R expenses (d)+(f)+(h)			100.89	219.49	106.20	3136.70	15948.57	19511.85
Additional capital expenditure claimed (a)+(c)+(e)+(g)			3030.81	2571.41	3268.92	1123.74	17143.76	27138.63
Additional capital expenditure allowed (b)+(d) +(f)+(h)			**2965.00**	**2501.80**	**990.38**	**3324.83**	**17081.12**	**26863.13**

R&R Expenses

30. The Petitioner vide affidavit dated 25.10.2019 has submitted that the Respondent, NVDD, GoMP vide letter No. 267 dated 14.3.2013 has conveyed the anticipated and approved completion cost of R&R works as Rs.2002.18 crore. It has further submitted that the additional capital expenditure of Rs.1923.24 crore was incurred on R&R works of the generating station up to 31.3.2014 and the balance expenditure of Rs.78.12 crore was projected to be incurred during the 2014-19 tariff period, which was allowed vide order dated 31.5.2016 in Petition No. 265/GT/2014.

31. The Petitioner has further submitted that the gross R&R expenses claimed by it for the 2014-19 tariff period is Rs.7346.54 lakh, which has been further apportioned to 50% subvention component for the purpose of tariff. The Petitioner has also submitted that as per Clause 7 of CCEA sanction dated 28.3.2002, the limit of Rs.1160 crore was kept for R&R works and any increase in the cost beyond this limit, was to be borne by the Respondent, NVDD, GoMP and the Petitioner equally. Accordingly, the Petitioner has stated that the Respondent NVDD, GoMP has to bear

an amount of Rs.418.35 crore (i.e. 50% of increased R&R cost beyond the limit of Rs.1160 crore) as on 31.3.2019, as Subvention and balance 50% i.e. Rs.418.35 crore is to be borne by the Petitioner, which is being booked to the cost of Unit-I (Dam).

32. The Respondent, MPPMCL in its reply has submitted that there is a difference in the additional capital expenditure claimed for the 2014-19 tariff period pertaining to R&R, and the amount as per P&L account. In response, the Petitioner has submitted that during finalization of the annual accounts/audit of annual accounts, several activities are sequenced one after another and these activities mainly involve the capturing of expenditure, classification of capital and revenue expenditure and the calculation of grant based on the actual capital expenditure, etc. The Petitioner has also stated that the expenses/ grants are accrued/ accounted during finalization of accounts at half yearly intervals, on the basis of best estimates available at that time and, thereafter, at the time of finalization of annual accounts, all these expenses are crystallized by making required adjustments. It has further stated that these reported crystallized expenses generally vary slightly and are subject to carrying over adjustments. Accordingly, the Petitioner has submitted that the differences are mainly on account of sequencing differences/carrying over adjustments and rounding off differences.

33. In consideration of the above and keeping in view that the difference is only on account of rounding off errors and carrying over the effect of adjustments, the Power Component share, pertaining to R&R expenses, has been worked out as under:

(Rs. in lakh)

	2014-15	**2015-16**	**2016-17**	**2017-18**	**2018-19**	**Total**
R&R expenses (gross) (A)	2864.11	2282.31	884.18	183.38	1132.56	**7346.54**
Less 50% subvention from GoMP (B)	1432.05	1141.15	442.09	91.69	566.28	**3673.27**
(C)=(A)-(B)	1432.05	1141.15	442.09	91.69	566.28	**3673.27**

	2014-15	2015-16	2016-17	2017-18	2018-19	Total
Less SSP (D)=@17.63% of (C)	252.47	201.19	77.94	16.17	99.83	**647.60**
(E)=(C)-(D)	1179.58	939.97	364.15	75.53	466.44	**3025.67**
Less Irrigation component (f)=@16.75 % of (E)	197.58	157.44	61.00	12.65	78.13	**506.80**
R&R expense share to Power Component (G)=(E)-(F)	**982.00**	**782.52**	**303.15**	**62.88**	**388.31**	**2518.87**

34. As regards additional capitalization allowed towards expenses other than R&R expenses, it is noticed that the Petitioner has not booked the expenditure under dam expenses, as the assets/works do not pertain to dam expenses. However, the Petitioner, for the claim of the asset/work 'Railway diversion' in year 2017-18, towards Power Component, has apportioned the expenditure to SSP Component and Irrigation Component. Considering the above, the additional capital expenditure allowed towards expenses, other than R&R expenses, is as under:

(Rs. in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19	Total
Expenses allowed (Other than R&R expenses) (a)	100.89	219.49	106.20	1290.45	15948.57	**17665.60**
Expenses allowed (Railway diversion) (b)	0.00	0.00	0.00	1851.00	0.00	**1851.00**
Less SSP @17.63% (Railway diversion) (c)	0.00	0.00	0.00	326.33	0.00	**326.33**
(d)=(c)-(b)	0.00	0.00	0.00	1524.67	0.00	**1524.67**
Less Irrigation component @16.75 % (Railway diversion) (e)	0.00	0.00	0.00	255.38	0.00	**255.38**
Expenses allowed towards share to Power Component (f)=(d)-(e)	**0.00**	**0.00**	**0.00**	**1269.29**	**0.00**	**1269.29**
Total Expenses allowed (other than R&R works (g)=(f)+(a)	**100.89**	**219.49**	**106.20**	**2559.73**	**15948.57**	**18934.89**

35. Based on the above discussion, the additional capital expenditure (for Power Component) allowed for the 2014-19 tariff period, excluding liabilities, is as under:

(Rs. in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19	Total
R&R expenses share for Power Component allowed	982.00	782.52	303.15	62.88	388.31	**2518.87**

	2014-15	2015-16	2016-17	2017-18	2018-19	Total
Add: Expenses (Dam excluding R&R) share for Power Component allowed	100.89	219.49	106.20	2559.73	15948.57	**18934.89**
Net additional capital expenditure (power component) allowed excluding liabilities.	**1082.90**	**1002.01**	**409.36**	**2622.61**	**16336.88**	**21453.76**

De-capitalization

36. Regulation 14(4) of the 2014 Tariff Regulations provides as under:

> *"In case of de-capitalization 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-capitalization 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-capitalization takes place, duly taking into consideration the year in which it was capitalized."*

37. The Petitioner has claimed de-capitalization (as per Form 9Bi) for assets/works such as PLCC signal level meter, Battery bank, networking device and server, SCADA, cars etc., due to various reasons such as, (i) assets handed over to State Authority, (ii) Obsolete Asset/Works, (iii) Assets/Works disposed of, etc., during the 2014 -19 tariff period. The same is allowed and is summarized as under:

(Rs in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Deletions claimed	0.00	0.00	5.25	676.86	273.25
Details of other deletions submitted vide affidavit dated 24.5.2021	0.00	8.56	0.17	0.00	3.75
Total	**0.00**	**8.56**	**5.42**	**676.86**	**277.00**

Assumed Deletions

38. 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 original value of the old asset. However, in certain cases where de-capitalization is affected in books during the following years, to the year of capitalization of 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". Further, in the absence of the gross value of the asset being de-capitalized, the same is calculated by de-escalating the gross value of new asset @5% per annum till the year of capitalization of the old asset.

39. It is observed that the Petitioner has claimed up-gradation of Instrumentation system of Intake gate & Radial gates for Rs.14.81 lakh in 2015-16 on replacement basis. The Petitioner has, however, not provided the de-capitalization value of the old assets which are being replaced. Accordingly, based on above methodology, the assumed deletion considered for this asset is Rs.9.09 lakh in 2015-16.

Un-discharged liabilities

40. Considering the actual un-discharged liabilities in Power Component, as on 31.3.2014, as allowed vide order dated 26.5.2016 in Petition No.265/GT/2014, the position of un-discharged liability as on 31st March of the respective years of the 2014-19 tariff period are as under:

(Rs. in lakh)

Carried forward as on 1.4.2014	31.3.2015	31.3.2016	31.3.2017	31.3.2018	31.3.2019
2401.94	1825.21	2518.49	2481.73	4695.82	4264.47

41. The additional capital expenditure (Power Component), after adjustment of the discharged and un-discharged liabilities are as under:

(Rs. in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19	Total
Additions in additional capital expenditure (Power component) allowed excluding liabilities.	1082.90	1002.01	409.36	2622.61	16336.88	**21453.76**
Undischarged liabilities discharged	576.73	(-) 693.28	36.76	(-) 2214.09	431.34	**(-) 1862.53**

	2014-15	2015-16	2016-17	2017-18	2018-19	Total
Total additions in additional capital expenditure (Power component) allowed	1659.62	308.73	446.12	403.77	16768.22	**19591.22**

42. The Petitioner has submitted that the liabilities claimed pertain to Power Component only. However, in the absence of the asset-wise details of liabilities, the position of overall liabilities has been considered. Accordingly, the additional capital expenditure for Power Component, allowed after adjustment of un-discharged liabilities/ discharge of liabilities is as under:

(Rs. in lakh)

		2014-15	2015-16	2016-17	2017-18	2018-19
A	Additions in additional capital expenditure (Power component)	1082.90	1002.01	409.36	2622.61	16336.88
B	Deletions during the year	0.00	8.56	5.42	676.86	277.00
C	Assumed Deletions during the year	0.00	9.09	0.00	0.00	0.00
	Un-discharged liabilities:					
D	Opening	2401.94	1825.21	2518.49	2481.73	4695.82
E	Closing	1825.21	2518.49	2481.73	4695.82	4264.47
F	Un-discharged liabilities discharged (D-E)	576.73	(-) 693.28	36.76	(-) 2214.09	431.34
G	Additional capital expenditure allowed (Power component) (A-B-C+F)	**1659.62**	**291.08**	**440.70**	**(-) 268.34**	**16491.22**

<u>Capital Cost for 2014-19</u>

43. As stated, the closing capital cost as on 31.3.2014 allowed vide order dated 26.5.2016 in Petition No. 265/GT/2014 is Rs.320700.09 lakh. This has been considered as the opening capital cost as on1.4.2014. Accordingly, the capital cost considered for the purpose of tariff for the 2014-19tariff period is as under:

(Rs. in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Capital Cost	320700.09	322359.71	322650.80	323091.50	322823.16
Additional Capital Expenditure	1659.62	291.08	440.70	(-) 268.34	16491.22
Closing Capital Cost	**322359.71**	**322650.80**	**323091.50**	**322823.16**	**339314.38**

Debt-Equity Ratio

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

"19. Debt-Equity Ratio: (1) For a project declared under commercial operation on or after 1.4.2014, the debt-equity ratio would be considered as 70:30 as on COD. If the equity actually deployed is more than 30% of the capital cost, equity in excess of 30% shall be treated as normative loan: Provided that:

i. where equity actually deployed is less than 30% of the capital cost, actual equity shall be considered for determination of tariff:
ii. the equity invested in foreign currency shall be designated in Indian rupees on the date of each investment:

iii. any grant obtained for the execution of the project shall not be considered as a part of capital structure for the purpose of debt: equity ratio.

45. By order dated 6.2.2007 in Petition No.119/2005, the Commission had determined the annual fixed charges, on the basis of debt-equity ratio of 61.73:38.27 on COD, as approved by the Central Government. During the subsequent tariff periods, the additional capitalization has been funded through 70:30 debt-equity ratio. In the instant petition, the Petitioner has stated that the funding of additional capital expenditure has been made through internal resources and others. Accordingly, in terms of Regulation 19 of the 2014 Tariff Regulations, the debt-equity ratio of 70:30 has been considered on the admitted additional capital expenditure, after adjustment of un-discharged liabilities.

Return on Equity

46. Regulation 24 of the 2014 Tariff Regulations provides as under:

"24. Return on Equity: (1) Return on equity shall be computed in rupee terms, on the equity base determined in accordance with regulation 19.

(2) Return on equity shall be computed at the base rate of 15.50% for thermal generating stations, transmission system including communication system and run of the river hydro generating station, and at the base rate of 16.50% for the storage type hydro generating stations including pumped storage hydro generating stations and run of river generating station with pondage:

Provided that:
i). in case of projects commissioned on or after 1st April, 2014, an additional return of 0.50 %
shall be allowed, if such projects are completed within the timeline specified in Appendix-I:

ii). the additional return of 0.5% shall not be admissible if the project is not completed within the timeline specified above for reasons whatsoever:

iii). additional RoE of 0.50% may be allowed if any element of the transmission project is completed within the specified timeline and it is certified by the Regional Power Committee/National Power Committee that commissioning of the particular element will benefit the system operation in the regional/national grid:

iv). the rate of return of a new project shall be reduced by 1% for such period as may be decided by the Commission, if the generating station or transmission system is found to be declared under commercial operation without commissioning of any of the Restricted Governor Mode Operation (RGMO)/ Free Governor Mode Operation (FGMO), data telemetry, communication system up to load dispatch centre or protection system: v) as and when any of the above requirements are found lacking in a generating station based on the report submitted by the respective RLDC, RoE shall be reduced by 1% for the period for which the deficiency continues: vi) additional RoE shall not be admissible for transmission line having length of less than 50 kilometers.

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

"Tax on Return on Equity:

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

(2) Rate of return on equity shall be rounded off to three decimal places and shall be computed as per the formula given below:
Rate of pre-tax return on equity = Base rate / (1-t)
Where "t" is the effective tax rate in accordance with Clause (1) of this regulation and shall be calculated at the beginning of every financial year based on the estimated profit and tax to be paid estimated in line with the provisions of the relevant Finance Act applicable for that financial year to the company on pro-rata basis by excluding the income of non-generation or non- transmission business, as the case may be, and the corresponding tax thereon. In case of generating company or transmission licensee paying Minimum Alternate Tax (MAT), "t" shall be considered as MAT rate including surcharge and cess.

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

48. The base rate has been grossed up in terms of above regulations and Return on Equity has been worked out and allowed as under for the 2014-19 tariff period:

(Rs. in lakh)

		2014-15	2015-16	2016-17	2017-18	2018-19
A	Gross Notional Equity	120250.57	120748.46	120835.78	120967.99	120887.49
B	Addition due to additional capitalization	497.89	87.32	132.21	-80.50	4947.37
C	Closing Equity (A+B)	120748.46	120835.78	120967.99	120887.49	125834.86
D	Average Equity [(A+C)/2]	120499.51	120792.12	120901.89	120927.74	123361.17
E	Return on Equity (Base Rate)	16.500%	16.500%	16.500%	16.500%	16.500%
F	Tax rate for the year	20.961%	21.342%	21.342%	21.342%	21.549%
G	Rate of Return on Equity [E/(1-F)]	20.876%	20.977%	20.977%	20.977%	21.032%
H	**Return on Equity (D*F)**	**25155.48**	**25338.56**	**25361.59**	**25367.01**	**25945.32**

Interest on loan

49. Regulation 26 of the 2014 Tariff Regulations provides as under:

"26. Interest on loan capital:

(1) The loans arrived at in the manner indicated in regulation 19 shall be considered as gross normative loan for calculation of interest on loan.

(2) The normative loan outstanding as on 1.4.2014 shall be worked out by deducting the cumulative repayment as admitted by the Commission up to 31.3.2014 from the gross normative loan.

(3) The repayment for each of the year of the tariff period 2014-19 shall be deemed to be equal to the depreciation allowed for the corresponding year/period. In case of Decapitalization 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 up to the date of de- capitalization of such asset.

(4) Not withstanding any moratorium period availed by the generating company or the transmission licensee, as the case may be, the repayment of loan shall be considered from the first year of commercial operation of the project and shall be equal to the depreciation allowed for the year or part of the year.

(5) The rate of interest shall be the weighted average rate of interest calculated on the basis of the actual loan portfolio after providing appropriate accounting adjustment for interest capitalized:

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

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

(6) The interest on loan shall be calculated on the normative average loan of the year by applying the weighted average rate of interest.

(7) The generating company or the transmission licensee, as the case may be, shall make every effort to re-finance the loan as long as it results in net savings on interest and in that event the costs associated with such re-financing shall be borne by the beneficiaries and the net savings shall be shared between the beneficiaries and the generating company or the transmission licensee, as the case may be, in the ratio of 2:1.

(8) The changes to the terms and conditions of the loans shall be reflected from the date of such re-financing.

