

**CENTRAL ELECTRICITY REGULATORY COMMISSION  
NEW DELHI**

**Petition No. 107/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: 11<sup>th</sup> March, 2022**

**IN THE MATTER OF**

Petition for revision of tariff for the 2014-19 tariff period and determination of tariff for the 2019-24 tariff period in respect of Omkareshwar Power Station (520 MW).

**AND**

**IN THE MATTER OF**

NHDC Limited,  
(A JV of NHPC & GoMP)  
NHDC Parisar, Shyamla Hills  
Bhopal – 462013 (M.P).

**...Petitioner**

**Vs**

1. M. P. Power Management Company Limited,  
Shakti Bhawan, Vidyut Nagar,  
Jabalpur (M.P) – 482 008
2. Narmada Valley Development Department,  
Government of Madhya Pradesh,  
Mantralaya, Vallabh Bhawan,  
Bhopal (M.P.) – 462 004

**...Respondents**

**Parties Present:**

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



## **ORDER**

This Petition has been filed by the Petitioner, NHDC Limited (in short 'NHDC') for true-up of tariff of Omkareshwar Power Station (520 MW) (hereinafter referred to as "the project" or "the generating station") for the period from 1.4.2014 to 31.3.2019, in terms of Regulation 8(1) of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 (hereinafter referred to as "the 2014 Tariff Regulations") and for determination of tariff of the generating station for the period from 1.4.2019 to 31.3.2024, in accordance with the provisions of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 (hereinafter referred to as "the 2019 Tariff Regulations").

### **Background**

2. This multi-purpose project has been constructed by the Petitioner which is a joint venture between NHPC (National Hydroelectric Power Corporation of India Limited) and the State Government of Madhya Pradesh. It comprises of 520 MW (8 x 65 MW) of generating capacity and has supplied 12885.53 MU to the beneficiary, i.e. MPPMCL up to 30.9.2019. Unit-I consists of Dam and appurtenant works, Unit-II consists of irrigation system of canals and distributaries being executed by the Government of Madhya Pradesh and Unit-III includes the Powerhouse and water conductor system along with allied works in power generation. Thus, Unit-I and Unit-III are for power generation, named as power component and Unit-II is for irrigation system named as irrigation component. Since Unit-I contribute for power generation as well as for irrigation purpose its cost is apportioned for power generation and irrigation system depending upon the proportion of water utilization for both the



systems. The irrigation component is apportioned @16.75% of cost of Unit-I and the balance cost is accounted towards power generation. The State of Madhya Pradesh is the only beneficiary of the project. The dates of commercial operation of all the machines of the Project are as under:

Units	COD
Machine 1	20.8.2007
Machine 2	25.8.2007
Machine 3	11.9.2007
Machine 4	26.9.2007
Machine 5	19.10.2007
Machine 6	30.10.2007
Machine 7	10.11.2007
Machine 8	15.11.2007

3. The Commission vide its order dated 26.5.2016 in Petition No. 264/GT/2014, based on the projected additional capital expenditure allowed, had determined the capital cost and the annual fixed charges of the generating station for 2014-19 tariff period, as stated below:

#### Capital Cost allowed

	(Rs. in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Capital Cost	238286.93	240341.73	241221.82	241445.76	244688.26
Admitted additional capitalization	2054.80	880.09	223.94	3242.50	3.45
Closing Capital Cost	240341.73	241221.82	241445.76	244688.26	244691.71

#### Annual Fixed Charges allowed

	(Rs. in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Return on Equity	14987.78	15079.68	15114.25	15222.80	15324.44
Interest on Loan	10767.37	9575.04	8481.04	7466.29	6437.00
Depreciation	10953.64	11003.56	11032.57	11116.87	11160.91
Interest on Working Capital	1094.40	1086.79	1080.75	1080.68	1080.44
O&M Expenses	4515.31	4815.30	5135.23	5476.42	5840.27
<b>Total</b>	<b>42318.49</b>	<b>41560.37</b>	<b>40843.84</b>	<b>40363.06</b>	<b>39843.06</b>



4. The petition was heard on 13.4.2021 and the Commission after directing the Petitioner to submit certain additional information, reserved its order in the petition. In response, the Petitioner vide its affidavit dated 27.5.2021 has filed the additional information. The Respondent has filed its reply and the Petitioner has filed its rejoinder to the said reply. Taking into consideration the submissions of the parties and the documents available on record and on prudence check, we proceed to dispose of the petition, as stated in the subsequent paragraphs.

#### **Truing Up of Annual Fixed Charges for the 2014-19 tariff period**

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

*“8. Truing up*

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

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

6. The annual fixed charges determined by order dated 26.5.2016 in Petition No.264/GT/2014, were subject to truing-up in terms of Regulation 8(1) of the 2014 Tariff Regulations. Accordingly, the Petitioner has filed the present petition for truing-up of tariff based on the actual capital expenditure incurred for the period from 1.4.2014 to 31.3.2019, as per audited accounts. The capital cost and annual fixed charges claimed by the Petitioner in the present petition are as under:



## Capital cost claimed

(Rs. in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Capital Cost	238286.93	239121.82	240509.02	242257.60	247059.93
Add: Addition during the year/ period	834.89	1387.21	1748.57	4812.24	616.14
Less: De-capitalization during the year/period	-	-	-	9.91	-
Closing Capital Cost	239121.82	240509.02	242257.60	247059.93	247676.07

## Annual Fixed Charges claimed

(Rs. in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	10748.14	10799.37	10869.97	11017.72	11139.97
Interest on Loan	10736.50	9537.08	8535.13	7645.04	6700.28
Return on Equity	14949.58	15091.82	15190.49	15396.84	15608.37
Interest on Working Capital	1474.58	1467.74	1381.97	1354.61	1195.69
O&M Expenses	4515.31	4815.30	5135.23	5476.42	5840.27
<b>Total</b>	<b>42424.11</b>	<b>41711.31</b>	<b>41112.79</b>	<b>40890.64</b>	<b>40484.59</b>

## Capital Cost

7. 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*

*(c) expenditure on account of renovation and modernisation as admitted by this Commission in accordance with Regulation 15.”*

8. The Commission in its order dated 26.5.2016 in Petition No. 264/GT/2014 had approved the opening capital cost of Rs.238286.93 lakh as on 1.4.2014. Accordingly, the capital cost of Rs.238286.93 lakh has been considered as the opening capital cost as on 1.4.2014, for the purpose of tariff for the 2014-19 tariff period.



## **Additional Capital Expenditure**

9. 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 obsolescence 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."*

10. The additional capital expenditure allowed with adjustment of power component, R&R subvention, adjustment of liabilities etc. in order dated 26.5.2016 in Petition No. 264/GT/2014 are as under:

	<i>(Rs. In lakh)</i>				
	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Additional capital expenditure (Power component) <b>(a)</b>	1415.73	880.09	223.94	3242.50	3.45
Un-discharged liabilities at the beginning of the year <b>(b)</b>	10643.48	10004.41	10004.41	10004.41	10004.41
Un-discharged liabilities at the end of the year <b>(c)</b>	10004.41	10004.41	10004.41	10004.41	10004.41
Un-discharged liabilities discharged <b>(d)</b>	639.07	0.00	0.00	0.00	0.00
Additional capital expenditure (Power component) allowed for tariff <b>(a)+(d)</b>	2054.80	880.09	223.94	3242.50	3.45

11. The reconciliation of the additional capital expenditure (prior to adjustments of R&R subvention, Sardar Sarovar and Irrigation components) claimed by the Petitioner in Form 9C, for Power component for the 2014-19 tariff period, duly certified by Auditor is as follows:



	(Rs. in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Closing Gross Block	302061.92	302726.29	303041.94	303436.73	304134.25
Less: Opening Gross Block	301539.90	302061.92	302726.29	303041.94	303436.73
<b>Total Additions as per books</b>	522.02	664.38	315.65	394.79	697.52
Less: Exclusions (items not allowable / not claimed)	6.74	30.80	17.72	10.90	36.10
<b>Net Additional Capital Expenditure claimed</b>	<b>515.28</b>	<b>633.58</b>	<b>297.93</b>	<b>383.90</b>	<b>661.42</b>

12. As per Clause 4 of the CCEA (Cabinet Committee on Economic Affairs) approval dated 29.5.2003, limit of Rs.117.00 crore was kept for R&R works and any increase in the R&R cost beyond this limit, was to be borne equally by the GoMP (Government of Madhya Pradesh) and the Project. The details of sharing of R&R expenditure, as per Clause 4 of CCEA approval are shown as under:

Date	Gross Expenditure on R&R works	Sharing of R&R Expenditure		
		Project's Share	GoMP's Subvention (50%) (Accrued)	Special Package (100% subvention from GoMP)#
31.3.2014	47410.77	19180.39	7480.39	20750.00
31.3.2015	47402.02	19176.01	7476.01	20750.00
31.3.2016	47553.10	19251.55	7551.55	20750.00
31.3.2017	47605.97	19277.99	7577.98	20750.00
31.3.2018	47666.78	19291.89	7591.89	20783.00
31.3.2019	48070.05	19476.03	7776.02	20818.00

#As per demand raised by NVDA, GoMP (Respondent No. 2)

13. The Petitioner has furnished the gross actual additional capital expenditure in Form 9A as under:

	(Rs. in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
<b>Gross Capital Cost as on 31.3.2014: Rs.301199.37 lakh</b>					
Opening cumulative capitalized expenditure projected at the beginning of financial year	301199.37	301720.59	302384.76	302700.40	303095.19
Regulation 14(3)(i)	(-) 8.75	151.08	52.87	60.81	403.27





	2014-15	2015-16	2016-17	2017-18	2018-19
Regulation 14(3)(ii)	0.00	0.00	29.44	0.00	0.00
Regulation 14(3)(iii)	26.87	16.83	0.00	2.96	3.77
Regulation 14(3)(v)	(-) 25.73	16.28	(-)5.20	10.24	-2.12
Regulation 14(3)(viii)	522.08	449.18	220.83	309.88	256.50
Total capital expenditure incurred during financial years	514.47	633.37	297.93	383.89	661.42
Minor Assets	6.74	30.80	17.72	10.90	36.10
Closing cumulative capital expenditure projected at the end of financial years (including minor assets)	<b>301720.59</b>	<b>302384.76</b>	<b>302700.40</b>	<b>303095.19</b>	<b>303792.71</b>

14. The Petitioner has submitted that based on the gross actual additional capitalization, the actual cumulative capital cost of the Power Component (i.e. after deduction of Irrigation Component and R&R Subvention on original scope items i.e. against R&R Expenditure) has been worked out up to 31.3.2019. It has also stated that as per CCEA approval, the expenditure against Revised Cost Estimate (RCE) items, contribution from GoMP/ NVDA (Narmada Valley Development Authority) towards Irrigation component, shall be reimbursed as Grants. The Petitioner has furnished the details of the actual cumulative capital cost for Power Component as under:

(Rs. In lakh)

Period		Actual additional capitalization		Actual cumulative capital cost	
From	To	Gross	Power Component*	Gross	Power Component*
<b>Capital Cost as on 31.3.2014</b>				301104.09	248930.41
01-04-14	31-03-15	514.47	519.58	301618.56	249449.99
01-04-15	31-03-16	633.37	545.18	302251.93	249995.17
01-04-16	31-03-17	297.93	267.06	302549.86	250262.23
01-04-17	31-03-18	383.89	334.66	302933.75	250596.89
01-04-18	31-03-19	661.42	411.44	303595.17	251008.34

\*Inclusive of un-discharged liabilities but excluding minor assets.

15. Some of the assets/ works claimed by the Petitioner during the 2014-19 tariff period *inter-alia* includes the purchase of Turbine Guide Bearing pads & labyrinth for



head cover, Distributor Servomotor, Construction of F-type quarters, Servo valve Governor etc. which were earlier allowed in order dated 26.5.2016 in Petition No. 264/GT/2014, while some new items like protection work for road at left bank, approach road at downstream of the generating station, R&R expenditure, widening of tail race, construction of parking shed, which were not allowed earlier, have also been claimed.

16. As regards Resettlement and Rehabilitation (R&R) expenses, the Petitioner has submitted that, during raising of the reservoir level of the generating station beyond EL 189.0 M, there was severe agitation by the Project Affected Families (PAFs) in the form of 'Jal Satyagrah'. Group of Ministers (GoM) of GoMP visited the agitation site/ areas and recommended for raising the reservoir level to EL 189.0 M and a special package for the PAFs, before raising the water level beyond EL 189.0 M, was provided. The Petitioner has stated that the announcement of a special package of Rs.224.52 crore is a liberalization of the R&R Package by the GoMP and, hence, 100% subvention by GoMP shall be applicable up to 31.3.2019. Out of this, a demand of Rs.208.18 crore has been received from the Respondent No. 2, NVDA. The Petitioner has further submitted that in anticipation of the completion of R&R work within the 2009-14 tariff period, no projections in additional capital expenditure were made during the 2014-19 tariff period. However, the actual additional capital expenditure incurred/ adjustments made, against R&R works of the generating station, for the 2014-19 tariff period are claimed as under:



(Rs in lakh)

Period	2014-15	2015-16	2016-17	2017-18	2018-19
Gross actual additional capitalization (R&R works) (A)	(-) 8.75	151.08	52.87	27.81	368.27
Subvention for R&R from GoMP (50% of gross) (B)=[50% of (A)]	(-) 4.38	75.54	26.44	13.91	184.13
Irrigation component from GoMP (16.75% of the remaining 50%) (C)= [16.75% of (B)]	(-) 0.73	12.65	4.43	2.33	30.84
<b>Power Component (remaining component) (D)= (A-B-C)</b>	<b>(-) 3.64</b>	<b>62.89</b>	<b>22.01</b>	<b>11.58</b>	<b>153.29</b>

17. Accordingly, the detailed breakup of the additional capital expenditure claimed on actual basis, for Power Component, for the 2014-19 tariff period is as under:

(Rs. in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Additions during the year (Power Component) (a)	519.58	545.18	267.06	344.56	411.44
Discharges during the year (b)	315.31	842.03	1481.51	4467.67	204.69
Deletions during the year (c)	0.00	0.00	0.00	9.91	0.00
<b>Net additional Capital Expenditure (d)=(a)+(b)-(c)</b>	<b>834.89</b>	<b>1387.21</b>	<b>1748.57</b>	<b>4802.33</b>	<b>616.14</b>

18. The details of additional capital expenditure claimed for Power Component for in terms of the 2014 Tariff Regulations are as under:

Sl. No	Regulations of the 2014 Tariff Regulations under which claims made	Amount (in lakh)				
		2014-15	2015-16	2016-17	2017-18	2018-19
1	14(3)(i)	(-)3.64	62.89	22.01	11.58	153.29
2	14(3)(ii)	0.00	0.00	29.44	0.00	0.00
3	14(3)(iii)	26.87	16.83	0.00	2.96	3.77
4	14(3)(v)	(-)25.72	16.28	(-)5.20	10.24	(-)2.12
5	14(3)(viii)	522.08	449.18	220.83	309.88	256.50
6	<b>Sub-Total (1+2+3+4+5)</b>	<b>519.58</b>	<b>545.18</b>	<b>267.06</b>	<b>334.66</b>	<b>411.44</b>
7	14(3)(vi)	315.31	842.03	1481.51	4467.67	204.69
8	<b>Total as per Form-9A (Net)(6+7)</b>	<b>834.89</b>	<b>1387.21</b>	<b>1748.57</b>	<b>4802.33</b>	<b>616.14</b>
9	14(3) (Net Exclusions)	6.74	30.80	17.72	10.90	36.10



19. In compliance with the directions of the Commission vide ROP of the hearing dated 13.4.2021 the Petitioner has submitted the details of the additional capital expenditure claimed under the heads 'R&R Expenditure'/ 'R&R Special Package', for the 2014-19 tariff period, along with proper justification and supporting documents. The Respondent, MPPMCL has clarified that the Petitioner has under-stated the R&R amounts received from GoMP and the year-wise details of the R&R works have also not been submitted. The Respondent has further submitted that the Petitioner has claimed many additional capital expenditures under Regulation 14(3)(viii) of the 2014 Tariff Regulations, without providing proper justification and supporting documents including certain additional capital expenditure which is in the nature of O&M expenses. Based on the submissions of the parties and on prudence check, we examine the additional capital expenditure claimed by the Petitioner in the following paragraphs.

**Additional capital expenditure claimed for 2014-19 tariff period**

**2014-15**

20. The details of the additional capital expenditure claimed in 2014-15 under various provisions of Regulation 14(3) of the 2014 Tariff Regulations are examined below:

<i>(Rs. in lakh)</i>			
Sl. No.	Regulation of the 2014 Tariff Regulations under which claim has been made		Amount
(a)	14(3)(i)	Liabilities to meet award of arbitration or for compliance of the order or decree of a court of law.	(-) 3.64
(b)	14(3)(ii)	Change in law or compliance of any existing law.	-
(c)	14(3)(iii)	Expenses incurred on account of need for higher security and safety of the plant as advised or directed by appropriate Govt. Agencies of statutory authorities responsible for national/ internal security	26.87
(d)	14(3)(v)	Liability for works executed prior to the cut-off date;	(-) 25.72
(e)	14(3)(viii)	Additional works/expenditure which has become necessary for	522.08



Sl. No.	Regulation of the 2014 Tariff Regulations under which claim has been made	Amount
	efficient and successful operation of plant	
	<b>Total additional capital expenditure claimed</b>	<b>519.58</b>

**(a) Claims under Regulation 14(3)(i) of the 2014 Tariff Regulations**

*(Rs. in lakh)*

Sl. No.	Details of the claim	Amount claimed	Justification submitted by the Petitioner	Remarks on admissibility	Amount Allowed
1	Expenditure on balance R&R Works	(-)3.64	The adjustment is on account of balance R&R works. The expenditure on R&R works is being done in compliance with the directions of Court.	<p>The Petitioner has submitted that in anticipation of completion of the R&amp;R work within the 2009-14 tariff period, no projection in additional capital expenditure was made during the 2014-19 tariff period. However, the actual additional capitalization incurred/ adjustments made in respect of R&amp;R works of the generating station has been claimed during the 2014-19 tariff period. The additional capital expenditure claimed by the Petitioner for 2014-19 tariff period is in a phased manner towards Power Component, as under:            (-) Rs.3.64 lakh in 2014-15, Rs.62.89 lakh in 2015-16, Rs.22.01 lakh in 2016-17, Rs.11.58 lakh in 2017-18, and Rs.153.29 lakh in 2018-19, thereby amounting to a total additional capital expenditure of Rs.246.12 lakh.</p> <p>The Petitioner has furnished the details of the additional capital expenditure (as Annexure H to the affidavit) including the Court orders, as documentary evidence in support of the claim. In view of the above and since the additional capital expenditure incurred/ adjustment made is towards compliance with the</p>	(-) 3.64



Sl. No.	Details of the claim	Amount claimed	Justification submitted by the Petitioner	Remarks on admissibility	Amount Allowed
				orders of the Court, the same is <b>allowed</b> .	
	<b>Total amount claimed</b>	<b>(-) 3.64</b>			
	<b>Total amount allowed</b>				<b>(-)3.64</b>

**(b) Claims under Regulation 14(3)(iii) of the 2014 Tariff Regulations**

*(Rs. in lakh)*

Sl. No.	Details of the claim	Amount claimed	Justification submitted by the Petitioner	Remarks on admissibility	Amount Allowed
1	Construction of watch tower on left bank of dam and shed for security check at right bank barrier at Generating station.	13.06	<p>This asset/ work was admitted vide order dated 26.5.2016 in Petition No. 264/GT/2014 (projected item No. 15 of 2014-15).</p> <p>The Commission had allowed this item as the security of the project is at the disposal of CISF and as per their recommendation, construction of watch tower on left bank of dam near their security check posts and also a shed in front of security check post on right bank side was necessary from security point of view.</p>	The Commission vide its order dated 26.5.2016 in Petition No. 264/GT/2014 had allowed the additional capitalisation for this asset for Rs.15.00 lakh. It is noticed that the actual additional capital expenditure claimed for this work/ asset, is within the limit allowed in order dated 26.5.2016. In view of this and considering the fact that the additional capital expenditure incurred is towards safety and security, the same is <b>allowed</b> .	13.06
2	Purchase of search light for dam.	4.61	<p>This asset/ work was admitted vide order dated 26.5.2016 in Petition No. 264/GT/2014 (projected item No. 29 of 2014-15).</p> <p>The Commission has allowed this item as it was required in compliance of recommendation of Dam Safety Committee and the asset was considered necessary for security/ safety of</p>	The Commission in its order dated 26.5.2016 in Petition No. 264/GT/2014 had allowed the additional capital expenditure for this asset/ work for Rs.5 lakh. It is noticed that the actual additional capital expenditure claimed for this work/ asset, is within the limit allowed in order dated 26.5.2016. In	4.61



Sl. No.	Details of the claim	Amount claimed	Justification submitted by the Petitioner	Remarks on admissibility	Amount Allowed
			plant.	view of this and considering the fact that the additional capital expenditure incurred is towards safety and security, the same is <b>allowed</b> .	
3	Providing surface mounted moisture proof, corrosion resistant and suitable for working in moist environment (IP-67) Fitting with Luminaries.	9.19	Frequent failures/ faults in the illumination system of Dam Galleries/ premises were reported by the O&M staff of dam. Dam safety committee has recommended to provide proper illumination fitting which can sustain in moist environment. In this context, IP-67 compliant fitting with luminaries were essential at dam gallery.	In our view, the additional capital expenditure incurred by the Petitioner does not directly relate to the operation of the generating station and is in the nature of O&M expenses. Also, this claim was dealt and disallowed by the Commission in its order dated 26.5.2016 in Petition No. 264/GT/2014. Hence, the additional capital expenditure is <b>not allowed</b> .	0.00
	<b>Total amount claimed</b>	<b>26.87</b>			
	<b>Total amount allowed</b>				<b>17.68</b>

### (c) Claims under Regulation 14 (3)(v) of the 2014 Tariff Regulations

Sl. No.	Details of the claim	Amount claimed	Justification submitted by the Petitioner	Remarks on admissibility	Amount Allowed
1	Exchange Rate Variation	(-) 22.73	The adjustment of amount pertains to the main turnkey contract of hydro-mechanical works under the original scope of project, which is materialised after COD.	The Petitioner has furnished the details of the hydro-mechanical works and when the assets/ items were put to use (August 2007).  In view of this, the additional capital expenditure / adjustment made is <b>allowed</b> .	(-)22.73
2	Recovery against Discrepancy/	(-) 3.00	The adjustment is against the	The Petitioner has furnished the details of	(-)3.00



Sl. No.	Details of the claim	Amount claimed	Justification submitted by the Petitioner	Remarks on admissibility	Amount Allowed
	Variation in the Quantity of Large Screen Display (LSD)		recovery for the variation in quantity of Large Screen Display (LSD) pertaining to the main Turnkey Contract under original scope of project.	the recovery against the discrepancy/ variation in the quantity of LSD including the year of put to use of the items (as August 2007).  In view of this, the additional capital expenditure/ adjustment is <b>allowed</b> .	
	<b>Total amount claimed</b>	<b>(-) 25.73</b>			
	<b>Total amount allowed</b>				<b>(-) 25.73</b>

**(d) Claims under Regulation 14(3)(viii) of the 2014 Tariff Regulations**

*(Rs. in lakh)*

Sl. No.	Details of the claim	Amount claimed	Justification submitted by the Petitioner	Remarks on admissibility	Amount Allowed
<b>Items allowed in order dated 26.5.2016 in Petition No. 264/GT/2014</b>					
1(i)	Purchase of turbine guide bearing pads	85.91	This claim was allowed vide order dated 26.5.2016 in Petition No. 264/GT/2014 on the ground that these are considered necessary for successful and efficient operation of the plant.	The Commission vide its order dated 26.5.2016 in Petition No. 264/GT/2014 had allowed the additional capital expenditure for this asset/ work for Rs.86.49 lakh. As the actual additional capital expenditure incurred for this asset/ work is within the limit approved by order dated 26.5.2016, the same is <b>allowed</b> .	85.91
1(ii)	Purchase of labyrinth for head cover	15.95		The Commission vide its order dated 26.5.2016 in Petition No. 264/GT/2014 had allowed the additional capital expenditure for this asset/work for Rs.13.90 lakh. It is noticed that the additional capital expenditure claimed against this head is in	15.95





Sl. No.	Details of the claim	Amount claimed	Justification submitted by the Petitioner	Remarks on admissibility	Amount Allowed
				excess of the limit allowed by order dated 26.5.2016. The Petitioner, in compliance to the directions of the Commission, has clarified that the projected additional capital expenditure claimed/ allowed earlier was based on the preliminary estimates. However, the additional capital expenditure actually incurred is based on the actual expenditure incurred, after following the requisite public procurement process. In view of the justification, the additional capital expenditure claimed by the Petitioner is <b>allowed</b> .	
2	Purchase of SF6 evacuating and filtration machine & dew point meter	22.75	These claims were admitted vide order dated 26.5.2016 in Petition No. 264/GT/2014 (projected item No. 9 of 2014-15)	It is noticed that the Commission vide its order dated 26.5.2016 in Petition No. 254/GT/2014 had allowed the additional capital expenditure for the asset/ work for Rs.25 lakh. As the actual additional capital expenditure incurred for this asset is within the limit approved by order dated 26.5.2016, the same is <b>allowed</b> .	22.75
3	Extension of DCR (Dam Control Room) building of Omkareshwar Power Station	31.36	These claims were allowed vide order dated 26.5.2016 in Petition No. 264/GT/2014.	It is noticed that the Commission vide its order dated 26.5.2016 in Petition No. 254/GT/2014 had allowed the additional	31.36



Sl. No.	Details of the claim	Amount claimed	Justification submitted by the Petitioner	Remarks on admissibility	Amount Allowed
	including the construction of inspection hall at EL 200 M.		Hindrance was observed in the operation of radial gates; Accordingly, the Commission has allowed this item in order to create adequate space for smooth gate operation and for adequate parking space.	capital expenditure for the asset/ work for Rs.49 lakh. The Petitioner has claimed the additional capital expenditure in a phased manner i.e. Rs.31.36 lakh in 2014-15 and Rs.1.06 lakh in 2015-16. As the total additional capital expenditure claimed is within the amount approved by order dated 26.5.2016, the same is <b>allowed</b> .	
4	Construction of Parking shed near Powerhouse at EL 190 m	24.29	<p>These claims were admitted vide order dated 26.5.2016 in Petition No. 264/GT/2014.</p> <p>The Commission has allowed this item as the parking facility for fire tender, water tanker, shift vehicles and vehicles of staff was not available at the Power house, wherein during summer the temperature reaches very high (about 47 degree).</p> <p>For security and safety of the above vehicles, suitable parking facility was essentially required near the Powerhouse of the generating station.</p>	It is noticed that the Commission vide its order dated 26.5.2016 in Petition No. 264/GT/2014 had allowed the additional capital expenditure for the asset/ work for Rs.25 lakh. The Petitioner has claimed additional capital expenditure in a phased manner i.e. Rs.24.29 lakh in 2014-15, Rs.0.16 lakh in 2015-16. As the total additional capital expenditure claimed is within the amount approved by order dated 26.5.2016, the same is <b>allowed</b> .	24.29
5	Construction of workshop cum store shed at Omkareshwar	40.40	These claims were admitted vide order dated 26.5.2016 in Petition No.	It is noticed that the Commission vide order dated 26.5.2016 in Petition No.	40.40



Sl. No.	Details of the claim	Amount claimed	Justification submitted by the Petitioner	Remarks on admissibility	Amount Allowed
	power station.		<p>264/GT/2014 (projected item No. 20 of 2014-15).</p> <p>There was no proper space for storing expensive and necessary tools-tackles, equipment/spares of turbine, generator etc. and the same were kept in open space. Accordingly, considering necessity the Commission has allowed work of construction of workshop-cum-store at the generating station.</p>	<p>264/GT/2014 had allowed the additional capital expenditure for the asset/ work for Rs.40.00 lakh. It is observed that the actual additional capital expenditure incurred is marginally higher than limit approved vide order dated 26.5.2016. The Petitioner, in compliance to the directions of the Commission, has clarified that the projected additional capital expenditure claimed/ allowed earlier was based on the preliminary estimates. However, the additional capital expenditure actually incurred is based on the actual expenditure incurred, after following the requisite public procurement process. In view of the justification, the additional capital expenditure claimed by the Petitioner is <b>allowed</b>.</p>	
6	Construction of office, transit camp & canteen at power station, Siddhwarkut for CISF	126.39	<p>These claims were admitted vide order dated 26.5.2016 in Petition No. 264/GT/2014.</p> <p>These items were allowed for security of the generating station by CISF. For smooth functioning, these buildings were required to be</p>	<p>It is noticed that the Commission vide its order dated 26.5.2016 in Petition No. 264/GT/2014 had allowed the additional capital expenditure for Rs.150.00 lakh. The Petitioner has claimed additional capital expenditure for this work/ asset in a phased manner i.e.</p>	126.39



Sl. No.	Details of the claim	Amount claimed	Justification submitted by the Petitioner	Remarks on admissibility	Amount Allowed
			constructed. The expenditure was for the benefit of employees of CISF and shall facilitate the safety of the plant.	Rs.126.39 lakh in 2014-15 and Rs.1.44 lakh in 2015-16. As the total additional capital expenditure claimed for this asset/ work is within the amount approved by order dated 26.5.2016, the same is <b>allowed</b> .	
7	Construction of watch tower at central store.	19.13	<p>These claims were admitted vide Tariff order dated 26.5.2016 in Petition No. 264/GT/2014 (projected item No. 39 of 2014-15).</p> <p>The Commission has allowed this item as construction of watch tower at central store was essential for strict vigil, ensuring safety and security of the central store. The expenditure is necessary for smooth functioning CISF and it will facilitate safety and security of the plant.</p>	It is noticed that the Commission vide its order dated 26.5.2016 in Petition No. 264/GT/2014 had allowed the additional capital expenditure for the asset/ work for Rs.20.00 lakh. As the additional capital expenditure claimed is within the amount approved by order dated 25.6.2016, the same is <b>allowed</b> .	19.13
8	Widening of existing approach road to main dam on left bank at OSP	71.36	<p>These claims were admitted vide order dated 26.5.2016 in Petition No. 264/GT/2014 (projected item No. 40 of 2014-15).</p> <p>The Commission has allowed this item considering it to be deferred work of original scope of project and necessity to ensure smooth movement of CISF</p>	It is noticed that the Commission vide its order dated 26.5.2016 in Petition No.264/GT/2014 had allowed the additional capital expenditure for the asset/ work for Rs.77.00 lakh. As the additional capital expenditure claimed is within the amount approved by order dated 25.6.2016, the same is <b>allowed</b> .	71.36