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

Provided that the beneficiaries or the long-term transmission customers /DICs shall not withhold any payment on account of the interest claimed by the generating company or the transmission licensee during the pendency of any dispute arising out of re-financing of loan."

50. Interest on loan has been worked out as under:

i. The opening gross normative loan as on 1.4.2014 has been arrived at in accordance with Regulation 26 of the 2014 Tariff Regulations.

ii. The weighted average rate of interest has been worked out on the basis of the actual loan portfolio of respective year applicable to the project.

iii. The repayment for the years of the 2014-19 tariff period has been considered equal to the depreciation allowed for that year.

iv. Interest on loan has been calculated on the normative average loan of the year by applying the weighted average rate of interest.

51. Accordingly, Interest on loan has been computed as under:

(Rs. in lakh)

	2014-15	**2015-16**	**2016-17**	**2017-18**	**2018-19**
Gross Normative loan (A)	200449.52	201611.26	201815.02	202123.51	201935.67
Cumulative Repayment (B)	104828.81	117760.74	130718.65	143686.08	156334.87
Net loan-Opening (C)=(A-B)	95620.71	83850.52	71096.36	58437.42	45600.80
Repayment during the year (D=Depreciation)	12931.93	12964.71	12969.73	12963.51	6322.67
Cumulative repayment adjustment due to de-capitalization (E)	0.00	6.80	2.30	314.72	133.45
Net Repayment (F)=(D-E)	12931.93	12957.91	12967.43	12648.78	6189.22
Addition due to additional capitalization (G)	1161.74	203.76	308.49	(-) 187.84	11543.86
Net loan-Closing (H)=(C+G-F)	83850.52	71096.36	58437.42	45600.80	50955.44

	2014-15	2015-16	2016-17	2017-18	2018-19
Average loan (I)=[(C+H)/2]	89735.61	77473.44	64766.89	52019.11	48278.12
Weighted Average Rate of Interest (J)	12.201%	12.255%	12.255%	12.255%	12.255%
Interest on loan (K) = (I*J)	**10948.56**	**9494.27**	**7937.10**	**6374.87**	**5916.42**

Depreciation

52. Regulation 27 of the 2014 Tariff Regulations provides as under:

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

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

(2) The value base for the purpose of depreciation shall be the capital cost of the asset admitted by the Commission. In case of multiple units of a generating station or multiple elements of transmission system, weighted average life for the generating station of the transmission system shall be applied. Depreciation shall be chargeable from the first year of commercial operation. In case of commercial operation of the asset for part of the year, depreciation shall be charged on pro rata basis.

(3) The salvage value of the asset shall be considered as 10% and depreciation shall be allowed up to maximum of 90% of the capital cost of the asset:

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

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

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

(4) Land other than the land held under lease and the land for reservoir in case of hydro generating station shall not be a depreciable asset and its cost shall be excluded from the capital cost while computing depreciable value of the asset.

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

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

(6) In case of the existing projects, the balance depreciable value as on 1.4.2014 shall be worked out by deducting the cumulative depreciation as admitted by the Commission up to 31.3.2014 from the gross depreciable value of the assets.

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

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

53. The COD of the generating station is 25.8.2005. Since the generating station has completed 12 years of commercial operation during the year 2017-18, the weighted average rate of depreciation has been considered for calculation of depreciation during the period from 2014-15 to 2017-18. The remaining depreciable value has been spread over the balance useful life of the generating station from the year 2018-19 onwards. Accordingly, depreciation has been worked out as under:

(Rs. in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Gross block (A)	320700.09	322359.71	322650.80	323091.50	322823.16
Additional capital expenditure (B)	1659.62	291.08	440.70	(-)268.34	16491.22
Closing gross block (C)=(A+B)	322359.71	322650.80	323091.50	322823.16	339314.38
Average gross block (D)=[(A+C)/2]	321529.90	322505.26	322871.15	322957.33	331068.77
Rate of Depreciation (E)	4.022%	4.020%	4.017%	4.014%	1.910%
Depreciable Value [90% of (D)]	289376.91	290254.73	290584.03	290661.59	297961.89
Balance useful life (Year)	26.40	25.40	24.40	23.40	22.40
Remaining Depreciable value	184548.78	172494.67	159866.06	146976.19	141627.70
Depreciation (D*E)	**12931.93**	**12964.71**	**12969.73**	**12963.51**	**6322.67**

Operation & Maintenance expenses

54. Regulation 29(4)(a) of the 2014 Tariff Regulations provides the O&M expense norms for hydrogenating stations which have been operational for three or more years as on 1.4.2014. The generating station of the Petitioner is in operation

for more than three years as on 1.4.2014. Accordingly, the O&M expense norms applicable for the generating station of the Petitioner in terms of the said regulations is as under:

(Rs. in lakh)

Name of station	2014-15	2015-16	2016-17	2017-18	2018-19
Indira Sagar HEP	8607.73	9179.63	9789.52	10439.94	11133.57

55. The year-wise normative O&M expenses claimed by the Petitioner as above in terms of Regulation 29(4)(a) of the 2014 Tariff Regulations is allowed.

Interest on Working Capital

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

> *"28. Interest on Working Capital:*
> *(1) The working capital shall cover*
> *xxx*
> *(c) Hydro generating station including pumped storage hydroelectric generating station and transmission system including communication system:*
> *(i) Receivables equivalent to two months of fixed cost;*
> *(ii) Maintenance spares @ 15% of operation and maintenance expenses specified in regulation 29; and*
> *(iii) Operation and maintenance expenses for one month."*

57. Clause (3) of Regulation 28 of the 2014 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 1.4.2014 or as on 1st April of the year during the tariff period 2014-15 to 2018-19 in which the generating station or a unit thereof or the transmission system including communication system or element thereof, as the case may be, is declared under commercial operation, whichever is later".*

58. Working capital has been calculated as under:

Working capital for Maintenance Spares

59. Maintenance spares have been worked out on the basis of 15% of the O&M expenses as under:

(Rs. in lakh)

2014-15	2015-16	2016-17	2017-18	2018-19
1291.16	1376.94	1468.43	1565.99	1670.04

Working capital for Receivables

60. Receivable component of working capital has been worked out on the basis of

two months of fixed cost as under:

(Rs. in lakh)

2014-15	2015-16	2016-17	2017-18	2018-19
9874.65	9764.08	9610.62	9458.51	8468.66

Working capital for O&M Expenses

61. O&M expenses component of Working Capital has been worked out as one month of O&M Expenses as under:

(Rs. in lakh)

2014-15	2015-16	2016-17	2017-18	2018-19
717.31	764.97	815.79	870.00	927.80

62. In terms of clause (3) of Regulation 28 of the 2014 Tariff Regulations, the bank rate of 13.50% as on 1.4.2014 for the 2014-19 tariff period has been considered. Accordingly, Interest on working capital has been worked out as per the methodology provided in Regulation 28 of the 2014 Tariff Regulations and allowed as under:

(Rs. in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Working Capital towards O & M expenses	717.31	764.97	815.79	870.00	927.80
Working Capital towards Maintenance Spares	1291.16	1376.94	1468.43	1565.99	1670.04
Working Capital towards Receivables	9874.65	9764.08	9610.62	9458.51	8468.66
Total Working Capital	**11883.12**	**11905.99**	**11894.85**	**11894.50**	**11066.49**
Rate of Interest	13.50%	13.50%	13.50%	13.50%	13.50%
Total Interest on working capital	**1604.22**	**1607.31**	**1605.80**	**1605.76**	**1493.98**

Annual Fixed Charges

63. Accordingly, the annual fixed charges approved for the generating station for the 2019-24 tariff period (after truing-up) are summarized as under:

(Rs. in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	12931.93	12964.71	12969.73	12963.51	6322.67
Interest on Loan	10948.56	9494.27	7937.10	6374.87	5916.42
Return on Equity	25155.48	25338.56	25361.59	25367.01	25945.32
Interest on Working Capital	1604.22	1607.31	1605.80	1605.76	1493.98

	2014-15	2015-16	2016-17	2017-18	2018-19
O&M Expenses	8607.73	9179.63	9789.52	10439.94	11133.57
Total	**59247.92**	**58584.48**	**57663.74**	**56751.09**	**50811.95**

Normative Annual Plant Availability Factor

64. Clause (4) of Regulation 37 of the 2014 Tariff Regulations provides for the Normative Annual Plant Availability Factor (NAPAF) of 85% for hydro generating stations already in operation. Accordingly, NAPAF of 85% has been allowed for the generating station in accordance with the said regulation.

Design Energy

65. As regards Design Energy, depending upon the development of canal network and the Irrigation command, the following three stages of the power generation for 90% dependable year has been defined in the Techno-Economic Clearance (TEC) of CEA for the Project, depending upon the water utilization by the State of Madhya Pradesh in the Narmada Basin:

Stage of Irrigation Development	Total IrrigationUtilization in Basin (BM^3) by MP	Firm Power (MW)
Stage-I	≤6.00	226
Stage-II	>6.00 ≤13.00	From 226 to 125
Stage-III	>13.00 ≤18.25	From125 to 100
Final Stage	≥18.25	100

66. The Respondent, MPPMCL has submitted that CEA had cleared the Techno Economic Clearance (TEC) of project on 22.5.1984 based on NWDT order dated 12.12.1979 and that CEA had considered the same figures of water utilization for Stage I, Stage II & Stage III in BMQ units in place of MAFT units, as mentioned in NWDT award dated 12.12.1979. In this connection, the Respondent MPPMCL vide letter dated 17.5.2021 has requested CEA to review TEC dated 22.5.1984so that the correct stage-wise firm power can be ascertained. As such, the Respondent, MPPMCL has prayed that the Commission may revise the tariff orders, as and when CEA revises the DE of the generating station. In response, the Petitioner has

submitted that CEA vide its letter dated 29.6.2021 has advised the Petitioner to examine the claim of the Respondent MPPMCL and in case, the Petitioner finds the same to be correct, then it may submit a request along with backup details/ supporting documents to CEA. The Petitioner has submitted that as the project clearance/ documents etc., in respect of the generating station were accorded in favour of the Respondent NVDD, GoMP, the backup details/ supporting documents were not available with the Petitioner. The Petitioner has further submitted that the implementation of NWDT award and utilization of Narmada water allocated to the State of Madhya Pradesh are matters/ issues which pertain to the Respondent, NVDD, GoMP, and, therefore, the Petitioner is not in position to comment anything over the authenticity of the claim made by the Respondent MPPMCL as regards the errors in TEC accorded by CEA on dated 22.5.1984.

67. The Petitioner has further submitted that the percentage of the actual Secondary Energy Generation, on average basis, works out to 34.86%, which is in close vicinity of 35.45% as envisaged in TEC. Thus, the performance of the generating station has been in line and the Firm energy and Secondary energy generation from the generating station has been in congruence as envisaged in TEC during ongoing development stage, which would cease in 2024 as per NWDT Award. Thereafter, the final allocation of water shall be carried out on the basis of actual utilization of water in Narmada Basin by the States, as well as on the basis of additional hydrological data which would be available by that time. As the firm power/ energy and secondary energy generation will also be subjected to review, based on the actual available data, the prayer of Respondent, MPPMCL at this juncture, for revision in TEC of the project is not warranted.

68. Keeping in view that the firm power/ energy and secondary energy generation

will be subjected to review by CEA, based on the actual available data, we find no reason to revise the DE of the generating station at this stage. The Petitioner, in the petition, has submitted that in order to work out the Reducing Power Benefit i.e. Firm Power during the respective periods of Stage-II, the Commission in its order dated 13.6.2012 in Petition No. 154/2010 had worked out the following formula:

$$FP_{\,(stage\text{-}II)} = 226 - \frac{(226 - 125) \times (Q - 6.00)}{(13 - 6.00)}$$

Where,
FP (stage-II) = Reducing power benefit i.e. Firm Power (in MW) on pro-rata basis during Stage–II period of Indira Sagar Multi-purpose Project.

Q* = Actual water utilization (in BM3) for Irrigation by MP in the Narmada Basin to be notified by NCA for respective years

*Note: *The value of 'Q' shall be irreversible and shall not be reduced once attained.*

69. Accordingly, the Petitioner has submitted that based on the actual water utilization by the State of Madhya Pradesh, the Commission in order dated 13.6.2012 in Petition No. 154/2010 had allowed the Reducing Power Benefits i.e. Firm Power and the Design Energy shall be calculated based on water utilization certification by Narmada Control Authority. Accordingly, the Petitioner has submitted the details of actual water utilization certified by Narmada Control Authority for the period from 2014-17 to 2017-19 and the consolidated claim is as under:

Year	**Water Utilization by MP (as Published by NCA) (BMC)**	**Reduced Power Benefits (Stg-II)**	
		Firm Power (MW)	**Design Energy (MU)**
2014-15	8.776	185.95	1628.89
2015-16	10.249	164.69	1442.7
2016-17	10.072	167.25	1465.10/ **1442.70**
2017-18	9.299	-	**-**
2018-19	10.402	-	**-**

70. The Petitioner has submitted that the annual utilization account of 2015-16 is applicable for the years 2016-17 and 2017-18, as 'the value of Q shall be irreversible and shall not be reduced once attained.' Accordingly, the above formula is adopted

in the calculation of design energy for the 2014-19 tariff period as under:

Month	Design Energy (MU)				
	2014-15	**2015-16**	**2016-17**	**2017-18**	**2018-19**
April	133.88	118.58	118.58	118.58	116.98
May	138.34	122.53	122.53	122.53	120.88
June	133.88	118.58	118.58	118.58	116.98
July	138.34	122.53	122.53	122.53	120.88
August	138.34	122.53	122.53	122.53	120.88
September	133.88	118.58	118.58	118.58	116.98
October	138.34	122.53	122.53	122.53	120.88
November	133.88	118.58	118.58	118.58	116.98
December	138.34	122.53	122.53	122.53	120.88
March	138.34	122.53	122.53	122.53	120.88
February	124.96	110.67	110.67	110.67	109.18
January	138.34	122.53	122.53	122.53	120.88
TOTAL	**1628.89**	**1442.71**	**1442.71**	**1442.71**	**1423.26**

71. Further, the Petitioner has prayed to consider deriving formula for the determination of reducing Firm Power i.e. FP (Stage-III) of the generating station, in the event of water utilization in Narmada Basin is surpassed by the State of Madhya Pradesh, by more than 13 BMC in the intervening period of the 2019-24 tariff period. This prayer of the Petitioner will be considered at the time of truing-up of tariff for the 2019-24 tariff period, in the event, the water utilization is surpassed by more than 13 BMC during the intervening period.

72. The annual fixed charges for the 2014-19 tariff period allowed vide order dated 31.5.2016 in Petition No.265/GT/2014 and the annual fixed charges allowed in this order (after truing-up) for the 2014-19 tariff period in respect of the generating station is as under:

(Rs. in lakh)

	2014-15	**2015-16**	**2016-17**	**2017-18**	**2018-19**
Annual fixed charges allowed vide order dated 31.5.2016 in Petition No. 265/GT/2014	59303.28	59081.94	60086.83	60669.04	52860.46
Annual fixed charges allowed in this order	**59247.92**	**58584.48**	**57663.74**	**56751.09**	**50811.95**

73. The difference between the annual fixed charges recovered by the Petitioner in terms of order dated 31.5.2016 in Petition No. 265/GT/2014 and the annual fixed

charges determined by this order shall be adjusted in terms of the provisions of Regulation 8 of the 2014 Tariff Regulations.

DETERMINATION OF TARIFF FOR THE 2019-24 TARIFF PERIOD

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

Capital cost claimed

(Rs. in lakh)

	2019-20	2020-21	2021-22	2022-23	2023-24
Opening Capital Cost	339611.45	340422.79	343413.47	356370.12	366308.72
Add: Addition during the year/period	1108.57	3363.50	13291.55	10166.69	13786.68
Less: De-capitalisation during the year/period	(-)27.63	(-)457.44	(-)419.51	(-)312.70	(-)114.40
Add: Discharges during the year/period	(-)269.60	84.61	84.61	84.61	3927.72
Closing Capital Cost	340422.79	343413.47	356370.12	366308.72	383908.72
Average Capital Cost	340017.12	341918.13	349891.80	361339.42	375108.72

Annual fixed charges claimed

(Rs. in lakh)

	2019-20	2020-21	2021-22	2022-23	2023-24
Return on Equity	25236.69	25359.86	25854.65	26555.11	27389.07
Interest on Loan	5938.08	5440.57	5447.56	5705.39	6097.07
Depreciation	5415.38	5491.13	5784.68	6222.63	6771.41
Interest on Working Capital	1104.70	1130.79	1174.78	1229.60	1292.15
O&M Expenses	13444.56	14164.01	14928.06	15740.22	16604.29
Total	**51139.42**	**51586.36**	**53189.73**	**55452.95**	**58154.00**

75. The Respondent MPPMCL has filed its reply vide its affidavit dated 3.6.2020 and the Petitioner vide affidavit dated 24.8.2020 has filed its rejoinder to the said reply. In compliance with the directions of the Commission, the Petitioner has filed the additional information vide affidavit dated 24.5.2021 and has served the same on the Respondents. Based on the submissions of the parties and the documents available on record and on prudence check, we proceed to determine the tariff of the generating station for the 2019-24 tariff period, as stated in the subsequent paragraphs.

Capital Cost

76. Clause (1) of Regulation 19 of the 2019 Tariff Regulations provides that the capital cost as determined by the Commission after prudence check in accordance with this regulation shall form the basis of determination of tariff for existing and new projects. However, capital cost for an existing project is governed as per clause (3) of Regulation 19 of the 2019 Tariff Regulations, which is as under:

> *"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 modernization 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 up to 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…."*

77. The Commission, while truing-up the tariff of this generating station for the 2014-19 tariff period has, in this order, allowed the closing capital cost of Rs.339314.38 lakh as on 31.3.2019. Accordingly, in terms of Regulation 19 of the 2019 Tariff Regulations, the capital cost of Rs.339314.38 lakh as on 31.3.2019, has been considered as the opening capital cost as on 1.4.2019, for the purpose of determination of tariff for the 2019-24 tariff period.

<u>Additional Capital Expenditure</u>

78. Clause (2) of Regulation 9 of the 2019 Tariff Regulations provides that the application for determination of tariff shall be on admitted capital cost including additional capital expenditure already admitted and incurred 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 along with the true up for the 2014-19 period in accordance with the 2014 Tariff Regulations. Regulations 25 and 26 of the 2019 Tariff Regulations provides as under:

> *"25. Additional Capitalization 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 Capitalization 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-capitalization 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-capitalization 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-capitalization takes place with corresponding adjustments in cumulative depreciation and cumulative repayment of loan, duly taking into consideration the year in which it was capitalized. "

79. The Petitioner has submitted that the net projected additional capital expenditure of Rs.80037.89 lakh has been claimed till 31.3.2024, under various provisions of Regulation 25 and Regulation 26 of the 2019 Tariff Regulations. Out of this, the Petitioner has stated that some of the projected additional capital expenditure claimed is in respect of admitted capital works, which have spilled over from 2014-19 tariff period. The year-wise details of the projected additional capital expenditure claimed by the Petitioner are as under:

(Rs. in lakh)

	2019-20	**2020-21**	**2021-22**	**2022-23**	**2023-24**
Gross Capital Cost as on 31.3.2019: 479199.94					
Opening cumulative capitalized expenditure projected at the beginning of respective years	479199.94	481826.18	486509.22	513913.38	534666.46
Regulation 25 (**Additional capital expenditure within the original scope after COD**)					
(1)(a) Liabilities to meet award of arbitration or decree of court	2351.56	2704.13	22114.37	16585.78	16585.77
Regulation 25(2) In case of replacement of asset					
(a) The useful life of the assets is not commensurate with the useful life of the project	16.09	505.05	295.25	107.59	440.22
(c) The replacement of such asset or equipment is necessary on account of obsolescence of technology;	64.60	97.85	38.99	559.71	245.38
(d) The replacement of such asset or equipment has otherwise been allowed by the Commission	57.18	697.40	647.07	0.00	0.00
Regulation 26. Additional capital expenditure beyond the original scope					
(1)(b) Change in law or compliance of any existing law.	24.34	6.58	1206.62	0.00	0.00
(1)(d) need for higher security and safety of the plant as advised or directed by appropriate Government Instrumentality or statutory authorities responsible for national security or internal security	112.47	672.03	3101.86	3500.00	7300.00
Total additional capital expenditure projected to be incurred during respective years	2626.24	4683.04	27404.16	20753.08	24571.37
Closing cumulative projected additional capital expenditure at	**481826.18**	**486509.22**	**513913.38**	**534666.46**	**559237.83**

	2019-20	2020-21	2021-22	2022-23	2023-24
the end of respective years					

80. After deducting the SSP Component, Irrigation Component and GoMP's 50% Subvention towards increased R&R cost, the cumulative capitalized cost, as projected up to 31.3.2024 is Rs.559237.83 lakh, which has been apportioned. Thus, the projected cost of Power Component works out as Rs.384261.23 lakh, as on 31.3.2024. The details of the cumulative capitalized cost vis-à-vis Power Component during the respective years of the 2019-24 tariff period are as under:

(Rs. in lakh)

Period		Additional cost capitalized*		Capitalized expenditure at the end of the period*	
From	To	Gross	Power Component	Gross	Power Component
1-4-2019	31-3-2020	2626.24	1080.94	481826.18	344956.86
1-4-2020	31-3-2021	4683.04	2906.06	486509.22	347862.93
1-4-2021	31-3-2022	27404.16	12872.04	513913.38	360734.96
1-4-2022	31-3-2023	20753.08	9853.99	534666.46	370588.95
1-4-2023	31-3-2024	24571.37	13672.28	559237.83	384261.23

*Note: *Inclusive of Un-discharged liabilities*

81. The Petitioner has furnished the details of the projected un-discharged liabilities in Power Component, as on 31st March of the respective years of the 2019-24 tariff period as under:

(Rs. in lakh)

Projected as on				
31.3.2019	**31.3.2020**	**31.3.2021**	**31.3.2022**	**31.3.2023**
4264.47	4534.08	4449.46	4364.85	4280.24

82. The net Power Component claimed by the Petitioner after considering un-discharged liabilities is as under:

(Rs. in lakh)

	On Projection basis				
	2019-20	2020-21	2021-22	2022-23	2023-24
Net Power Component at the beginning of the year	339611.45	340422.79	343413.47	356370.12	366308.72
Additions to Power Component	1080.94	2906.06	12872.04	9853.99	13672.28
Un-discharged liabilities attributable to Power Component at beginning	4264.47	4534.08	4449.46	4364.85	4280.24

of the year					
Additions in Net Power Component	811.34	2990.68	12956.65	9938.60	17600.00
Net Power Component at the end of the year	340422.79	343413.47	356370.12	366308.72	383908.72

Note: The Petitioner's claim for amounts in crore for the 2019-24 tariff period is converted to lakh as above.

<u>Projected Additional Capital Expenditure for the 2019-24 tariff period</u>

83. The year-wise details of the projected additional capital expenditure claimed by the Petitioner during the 2019-24 tariff period, under the various provisions of Regulations 25 and 26 of the 2019 Tariff Regulations are as under:

a) Gross projected additional capital expenditure claimed is as under:

(Rs. in lakh)

Year	**Additions**	**Regulation**					
		25(1)(a)	**25(2)(a)**	**25(2)(c)**	**25(2)(d)**	**26(1)(b)**	**26(1)(d)**
2019-20	2626.24	2351.56	16.09	64.60	57.18	24.34	112.47
2020-21	4683.04	2704.13	505.05	97.85	697.40	6.58	672.03
2021-22	27404.16	22114.37	295.25	38.99	647.07	1206.62	3101.86
2022-23	20753.08	16585.78	107.59	559.71	0.00	0.00	3500.00
2023-24	24571.37	16585.77	440.22	245.38	0.00	0.00	7300.00
	80037.89	**60341.61**	**1364.20**	**1006.53**	**1401.65**	**1237.54**	**14686.36**

b) Net Power Component claimed, excluding un-discharged and discharge of liabilities is as under:

(Rs. in lakh)

Year	**Regulation**						
	25(1)(a)	**25(2)(a)**	**25(2)(c)**	**25(2)(d)**	**26(1)(b)**	**26(1)(d)**	**Total**
2019-20	806.27	19.30	71.77	74.43	24.34	112.47	1108.57
2020-21	927.15	585.74	140.90	1020.00	6.58	683.13	3363.50
2021-22	7582.25	313.03	46.45	848.00	1206.62	3295.20	13291.55
2022-23	5686.69	120.00	860.00	0.00	0.00	3500.00	10166.69
2023-24	5686.68	500.00	300.00	0.00	0.00	7300.00	13786.68

84. The Respondent MPPMCL has submitted that the projected additional capital expenditure claimed by the Petitioner in terms of the provisions of Regulation 25(2) and Regulation 26(1) of the 2019 Tariff Regulations may be permitted only after prudence check. It has also submitted that the Petitioner has not furnished proper documents regarding the expenses claimed on account of higher safety and security of the plant. In response, the Petitioner has clarified that it has claimed additional capital expenditure against the replacement of assets deployed under the original

scope, after the cut-off date, in line with Regulation 25(2) of 2019 Tariff Regulations. The Petitioner has further submitted that the projected additional capital expenditure to be incurred on assets beyond the original scope is in accordance with Regulation 26(1) of 2019 Tariff Regulations.

85. We have examined the matter. The total projected additional capital expenditure claimed by the Petitioner, prior to adjustment of de-capitalization, is as under:

(Rs. in lakh)

	2019-20	2020-21	2021-22	2022-23	2023-24
Total projected additional capital expenditure claimed including de-capitalization **[A]**	2626.24	4683.04	27404.16	20753.08	24571.37
De-capitalization claimed **[B]**	27.63	457.44	419.51	312.70	114.40
Total Projected additional capital expenditure claimed excluding de-capitalization **[C] = [A]-[B]**	2653.87	5140.48	27823.67	21065.78	24685.77

86. The Petitioner has not furnished the unit-wise breakup of the additional capital expenditure claimed. However, the admissibility of the projected additional capital expenditure claimed by the Petitioner, prior to the adjustment of de-capitalization of assets/works, for each year of the 2019-24 tariff period, is examined as stated below:

2019-20

(Rs. in lakh)

Sl. No.		Works	Claimed	Allowed	Reason for admissibility
A.	**Additional capital expenditure claimed under Regulation 25(1)(a)**				
1	New Items	B LAND - Land Compensation Payments, Stamp Duty & Registration Fees etc.	414.18	414.18	The Petitioner has submitted that NVDA vide letter dated 25.6.2019 has conveyed its in-principle approval of revised cost against R&R of the generating station. The expenditure relates to R&R works of the generating station and shall be undertaken against reference cases in Hon’ble High Court, District Court – Khandwa, Madhya Pradesh, the orders of Grievance Redressal Authority and other statutory authority, in respect of petitions filed by project

Sl. No.		Works	Claimed	Allowed	Reason for admissibility
					affected families (PAF's)for review of land acquisition and compensation payments. It is to mention that the Petitioner has claimed the additional capital expenditure in a phased manner for Rs. 50129.38 lakh in the 2019-24 tariff period. Further, in compliance of the directions vide ROP dated 13.4.2021, the Petitioner has submitted that the additional capital expenditure claimed is based on the information received from GoMP (i.e. the implementation agency) and expected expenditure during the period. Considering the above and that the expenditure is on account of balance R&R works which is to be incurred in compliance with the directions of the Courts and statutory authorities, the additional capital expenditure claimed is **allowed** under Regulation 25(1)(a) of the 2019 Tariff Regulations.
2		B LAND-Development of R/sites and Contingency Plan	1937.38	1937.38	The Petitioner has submitted that NVDA vide letter dated 25/06/2019 has conveyed its in-principle approval of the revised cost against R&R of the generating station. It has submitted that the additional expenditure relates to R&R works of the generating station, and shall be done against following: (a) works for contingency plan during monsoon period by District Administration; (b) re-developed/ repaired facilities at various resettlement sites to hand over to local authorities. It has further submitted that the payments shall be required to be done as per the orders of Hon'ble High Court, District Court – Khandwa, Madhya Pradesh, orders of Grievance Redressal Authority and other statutory authority. It is noticed that the Petitioner has claimed the additional capital expenditure in phased manner for Rs. 10212.23 lakh in the 2019-24 tariff period. In compliance of the directions vide ROP dated 13.4.2021, the Petitioner has submitted that the expenditure claimed is based on the information received from GoMP (i.e.

Sl. No.		Works	Claimed	Allowed	Reason for admissibility
					the implementation agency and expected expenditure during the period. Considering the above and that the expenditure is on account of balance R&R works which is to be incurred in compliance with the directions of the Court and authorities, the additional capital expenditure claimed is **allowed** under Regulation 25(1)(a) of the 2019 Tariff Regulations.
B. Additional capital expenditure claimed under Regulation 25(2)(a)					
3	New Items	01 Number Vehicle Mini Truck (Light commercial truck) in lieu of existing TATA 407 (Reg. No. MP04 K 4556)	11.50	11.50	The Petitioner has submitted that the expenditure incurred is towards the replacement of the existing asset, which forms part of the original scope of the project. It has stated that the old asset has completed its useful life and such capitalization is towards the replacement of the said asset. The Petitioner has further claimed the de-capitalisation of the old asset of Rs. 0.39 lakh, which has been considered under deletions. Considering the fact that the asset/work form part of the original scope and has been claimed as replacement, the additional capital expenditure claimed is **allowed** under Regulation 25(2)(a) of the 2019 Tariff Regulations.
4		Replacement of 24 V VRLA Battery bank (02 sets) cells which provides supply to MMB, firefighting system etc. at powerhouse of the generating station	6.07	6.07	The Petitioner has submitted that the projected additional capital expenditure claimed is towards the replacement of existing asset i.e. Battery banks which were under original scope of the project. It has stated that the replacement of old 24V Battery Bank was necessary to ensure the safety as well as for the reliable operation of the generating units. The Petitioner has also stated that the old asset has completed its useful life and as such the additional capitalization is towards the replacement of the said asset. Further, the Petitioner has claimed de-capitalisation of Rs.1.41 lakh for the old asset and the same is considered in deletions. Considering the fact that the asset/work form part of the original scope and has been claimed as replacement on account of the asset having become obsolete, the additional capital expenditure incurred towards the asset/ work is **allowed** under

Sl. No.		Works	Claimed	Allowed	Reason for admissibility
					Regulation 25 (2)(a) of the 2019 Tariff Regulations. The Petitioner is, however, directed to furnish at the time of truing-up, the details regarding the year the old asset was put to use.
5		Supply and installation of Two Sets of 192 V, 100 AH VRLA/ SMF Battery Bank for Dam control room of the generating station	1.73	1.73	The Petitioner has submitted that Battery banks which were within the original scope of the project were to provide emergency DC supply to various control panels. It has stated that the DC system is vital for the smooth functioning of hydro-mechanical equipment. The Petitioner has stated that the old asset has completed its useful life and as such the additional capitalization is towards the replacement of the said asset. Further, the Petitioner has claimed de-capitalisation of Rs.1.41 lakh for the old asset and the same is considered in deletions. Considering the fact that the asset/work form part of the original scope and has been claimed as replacement on account of it having become obsolete, the additional capital expenditure incurred towards the asset/work is **allowed** under Regulation 25(2)(a) of the 2019 Tariff Regulations.
C. Additional capital expenditure claimed under Regulation 25(2)(c)					
6	Already admitted works	Retrofitting of GE make air circuit breakers installed at UAB & SSB (1250 A & 3200A) of powerhouse with modern air circuit breakers.	25.58	25.58	The Petitioner has submitted that the asset/work has already been admitted by the Commission vide its order dated 31.5.2016 in Petition No. 265/GT/2014 for Rs.50 lakh. It has also submitted that in the first phase, retrofitting of 16 Nos. of modern Air Circuit Breakers was done in 2017-18 and Rs.22.04 lakh was partly capitalized and the activities in the second phase are going on. It is pertinent to mention that out of Rs. 50 lakh allowed vide order dated 31.5.2016, the balance amount of Rs. 27.96 lakh is available. Further, the Petitioner has claimed de-capitalisation of Rs.2.02 lakh for the old asset which has been considered under deletions.