Sl. No.	Details of the claim	Amount claimed	Justification submitted by the Petitioner	Remarks on admissibility	Amount Allowed
			personnel from their camp located at left bank of dam to the main Project area located on right bank side.		
9	Providing epoxy flooring in the generator floor of Powerhouse	47.55	During the construction of the project, cement concrete flooring work was carried out in power house. However, with the passage of time, erosion in cement concrete was observed and there was possibility of the same depositing over the windings of generator and control panel which may lead to major fault in the unit/ system. Thus, it was essential to curb the ingress of dirt/ dust on the electrical equipment and strengthen flooring, for which epoxy based self-levelling flooring was done.	It is observed that the projected additional capital expenditure claimed by the Petitioner for this work, was not allowed in order dated 26.5.2016 in Petition No. 264/GT/2014 on the ground that the same was in the nature of O&M expenses. In line with this decision, the additional capital expenditure claimed by the Petitioner is <b>not allowed</b> .	0.00
10	Providing & fixing of railing at machine hall roof of Powerhouse.	9.86	Requirement of providing railing was felt in order to ensure the safety of O&M Staff working/ deployed at machine hall roof of Powerhouse for carrying out the maintenance activities. Also, it was essential for safety of the Plant equipment/ T&P. Hence, it was very essential to provide railing at machine hall roof of	It is observed that the projected additional capital expenditure claimed by the Petitioner for this work, was not allowed in order dated 26.5.2016 in Petition No.264/GT/2014 on the ground that the same was in the nature of O&M expenses. In line with this decision, the additional capital expenditure claimed by the Petitioner is	0.00



Sl. No.	Details of the claim	Amount claimed	Justification submitted by the Petitioner	Remarks on admissibility	Amount Allowed
			powerhouse of the generating station.	<b>not allowed.</b>	
11	Acoustic treatment of multipurpose hall, vrindavan parisar, OSP	6.27	Multipurpose hall has been developed during construction stage of the generating station. Further, various meeting/ training session (by in house/ outside faculty) are being organised on regular basis for technical up-gradation/ personal development of employees/ staff at power station. It was observed that voice audibility was not clear during above sessions due to echo effect/ other problems. Accordingly, execution of this work was essential. The work of acoustic treatment was required for benefit of employees/ power station which shall facilitate smooth plant activities.	As the additional capital expenditure incurred does not relate to the operation of the generating station, the claim of the Petitioner is <b>not allowed.</b>	0.00
12	Purchase of LED streetlights for the Power Station/ premises of generating station.	5.09	The Government of India is promoting means for conservation of energy. In this context, energy saving LED streetlight has been provided in the power station/ project premises.	It is observed that the projected additional capital expenditure claimed by the Petitioner for this work, was not allowed in order dated 26.5.2016 in Petition No.264/GT/2014 on the ground that the same was in the nature of O&M expenses. In line with this decision, the additional capital	0.00
13	Purchase of LED bollard lights (80 numbers) for the Power station and colony premises of generating station.	3.84			0.00
14	Supply,	8.67			0.00



Sl. No.	Details of the claim	Amount claimed	Justification submitted by the Petitioner	Remarks on admissibility	Amount Allowed
	Installation and Commissioning of Thyristorised switching Automatic Power Factor Control (APFC) at Powerhouse, OSP		power factor at the consumer end is maintained high (near unity) as it ensures optimum conservation of energy. For accomplishment of above objective thyristorised switching Automatic Power Factor Control (APFC) panel with 200 KVAR capacity and detuned reactor was provided in the powerhouse. The work was also recommended by CPRI, Bangalore during the energy audit of the generating station.	expenditure claimed by the Petitioner is <b>not allowed</b> .	
15	Purchase of semi-automatic chemistry analyser for hospital of generating station.	3.26	The OSP colony is remotely located and for analysing the blood samples of employees, a semi-automatic chemistry analyser was procured. The asset/ expenditure was necessary for the benefit of the employees/ staff of the generating station.	As the additional capital expenditure incurred does not relate to the efficient operation of the generating station, the claim of the Petitioner is <b>not allowed</b> .	0.00
16	De-capitalization of semi-automatic chemistry analyser for hospital of generating station.	0.00		The Petitioner has claimed de-capitalisation of Rs.3.58 lakh in 2015-16. As the capitalization of the same is not allowed, the corresponding de-capitalization is also <b>not allowed</b> .	0.00
	<b>Total amount claimed</b>	<b>522.08</b>			<b>437.54</b>
	<b>Total amount allowed</b>				<b>437.54</b>



21. Based on the above, the total additional capital expenditure of Rs.425.85 lakh {(-)Rs.3.64 + Rs.17.68 + (-)Rs.25.72 + Rs.437.54} in 2014-15 is allowed.

### **2015-16**

22. The details of the additional capital expenditure claimed under various provisions of Regulation 14(3) of the 2014 Tariff Regulations in 2015-16 is examined below:

			(Rs. in lakh)
Sl. No.	Regulation of the 2014 Tariff Regulations under which claim has been made		2015-16
(a)	14(3)(i)	Liabilities to meet award of arbitration or for compliance of the order or decree of a court of law.	62.89
(b)	14(3)(ii)	Change in law or compliance of any existing law.	-
(c)	14(3)(iii)	Expenses incurred on account of need for higher security and safety of the plant as advised or directed by appropriate Govt. Agencies of statutory authorities responsible for national/ internal security	16.83
(d)	14(3)(v)	Liability for works executed prior to the cut-off date;	16.28
(e)	14(3)(viii)	Additional works/expenditure which has become necessary for efficient and successful operation of plant	449.18*
	<b>Total additional capital expenditure claimed</b>		<b>545.18</b>

\*Additional capital expenditure of Rs. 452.75 lakh and de-capitalization of Rs. 3.58 lakh

#### **(a) Claims under Regulation 14(3)(i) of the 2014 Tariff Regulations**

(Rs. in lakh)					
Sl. No	Details of the claim	Amount claimed	Justification submitted by the Petitioner	Remarks on admissibility	Amount Allowed
1	Expenditure on balance R&R works	62.89	Same as for 2014-15	Same as for 2014-15	62.89
	<b>Total amount claimed</b>	<b>62.89</b>			<b>62.89</b>
	<b>Total amount allowed</b>				

#### **(b) Claims under Regulation 14(3)(iii) of the 2014 Tariff Regulations**

(Rs. in lakh)					
Sl. No.	Details of the claim	Amount claimed	Justification submitted by the Petitioner	Remarks on admissibility	Amount Allowed
1	Purchase of accessories for installation of CCTV system and	15.08	These assets/ works were admitted vide order dated 26.5.2016 in Petition No. 264/GT/2014 (projected item No. 11 of 2014-15).	It is noticed that the Commission vide its order dated 26.5.2016 in Petition No. 264/GT/2014 had	15.08





Sl. No.	Details of the claim	Amount claimed	Justification submitted by the Petitioner	Remarks on admissibility	Amount Allowed
	erection and commissioning of cameras and interconnection of Powerhouse with admin block.			allowed projected additional capital expenditure for this asset/ work for Rs.40.00 lakh. The Petitioner has claimed additional capital expenditure for this asset in a phased manner i.e. Rs.15.08 lakh in 2015-16, Rs.3.77 lakh in 2018-19 and Rs.10 lakh in 2019-20 and the same is within the limit allowed in order dated 26.5.2016. The Petitioner has furnished the security audit report of CISF, as documentary evidence in support of its claim. In view of this, the claim of the Petitioner is <b>allowed</b> .	
2	Intelligent addressable fire alarm system	1.75	The fire-fighting system was commissioned under original scope of the Project. The fire hazards are very critical as there is possibility of loss of property and human life. It is very important to locate zone of fire immediately on its occurrence to curtail the loss. Accordingly, intelligent addressable fire alarm system was provided in Powerhouse. The additional capital expenditure relates to safety of equipment and staff deployed in Power Station.	The Petitioner has submitted that the work/ asset was within the original scope of work of the project. In support of the claim, the Petitioner has furnished the office note dated 22.2.2015 stating the need for installation of the intelligent fire alarm for powerhouse. Keeping in view that the asset is required for the safety of the Powerhouse, the additional capital expenditure claimed is <b>allowed</b> .	1.75
	<b>Total amount claimed</b>	<b>16.83</b>			
	<b>Total amount allowed</b>				<b>16.83</b>



**(c) Claims under Regulation 14(3)(v) of the 2014 Tariff Regulations**

*(Rs. in lakh)*

Sl. No.	Details of the claim	Amount claimed	Justification submitted by the Petitioner	Remarks on admissibility	Amount Allowed
<b>New Items</b>					
1	Exchange rate variation	11.11	The adjustment pertains to the main turnkey contract of hydro-mechanical works under original scope of project, which is materialised after COD.	Since the additional capital expenditure/ adjustment made is for items within the original scope of works and is towards balance payments, the same is <b>allowed</b> .	11.11
2	Construction of administrative building and Executive field hostel building	5.17	The expenditure is on account of balance payment of old contract. The work was covered in the original scope of the Project.		5.17
	<b>Total amount claimed</b>	<b>16.28</b>			
	<b>Total amount allowed</b>				<b>16.28</b>

**(d) Claims under Regulation 14(3)(viii) of the 2014 Tariff Regulations**

*(Rs. in lakh)*

Sl. No.	Details of the claim	Amount claimed	Justification submitted by the Petitioner	Remarks on admissibility	Amount Allowed
1(i)	Purchase of Distributor Servomotor No. 1 & Servomotor No. 2	108.06	These assets/ works were admitted vide order dated 26.5.2016 in Petition No. 264/GT/2014 (projected item No. 2 of 2014-15).	It is noticed that the Commission vide its order dated 26.5.2016 in Petition No.264/GT/2014 had allowed additional capitalisation of this asset/ work for Rs.108.06 lakh. As the actual additional capital expenditure claimed for this asset is within the limit allowed by order dated 26.5.216, the same is <b>allowed</b> .	108.06
1(ii)	Procurement of Turbine guide bearing cooler	45.11		It is noticed that the Commission vide its order dated 26.5.2016 in Petition No.264/GT/2014	45.11



Sl. No.	Details of the claim	Amount claimed	Justification submitted by the Petitioner	Remarks on admissibility	Amount Allowed
				had allowed additional capitalisation of this asset/ work for Rs.43.77 lakh. As the actual additional capital expenditure claimed for this asset is marginally higher than projected value, allowed by order dated 26.5.2016, the actual expenditure is <b>allowed.</b>	
2	Configuration of workstations of Powerhouse automation system	15.59	These assets/ works were admitted vide order dated 26.5.2016 in Petition No. 264/GT/2014 (projected item No. 5 of 2014-15), considered necessary for successful and efficient operation of the plant.	It is noticed that the Commission vide its order dated 26.5.2016 in Petition No.264/GT/2014 had allowed additional capitalisation of this asset/ work for Rs.55.00 lakh, under the head 'Purchase of spares generator, excitation system and Automation etc.'. As the actual additional capital expenditure claimed for this asset in a phased manner i.e. Rs.15.59 lakh in 2015-16 and Rs.24.24 lakh in 2017-18 is within the amount approved by order dated 26.5.2016, the same is <b>allowed.</b>	15.59
3	Purchase of constant voltage current generator and accessories- Multifunction Calibrator	3.97	These assets/ works were admitted vide order dated 26.5.2016 in Petition No. 264/GT/2014 (projected item No. 6 of 2014-15), considered necessary	It is noticed that the Commission vide its order dated 26.5.2016 in Petition No.264/GT/2014 had allowed additional capitalisation of this	3.97



Sl. No.	Details of the claim	Amount claimed	Justification submitted by the Petitioner	Remarks on admissibility	Amount Allowed
			for successful and efficient operation of the plant.	asset/ work for Rs.5.00 lakh. As the actual additional capital expenditure claimed for this asset is within the amount allowed by order dated 26.5.2016, the same is <b>allowed</b> .	
4	Implementation of AMR for ABT meter	5.38	<p>These assets/ works were admitted vide order dated 26.5.2016 in Petition No. 264/GT/2014 (projected item No. 30 of 2014-15)</p> <p>The Commission has allowed this item so that the meter reading may be exported to MPSLD on real time basis through mobile network. The capital expenditure has been necessitated to comply with the grid requirements. Further the asset is also recommended by MPOCC/ MPSLDC.</p>	It is noticed that the Commission vide its order dated 26.5.2016 in Petition No.264/GT/2014 had allowed additional capitalisation of this asset/ work for Rs.12.00 lakh. As the actual additional capital expenditure claimed for this asset in a phased manner i.e. Rs.5.38 lakh in 2015-16 and Rs.0.50 lakh in 2016-17 is within the amount allowed by order dated 26.5.2016, the same is <b>allowed</b> .	5.38
5	Construction of 12 numbers F-Type Qtrs (Phase - I) at Power Station, Siddhwarkut	196.31	<p>These assets/ works were admitted vide order dated 26.5.2016 in Petition No. 264/GT/2014 (projected item No. 37 of 2014-15)</p> <p>The Commission has allowed this item as available nos. of F type quarters were less than sanctioned strength of E-3 &amp; E-4 level officers at OSP. Also, there was provision of F Type Quarters in original</p>	It is noticed that the Commission vide its order dated 26.5.2016 in Petition No.264/GT/2014 had allowed additional capitalisation of this asset/ work for Rs.200.00 lakh. As the actual additional capital expenditure claimed for this asset is within the limit allowed by order dated 26.5.2016, the same is <b>allowed</b> .	196.31



Sl. No.	Details of the claim	Amount claimed	Justification submitted by the Petitioner	Remarks on admissibility	Amount Allowed
			scope which could not be executed previously. The expenditure was for the benefit of the employees working in the power plant.		
6	Construction of Office, transit camp & canteen at power station, Siddhwarkut for CISF	1.44	Same as in 2014-15.	Same as in 2014-15.	1.44
7	Extension of DCR (Dam Control Room) building of power station including the construction of inspection hall at EL 200 M opposite of DCR. - balance capitalization	1.06	Same as in 2014-15.	Same as in 2014-15.	1.06
8	Construction of parking shed near powerhouse at EL 190 m at generating station. - balance capitalization	0.16	Same as for 2014-15.	Same as in 2014-15.	0.16
<b>New Items</b>					
9	Purchase of 16 numbers Industrial PCs for replacement against old out dated PCs	63.19	Industrial windows XP PCs were installed during commissioning of the power station. These had gone sluggish due to limited RAM and obsolete/ out dated processors. For smooth operation of generating station, replacement of existing PCs with new latest PCs was necessary. Accordingly, replacement with latest Windows 7 and improved RAM and processors was done.	As this expenditure incurred is in respect of assets which is minor in nature, the additional capital expenditure claimed is <b>not allowed</b> .	0.00
10	Supply, Installation and Commissioning of Thyristorised	6.60	It is essential that the power factor at the consumer end is	It is observed that the claim of the Petitioner for	0.00



Sl. No.	Details of the claim	Amount claimed	Justification submitted by the Petitioner	Remarks on admissibility	Amount Allowed
	switching Automatic Power Factor Control (APFC) at Powerhouse, OSP		maintained high (near unity) as it ensures optimum conservation of energy. For accomplishment of above objective, thyristorised switching Automatic Power Factor Control (APFC) panel with 200 KVAR capacity and detuned reactor was provided in the powerhouse. The work was also recommended by CPRI, Bangalore during the energy audit of the generating station. Accordingly, work was essential for efficient plant operations.	additional capital expenditure for this asset/ item was also claimed earlier but was not allowed vide order dated 26.5.2016 in Petition No.264/GT/2014, on the ground that the Petitioner should meet the same from the normative O&M expenses allowed to the generating station. In line with this decision, the additional capital expenditure claimed is <b>not allowed</b> .	
11	Purchase of hydraulic pressure test kit for generating station.	1.76	Various equipment in the power station are subject to high pressure like HPU system, hydrostatic lubrication system & cooling water system. Further, these equipment are equipped with various pressure sensing/ measuring instruments i.e. pressure gauges, pressure switches etc. For the safety of equipment/ plant it is essential that pressure measuring instruments & NRVs are tested/ calibrated. The asset is required for smooth and safe operation of plant.	As the additional capital expenditure claimed after the cut-off date in respect of this asset/ work, is in the nature of tools and tackles, same is <b>not allowed</b> .	0.00
12	220 KV solid post core insulators	4.13	As per requirement at powerhouse/ switchyard of OSP, 220 KV insulators	As the additional capital expenditure claimed after the cut-off date in	0.00



Sl. No.	Details of the claim	Amount claimed	Justification submitted by the Petitioner	Remarks on admissibility	Amount Allowed
			were procured for ensuring enhanced availability of units. These assets are essential for smooth plant operations.	respect of this asset/work, is in the nature of tools and tackles, same is <b>not allowed</b> .	
13	De-capitalization of semi-automatic chemistry analyser for hospital of generating station.	(-)3.58	The Petitioner has claimed de-capitalization of the assets during FY 2015-16.	The de-capitalization is shifted to 2014-15 being the year of capitalization.	0.00
	<b>Total amount claimed</b>	<b>449.18</b>			
	<b>Total amount allowed</b>				<b>377.07</b>

23. Based on the above, the total additional expenditure of Rs.473.07 lakh (Rs.62.89 + Rs.16.83 + Rs.16.28 + Rs.377.07 lakh) in 2015-16 is allowed.

### **2016-17**

24. The details of the actual additional capital expenditure claimed by the Petitioner in 2016-17 under various provisions of Regulation 14(3) of the 2014 Tariff Regulations are examined below:

*(Rs. in lakh)*

Sl. No.		Regulation of the 2014 Tariff Regulations under which claim has been made	2016-17
(a)	14(3)(i)	Liabilities to meet award of arbitration or for compliance of the order or decree of a court of law.	22.01
(b)	14(3)(ii)	Change in law or compliance of any existing law.	29.44
(c)	14(3)(iii)	Expenses incurred on account of need for higher security and safety of the plant as advised or directed by appropriate Govt. Agencies of statutory authorities responsible for national/ internal security	-
(d)	14(3)(v)	Liability for works executed prior to the cut-off date;	(-) 5.20*
(e)	14(3)(viii)	Additional works/expenditure which has become necessary for efficient and successful operation of plant	220.83
	<b>Total additional capital expenditure claimed</b>		<b>267.06</b>

*\*Additional capital expenditure of Rs. 12.04 lakh and de-capitalization of Rs.17.24 lakh*

### **(a) Claims under Regulation 14(3)(i) of the 2014 Tariff Regulations**

*(Rs. in lakh)*

Sl. No.	Details of the claim	Amount claimed	Justification submitted by the Petitioner	Remarks on admissibility	Amount Allowed
1	Expenditure on	22.01	Same as for 2014-15.	Same as for	22.01



Sl. No.	Details of the claim	Amount claimed	Justification submitted by the Petitioner	Remarks on admissibility	Amount Allowed
	balance R&R works			2014-15.	
	<b>Total amount claimed</b>	<b>22.01</b>			
	<b>Total amount allowed</b>				<b>22.01</b>

**(b) Claims under Regulation 14(3)(ii) of the 2014 Tariff Regulations**

(Rs. in lakh)

Sl. No.	Details of the claim	Amount claimed	Justification submitted by the Petitioner	Remarks on admissibility	Amount Allowed
<b>New Items</b>					
1	Construction of 110 KLD Sewage Treatment Plant for Siddhawarkut colony, OSP	29.44	The Madhya Pradesh Pollution Control Board (MPPCB) has instructed Omkareshwar Project to ensure statutory compliance by providing sewage treatment plant. The work was carried out as per statutory requirement as per prevalent pollution norms.	The Petitioner has not furnished any documentary evidence in support of the claim. In view of this and since the additional capital expenditure incurred do not directly relate to the safety of the plant, the claim of the Petitioner is <b>not allowed</b> .	0.00
	<b>Total amount claimed</b>	<b>29.44</b>			<b>0.00</b>
	<b>Total amount allowed</b>				

**(c) Claims under Regulation 14 (3)(v) of the 2014 Tariff Regulations**

(Rs. in lakh)

Sl. No	Details of the claim	Amount claimed	Justification submitted by the Petitioner	Remarks on admissibility	Amount Allowed
<b>New Items</b>					
1	Exchange Rate Variation	(-) 8.18	The adjustment pertains to the main turnkey contract of hydro-mechanical works under original scope of project, which is materialised after COD.	The additional capital expenditure claimed is for items which are within the original scope of work of the project and the Petitioner has submitted that the same was put to use during August 2007. In view of this and since the adjustment is in respect of the payments made, the additional capital	(-) 8.18





Sl. No	Details of the claim	Amount claimed	Justification submitted by the Petitioner	Remarks on admissibility	Amount Allowed
<b>New Items</b>					
				expenditure is <b>allowed.</b>	
2	Construction of Dam of the generating station	9.07 (-) 9.06	The additional expenditure is on account of balance payment of old contract. The work was covered in the original scope of the Project.	Since the additional capital expenditure is within the original scope of works and is towards balance payments, the same is <b>allowed.</b>	0.01 [9.07+ (-) 9.06]
3	Construction of Powerhouse building of OSP.	2.97			2.97
	<b>Total amount claimed</b>	<b>(-) 5.20</b>			
	<b>Total amount allowed</b>				<b>(-) 5.20</b>

**(d) Claims under Regulation 14(3)(viii) of the 2014 Tariff Regulations**

*(Rs. in lakh)*

Sl. No.	Details of the claim	Amount claimed	Justification submitted by the Petitioner	Remarks on admissibility	Amount Allowed
1(i)	Purchase of Servo valve for Governor	42.66	These assets/ works were admitted vide order dated 26.5.2016 in Petition No. 264/GT/2014 (projected item No. 2 of 2014-15).	It is noticed that the Commission in its order dated 26.5.2016 in Petition No.264/GT/2014 had allowed the projected additional capital expenditure for this asset/ work for Rs.100.00 lakh. As the actual additional capital expenditure claimed by the Petitioner is within the limit approved by order dated 26.5.2016, the same is <b>allowed.</b>	42.66
1(ii)	Purchase of Sliding Ring & Sealing Ring insert along with other accessories for Shaft Seal System	22.84	These assets/ works were admitted vide order dated 26.5.2016 in Petition No. 264/GT/2014 (projected item No. 24 of 2014-15) as considered necessary for successful and efficient operation of the plant.  The Commission has allowed this item since shaft seal is the main part of the turbine which prevents water leakage	It is noticed that the Commission vide its order dated 26.5.2016 in Petition No.264/GT/2014 had allowed the projected additional capital expenditure for this asset / work for Rs.25.00 lakh. As the additional capital expenditure claimed by the Petitioner is	22.84



Sl. No.	Details of the claim	Amount claimed	Justification submitted by the Petitioner	Remarks on admissibility	Amount Allowed
			from turbine, failure of Shaft seal can lead to stoppage of machine operation. Hence, the replacement of existing sliding rings and sealing rings of shaft sealing system were essential for smooth operation of units.	within the amount approved by order dated 26.5.2016, the same is <b>allowed</b> . The Commission in the order dated 26.5.2016 had also noted that the existing sliding rings and sealing rings of shaft sealing system are required to be replaced with new one and had considered the same as assumed deletions in the absence of any de-capitalization amount. In view of this, 'assumed deletions' is considered as Rs.14.02 lakh which is dealt with in subsequent portion of this order.	
2	Construction of lunchroom cum canteen for workers near Powerhouse of the generating station.	16.29	These assets/ works were admitted vide order dated 26.5.2016 in Petition No. 264/GT/2014, considering the same as a mandatory requirement for labour welfare and that the expenditure is for the benefit of the employees which will facilitate efficient and successful operation of the plant.	It is noticed that the Commission vide its order dated 26.5.2016 in Petition No.264/GT/2014 had allowed the projected additional capital expenditure for this asset/ work for Rs.40.00 lakh. As the additional capital expenditure claimed by the Petitioner is within the amount approved by order dated 26.5.2016, the same is <b>allowed</b> .	16.29
3	Construction of Shed for security check at left Bank barrier at OSPS.		This asset/ work was admitted vide order dated 26.5.2016 in Petition No. 264/GT/2014 (projected item No. 8 of 2015-16).	It is noticed that the Commission vide its order dated 26.5.2016 in Petition No.264/GT/2014 had allowed	



Sl. No.	Details of the claim	Amount claimed	Justification submitted by the Petitioner	Remarks on admissibility	Amount Allowed
			The work of construction of security sheds at left bank was executed as per the requirement of CISF.	projected additional capital expenditure for this asset/ work for Rs.8.00 lakh. As the additional capital expenditure claimed by the Petitioner is within the amount approved by order dated 26.5.2016, the same is <b>allowed</b> .	
4	Area development near F-Type Quarters at Urja Vihar Colony	32.50	<p>These assets/ works were admitted vide order dated 26.5.2016 in Petition No. 264/GT/2014.</p> <p>The Commission has allowed this item considering essentiality to develop the outer area i.e. construct road, garages and street light etc, for the resident of F-type quarters.</p>	It is noticed that the Commission vide its order dated 26.5.2016 in Petition No.264/GT/2014 had allowed the projected additional capital expenditure for this asset/ work for Rs.40.00 lakh. As the additional capital expenditure claimed by the Petitioner is within the amount approved by order dated 26.5.2016, the same is <b>allowed</b> .	32.50
5	Purchase of numerical protection relay for feeder protection	20.22	<p>This asset/ work was admitted vide order dated 26.5.2016 in Petition No. 264/GT/2014 (projected item No. 9 of 2016-17)</p> <p>This item was to enhance the availability of units and to ensure minimum outage in case of fault in the Protection system.</p>	It is noticed that the Commission vide order dated 26.5.2016 in Petition No.264/GT/2014 had allowed the projected additional capital expenditure for this asset/ work for Rs.50.00 lakh.	20.22
6	Purchase of Numerical Protection Relay for Feeder Protection - De-capitalisation of old asset	0.00	This was admitted vide order dated 26.5.2016 in Petition No. 264/GT/2014 (projected item No. 9 of 2016-17). The asset was procured and capitalised in 2016-17. This provision is against de-capitalisation of old asset.	The Petitioner has claimed actual additional capital expenditure against this asset in a phased manner i.e. Rs.20.22 lakh in 2016-17 and Rs.16.40 lakh in 2018-19. As the additional capital expenditure claimed	(-) 9.91



Sl. No.	Details of the claim	Amount claimed	Justification submitted by the Petitioner	Remarks on admissibility	Amount Allowed
				by the Petitioner is within the amount approved by order dated 26.5.2016, the same is <b>allowed</b> . The corresponding de-capitalization for this asset is also <b>allowed</b> .	
7	Implementation of AMR for ABT Meter	0.50	Same as in 2015-16.	Same as in 2015-16.	0.50
8	Providing & fixing of M.S. pipe railing at top of piers at u/s side.	10.03	It was observed that for the safety of the deployed operation and maintenance staff of generating station, the asset was essential to provide railing at the upstream face of top of piers of dam. Also, the item is essential for smooth plant operations.	It is observed that the projected additional capital expenditure claimed by the Petitioner for this work, was not allowed in order dated 26.5.2016 in Petition No. 264/GT/2014 on the ground that the same was in the nature of O&M expenses. In line with this decision, the additional capital expenditure claimed by the Petitioner is <b>not allowed</b> .	0.00
9	Purchase of 1.6 MVA, 33/11KV transformer for Siddhawarkut colony of OSP.	12.81	NHDC has obtained 33 kV HT connection from MPPKVV Co. Ltd for Powerhouse and colony. Further, only one 33/11 kV Main transformer is available which was procured during construction stage of project. For power station of OSP, it is important that uninterrupted power supply is ensured at the powerhouse/ switchyard/ dam/ admin building/ colony of OSPS.  It is essential to ensure redundancy/ reliability of power supply to power station accordingly 1 number 1.6 MVA, 33/11 kV	The additional capital expenditure claimed by Petitioner does not directly relate to the efficient operation of plant. The Petitioner has also not furnished any recommendation of CTU or CEA or any other competent authority justifying the creation of additional bays. In view of this, and since the assets claimed are in the nature of "spares",	0.00



Sl. No.	Details of the claim	Amount claimed	Justification submitted by the Petitioner	Remarks on admissibility	Amount Allowed
			transformer has been installed.	the same is <b>not allowed</b> .	
10	Supply, Installation, Testing and Commissioning of 40 KW Solar Power Plant at OSPS	48.58	The Government of India is promoting National Solar Mission. In this context, the Government of Madhya Pradesh, vide gazette notification in the month of November 2017, has notified implementation of net-metering system for renewal energy sources up to 10 MW capacity. Further, as a green energy initiative, installation of 40 kW solar power plant was done to conserve the conventional sources of energy.	The additional capital expenditure claimed by the Petitioner for these assets/ works is on account of notification by GoMP, in line with National Solar Mission of the Government of India. However, the Petitioner has not furnished any documentary evidence in support of the claim mandating the generating station to install the same. In view of this, the additional capital expenditure claimed is <b>not allowed</b> .	0.00
11	Construction of Battery Room for 40 KW Solar Power Plant.	7.25			0.00
12	Purchase of low vacuum dehydration (LVDH) machine	3.70	In order to ensure trouble-free operation of units especially on account of failure of oil supply system owing ingress of water/ contaminated particle/ gas in Oil, LVDH was essentially required. LVDH removes both free and dissolved water from the oil as well as dissolved gases effectively removes particles and water. Accordingly, the said asset was essential for smooth operation of units.	Since the expenditure for the said asset/ work is in the nature of tools and tackles and is after the cut-off date of the generating station, the additional capital expenditure is <b>not allowed</b> .	0.00
12	Online Portable Ground Fault Locator	3.45	Online Ground fault Locator is required for detection of Earth Fault in the system. The said asset is essential for smooth and efficient operation of units.	Since the additional capital expenditure claimed is in the nature of tools and tackles as decided in order dated 26.5.2016 in Petition No. 264/GT/2014 (item no. 19, 2015-	0.00



Sl. No.	Details of the claim	Amount claimed	Justification submitted by the Petitioner	Remarks on admissibility	Amount Allowed
				16 additional capital expenditure), the claim of the Petitioner is <b>not allowed</b>	
	<b>Total amount claimed</b>	<b>220.83</b>			
	<b>Total amount allowed</b>				<b>125.10</b>

25. Based on the above, the total additional expenditure of Rs.141.90 lakh {Rs.22.01 + (-) Rs.5.20+ Rs.125.10} lakh in 2016-17 is allowed.

### **2017-18**

26. The details of the actual additional capital expenditure claimed by the Petitioner in 2017-18 under the various provisions of Regulation 14(3) of the 2014 Tariff Regulations are examined below:

<i>(Rs. in lakh)</i>			
Sl. No.	Regulation of the 2014 Tariff Regulations under which claim has been made		2017-18
(a)	14(3)(i)	Liabilities to meet award of arbitration or for compliance of the order or decree of a court of law.	11.58
(b)	14(3)(ii)	Change in law or compliance of any existing law.	-
(c)	14(3)(iii)	Expenses incurred on account of need for higher security and safety of the plant as advised or directed by appropriate Govt. Agencies of statutory authorities responsible for national/ internal security	2.96
(d)	14(3)(v)	Liability for works executed prior to the cut-off date;	10.24
(e)	14(3)(viii)	Additional works/expenditure which has become necessary for efficient and successful operation of plant	309.88*
	<b>Total additional capital expenditure claimed</b>		<b>334.66</b>

*\*Additional capital expenditure of Rs.319.79 lakh and de-capitalization of Rs.9.91 lakh*

#### **(a) Claims under Regulation 14(3)(i) of the 2014 Tariff Regulations**

<i>(Rs. in lakh)</i>					
Sl. No.	Details of the claim	Amount claimed	Justification submitted by the Petitioner	Remarks on admissibility	Amount Allowed
1	Expenditure on balance R&R Works	11.58	Same as for 2014-15.	Same as for 2014- 15.	11.58
	<b>Total amount claimed</b>	<b>11.58</b>			



Sl. No.	Details of the claim	Amount claimed	Justification submitted by the Petitioner	Remarks on admissibility	Amount Allowed
	<b>Total amount allowed</b>				<b>11.58</b>

**(b) Claims under Regulation 14(3)(iii) of the 2014 Tariff Regulations**

*(Rs. in lakh)*

Sl. No.	Details of the claim	Amount claimed	Justification submitted by the Petitioner	Remarks on admissibility	Amount Allowed
<b>New Items Claimed</b>					
1	Providing retro reflective sign board at various places of power station.	2.96	As per requirement of Disaster Management Plan, emergency exit plan was prepared for which retro-reflective sign board was provided at various places of power Station. The asset is considered essential for safety of the personnel/ staff deployed at Power House.	The Petitioner has submitted that the asset/ work is necessary for the safety and security of the power station. The Petitioner has also furnished the necessary documents in support of the claim. In view of this, the additional capital expenditure claimed is <b>allowed</b> .	2.96
	<b>Total amount claimed</b>	<b>2.96</b>			
	<b>Total amount allowed</b>				<b>2.96</b>

**(c) Claims under Regulation 14(3)(v) of the 2014 Tariff Regulations**

*(Rs. in lakh)*

Sl. No.	Details of the claim	Amount claimed	Justification submitted by the Petitioner	Remarks on admissibility	Amount Allowed
1	Exchange Rate Variation	10.24	The adjustment pertains to main turnkey contract of hydro-mechanical works under original scope of Project, which is materialised after COD.	Since the additional capital expenditure/ adjustment made is for items within the original scope of works and is towards balance payments, the same is <b>allowed</b> .	10.24
	<b>Total amount claimed</b>	<b>10.24</b>			
	<b>Total amount allowed</b>				<b>10.24</b>





(d) Claims under Regulation 14(3)(viii) of the 2014 Tariff Regulations

(Rs. in lakh)

Sl. No.	Details of the claim	Amount claimed	Justification submitted by the Petitioner	Remarks on admissibility	Amount Allowed
1(i)	Purchase of Generator Coolers	13.74	These assets/ works were admitted vide order dated 26.5.2016 in Petition No. 264/GT/2014 (projected item No. 1 of 2015-16).	It is noticed that the Commission vide order dated 26.5.2016 had allowed additional capital expenditure for the asset/ work in Petition No. 264/GT/2014 for Rs.192 lakh. As the additional capital expenditure claimed is within the amount approved vide order dated 26.5.2016, the same is <b>allowed</b> .	13.74
1(ii)	Purchase of spares generator excitation system and automation etc., ( <i>configuration of workstations of powerhouse automation system, procurement of T400 Card for excitation system</i> )	24.24	Same as in 2015-16.	Same as in 2015-16.	24.24
2	Construction of 06 numbers F-Type Qtrs (Phase - II) at Omkareshwar Power Station, Siddhwarkut	121.53	These assets/ works were admitted vide order dated 26.5.2016 in Petition No. 264/GT/2014 (projected item No. 23 of 2015-16). The Commission has allowed this item as available F-type quarters were less than sanctioned strength of E-3 & E-4 level officers at the generating station. Further, there was provision of F-type	It is noticed that the Commission vide order dated 26.5.2016 in Petition No. 264/GT/2014 had allowed additional capital expenditure for the asset/ work for Rs.80.00 lakh. The Petitioner has claimed actual additional capital expenditure for this asset/ work in a phased manner i.e. Rs.121.53 lakh in	121.53





Sl. No.	Details of the claim	Amount claimed	Justification submitted by the Petitioner	Remarks on admissibility	Amount Allowed
			quarters in original scope all of which could not be executed previously. This expenditure was for the benefit of the employees working in the power plant.	2017-18 and Rs.2.32 lakh in 2018-19 and the same is beyond the limit allowed vide order dated 26.5.2016. The Petitioner has submitted that the variation is on account of the fact that while the projected additional capital expenditure was based on projections, the actual additional capital expenditure claimed is based on the actual contract value awarded by following requisite public procurement process. In view of the above, the additional capital expenditure claimed is <b>allowed</b> .	
3	Centrifuging machine - 2 numbers	10.74	These assets/ works were admitted vide order dated 26.5.2016 in Petition No. 264/GT/2014 (projected item No. 15 of 2015-16). These assets were allowed earlier as the centrifuging machines are essentially required for moisture removal from hydraulic oil used in power packs of 23 numbers radial gate, 8 numbers intake gates 8 numbers machines (units) and 01 number Trash Rack Cleaning	It is noticed that the Commission vide order dated 26.5.2016 had allowed the projected additional capital expenditure for this asset/ work for Rs.20.00 lakh in Petition No. 264/GT/2014. As the actual additional capital expenditure claimed by the Petitioner is within the amount approved vide order dated 26.5.2016, the same is <b>allowed</b> .	10.74



Sl. No.	Details of the claim	Amount claimed	Justification submitted by the Petitioner	Remarks on admissibility	Amount Allowed
			Machine (TRCM).		
4	Purchase of absolute encoders for Radial Gates of generating station	2.30	These assets/ works were admitted vide order dated 26.5.2016 in Petition No. 264/GT/2014 (projected item No. 44 of 2014-15).	It is noticed that the Commission vide order dated 26.5.2016 had allowed the projected additional capital expenditure for this asset/ work for Rs.21.50 lakh. As the actual additional capital expenditure claimed by the Petitioner is within the limit allowed vide order dated 26.5.2016, the same is <b>allowed</b> . The de-capitalization value of Rs.1.35 lakh for old replaced assets/ works has been considered under 'assumed deletions'.	2.30
5	Pump for dewatering of Dam gallery	20.58	These assets/ works were admitted vide order dated 26.5.2016 in Petition No. 264/GT/2014 (projected item No. 23 of 2014-15).	It is observed that the Commission vide order dated 26.5.2016 in Petition No. 264/GT/2014 had allowed projected additional capital expenditure for the asset/ work for Rs.25.00 lakh. The Petitioner has claimed actual additional capital expenditure for this asset/ work in a phased manner i.e. Rs.20.58 lakh in 2017-18 and Rs.4.83 lakh in 2018-19 but the same is beyond the limit approved vide order dated 26.5.2016. The	20.58



Sl. No.	Details of the claim	Amount claimed	Justification submitted by the Petitioner	Remarks on admissibility	Amount Allowed
				Petitioner has submitted that the variation is on account of the fact that while the projected additional capital expenditure was based on projections, the actual additional capital expenditure claimed is based on the actual contract value awarded by following the requisite public procurement process. In view of the above, the additional capital expenditure claimed is <b>allowed</b> .	
6	Purchase of 03 MT forklift for Store.	8.56	These assets/ works were admitted vide order dated 26.5.2016 in Petition No. 264/GT/2014 (projected item No. 22 of 2015-16).	It is noticed that the Commission vide order dated 26.5.2016 had allowed projected additional capital expenditure for this asset/ work for Rs.10 lakh. As the actual additional capital expenditure claimed by the Petitioner is within the amount approved vide order dated 26.5.2016, the same is <b>allowed</b> .	8.56
7	Mobile lighting mast	5.23	These assets/ works were admitted vide order dated 26.5.2016 in Petition No. 264/GT/2014 (projected item No. 10 of 2016-17).	It is noticed that the Commission vide order dated 26.5.2016 in Petition No. 264/GT/2014 had allowed projected additional capital expenditure for this asset/ work for Rs.7.00 lakh. As	5.23



Sl. No.	Details of the claim	Amount claimed	Justification submitted by the Petitioner	Remarks on admissibility	Amount Allowed
				the actual additional capital expenditure claimed by the Petitioner is within the amount approved vide order dated 26.5.2016, the same is <b>allowed</b> .	
8	Purchase of Numerical Protection Relay for Feeder Protection - De-capitalisation of old asset	(-)9.91	This was admitted vide order dated 26.5.2016 in Petition No. 264/GT/2014 (projected item No. 9 of 2016-17). The asset was procured and capitalised in 2016-17. This provision is against de-capitalisation of old asset.	The asset was shifted to 2016-17, in the year of replacement.	0.00
9	Protection work for Road at Left Bank approach road at downstream of OSP	63.00	There is only one proper approach road to the project and the same was used for shifting of all equipment/ machinery during construction phase of Project. During heavy flood, the bank of river got damaged (slide due to under cutting) and to curb further deterioration of the bank, it was essential to execute protection work for road at Left Bank approach road.	It is noticed that in order dated 26.5.2016 in Petition No. 264/GT/2014, the asset/ work was not allowed to be capitalised, on the ground that the expenditure should be met from O&M expenses permitted to the generating station. In line with this decision, the additional capital expenditure claimed is <b>not allowed</b> .	0.00
10	Purchase of 245 kV SF6 Circuit Breaker Columns for Switchyard of OSP.	7.20	There are total 14 Bays (08 numbers Generator Bays, 05 numbers Line Bays and 1 number Bus coupler Bay) at Switchyard of the project. The 220 KV CB provided are of	The Petitioner has claimed additional capitalization of the assets, in a phased manner i.e. Rs.7.20 lakh in 2017-18 and Rs.6.96 lakh in 2018-19. Since the additional capital	7.20



Sl. No.	Details of the claim	Amount claimed	Justification submitted by the Petitioner	Remarks on admissibility	Amount Allowed
			Pneumatic Drive type, wherein frequent troubles are being observed. The healthiness of CB is required to be ensured at all times for smooth operation of units. Accordingly, the asset was essentially required.	expenditure on the assets/ works contributes to the efficient operation of the generating station, the same is <b>allowed</b> .  The de-capitalization value of Rs.4.21 lakh in 2017-18 and Rs.1 lakh in 2018-19 towards the old, replaced assets/ works has been considered under 'assumed deletions'.	
11	Construction of approach road for the 110 KLD sewage treatment Plant of Siddhawarkut colony, OSP	9.34	There was no proper approach up to 110 KLD Sewage Treatment Plant of Siddhawarkut colony. The work was essential in nature as proper approach road is required to ensure regular R&M of the STP.	Since the expenditure incurred is in the nature of O&M expenses and does not directly relate to the operation of the plant, the claim of the Petitioner is <b>not allowed</b> .	0.00
12	Purchase of leakage current measuring equipment.	17.26	For safety of various plants and equipment of powerhouse and switchyard, it is essential to maintain healthiness of the lightning arrester. Accordingly, for in house periodic maintenance, the assets are essentially required.	Since the additional capital expenditure incurred in respect of the asset/ work after the cut-off date, are in the nature of tools and tackles/ minor assets, the same is <b>not allowed</b> .	0.00
13	Transducer for joint meter reading	3.59	Various essential assets were procured and installed for smooth operation of plant like Transducer for joint meter reading, programmable memory card, pump		0.00
14	Programmable memory card	3.41			0.00
15	PLCC Based EPABX system (put under minor items)	1.94			0.00



Sl. No.	Details of the claim	Amount claimed	Justification submitted by the Petitioner	Remarks on admissibility	Amount Allowed
16	Pump & Jockey Pump	0.83	& jockey pump. In addition to this, other essential assets were also installed like PLCC-based EPABX system for effective communication and installation of pipeline network. All the above items are essential for smooth plant operations.		0.00
17	Laying/ Installation of Pipeline Network	6.28			0.00
	<b>Total amount claimed</b>	<b>309.88</b>			
	<b>Total amount allowed</b>				<b>214.14</b>

27. Based on the above, the total additional expenditure of Rs.238.92 lakh {Rs.11.58 + Rs.2.96 + Rs.10.24 + Rs.214.14} in 2017-18 is allowed.

### **2018-19**

28. The details of the actual additional capital expenditure claimed by the Petitioner in 2018-19 under the various provisions of Regulation 14(3) of the 2014 Tariff Regulations are examined below:

			(Rs. in lakh)
Sl. No.	Regulation of the 2014 Tariff Regulations under which claim has been made		2018-19
(a)	14(3)(i)	Liabilities to meet award of arbitration or for compliance of the order or decree of a court of law.	153.29
(b)	14(3)(ii)	Change in law or compliance of any existing law.	-
(c)	14(3)(iii)	Expenses incurred on account of need for higher security and safety of the plant as advised or directed by appropriate Govt. Agencies of statutory authorities responsible for national/ internal security	3.77
(d)	14(3)(v)	Liability for works executed prior to the cut-off date;	(-)2.12
(e)	14(3)(viii)	Additional works/expenditure which has become necessary for efficient and successful operation of plant	256.50
	<b>Total additional capital expenditure claimed</b>		<b>411.44</b>



**(a) Claims under Regulation 14(3)(i) of the 2014 Tariff Regulations**

*(Rs. in lakh)*

Sl. No.	Details of the claim	Amount claimed	Justification submitted by the Petitioner	Remarks on admissibility	Amount Allowed
1	Expenditure on balance R&R works	153.29	Same as for 2014-15.	Same as for 2014-15.	153.29
	<b>Total amount claimed</b>	<b>153.29</b>			
	<b>Total amount allowed</b>				<b>153.29</b>

**(b) Claims under Regulation 14(3)(iii) of the 2014 Tariff Regulations**

*(Rs. in lakh)*

Sl. No	Details of the claim	Amount claimed	Justification submitted by the Petitioner	Remarks on admissibility	Amount Allowed
<b>New Items Claimed</b>					
1	Purchase of accessories for installation of CCTV system erection, commissioning of cameras and interconnection of powerhouse with administrative block through OFC based network.	3.77	Same as for 2015-16.	Same as in 2015-16.	3.77

**(c) Claims under Regulation 14(3)(v) of the 2014 Tariff Regulations**

*(Rs. in lakh)*

Sl. No.	Details of the claim	Amount claimed	Justification submitted by the Petitioner	Remarks on admissibility	Amount Allowed
1	Exchange Rate Variation	(-) 2.12	The adjustment pertains to the main Turnkey Contract of Hydro Mechanical Works under original scope of Project, which materialised after COD.	The additional capital expenditure claimed is for items which are within the original scope of work of the project and the Petitioner has submitted that the same was put to use during August 2007. In view of this and since the adjustment is in respect of the payments made, the additional capital expenditure is <b>allowed</b> .	(-) 2.12



**(d) Claims under Regulation 14(3)(viii) of the 2014 Tariff Regulations**

**(Rs. in lakh)**

<b>Sl. No.</b>	<b>Details of the claim</b>	<b>Amount claimed</b>	<b>Justification submitted by the Petitioner</b>	<b>Remarks on admissibility</b>	<b>Amount Allowed</b>
1	Pump for dewatering of dam gallery	4.83	Same as for 2017-18.	Same as in 2017-18.	4.83
2	Up-gradation of protection system including replacement of numerical/ electromagnetic relay for Power house	16.40	Same as for 2016-17.	Same as in 2016-17.	16.40
3	Construction of 06 numbers F-Type Qtrs (Phase - II) at generating station	2.32	Same as for 2017-18.	Same as in 2017-18.	2.32
4	Development of children park at Urja Vihar Parisar.	38.33	These assets/ works were admitted vide order dated 26.5.2016 in Petition No. 264/GT/2014 (projected item No. 41 of 2014-15).	It is noticed that the Commission vide order dated 26.5.2016 in Petition No. 264/GT/2014 had allowed projected additional capital expenditure for the asset/work for Rs.20.00 lakh. The Petitioner has submitted that the variation is on account of the fact that while the additional capital expenditure was based on projections in Petition No. 264/GT/2014, the actual additional capital expenditure claimed in this petition is based on the actual contract value awarded by following requisite public procurement process. In view of the above, the additional capital expenditure claimed is <b>allowed</b> .	38.33
5	Providing and fixing filter plant for water	2.63	These assets/ works were admitted vide order dated	It is noticed that the Commission vide its order dated 26.5.2016 in Petition No. 264/GT/2014 had allowed	2.63





Sl. No.	Details of the claim	Amount claimed	Justification submitted by the Petitioner	Remarks on admissibility	Amount Allowed
	treatment for drinking water supply for dam & Power house - cost of RCC tank		26.5.2016 in Petition No. 264/GT/2014 (projected item No. 06 of 2015-16).	projected additional capital expenditure for the asset/work for Rs.10.00 lakh. As the actual additional capital expenditure claimed by the Petitioner is within the amount approved vide order dated 26.5.2016, the same is <b>allowed</b> . The de-capitalization value of Rs.1.46 lakh for the old replaced assets/ works has been considered under 'assumed deletions'.	
6	Construction of Parking shed at central stores, transit camp and service building at generating station	49.78	During summer, the temperature around generating station reaches about 47 <sup>0</sup> Celsius and parking shed/ facility for departmental vehicles was not available at central stores. Also, there was no parking shed for employees/ guest residing at transit camp and working at services building. Hence, construction of parking shed was required for ensuring safety of vehicles/ efficient plant operation.	Since the expenditure incurred is in the nature of O&M expenses and does not directly relate to the operation of the plant, the claim of the Petitioner is <b>not allowed</b> .	0.00
7	Work of widening of Tail race channel for smooth flow of water from Kaveri to Narmada.	81.20	The project has encountered numerous floods. During heavy floods, spillways of OSP dam are operated. It is observed that with passage of time, the	Since the additional capital expenditure incurred by the Petitioner is related to the efficient operation including the safety of the plant, the same is <b>allowed</b> .	81.20



Sl. No.	Details of the claim	Amount claimed	Justification submitted by the Petitioner	Remarks on admissibility	Amount Allowed
			<p>downstream profile has changed due to the release of flood water from the spillway. The flood water has deposited the riverbed material on the Narmada river side. This deposition of riverbed material creates afflux which results in reduction of net head and thereby drastically affecting the performance of the generating units owing lesser resultant net head.</p> <p>Accordingly, the work of widening of tail race channel for smooth flow of water from Kaveri to Narmada was essential. This work was also essential to allow more flow of water towards Narmada river course for environmental needs of downstream inhabitants/ Omkareshwar temple.</p>		
8	Purchase of SC2 jacks along with power pack for stress	12.58	PTPS anchorage system of the project has been supplied by M/s Freyssinet	Since the additional capital expenditure for the asset/work is necessary for safety and efficient operation of the plant, the same is <b>allowed</b> .	12.58



Sl. No.	Details of the claim	Amount claimed	Justification submitted by the Petitioner	Remarks on admissibility	Amount Allowed
	monitoring of cables of dam gates.		Prestressed Concrete Co. Ltd. It is essential to ensure that the individual tendons are stressed as per standard technical requirements as loosening or detachment from end may result in zero stress which is very dangerous/ fatal for safety of radial gate. The asset was essential for stress monitoring of the cables of dam. The work relates to safety of plant/ installation also facilitates smooth plant operations.		
9	Supply and installation of 220 KV, 2500/1 single Phase Dead Tank type Current Transformer for switchyard	3.78	Bus Coupler is a vital constituent of switchyard and is used to couple two bus bars in order to perform maintenance on other circuit breakers associated with that bus bar. During conduct of Operation and Coordination Committee (OCC) of Madhya Pradesh, it was stressed upon that the Bus coupler of Switchyard is to be made operational. The	The Petitioner has claimed additional capital expenditure towards the supply and installation of current transformer. The Petitioner has submitted that during the Operation and Coordination Committee meeting, it was stressed that the bus coupler of switchyard is to be made operational to ensure grid security and reliability of the system. The said asset is essential to ensure the reliable system operations. In line with the submissions and considering the fact that the additional capital expenditure claimed is necessary for the efficient operation of the generating station the same is <b>allowed</b> .	3.78



Sl. No.	Details of the claim	Amount claimed	Justification submitted by the Petitioner	Remarks on admissibility	Amount Allowed
			work/ asset was essential for ensuring the grid security and for reliability of the system.		
10	Purchase of 245 KV SF6 Circuit Breaker columns for switchyard	6.96	Same as for 2017-18.	Same as in 2017-18.	6.96
11	Purchase of Tan delta measurement kit	37.70	Internal Protection Audit committee constituted by MPSLDC, Jabalpur in its report has recommended to record capacitance and tan delta value of HV bushing of GT, which is a vital condition monitoring parameter useful in prevention of failures of HT equipment. Accordingly, additional capital expenditure is required to comply with the recommendations of Internal Protection Audit Committee as well as the asset/work is necessary for safety of equipment of the plant/ smooth plant operations.	Since the additional capital expenditure claimed is in the nature of tools & tackles and does not relate to the operation of the generating station, the same is <b>not allowed</b> . This was dealt and disallowed earlier in order dated 26.5.2016 in Petition No. 264/GT/2014.	0.00
	<b>Total amount claimed</b>	<b>256.50</b>			



Sl. No.	Details of the claim	Amount claimed	Justification submitted by the Petitioner	Remarks on admissibility	Amount Allowed
	<b>Total amount allowed</b>			<b>169.02</b>	

29. Based on the above, the total additional expenditure of Rs.323.96 lakh {Rs.153.29 + (-) Rs.2.12 + Rs.3.77 + Rs.169.02 lakh} in 2018-19 is allowed.

### **Discharge of liabilities**

30. The Petitioner has claimed the following discharge of liabilities:

<i>(Rs. in lakh)</i>				
2014-15	2015-16	2016-17	2017-18	2018-19
315.31	842.03	1481.51	4467.67	204.69

31. The Respondent, MPPMCL has submitted that the Petitioner may be directed to furnish the details of un-discharged liabilities along with justification. In response, the Petitioner has furnished asset-wise un-discharged liabilities and the liabilities discharged along with Form 16, duly certified by independent practitioner. Accordingly, on prudence check, the discharge of liabilities is allowed.

### **De-capitalization**

32. As regards de-capitalization, Regulation 14(4) of the 2014 Tariff Regulations, provides as under:

*“In case of de-capitalisation of assets of a generating company or the transmission licensee, as the case may be, the original cost of such asset as on the date of de-capitalisation shall be deducted from the value of gross fixed asset and corresponding loan as well as equity shall be deducted from outstanding loan and the equity respectively in the year such de-capitalisation takes place, duly taking into consideration the year in which it was capitalised.”*

33. The Commission vide ROP of the hearing dated 13.4.2021 directed the Petitioner to submit the details of items de-capitalized along with the original value of capitalization and the year in which they were put to use. In response, the Petitioner



has submitted that the construction of the project was awarded on a package/ lot basis and, hence, the original value of the individual equipment cannot be determined. The Petitioner has stated that Clause 70 of the Indian Accounting Standards (Ind AS) 16 stipulates the following:

*“..... If it is not practicable for an entity to determine the carrying amount of the replaced part, it may use the cost of replacement as an indication of what the cost of the replaced part was at the time it was acquired or constructed.”*

34. Accordingly, the cost of item has been derived by the Petitioner taking the current price of item and reinstating the value, considering the income tax price indexation, applicable for the year of 2007, based on which depreciation has been worked out. The Petitioner has claimed de-capitalization as under:

<i>(Rs. in lakh)</i>				
<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
(-) 29.37	(-) 3.58	(-) 17.24	(-) 9.91	(-) 2.12

35. The de-capitalization claimed by the Petitioner has been dealt with in the relevant paragraphs relating to the additional capital expenditure claims, which have been considered and allowed for the respective years of the 2014-19 tariff period in terms of the provisions of Regulation 14(3) of the 2014 Tariff Regulations. Further, de-capitalization of assets is not considered against which capitalization of expenditure has not been allowed. Accordingly, the de-capitalization considered for the purpose of tariff is as under:

<i>(Rs. in lakh)</i>					
	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
De-capitalization claimed	(-) 29.37	(-) 3.58	(-) 17.24	(-) 9.91	(-) 2.12
De-capitalization allowed	(-) 29.37	0.00	(-) 27.15	0.00	(-) 2.12

### **Assumed Deletion**

35. As per consistent methodology adopted by the Commission in its orders, the expenditure on replacement of assets, if found justified, is allowed for the purpose of



tariff provided that the capitalization of the said asset, is followed by de-capitalization of the gross value of the old asset. However, in certain cases, where the de-capitalization is proposed to be effected during the future years to the year of capitalization of the new asset, the de-capitalization of the old asset for the purpose of tariff, is shifted to the very same year in which the capitalization of the new asset is allowed. Such de-capitalization which is not a book entry in the year of capitalization is termed as "Assumed Deletion".

36. The methodology of arriving at the fair value of the de-capitalized asset, i.e. escalation rate of 5% per annum from the COD has been considered in order to arrive at the gross value of old asset in comparison to the cost of new asset. In the instant petition, COD year of the generating station is 2007-08. We have considered the value of asset under consideration as on COD as 100 and escalated it @5% till the year during which additional capital expenditure is claimed against replacement of the same. The amount claimed for additional capital expenditure against this asset is multiplied by the derived ratio from above two values i.e. value in COD year divided by value in capitalized year to work out the de-capitalization amount.

37. The Petitioner has claimed additional capital expenditure for certain assets/works, but has not furnished the de-capitalized value of the old, replaced assets/works. In this regard, the Commission in its order dated 26.5.2016 in Petition No. 264/GT/2014 has adopted the following methodology:

*"It is observed that the petitioner has claimed Rs. 396.50 lakh against the capitalization for Installation of instrumentation system for Dam & Power house, Sliding Ring & Sealing Ring insert along with other accessories for Shaft Seal System, electrical drives for EOT Cranes and encoders for Radial Gates, Up gradation of Air gap and vibration monitoring system, Up gradation of protection system including replacement of numerical/ Electromagnetic relay for power house, Up-gradation of Software of automation i.e. CS-*



7 system and Up gradation of ARMAC System on replacement basis, during the period 2014-19. The petitioner has not indicated the gross value of the old assets replaced. Therefore, the methodology of arriving at the fair value of the de-capitalized asset, i.e. escalation rate of 5 % per annum from the COD has been considered in order to arrive at the gross value of old assets in comparison to the cost of new assets. Gross value of the old assets considered for the purpose of tariff in respect of the admitted assets/works has been indicated against individual assets, as in para 15 above. However, the petitioner is granted liberty to furnish the actual gross value of replaced assets at the time of truing up exercise and the same will be considered in accordance with law.”

38. It is observed that the Petitioner, in its present petition, has not furnished the de-capitalization value for some of the assets/ works as mentioned in the table below for the years 2016-17, 2017-18 and 2018-19 respectively. Accordingly, in terms of the above methodology, the value of ‘assumed deletions’ considered for the replaced asset for the purpose of tariff is detailed as under:

(Rs. in lakh)					
Sl. No.	Details	Additions claimed for new asset on replacement	De-capitalization value of old asset Claimed	Assumed Deletions for old asset Allowed	Net Additional Capital Expenditure allowed
<b>2016-17</b>					
1	Sliding Ring & Sealing Ring insert along with other accessories for Shaft Seal System	22.84	0.00	14.02	8.82
<b>2017-18</b>					
1	Purchase of absolute encoders for radial gates of project	2.30	0.00	1.35	0.96
2	Purchase of 245KV SF6 Circuit Breaker columns for switchyard of project	7.20	0.00	4.21	2.99
<b>2018-19</b>					
1	Providing and fixing filter plant for water treatment for drinking water supply for Dam & Power house - construction of RCC	2.63	0.00	1.46	1.16





Sl. No.	Details	Additions claimed for new asset on replacement	De-capitalization value of old asset Claimed	Assumed Deletions for old asset Allowed	Net Additional Capital Expenditure allowed
	tank				
2	Purchase of 245KV SF6 Circuit Breaker columns for switchyard of project.	6.96	0.00	3.88	3.09

### **Exclusions**

39. The following exclusions have been claimed by the Petitioner:

	<i>(Rs. in lakh)</i>				
	2014-15	2015-16	2016-17	2017-18	2018-19
Exclusions in Additions	18.56	30.08	18.83	14.42	37.21
Exclusions in Deletions	(-)11.82	0.00	(-)1.12	(-)3.53	(-)1.11
<b>Net Exclusions claimed</b>	<b>6.74</b>	<b>30.08</b>	<b>17.72</b>	<b>10.90</b>	<b>36.10</b>

#### ***Exclusions in Additions (capitalized in books but not to be considered for tariff purpose)***

40. The Petitioner has submitted that the expenditure as stated in the table above is incurred on procurement/ replacement of minor assets which are not allowed for the purpose of tariff, after the cut-off date of the generating station, in terms of the 2014 Tariff Regulations. The Petitioner has, accordingly, put these additions under exclusion category, by including the positive entries arising due to Inter-head adjustments. As such, the exclusion of such positive entries is allowed and has no impact on tariff. Hence, the same is in order and allowed.