Sl. No.		Works	Claimed	Allowed	Reason for admissibility
					However, considering the part capitalization of Rs.22.04 lakh and that the balance amount has been carried over to the 2019-20 and claimed for replacement of asset/work which is within the limit, the same is **allowed** under Regulation 25(2)(c) of the 2019 Tariff Regulations. The Petitioner is, however, directed to submit the reasons for the spill over of the additional capital expenditure along with relevant documents at the time of truing-up of tariff.
7	New Items	Up-gradation of remote telemetry system of Indira Sagar Power Station	15.27	15.27	The Petitioner has submitted that the existing asset has become obsolete, and the OEM has recommended the up gradation of the existing system. Considering the Petitioner has claimed the expenditure for replacement of asset on account of obsolescence of technology, the additional capital expenditure claimed is allowed under Regulation 25(2)(c) of the 2019 Tariff Regulations on replacement basis. Petitioner has not considered the de-capitalisation of old asset against which the expenditure is claimed. Accordingly, the amount of Rs.7.71 lakh has been considered for the old replaced asset under 'Assumed Deletions' in paragraph 99 of this order. The Petitioner is, however, directed to submit management certificate of competent authority with regard to certification for obsolescence of old asset, at the time of truing up of tariff.
8		Procurement of CB Analyzer	30.92	30.92	The Petitioner has submitted that the existing CB Analyzer procured in 2004 with DCRM kit, had become obsolete and no service support is available from the OEM i.e. M/s Scope. Considering the Petitioner has claimed the expenditure for replacement of asset on account of obsolescence of technology, the additional capital expenditure claimed is **allowed** under Regulation 25(2)(c) of the 2019 Tariff Regulations on replacement basis. Petitioner has submitted the de-capitalisation value of Rs.5.15 lakh for old asset against which the expenditure is claimed. Accordingly,

Sl. No.		Works	Claimed	Allowed	Reason for admissibility
					the same has been considered under 'De-capitalization' in paragraph 96 of this order. The Petitioner is, however, directed to submit management certificate of competent authority with regard to certification for obsolescence of old asset. at the time of truing up of tariff.
D. Additional capital expenditure claimed under Regulation 25(2)(d)					
9	Already Admitted	Replacement of starter panels of drainage and dewatering pumps from conventional starters to VVVF drive starter.	**74.43**	**40.00**	The Petitioner has submitted that the additional capital expenditure for the asset/work was admitted by the Commission vide its order dated 31.5.2016 in Petition No. 265/GT/2014 for Rs.40 lakh. It has also stated that for safety of installations, it is important to ensure proper and quick drainage/ dewatering of the seepage water. The Petitioner has claimed de-capitalisation of Rs.17.25 lakh for the old asset which has been considered under deletions. The Petitioner has not provided justifications for claiming higher cost or the reasons for spill over. Considering the fact that the additional capitalization for this work has been spilled over to this year, the additional capital expenditure has been restricted to Rs.40 lakh as of now, and **allowed** under Regulation 25(2)(d) of the 2019 Tariff Regulations. The Petitioner is directed to furnish the reasons for such spill over of the expenditure along with relevant documents at the time of truing-up of tariff.
E. Additional Capital Expenditure claimed under Regulation 26(1)(b)					
10	New Item	Installation and Commissioning of Lift having capacity of 08 passengers at Corporate Office Bhopal	24.34	0.00	Considering the fact that these assets are towards Corporate office expenses and is not related to operation of the generating station, the additional capital expenditure is **not allowed**.
F. Additional Capital Expenditure claimed under Regulation 26(1)(d)					
11	Already admitted item	Construction of security wall near Switchyard of the generating station, Narmada Nagar.	95.38	85.00	The Petitioner has submitted that the asset/work has already been admitted vide Commission's order dated 31.5.2016 in Petition No. 265/GT/2014. It has stated that the Intelligence Bureau (IB), Ministry of Home Affairs (MHA), GoI in its report dated 1610.2018 has recommended the

Sl. No.		Works	Claimed	Allowed	Reason for admissibility
					execution of this work on security grounds. Considering the fact that the additional capitalization allowed for this work has been spilled and is on account of higher safety of the generating station as per recommendations of IB, the additional capital expenditure is **allowed** under Regulation 26(1)(d) of the 2019 Tariff Regulations. However, in the absence of any reason for increase in the projected expenditure claimed, the same has been restricted to the amount of Rs.85 lakh, as allowed in order dated 31.5.2016 in Petition No. 265/GT/2014.
12	New Items	Implementation of Enterprises Resource Planning (ERP) for NHDC Power Station	6.58	6.58	The Petitioner has claimed a total amount of Rs.598.69 lakh in phased manner for the period 2019-22 on account of implementation of Enterprises Resource Planning (ERP). (Rs.6.58 lakh in 2019-20, Rs.197.37 in 2020-21 and Rs.394.74 lakh in 2021-22). Though the expenditure claimed do not fall under Regulation 26(1)(d) of the 2019 Tariff Regulations, keeping in view that the expenditure is considered necessary for the efficient management of the activities of the generating station, we, in relaxation of the provision of the regulation, **allow** the projected additional capital expenditure claimed by the Petitioner.
13		Supply of Security Gadgets at the generating station for CISF	2.07	2.07	The Petitioner has submitted that the Intelligence Bureau, Ministry of Home Affairs (MHA), GoI, New Delhi has included the generating station under Category-B. It has stated that the safety Committee/ CISF has reviewed the existing requirement of various security gadgets and the expenditure is related to the procurement of latest security gadgets as per requirement/ recommendations of CISF. Considering the fact that the additional capitalisation is on account of higher safety of generating station, the expenditure claimed is **allowed** under Regulation 26(1)(d) of the 2019 Tariff Regulations.

Sl. No.		Works	Claimed	Allowed	Reason for admissibility
14		Supply & Installation of integrated new sewage treatment plant for canteen building of powerhouse.	8.44	0.00	As the claim does not directly pertain to the generating station, the additional capitalisation claimed is **not allowed**.
Total Additional capital expenditure (A+B+C+D+E+F)			**2653.87**	**2576.27**	

87. Accordingly, the total additional capital expenditure allowed for 2019-20 is Rs.2576.27 lakh (Rs.2351.56 lakh + Rs.19.30 lakh + Rs.71.77 lakh +Rs.40 lakh + Rs.93.65 lakh).

<u>2020-21</u>

(Rs. in lakh)

Sl. No.		Works	Claimed	Allowed	Reason for admissibility
A. Additional capital expenditure claimed under Regulation 25(1)(a)					
1	New Items	B LAND - Land Compensation Payments, Stamp Duty & Registration Fees etc.	500.00	500.00	Considering the submissions of the Petitioner that the additional capital expenditure is on account of balance R&R works which are required to be done as per the orders of Hon'ble High Court, District Court – Khandwa, Madhya Pradesh, the orders of Grievance Redressal Authority and other statutory authority, the additional capital expenditure claimed is **allowed** under Regulation 25(1)(a) of the 2019 Tariff Regulations.
2		B LAND - Development of R/sites and Contingency Plan	2204.13	2204.13	
B. Additional capital expenditure claimed under Regulation 25(2)(a)					
3	New Items	01 Number Truck in lieu of existing Truck (Reg. No. MP04 K 4556)	19.50	19.50	The Petitioner has submitted that the additional capital expenditure claimed is towards the replacement of the existing asset, which was deployed under the original scope of the Project. It has stated that the old asset has completed its useful life and as such the additional capitalization claimed is for the replacement of the said asset. The Petitioner has further submitted that it has claimed de-capitalisation of Rs.0.69 lakh and Rs.0.78 lakh respectively for these assets, which have been considered under deletions. In view of this, the additional capital expenditure
4		01 Number Tipper in lieu of existing Tipper (Reg. No. MP04 K 6610)	26.50	26.50	

Sl. No.		Works	Claimed	Allowed	Reason for admissibility
					claimed is **allowed** under Regulation 25(2)(a) of the 2019 Tariff Regulations.
		Replacement of existing 2 V, 220 Cells 2400 AH Lead Acid battery bank along with replacement of 220 V DC Float cum Boost Chargers at powerhouse, the generating station	241.14	241.14	The Petitioner has submitted that the said asset supplies 220 V DC to control and protection system of generating units and unit/station auxiliary systems and has been claimed towards replacement of the existing asset. The Petitioner has stated that the old asset has completed its useful life and as such the additional capitalization is for replacement of the said asset. The Petitioner has claimed the de-capitalisation of Rs.53.95 lakh for the old asset which has been considered under deletions. Accordingly, the additional capital expenditure claimed is **allowed** under Regulation 25(2)(a) of the 2019 Tariff Regulations.
5		Replacement of 2X20KVA UPS installed at Powerhouse	10.00	10.00	The Petitioner has submitted that the assets are used to cater to uninterrupted supplies to control system and monitoring devices of the Powerhouse. It has stated that the additional capital expenditure claimed is for the replacement of existing asset and the old asset has completed its useful life and such capitalization is towards the replacement of the said asset. The Petitioner has claimed de-capitalisation of Rs.0.30 lakh for the old asset which has been considered under deletions. Accordingly, the additional capital expenditure claimed is **allowed** under Regulation 25(2)(a) of the 2019 Tariff Regulations.
6		Replacement of existing package AC's in PH and S/y	45.00	0.00	Considering the fact that these assets are in the nature of minor assets, the additional capital expenditure claimed is **not allowed**. The claim of the Petitioner for de-capitalisation of Rs.1.04 lakh for the old asset has also not been considered under deletions.
7		Replacement of engine of 1000 KVA DG set installed at switchyard of the generating station	52.00	52.00	The Petitioner has submitted that the expenditure is for the replacement of existing asset. It has stated that the asset/work is required for providing emergency power supply to Powerhouse & Switchyard, Dam etc. of the Power Station as well as for black start of 400 KV grid. The Petitioner has stated that the old asset has completed its useful life and the additional

Sl. No.		Works	Claimed	Allowed	Reason for admissibility
					capitalization is towards replacement of the said asset. Further, the Petitioner has claimed de-capitalisation of Rs.0.23 lakh for the old asset which has been considered under deletions. In view of this, the additional capital expenditure claimed is **allowed** under Regulation 25(2)(a) of the 2019 Tariff Regulations.
8		Construction of 05 numbers RCC overhead tank	102.92	102.92	The Petitioner has submitted that the additional capital expenditure claimed is for replacement of various overhead steel water tanks for providing proper water supply system for the station township. It has stated that as the old asset has completed its useful life, the additional capitalization is for replacement of the said asset. The Petitioner has also claimed the de-capitalisation of Rs.16.48 lakh for the old asset which has been considered under deletions. In view of this, the additional capital expenditure is **allowed** under Regulation 25(2)(a) of the 2019 Tariff Regulations.
9		Purchase of total station surveying instrument for Dam Division	5.43	0.00	Considering the fact that these assets are in the nature of tools & tackles, the additional capital expenditure claimed is **not allowed**. The Petitioner's claim for de-capitalisation of Rs.0.32 lakh for the old asset has not been considered under deletions.
10		Replacement of existing CO2 cylinders of CO2 bank for Generator fire protection	83.25	83.25	The Petitioner has submitted that the CO_2 firefighting system was installed during commissioning of the Project for extinguishing the fire inside the Generator Barrel, in case of any fire mishap. It has also mentioned that during hydro-testing, some of the cylinders failed. The Petitioner has further submitted that pursuant to IS 2190:2010, the cylinders which have completed useful life of 15 years, have to be replaced. The Petitioner has also claimed de-capitalisation of Rs. 6.90 lakh for the old asset which has been considered under deletions. Considering the fact that the old asset has completed its useful life and the additional capital expenditure claimed is for replacement of the said asset, the same is **allowed** under Regulation 25(2)(a) of the 2019 Tariff Regulations.
C. Additional capital expenditure claimed under Regulation 25(2)(c)					

Sl. No.		Works	Claimed	Allowed	Reason for admissibility
11	Already admitted work	Up-gradation of Automation system of 20 number Radial gates installed at the generating station.	115.90	75.00	The Petitioner has submitted that the asset/work was allowed vide order dated 31.5.2016 in Petition No. 265/GT/2014 for Rs.75 lakh. The Petitioner has also claimed the de-capitalisation of Rs 32.35 lakh for the old asset which has been considered under deletions. Considering the fact that the claim is for replacement/ up-gradation of the existing asset/work, the additional capital expenditure claimed is **allowed** under Regulation 25(2)(c) of the 2019 Tariff Regulations. Since the Petitioner has not provided detailed reasons for spill over and for increase in cost from that which was allowed earlier, the claim has been restricted to Rs.75 lakh. The Petitioner shall submit details at the time of true-up for consideration of actual expenditure.
12	New Items	Retrofit of existing numerical distance protection relay REL 521 to latest version numerical distance protection relay with common DR PC networking with all numerical relays at switchyard	25.00	25.00	The Petitioner has submitted that the existing asset has now become obsolete, and no service support is available from OEM i.e. M/s ABB. Considering the fact that the Petitioner has claimed the expenditure for replacement of asset on account of obsolescence of technology, the additional capital expenditure claimed is **allowed** under Regulation 25(2)(c) of the 2019 Tariff Regulations on replacement basis. Petitioner has submitted the de-capitalisation value of Rs.10.70 lakh for old asset against which the expenditure is claimed. Accordingly, the same has been considered under 'De-capitalization' in paragraph 96 of this order. The Petitioner is, however, is directed to submit management certificate of competent authority with regard to certification for obsolescence of old asset. at the time of truing up of tariff.
D. Additional capital expenditure claimed under Regulation 25(2)(d)					
13	Already admitted works	Construction of 24 Number of F type units and 20 Number of Single Officer Accommodation	800 *(revised on account of typographical error vide affidavit dated*	636	The Petitioner has submitted that the asset/work has already been admitted vide Tariff order dated 31.5.2016 in Petition No. 265/GT/2014 for Rs.636 lakh. The Petitioner has also submitted that it had acquired the colony of the generating station, which was constructed by GoMP about 30 years back. The Petitioner has also stated that there was requirement for

Sl. No.		Works	Claimed	Allowed	Reason for admissibility
			24.5.2021)		Construction of sufficient numbers of F-type quarters to cater to the entitled class of residential quarters to the officers posted at the generating Station. It is noticed that the Petitioner vide affidavit dated 24.5.2021 has submitted that due to typographical error, the additional capital claim of Rs.500 lakh has been revised to Rs.800lakh. Considering that the Commission had allowed Rs.636 lakh for this asset/ work earlier, the claim for additional capital expenditure is restricted to Rs.636 lakh and is **allowed** under Regulation 25(2)(d) of the 2019 Tariff Regulations. It is also noticed that the Petitioner has not considered the de-capitalisation of old asset/work and as such the amount of Rs.71.02 lakh has been considered under 'Assumed Deletions' in paragraph 99 of this order. The Petitioner is, however, directed to submit the actual claim, reasons for spill over and increase in cost along with supporting documents at the time of truing up of tariff.
14	Already Admitted	Replacement of existing Governing System with Electronic Governor	520.00	520.00	The Petitioner has submitted that the asset/work has already been admitted vide order dated 31.5.2016 in Petition No. 265/GT/2014 for Rs. 2000 lakh. The Petitioner has also claimed de-capitalisation of Rs.322.60 lakh for old asset which has been considered under deletions. Considering that the additional capital expenditure was allowed by the Commission vide earlier order and is towards the replacement of asset, the same is **allowed** under Regulation 25(2)(d) of the 2019 Tariff Regulations
E. Additional capital expenditure claimed under Regulation 26(1)(b)					
15	New Items	Installation and Commissioning of lift having capacity of 08 passengers at Corporate Office Bhopal	6.58	0.00	Considering the fact that these assets are towards Corporate office expenses and not related to operation of the generating station, the additional capital expenditure claimed is **not allowed**.
F. Additional capital expenditure claimed under Regulation 26(1)(d)					
16	Already admitted works	Development of facilities for the inspection of EDA system of the	107.65	50.00	The Petitioner has submitted that the asset/work has already been admitted vide order dated 31.5.2016 in Petition No. 265/GT/2014 for Rs.50 lakh. It has