#### ***Exclusions in deletions (de-capitalized in books but not to be considered for tariff purpose)***

41. The Petitioner has de-capitalized the following amounts in books of accounts and has kept the same under exclusion for the purpose of tariff:



	<i>(Rs. in lakh)</i>				
	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Minor Assets de-capitalised	(-)10.42	0.00	0.00	(-)2.78	0.00
Minor Assets transferred out - Senior employee	(-)1.40	0.00	0.00	(-)0.75	(-)1.11
Ambassador Car-De-capitalization	0.00	0.00	(-)1.07	0.00	0.00
Drill Machine – De-capitalization	0.00	0.00	(-)0.05	0.00	0.00
<b>Total</b>	<b>(-)11.82</b>	<b>0.00</b>	<b>(-)1.12</b>	<b>(-)3.53</b>	<b>(-)1.11</b>

42. It is noticed that the exclusion in deletions are under minor assets de-capitalized, minor assets transferred out, car and drilling machine. However, the Petitioner has not furnished item-wise details for the years 2014-15, 2017-18 and 2018-19, under the head 'minor assets de-capitalised' and minor assets transferred out-senior employee' as shown in the table above. In absence of any details of the assets and proper linking of the items claimed under exclusions in deletion category, the same is disallowed. As regards the exclusion claimed for Ambassador car and Drill machine, it is pointed out that the purchase of new car and drill machine are not allowed for the purpose of tariff, after the cut-off date of the generating station. Accordingly, the de-capitalized amount for the same are allowed to be excluded from deletions. Based on this, the following exclusion in deletions are not allowed and are reduced from capital cost for the purpose of tariff:

	<i>(Rs. in lakh)</i>				
	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Exclusions in Deletions not allowed (to be considered in deletion)	(-)11.82	0.00	0.00	(-)3.53	(-)1.11

#### **Additional capital expenditure allowed (Net) for the 2014-19 period**

43. In view of above, the net additional capital expenditure allowed for the purpose of tariff for the 2014-19 tariff period is as follows:



	(Rs. in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Additional capital expenditure (Power component) [A]	455.22	473.07	169.05	238.91	323.96
Deletion during the year [B]	(-)29.37	0.00	(-)27.15	0.00	(-)2.12
Assumed Deletions during the year [C]	0.00	0.00	(-)14.02	(-)5.55	(-)5.34
Exclusions disallowed [D]	(-)11.82	0.00	0.00	(-)3.53	(-)1.11
<b>Net Additional capital expenditure (Power component) [E]=[A+B+C]</b>	<b>425.85</b>	<b>473.07</b>	<b>127.88</b>	<b>233.36</b>	<b>318.62</b>
Un-discharged liabilities at the beginning of the year (X)	10643.48	10328.17	9486.14	8004.64	3536.97
Un-discharged liabilities at the ending of the year (Y)	10328.17	9486.14	8004.64	3536.97	3332.27
Un-discharged liabilities discharged [F]= (X)-(Y)	315.31	842.03	1481.51	4467.67	204.69
<b>Additional capital expenditure (Power component) allowed for tariff [E+F]</b>	<b>729.35</b>	<b>1315.10</b>	<b>1609.39</b>	<b>4697.50</b>	<b>522.21</b>

### **Capital cost allowed for the 2014-19 tariff period**

44. The Commission vide order dated 26.5.2016 in Petition No. 264/GT/2014 had allowed the opening capital cost of Rs.238286.93 lakh as on 31.3.2014. The same is considered as the opening capital cost as on 1.4.2014. Accordingly, the capital cost allowed for the 2014-19 tariff period is as under:

	(Rs. in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Opening capital cost (a)	238286.93	239016.28	240331.37	241940.76	246638.26
Net additional capital expenditure allowed during the year/ period (b)	729.35	1315.10	1609.39	4697.50	522.21
<b>Closing Capital Cost (a)+(b)</b>	<b>239016.28</b>	<b>240331.37</b>	<b>241940.76</b>	<b>246638.26</b>	<b>247160.47</b>

### **Debt Equity Ratio**

45. 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.

*Explanation-*The premium, if any, raised by the generating company or the transmission licensee, as the case may be, while issuing share capital and investment of internal resources created out of its free reserve, for the funding of the project, shall be reckoned as paid up capital for the purpose of computing return on equity, only if such premium amount and internal resources are actually utilised for meeting the capital expenditure of the generating station or the transmission system.

(2) The generating company or the transmission licensee shall submit the resolution of the Board of the company or approval from Cabinet Committee on Economic Affairs (CCEA) regarding infusion of fund from internal resources in support of the utilization made or proposed to be made to meet the capital expenditure of the generating station or the transmission system including communication system, as the case may be.

(3) In case of the generating station and the transmission system including communication system declared under commercial operation prior to 1.4.2014, debt:equity ratio allowed by the Commission for determination of tariff for the period ending 31.3.2014 shall be considered.

(4) In case of the generating station and the transmission system including communication system declared under commercial operation prior to 1.4.2014, but where debt: equity ratio has not been determined by the Commission for determination of tariff for the period ending 31.3.2014, the Commission shall approve the debt: equity ratio based on actual information provided by the generating company or the transmission licensee as the case may be.

(5) Any expenditure incurred or projected to be incurred on or after 1.4.2014 as may be admitted by the Commission as additional capital expenditure for determination of tariff, and renovation and modernization expenditure for life extension shall be serviced in the manner specified in clause (1) of this regulation.”

46. The debt-equity ratio of 70:30 has been considered in terms of Regulation 19 of the 2014 Tariff Regulations for the purpose of tariff.

**(Rs. in lakh)**

Asset	As on 1.4.2014		Net Additional Capitalization during 2014-19		As on 31.3.2019	
	Amount	%	Amount	%	Amount	%
Debt	166800.85	70.00%	6,211.48	70.00%	173012.33	70.00%
Equity	71486.08	30.00%	2,662.06	30.00%	74148.14	30.00%
<b>Total</b>	<b>238286.93</b>	<b>100.00%</b>	<b>8,873.54</b>	<b>100.00%</b>	<b>247160.47</b>	<b>100.00%</b>



## **Return on Equity**

47. 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.”*

48. 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.”*

49. The Respondent MPPMCL has submitted that in order dated 26.5.2016 in Petition No. 264/GT/2014 the Petitioner was directed to furnish the effective tax rates along with tax audit report, which has not been furnished. The Respondent has further submitted that as per Income Tax department website, the domestic companies are liable to pay MAT @18.5% every year during the period 2014-19 and, therefore, the MAT rate of 18.5% may only be considered for computation of pre-tax RoE. In response, the Petitioner has submitted that RoE considering the base rate, grossed up with the MAT rate for the year 2013-14, has been computed as 20.876%. The Petitioner has also submitted that in terms of Regulation 25(2) of the 2014 Tariff Regulations, RoE of 16.5% grossed-up at applicable MAT rates for respective years has been claimed as per details given below:



Period	2014-15	2015-16	2016-17	2017-18	2018-19
Rate of grossed-up RoE with applicable MAT rate on base rate @ 16.50 %	20.876%	20.977%	20.977%	20.977%	21.032%
	Applicable MAT Rate =20.9605%	Applicable MAT Rate =21.3416%	Applicable MAT Rate =21.3416%	Applicable MAT Rate =21.3416%	Applicable MAT Rate =21.5488%
	(18.5% MAT, 10% surcharge, 3% Education cess)	(18.5% MAT, 12% surcharge, 3% Education cess)	(18.5% MAT, 12% surcharge, 3% Education cess)	(18.5% MAT, 12% surcharge, 3% Education cess)	(18.5% MAT, 12% surcharge, 4% Education cess)

50. The Petitioner has submitted that it was covered under MAT as per section 115JB of Income Tax Act, 1961, during the 2014-19 tariff period. The Petitioner has also submitted the certificate from Chartered Accountant for calculation of the effective tax rate for the period from 2014-15 to 2018-19.

51. We have considered the submissions of the parties. The Petitioner has submitted that MAT rate is applicable to the Petitioner. Since the Petitioner has been paying income tax on income computed under Section 115JB of the IT Act, 1961, as per the MAT rates of the respective financial year, the notified MAT rate for respective financial year has been considered as the effective tax rate for the purpose of grossing up of RoE for the 2014-19 tariff period, in terms of the provisions of the 2014 Tariff Regulations. Accordingly, grossing up of base rate has been done with actual MAT rate of the respective financial year and RoE has been computed in line with Regulations 24 and 25 of the 2014 Tariff Regulations as under:

	<b>(Rs. in lakh)</b>				
	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Opening Equity (A)	71486.08	71704.88	72099.41	72582.23	73991.48
Addition due to additional capitalization (B)	124.21	141.92	42.57	70.62	96.86





	2014-15	2015-16	2016-17	2017-18	2018-19
Addition due to un-discharged liability (C)	94.59	252.61	444.45	1340.30	61.41
Less: Assumed Deletion (D)	0.00	0.00	4.21	1.67	1.60
Closing Equity (E)=[(A)+(B)+(C)-(D)]	71704.88	72099.41	72582.23	73991.48	74148.14
Average Equity (F)=[(A+E)/2]	71595.48	71902.15	72340.82	73286.85	74069.81
Base Rate (%) (G)	16.500%	16.500%	16.500%	16.500%	16.500%
Effective Tax Rate (%) (H)	20.9605%	21.3416%	21.3416%	21.3416%	21.5488%
Effective ROE Rate (%) (I)	20.876%	20.977%	20.977%	20.977%	21.032%
<b>Return on Equity (J)= [(F)*(I)]</b>	14946.27	15082.91	15174.93	15373.38	15578.36

### **Interest on Loan**

52. 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) Notwithstanding any moratorium period availed by the generating company or the transmission licensee, as the case may be, the repayment of loan shall be considered from the first year of commercial operation of the project and shall be equal to the depreciation allowed for the year or part of the year.*

*(5) The rate of interest shall be the weighted average rate of interest calculated on the basis of the actual loan portfolio after providing appropriate accounting adjustment for interest capitalized Provided that if there is no actual loan for a particular year but normative loan is still outstanding, the last available weighted average rate of interest shall be considered: Provided further that if the generating station or the transmission system, as the case may be, does not have actual loan, then the weighted average rate of interest of the generating company or the transmission licensee as a whole shall be considered*

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

*(7) The generating company or the transmission licensee, as the case may be, shall make every effort to re-finance the loan as long as it results in net savings on interest and in that event the costs associated with such refinancing 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."

53. Interest on loan has been worked out as mentioned below:

- 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 based on the actual loan portfolio of respective year applicable to the project.
- iii. The repayment for the year 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 considering the time factor.

54. Accordingly, Interest on loan is computed as under:

	<b>(Rs. in lakh)</b>				
	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Gross Normative Loan (A)	166800.85	167311.39	168231.96	169358.53	172646.78
Cumulative repayment of loan upto previous year (B)	59039.97	69782.15	80575.14	91424.57	102421.77
Net Loan Opening (C)=[(A)-(B)]	107760.88	97529.24	87656.82	77933.96	70225.01
Repayment during the year (D)=Depreciation	10745.77	10792.99	10858.84	11001.09	11118.87
Cumulative repayment adjustment on a/c of de-capitalization (E)	3.58	0.00	9.41	3.89	3.12
Net Repayment (F)=[(D)-(E)]	10742.18	10792.99	10849.43	10997.20	11115.75
Addition due to additional capital expenditure (G)	510.54	920.57	1136.39	3292.14	369.28
Net Loan Closing (H)= (C+G-F)	97529.24	87656.82	77933.96	70225.01	59474.81
Average Loan	102645.06	92593.03	82795.39	74079.49	64849.91



	2014-15	2015-16	2016-17	2017-18	2018-19
$(I)=[(C+H)/2]$					
Weighted Average Rate of Interest of loan (J)	10.46	10.29	10.29	10.29	10.29
<b>Interest on Loan (K)=(I*J)</b>	<b>10732.95</b>	<b>9527.82</b>	<b>8519.65</b>	<b>7622.78</b>	<b>6673.06</b>

### **Depreciation**

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

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

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

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

*(3) The salvage value of the asset shall be considered as 10% and depreciation shall be allowed up to maximum of 90% of the capital cost of the asset: Provided that in case of hydro generating station, the salvage value shall be as provided in the agreement signed by the developers with the State Government for development of the Plant:*

*Provided further that the capital cost of the assets of the hydro generating station for the purpose of computation of depreciated value shall correspond to the percentage of sale of electricity under long-term power purchase agreement at regulated tariff: Provided also that any depreciation disallowed on account of lower availability of the generating station or generating unit or transmission system as the case may be, shall not be allowed to be recovered at a later stage during the useful life and the extended life.*

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

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



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

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

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

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

56. The weighted average rate of depreciation has been calculated by the Petitioner in accordance with Regulation 27 of the 2014 Tariff Regulations. The calculation of WAROD is enclosed as Annexure-I to this order. Accordingly, depreciation has been worked out as under:

	<b>(Rs. in lakh)</b>				
	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Opening Gross block (A)	238286.93	239016.28	240331.37	241940.76	246638.26
Net Additional capital expenditure during 2014-19 (B)	729.35	1315.10	1609.39	4697.50	522.21
Closing gross block (C)=(A+B)	239016.28	240331.37	241940.76	246638.26	247160.47
Average gross block (D)=[(A+C)/2]	238651.60	239673.82	241136.07	244289.51	246899.37
Depreciable Value (E)=(D*90%)	214786.44	215706.44	217022.46	219860.56	222209.43
Remaining Depreciable Value at the beginning of the year (F)=[(E)-(Cumulative Depreciation at 'L' at the end of previous year)]	155746.47	145924.29	136447.32	128435.99	119787.76
Rate of Depreciation (G)	4.5027	4.5032	4.5032	4.5033	4.5034
Balance useful Life (H)	28	27	26	25	24
<b>Depreciation (I)=(D*G)</b>	<b>10745.77</b>	<b>10792.99</b>	<b>10858.84</b>	<b>11001.09</b>	<b>11118.87</b>
Cumulative Depreciation at the end of the year (J)=[(I)+(Cumulative	69785.74	80575.14	91433.98	102425.66	113540.54



	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation at 'L' at the end of previous year]					
Less: Depreciation adjustment on account of de-capitalization (K)	3.58	0.00	9.41	3.99	3.12
Cumulative Depreciation at the end of the year (L)*	<b>69782.15</b>	<b>80575.14</b>	<b>91424.57</b>	<b>102421.67</b>	<b>113537.42</b>

\*Cumulative Depreciation as on 31.3.2014 is Rs.59039.97

### **Operation & Maintenance Expenses**

57. In respect of this generating station, Regulation 29(3)(a) of the 2014 Tariff Regulations, provides as under:

*"29(3)(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 1.4.2014:*

<i>(Rs. in lakh)</i>					
Omkareshwar	2014-15	2015-16	2016-17	2017-18	2018-19
	4515.31	4815.30	5135.23	5476.42	5840.27

58. Since the Petitioner has claimed O&M expenses in accordance with Regulation 29(3)(a) of the 2014 Tariff Regulations, the claim of the Petitioner is allowed.

<i>(Rs. in lakh)</i>				
2014-15	2015-16	2016-17	2017-18	2018-19
4515.31	4815.30	5135.23	5476.42	5840.27

### **Additional O&M expenses**

59. It is observed that the Petitioner has filed Petition No. 537/MP/2020 seeking recovery of additional O&M expenses towards the (i) impact of pay revision of its employees and the employees of Central Industrial Security Force (CISF) (ii) impact of wage revision (change in minimum wages) and (iii) implementation of Goods & Service Tax (GST) in respect of the generating station for the 2014-19 tariff period as detailed below:



<b>(Rs. in lakh)</b>					
<b>Period</b>	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Impact of Pay Revision of NHDC staff including gratuity & fitment (a)	0.00	0.00	164.26	737.85	1220.06
Impact of revision of minimum wages (b)	0.00	0.00	0.00	331.20	331.20
Impact of Pay Revision of CISF/ Security Staff (c)	0.00	20.85	87.02	101.52	110.20
Impact of GST (d)	0.00	0.00	0.00	46.50	63.89
<b>Total (a+b+c+d)</b>	<b>0.00</b>	<b>20.85</b>	<b>251.28</b>	<b>1217.07</b>	<b>1725.35</b>

*Note: Above expenditure includes expenses at CO, NHDC (allocated to Power Station as per their installed capacity).*

60. Therefore, the additional O&M expenses towards impact of wage revision, GST etc. have not been considered in this order.

### **Interest on Working Capital**

61. 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  
(c) Hydro generating station including pumped storage Hydro Electric 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 expense specified in regulation 29; and  
(iii) Operation and maintenance expenses for one month.”*

62. Clause (3) of Regulation 28 of the 2014 Tariff Regulations provides as under:

*“Interest on working Capital: (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.”*

63. In terms of the Regulation 28(1)(c) of the 2014 Tariff Regulations, the interest on working capital is worked out as under:



	<i>(Rs. in lakh)</i>				
	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Working capital for O&M Expenses (one month)	376.28	401.28	427.94	456.37	486.69
Working capital for Maintenance Spares	677.30	722.30	770.28	821.46	876.04
Working capital for Receivables	7004.69	6883.33	6794.61	6759.79	6716.88
Total working capital	8058.27	8006.90	7992.83	8037.62	8079.61
Rate of Interest (%)	13.50	13.50	13.50	13.50	13.50
<b>Interest on Working Capital</b>	<b>1087.87</b>	<b>1080.93</b>	<b>1079.03</b>	<b>1085.08</b>	<b>1090.75</b>

### **Annual Fixed Charges**

64. Based on the above, the annual fixed charges approved for the generating station for the 2014-19 tariff period is summarized as under:

	<i>(Rs. in lakh)</i>				
	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Depreciation	10745.77	10792.99	10858.84	11001.09	11118.87
Interest on Loan	10732.95	9527.82	8519.65	7622.78	6673.06
Return on Equity	14946.27	15082.91	15174.93	15373.38	15578.36
O&M Expenses	4515.31	4815.30	5135.23	5476.42	5840.27
Interest on Working Capital	1087.87	1080.93	1079.03	1085.08	1090.75
<b>Total</b>	<b>42028.16</b>	<b>41299.96</b>	<b>40767.68</b>	<b>40558.75</b>	<b>40301.30</b>

### **Normative Annual Plant Availability Factor (NAPAF)**

65. Since NAPAF of 90% as claimed by the Petitioner is in accordance with Regulation 37(4) of the 2014 Tariff Regulations, the same is allowed.

### **Design Energy (DE)**

66. 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 dated 13.12.1993 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 <sup>3</sup> ) by MP	Firm Power (MW)
Stage-I	≤6.00	133
Stage-II	>6.00 ≤13.00	From 133 to 79.41
Stage-III	>13.00 ≤18.25	From 79.41 to 64.55
Final Stage	≥18.25	64.55

67. The Respondent MPPMCL has submitted the following:

- (i) The Petitioner, in its tariff petitions, for the period from CoD onwards, had submitted the figures of utilization of water in terms of BMQ units, as awarded in NWDT (Narmada Water Disputes Tribunal) order, in place of Maft (million acre feet) units, as mentioned in the TEC (techno-economic clearance) approved by CEA. The formula for firm power derived against Stage-I, Stage-II and Stage-III for utilization of water by the State of Madhya Pradesh were in BMQ in place of Maft. This has resulted into computation of reduced design energy for the entire period from the date of commissioning of plant to till date.
- (ii) As per TEC of CEA, the Design Energy (DE) of the generating station correspond to 133.17 MW, which was approved on the basis of FRL (full reservoir level) of 196.6 meters. The Petitioner in its tariff petitions for the period from 2009-14 onwards, had prayed to allow the computation of DE of the generating station, on the basis of reduced level of 189 meter, as full reservoir level of 196.6 meter, was not allowed due to R&R issues. Accordingly, the Commission had allowed DE of the generating station on the basis of 189 meters.
- (iii) OSP dam achieved level of 191.0 m on 13.4.2015 and permission was granted for raising OSP reservoir level to EL 193.0 m vide NVDA letter dated 22.9.2017 and, thereafter, to a reservoir level to EL 196.6 m vide NVDA letter dated 15.10.2019. As per the daily status of Narmada river basin on 4.12.2019, issued by Narmada Control Authority, Omkareshwar reservoir had achieved 196.54 meter level. The Petitioner has claimed DE for the period from 2014-15 to 2016-17 only on the basis of 191-meter reservoir level, whereas, it had already reached level of up to 192.84 meter, in September 2017. The Commission may, therefore, consider water quantity in Maft units as mentioned in TEC approved by CEA, in place of BMQ, while calculating firm power for determination of DE.

68. In response, the Petitioner has submitted the following:





(i) The on-going stage development period of 45 years would cease in 2023-24 as per NWDT Award and the final allocation of water shall be carried out on the basis of actual utilisation of water in the Narmada Basin by the party States, as well as based on the additional hydrological data that 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 the Respondent MPPMCL, at this juncture, appears to be unwarranted.

(ii) The Commission had allowed the commencement of Stage-II of this project from 2010-11, consequent upon utilization of water in Narmada Basin by the State of Madhya Pradesh beyond 6 BMC. The Commission had also allowed that Stage-II power generation shall be continued till utilization of water by the State of Madhya Pradesh attains 13 BMC in the Narmada Basin, depending upon the development of irrigation command by the Government of MP.

(iii) The Commission, in order to work out the Reducing Power Benefit i.e. Firm Power during respective periods of Stage –II, had adopted the following formula in its order dated 10.5.2016 in Petition No.460/GT/2014:

$$FP \text{ (stage-II)} = \frac{133.17 - (133.17 - 79.41) \times (Q - 6.00)}{(13 - 6.00)}$$

Where,

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

*Q\* = Actual water utilization (in BM<sup>3</sup>) 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.*

(iv) Pursuant to the permission granted for raising the reservoir level, dam of the generating station had achieved level of EL 191.0 m as on 13.4.2015 and the project has achieved the capacity declaration of 55 MW at EL 191.0 m. However, the capacity of units reduced during rainy season/ floods on increase in TRC level. Further, permission was granted for raising the OSP Reservoir Level to EL 193.0M vide NVDA letter dated 22.9.2017. However, owing to R&R issues, the operation of units is being done at a level between EL 191.0 m to EL 193.0 m.

(v) The Narmada Control Authority has so far circulated the water utilization account for the year up to 2016-17 and, accordingly, the details of reducing DE as determined for 2014-15, 2015-16 and 2016-17 are given as follows:





Year	Water Utilization by MP (BMC)	Reduced Power Benefits Unit Capacity – 65MW (at FRL 196.60M) (Stg-II)		Reduced Power Benefits Unit Capacity – 55MW (at 191.00M) (Stg-II)	
		Firm Power (MW)	Design Energy (MU)	Firm Power (MW)	Design Energy (MU)
2014-15	8.776	111.85	979.81	94.64	829.07
2015-16	10.249	100.54	880.71	85.07	745.22
2016-17	10.072	101.90	892.62	86.22/ <b>85.07</b>	755.29/ <b>745.22*</b>

*\*The value of Water Utilization (Q) is irreversible and shall not be reduced once attained, accordingly, working of Firm Power (2016-17) is being done as per Water utilization data of 2015-16."*

69. The Petitioner was directed to submit the actual water utilisation certificate issued by Narmada Control Authority (NCA). In response, the Petitioner has submitted the details of the annual water consumption by the State of Madhya Pradesh for the respective year(s), duly certified by NCA based on published water account as under:

Sr. No.	Year	Annual utilisation by MP (BM <sup>3</sup> )
1	2014-15	8.77613
2	2015-16	10.24938*
3	2016-17	10.07273
4	2017-18	9.29963
5	2018-19	10.40291

*\*Note: Annual utilisation account of 2015-16 is applicable for 2016-17 & 2017-18 also, as 'the value of Q shall be irreversible and shall not be reduced once attained.*

70. It is observed from the submissions of the Petitioner and the documents available on record that OSP dam had achieved level of EL 191.0 m as on 13.4.2015. Accordingly, DE for 2013-14 and 2014-15 have been computed considering reservoir level at 189 m till 2015-16 and from 2016-17 onwards, reservoir level at 191 m has been considered. Also, as 'the value of Q shall be irreversible and shall not be reduced once attained. The value of 'Q' considered from 2015-16 to 2017-18 shall be 10.249 BM<sup>3</sup> and for 2018-19 the value of 'Q' shall be 10.402 BM<sup>3</sup>. Accordingly, the DE has been worked out as:



	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19
Utilization of Water by GoMP as Notified by NCA (BM <sup>3</sup> )	8.0984	8.776	10.249	10.249	10.249	10.4029
Firm Power (MW)	90.042	86.039	85.070	85.070	85.070	84.070
<b>Monthly trued up design energy</b>						
	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19
April	64.83	61.95	59.02	61.25	61.25	60.53
May	66.99	64.01	63.29	63.29	63.29	62.55
June	64.83	61.95	61.25	61.25	61.25	60.53
July	66.99	64.01	63.29	63.29	63.29	62.55
August	66.99	64.01	63.29	63.29	63.29	62.55
September	64.83	61.95	61.25	61.25	61.25	60.53
October	66.99	64.01	63.29	63.29	63.29	62.55
November	64.83	61.95	61.25	61.25	61.25	60.53
December	66.99	64.01	63.29	63.29	63.29	62.55
Jan	66.99	64.01	63.29	63.29	63.29	62.55
Feb	60.51	57.82	57.17	57.17	57.17	56.50
March	66.99	64.01	63.29	63.29	63.29	62.55
<b>Design Energy (MU)</b>	<b>788.77</b>	<b>753.70</b>	<b>742.99</b>	<b>745.22</b>	<b>745.22</b>	<b>736.45</b>

71. The annual fixed charges for the 2014-19 tariff period allowed vide order dated 26.5.2016 in Petition No.264/GT/2014 and the annual fixed charges allowed in this order (after truing-up) for the 2014-19 tariff period for the generating station is as under:

	<b>(Rs. in lakh)</b>				
	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Annual fixed charges allowed vide order dated 26.5.2016 in Petition No. 264/GT/2014	42318.49	41560.37	40843.84	40363.06	39843.06
Annual fixed charges allowed in this order	42028.16	41299.96	40767.68	40558.75	40301.30

72. The difference between the annual fixed charges recovered by the Petitioner in terms of order dated 26.5.2016 in Petition No. 264/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**

73. The Petitioner, in this petition, has also sought determination of tariff of the generating station for the 2019-24 tariff period, in terms of the provisions of the 2019 Tariff Regulations. The annual fixed charges claimed by the Petitioner for the 2019-24 tariff period are as under:

### **Annual Fixed Charges claimed**

	<b>(Rs. in lakh)</b>				
	<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>
Depreciation	11226.93	3715.45	3785.81	3899.85	4007.96
Interest on Loan	5695.69	5158.40	4941.29	4780.83	4587.43
Return on Equity	14962.00	15162.45	15308.10	15504.23	15682.10
O&M Expenses	825.94	728.89	747.59	769.43	791.42
Interest on WC	8486.73	8907.52	9349.47	9813.64	10301.21
<b>Total</b>	<b>41197.29</b>	<b>33672.72</b>	<b>34132.26</b>	<b>34767.98</b>	<b>35370.12</b>

### **Capital Cost**

74. 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 provides 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 upto the receiving end of generating station but does not include the transportation cost and any other appurtenant cost paid to the railway; and*



*(f) Capital cost incurred or projected to be incurred by a thermal generating station, on account of implementation of the norms under Perform, Achieve and Trade (PAT) scheme of Government of India shall be considered by the Commission subject to sharing of benefits accrued under the PAT scheme with the beneficiaries....”*

75. The Petitioner vide Form-1i of the petition has claimed capital cost as follows:

	<b>(Rs. in lakh)</b>				
	<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>
Opening Capital Cost	247676.07	251044.46	253911.88	255605.58	260423.88
Add: Addition during the year / Period	3616.27	3260.10	1723.44	4828.54	1105.59
Less: De-capitalisation during the year/period	247.88	392.68	29.74	10.24	0.00
Closing Capital Cost	251044.46	253911.88	255605.58	260423.88	261529.46

76. The Commission in paragraph 43 of this order has allowed the closing capital cost of Rs.247160.47 lakh, as on 31.3.2019. Accordingly, in terms of Regulation 19 of the 2019 Tariff Regulations, the capital cost of Rs.247160.47 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 tariff period.

### **Additional Capital Expenditure**

77. 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.

78. Regulation 25(1) 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.*

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

*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 Modernization (R&M) or repairs and maintenance under O&M expenses, the same shall not be claimed under this Regulation;*

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

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

80. The Petitioner has submitted that the projected additional capital expenditure has been claimed under various provisions of Regulation 25 and Regulation 26 of the 2019 Tariff Regulations, wherein, some admitted capital works have spilled over from the 2014-19 tariff period. Based on this, the details of additional capital expenditure claimed by the Petitioner are as under:

	<b>(Rs. in lakh)</b>				
	<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>
Gross Capital Cost as on 31.3.2019: Rs.303792.71					
Opening cumulative capitalized expenditure projected at the beginning of respective years	303792.71	311048.81	315266.20	318933.71	325232.37
Regulation 25(1)(a)	6659.88	2312.59	3381.26	2535.95	2535.95
Regulation 25 (2)(a)	23.25	42.88	0.00	0.00	0.00
Regulation 25(2)(c)	260.67	459.87	24.20	12.71	0.00
Regulation 25(2)(d)	48.03	300.00	0.00	0.00	50.00
Regulation 26(1)(b)	52.66	68.42	0.00	0.00	0.00
Regulation 26(1)(d)	211.61	1033.63	262.05	3750.00	0.00
Total projected additional capital expenditure to be incurred	7256.10	4217.39	3667.51	6298.66	2585.95
Closing cumulative projected additional capital expenditure at the end of respective years	<b>311048.81</b>	<b>315266.20</b>	<b>318933.71</b>	<b>325232.37</b>	<b>327818.32</b>

81. The Petitioner has submitted that after deducting the Irrigation Component and R&R Subvention, the projected cost of Power Component works out to



Rs.261529.47 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, as submitted by the Petitioner, is as under:

*(Rs. in lakh)*

Period		Additional expenditure capitalized*		Capital expenditure at the end of period*	
From	To	Gross	Power Component	Gross	Power Component
1.4.2019	31.3.2020	7256.10	3368.39	311048.81	251044.46
1.4.2020	31.3.2021	4217.39	2867.42	315266.20	253911.88
1.4.2021	31.3.2022	3667.51	1693.70	318933.71	255605.58
1.4.2022	31.3.2023	6298.66	4818.30	325232.37	260423.88
1.4.2023	31.3.2024	2585.95	1105.59	327818.32	261529.47

\*Including un-discharged liabilities

82. The Petitioner submitted the additional capital expenditure for the Gross Power component as follows:

Regulations	Projected Additional Capital Expenditure for Gross Component					Total
	2019-20	2020-21	2021-22	2022-23	2023-24	
25(1)(a)	6659.88	2312.59	3381.26	2535.95	2535.95	17425.63
25(2)(a)	23.25	42.88	0.00	0.00	0.00	66.13
25(2)(c)	260.67	459.87	24.20	12.71	0.00	757.45
25(2)(d)	48.03	300.00	0.00	0.00	50.00	398.03
26(1)(b)	52.66	68.42	0.00	0.00	0.00	121.08
26(1)(c)	0.00	0.00	0.00	0.00	0.00	0.00
26(1)(d)	211.61	1033.63	262.05	3750.00	0.00	5257.29
	<b>7256.10</b>	<b>4217.39</b>	<b>3667.51</b>	<b>6298.66</b>	<b>2585.95</b>	<b>24025.61</b>

83. The Petitioner has submitted that as on 31.3.2019, the actual un-discharged liability, attributable to the Power Component i.e. after apportionment on account of Irrigation Component (16.75%) and R&R Subvention (50%), was Rs.3332.27 lakh and the same is being carried forward as the opening balance as on 1.4.2019, subject to truing-up. The Petitioner has submitted the details of the projected un-discharged liabilities in Power component as on 31<sup>st</sup> March of each financial year for the 2019-24 period as under:





(Rs. in crore)

Projected as on					
31.3.2019	31.3.2020	31.3.2021	31.3.2022	31.3.2023	31.3.2024
33.32	33.32	33.32	33.32	33.32	33.32

84. The net power component claimed by the Petitioner for the 2019-24 tariff period, after considering un-discharged liabilities are as under:

(Rs. in lakh)

	Projected Additional Capital Expenditure for Power Component				
	2019-20	2020-21	2021-22	2022-23	2023-24
Net Power Component at the beginning of the year	247676	251044	253912	255606	260424
Additions to Power Component	3368	2867	1694	4818	1106
Un-discharged liabilities attributable to Power Component at beginning of the year	3332	3332	3332	3332	3332
Un-discharged liabilities attributable to Power Component at end of the year	0.00	0.00	0.00	0.00	0.00
Un-discharged liabilities	0.00	0.00	0.00	0.00	0.00
Additions in Net Power Component	3368	2867	1694	4818	1106
<b>Net Power Component at end of the year</b>	<b>251044</b>	<b>253912</b>	<b>255606</b>	<b>260424</b>	<b>261529</b>

85. It is observed that major assets/ works claimed by the Petitioner for additional capitalization during the 2019-24 tariff period include land compensation payments, development of R&R sites/ contingency plan under Regulation 25 of 2019 Tariff Regulations and expenditure for higher security and safety of plant. The projected additional capital expenditure claimed for the 2019-24 tariff period for Power Component in Form-9A are as follows:

(Rs. in lakh)

Regulation	2019-20	2020-21	2021-22	2022-23	2023-24
25(1)(a)	2772.18	962.62	1407.45	1055.59	1055.59
25(2)(a)	42.00	140.00	-	-	-
25(2)(c)	470.83	820.43	31.62	22.95	-
25(2)(d)	67.00	300.00	-	-	50.00
25 (De-capitalization)	(-)247.88	(-)392.68	(-)29.74	(-)10.24	-
26(1)(b)	52.66	3.42	-	-	-





<b>Regulation</b>	<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>
26(1)(d)	211.61	1033.63	284.37	3750.00	-
<b>Total additional capital expenditure as per Form 9A</b>	<b>3368.39</b>	<b>2867.42</b>	<b>1693.70</b>	<b>4818.30</b>	<b>1105.59</b>

86. The Respondent, MPPMCL has submitted that prudence check should be undertaken with regard to the additional capital expenditure claimed for assets/ works under Regulation 25(2)(a) of the 2019 Tariff Regulations and the additional capital expenditure claimed for assets/works under Regulation 25(2)(c) of the 2019 Tariff Regulations should be disallowed as the same has not been justified with any technical report with regard to obsolescence of such assets/ works. The Respondent has further submitted that the additional capital expenditure claimed under Regulation 26(1)(d) and 26(1)(b) of the 2019 Tariff Regulations do not indicate the relevant provisions under which claimed and hence may be disallowed. Based on the submissions of the parties, we proceed to examine the claims of the Petitioner for projected additional capital expenditure, on prudence check, as stated in the subsequent paragraphs. We would also like to mention that we have disallowed several expenditures claimed by the Petitioner for want of documentary evidence. It was not possible to examine the claims of the Petitioner since there were no documents available for us to take a view. The Petitioner may produce relevant documents to justify its claim in terms of appropriate Regulations and claim the same at the time of truing up. Also, we have allowed certain additional capital expenditures in some cases where we were of the view that such expenditures were covered under provisions of the Regulations despite the Petitioner not furnishing complete documents. In such cases, the Petitioner shall produce full documents to justify its



claim for additional capital expenditure at the time of truing up, failing which the expenditure may not be allowed.

## **2019-20**

87. The Petitioner has claimed projected additional capital expenditure of Rs.3368.39 lakh in 2019-20 under the provisions of Regulation 25 and Regulation 26 of the 2019 Tariff Regulations which are discussed as follows:

			(Rs. in lakh)
Sl. No.	Regulation		2019-20
1	25(1)(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	2772.18
2	25(2)(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	42.00
3	25(2)(c)	The replacement of such asset or equipment is necessary on account of obsolescence of technology	470.83
4	25(2)(d)	The replacement of such asset or equipment has otherwise been allowed	67.00
		De-capitalization claimed by the Petitioner for above additional capitalization on replacement basis	(-)247.88
5	26(1)(b)	Change in law or compliance of any existing law	52.66
6	26(1)(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	211.61
7	<b>Total projected additional capital expenditure as per Form 9A</b>		<b>3368.39</b>

### **(a) Claims under Regulation 25(1)(a) of the 2019 Tariff Regulations**

					(Rs. in lakh)
Head of Work/ Equipment	Actual additional capital expenditure claimed	Justification	Remarks on Admissibility	Amount Allowed	
Land compensation payments, stamp duty & registration fees etc.	2073.45	Narmada Valley Development Authority (NVDA) vide letter No. F-31-04/2019/27-01 dated 22.6.2019 has conveyed in-principle approval of Revised Cost against R&R of the generating station for Rs.593.55	The expenditure relates to R&R works of the generating station and is in compliance with the direction of the Court. It is	2073.45	



Head of Work/ Equipment	Actual additional capital expenditure claimed	Justification	Remarks on Admissibility	Amount Allowed
		<p>crore as against earlier approved amount of Rs.274.53 crore.</p> <p>The expenditure relates to R&amp;R works of the generating station and shall be done against balance payments to project affected persons (PAF) for land acquisition and compensation payments.</p> <p>The process of claim and objection are going on and the payments shall be required to be done as per the court orders.</p>	<p>noticed that the Petitioner has claimed additional capital expenditure in phased manner over the 2019-24 tariff period i.e. Rs.2073.45 lakh in 2019-20, Rs.779.47 lakh in 2020-21, Rs.1165.50 lakh in 2021-22, Rs.874.13 lakh in 2022-23 and Rs.874.13 lakh in 2023-24. The Petitioner has submitted that process of claim and objections are going on. The expenditure on this account is <b>allowed</b> subject to the Petitioner furnishing documentary evidence/ Court orders at the time of truing-up of tariff, failing which the expenditure may not be allowed.</p>	
Development of R/sites and Contingency Plan	698.73	<p>The R&amp;R works of the generating station, shall be done against following:</p> <p>(a) R&amp;R work of various villages is incomplete and many PAFs are still residing in affected villages. Works for contingency plan are executed during monsoon period by district administration like providing motorboats to submergence affected villages as approach roads to villages and farm fields are affected. Expenditure done by district administration is reimbursed as per actual. This</p>	<p>It is noticed that the Petitioner has projected additional capital expenditure in a phased manner during the 2019-24 tariff period i.e. Rs.698.73 lakh in 2019-20, Rs.183.15 lakh in 2020-21, Rs.241.95 lakh in 2021-22, Rs.181.46 lakh in 2022-23, Rs.181.46 lakh in 2023-24.</p>	0.00



Head of Work/ Equipment	Actual additional capital expenditure claimed	Justification	Remarks on Admissibility	Amount Allowed
		<p>work shall be continued till construction of alternate approach roads.</p> <p>(b)Facilities developed at various resettlement sites could not be handed over to local authorities as they are not financially sound for running &amp; maintenance. These facilities are required to be redeveloped/ repaired before handing over to local authorities.</p>	The Petitioner has, however, not furnished any documentary evidence in support of the claim for the additional capital expenditure. It is also not clear as to whether the assets for which additional capital expenditure is claimed are in respect of the assets owned by the generating station. In this background, the projected additional capital expenditure claimed is <b>not allowed</b> .	
<b>Total amount claimed</b>	<b>2772.18</b>			
<b>Total amount allowed</b>				<b>2073.45</b>

**(b) Claims under Regulation 25(2)(a) of the 2019 Tariff Regulations**

*(Rs. in lakh)*

Head of Work/ Equipment	Actual additional capital expenditure claimed	Justification	Remarks on Admissibility	Amount allowed
Main distribution valve for governing system	42.00	The generating station was commissioned in the year 2007 and is recently showing problems in the main distribution valve of governing system of units. The replacement of the old MDV with a new one is essential in order to ensure the successful trouble-free operation of generating units.	It is evident from the Petitioner's submission that the claim is for replacement of equipment in a phased manner i.e. Rs.42 lakh in 2019-20 and Rs.50 lakh in 2020-21, as considered necessary for the functioning of plant. As the old asset has completed	42.00



Head of Work/ Equipment	Actual additional capital expenditure claimed	Justification	Remarks on Admissibility	Amount allowed
			its useful life, the additional capitalization is for replacement of the old asset. In view of this, the additional capital expenditure claimed is <b>allowed</b> subject to the Petitioner furnishing management certificate and OEM certificate for obsolescence in support of its claim at the time of truing-up of tariff, failing which the expenditure may not be allowed.	
De-capitalisation	(-) 18.75	De-capitalization is claimed for the above.	The Petitioner has submitted the details of de-capitalisation in respect of the claim towards replacement of main distribution valve for governing system. The same is <b>allowed</b> subject to furnishing documentary evidence.	(-)18.75
<b>Total amount claimed</b>	<b>23.25</b>			
<b>Total amount allowed</b>				<b>23.25</b>

**(c) Claims under Regulation 25(2)(c) of the 2019 Tariff Regulations**

**(Rs. in lakh)**

Head of Work/ Equipment	Actual additional capital expenditure claimed	Justification	Remarks on admissibility	Amount Allowed
Up-gradation of ARMAC system	40.00	The assets/ works were admitted vide order dated 26.5.2016 in Petition No.	It is noticed that the Commission vide order dated 26.5.2016 in	10.00



Head of Work/ Equipment	Actual additional capital expenditure claimed	Justification	Remarks on admissibility	Amount Allowed
		<p>264/GT/2014 under Regulation 14(3)(viii) of the 2014 Tariff Regulations (projected item No.1 of 2018-19).</p> <p>The Commission had allowed this item as ARMAC System controls and monitors the operation of radial gates from dam control room to control the flood. the work was considered necessary for up-gradation of obsolete technology and to keep system healthy and operative for effective and reliable control of flood.</p>	<p>Petition No. 264/GT/2014 had allowed additional capitalisation of Rs.10 lakh for this asset/work. The Petitioner has not submitted any documentary evidence for spill over of the expenditure nor has submitted any reasons for increase in the cost compared to that allowed in the 2014-19 period. In view of the above, the additional capital expenditure claimed has been restricted to Rs.10 lakh and <b>allowed</b>. The Petitioner is directed to furnish the reasons for spill over at the time of truing of tariff, failing which the expenditure may not be allowed.</p>	
De-capitalisation of above	(-)17.85		<p>Since the additional capitalisation has been restricted to Rs.10 lakh as above, the de-capitalised amount of Rs.5.85 lakh as allowed in order dated 26.5.2016 has been <b>allowed</b> in this order. The details of de-capitalisation furnished by the Petitioner shall, however, be considered at the time of truing-up of tariff.</p>	(-) 5.85
Up-gradation of Software of automation i.e. CS-7 system.	234.82	<p>The assets/ works were admitted vide order dated 26.5.2016 in Petition No. 264/GT/2014 under Regulation 14(3)(viii) of the 2014 Tariff</p>	<p>The Petitioner was directed vide order dated 26.5.2016 in Petition No. 264/GT/2014 to furnish the obsolescence</p>	0.00



Head of Work/ Equipment	Actual additional capital expenditure claimed	Justification	Remarks on admissibility	Amount Allowed
		Regulations. The Commission had allowed the item as the existing CS-7 System has become obsolete and there is no support available from M/s Siemens and no updates available for windows from Microsoft. Accordingly, this item was essential to avoid any crash of system in future. The existing CS-7 System is to be upgraded with PCS-7 (Ver. 8.0).	certificate, which has not been complied with by the Petitioner. In the absence of the documentary evidence/ obsolescence certificate in support of the said claim, the additional capital expenditure claimed is <b>not allowed</b> .	
De-capitalisation of above	(-)104.82		Since the additional capitalisation of the above asset has not been allowed, the de-capitalisation submitted by the Petitioner has also <b>not been considered</b> .	0.00
Up-gradation of REL 511 relay of line protection system	24.69	At the project switchyard Main-I and Main-II protection relays are installed in each feeder/ transmission line. Main-II Relay (REL - 316) of all the lines has already been replaced in 2016-17. Main-II Relay (REL 511) has become obsolete and no service support from OEM (as malfunction observed at voltage level much below the pickup level).  Also, MPSLDC has recommended for replacement of REL 511 (Main-I) of Omkareshwar Switchyard during testing.  The expenditure is essential in view of grid security, relays declared obsolete by the OEM and	The Petitioner has claimed the expenditure towards obsolescence of the existing asset/ item. However, the Petitioner has not furnished any documentary evidence/ obsolescence certificate in support of the claim. In view of this, the additional capital expenditure claimed is <b>allowed</b> subject to the Petitioner furnishing documentary evidence in support of the said claim at the time of truing-up of tariff, failing which the expenditure may not be allowed.	24.69
De-capitalisation of	(-)11.02		The de-capitalisation amount as claimed is	(-)11.02



Head of Work/ Equipment	Actual additional capital expenditure claimed	Justification	Remarks on admissibility	Amount Allowed
above		no service support available for rectification of faults/ malfunctioning. The Petitioner has requested to consider capitalization with de-capitalisation considering obsolescence of technology/ higher grid security.	<b>allowed</b> subject to the Petitioner submitting documentary evidence at the time of truing up.	
Up-gradation of Bus-Bar Protection Relays (RADHA)	30.17	The Existing Bus Bar Protection Relays (RADHA) is static relay which is lacking self diagnostic features. The operation of RADHA relays are based on high impedance principle, which has now been declared obsolete by the OEM. Further, in compliance to the recommendation of MPSLDC, the 2 <sup>nd</sup> meeting of the relay setting group has specifically recommended to replace the static bus bar protection to numerical bus bar protection.	The Petitioner has not furnished any documentary evidence/ obsolescence certificate in support of the claim. In view of this, the additional capital expenditure claimed is <b>allowed</b> subject to the Petitioner furnishing documentary evidence/ obsolescence certificate in support of the said claim at the time of truing-up of tariff, failing which the expenditure may not be allowed.	30.17
De-capitalisation of above	(-)13.47	The expenditure is essential in view of grid security, relays declared obsolete by the OEM and no service support available for rectification of faults/ malfunctioning.	The de-capitalisation amount as claimed is <b>allowed</b> subject to the Petitioner submitting documentary evidence at the time of truing up.	(-)13.47
Up-gradation of Large Screen Display (LSD) of Power House	47.20	The existing Large Screen Display (67' x 4 Diagonal screen) was commissioned in 2007 by M/s Voith as a part of original scope of project.  OEM has recommended that existing Bulb	The Petitioner has not furnished any documentary evidence/ obsolescence certificate in support of the claim. In view of this, the additional capital expenditure	47.20





Head of Work/ Equipment	Actual additional capital expenditure claimed	Justification	Remarks on admissibility	Amount Allowed
		Technology is at the end of service and end of life. Accordingly, the replacement of obsolete lamp based display with currently prevalent LED-based display is essential.  The Petitioner has requested to consider capitalization with de-capitalisation considering end of useful life/obsolescence of technology.	claimed is <b>allowed</b> subject to the Petitioner furnishing obsolescence certificate/ documentary evidence in support of the said claim at the time of truing-up of tariff, failing which the expenditure may not be allowed.	
De-capitalisation of above	(-)21.07		The de-capitalisation amount as claimed is <b>allowed</b> subject to the Petitioner submitting documentary evidence at the time of truing up.	(-)21.07
Up-gradation of Servo valve of governor of TG sets	66.00	Owing to continuous operation of Generating Units of OSP, there have been recurring incidences of problems in the servo valves installed in governing system. As per the OEM, the existing servo valves have become obsolete and needs up-gradation from moving coil type to proportional servo valve. as such, up-gradation in phased manner is proposed for successful O&M of Power Station.  The Petitioner has requested to consider capitalization with de-capitalisation considering obsolescence of technology/ higher grid security.	The Petitioner has sought additional capitalisation in a phased manner i.e. Rs.66 lakh in 2019-20 and Rs.70 lakh in 2020-21 for successful operation of the generating station. The Petitioner has, however, not furnished any documentary evidence/ obsolescence certificate in support of the claim. In view of this, the additional capital expenditure claimed is <b>allowed</b> subject to the Petitioner furnishing documentary evidence in support of the said claim at the time of truing-up of tariff, failing which the expenditure may not be allowed.	66.00
De-	(-)29.46		The de-capitalisation	(-)29.46



Head of Work/ Equipment	Actual additional capital expenditure claimed	Justification	Remarks on admissibility	Amount Allowed
capitalisation of above			amount as claimed is <b>allowed</b> subject to the Petitioner submitting documentary evidence at the time of truing up.	
Up-gradation of ACBs of Unit Auxiliary Board (4 numbers) of the generating units	22.95	<p>The existing ACBs of Unit Auxiliary Board (UAB) was installed during commissioning of Project. The associate relays have been declared obsolete by the OEM and no service support is available for rectification of faults/ malfunctioning. The up-gradations of ACBs of UABs of generating Units are essential for smooth operation of generating Units.</p> <p>The Petitioner has requested to consider capitalization with de-capitalisation considering obsolescence of technology/ higher grid security.</p>	The Petitioner has not furnished any documentary evidence / obsolescence certificate in support of the claim. In view of this, the additional capital expenditure claimed is <b>allowed</b> subject to the Petitioner furnishing documentary evidence in support of the said claim at the time of truing-up of tariff, failing which the expenditure may not be allowed.	22.95
De- capitalisation of above	(-)10.24		The de-capitalisation amount as claimed is <b>allowed</b> subject to the Petitioner submitting documentary evidence at the time of truing up.	(-)10.24
Updating of protection system including replacement of numerical relay/ EM relay of 33/11KV panel with battery bank	5.00	<p>Power Supply to Powerhouse, switchyard, radial gates, dam, admin building is feed through 33/11KV supply system. The protection system of this network was provided during commissioning of Project (more than 10 years old). Over the time malfunctioning/ improper functioning is observed in the protection system.</p> <p>Accordingly, it is essential to go for updating for better</p>	The Petitioner has not furnished any documentary evidence/ obsolescence certificate in support of the claim. In view of this, the additional capital expenditure claimed is <b>allowed</b> subject to the Petitioner furnishing documentary evidence in support of the said claim at the time of truing-up of tariff, failing which the expenditure may not	5.00



Head of Work/ Equipment	Actual additional capital expenditure claimed	Justification	Remarks on admissibility	Amount Allowed
De- capitalisation of above	(-)2.23	protection in view of ensuring uninterrupted and reliable supply.	be allowed. The de-capitalisation amount as claimed is <b>allowed</b> subject to the Petitioner submitting documentary evidence at the time of truing up.	(-)2.23
<b>Total amount claimed</b>	<b>260.67</b>			
<b>Total amount allowed</b>				<b>112.67</b>

(d) Claims under Regulation 25(2)(d) of the 2019 Tariff Regulations

(Rs. in lakh)				
Head of Work/ Equipment	Actual additional capital expenditure claimed	Justification	Admissibility	Amount Allowed
Purchase of motor for stop log & bulk head gantry crane	6.50	The assets/ works were admitted vide order dated 26.5.2016 in Petition No. 264/GT/2014 (projected item no.4 of 2014-15) and are considered necessary for successful and efficient operation of the plant.  The Commission had allowed this item as the asset is required for reliable operation of radial gates specially during floods. The award for procurement of instant asset is made and the supply shall be completed shortly.	We note the asset/ work has already been allowed vide order dated 26.5.2016 in Petition No. 264/GT/2014 for Rs.10 lakh, on the ground that the said asset is required for reliable operation of radial gates especially during floods. As the additional capital expenditure claimed by the Petitioner is within the limit of the amount allowed vid order dated 26.5.2016, the same is <b>allowed</b> .	6.50
Construction of Store building at switch yard of generating station	18.00	The assets/ works were admitted vide order dated 26.5.2016 in Petition No. 264/GT/2014 under Regulation 14(3)(iii) of the 2014 Tariff Regulations (projected item No.18 of 2014-15).	It is noticed that the additional capital expenditure for the asset/ work was allowed vide order dated 26.5.2016 in Petition No.	18.00



Head of Work/ Equipment	Actual additional capital expenditure claimed	Justification	Admissibility	Amount Allowed
		The Commission had allowed this item as store building is not available at switch yard. The equipment's, tools/ tackles, spares required for smooth operation and maintenance of various component are to be stored in switch yard area itself. Hence, for proper storage of above items it is essential to construct a store building at switch yard.	264/GT/2014 for Rs.30.00 lakh, for proper storage of these items, at switch yard. As the additional capital expenditure claimed by the Petitioner is within the limit of the amount allowed vide order dated 26.5.2016, the same is <b>allowed</b> .	
Purchase of 800 amp. CT for 220 KV line	42.50	The assets/ works were admitted vide order dated 26.5.2016 in Petition No. 264/GT/2014 under Regulation 14(3)(viii) of the 2014 Tariff Regulations (projected item No.4 of 2015-16).  The Commission had considered this item as, MPSLDC during conduct of various operation and coordination committee meeting (OCCM) of MP, has been persistently raising the issue of providing 800 amp CT in place of existing 500 Amp CT installed in all feeders of power station. Hence, purchase of instant asset is required for enhanced reliability of system/ for grid stability and compliance of direction of MPSLDC.	It is noticed that the said asset was allowed vide order dated 26.5.2016 in Petition No. 264/GT/2014 for Rs.50.00 lakh. As the additional capital expenditure claimed by the Petitioner is within the limit of the amount allowed vide order dated 26.5.2016, the same is <b>allowed</b> .	42.50
De-capitalisation of above	(-)18.97		As the asset has been allowed as above, the de-capitalisation value furnished by the Petitioner has also been considered and <b>allowed</b> .	(-)18.97
<b>Total amount claimed</b>	<b>48.03</b>			
<b>Total amount allowed</b>				<b>48.03</b>



**(e) Claims under Regulation 26(1)(b) of the 2019 Tariff Regulations**

**(Rs. in lakh)**

<b>Head of Work/ Equipment</b>	<b>Actual additional capital expenditure claimed</b>	<b>Justification</b>	<b>Remarks on admissibility</b>	<b>Amount Allowed</b>
Supply & Installation of organic waste composite machine with building	40.00	The Govt of India is striving for "Clean India" mission. Further, under the Environment Conservation measures to utilize the large quantity of organic waste material which gets collected each day from huge lawns/ gardens of the power station, installation of organic waste composite machine with building is essential.	Though the additional capital expenditure for the asset/ work has been claimed in in respect of the 'Clean India Mission' guidelines/ policy of the Government of India, no documentary evidence to show that the claim is on account of change in law or for compliance with existing law has been furnished by the Petitioner. In view of this, the claim of the Petitioner is <b>not allowed.</b>	0.00
Installation and commissioning of lift (capacity of 8 passengers) at corporate office Bhopal	12.66	As per provision of "Accessible India Campaign (Sugamya Bharat Abhiyan)" issued vide Gazette Notification dated 15-06-2017, all Government departments are required to make suitable provision by construction of ramp/ others for accessibility of the physically challenged persons. In addition to above, DPE, Gol has directed that compliance of above shall be evaluated as per para 14.2(xi) of MOU guidelines. The Commission may allow the capitalization towards the replacement of asset under Regulation No. 26(1)(b) of the 2019 Tariff Regulations.	The Petitioner has not demonstrated that the additional capital expenditure claimed is in the nature of change in law or in compliance to the existing law. As the additional capital expenditure is in the nature of Corporate office expenses, the claim of the Petitioner is <b>not allowed.</b>	0.00
<b>Total amount claimed</b>	<b>52.66</b>			



Head of Work/ Equipment	Actual additional capital expenditure claimed	Justification	Remarks on admissibility	Amount Allowed
<b>Total amount allowed</b>				<b>0.00</b>

**(f) Claims under Regulation 26(1)(d) of the 2019 Tariff Regulations**

*(Rs. in lakh)*

Head of Work/ Equipment	Actual additional capital expenditure claimed	Justification	Remarks on admissibility	Amount Allowed
Fire Protection system of admin building and other building at generating station	28.19	<p>The assets/ works were admitted vide order dated 26.5.2016 in Petition No. 264/GT/2014 under Regulation 14(3)(iii) of the 2014 Tariff Regulations (projected item No.8 of 2014-15).</p> <p>The Commission had allowed this item as work is essential as per requirement of Factories Act. The execution of the work is already completed.</p>	<p>It is noticed that the Commission vide its order dated 26.5.2016 in Petition No. 264/GT/2014 had allowed the additional capital expenditure for this asset/ work for Rs.20.00 lakh. However, the claim of the Petitioner is beyond the amount approved vide order dated 26.5.2016. The Petitioner has clarified that the projected additional capital expenditure claimed/ allowed earlier was based on the preliminary estimates. However, the additional capital expenditure claimed is based on the actual expenditure incurred, after following the requisite public procurement process. In view of the justification and since the additional capitalisation is in respect of spill over work, the claim of</p>	28.19



Head of Work/ Equipment	Actual additional capital expenditure claimed	Justification	Remarks on admissibility	Amount Allowed
			the Petitioner is <b>allowed.</b>	
Purchase of accessories for installation of CCTV system and erection and commissioning of cameras and interconnection of Powerhouse with admin block through OFC based network.	10.00	Same as in 2015-16.	Same as in 2015-16. The claim is allowed under Regulation 26(1)(d) of the 2019 Tariff Regulations.	10.00
Supply, installation & consultancy services of two numbers of accelerograph for Dam	40.00	It is important to keep track of the seismic movement at important installations like dam body. At Omkareshwar Dam, presently there is one strong motion accelerograph on the Dam (near Block No. 03) and one seismograph in the garden at left bank. The Geophysics team of NHPC visited the Omkareshwar project during March 2016 to review the condition and status of seismographs. The team has recommended installation of two more accelerographs, one strong motion accelerograph (SMA) in open and one at Dam gallery at Omkareshwar Dam. The installation of SMA is essential for safety of dam/ Installation. The Petitioner has requested to consider capitalization of this asset on ground of safety of dam/ installation.	The Petitioner has claimed the additional capital expenditure in a phased manner i.e. Rs.40 lakh in 2019-20 and Rs.65 lakh in 2020-21. Since the Petitioner has not furnished any documentary evidence in support of the additional capital expenditure claimed, the same is <b>not allowed.</b>	0.00
Providing and fixing floating barrier at	65.00	It is important to check unauthorised movement to the dam/ other structures. The dam	As the Petitioner has not furnished any documentary	0.00





Head of Work/ Equipment	Actual additional capital expenditure claimed	Justification	Remarks on admissibility	Amount Allowed
upstream of dam reservoir.		safety team has recommended providing the floating barriers on the upstream side for the safety of the dam. The work is essential to ensure enhanced security of dam specially during night. The work is related to safety of dam/ installation.	evidence in support of the additional capital expenditure claimed, the same is <b>not allowed</b> .	
Installation of GPS system at Power house	20.00	Cyber Security is issue of concern for all generating units. At present, at Omkareshwar Power Station, Single GPS System is used for time synchronisation of SCADA and Relays of the Protection system. Dedicated network of one system should not be used for other considering cyber security threat. Therefore, it is essential to have separate GPS for time synchronization of the relays of protection system of generating units & switch yard in compliance to cyber security provisions.	The Petitioner has not furnished any documentary evidence or the relevant cyber security provisions in support of the said claim. In view of this, the additional capital expenditure claimed is <b>not allowed</b> .	0.00
Up-gradation of level control & monitoring system for the dam drainage pump	25.00	Effective and reliable dam dewatering system is essential for averting the possibility of inundation of dam gallery. Pumps are being operated as per requirement causing electrical and mechanical stress on the pumps due to frequent switching resulting in its breakdown.  In order to optimise the operation of pumps, the instant additional capital expenditure is required.	As the Petitioner has not furnished any documentary evidence in support of the additional capital expenditure claimed, the same is <b>not allowed</b> .	0.00
Augmentation of powerhouse surveillance system	20.00	Security of Omkareshwar Project is being looked after by CISF. Looking to security threats to the project, the safety committee/ CISF has reviewed the existing surveillance system to ensure that the present safety and security measures comply with the enhanced auditing norms for security. The envisaged security augmentation measures are	The Petitioner has claimed projected additional capital expenditure for augmentation of powerhouse surveillance system and has submitted that security augmentation measures as	20.00





Head of Work/ Equipment	Actual additional capital expenditure claimed	Justification	Remarks on admissibility	Amount Allowed
		essential to be taken up to ensure higher security/ safety of the project/ installations.	envisaged by CISF are essential to be taken up to ensure higher security/ safety of the project/ installations. In view of this, the additional capital expenditure claim is <b>allowed</b> . The claim of the Petitioner is <b>allowed</b> subject to the Petitioner furnishing full details at the time of truing up, failing which the expenditure may not be allowed.	
Implementation of Enterprises Resource Planning for power station	3.42	In the present competitive market, a comprehensive integrated solution (ERP) is the need of hour. There is no integrated solution available at NHDC. ERP implementation shall provide central access & control, support the latest IFRS accounting system and provide enhanced cyber security. In addition to this, ERP solution shall standardise the business process to comply the national/ international norms. All generating utilities are prone to cyber threat/ unauthorised access to important/ confidential data of system, for averting this situation ERP implementation is essential to increase data security. The Commission is requested to consider the capitalisation of this asset as it relates to security of system under Regulation 26 (1) (d) of the 2019 Tariff Regulations.	The Petitioner has claimed the additional capital expenditure in a phased manner i.e. Rs.3.42 lakh in 2019-20, Rs.102.63 lakh in 2020-21 and Rs.205.26 lakh in 2021-22. It is, however, noticed that the Petitioner has not submitted any relevant documents in support of the claim. The claim of the Petitioner is <b>allowed</b> subject to the Petitioner furnishing full details at the time of truing up, failing which the expenditure may not be allowed.	3.42
<b>Total amount claimed</b>	<b>211.61</b>			
<b>Total amount allowed</b>				<b>61.61</b>



88. Based on the above, the total additional expenditure of Rs.2319.01 lakh (Rs.2073.45+Rs.23.25+Rs.112.67+Rs.48.03+Rs.61.61) in 2019-20 is allowed.