Sl. No.		Works	Claimed	Allowed	Reason for admissibility
		generating station Dam.			submitted that presently, the inspection of EDA of the generating station dam is done by construction of temporary approaches in downstream river course area. It has further stated that on attainment of FRL by downstream cascading project i.e. OSP, the backwaters will submerge the downstream river course area and present means of inspection would not be possible. Accordingly, the work of installation of tower crane on left trailing wall for developing inspection facilities to EDA is essential. Considering the fact that the additional capital expenditure claimed had been allowed by an earlier order of the Commission and is on account of higher safety of the generating station, the claim of the Petitioner is allowed but the same is restricted to Rs.50 lakh. It is allowed under Regulation 26(1)(d) of the 2019 Tariff Regulations. The Petitioner is, however, directed to submit the actual claim, reasons for spill over and increase in cost along with supporting documents at the time of truing up of tariff.
17	New Items	Implementation of Enterprises Resource Planning (ERP) for NHDC Power Station	197.37	197.37	The expenditure claimed by the Petitioner is **allowed** for the same reason as mentioned in sl. no.12 of table above, in respect of the additional capital expenditure claimed for this asset/ item in 2019-20.
18	New Items	Purchase of Automatic Capacitance and Tan Delta Measurement Kit	39.53	0.00	Considering the fact that these assets are in the nature of tools and tackles, the additional capital expenditure claimed is **not allowed**.
19	New Items	Reconstruction of dilapidated portion of Ajnal Field Hostel/ Guest House	300.00	300.00	The Petitioner has submitted that the expenditure claimed is towards replacement of the existing dilapidated portion of the Ajnal Field Hostel/ Guest House which was constructed in early 1980s.The Petitioner has submitted that the field hostel is presently catering to the needs of non-executive staff of the Petitioner Company as well as the Service engineers and other representatives of various O&M agencies. The Petitioner has stated that in order to avoid any mishap owing to dilapidated condition of the structure,

Sl. No.		Works	Claimed	Allowed	Reason for admissibility
					this portion of hostel has been proposed to be re-constructed on safety grounds. It is noticed that the additional capital expenditure claimed is on replacement basis. Considering the nature of the claim, the same is **allowed**. The Petitioner has claimed Rs.11.10 lakh as de-capitalisation of the old asset which has been considered under deletions.
20	New Items	Supply, installation, testing & Commissioning of CCTV surveillance system at various location of Powerhouse and various locations of Project Area	38.58	38.58	The Petitioner has submitted that the expenditure is to ensure that the present safety and security measures comply with the enhanced auditing norms for security. Considering the fact that the additional capital expenditure claimed is on account of higher safety and security of the generating station, the claim is **allowed** under Regulation 26(1)(d) of the 2019 Tariff Regulations.
Total additional capital expenditure (A+B+C+D+E+F)			**5140.48**	**5081.39**	

88. Accordingly, the total additional capital expenditure allowed in 2020-21 is Rs.5081.39 lakh (Rs.2704.13 lakh + Rs.535.31 lakh + Rs.100.00 lakh +Rs.1156.00 lakh + Rs.585.95 lakh).

<u>2021-22</u>

(Rs. in lakh)

Sl. No.		Works	Claimed	Allowed	Reason for admissibility
A. Additional capital expenditure claimed under Regulation 25(1)(a)					
1	New Items	B LAND - Land Compensation Payments, Stamp Duty & Registration Fees etc.	19686.08	19686.08	Considering the submissions of the Petitioner that the expenditure incurred is on account of balance R&R works which are required to be undertaken as per orders of Hon'ble High Court, District Court – Khandwa, Madhya Pradesh, the orders of Grievance Redressal Authority and other statutory authority. In view of the above, the additional capital expenditure claimed is **allowed** under Regulation 25(1)(a) of the 2019 Tariff Regulations.
2	New Items	B LAND - Development of R/sites and Contingency Plan	2428.29	2428.29	
B. Additional capital expenditure claimed under Regulation 25(2)(a)					

Sl. No.		Works	Claimed	Allowed	Reason for admissibility
3	New Items	01 No. Water Tanker in lieu of existing Water Tanker (Reg. No. MP04 K 6792)	19.00	19.00	The Petitioner has submitted that the expenses are towards the replacement of existing assets, which were deployed under original scope of the Project. It has stated that the old assets have completed useful life and the additional capitalization is towards the replacement of the said assets. In view of this, the additional capital expenditure claimed is **allowed** under Regulation 25(2)(a) of the 2019 Tariff Regulations. The Petitioner has also claimed de-capitalisation of Rs.0.96 lakh and Rs.0.99 lakh respectively for these items/ works which have been considered under deletions.
4	New Items	01 No. Bus in lieu of existing Bus (Reg. No. MP04 HB 9108)	27.50	27.50	
5	New Items	Up-gradation by replacement of obsolete components of fire alarm system for Powerhouse and Switchyard of the generating station	20.00	20.00	The Petitioner has submitted that some of the components of the Fire alarm system have become obsolete and are not in working condition. Therefore, the replacement of the obsolete components of the existing fire alarm system is very essential. Considering the fact that the old asset has completed its useful life the additional capital expenditure claimed as replacement is **allowed** under Regulation 25(2)(a) of the 2019 Tariff Regulations. The Petitioner has also claimed de-capitalisation of Rs.3.07 lakh for the old asset which has been considered under deletions.
6	New Items	Procurement of Split & Slim Air Conditioners	11.00	0.00	Considering the fact that the expenditure for the assets are in the nature of minor assets, the additional capital expenditure claimed is **not allowed**.
7	New Items	Replacement of existing Temperature Calibrator and Pressure Calibrators	40.39	40.39	The Petitioner has submitted that the expenditure is towards the replacement of existing asset that has now became obsolete and no service support is available from OEM. Therefore, the replacement of existing Temperature Calibrator and Pressure Calibrators is necessary. Considering the fact that the old asset has completed its useful life and the additional capital expenditure claimed is for replacement, the same is **allowed** under Regulation 25(2)(a) of the 2019 Tariff Regulations. The Petitioner has also claimed de-capitalisation of Rs.6.21 lakh for the

Sl. No.		Works	Claimed	Allowed	Reason for admissibility
					old asset which has been considered under deletions.
8	New Items	Replacement of Fire Extinguishers	29.14	29.14	The Petitioner has submitted that Fire extinguishers have become obsolete and are not in working condition and, therefore, the replacement of obsolete Fire extinguishers is essential for safety of the plant & machinery of Powerhouse and Switchyard. Considering the fact that the old asset has completed its useful life and the additional capital expenditure claimed is for replacement, the same is **allowed** under Regulation 25(2)(a) of the 2019 Tariff Regulations.
9	New Items	Replacement of various office electrical/ IT equipment which have completed their useful life	106.00	0.00	Considering the fact that the expenditure for the assets are in the nature of minor assets, the additional capitalization of the same is **not allowed.** The Petitioner has claimed de-capitalisation of Rs.0.34 lakh for the old asset which has not been considered under deletions.
10	New Items	Replacement of various hospital pathological equipment which have completed their useful life	15.00	15.00	The Petitioner has submitted that the expenditure claimed is towards replacement of various hospital pathological equipment's which have completed their useful life. Considering the fact that the old asset has completed its useful life and the additional capital expenditure claimed is for replacement, the claim is **allowed** under Regulation 25(2)(a) of the 2019 Tariff Regulations. The Petitioner has also claimed de-capitalisation of Rs.2.30 lakh for old asset which has been considered under deletions.
11	New Items	Replacement of Moisture measurement Equipment, Portable DGA Kit, Turn Ration kit including SFRA Test Kit for 400 KV Generating Transformers installed at the generating station	45.00	0.00	Considering the fact that these assets are in the nature of tools and tackles, the additional capitalization of the same is **not allowed.** The Petitioner has claimed de-capitalisation of Rs.3.91 lakh for the old asset which has not been considered under deletions.
C. Additional capital expenditure claimed under Regulation 25(2)(c)					
12	New Items	Procurement of	21.45	21.45	The Petitioner has submitted that the

Sl. No.		Works	Claimed	Allowed	Reason for admissibility
		SF6 Gas Analyzer			existing meters have now become obsolete, and no service support is available from OEM. Considering the fact that the Petitioner has claimed the expenditure for replacement of asset on account of obsolescence of technology, the additional capital expenditure claimed is **allowed** under Regulation 25(2)(c) of the 2019 Tariff Regulations on replacement basis. Petitioner has submitted the de-capitalisation value of Rs.3.62 lakh for old asset against which the expenditure is claimed. Accordingly, the same has been considered under 'De-capitalization' in paragraph 98 of this order. The Petitioner is, however, directed to submit management certificate of competent authority with regard to certification for obsolescence of old asset. at the time of truing up of tariff.
13	New Items	Up-gradation of existing 3 phase relay test kit with new relay test kit having latest features	25.00	0.00	Considering the fact that these assets are in the nature of tools and tackles, the capitalization of the same is **not allowed**. The Petitioner has claimed de-capitalisation of Rs.3.84 lakh for the old asset which has not been considered under deletions.
D. Additional capital expenditure claimed under Regulation 25(2)(d)					
14	Already admitted	Up-gradation of numerical relays installed at GRP of generating units (REG 316 & RET 316 with REG 670 & RET 670.)	300.00	300.00	The Petitioner has submitted that the asset/work has already been admitted vide order dated 31.5.2016 in Petition No. 265/GT/2014 for Rs.300 lakh. Considering the fact that the additional capital expenditure is for replacement of the asset, the same is **allowed** under Regulation 25(2)(d) of the 2019 Tariff Regulations. The Petitioner has claimed de-capitalisation of Rs.184.03 lakh for old asset which has been considered under deletions.
15	Already admitted item	Conversion of old 415 V Overhead Distribution System with underground distribution System with modern age protection system in NHDC Colony	548.00	318.00	The Petitioner has submitted that the asset/work has already been admitted vide order dated 31.5.2016 in Petition No. 265/GT/2014 for Rs.318 lakh. The Petitioner has further submitted that the expenditure has been undertaken to minimize the fault, improve the reliability of the electrical distribution system, optimize manpower, reduce power losses, better voltage stabilization

Sl. No.		Works	Claimed	Allowed	Reason for admissibility
		Premises.			and better safety of residents and their electrical equipment's, new modern age distribution system is essential. The Petitioner has stated that for the 2014-19 tariff period, the Commission had approved the capital works of supply, installation, testing and commissioning of 11/0.433 kV oil filled copper wound distribution transformer and its associated equipment's for colony. It has stated that on technical and economic considerations, the execution of these works has been clubbed. The additional capital expenditure claimed is restricted to Rs.318 lakh and **allowed** under Regulation 25(2)(d) of the 2019 Tariff Regulations. At the time of truing-up, the Petitioner shall submit actual expenditure, reasons for not undertaking the work in 2014-19 period and reasons for higher proposed cost than approved earlier. The Petitioner has also claimed de-capitalisation of Rs.16.90 lakh for old assets which has been considered in deletions.
E. Additional capital expenditure claimed under Regulation 26(1)(b)					
16	Already admitted item	Sewage Treatment Plant	720.00	120.00	The Petitioner has submitted that the asset/work had been allowed vide order 31.5.2016 in Petition No. 265/GT/2014 for Rs.120.00 lakh. The Petitioner has further submitted that the work is required for monitoring of various important parameters of generating units and thus ensuring the reliability of operation of generating units. In this background and keeping in view that the claim for additional capital expenditure is for compliance to the directions in the consent order of MPPCB dated 24.7.2018, the same is restricted to Rs.120 lakh and **allowed** under Regulation 26(1)(b) of the 2019 Tariff Regulations. The Petitioner shall, at the time of truing-up of tariff, submit the actual expenditure along with reasons for not undertaking the work in 2014-19 period and reasons for higher proposed cost than approved earlier.
17	New Items	Supply,	395.62	0.00	The Petitioner has submitted that Govt of India is promoting National

Sl. No.		Works	Claimed	Allowed	Reason for admissibility
		Installation, Testing and Commissioning of 600 KWp Solar Power Plant at the generating station			Solar Mission and in this context Govt. of Madhya Pradesh has notified the implementation of net-metering system for renewal energy sources up to 10 MW capacity and as a green energy initiative, the Petitioner has proposed installation of 600 KWp solar power plant which has been envisaged so as to conserve the conventional sources of energy. The Petitioner has not provided the details of impact on the auxiliary/O&M energy consumption of the plant. Further, with regard to the nature of the asset claimed, Commission in various orders in other petitions has already recognised that the asset will reduce O&M expenses of the generating station and as O&M expenses have been allowed to the generating station on normative basis, the capitalization of this asset was not considered for the purpose of tariff. In view of above, the additional capital expenditure claimed is **not allowed**.
18	New Items	Procurement of strong motion accelerograph (SMA) for dam body for analysis of earthquake effect on dam.	91.00	91.00	The Petitioner has submitted that the geophysical team of NHPC Ltd. has recommended for a proper network of strong motion accelerographs to measure the acceleration of the dam structure during earthquake. It has also stated that in order to meet the mandatory/ statutory requirement of the project, the expenditure is incurred for procurement of strong motion accelerographs in compliance of the relevant IS code as well as CDSO document No. CDSO-GUD DS-02-V1.0. The claim of the Petitioner is **allowed** subject to the Petitioner furnishing detailed justification along with documentary evidence, at the time of truing up, failing which the expenditure may not be considered.
F. Additional capital expenditure claimed under Regulation 26(1)(d)					
19	Already admitted work	Development of online condition monitoring facilities of generator.	1054.57	1054.57	The Petitioner has submitted that the asset/work had been allowed vide order 31.5.2016 in Petition No. 265/GT/2014 for Rs. 1200 lakh. The Petitioner has submitted that the

Sl. No.		Works	Claimed	Allowed	Reason for admissibility
					work is required for monitoring of various important parameters of generating units and, thus, ensuring the reliability of operation of generating units. It has also stated that the instant work is under tendering and the execution of which is expected to be completed in the current tariff period. Considering the fact that the additional capital expenditure claimed is on account of higher safety of plant and is within the amount approved earlier, the additional capital expenditure claimed is **allowed** under Regulation 26(1)(d) of the 2019 Tariff Regulations. However, the Petitioner is directed to submit the reasons for the spill over of the expenditure at the time of truing-up of tariff.
20	New Items	Implementation of Enterprises Resource Planning (ERP) for NHDC Power station	394.74	394.74	The expenditure claimed for this asset/item is **allowed** for the same reasons as mentioned in sl. no. 12 of the table above in respect of the additional capital expenditure claimed for this asset/ item in 2019-20.
21	New Items	Replacement of existing double acting brake and jack assembly & control panel with upgraded brake jack system by using the single acting brake and jack assembly & control panel in remaining 7 Number generating units	250.00	250.00	The Petitioner has submitted that the replacement of existing brake jack system in Unit No. 1 had been taken-up as R&D activity during 2018-19 in consultation with OEM M/s BHEL, to avoid the frequent failure of brake system which was being observed due to malfunctioning of pilot valves. The claim of the Petitioner is **allowed** as replacement, subject to the Petitioner furnishing the relevant documents/recommendations at the time of truing up of tariff, failing which the expenditure claimed may not be considered. The Petitioner has also claimed de-capitalisation of Rs.33.70 lakh for old asset which has been considered under deletions.
22	New Items	Phase-I re-construction of various types of staff quarters in the township in lieu of existing dilapidated staff quarters	1500.00	1500.00	The Petitioner has submitted that existing township of the generating station was developed by NVDA in early 1980s. It has submitted that 1342 out of 1835 quarters of various types have been found in dilapidated condition and 568 nos. are already in a collapsed/ ruined condition, as certified by a third-party survey report submitted by MPPWD, Khandwa vide