### **2020-21**

89. The Petitioner has claimed projected additional capital expenditure of Rs.2867.42 lakh in 2020-21 under the provisions of Regulation 25 and Regulation 26 of the 2019 Tariff Regulations which are discussed under:

<i>(Rs. in lakh)</i>			
Sl. No.	Regulations		2020-21
1	25(1)(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	962.62
2	25(2)(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	75.00
3	25(2)(c)	The replacement of such asset or equipment is necessary on account of obsolescence of technology	820.43
4	25(2)(d)	The replacement of such asset or equipment has otherwise been allowed	300.00
		De-capitalization claimed by the Petitioner for above Add Capitalization on replacement basis	(-)392.68
5	26(1)(b)	Change in law or compliance of any existing law	68.42
6	26(1)(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	1033.63
7	<b>Total additional capital expenditure claimed as per Form 9A</b>		<b>2867.42</b>

### **(a) Claims under Regulation 25(1)(a) of the 2019 Tariff Regulations**

<i>(Rs. in lakh)</i>				
Head of Work/ Equipment	Actual additional capital expenditure claimed	Justification	Remarks on admissibility	Amount Allowed
Land Compensation Payments, Stamp Duty & Registration Fees etc.	779.47	Same as in 2019-20		779.47
Development of R/sites and Contingency Plan	183.15	Same as in 2019-20		0.00
<b>Total amount claimed</b>	<b>962.62</b>			



Head of Work/ Equipment	Actual additional capital expenditure claimed	Justification	Remarks on admissibility	Amount Allowed
Total amount allowed				779.47

**(b) Claims under Regulation 25(2)(a) of the 2019 Tariff Regulations**

<i>(Rs. in lakh)</i>				
Head of Work/ Equipment	Actual additional capital expenditure claimed	Justification	Remarks on admissibility	Amount Allowed
Main distribution valve for governing system	50.00	Same as for 2019-20.		50.00
De- capitalisation of above	(-) 22.32			(-) 22.32
Updating the existing EPABX/ communicati on	25.00	EPABX communication of the generating station is an important system for internal/ external communication within (Between PH, Dam, S/y, colony, admin building etc) and outside power station. Existing EPABX exchange was installed during commissioning of the project in 2007. The same is now developing frequent troubles. Communication amongst these staff is the backbone of successful operation and maintenance of the generating units. In order to ensure reliable communication system, updating of EPABX Exchange is necessary. The work relates safety/ smooth operation of various activities of Plant/ units.	Considering the fact that these assets/ works are claimed as replacement of assets/works which are within the original scope of the existing project and after cut-off date, the additional capital expenditure of Rs.25.00 lakh is <b>allowed</b> under Regulation 25(2)(a) of the 2019 Tariff Regulations. The Petitioner is directed to submit relevant documentary evidence at the time of truing of tariff, failing which the expenditure may not be allowed.	25.00
De- capitalisation of above	(-)9.80		The de-capitalisation amount as claimed is <b>allowed</b> subject to the Petitioner submitting documentary evidence at the time of truing up.	(-) 9.80



Head of Work/ Equipment	Actual additional capital expenditure claimed	Justification	Remarks on admissibility	Amount Allowed
<b>Total amount claimed</b>	<b>42.88</b>			
<b>Total amount allowed</b>				<b>42.88</b>

**(c) Claims under Regulation 25(2)(c) of the 2019 Tariff Regulations**

*(Rs. in lakh)*

Head of Work/ Equipment	Actual additional capital expenditure claimed	Justification	Remarks on admissibility	Amount Allowed
Up-gradation of Air gap & Vibration monitoring system	61.27	<p>The assets/ works were admitted vide order dated 26.5.2016 in Petition No. 264/GT/2014 under Regulation 14(3)(viii) of the 2014 Tariff Regulations (projected item No.16 of 2015-16).</p> <p>The existing air gap and vibration monitoring system was commissioned by M/s Voith Siemens in the year 2007. The work is necessary for reliable monitoring of system which is meant for prediction of any problem in airgap/ vibration of running machine. The latest version of software equipped with various newer features and obsolescence of existing software, replacement is necessitated, so as to avoid the system hang problem being encountered in recent</p>	<p>It is noticed that additional capitalisation of the asset/ work was allowed vide order dated 26.5.2016 in Petition No. 264/GT/2014 for Rs.10 lakh on the ground that the same was required for reliable monitoring of system, meant for prediction of any problem in Airgap/ vibration of running machine.</p> <p>Since the claim of the Petitioner is in respect of a spill over work and is over and above the amount allowed vide order dated 26.5.2016, the claim is restricted to Rs.10 lakh and is <b>allowed</b>. The Petitioner is directed to furnish proper reasons for the spill over of the asset/ work at the time of truing up of tariff, failing which the</p>	10.00



		past.	expenditure may not be allowed.	
De-capitalisation of above	(-)27.35		Since the additional capitalisation of the above asset has been restricted to the amount allowed vide order dated 26.5.2016, the de-capitalisation value of Rs.6.77 lakh as per the said order has only been considered. However, the de-capitalisation value furnished by the Petitioner shall be considered at the time of truing up of tariff.	(-)6.77
<b>Capitalisation against other than admitted items</b>				
Up-gradation of Protection system of generating units and generator transformers	300.00	<p>The existing protection system of the generating station was installed during the inception of the project. For generator protection, 02 numbers REG 316 Var 4 Relay &amp; 1 number REG 316 Var 7 Relays and for GT protection 02 numbers RET 521 have been installed.</p> <p>Due to rapid development in the field of protection the relays, the existing relays provided for generator protection and GT protection have been declared obsolete by the OEM (M/s ABB) and no service support available for rectification of faults/malfunctioning. The replacement of existing asset with latest IED relays is</p>	<p>Considering the fact that these assets/works are claimed as replacement of assets/works which are within the original scope of the existing project and after cut-off date, the additional capital expenditure of Rs.300.00 lakh is <b>allowed</b> under Regulation 25(2)(a) of the 2019 Tariff Regulations. The Petitioner is directed to submit relevant documentary evidence at the time of truing of tariff, failing which the expenditure may not be allowed.</p>	300.00



		essential owing to technological obsolesce and for ensuring reliable operation of generating units.		
De-capitalisation of above	(-)133.91		The de-capitalisation amount as claimed is <b>allowed</b> subject to the Petitioner submitting documentary evidence at the time of truing up.	(-)133.91
Up-gradation of LCD displays in LCU of automation panel.	31.32	Siemens make LCD was installed during commissioning of project in each Local Control Unit (LCU) of generating units, switch yard and auxiliary/ associated system. Theses LCD are of resistive touch type which has developed problems with the passage of time and now most of them are not working properly. LCU interface is essential specially to monitor the parameters of unit during communication failure between the servers and PLC.	The Petitioner has not furnished any documentary evidence/ obsolescence certificate in support of the claim. In view of this, the additional capital expenditure claimed is <b>allowed</b> subject to the Petitioner submitting relevant documentary evidence at the time of truing of tariff, failing which the expenditure may not be allowed.	31.32
De-capitalisation of above	(-)13.98	The replacement of existing asset with latest Capacitive Type LCD for ensuring smooth and reliable operation of plant/ units.	The de-capitalisation amount as claimed is <b>allowed</b> subject to the Petitioner submitting documentary evidence at the time of truing up.	(-)13.98
Up-gradation of 220 kV Circuit Breakers pneumatic drive type with 220 kv spring operated, sf6 circuit	322.84	In switchyard of the generating station, 220 kV pneumatic drive type, spring operated, SF6, M2 class circuit breaker has been installed	The Petitioner has not furnished any documentary evidence/ obsolescence certificate in support of the claim. In view of	322.84



breaker (mechanical endurance m2 class) for 8 numbers of generator bays, 5 outgoing lines and one bus coupler bay		<p>during commissioning of project. Frequent failures of the current pneumatic type circuit breakers have been observed resulting into LBB operations and thereby imposing threats to the grid stability besides frequent outage of units/ feeders.</p> <p>Replacement of old and obsolete Pneumatic Type ABB Make 220 kV SF6 Circuit Breaker (M1 Type) has become essential for the safe and reliable operation of the generating units.</p>	this, the additional capital expenditure claimed is <b>allowed</b> subject to the Petitioner submitting relevant documentary evidence at the time of truing of tariff, failing which the expenditure may not be allowed.	
De-capitalisation of above	(-)144.11		The de-capitalisation amount as claimed is <b>allowed</b> subject to the Petitioner submitting documentary evidence at the time of truing up.	(-)144.11
Up-gradation of existing surge counter of generator transformer with digital surge counter	15.00	Surge Counter has been installed in Generator Transformer of the Project. Central Electricity Authority (CEA) has recommended for replacement of existing Surge counter with digital surge counter. The replacement of asset is essential for compliance of directive of CEA.	The Petitioner has not furnished any documentary evidence in support of the claim. In view of this, the additional capital expenditure claimed is <b>allowed</b> subject to the Petitioner submitting relevant documentary evidence at the time of truing of tariff, failing which the expenditure may not be allowed.	15.00
De-capitalisation of above	(-)1.03		The de-capitalisation amount as claimed is <b>allowed</b> subject to the Petitioner submitting documentary evidence at the time	(-)1.03



			of truing up.	
Up-gradation of servo valve of governor of TG sets	70.00	Same as in 2019-20		70.00
De-capitalisation of above	(-)31.25			(-) 31.25
Up-gradation of various NRVs installed in the headers of drainage & dewatering system of powerhouse with hydraulic NRVS	20.00	It is essential to have proper and robust drainage and de-watering system of Powerhouse. The multiple operations of drainage and dewatering pumps result in damaging impact on the mountings of the long headers of heavy pipelines due to hammering effect causing damaging impact on NRV.  Therefore, up-gradation of various NRVs installed in the drainage & dewatering system headers with Hydraulic NRVs has become necessary to enhance the reliability of system and ensure the safety & longevity of headers.	The Petitioner has not furnished any documentary evidence in support of the claim. In view of this, the additional capital expenditure claimed is <b>allowed</b> subject to the Petitioner submitting relevant documentary evidence at the time of truing of tariff, failing which the expenditure may not be allowed.	20.00
De-capitalisation of above	(-)8.93		The de-capitalisation amount as claimed is <b>allowed</b> subject to the Petitioner submitting documentary evidence at the time of truing up.	(-)8.93
<b>Total amount claimed</b>	<b>459.87</b>			
<b>Total amount allowed</b>				<b>429.18</b>

**(d) Claims under Regulation 25(2)(d) of the 2019 Tariff Regulations**

<i>(Rs. in lakh)</i>				
Head of Work/ Equipment	Actual additional capital expenditure claimed	Justification	Remarks on admissibility	Amount Allowed
Purchase of	250.00	The assets/ works were admitted	It is noticed that the	223.00





Head of Work/ Equipment	Actual additional capital expenditure claimed	Justification	Remarks on admissibility	Amount Allowed
hydraulic cylinder of intake gates		<p>vide order dated 26.5.2016 in Petition No. 264/GT/2014 under Regulation 14(3)(viii) of the 2014 Tariff Regulations (projected item No.1 of 2014-15).</p> <p>The asset is required for reliable operation of Intake Gates of generating units. The asset is essential for reliable and trouble-free operation of units. The procurement of this asset is under process and the supply shall be completed by 2020-21.</p>	<p>Commission vide order dated 26.5.2016 in Petition No. 264/GT/2014 had allowed additional capitalisation of the asset/ work for Rs.223.00 lakh. The claim of the Petitioner is beyond the limit allowed vide order dated 26.5.2016. In view of this and considering the fact that the additional capitalisation claimed is in respect of a spill over work/ asset, the additional capitalisation claimed is restricted to Rs.223.00 lakh and is <b>allowed</b>.</p>	
Providing online monitoring system for assessing safety of dam structure.	50.00	<p>The assets/ works were admitted vide order dated 26.5.2016 in Petition No. 264/GT/2014 under Regulation 14(3)(viii) of the 2014 Tariff Regulations (projected item No.4 of 2016-17).</p> <p>The Commission had allowed this item as presently the instrumentation data is being collected through data acquisition system and these data are required to be analyzed for assessing safety of dam structure. Nowadays, online monitoring system is available in the market, which shows deflection, settlement etc. of dam structure immediately and, thus, it is essential to install such system from safety point of view.</p>	<p>It is noticed that the Commission vide its order dated 26.5.2016 in Petition No. 264/GT/2014 had allowed additional capitalisation of the asset/ work for Rs.50.00 lakh. As the claim of the Petitioner is same as the amount approved vide order dated 26.5.2016, the additional capital expenditure claimed is <b>allowed</b>.</p>	50.00
<b>Total</b>	<b>300.00</b>			



Head of Work/ Equipment	Actual additional capital expenditure claimed	Justification	Remarks on admissibility	Amount Allowed
amount claimed				
Total amount allowed				273.00

**(e) Claims under Regulation 26(1)(b) of the 2019 Tariff Regulations**

*(Rs. in lakh)*

Head of Work/ Equipment	Actual additional capital expenditure claimed	Justification	Remarks on admissibility	Amount Allowed
Installation and commissioning of lift having capacity of 08 passengers at Corporate Office Bhopal	3.42	As per provision of "Accessible India Campaign (Sugamya Bharat Abhiyan)" issued vide gazette Notification dated 15-06-2017, all Government departments are required to make suitable provision by construction of ramp/ others for accessibility of the physically challenged persons. In addition to above, DPE, GOI has directed that compliance of above shall be evaluated as per paragraph 14.2(xi) of MOU guidelines.	The Petitioner has not demonstrated that the additional capital expenditure claimed is on account of change in law or in compliance to the existing law. As the additional capital expenditure is in the nature of Corporate office expenses, the claim of the Petitioner is <b>not allowed</b> .	0.00
Supply & Installation of 2 numbers 'accelerographs' for power station	65.00	Same as for 2019-20		0.00
<b>Total amount claimed</b>	<b>68.42</b>			
<b>Total amount allowed</b>				<b>0.00</b>



**(f) Claims under Regulation 26(1)(d) of the 2019 Tariff Regulations**

*(Rs. in lakh)*

Head of Work/ Equipment	Actual additional capital expenditure claimed	Justification	Remarks on admissibility	Amount Allowed
<b>Actual additional capitalization against admitted items</b>				
Fire fighting equipment in dam & power dam gallery	40.00	<p>The assets/ works were admitted vide order dated 26.5.2016 in Petition No. 264/GT/2014 under Regulation 14(3)(iii) of the 2014 Tariff Regulations (projected item No.14 of 2015-16).</p> <p>The asset is required as per recommendation of the Dam Safety Committee. The instant additional capital expenditure is essential as relates to safety of the dam structure.</p>	It is noticed that the Commission vide order dated 26.5.2016 in Petition No. 264/GT/2014 had allowed the additional capitalisation for the asset/ work for Rs.40.00 lakh. Since the clam of the Petitioner is in line with the amount allowed vide order dated 26.5.2016, the additional capital expenditure is <b>allowed</b> .	40.00
Providing and fixing access/ platform to trunnion girder across the piers at dam of generating station	436.00	<p>The assets/ works were admitted vide order dated 26.5.2016 in Petition No. 264/GT/2014 under Regulation 14(3)(iii) of the 2014 Tariff Regulations (projected item No. 2 of 2016-17).</p> <p>The Commission had allowed this item as the work is necessary as per the recommendation of Dam Safety Committee. This work is proposed especially for the safety of operation and maintenance staff.</p>	It is noticed that the Commission vide its order dated 26.5.2016 in Petition No. 264/GT/2014 had allowed the additional capitalisation for the asset/ work for Rs.150.00 lakh. As the claim of the Petitioner, in the instant petition, is beyond the amount approved vide order dated 26.5.2016, the Petitioner has not provided reasons for increase in cost and it getting spilled	150.00



Head of Work/ Equipment	Actual additional capital expenditure claimed	Justification	Remarks on admissibility	Amount Allowed
			over to 2019-24 tariff period, the additional capital expenditure is restricted to Rs.150 lakh and is <b>allowed</b> .	
Installation of APFC panel at switchyard & dam	20.00	It is essential that the Power factor at the consumer end is maintained high (near unity) as it ensures optimum conservation of energy. Further, owing to high inductive load at dam (pumps etc.) and switchyard (compressor etc.) at power station, the power factor of plant slips beyond the prescribed value causing huge penalties to corporation. Accordingly, the work is essential for conservation of energy by improvement of power factor also it ensures the safety of grid.	It is noticed that the additional capital expenditure claimed by the Petitioner was not allowed in order dated 26.5.2016 in Petition No. 264/GT/2014 on the ground that that the O&M expenses for power station has been allowed on normative basis and the benefit of reduced O&M consumption will not be directly shared with the beneficiary, though it indirectly impacted the efficient operation of the generating station. In line with this decision, the additional capital expenditure claimed by the Petitioner is <b>not allowed</b> .	0.00
Installation of automatic temperature monitoring & control system for unit Automation panels of powerhouse & switchyard	35.00	The temperature at the project during summer reaches 47 degree Celsius. Also, during monsoon, the weather becomes humid. OSP is surface type powerhouse and, hence, sensitive electronic components installed in the unit automation panels located at generator floor and	The Petitioner has not furnished any documentary evidence in support of the claim. In view of this, the additional capital expenditure claimed is <b>not allowed</b> .	0.00



Head of Work/ Equipment	Actual additional capital expenditure claimed	Justification	Remarks on admissibility	Amount Allowed
		switchyard panel room is subject to adverse weather conditions, which may lead to failure of protection system. Accordingly, in order to ensure safety of plant and trouble-free operation of units, the asset is essential.		
Extension of existing field hostel -1	250.00	As the generating station is ageing the frequency of faults in some components of power station has increased tremendously. For rectification of faults/ maintenance/ AMC of various equipment, service engineers/ expert are being called on regular basis. The Power Station is remotely located (about 280 km from Bhopal and about 80 km from Indore). There is no option left with engineers/ experts to stay at OSP during night for which augmentation of capacity of field hostel is required. In addition to this, many Officers have opted to keep their families in cities so that they can offer better educate to their children. Accordingly, there is need for extension of field hostel no-1 and no-2. The Petitioner has requested to consider capitalization on ground of safety/ reliability/healthiness of plant/ employees.	The Petitioner has not furnished any documentary evidence in support of the claim. Moreover, the Petitioner has not demonstrated that the requirement of this asset/ work is based on any directions of Governmental authorities or statutory agencies with regard to the safety & security of the generating station. In view of this, the additional capital expenditure claimed is <b>not allowed</b> .	0.00
Extension of existing field hostel -2	150.00			0.00
Implementation of Enterprises Resource Planning (ERP)	102.63	Same as in 2019-20		102.63



Head of Work/ Equipment	Actual additional capital expenditure claimed	Justification	Remarks on admissibility	Amount Allowed
<b>Total amount claimed</b>	<b>1033.63</b>			
<b>Total amount allowed</b>				<b>292.63</b>

90. Based on the above, the total additional expenditure of Rs.1817.16 lakh (Rs.779.47 + Rs.42.88 lakh + Rs.429.18 lakh + Rs.273.00 lakh + Rs.292.63 lakh) in 2020-21 is allowed.

### **2021-22**

91. The additional capital expenditure claimed under various provisions of Regulation 25 and Regulation 26 of the 2019 Tariff Regulations for Rs.1693.70 lakh in 2021-22 is discussed as under:

Sl. No.	Regulations		2021-22
1	25(1)(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	1407.45
2	25(2)(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	-
3	25(2)(c)	The replacement of such asset or equipment is necessary on account of obsolescence of technology	31.62
4	25(2)(d)	The replacement of such asset or equipment has otherwise been allowed	-
5		De-capitalization claimed by the Petitioner for above additional capitalization on replacement basis	(-) 29.74
6	26(1)(b)	Change in law or compliance of any existing law	-
7	26(1)(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	284.37
8	<b>Total additional capital expenditure claimed as per Form 9A</b>		<b>1693.70</b>



**(a) Claims under Regulation 25(1)(a) of the 2019 Tariff Regulations**

*(Rs. in lakh)*

Head of Work/ Equipment	Actual additional capital expenditure claimed	Justification	Remarks on admissibility	Amount Allowed
Land Compensation Payments, Stamp Duty & Registration Fees etc.	1165.50	Same as in 2019-20		1165.50
Development of R/sites and Contingency Plan	241.95	Same as in 2019-20		0.00
<b>Total amount claimed</b>	<b>1407.45</b>			
<b>Total amount allowed</b>				<b>1165.50</b>

**(b) Claims under Regulation 25(2)(c) of the 2019 Tariff Regulations**

*(Rs. in lakh)*

Head of Work/ Equipment	Actual additional capital expenditure claimed	Justification	Remarks on admissibility	Amount Allowed
Smart metering of auxiliary system	15.00	Energy consumption of auxiliary equipment need to be checked, monitored and controlled so as to ensure that the same is within the prescribed limit specified in Regulations and to optimise power consumption at various load centres. Smart metering of auxiliary system is essential for obtaining elaborate accounting of energy consumption at load centres.	It is evident that the additional capital expenditure claimed is for replacement of the existing old meters. The additional capital expenditure claimed is <b>allowed</b> subject to the Petitioner submitting obsolescence certificate/ relevant documents at the time of truing up, failing which the expenditure may not be allowed.	15.00
Up-gradation of 11 kV relays	16.62	The existing 11 kV relays installed at generating station are of static type and do not have self-diagnostic features. The same has also become obsolete.	The additional capital expenditure claimed is <b>allowed</b> subject to the Petitioner submitting obsolescence certificate/ relevant	16.62



		Accordingly, the replacement of existing 11 kV relays of generating station is envisaged with upgraded numerical relay with self-diagnostic feature.	documents at the time of truing up, failing which the expenditure may not be allowed.	
De-capitalisation of the above	(-)7.42		The de-capitalisation amount as claimed is <b>allowed</b> subject to the Petitioner submitting documentary evidence at the time of truing up.	(-)7.42
<b>Total amount claimed</b>	<b>24.20</b>			
<b>Total amount allowed</b>				<b>24.20</b>

**(c) Claims under Regulation 26(1)(d) of the 2019 Tariff Regulations**

*(Rs. in lakh)*

Head of Work/ Equipment	Actual additional capital expenditure claimed	Justification	Remarks on admissibility	Amount Allowed
Augmentation of emergency lighting system at dam & Powerhouse	20.00	Emergency lighting system has been installed to counter power supply failure from MP MKVVCL. Recently, the Dam Safety Committee has recommended for augmentation of emergency lighting system at dam for ensuring safety of dam structure especially during floods/ monsoon season.	The Petitioner has claimed projected additional capital expenditure for augmentation of emergency lighting system at dam & powerhouse and has submitted that the same is based on the recommendations of the dam safety committee. In view of this, the additional capital expenditure claimed is <b>allowed</b> .	20.00
Augmentation of EPABX exchange of Powerhouse	5.00	The Powerhouse, switchyard and dam are huge structures and spread over lengths of more than a kilometre. Further, operation &	As the additional capital expenditure claimed by the Petitioner is in the nature of O&M expenses, the same is <b>not allowed</b> .	0.00





Head of Work/ Equipment	Actual additional capital expenditure claimed	Justification	Remarks on admissibility	Amount Allowed
		<p>maintenance staff need to perform duties at various elevation levels. Communication amongst these O&amp;M staff is the backbone of successful operation and maintenance of the generating units. In order to ensure safe and reliable communication system, augmentation of capacity/ features of EPABX exchange are necessary. The work is essential as it relates safety/ smooth operation of various activities of plant/ units.</p>		
Up-gradation & augmentation of HVAC system of powerhouse	50.00	<p>Heating, Ventilation and Air conditioning (HVAC) system is designed to control the environment of the surroundings. The performance of existing HVAC system of power house, installed during 2006-07 has become insufficient to meet the temperature requirements for maintaining safe working conditions of various panels, machine floor area and office spaces. Hence, up-gradation and augmentation of HVAC System is necessary for the safe and reliable operation of various equipment</p>	<p>The Petitioner has submitted that Heating, Ventilation and Air conditioning (HVAC) system is designed to control the environment of the surroundings. The performance of existing HVAC system of power house, installed during 2006-07 has become insufficient to meet the temperature requirements for maintaining safe working conditions of various panels, machine floor area and office space. In view of this, the additional capital expenditure claimed is <b>allowed</b>. The Petitioner may furnish documentary evidence in support of the claim at</p>	50.00



Head of Work/ Equipment	Actual additional capital expenditure claimed	Justification	Remarks on admissibility	Amount Allowed
		of Powerhouse.	the time of truing-up of tariff, failing which the expenditure may not be allowed.	
De-capitalisation of the above	(-)22.32		Since the additional capitalisation of the above asset has been allowed, the de-capitalisation value furnished by the Petitioner has also been considered. The same shall be considered at the time of truing up of tariff.	(-)22.32
Implementation of Enterprises Resource Planning (ERP) for NHDC Power Station	205.26	At present, there is no integrated solution available at NHDC. ERP implementation shall provide central access & control, support the latest IFRS accounting system and provide enhanced cyber security. In addition to this, ERP solution shall standardise the business process to comply the national/ international norms. All generating utilities are prone to cyber threat/ unauthorised access to important/ confidential data of system, for averting this situation ERP implementation is essential to increase data security.	It is noticed that the Petitioner has not submitted any relevant documents in support of the claim. Moreover, the claim of the Petitioner does not relate to the safety/ security of the plant. Since ERP solution is important from point of view of greater efficiency of the generating station, the additional capital expenditure claimed is <b>allowed</b> subject to the Petitioner furnishing full details at the time of truing up, failing which the expenditure may not be allowed.	205.26
125 KVA DG Set	4.11	During monsoon frequent tripping was observed in the supply of Power from MP MKVVNL. It is essential to ensure	As the additional capital expenditure claimed by the Petitioner for the asset is in the nature of spares, the claim is <b>not allowed</b> .	0.00



Head of Work/ Equipment	Actual additional capital expenditure claimed	Justification	Remarks on admissibility	Amount Allowed
		uninterrupted supply of power as flood cell/ O&M cell is being managed round the clock from CO Bhopal. The data communication as regards intensity of flood/ rise in water level is communicated from 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.		
<b>Total amount claimed</b>	<b>262.05</b>			
<b>Total amount allowed</b>				<b>252.94</b>

92. Based on the above, the total additional expenditure of Rs.1442.64 lakh (Rs.1165.50 lakh + Rs.24.20 lakh + Rs.252.94 lakh) in 2021-22 is allowed.