<table>
<tr><th>Sl. No.</th><th></th><th>Works</th><th>Claimed</th><th>Allowed</th><th>Reason for admissibility</th></tr>
<tr><td></td><td></td><td></td><td></td><td></td><td>No. 3078 dated 14-06-2018. It has further stated that the NHDC Board had already resolved to survey-off these dilapidated quarters from the fixed assets register w.e.f. 1st April 2018.
It is noticed that the Petitioner has claimed capitalisation of the item in a phased manner during the period 2021-24 for amount of Rs.9500 lakh as under:<table><tr><td>2021-22</td><td>Rs.1500 lakh</td></tr><tr><td>2022-23</td><td>Rs.3000 lakh</td></tr><tr><td>2023-24</td><td>Rs.5000 lakh</td></tr></table>The claim of the Petitioner is allowed as replacement subject to the Petitioner furnishing the relevant documents/recommendations, along with survey report of MPPWD, at the time of truing up, failing which the expenditure claimed may not be considered. The Petitioner has also claimed de-capitalisation of Rs. 159.64 lakh for old asset which has been considered under deletions.</td></tr>
<tr><td>23</td><td>New Items</td><td>Procurement of E-rickshaw</td><td>7.00</td><td>0.00</td><td>The Petitioner has submitted that at present, there are no means of transport in the vast area of switchyard as well as in the powerhouse and no other vehicles are permissible being a hazardous area. It is noticed from the submissions of the Petitioner that the additional capital expenditure claimed does not directly pertain to the operation and safety of the generating station. Hence, the claim is not allowed.</td></tr>
<tr><td>24</td><td>New Items</td><td>Construction of control room, security check post shed, automatic spike barrier, motorised sliding gate and high masts at different strategic locations of Power Station / Dam of the generating station as per requirement of CISF</td><td>81.00</td><td>81.00</td><td>The Petitioner has submitted that the project is under surveillance of Intelligence Bureau. It has submitted that the Safety committee/CISF had reviewed the existing surveillance system to ensure that the present safety and security measures in the generating station do comply with the enhanced auditing norms for security. Considering the fact that the additional capital expenditure claimed is on account of higher safety of generating station, the claim is allowed under Regulation 26(1)(d) of the 2019 Tariff Regulations. The Petitioner is directed to furnish the linkage of items in the claim with</td></tr>
</table>

Sl. No.		Works	Claimed	Allowed	Reason for admissibility
					relevant documents at the time of truing-up of tariff.
25	New Items	125 KVA DG Set	7.89	0.00	The Petitioner has submitted that during monsoon season, frequent tripping was observed in the supply of power from MPMKVVCL (Madhya Pradesh Madhya Kshetra Vidyut Vitaran Company Limited). It has also stated that it is essential to ensure uninterrupted supply of power as flood cell/ O&M cell is being managed round the clock from C.O Bhopal. The Petitioner has submitted that the data communication as regard the intensity of flood/ rise in water level is communicated from the above station/ cell to local administration, which is essential, in view of the safety of downstream inhabitants. In addition to the above, in case of failure of supply especially in night the safety of administrative building becomes issue of concern. The Petitioner has requested that the Commission may consider the capitalization for replacement of the asset. It is noticed from the submissions of the Petitioner that the additional capital expenditure claimed does not directly pertain to the operation and safety of the generating station. Hence, the claim is **not allowed**.
Total additional capital expenditure (A+B+C+D+E+F)			**27823.67**	**26396.16**	

89. Accordingly, the total additional capital expenditure allowed in 2021-22 is Rs.26396.16 lakh (Rs.22114.37 lakh + Rs.151.03 lakh + Rs.21.45 lakh +Rs.618 lakh + Rs.211 lakh + Rs.3280.31 lakh).

2022-23

(Rs. in lakh)

Sl. No.		Works	Claimed	Allowed	Reason for admissibility
A. Additional capital expenditure claimed under Regulation 25(1)(a)					
1	New Items	B LAND - Land Compensation Payments, Stamp Duty &	14764.56	14764.56	The Petitioner has submitted that the projected additional capital expenditure claimed is on account of balance R&R works required to

Sl. No.		Works	Claimed	Allowed	Reason for admissibility
		Registration Fees etc.			be undertaken in line with the orders of Hon'ble High Court, District Court – Khandwa, Madhya Pradesh, the orders of Grievance Redressal Authority and other statutory authority. In view of the above, the additional capital expenditure claimed is **allowed** under Regulation 25(1)(a) of the 2019 Tariff Regulations.
2	New Items	B LAND - Development of R/sites and Contingency Plan	1821.22	1821.22	
B. Additional capital expenditure claimed under Regulation 25(2)(a)					
3	New Items	01 Number Fire Tender in lieu of existing Fire Tender (Reg. No. MP04 K 7464)	40.00	40.00	The Petitioner has submitted that the additional capital expenditure claimed is towards the replacement of the existing asset, which was deployed, under original scope of the project. The Petitioner has stated that as the old asset has completed its useful life, the capitalization is towards replacement of the said asset. As the additional capital expenditure claimed is towards replacement of the asset/work, the claim is **allowed** under Regulation No. 25(2)(a) of the 2019 Tariff Regulations. The Petitioner has also claimed de-capitalisation of Rs.0.62 lakh for old asset which has been considered under deletions.
4	New Items	Retrofitting of old and obsolete 11 KV Vacuum Circuit Breakers with modern Circuit Breakers having enhanced protection and safety features	80.00	80.00	The Petitioner has submitted that the useful life of existing 11 kV Vacuum Circuit Breakers has completed and has now become obsolete. It has, therefore, submitted that for keeping the healthiness of the auxiliary power supply system of the power station, the replacement of existing 11 KV Vacuum Circuit Breakers is necessary. It has also stated that the old asset has completed its useful life and as such the additional capitalization is towards the replacement of the said asset. In view of this, the additional capital expenditure claimed is **allowed** under Regulation 25(2)(a) of the 2019 Tariff Regulations. The Petitioner has also claimed de-capitalisation of Rs.11.79 lakh for the old asset which has been considered under deletions.

Sl. No.		Works	Claimed	Allowed	Reason for admissibility
C. Additional capital expenditure claimed under Regulation 25(2)(c)					
5	New Items	Up-gradation of existing Excitation System of Indira Sagar Power Station.	800.00	800.00	The Petitioner has submitted that the upgraded Excitation system has advantages of redundant auto and manual channel, Offline system tuning, Data and event recorder with real time stamp which further enhances fault diagnosis and troubleshooting capability. It has stated that the additional capitalisation claimed is towards the replacement/ up-gradation of the said asset/ work. Considering the fact that the Petitioner has claimed the expenditure for replacement of asset on account of obsolescence of technology, the additional capital expenditure claimed is **allowed** under Regulation 25(2)(c) of the 2019 Tariff Regulations on replacement basis. Petitioner has submitted the de-capitalisation value of Rs.291.45 lakh for old asset against which the expenditure is claimed. Accordingly, the same has been considered under 'De-capitalization' in paragraph 96 of this order. The Petitioner is, however, directed to submit management certificate of competent authority with regard to certification for obsolescence of old asset. at the time of truing up.
6	New Items	Replacement of old and obsolete ABB make ETL 41 PLCC system installed at 400 KV switchyard with upgraded version of PLCC system having latest features	60.00	60.00	The Petitioner has submitted that the existing PLCC System procured during 2004 has become obsolete and, therefore, for keeping the healthiness of 400 KV protection system as well as communication system, the expenditure has been claimed. Considering the fact that the Petitioner has claimed the expenditure for replacement of asset on account of obsolescence of technology, the additional capital expenditure claimed is **allowed** under Regulation 25(2)(c) of the 2019 Tariff Regulations on replacement basis. Petitioner has submitted the de-capitalisation value of Rs.8.84 lakh for old asset against which the expenditure is claimed. Accordingly, the same has

Sl. No.		Works	Claimed	Allowed	Reason for admissibility
					been considered under 'De-capitalization' in paragraph 96 of this order. The Petitioner is, however, directed to submit management certificate of competent authority with regard to certification for obsolescence of old asset. at the time of truing up of tariff.
D. Additional capital expenditure claimed under Regulation 26(1)(d)					
7	New Items	Phase-I re-construction of various types of staff quarters in the township in lieu of existing dilapidated staff quarters	3000.00	3000.00	The Petitioner has submitted that the additional capital expenditure has been claimed in phased manner as shown in Sl no. 22 of the table under paragraph 88 for the year 2021-22. However, the claim of the Petitioner is **allowed** on replacement basis, subject to that the Petitioner furnishing relevant documents, along with survey report of MPPWD in respect of such assets/works at the time of truing up of tariff, failing which the expenditure may not be considered. It is noticed that the Petitioner has also not provided details of the de-capitalisation of the said asset/work. Hence, the amount of Rs.386.52 lakh has been considered under 'Assumed deletions' in paragraph 99 of this order, considering the vintage of the staff quarters.
8	New Items Details to be provided	Arrangement to be provided to arrest the return flow during spillage water on left bank of river Narmada as observed during 3D model study of Indira Sagar Dam	500.00	500.00	The Petitioner has submitted that as per recommendations of the CWC, GoI (Designer of the generating station Dam), the slotted roller bucket type EDA was reconstructed and replaced with Ski-jump type EDA. It has stated that in order to study the behaviour of exit spillage water from gates of main spillway, the 3D model study is in progress at CWPRS, Pune. The Petitioner has stated that some measures have been taken by way of construction of guide walls etc. on the basis of final report to be submitted by CWPRS for the 3D Model Studies. In line with the above submissions and considering the fact that the additional capital expenditure claimed is on account

Sl. No.		Works	Claimed	Allowed	Reason for admissibility
					of higher safety of generating station, the additional capital expenditure claimed is **allowed** under Regulation 26(1)(d) of the 2019 Tariff Regulations. The Petitioner is however directed to submit the relevant documents along with the comprehensive scheme approved, at the time of truing up of tariff.
Total additional capital expenditure (A+B+C+D)			**21065.78**	**21065.78**	

90. Accordingly, the total additional capital expenditure allowed in 2022-23 is Rs.21065.78 lakh (Rs.16585.78 lakh + Rs.120.00 lakh + Rs.860 lakh + Rs.3500.00 lakh).

<u>2023-24</u>

(Rs. in lakh)

Sl. No.		Works	Claimed	Allowed	Reason for admissibility
A. Additional capital expenditure claimed under Regulation 25(1)(a)					
1	New Items	B LAND - Land Compensation Payments, Stamp Duty & Registration Fees etc.	14764.56	14764.56	The Petitioner has submitted that the projected additional capital expenditure claimed is on account of the balance R&R works which are required to be undertaken in line with the orders of Hon'ble High Court, District Court – Khandwa, Madhya Pradesh, the orders of Grievance Redressal Authority and other statutory authority. In view of the above, the additional capital expenditure is **allowed** under Regulation 25(1)(a) of the 2019 Tariff Regulations.
2	New Items	B LAND - Development of R/sites and Contingency Plan	1821.21	1821.21	
B. Additional capital expenditure claimed under Regulation 25(2)(a)					
3	New Items	Replacement of Hydraulic Hoist for GNT gates	500.00	500.00	The Petitioner has submitted that the GNT gates are presently in non-operative stage. It has also stated that the additional capital expenditure claimed is towards replacement of the existing asset i.e. Hydraulic Hoist of GNT, as it is essential to keep the asset in operative condition. Considering the fact that the old asset has completed its useful life and the additional capital expenditure

Sl. No.		Works	Claimed	Allowed	Reason for admissibility
					claimed is for replacement of the said asset, the additional capital expenditure claimed is **allowed** under Regulation 25(2)(a) of the 2019 Tariff Regulations. The Petitioner has also claimed de-capitalisation of Rs.59.78 lakh for old asset which has been considered under deletions.
C. Additional capital expenditure claimed under Regulation 25(2)(c)					
4	New Items	Up-gradation of 400 KV PG isolators	300.00	300.00	The Petitioner has submitted that the Isolators are off load device which, on requirement, should operate properly, as it is related to the safety of maintenance and it is envisaged to upgrade the PG Isolators with the latest technology, considering the criticality of the same and for the safe and reliable operation of the 400 kV switchyard of the generating station. Considering the fact that the Petitioner has claimed the expenditure for replacement of asset on account of obsolescence of technology, the additional capital expenditure claimed is **allowed** under Regulation 25(2)(c) of the 2019 Tariff Regulations on replacement basis. Petitioner has submitted the de-capitalisation value of Rs.54.62 lakh for old asset against which the expenditure is claimed. Accordingly, the same has been considered under 'De-capitalization' in paragraph 96 of this order. The Petitioner is, however, directed to submit management certificate of competent authority with regard to certification for obsolescence of old asset. at the time of truing up of tariff.
D. Additional capital expenditure claimed under Regulation 26(1)(d)					
5	New Items	Phase-I re-construction of various types of staff quarters in the township in lieu of existing dilapidated staff quarters	5000.00	5000.00	The additional capital expenditure claimed is **allowed** as replacement basis, subject to the Petitioner furnishing the relevant documents including the survey report of MPPWD, at the time of truing up of tariff, failing which the expenditure may not be considered. It is noticed

Sl. No.		Works	Claimed	Allowed	Reason for admissibility
					that the Petitioner has also not provided the details of de-capitalisation of the asset/work and hence the amount of Rs.613.52 lakh has been considered under 'Assumed deletions' in paragraph 99 of this order, considering the vintage of the staff quarters.
6	New Items	Augmentation arrangement for providing safe passage to exit water from auxiliary spillway of Indira Sagar Dam	2000.00	2000.00	The Petitioner has submitted that the slotted roller bucket type EDA was reconstructed and replaced with Ski-jump type EDA. It has stated that in order to study the behaviour of exit spillage water from gates of main spillway, the 3D model study is in progress at CWPRS, Pune. The Petitioner has submitted that as per their first report, the arrangement for providing safe passage to exit water from auxiliary spill way is required to be provided keeping safety aspect of Powerhouse and tail pool channel. In line with the above submissions and considering the fact that the additional capital expenditure claimed is on account of higher safety of the generating station, the additional capital expenditure claimed is **allowed** under Regulation 26(1)(d) of the 2019 Tariff Regulations. The Petitioner is however directed to submit relevant documents along with the comprehensive scheme approved by the chartered accountant at the time of truing up of tariff.
7	New Items	Strengthening/ jacketing of Pier of High-Level Bridge situated at downstream of Indira Sagar Dam	300.00	300.00	The Petitioner has submitted that the slotted roller bucket type EDA was reconstructed and replaced with Ski-jump type EDA. It has stated that in order to study the behaviour of exit spillage water from gates of main spillway, the 3D model study is in progress at CWPRS, Pune. The Petitioner has submitted that as per their first report, in order to protect the safety of piers of high-level bridge against the very high velocity its strengthening/ jacketing has to be carried out on the basis of final report to be submitted by CWPRS

Sl. No.		Works	Claimed	Allowed	Reason for admissibility
					for the 3D model studies. In line with the above submissions and considering the fact that the additional capital expenditure claimed is on account of higher safety of the generating station, the additional capital expenditure claimed is **allowed** under Regulation 26(1)(d) of the 2019 Tariff Regulations.
Total additional capital expenditure (A+B+C+D+E)			**24685.77**	**24685.77**	

91. Accordingly, the total additional capital expenditure allowed in 2023-24 is Rs.24685.77 lakh (Rs.16585.77 lakh + Rs.500 lakh + Rs.300 lakh + Rs.7300 lakh).