### **2022-23**

93. The additional capital expenditure claimed under the provisions of Regulation 25 and Regulation 26 of the 2019 Tariff Regulations for Rs.4818.30 lakh in 2022-23 is discussed below:

			(Rs. in lakh)
Sl. No.	Regulations		2022-23
1	25(1)(a)	Liabilities to meet award of arbitration or for compliance of the directions or order of any statutory authority, or order or decree	1055.59



Sl. No.	Regulations		2022-23
		of any court of law	
2	25(2)(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	-
3	25(2)(c)	The replacement of such asset or equipment is necessary on account of obsolescence of technology	22.95
4	25(2)(d)	The replacement of such asset or equipment has otherwise been allowed	0.00
		De-capitalization claimed by the Petitioner for above additional capitalization on replacement basis	(-)10.24
5	26(1)(b)	Change in law or compliance of any existing law	-
6	26(1)(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	3750.00
7	<b>Total additional capital expenditure claimed as per Form 9A</b>		<b>4818.30</b>

**(a) Claims under Regulation 25(1)(a) of the 2019 Tariff Regulations**

*(Rs. in lakh)*

Head of Work/ Equipment	Actual additional capital expenditure claimed	Justification	Remarks on admissibility	Amount Allowed
Land compensation payments, stamp duty & registration fees etc.	874.13	Same as in 2019-20.		874.13
Development of R/sites and Contingency Plan	181.46			0.00
<b>Total amount claimed</b>	<b>1055.59</b>			
<b>Total amount allowed</b>				<b>874.13</b>

**(b) Claims under Regulation 25(2)(c) of the 2019 Tariff Regulations**

*(Rs. in lakh)*

Head of Work/ Equipment	Actual additional capital expenditure claimed	Justification	Remarks on admissibility	Amount Allowed
Up-gradation of ACBs of UABs of 4 number Generating Units	22.95	The existing ACBs of unit auxiliary board was installed during commissioning of project. The associate relays have been declared obsolete by the OEM and no service support is available for rectification	The Petitioner has not furnished any documentary evidence/ obsolescence certificate in support of the claim. In view of this, the additional capital expenditure claimed is <b>allowed</b>	22.95



Head of Work/ Equipment	Actual additional capital expenditure claimed	Justification	Remarks on admissibility	Amount Allowed
		of faults/ maintenance. The up-gradation of ACBs of UABs of generating units are essential for safe and reliable operation of generating units.	subject to the Petitioner furnishing documentary evidence in support of the said claim at the time of truing-up of tariff.	
De- capitalisation of the above	(-)10.24		Since the capitalisation amount as claimed is <b>allowed</b> , the de- capitalization of the same is also allowed.	(-)10.24
<b>Total amount claimed</b>	<b>12.71</b>			
<b>Total amount allowed</b>				<b>12.71</b>

**(c) Claims under Regulation 26(1)(d) of the 2019 Tariff Regulations**

*(Rs. in lakh)*

Head of Work/ Equipment	Actual additional capital expenditure claimed	Justification	Remarks on admissibility	Amount Allowed
<b>Actual additional capitalization against admitted items</b>				
Design, Engineering and Construction of bridge and approach road on D/s of Omkareshwar Dam, Siddhwarkut.	3500.00	The assets/ works were admitted vide order dated 26.5.2016 in Petition No. 264/GT/2014 under Regulation 14(3)(iii) of the 2014 Tariff Regulations (projected item No 1 of 2017-18).  The Commission had allowed this item in previous tariff period considering the safety of plant. Further, dam safety committee has been repeatedly advising for construction of bridge and approach road in the downstream of the dam.	It is observed that the Commission vide its order dated 26.5.2016 in Petition No. 264/GT/2014 had allowed the additional capitalisation for the asset/ work for Rs.3500.00 lakh. As the claim of the Petitioner is in line with the additional capital expenditure allowed vide order dated 26.5.2016, the same is <b>allowed</b> .	3500.00
Purchase of 01 no foam & water	50.00	Presently, one fire tender of model 2007,	The Petitioner has not furnished any	50.00



Head of Work/ Equipment	Actual additional capital expenditure claimed	Justification	Remarks on admissibility	Amount Allowed
type fire tender and (01 number) mini foam & water type fire extinguishing vehicle		is deployed for emergency duty at project premises area. This fire tender does not have facility of foam and water type fire extinguishing. This fire tender has already completed its life of 11 years. There is need for augmentation of fire- fighting facilities at the generating station. For the safety of the power station, 1 foam & water type fire tender and 1 mini foam & water type fire tender for facilitating fire-fighting facilities at space constraint sites, is required.	documentary evidence in support of the claim for safety and security of the plant. In view of this, the additional capital expenditure claimed is <b>allowed</b> subject to the Petitioner submitting documentary evidence at the time of truing up, failing which the claim may not be allowed.	
Construction of multi-purpose hall	200.00	The power station organises various meetings like Operation and Coordination Committee meeting (OCC), for ensuring grid security, various meeting with CISF personnel for security concern of the project/ events on various occasions like national festivals, foundation day etc. wherein delegates from local administration/ external agencies like MPSLDC, MPPMCL, GoMP remain present. There is no proper multipurpose hall for conducting above occasions. The construction of multi-	The Petitioner has however not demonstrated that the asset/ work is required for the safety and security of the plant. In view of this, the additional capital expenditure claimed is <b>not allowed</b> .	0.00



Head of Work/ Equipment	Actual additional capital expenditure claimed	Justification	Remarks on admissibility	Amount Allowed
		purpose hall is essential for above as well as for welfare of staff/ employees of project. Accordingly, looking to the remote location of the power station, construction of multi-purpose hall is necessary for welfare of the employees/ safety/ security of plant/ Structure.		
<b>Total amount claimed</b>	<b>3750.00</b>			
<b>Total amount allowed</b>				<b>3550.00</b>

94. Based on the above, the total additional expenditure of Rs.4436.84 lakh (Rs.874.13 lakh + Rs.12.71 lakh + Rs.3550.00 lakh) in 2022-23 is allowed.

### **2023-24**

95. The additional capital expenditure claimed under the provisions of Regulation 25 and Regulation 26 of the 2019 Tariff Regulations for Rs.1105.59 lakh is discussed below:

<i>(Rs. in lakh)</i>			
Sl. No.	Regulations		2023-24
1	25(1)(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	1055.59
2	25(2)(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	-
3	25(2)(c)	The replacement of such asset or equipment is necessary on account of obsolescence of technology	-
4	25(2)(d)	The replacement of such asset or equipment has otherwise been allowed	50.00
		De-capitalization claimed by the Petitioner for above	-



Sl. No.	Regulations		2023-24
		additional capitalization on replacement basis	
5	26(1)(b)	Change in law or compliance of any existing law	-
6	26(1)(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	-
7	<b>Total additional capital expenditure claimed as per Form 9A</b>		<b>1105.59</b>

**(a) Claims under Regulation 25(1)(a) of the 2019 Tariff Regulations**

*(Rs. in lakh)*

Head of Work/ Equipment	Actual additional capital expenditure claimed	Justification	Remarks on admissibility	Amount Allowed
Land compensation payments, stamp duty & registration fees etc.	874.13	Same as in 2019-20.		874.13
Development of R/sites and Contingency Plan	181.46			0.00
<b>Total amount claimed</b>	<b>1055.59</b>			
<b>Total amount allowed</b>				<b>874.13</b>

**(b) Claims under Regulation 25(2)(d) of the 2019 Tariff Regulations**

*(Rs. in lakh)*

Head of Work/ Equipment	Actual additional capital expenditure claimed	Justification	Remarks on admissibility	Amount Allowed
Testing of generating units at FRL	50.00	The assets/ works were admitted vide order dated 26.5.2016 in Petition No. 264/GT/2014 under Regulation 14(3)(viii) of the 2014 Tariff Regulations (projected item No.10 of 2014-15).  This projection has been made in anticipation of filling of the reservoir up to FRL and subsequent testing for assessment of plant performance in accordance with relevant IEC.	It is noticed that the Commission vide order dated 26.5.2016 in Petition No. 264/GT/2014 had allowed additional capitalisation of the asset/ work for Rs. 50.00 lakh. In view of this and since the capitalisation is in respect of a spill over work, the additional capital expenditure is <b>allowed.</b>	50.00
<b>Total amount claimed</b>	<b>50.00</b>			<b>50.00</b>





Head of Work/ Equipment	Actual additional capital expenditure claimed	Justification	Remarks on admissibility	Amount Allowed
<b>Total amount allowed</b>				

96. Based on the above, the total additional expenditure of Rs. 924.13 lakh (Rs.874.13 lakh + Rs.50.00 lakh) is allowed in 2023-24.

### **De-capitalization**

97. The Petitioner has claimed the de-capitalization, as per Form 9Bi, as under:

<i>(Rs. in lakh)</i>				
2019-20	2020-21	2021-22	2022-23	2023-24
(-)247.88	(-)392.68	(-)29.74	(-)10.24	0.00

98. The Petitioner has submitted the year of 'put to use' of the de-capitalized assets and accordingly, the de-capitalization value of the assets has been calculated. The de-capitalization considered for the assets/works during the 2019-24 tariff period has been dealt with in the relevant paragraphs relating to the additional capital expenditure allowed as above and the same is summarized below:

<i>(Rs in lakh)</i>				
Regulation	2019-20	2020-21	2021-22	2022-23
25(2)(c)	(-)93.34	(-)339.98	(-)7.42	(-)10.24
25(2)(d)	(-)18.97	0.00	0.00	0.00
25(2)(a)	(-)18.75	(-) 32.12	0.00	0.00
26(1)(d)	0.00	0.00	(-)22.32	0.00
<b>Total de-capitalization allowed</b>	<b>(-)131.06</b>	<b>(-)372.10</b>	<b>(-)29.74</b>	<b>(-)10.24</b>

### **Additional capital expenditure allowed (Net) for the 2019-24 period**

99. In view of above, the net additional capital expenditure allowed for the 2019-24 tariff period is as under:

<i>(Rs. in lakh)</i>					
	2019-20	2020-21	2021-22	2022-23	2023-24
Additional capital expenditure allowed (a)	2450.07	2189.26	1472.38	4447.08	924.13



	2019-20	2020-21	2021-22	2022-23	2023-24
Less: De-capitalisation considered (b)	(-)131.06	(-)372.10	(-)29.74	(-)10.24	0.00
<b>Net additional capital expenditure allowed (c)=(a)-(b)</b>	<b>2319.01</b>	<b>1817.16</b>	<b>1442.64</b>	<b>4436.84</b>	<b>924.13</b>

### **Capital cost allowed**

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

	2019-20	2020-21	2021-22	2022-23	2023-24
Opening Capital Cost	247160.47	249479.48	251296.64	252739.28	257176.12
Net Additional capital expenditure allowed during the year/ period	2319.01	1817.16	1442.64	4436.84	924.13
<b>Closing Capital Cost</b>	<b>249479.48</b>	<b>251296.64</b>	<b>252739.28</b>	<b>257176.12</b>	<b>258100.24</b>

(Rs. in lakh)

### **Debt-Equity Ratio**

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

*“18. Debt-Equity Ratio: (1) For new projects, the debt-equity ratio of 70:30 as on date of commercial operation shall be considered. If the equity actually deployed is more than 30% of the capital cost, equity in excess of 30% shall be treated as normative loan:*

*Provided that:*

*i. where equity actually deployed is less than 30% of the capital cost, actual equity shall be considered for determination of tariff:*

*ii. the equity invested in foreign currency shall be designated in Indian rupees on the date of each investment:*

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

*Explanation-The premium, if any, raised by the generating company or the transmission licensee, as the case may be, while issuing share capital and investment of internal resources created out of its free reserve, for the funding of the project, shall be reckoned as paid up capital for the purpose of computing return on equity, only if such premium amount and internal resources are actually utilised for meeting the capital expenditure of the generating station or the transmission system.*

*(2) The generating company or the transmission licensee, as the case may be, shall submit the resolution of the Board of the company or approval of the competent authority in other cases regarding infusion of funds from internal resources in*



support of the utilization made or proposed to be made to meet the capital expenditure of the generating station or the transmission system including communication system, as the case may be.

(3) In case of the generating station and the transmission system including communication system declared under commercial operation prior to 1.4.2019, debt:equity ratio allowed by the Commission for determination of tariff for the period ending 31.3.2019 shall be considered:

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

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

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

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

102. In terms of the above regulations, the debt equity ratio of 70:30 has been considered on the admitted additional capital expenditure, after adjustment of un-discharged liability for the purpose of tariff. Accordingly, debt-equity is worked out as under:

Asset	As on 1.4.2019		Net Additional Capitalization during 2019-24 period		As on 31.3.2024	
	Amount	%	Amount	%	Amount	%
Debt	173012.33	70.00%	7657.84	70.00%	180670.17	70.00%
Equity	74148.14	30.00%	3281.93	30.00%	77430.07	30.00%
<b>Total</b>	<b>247160.47</b>	<b>100.00%</b>	<b>10939.77</b>	<b>100.00%</b>	<b>258100.24</b>	<b>100.00%</b>



## **Return on Equity**

103. 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 centre or protection system based on the report submitted by the respective RLDC;*

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

*iii. in case of a thermal generating station, with effect from 1.4.2020:*

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

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

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

*31. Tax on Return on Equity:*

*(1) The base rate of return on equity as allowed by the Commission under Regulation 30 of these regulations shall be grossed up with the effective tax rate of the respective financial year. For this purpose, the effective tax rate shall be considered on the basis of actual tax paid in respect of the financial year in line with the provisions of the relevant Finance Acts by the concerned generating company or the transmission licensee, as the case may be. The actual tax paid on income from other businesses including deferred tax liability (i.e. income from business other than*



*business of generation or transmission, as the case may be) shall be excluded for the calculation of effective tax rate.*

*(2) Rate of return on equity shall be rounded off to three decimal places and shall be computed as per the formula given below:*

*Rate of pre-tax return on equity = Base rate / (1-t)*

*Where “t” is the effective tax rate in accordance with clause (1) of this Regulation and shall be calculated at the beginning of every financial year based on the estimated profit and tax to be paid estimated in line with the provisions of the relevant Finance Act applicable for that financial year to the company on pro-rata basis by excluding the income of non-generation or non-transmission business, as the case may be, and the corresponding tax thereon. In case of generating company or transmission licensee paying Minimum Alternate Tax (MAT), “t” shall be considered as MAT rate including surcharge and cess.*

*Illustration-*

*(i) In case of a generating company or a transmission licensee paying Minimum Alternate Tax (MAT) @ 21.55% including surcharge and cess: Rate of return on equity =  $15.50/(1-0.2155) = 19.758\%$*

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

*(a) Estimated Gross Income from generation or transmission business for 2019-20 is Rs. 1,000 Crore;*

*(b) Estimated Advance Tax for the year on above is Rs. 240 Crore;*

*(c) Effective Tax Rate for the year 2019-20 = Rs. 240 Crore/Rs. 1000 Crore = 24%;*

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

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

104. The Petitioner, in compliance to the directions of the Commission, had furnished the Chartered Accountant certificate for calculation of the effective tax rate for 2019-20. Based on the additional capital expenditure allowed in this order, RoE has been calculated, considering the weighted average rate of interest of 10.29%. For equity base, RoE has been calculated by grossing up of RoE during the 2019-24



tariff period. The Petitioner has applied the MAT rate of 17.472% for the year 2019-20 and the same has been allowed. Accordingly, RoE has been worked out and allowed as under:

	<i>(Rs. in lakh)</i>				
	2019-20	2020-21	2021-22	2022-23	2023-24
Opening Equity (A)	74148.14	74825.36	75282.72	75632.93	75898.98
Total addition due to Capitalization (B)	695.70	545.15	432.79	1331.05	277.24
Addition due to additional capitalization within scope of work (C)	677.22	457.36	350.21	266.05	277.24
Closing Equity (D)=[(A)+(C)]	74825.36	75282.72	75632.93	75898.98	76176.22
Average Equity (E)=[(A+D)/2]	74486.75	75054.04	75457.83	75765.96	76037.60
Base rate (%) (F)	16.500%	16.500%	16.500%	16.500%	16.500%
Effective Tax rate (%) (G)	17.472%	17.472%	17.472%	17.472%	17.472%
Effective ROE rate (%) (H)	19.993%	19.993%	19.993%	19.993%	19.993%
Return on Equity within the original scope of work (I)=[(E)*(H)]	<b>14892.14</b>	<b>15005.55</b>	<b>15086.28</b>	<b>15147.89</b>	<b>15202.20</b>
<b>Addition due to additional capitalization beyond scope of work</b>					
Opening Equity (J)	0.00	18.48	106.27	188.85	1253.85
Addition due to Capitalization beyond scope of work (K)=[(B)-(C)]	18.48	87.79	82.58	1065.00	0.00
Closing Equity (L)=[(J)+(K)]	18.48	106.27	188.85	1253.85	1253.85
Average Equity (M)=[(J+L)/2]	9.24	62.38	147.56	721.35	1253.85
Rate of return for additional capitalization beyond original scope (i.e. weighted average rate of interest approved by the Commission) (%) (N)	10.29%	10.29%	10.29%	10.29%	10.29%
Return on equity for additional capitalization beyond original scope (O)=[(M)*(N)]	0.95	6.42	15.18	74.23	129.02
<b>Total Return on</b>	<b>14893.09</b>	<b>15011.97</b>	<b>15101.47</b>	<b>15222.12</b>	<b>15331.22</b>





	2019-20	2020-21	2021-22	2022-23	2023-24
Equity (P)=[(O)+(I)]					

### **Interest on Loan**

105. 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 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) 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.”*

106. The salient features for computation of interest on loan are summarized below:

- a) The gross normative loan has been considered as on 1.4.2019;
- b) Cumulative repayment as on 31.3.2019 has been considered;
- 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.

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

	2019-20	2020-21	2021-22	2022-23	2023-24
Gross opening loan (A)	173012.33	174635.64	175907.65	176917.50	180023.28
Cumulative repayment of loan up to previous year (B)	113537.52	124717.61	128361.16	132059.81	135861.74
Net Loan Opening (C)=[(A)-(B)]	59474.81	49918.02	47546.49	44857.68	44161.54
Repayment during the year (D)	11180.10	3643.55	3698.65	3801.93	3899.92
Cumulative repayment adjustment on a/c of de-capitalization (E)*	0.00	0.00	0.00	0.00	0.00
Net Repayment (F)=[(D)-(E)]	11180.10	3643.55	3698.65	3801.93	3899.92
Addition due to additional capital expenditure (G)	1623.31	1272.01	1009.85	3105.78	646.89
Net Loan Closing (H)= [(C+G-F)]	49918.02	47546.49	44857.68	44161.54	40908.51
Average Loan (I)=[(C+H)/2]	54696.41	48732.25	46202.08	44509.61	42535.03
Weighted Average Rate of Interest of loan (J)	10.29%	10.29%	10.29%	10.29%	10.29%
<b>Interest on Loan (K)=[(I*J)]</b>	<b>5628.26</b>	<b>5014.55</b>	<b>4754.19</b>	<b>4580.04</b>	<b>4376.85</b>

\*The adjustment on account of de-capitalization shall be taken at the time of true up when the additional capitalization and de-capitalization gets firmed up.

### **Depreciation**

108. 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."



109. Accordingly, the cumulative depreciation amounting to Rs.113536.72 lakh as on 31.3.2019, has been considered for the purpose of tariff. COD of the generating station is 15.11.2007. The project has completed 12 years of commercial operation during 2019-20 and the remaining depreciable value has been spread over the balance useful life of the generating station from 2020-21 onwards.

110. In terms of the 2014 Tariff Regulations, the useful life of a hydro generating station was 35 years. However, the 2019 Tariff Regulations stipulates that the useful life of a hydro generating station is 40 years. Accordingly, the balance useful life of the generating station as on 1.4.2019 has been considered as 28.62 years in line with the 2019 Tariff Regulations. Accordingly, depreciation has been computed as under:

	<i>(Rs. in lakh)</i>				
	<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>
Opening Gross block (A)	247160.47	249479.48	251296.64	252739.28	257176.12
Net Additional capital expenditure during 2019-24 (B)	2319.01	1817.16	1442.64	4436.84	924.13
Closing gross block (C)=(A+B)	249479.48	251296.64	252739.28	257176.12	258100.24
Average gross block (D)=(A+C)/2	248319.98	250388.06	252017.96	254957.70	257638.18
Depreciable Value (E)=(D*90%)	223487.98	225349.25	226816.16	229461.93	231874.36
Remaining Depreciable Value at the beginning of the year (F)= [(E) - (Cumulative Depreciation at 'K' at the end of previous year)]	109950.56	100631.74	98455.10	97402.21	96012.72
Rate of Depreciation (G)	4.50%	-	-	-	-
Balance useful Life (H)	28.62	27.62	26.62	25.62	24.62
<b>Depreciation (I)=(D*G)</b>	<b>11180.10</b>	<b>3643.55</b>	<b>3698.65</b>	<b>3801.93</b>	<b>3899.92</b>
Cumulative Depreciation at the end of the year (J)=[(I)+ (Cumulative Depreciation at 'K' at the end of previous year)] **	124717.52	128361.06	132059.72	135861.64	139761.56



	2019-20	2020-21	2021-22	2022-23	2023-24
Cumulative Depreciation at the end of the year (K)*	124717.52	128361.06	132059.72	135861.64	139761.56

\*Cumulative Depreciation as on 31.3.2019 is 113536.72 \*\* The adjustment on account of de-capitalization shall be taken at the time of true up when the additional capitalization and de-capitalization gets firmed up.

### **Operation & Maintenance Expenses**

111. Regulation 35(2)(a) 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:*

Particulars	2019-20	2022-21	2021-22	2022-23	2023-24
Omkareshwar	7198.97	7542.12	7901.62	8278.25	8672.84

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

112. As the Petitioner has claimed O&M expenses in accordance with Regulation 35(2)(a) of the 2019 Tariff Regulations as above, the same is allowed.

113. Regulation 35(2) (d) of the 2019 Tariff Regulations provides as under:

*“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.”*

### **Capital Spares**

114. With regard to capital spares, the Petitioner has submitted that same will be claimed at the time of truing-up of tariff based on the actual expenses incurred. In view of this, capital spares have not been considered in this order.

### **Security Expenses**



115. The Petitioner has also claimed Security expenses as part of O&M expenses in terms of clause 35(2)(d) of the 2019 Tariff Regulations. Further, the Petitioner has submitted that based on the actual security expenses incurred during the period from 2012-13 to 2018-19, year-wise escalation rate of 6.76% has been considered to arrive at the security expenses for the 2019-24 tariff period. Accordingly, the estimated security expenses claimed by the Petitioner are as under:

<i>(Rs. in lakh)</i>				
<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>
815.97	871.11	929.97	992.82	1059.91

116. The Respondent MPPMCL has submitted that the Petitioner has claimed estimated expenses on account of security without providing year-wise assessment of the security requirement which is mandatory in terms of Regulation 35(2)(d) of the 2019 Tariff Regulations and, hence, the same may be disallowed. In response, the Petitioner has clarified that in order to ensure the security and safety of important/ strategic installations of the project like dam, powerhouse, switchyard etc., CISF has been deployed since the commissioning of the project and, thus, the estimated security expenses for the 2019-24 tariff period has been worked out in detail.

117. The matter has been considered. It is noticed that the Security expenses incurred by the Petitioner for 2018-19 is Rs.764.31 lakh, and the same is escalated @4.77% annually, to work out the projected security expenses from 2019-20 onwards as tabulated below and the same is allowed:

<i>(Rs. in lakh)</i>				
<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>
800.77	838.97	878.99	920.92	964.85



118. Accordingly, the O&M expenses allowed for the generating station are as under:

	<i>(Rs. in lakh)</i>				
	<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>
Normative O & M expenses allowed	7198.97	7542.12	7901.62	8278.25	8672.84
Security Expenses allowed	800.77	838.97	878.99	920.92	964.85

### **Additional O&M expenses**

119. The Petitioner has claimed the impact on account of revision of minimum wages, pay revision of employees and implication of GST over and above the allowed O&M expenses, for the 2019-24 tariff period, based on the certificate of independent practitioner as under:

	<i>(Rs. in lakh)</i>				
	<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>
Allowed O&M expenses (a)	7198.97	7542.12	7901.62	8278.25	8672.84
Impact of pay revision of NHDC staff, including gratuity & fitment (b)	881.74	923.79	967.86	1014.03	1062.39
Impact of revision of minimum wages (c)	358.52	375.63	393.54	412.31	431.98
Impact of pay revision of CISF/ Security Staff (d)	110.47	115.75	121.27	127.06	133.12
Impact of Goods & Service Tax (e)	67.93	71.17	74.57	78.13	81.86
<b>Total additional O&amp;M Expenses (a+b+c+d+e)</b>	<b>8617.64</b>	<b>9028.47</b>	<b>9458.87</b>	<b>9909.78</b>	<b>10382.20</b>

*Note: Above expenditure includes expenses at CO, NHDC (allocated to Power Station as per their installed capacity).*

120. It is observed that the Petitioner has filed a separate petition (Petition No. 537/MP/2020) seeking recovery of additional O&M expenses on account of the impact of pay revision, GST and minimum wages etc., for the 2014-19 tariff period. However, for the 2019-24 tariff period, the Petitioner has sought additional O&M expenses in the present petition, based on the data available for the 2014-19 tariff



period. Since the claims of the Petitioner as above is subject to revision based on the decision in Petition No. 537/MP/2020, we find no reason to consider the additional O&M expenses claimed by the Petitioner, in this order. The Petitioner is, however, granted liberty to file separate petition seeking the additional O&M expenses due to impact of pay revision and minimum wages, along with relevant particulars, which shall be considered in accordance with law.

### **Goods & Service Tax**

121. As regards the claim for additional O&M expenses towards impact of GST, based on the impact of GST for 2018-19, it is noticed that the actual figures of GST incurred during the 2019-24 tariff period are not available and the claim is based on auditor certified actual GST of Rs 62.37 lakh for 2018-19 which has been escalated @ 4.77% annually. Taking into account the claim of the Petitioner and considering the actual audited figures for 2018-19, we find it reasonable to allow Rs 62.37 lakh per year as the impact of GST for the 2019-24 tariff period. The Petitioner is, however, directed to furnish the actual impact of GST incurred, duly audited, at the time of truing up of the tariff. Accordingly, the projected impact of GST allowed for the 2019-24 tariff period is as under:

<i>(Rs. in lakh)</i>				
<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>
62.37	62.37	62.37	62.37	62.37

### **Interest on Working Capital**

122. 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”

123. Regulation 34(3) 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.”*

124. 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 2019-24 tariff period is being determined during 2021-22, 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 to 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:



	<i>(Rs. in lakh)</i>				
	<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>
Working capital for O&M expenses (one month)	671.84	709.07	748.07	788.92	831.73
Working capital for Maintenance Spares	1209.32	1276.32	1346.52	1420.06	1497.12
Working capital for Receivables	4990.77	4050.98	4090.76	4159.71	4214.24
<b>Total Working capital</b>	<b>6871.94</b>	<b>6036.37</b>	<b>6185.34</b>	<b>6368.70</b>	<b>6543.08</b>
Rate of interest (%)	12.050	11.250	10.500	10.500	10.500
<b>Interest on Working capital</b>	<b>828.07</b>	<b>679.09</b>	<b>649.46</b>	<b>668.71</b>	<b>687.02</b>

### **Annual Fixed Charges**

125. Based on the above, the annual fixed charges approved for the generating station for the 2019-24 tariff period are summarized as under:

	<i>(Rs. in lakh)</i>				
	<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>
Depreciation	11180.10	3643.55	3698.65	3801.93	3899.92
Interest on loan	5628.26	5014.55	4754.19	4580.04	4376.85
Return on Equity	14893.09	15011.97	15101.47	15222.12	15331.22
O&M Expenses	7198.97	7542.12	7901.62	8278.25	8672.84
Security Expenses	863.15	966.70	1075.19	1188.85	1307.93
Interest on Working capital	828.07	679.09	649.46	668.71	687.02
<b>Total</b>	<b>40591.63</b>	<b>32857.98</b>	<b>33180.58</b>	<b>33739.89</b>	<b>34275.79</b>

### **Normative Annual Plant Availability Factor (NAPAF)**

126. The Petitioner has claimed NAPAF of 90% in terms of Regulation 50(A)(4) of the 2019 Tariff Regulations and, hence, the same has been considered.

### **Auxiliary Energy Consumption**

127. The Petitioner has claimed Auxiliary Energy Consumption (AEC) of 1.0% for the generating station in terms of Regulation 50(C) of the 2019 Tariff Regulations. The generating station has surface with static excitation with installed capacity of 520 MW. Accordingly, the auxiliary energy consumption of 1% is allowed for the 2019-24 tariff period in terms of Regulation 50(C) of the 2019 Tariff Regulations.





### **Design Energy (DE)**

128. The Petitioner has submitted that dam of the generating station has achieved level of EL 191.0M as on 12.4.2015 and the capacity declaration of 55 MW was done at EL 191.0M. Further, the Petitioner has submitted that on 22.9.2017, permission was granted by TEC (Techno-economic clearance) of CEA for raising OSP reservoir level to EL 193.0M. However, owing to R&R issues, the operation of units is being done at level between EL 191.0M to EL 193.0M. Accordingly, the Petitioner has submitted that DE for the 2019-24 tariff period may be provisionally allowed, based on latest water account for 2015-16. The Petitioner, in its rejoinder, has submitted the formula for determination of reducing firm power i.e. FP (stage-III) of the project during stage-III. The Petitioner has also submitted that the water utilization in the Narmada basin by the State of Madhya Pradesh is likely to reach more than 13 BM<sup>3</sup> in the intervening period of 2019-24.

129. The Respondent MPPMCL has submitted that the Petitioner has claimed design energy on the basis of reservoir level of 191 meters. It has submitted that the maximum level of 196.59 meters was achieved on 5.11.2019. The Respondent has further submitted that paragraph 6.2 of the minutes of the 45<sup>th</sup> meeting of the Operation Coordination Committee of MPSLDC, held on 24.4.2015, had recorded the following:

*"6.2: Now as per directive of GoMP, reservoir level of OSP has been raised to [91 Mfrs. From 189 Mfrs. On 13.04.2015. While raising the reservoir level of OSP by discharging water from ISP machines, the generation of OSP machines had been recorded of about 58 MW after 13:30 Hrs of 13.04.2015 in SCADA system installed at SLDC and the reservoir level of OSP was at around 190.85 Mtrs. at that time, He (SLDC) proposed to consider the installed capacity of OSP as 58 MW for computation of PAF of OSP from 13:30 Hrs of 13.4.2015."*



130. The Respondent has submitted that the Commission may consider the above minutes as regards the reservoir level already achieved and DC of 58 MW corresponding to the reservoir level EL 191.0 M and compute the firm power and DC at other reservoir levels, for the 2019-24 tariff period also. In response, the Petitioner has clarified that GoMP had allowed to raise the level of OSP Reservoir up to FRL in the month of November 2019 and the Reservoir attained FRL on 4.11.2019. On attainment of FRL, the powerhouse had already started injecting power corresponding to the rated capacity of machines i.e. 65 MW per machine and with total injection of 520 MW, when all 8 machines were scheduled for generation. Accordingly, the Petitioner has complied with all the provisions of the Grid Code by exhibiting peaking capabilities of the generating station, equal to the installed capacity i.e. 520 MW, although DC continued at 55 MW per machine with total DC of 440 MW, on availability of all 8 machines. In terms of the meeting between the Petitioner and MPSLDC on 8.3.2021, the project commenced DC at 65 MW per machine, with a total declared capacity of 520 MW w.e.f. 1.4.2021. Accordingly, the Petitioner has prayed to consider fixing notional DC of 65 MW per machine, corresponding to FRL, with a total output of 520 MW, to regularize DE for the period from 5.11.2019 to 31.3.2021.