92. Based on the above discussion, the projected additional capital expenditure allowed, before adjustment of subvention, is as under:

(Rs. in lakh)

Regulation		**2019-20**	**2020-21**	**2021-22**	**2022-23**	**2023-24**	**Total**
25(1)(a)	claimed	2351.56	2704.13	22114.37	16585.78	16585.77	60341.61
	allowed	2351.56	2704.13	22114.37	16585.78	16585.77	**60341.61**
25(2)(a)	claimed	19.30	585.74	313.03	120.00	500.00	1538.07
	allowed	19.30	535.31	151.03	120.00	500.00	**1325.64**
25(2)(c)	claimed	71.77	140.90	46.45	860.00	300.00	1419.12
	allowed	71.769	100.00	21.45	860.00	300.00	**1353.22**
25(2)(d)	claimed	74.43	1020.00	848.00	0.00	0.00	1942.43
	allowed	40.00	1156.00	618.00	0.00	0.00	**1814.00**
26(1)(b)	claimed	24.34	6.58	1206.62	0.00	0.00	1237.54
	allowed	0.00	0.00	211.00	0.00	0.00	**211.00**
26(1)(d)	claimed	112.47	683.13	3295.20	3500.00	7300.00	14890.80
	allowed	93.65	585.95	3280.31	3500.00	7300.00	**14759.90**
Total additional capital expenditure allowed, other than R&R expenses		**224.71**	**2377.26**	**4281.79**	**4480.00**	**8100.00**	**60341.61**
Total additional capital expenditure claimed		2653.87	5140.48	27823.67	21065.78	24685.77	81369.57
Total additional capital expenditure		**2576.27**	**5081.39**	**26396.16**	**21065.78**	**24685.77**	**79805.37**

R&R Expenses

93. It is observed that as per the terms of the Cabinet Committee of Economic Affairs (CCEA) clearance, 50% increase in the R&R cost beyond the approved cost

of Rs. 1160 crore is required to be borne by the Government of Madhya Pradesh (GoMP) as ‘Subvention’ and the balance 50% shall be borne by the project which is booked to cost of Unit-I (Dam). Also, the Sardar Sarovar Component is apportioned @ 17.63% of cost of Unit-I and Irrigation Component is apportioned @ 16.75% of balance cost of Unit-I after deducting Sardar Sarovar Component. These percentages of apportionment are as per CCEA approval as conveyed by MoP, GoI vide letter dated 28.3.2002. As such, the R&R expenses share to the Power component is calculated as under:

(Rs. in lakh)

	2019-20	**2020-21**	**2021-22**	**2022-23**	**2023-24**	**Total**
R&R expenses (gross) (a)	2351.56	2704.13	22114.37	16585.78	16585.77	**60341.61**
Less 50% subvention from GoMP (b)	1175.78	1352.07	11057.19	8292.89	8292.89	**30170.81**
(c)=(a)-(b)	1175.78	1352.07	11057.19	8292.89	8292.89	**30170.81**
Less SSP @17.63% (d)	207.29	238.37	1949.38	1462.04	1462.04	**5319.11**
(e)=(c)-(d)	968.49	1113.70	9107.80	6830.85	6830.85	**24851.69**
Less Irrigation component @16.75 % (f)	162.22	186.54	1525.56	1144.17	1144.17	**4162.66**
R&R expense share to Power Component (g)= (e)-(f)	**806.27**	**927.15**	**7582.25**	**5686.69**	**5686.68**	**20689.03**

94. As regards additional capital expenditure allowed for expenses other than R&R expenses, it is noticed that the Petitioner has not booked the expenditure under dam expenses, as the assets/works do not pertain to dam. Considering the above, the additional capital expenditure allowed for expenses, other than R&R expenses, is as under:

(Rs. in lakh)

2019-20	**2020-21**	**2021-22**	**2022-23**	**2023-24**	**Total**
224.71	2377.26	4281.79	4480.00	8100.00	**19463.76**

95. Based on the above discussion, the additional capital expenditure allowed (for Power Component), excluding liabilities, is as under:

(Rs. in lakh)

	2019-20	**2020-21**	**2021-22**	**2022-23**	**2023-24**	**Total**
Add: R&R expenses share	806.27	927.15	7582.25	5686.69	5686.68	20689.03

	2019-20	2020-21	2021-22	2022-23	2023-24	Total
for Power Component allowed						
Add: Expenses (excluding R&R) share for Power Component allowed	224.71	2377.26	4281.79	4480.00	8100.00	19463.76
Net Projected additional capital expenditure (power component) allowed excluding liabilities	**1030.98**	**3304.42**	**11864.03**	**10166.69**	**13786.68**	**40152.80**

De-capitalization

96. The Petitioner has claimed de-capitalization (as per Form 9Bi) for assets/works such as, retrofitting of GE make air circuit breakers, replacement of starter panels of drainage and dewatering pumps, vehicle mini truck, replacement of 24 V VRLA battery bank etc., which are summarized as under:

(Rs. in lakh)

2019-20	2020-21	2021-22	2022-23	2023-24
27.63	456.08	415.26	312.70	114.40

97. Regulation 26(2) of the 2019 Tariff Regulationsstates as under:

"In case of de-capitalization 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-capitalization 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-capitalization takes place with corresponding adjustments in cumulative depreciation and cumulative repayment of loan, duly taking into consideration the year in which it was capitalized.."

Since, these assets are not in use, the de-capitalization as claimed by the Petitioner above is allowed.

Assumed Deletions

98. 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 the de-capitalization of the original value of the old asset. However, in certain cases where de-capitalization is affected in books during the following years, to the year of capitalization of new asset, the de-capitalization of the old asset for the purpose of

tariff is shifted to the very same year for 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". Further, in absence of the gross value of the asset being de-capitalized, the same is calculated by de-escalating the gross value of new asset @5% per annum till the year of capitalization of the old asset.

99. It is observed that the Petitioner has claimed the following items during the 2019-24 tariff period, on replacement basis. The Petitioner has also not provided the de-capitalized value of the old assets which are being replaced. Accordingly, based on above methodology, the assumed deletions considered is as under

(Rs. in lakh)

Year of claim	**Assets**	**Assumed Deletion**
2019-20	Upgradation of remote telemetry system of Indira Sagar Power Station	7.71
2020-21	Construction of 24 Nos. of F type units and 20 Nos. of Single Officer Accommodation	71.02
2022-23	Phase-I re-construction of various types of staff quarters in the township in lieu of existing dilapidated staff quarters	386.52
2023-24	Phase-I re-construction of various types of staff quarters in the township in lieu of existing dilapidated staff quarters	613.52
	Total	**1078.78**

<u>Un-discharged liabilities</u>

100. Considering the actual un-discharged liabilities in Power Component as on 31.3.2019 as allowed for the 2014-19 tariff period in this order, the position of un-discharged liability as on 31st March of the respective years of the 2019-24tariff period is as under:

(Rs. in lakh)

31.3.2019	**31.3.2020**	**31.3.2021**	**31.3.2022**	**31.3.2023**
4264.47	4534.08	4449.46	4364.85	4280.24

101. The projected additional capital expenditure (Power Component) allowed, after adjustment of discharged and un-discharged liabilities, is as under:

(Rs. in lakh)

		2019-20	**2020-21**	**2021-22**	**2022-23**	**2023-24**
A	Additions in projected	1030.98	3304.42	11864.03	10166.69	13786.68

		2019-20	2020-21	2021-22	2022-23	2023-24
	additional capital expenditure (Power component) allowed excluding liabilities.					
B	Un discharge liabilities discharged during year	(-) 269.60	84.61	84.61	84.61	3927.72
C	**Additions in projected additional capital expenditure (Power Component) allowed (A+B)**	**761.38**	**3389.03**	**11948.65**	**10251.30**	**17714.40**

102. The Petitioner has submitted that the liabilities claimed pertain to Power Component only and in the absence of asset-wise details of liabilities, the position of overall liabilities has been considered by the Petitioner. In line with this, the additional capital expenditure for Power Component, allowed after adjustment of un-discharged liabilities/discharge of liabilities, is as under:

(Rs. in lakh)

		2019-20	2020-21	2021-22	2022-23	2023-24
A	Additional capital expenditure (Power component)	1030.98	3304.42	11864.03	10166.69	13786.68
B	Deletion during the year	27.63	456.08	415.26	312.70	114.40
C	Assumed Deletions During the year	7.71	71.02	0.00	386.52	613.52
	Un-discharged liabilities					
D	Opening	4264.47	4534.08	4449.46	4364.85	4280.24
E	Closing	4534.08	4449.46	4364.85	4280.24	352.52
F	Un-discharged liabilities discharged (D-E)	(-) 269.60	84.61	84.61	84.61	3927.72
G	Additional capital expenditure (Power component) allowed for tariff (A-B-C+F)	**726.04**	**2861.92**	**11533.39**	**9552.08**	**16986.48**

<u>Capital Cost for the 2019-24 tariff period</u>

103. Accordingly, the capital cost considered for the purpose of tariff for the 2019-24 tariff period is as under:

(Rs. in lakh)

	2019-20	2020-21	2021-22	2022-23	2023-24
Opening capital cost	339314.38	340040.42	342902.34	354435.73	363987.81
Additional capital expenditure	726.04	2861.92	11533.39	9552.08	16986.48
Closing capital cost	340040.42	342902.34	354435.73	363987.81	380974.29
Average capital cost	339677.40	341471.38	348669.04	359211.77	372481.05

<u>Debt-Equity Ratio</u>

104. 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."

105. Vide order dated 6.2.2007 in petition no. 119/2005, the Commission had determined in Annual Fixed Charges on the basis of debt-equity ratio of 61.73:38.27 on COD, as approved by the Central Government. During subsequent tariff periods, the additional capitalization has been funded through 70:30 debt-equity ratio. In the petition, the Petitioner has stated that the funding of the additional capital expenditure has been made through internal resources and others. Accordingly, in terms of Regulation 18 of the 2019 Tariff Regulations, the debt equity ratio of 70:30 has been considered on the admitted additional capital expenditure, after adjustment of the un-discharged liability for the purpose of tariff.

Capital Cost	**As on 31.3.2019**	**(%)**	**ACE in 2019-24**	**(%)**	**As on 31.3.2024**	**(%)**
Debt	213479.53	62.91%	29161.93	70.00%	242641.46	63.69%
Equity	125834.86	37.09%	12497.97	30.00%	138332.83	36.31%
Total	**339314.38**	**100.00%**	41659.91	**100.00%**	**380974.29**	**100.00%**

Return on Equity

106. Regulations 30 and 31 of the 2019 Tariff Regulations provide 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 excluding additional capitalization due to Change in

Law, shall be computed at the weighted average rate of interest on actual loan portfolio of the generating station or the transmission system;

Provided further that:

i. In case of a new project, the rate of return on equity shall be reduced by 1.00% for such period as may be decided by the Commission, if the generating station or transmission system is found to be declared under commercial operation without Commissioning of any of the Restricted Governor Mode Operation (RGMO) or Free Governor Mode Operation (FGMO), data telemetry, communication system up to load dispatch center 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 ₹1,000 crore;

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

(c) Effective Tax Rate for the year 2019-20 = ₹240 Crore/₹1000 Crore = 24%; (d) Rate of return on equity = 15.50/ (1-0.24) = 20.395%.

(3) The generating company or the transmission licensee, as the case may be, shall true up the grossed up rate of return on equity at the end of every financial year based on actual tax paid together with any additional tax demand including interest thereon, duly adjusted for any refund of tax including interest received from the income tax authorities pertaining to the tariff period 2019-24 on actual gross income of any financial year. However, penalty, if any, arising on account of delay in deposit or short deposit of tax amount shall not be claimed by the generating company or the transmission licensee, as the case may be. Any under-recovery or over-recovery of grossed up rate on return on equity after truing up, shall be recovered or refunded to beneficiaries or the long term customers, as the case may be, on year to year basis."

107. For grossing up of ROE during the 2019-24 tariff period, the Petitioner has used the MAT rate of 17.472% applicable for the year 2019-20. The same has been allowed, subject to truing-up. Further, in view of Regulation 30(2) of the 2019 Tariff Regulations, the additional capital expenditure as allowed in para 101 for the purpose of calculating return on equity has been bifurcated under the heads 'additional capital expenditure with-in the original scope of work' and 'additional capital expenditure beyond the original scope of work'. The same is detailed in table as under:

(Rs. in lakh)

	2019-20	**2020-21**	**2021-22**	**2022-23**	**2023-24**
Additional capital expenditure allowed in paragraph 101 (a)	726.04	2861.92	11533.39	9552.08	16986.48
Equity portion considered in above @ 30% (b)	217.81	858.58	3460.02	2865.62	5095.94
Equity corresponding to ACE within the original scope of work in (b) above	189.72	682.79	2475.92	1815.62	2905.94
Equity in ACE beyond the original scope of work excluding the additional capitalization due to change in law in (b) above	28.09	175.78	984.09	1050.00	2190.00

108. Accordingly, Return on Equity in respect of additional capitalization with-in the original scope of work has been worked out and allowed as under:

(Rs. in lakh)

	2019-20	2020-21	2021-22	2022-23	2023-24
Gross Notional Equity (A)	125834.86	126024.57	126707.37	129183.29	130998.91
Addition due to additional capitalization (B)	189.72	682.79	2475.92	1815.62	2905.94
Closing Notional Equity (C)=(A+B)	**126024.57**	**126707.37**	**129183.29**	**130998.91**	**133904.86**
Average Equity (D)=[(A+C)/2]	125929.71	126365.97	127945.33	130091.10	132451.89
Return on Equity (Base Rate) (E)	16.500%	16.500%	16.500%	16.500%	16.500%
Tax rate for the year (F)	17.472%	17.472%	17.472%	17.472%	17.472%
Rate of Return on Equity (G)=[E/(1-F)]	19.993%	19.993%	19.993%	19.993%	19.993%
Return on Equity (H)=(D*G)	**25177.13**	**25264.35**	**25580.11**	**26009.11**	**26481.11**

** Additional Capital Expenditure (Power Component) allowed vide para 101 has been considered as per Regulation 30(2), of the 2019 Tariff Regulations.*

109. As regards ROE in respect of additional capitalization after cut-off date and beyond the original scope, excluding the additional capitalization due to change in law, for the 2019-24 tariff period, the same has been computed as per proviso to Regulation 30(2), of the 2019 Tariff Regulations at the weighted average rate of interest on loan portfolio of the generating station. This is subject to revision, if any, at the time of truing-up of tariff. Accordingly, ROE has been worked out and allowed as under:

(Rs. in lakh)

	2019-20	2020-21	2021-22	2022-23	2023-24
Opening Notional equity	0.00	28.09	203.88	1187.97	2237.97
Addition due to Additional Capitalization (after cut of date) *	28.09	175.78	984.09	1050.00	2190.00
Repayment of Equity (balance of depreciation after repayment of loan)	0.00	0.00	0.00	0.00	0.00
Closing Equity	28.09	203.88	1187.97	2237.97	4427.97
Average Equity	14.05	115.99	695.93	1712.97	3332.97
Weighted average rate of interest on actual loan portfolio	12.255%	12.255%	12.255%	12.255%	12.255%
Return on Equity	**1.72**	**14.21**	**85.28**	**209.92**	**408.45**

**Additional Capital Expenditure (Power Component) allowed vide para 101, has been considered as per proviso to Regulation 30(2), of the 2019 Tariff Regulations.*

<u>Interest on loan</u>

110. 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 up to 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."

a) The gross normative loan amounting to Rs.213479.53 lakh has been considered as on 1.4.2019;

b) Cumulative repayment amounting to Rs.162524.09 lakh as on 31.3.2019 as considered in this order in truing up for the period 2014-19 has been considered as on 1.4.2019;

c) The repayment for the year of the 2019-24 tariff period has been considered equal to the depreciation allowed for that year;

d) Interest on loan has been calculated on the normative average loan of the year by applying the weighted average rate of interest as claimed by the Petitioner, which is subject to true-up.

111. Accordingly, Interest on loan has been worked out as under:

(Rs. in lakh)

	2019-20	2020-21	2021-22	2022-23	2023-24
Gross Normative loan (A)	213479.53	213987.75	215991.10	224064.47	230750.92
Cumulative Repayment up to previous year (B)	162524.09	167930.62	173155.12	178709.72	184534.54
Net loan-Opening (C)=(A-B)	50955.44	46057.14	42835.97	45354.75	46216.38
Repayment during the year (D)	5423.72	5487.96	5764.25	6178.70	6727.64
Cumulative repayment adjustment on a/c of de-capitalization (E)	17.19	263.46	209.66	353.88	367.20
Net Repayment (F)=(D-E)	5406.53	5224.51	5554.59	5824.82	6360.44
Addition due to additional capitalization (G)	557.70	2741.29	8654.73	7665.36	12909.63
Net loan-Closing (H)=(C+G-F)	46057.14	42835.97	45354.75	46216.38	51746.48
Average loan (I)=[(C+H)/2]	48506.29	44446.55	44095.36	45785.57	48981.43
Weighted Average Rate of Interest on loan (J)	12.255%	12.255%	12.255%	12.255%	12.255%
Interest on loan (K)=(I*J)	**5944.38**	**5446.87**	**5403.83**	**5610.96**	**6002.61**

Depreciation

112. 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 up to 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."

113. Accordingly, the cumulative depreciation amounting to Rs.162524.08 lakh as on 31.3.2019, as allowed for the 2014-19 tariff period in this order, has been considered for the purpose of tariff. In terms of the 2014 Tariff Regulations, the useful life of the hydro generating station is 35 years. The elapsed life of the generating station till 31.3.2019 is 13.60 years and the balance useful life of the generating station, as on 31.3.2019, is 21.40 years. However, in contrast to the 2014

Tariff Regulations, the 2019 Tariff Regulations stipulates the useful life of the hydro generating station as 40 years. Accordingly, the balance useful life of the generating station as on 1.4.2019 has been considered as 26.40 years, in line with the 2019 Tariff Regulations. Accordingly, depreciation has been worked out and allowed as under:

(Rs. in lakh)

	2019-20	**2020-21**	**2021-22**	**2022-23**	**2023-24**
Opening Gross block (A)	339314.38	340040.42	342902.34	354435.73	363987.81
Additional capital expenditure (B)	726.04	2861.92	11533.39	9552.08	16986.48
Closing gross block (C)=(A+B)	340040.42	342902.34	354435.73	363987.81	380974.29
Average gross block (D)=[(A+C)/2]	339677.40	341471.38	348669.04	359211.77	372481.05
Depreciable Value (E)=[90% of (D)]	305709.66	307324.24	313802.13	323290.59	335232.94
Balance useful life (F)	26.40	25.40	24.40	23.40	22.40
Remaining Depreciable value (G)	143186.25	139394.31	140647.69	144581.55	150699.08
Depreciation (H)=(F/G)	**5423.72**	**5487.96**	**5764.25**	**6178.70**	**6727.64**

O&M Expenses

114. The instant generating station is in operation for more than three years as on 1.4.2019. With regard to O&M expenses applicable for the instant generating station for the tariff period 2019-24, Regulation 35(2) of the 2019 Tariff Regulations provides as under:

> *"(2) Hydro Generating Station: (a) Following operations and maintenance expense norms shall be applicable for hydro generating stations which have been operational for three or more years as on 1.4.2019:*

(Rs in lakh)

	2019-20	*2020-21*	*2021-22*	*2022-23*	*2023-24*
Indira Sagar HEP	*11728.40*	*12287.44*	*12873.12*	*13486.73*	*14129.58*

> *Note: The impact in respect of revision of minimum wage, pay revision and GST, if any, will be considered at the time of determination of tariff."*

115. The Petitioner has claimed O&M expenses for the 2019-24 tariff period over and above the above allowed normative O&M in terms of Regulation 35(2)(a) of the 2019 Tariff Regulations, which is being dealt further.

Additional O&M expenses

116. The Petitioner has further submitted that note under Regulation 35(2)(a) of the 2019 Tariff Regulations stipulates that the impact in respect of revision of minimum wage, Pay Revision and GST, if any, will be considered at the time of determination of tariff. The total O&M expenses claimed by the Petitioner, including the impact of Pay Revision/ Gratuity and the estimated Security Expenses are as under:

(Rs. in lakh)

Description	2016-17	2017-18	Normalized at 2017-18	2018-19 (escalated @ 4.77%)	2019-20	2020-21	2021-22	2022-23	2023-24
Impact of Pay revision - enhancement in pay and allowances	271.82	1003.54	644.16	674.89	707.08	740.81	776.14	813.17	851.95
Impact of gratuity - increased ceiling in gratuity of CPSUs	112.91	8.02	63.15	66.17	69.32	72.63	76.09	79.72	83.53
Total Impact – over and above O&M expenses as allowed by Commission in accordance with Regulation 35 (2) (a) - [A]					776.40	813.44	852.24	892.89	935.48
*Estimated expenses on account of Security in accordance with Regulation 35(2) (c) - [B]					939.75	1063.13	1202.71	1360.60	1539.23
O&M Expenses (Normative) - [C]					11728.40	12287.44	12873.12	13486.73	14129.58
Total O&M expenses - claimed (A+B+C)					13444.56	14164.01	14928.06	15740.22	16604.29

Impact of wage revision

117. As regards the impact of wage revision and impact of GST, the Petitioner has submitted that the exact calculation to derive the impact against the enhancement of wage revision and imposition of GST is difficult, as the effect of it is on all the assets/ works executed/ purchased to certain extent. It is, however, noticed that the Petitioner has filed Petition No. 531/MP/2020 before this Commission for recovery of additional O&M expenses due to impact of wage/pay revision, minimum wage revision and GST for the 2014-19 tariff period. Accordingly, the impact of pay revision and increased ceiling in gratuity has not been considered in this order.

Security Expenses and Capital Spares

118. Regulation 35(2)(c) of the 2019 Tarff Regulations provides as under:

"(c) The Security Expenses and Capital Spares for hydro generating stations shall be allowed separately after prudence check:

Provided further that the generating station shall submit the assessment of the security requirement and estimated expenses, the details of year-wise actual capital spares consumed at the time of truing up with appropriate justification."

119. As regards Security Expenses, the Petitioner has submitted that after assessment of the security requirement and estimated expenses, the year-wise expenses against security requirement is claimed on projection basis in terms of the above regulations. As regards capital spares, the Petitioner has submitted that the same shall be claimed on actuals at the time of truing up of tariff with proper justification.

120. The Petitioner has claimed Security Expenses in terms of Regulation 35(2)(a) of the 2019 Tariff Regulations. In compliance to the directions of the Commission vide RoP of the hearing dated 13.4.2021, the Petitioner has submitted the methodology for claiming the Security Expenses, on projection basis, as under:

(Rs. in lakh)

Year	**Actual Security expenses**			**Variation w.r.t previous Year**	**% Variation [Average Variation /Average expenses)**	**Actual Security expenses for 2018-19**	**Estimated Security expenses**				
	Generating station	**Allocation of CO expenditure to the generating station**	**Total**				**2019-20**	**2020-21**	**2021-22**	**2022-23**	**2023-24**
A	**B**	**C**	**D=B+C**	**E**	**F = [Avg. of (E) /Avg. of (D)] *100**	**G**	**H=G*F**	**I= H*F**	**J = I*F**	**K= J*F**	**L= K*F**
2012-13	381.82	11.08	392.90		13.13%	830.69	939.75	1063.13	1202.71	1360.60	1539.23
2013-14	496.07	12.62	508.70	115.80							
2014-15	517.59	13.61	531.20	22.51							
2015-16	611.72	15.20	626.92	95.71							
2016-17	703.88	16.83	720.71	93.80							
2017-18	754.24	28.49	782.73	62.02							

121. It is noticed that the Petitioner has claimed actual security expenses of Rs 830.69 lakh in 2018-19 and has escalated the same at the rate of 13.13%. Considering the security requirements of the generating station, we allow the projected security expenses claimed for the 2019-24 tariff period, based on the

escalation rate of 4.77% on the actual security expenses incurred for 2018-19. The Petitioner is, however, directed to submit the actual security expenses incurred, duly audited, at the time of truing up of the tariff. Accordingly, the projected Security Expenses allowed for the 2019-24 tariff period is as under:

(Rs in lakh)

2019-20	2020-21	2021-22	2022-23	2023-24
870.31	911.83	955.32	1000.89	1048.63

122. As regards capital spares, the Petitioner is granted liberty to claim the same in terms of Regulation 35(2)(c) of the 2019 Tariff Regulations, based on actuals, at the time of truing up of tariff with proper justification.

123. Accordingly, the total O&M expenses, (including Security expenses) allowed to the generating station for the 2019-24 tariff period is as under:

(Rs. in lakh)

	2019-20	2020-21	2021-22	2022-23	2023-24
O&M expenses	11728.40	12287.44	12873.12	13486.73	14129.58
Security Expenses	870.31	911.83	955.32	1000.89	1048.63
Total O&M expenses including Security expenses	**12598.71**	**13199.27**	**13828.44**	**14487.62**	**15178.21**

<u>Interest on working capital</u>

124. Sub-section (c) of clause (1) of Regulation 34 of the 2019 Tariff Regulations provides as under:

> *"34. Interest on Working Capital: (1) The working capital shall cover:*
>
> *(c) For Hydro generating station (Including Pumped Storage Hydro Generating Station) and transmission system:*
> *(i) Receivables equivalent to 45 days of annual fixed cost;*
> *(ii) Maintenance spares @ 15% of operation and maintenance expense including security expenses; and*
> *(iii) Operation and maintenance expenses including security expenses for one month"*

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

> *"34(3) Rate of interest on working capital shall be on normative basis and shall be considered as the bank rate as on 1.4.2014 or as on 1st April of the year during the tariff period 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."

Working capital for Receivables

126. Receivable component of working capital has been worked out and allowed on the basis of 45 days of fixed cost as under:

(Rs. in lakh)

2019-20	2020-21	2021-22	2022-23	2023-24
6177.58	6220.97	6370.22	6601.37	6871.90

Working capital for Maintenance Spares

127. Maintenance spares component of Working Capital has been worked out on the basis of 15% of annual O&M expenses and allowed as under:

(Rs. in lakh)

2019-20	2020-21	2021-22	2022-23	2023-24
1889.81	1979.89	2074.27	2173.14	2276.73

Working capital for O&M expenses

128. O&M expenses component of Working Capital has been worked out on the basis of one month of O&M expenses including security expenses and allowed as under:

(Rs. in lakh)

2019-20	2020-21	2021-22	2022-23	2023-24
1049.89	1099.94	1152.37	1207.30	1264.85

Rate of Interest of working Capital

129. In accordance with Regulation 34(3) of the 2019 Tariff Regulations, the rate of interest on working capital considered on projection basis, for the 2019-24 tariff period is 12.05% (i.e. 1-year SBI MCLR of 8.55% as on 1.4.2019 + 350 basis points). As the tariff of the generating station for the 2019-24 tariff period is being determined during the year 2021-22, the SBI MCLR as on 1.4.2020 (7.75%) and as on 1.4.2021(7.00%) is also available which is lower in comparison of the same, as on 1.4.2019 (8.55%). Since the rate of interest on working capital is subject to

revision at the time of truing-up of tariff, based on the bank rate as on 1st April of each financial year, we find it prudent to allow the rate of interest as on 1.4.2020 and 1.4.2021, for the subsequent financial years. Accordingly, the rate of interest for the year 2019-20 is 12.05%, 2020-21 is 11.25% and for the subsequent years the rate of interest of 10.50% has been considered (i.e. 1-year SBI MCLR of 7.75% as on 1.4.2020 + 350 basis points and 1-year SBI MCLR of 7.00% as on 1.4.2021 + 350 basis points). Accordingly, Interest on working capital is allowed as under:

(Rs. in lakh)

	2019-20	2020-21	2021-22	2022-23	2023-24
Working Capital towards O & M expenses	1049.89	1099.94	1152.37	1207.30	1264.85
Working Capital towards Maintenance Spares	1889.81	1979.89	2074.27	2173.14	2276.73
Working Capital towards Receivables	6177.58	6220.97	6370.22	6601.37	6871.90
Total Working Capital	**9117.28**	**9300.80**	**9596.86**	**9981.81**	**10413.48**
Rate of Interest	12.05%	11.25%	10.50%	10.50%	10.50%
Total Interest on Working capital	**1098.63**	**1046.34**	**1007.67**	**1048.09**	**1093.42**

Annual Fixed Charges

130. Based on the above, the annual fixed charges approved for the 2019-24 tariff period in respect of the generating station is summarized below:

(Rs. in lakh)

	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	5423.72	5487.96	5764.25	6178.70	6727.64
Interest on Loan	5944.38	5446.87	5403.83	5610.96	6002.61
Return on Equity	25178.85	25278.56	25665.39	26219.04	26889.56
Interest on Working Capital	1098.63	1046.34	1007.67	1048.09	1093.42
O&M Expenses	12598.71	13199.27	13828.44	14487.62	15178.21
Total	**50244.30**	**50459.00**	**51669.58**	**53544.41**	**55891.43**

Normative Annual Plant Availability Factor

131. The Normative Annual Plant Availability Factor of 87% in terms of Regulation 50(A)(4) of the 2019 Tariff Regulations has been considered.

Design Energy

132. As regards Design Energy (DE), depending upon the development of canal

network and the Irrigation command, the following three stages of the power generation for 90% dependable year has been defined in the Techno-Economic Clearance (TEC) of CEA for the project, depending upon the water utilization by the State of Madhya Pradesh in the Narmada Basin:

Stage of Irrigation Development	Total Irrigation Utilization in Basin (BM^3) by MP	Firm Power (MW)
Stage-I	≤6.00	226
Stage-II	>6.00 ≤13.00	From226 to 125
Stage-III	>13.00 ≤18.25	From125to 100
Final Stage	≥18.25	100

133. The Petitioner has submitted that in order to work out the Reducing Power Benefit i.e. Firm Power during the respective periods of Stage-II, the Commission in paragraphs 54 and 55 of the order dated 13.6.2012 in Petition No.154/2010 has worked out the following formula:

$$FP_{\textit{(stage-II)}} = 226 - \frac{(226 - 125) \times (Q - 6.00)}{(13 - 6.00)}$$

Where,

FP *(stage-II)* = Reducing power benefit i.e. Firm Power (in MW) on pro-rata basis during Stage–II period of Indira Sagar Multi-purpose Project.

Q* = Actual water utilization (in BM3) for Irrigation by MP in the Narmada Basin to be notified by NCA for respective years

*Note: *The value of 'Q' shall be irreversible and shall not be reduced once attained.*

134. Accordingly, the Petitioner has submitted that based on the actual water utilization by the State of Madhya Pradesh, the Commission in order dated 13.6.2012 in Petition No. 154/2010 had allowed the Reducing Power Benefits i.e. Firm Power and the Design Energy shall be calculated based on water utilization certification by Narmada Control Authority. The Petitioner has submitted the details of the actual water utilization certified by Narmada Control Authority for the years 2014-17 and 2017-19 as under:

Year	Water Utilization by MP (as Published by NCA) (BMC)	Reduced Power Benefits (Stage-II)	
		Firm Power (MW)	Design Energy (MU)
2014-15	8.776	185.95	1628.89

Year	Water Utilization by MP (as Published by NCA) (BMC)	Reduced Power Benefits (Stage-II)	
		Firm Power (MW)	Design Energy (MU)
2015-16	10.249	164.69	1442.70
2016-17	10.072	167.25	1465.10/
			1442.70
2017-18	9.299	-	**-**
2018-19	10.402	-	**-**

135. The Petitioner has submitted that the annual water utilization account for the 2014-19 tariff period as 'the value of Q shall be irreversible and shall not be reduced once attained.' Accordingly, based on the water utilization of 10.402 BMC by the State of Madhya Pradesh during year 2018-19, the annual DE for the 2019-24 tariff period has been worked out as under:

Months	**Design Energy (MU)**
April	116.98
May	120.88
June	116.98
July	120.88
August	120.88
September	116.98
October	120.88
November	116.98
December	120.88
March	120.88
February	109.18
January	120.88
TOTAL	**1423.26**

Application Fees and Publication Expenses

136. The Petitioner has sought reimbursement of fees paid by it for filing the petition and for publication expenses. The Petitioner has submitted that the reimbursement towards filing fees and publication expenses are in accordance in terms of the Regulation 70(1) of the 2019 Tariff Regulations. In view of the above, the Petitioner shall be entitled for reimbursement of the filing fees and publication expenses in connection with the present petition, directly from the beneficiaries, on pro-rata basis, in accordance with Regulation 70(1) of the 2019 Tariff Regulations.

Summary

137. The annual fixed charges allowed for the 2014-19 tariff period (after truing up exercise) is as under:

(Rs. in lakh)

2014-15	2015-16	2016-17	2017-18	2018-19
59247.92	58584.48	57663.74	56751.09	50811.95

138. The annual fixed charges allowed for the 2019-24 tariff period is as under:

(Rs. in lakh)

2019-20	2020-21	2021-22	2022-23	2023-24
50244.30	50459.00	51669.58	53544.41	55891.43

139. Petition No. 106/GT/2020 is disposed of in terms of the above.

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