131. The submissions of the parties have been considered. The Petitioner, in terms of the directions of the Commission, has submitted the details of the annual water consumption by the State of Madhya Pradesh for the respective year(s), duly certified by NCA, based on the published water accounts as shown under:

Sr. No.	Year	Annual utilisation by MP (BM3)
1	2014-15	8.77613
2	2015-16	10.24938



Sr. No.	Year	Annual utilisation by MP (BM3)
3	2016-17	10.07273
4	2017-18	9.29963
5	2018-19	10.40291

132. The Petitioner has submitted 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, the latest annual design energy, corresponding to water utilization of 10.402 BMC by the State of Madhya Pradesh during year 2019-20 (as applicable for 2018-19) has been considered.

133. The above methodology is adopted for the calculation of DE for the 2019-24 tariff period. The formula for DE for stage-II, as approved in corrigendum order dated 17.8.2016 in Petition No. 264/GT/2014 is considered as under:

$$FP \text{ (stage-II)} = \frac{133.17 - (133.17 - 79.41)}{(13 - 6.00)} \times (Q - 6.00)$$

Where,

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

*Q\* = Actual water utilization (in BM<sup>3</sup>) 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, DE determined for the 2019-24 tariff period is as follows:

Particulars	2019-24
Utilization of Water by GoMP as Notified by NCA (BM <sup>3</sup> )	10.402
Firm Power (MW)	84.070
<b>Monthly Design Energy (MU)</b>	
	<b>2019-24</b>
April	60.53
May	62.55
June	60.53
July	62.55
August	62.55
September	60.53
October	62.55
November	60.53
December	62.55
Jan	62.55



<b>Particulars</b>	<b>2019-24</b>
Utilization of Water by GoMP as Notified by NCA (BM <sup>3</sup> )	10.402
Firm Power (MW)	84.070
<b>Monthly Design Energy (MU)</b>	
	<b>2019-24</b>
Feb	56.50
March	62.55
<b>Design Energy (MU)</b>	<b>736.45</b>

135. The Design Energy shall be calculated based on water utilization certification by Narmada Control Authority (NCA) and shall be trued up at the end of each year, based on the actual water utilization certified. The Petitioner is, therefore, directed to submit the water utilization certification by NCA for the 2019-24 tariff period at the time of truing up of tariff. Similarly, the prayer of the Petitioner to derive the formula for determination of reducing Firm Power i.e. FP (stage-III) of the project during stage-III, in the event of surpassing of water utilization in the Narmada basin by the State of Madhya Pradesh by more than 13 BMC in the intervening period of the 2019-24 tariff period, shall also be considered at the time of truing-up of tariff.

#### **Application Fee and Publication Expenses**

136. The Petitioner has sought the reimbursement of fees paid by it for filing the tariff petition and for publication expenses in respect of the same. Accordingly, in terms of the Regulation 70(1) of the 2019 Tariff Regulations, the Petitioner shall be entitled for the reimbursement of filing fees and publication expenses in connection with the present petition, directly from the beneficiaries, on pro-rata basis.

137. Similarly, RLDC fees & charges paid by the Petitioner in terms of the Central Electricity Regulatory Commission (Fees and Charges of Regional Load Dispatch Centre and other related matters) Regulations, 2015, shall be recovered from the



beneficiaries. In addition, the Petitioner is entitled recovery of statutory taxes, levies, duties, cess etc. levied by the statutory authorities in accordance with the 2014 Tariff Regulations.

138. Petition No. 107/GT/2020 is disposed of in terms of the above.

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

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

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

**Sd/-**  
**(P. K. Pujari)**  
**Chairperson**



**Annexure I****2014-15**

<b>Sr. No.</b>	<b>GL_Code</b>	<b>Name of the Assets</b>	<b>Gross Block as on 31-03-2014</b>	<b>Depreciation Amount for the year 2014-15</b>
1	410111	LAND- LEASE HOLD	8296491	277103
2	410121	LAND- RIGHT OF USE	9934489992	331811966
3	410201	ROADS	32663813	1090971
4	410203	BRIDGES & CULVERTS	15465447	516546
5	410204	AERODROMES, HELIPAD AND AIR STRIPS	1158541	38695
6	410301	BUILDING CONTAINING HYDRO ELECTRIC GENERATING PLANT	2071784135	69197590
7	410304	OFFICE BUILDINGS-PERMANENT	19676592	657198
8	410305	OFFICE BUILDINGS-TEMPORARY	132451	132451
9	410306	STORES AND GODOWN BUILDINGS	17521898	585231
10	410321	TRANSIT CAMP & FIELD HOSTEL	45630116	1524046
11	410322	SCHOOL BUILDINGS	3606873	120470
12	410323	HOSPITAL BUILDINGS	2408964	80459
13	410324	CLUB BUILDING	10356746	345915
14	410325	RESIDENTIAL BUILDING-PERMANENT	114248677	3815906
15	410326	RESIDENTIAL BUILDING-TEMPORARY	1493526	1493526
16	410328	BUILDINGS-OTHERS	32353340	1080602
17	410329	OTHER CIVIL WORKS	21573039	720540
18	410601	DAMS AND BARRAGES	5247794555	277083553
19	410602	POWER CHANNELS	321931946	16998007
20	410605	PENSTOCKS	407073997	21493507
21	410606	TAILRACE CHANNELS	279816602	14774317
22	410608	HYDROMECHANICAL WORKS-DAMS AND BARRAGES	2350171952	124089079
23	410610	HYDROMECHANICAL WORKS-TUNNELS AND CANALS	520819473	27499268
24	410611	HYDROMECHANICAL WORKS-TAIL RACE INCLUDING DRAFT TU	78541717	4147003
25	410701	MAIN GENERATING EQUIPMENT	5508568865	290852436
26	410702	GENERATOR STEP UP TRANSFORMER	567308512	29953889
27	410703	OTHER POWER PLANT TRANSFORMER	47365546	2500901
28	410704	COOLING WATER SYSTEMS	198102188	10459796
29	410705	EHV SWITCHGEAR SYSTEMS	176464369	9317319



Sr. No.	GL_Code	Name of the Assets	Gross Block as on 31-03-2014	Depreciation Amount for the year 2014-15
30	410707	DC SYSTEMS/ BATTERY SYSTEMS	26124914	1379395
31	410708	POWER AND CONTROL CABLES	89923630	4747968
32	410709	AIR CONDITIONING AND VENTILATION SYSTEMS	41600107	2196486
33	410710	POWER LINE CARRIER COMMUNICATION SYSTEMS	35670444	1883399
34	410711	CONTROL, METERING AND PROTECTION SYSTEM	503798018	26600535
35	410712	AUXILIARY AND ANCILLARY SYSTEMS	456959555	24127465
36	410713	MISCELLANEOUS POWER PLANT EQUIPMENTS	638564043	33716181
37	410714		3826553	202042
38	410801	SUBSTATION-TRANSFORMERS	3911149	206509
39	410802		69300	3659
40	410803	SWITCH GEAR INCLUDING CABLE CONNECTIONS	173398550	9155443
41	410805	UNDERGROUND CABLE AND DUCT SYSTEM	736437	38884
42	410806	MISC. EQPT.	459000	24235
43	410904	INTERNAL DISTRIBUTION LINES IN TOWNSHIP AND WORK S	14619185	771893
44	410905	STREET LIGHTING, ETC.	7353476	388264
45	411002	DIESEL GENERATING SETS	7976048	421135
46	411102	LOADERS	1748637	166121
47	411103	DUMPERS	919931	87393
48	411104	TIPERS	1333605	126692
49	411109	CRANES	10459368	993640
50	411112	PUMPS	1598471	151855
51	411114	WIELDING SETS	76950	7310
52	411118	FORKLIFTER		0
53	411130	OTHER EQUIPMENTS	487359	46299
54	411201	WATER SUPPLY	21206728	708305
55	411202	SEWERAGE AND EFFLUENT DISPOSAL SYSTEM	1408141	47032
56	411401	POWER SUPPLY SYSTEM-POWER PLANT	402959	21276
57	411402		1858314	98119
58	411501	CARS	476791	45295
59	411504	PICK UP VAN	1	0



Sr. No.	GL_Code	Name of the Assets	Gross Block as on 31-03-2014	Depreciation Amount for the year 2014-15
60	411505	FIRE TENDERS	1365574	129730
61	411508	TRUCKS/TANKERS	755275	71751
62	411511	MOTOR CYCLE	143200	13604
63	411701	FURNITURE-FIXTURES-OFFICE	10621555	672344
64	411702	FURNITURE-FIXTURES-RESIDENTIAL	94282	5968
65	411704	FURNITURE-FIXTURES-SCHOOL	344519	21808
66	411705	FURNITURE-FIXTURES-CLUB	135394	8570
67	411706	FURNITURE-FIXTURES-HOSPITAL	249839	15815
68	411707	FURNITURE-FIXTURES-FIELD HOSTEL/ TRANSIT HOSTEL	2056431	130172
69	411801	COMPUTERS	3784560	567684
70	411803	PRINTERS	461062	69159
71	411804	OTHER EDP EQUIPMENTS	1233994	185099
72	411805	SATELLITE COMMUNICATION SYSTEM	274671	41201
73	411902	TELEPHONE TELEX MACHINES	1081991	68490
74	411903	INTERIOR COMMUNICATION EQUIPMENTS	1352227	85596
75	412003	PHOTOCOPY/ DUPLICATING MACHINES	1137341	71994
76	412005	HOSPITAL EQUIPMENTS	1561532	98845
77	412006	CLUB EQUIPMENTS	880037	55706
78	412007	TRANSIT HOSTEL/ GUEST HOUSE EQUIPMENTS	170431	10788
79	412008	AIR CONDITIONERS	5704482	541926
80	412011	REFRIGERATORS OTHER THAN FOR OFFICE/ AIR COOLERS/	1639348	103771
81	412012	SCHOOL EQUIPMENTS	13950	883
82	412020	OTHER OFFICE EQUIPMENTS	1350459	85484
83	412101	R & D EQUIPMENT (OTHER THAN PLANT AND MACHINERY LAB)	11444400	724431
84	412201	INTANGIBLE ASSETS - COMPUTER SOFTWARE	1934899	290235
85	412501	TELEVISIONS/MUSIC SYSTEMS- OTHER THAN FOR OFFICE,	10378738	656974
86	412502	LABORATORY TESTING AND METER TESTING EQUIPMENTS	1875956	118748
87	412503	MISC.(OTHER) ASSETS EQPT.	6718542	425284





Sr. No.	GL_Code	Name of the Assets	Gross Block as on 31-03-2014	Depreciation Amount for the year 2014-15
88	412601	CAPITAL EXPENDITURE ON ASSETS NOT OWNED BY NHDC		0
89	412801	FIXED ASSETS OF MINOR VALUE >750<5000	1436999	1436999
		<b>TOTAL</b>	<b>30153989715</b>	<b>1357730178</b>
		<b>Weighted Average Rate of Depreciation ( %)</b>		<b>4.5027%</b>

### **FY 2015-16**

Sr. No.	GL_Code	Name of the Assets	Gross Block as on 31-03-2015	Depreciation Amount for the year 2015-16
1	410111	LAND- LEASE HOLD	8296491	277103
2	410121	LAND- RIGHT OF USE	9933614727	331782732
3	410201	ROADS	39799905	1329317
4	410203	BRIDGES & CULVERTS	15465447	516546
5	410204	AERODROMES, HELIPAD AND AIR STRIPS	1158541	38695
6	410301	BUILDING CONTAINING HYDRO ELECTRIC GENERATING PLANT	2077525373	69389347
7	410304	OFFICE BUILDINGS-PERMANENT	19676592	657198
8	410305	OFFICE BUILDINGS-TEMPORARY	132451	132451
9	410306	STORES AND GODOWN BUILDINGS	21562267	720180
10	410321	TRANSIT CAMP & FIELD HOSTEL	45630116	1524046
11	410322	SCHOOL BUILDINGS	3606873	120470
12	410323	HOSPITAL BUILDINGS	2408964	80459
13	410324	CLUB BUILDING	10983777	366858
14	410325	RESIDENTIAL BUILDING-PERMANENT	114248677	3815906
15	410326	RESIDENTIAL BUILDING-TEMPORARY	1493526	1493526
16	410328	BUILDINGS-OTHERS	48211024	1610248
17	410329	OTHER CIVIL WORKS	24002416	801681
18	410601	DAMS AND BARRAGES	5250930403	277249125
19	410602	POWER CHANNELS	321931946	16998007
20	410605	PENSTOCKS	407073997	21493507
21	410606	TAILRACE CHANNELS	279816602	14774317
22	410608	HYDROMECHANICAL WORKS-DAMS AND BARRAGES	2347899327	123969084
23	410610	HYDROMECHANICAL WORKS-TUNNELS AND CANALS	520819473	27499268



Sr. No.	GL_Code	Name of the Assets	Gross Block as on 31-03-2015	Depreciation Amount for the year 2015-16
24	410611	HYDROMECHANICAL WORKS-TAIL RACE INCLUDING DRAFT TU	78541717	4147003
25	410701	MAIN GENERATING EQUIPMENT	5508568865	290852436
26	410702	GENERATOR STEP UP TRANSFORMER	567308512	29953889
27	410703	OTHER POWER PLANT TRANSFORMER	47365546	2500901
28	410704	COOLING WATER SYSTEMS	198102188	10459796
29	410705	EHV SWITCHGEAR SYSTEMS	176464369	9317319
30	410707	DC SYSTEMS/ BATTERY SYSTEMS	26124914	1379395
31	410708	POWER AND CONTROL CABLES	89923630	4747968
32	410709	AIR CONDITIONING AND VENTILATION SYSTEMS	41600107	2196486
33	410710	POWER LINE CARRIER COMMUNICATION SYSTEMS	35670444	1883399
34	410711	CONTROL, METERING AND PROTECTION SYSTEM	503498307	26584711
35	410712	AUXILIARY AND ANCILLARY SYSTEMS	456959555	24127465
36	410713	MISCELLANEOUS POWER PLANT EQUIPMENTS	640838643	33836280
37	410714		14013138	739894
38	410801	SUBSTATION-TRANSFORMERS	3911149	206509
39	410802		69300	3659
40	410803	SWITCH GEAR INCLUDING CABLE CONNECTIONS	173398550	9155443
41	410805	UNDERGROUND CABLE AND DUCT SYSTEM	736437	38884
42	410806	MISC. EQPT.	459000	24235
43	410904	INTERNAL DISTRIBUTION LINES IN TOWNSHIP AND WORK S	14619185	771893
44	410905	STREET LIGHTING, ETC.	7862383	415134
45	411002	DIESEL GENERATING SETS	7976048	421135
46	411102	LOADERS	1748637	166121
47	411103	DUMPERS	919931	87393
48	411104	TIPERS	1333605	126692
49	411109	CRANES	10459368	993640
50	411112	PUMPS	1598471	151855
51	411114	WELDING SETS	76950	7310
52	411118	FORKLIFTER		0
53	411130	OTHER EQUIPMENTS	487359	46299



Sr. No.	GL_Code	Name of the Assets	Gross Block as on 31-03-2015	Depreciation Amount for the year 2015-16
54	411201	WATER SUPPLY	21206728	708305
55	411202	SEWERAGE AND EFFLUENT DISPOSAL SYSTEM	1408141	47032
56	411401	POWER SUPPLY SYSTEM-POWER PLANT	402959	21276
57	411402		1858314	98119
58	411403		918690	48507
59	411501	CARS	476791	45295
60	411504	PICK UP VAN	1	0
61	411505	FIRE TENDERS	1365574	129730
62	411508	TRUCKS/TANKERS	755275	71751
63	411511	MOTOR CYCLE	143200	13604
64	411701	FURNITURE-FIXTURES-OFFICE	10455892	661858
65	411702	FURNITURE-FIXTURES-RESIDENTIAL	110922	7021
66	411704	FURNITURE-FIXTURES-SCHOOL	344519	21808
67	411705	FURNITURE-FIXTURES-CLUB	110344	6985
68	411706	FURNITURE-FIXTURES-HOSPITAL	249839	15815
69	411707	FURNITURE-FIXTURES-FIELD HOSTEL/ TRANSIT HOSTEL	1922600	121701
70	411801	COMPUTERS	4144920	621738
71	411803	PRINTERS	521217	78183
72	411804	OTHER EDP EQUIPMENTS	658865	98830
73	411805	SATELLITE COMMUNICATION SYSTEM	274671	41201
74	411806		841819	126273
75	411902	TELEPHONE TELEX MACHINES	1073016	67922
76	411903	INTERIOR COMMUNICATION EQUIPMENTS	1352227	85596
77	412003	PHOTOCOPY/ DUPLICATING MACHINES	1137341	71994
78	412005	HOSPITAL EQUIPMENTS	1887032	119449
79	412006	CLUB EQUIPMENTS	840871	53227
80	412007	TRANSIT HOSTEL/ GUEST HOUSE EQUIPMENTS	140378	8886
81	412008	AIR CONDITIONERS	5667181	538382
82	412011	REFRIGERATORS OTHER THAN FOR OFFICE/ AIR COOLERS/	1547218	97939
83	412012	SCHOOL EQUIPMENTS	13950	883



Sr. No.	GL_Code	Name of the Assets	Gross Block as on 31-03-2015	Depreciation Amount for the year 2015-16
84	412020	OTHER OFFICE EQUIPMENTS	1146895	72598
85	412101	R & D EQUIPMENT (OTHER THAN PLANT AND MACHINERY LAB)	11444400	724431
86	412201	INTANGIBLE ASSETS - COMPUTER SOFTWARE	1934899	290235
87	412501	TELEVISIONS/MUSIC SYSTEMS- OTHER THAN FOR OFFICE,	10919068	691177
88	412502	LABORATORY TESTING AND METER TESTING EQUIPMENTS	1875956	118748
89	412503	MISC.(OTHER) ASSETS EQPT.	8317864	526521
90	412601	CAPITAL EXPENDITURE ON ASSETS NOT OWNED BY NHDC		0
91	412801	FIXED ASSETS OF MINOR VALUE >750<5000	1796723	1796723
		<b>TOTAL</b>	<b>30206191523</b>	<b>1360232955</b>
		<b>Weighted Average Rate of Depreciation ( %)</b>		<b>4.5032%</b>

### **FY 2016-17**

Sr. No.	GL_Code	Name of the Assets <sup>1</sup>	Gross Block as on 31-03-2016	Depreciation Amount for the year 2016-17
1	410111	LAND- LEASE HOLD	8296491	277103
2	410121	LAND- RIGHT OF USE	9948722530	332287333
3	410201	ROADS	39799905	1329317
4	410203	BRIDGES & CULVERTS	15465447	516546
5	410204	AERODROMES, HELIPAD AND AIR STRIPS	1158541	38695
6	410301	BUILDING CONTAINING HYDRO ELECTRIC GENERATING PLANT	2077525373	69389347
7	410304	OFFICE BUILDINGS-PERMANENT	20193898	674476
8	410305	OFFICE BUILDINGS-TEMPORARY	132451	132451
9	410306	STORES AND GODOWN BUILDINGS	21562267	720180
10	410321	TRANSIT CAMP & FIELD HOSTEL	45630116	1524046
11	410322	SCHOOL BUILDINGS	3606873	120470
12	410323	HOSPITAL BUILDINGS	2408964	80459
13	410324	CLUB BUILDING	10983777	366858
14	410325	RESIDENTIAL BUILDING-PERMANENT	133885806	4471786
15	410326	RESIDENTIAL BUILDING-TEMPORARY	1493526	1493526



Sr. No.	GL_Code	Name of the Assets <sup>1</sup>	Gross Block as on 31-03-2016	Depreciation Amount for the year 2016-17
16	410328	BUILDINGS-OTHERS	48371114	1615595
17	410329	OTHER CIVIL WORKS	24016944	802166
18	410601	DAMS AND BARRAGES	5251036067	277254704
19	410602	POWER CHANNELS	321931946	16998007
20	410605	PENSTOCKS	407073997	21493507
21	410606	TAILRACE CHANNELS	279816602	14774317
22	410608	HYDROMECHANICAL WORKS-DAMS AND BARRAGES	2349009986	124027727
23	410610	HYDROMECHANICAL WORKS-TUNNELS AND CANALS	520819473	27499268
24	410611	HYDROMECHANICAL WORKS-TAIL RACE INCLUDING DRAFT TU	78541717	4147003
25	410701	MAIN GENERATING EQUIPMENT	5508568865	290852436
26	410702	GENERATOR STEP UP TRANSFORMER	567308512	29953889
27	410703	OTHER POWER PLANT TRANSFORMER	47365546	2500901
28	410704	COOLING WATER SYSTEMS	198102188	10459796
29	410705	EHV SWITCHGEAR SYSTEMS	176464369	9317319
30	410707	DC SYSTEMS/ BATTERY SYSTEMS	26124914	1379395
31	410708	POWER AND CONTROL CABLES	89923630	4747968
32	410709	AIR CONDITIONING AND VENTILATION SYSTEMS	45511760	2403021
33	410710	POWER LINE CARRIER COMMUNICATION SYSTEMS	35670444	1883399
34	410711	CONTROL, METERING AND PROTECTION SYSTEM	511914275	27029074
35	410712	AUXILIARY AND ANCILLARY SYSTEMS	456959555	24127465
36	410713	MISCELLANEOUS POWER PLANT EQUIPMENTS	641719128	33882770
37	410714		29742879	
38	410801	SUBSTATION-TRANSFORMERS	3911149	206509
39	410802		69300	
40	410803	SWITCH GEAR INCLUDING CABLE CONNECTIONS	173398550	9155443
41	410805	UNDERGROUND CABLE AND DUCT SYSTEM	736437	38884
42	410806	MISC. EQPT.	459000	24235
43	410904	INTERNAL DISTRIBUTION LINES IN TOWNSHIP AND WORK S	14619185	771893
44	410905	STREET LIGHTING, ETC.	7929619	418684



Sr. No.	GL_Code	Name of the Assets <sup>1</sup>	Gross Block as on 31-03-2016	Depreciation Amount for the year 2016-17
45	411002	DIESEL GENERATING SETS	7976049	421135
46	411102	LOADERS	1748637	166121
47	411103	DUMPERS	919931	87393
48	411104	TIPERS	1333605	126692
49	411109	CRANES	10459368	993640
50	411112	PUMPS	1598471	151855
51	411114	WELDING SETS	76950	7310
52	411118	FORKLIFTER		0
53	411130	OTHER EQUIPMENTS	487359	46299
54	411201	WATER SUPPLY	21206728	708305
55	411202	SEWERAGE AND EFFLUENT DISPOSAL SYSTEM	1408141	47032
56	411401	POWER SUPPLY SYSTEM-POWER PLANT	402959	21276
57	411402		1858314	
58	411403		918690	
59	411501	CARS	476791	45295
60	411504	PICK UP VAN	1	0
61	411505	FIRE TENDERS	1365574	129730
62	411508	TRUCKS/TANKERS	755275	71751
63	411511	MOTOR CYCLE	143200	13604
64	411701	FURNITURE-FIXTURES-OFFICE	10518136	665798
65	411702	FURNITURE-FIXTURES-RESIDENTIAL	110922	7021
66	411704	FURNITURE-FIXTURES-SCHOOL	344519	21808
67	411705	FURNITURE-FIXTURES-CLUB	110344	6985
68	411706	FURNITURE-FIXTURES-HOSPITAL	249839	15815
69	411707	FURNITURE-FIXTURES-FIELD HOSTEL/ TRANSIT HOSTEL	1922600	121701
70	411801	COMPUTERS	5496268	824440
71	411803	PRINTERS	608420	91263
72	411804	OTHER EDP EQUIPMENTS	708043	106206
73	411805	SATELLITE COMMUNICATION SYSTEM	274671	41201
74	411806		841819	
75	411902	TELEPHONE TELEX MACHINES	1073016	67922
76	411903	INTERIOR COMMUNICATION EQUIPMENTS	1352227	85596



Sr. No.	GL_Code	Name of the Assets <sup>1</sup>	Gross Block as on 31-03-2016	Depreciation Amount for the year 2016-17
77	412003	PHOTOCOPY/ DUPLICATING MACHINES	1137341	71994
78	412005	HOSPITAL EQUIPMENTS	1559831	98737
79	412006	CLUB EQUIPMENTS	840871	53227
80	412007	TRANSIT HOSTEL/ GUEST HOUSE EQUIPMENTS	140378	8886
81	412008	AIR CONDITIONERS	2650780	251824
82	412011	REFRIGERATORS OTHER THAN FOR OFFICE/ AIR COOLERS/	1547218	97939
83	412012	SCHOOL EQUIPMENTS	13950	883
84	412020	OTHER OFFICE EQUIPMENTS	1146895	72598
85	412101	R & D EQUIPMENT (OTHER THAN PLANT AND MACHINERY LAB)	11444400	724431
86	412201	INTANGIBLE ASSETS - COMPUTER SOFTWARE	1997899	299685
87	412501	TELEVISIONS/MUSIC SYSTEMS- OTHER THAN FOR OFFICE,	12427434	786657
88	412502	LABORATORY TESTING AND METER TESTING EQUIPMENTS	2448622	154998
89	412503	MISC.(OTHER) ASSETS EQPT.	8592135	543882
90	412601	CAPITAL EXPENDITURE ON ASSETS NOT OWNED BY NHDC		0
91	412801	FIXED ASSETS OF MINOR VALUE >750<5000	1951609	1951609
		<b>TOTAL</b>	<b>30272629346</b>	<b>1361398511</b>
		<b>Weighted Average Rate of Depreciation ( %)</b>		<b>4.4971%</b>

### **FY 2017-18**

Sr. No.	GL_Code	Name of the Assets	Gross Block as on 31-03-2017	Depreciation Amount for the year 2017-18
1	410111	LAND- LEASE HOLD	8296491	277103
2	410121	LAND- RIGHT OF USE	9954009750	332463926
3	410201	ROADS	39799905	1329317
4	410203	BRIDGES & CULVERTS	15465447	516546
5	410204	AERODROMES, HELIPAD AND AIR STRIPS	1158541	38695
6	410301	BUILDING CONTAINING HYDRO ELECTRIC GENERATING PLANT	2077822431	69399269
7	410304	OFFICE BUILDINGS-PERMANENT	20193898	674476



Sr. No.	GL_Code	Name of the Assets	Gross Block as on 31-03-2017	Depreciation Amount for the year 2017-18
8	410305	OFFICE BUILDINGS-TEMPORARY	132451	132451
9	410306	STORES AND GODOWN BUILDINGS	21562267	720180
10	410321	TRANSIT CAMP & FIELD HOSTEL	45630116	1524046
11	410322	SCHOOL BUILDINGS	3606873	120470
12	410323	HOSPITAL BUILDINGS	2408964	80459
13	410324	CLUB BUILDING	10983777	366858
14	410325	RESIDENTIAL BUILDING-PERMANENT	137135619	4580330
15	410326	RESIDENTIAL BUILDING-TEMPORARY	1493526	1493526
16	410328	BUILDINGS-OTHERS	49096117	1639810
17	410329	OTHER CIVIL WORKS	25948801	866690
18	410601	DAMS AND BARRAGES	5252783620	277346975
19	410602	POWER CHANNELS	321979030	17000493
20	410605	PENSTOCKS	407122830	21496085
21	410606	TAILRACE CHANNELS	279857635	14776483
22	410608	HYDROMECHANICAL WORKS-DAMS AND BARRAGES	2348192082	123984542
23	410610	HYDROMECHANICAL WORKS-TUNNELS AND CANALS	520819473	27499268
24	410611	HYDROMECHANICAL WORKS-TAIL RACE INCLUDING DRAFT TU	78541717	4147003
25	410701	MAIN GENERATING EQUIPMENT	5508568865	290852436
26	410702	GENERATOR STEP UP TRANSFORMER	567308512	29953889
27	410703	OTHER POWER PLANT TRANSFORMER	47365546	2500901
28	410704	COOLING WATER SYSTEMS	198102188	10459796
29	410705	EHV SWITCHGEAR SYSTEMS	176464369	9317319
30	410707	DC SYSTEMS/ BATTERY SYSTEMS	26124914	1379395
31	410708	POWER AND CONTROL CABLES	89923630	4747968
32	410709	AIR CONDITIONING AND VENTILATION SYSTEMS	45556269	2405371
33	410710	POWER LINE CARRIER COMMUNICATION SYSTEMS	35670444	1883399
34	410711	CONTROL, METERING AND PROTECTION SYSTEM	511963921	27031695
35	410712	AUXILIARY AND ANCILLARY SYSTEMS	456959555	24127465
36	410713	MISCELLANEOUS POWER PLANT EQUIPMENTS	645448444	34079678
37	410714		32026938	





Sr. No.	GL_Code	Name of the Assets	Gross Block as on 31-03-2017	Depreciation Amount for the year 2017-18
38	410801	SUBSTATION-TRANSFORMERS	5192569	274168
39	410802		69300	3659
40	410803	SWITCH GEAR INCLUDING CABLE CONNECTIONS	175445825	9263540
41	410805	UNDERGROUND CABLE AND DUCT SYSTEM	736437	38884
42	410806	MISC. EQPT.	459000	24235
43	410904	INTERNAL DISTRIBUTION LINES IN TOWNSHIP AND WORK S	14619185	771893
44	410905	STREET LIGHTING, ETC.	8169462	431348
45	411002	DIESEL GENERATING SETS	7976049	421135
46	411102	LOADERS	1748637	166121
47	411103	DUMPERS	919931	87393
48	411104	TIPERS	1333605	126692
49	411109	CRANES	10459368	993640
50	411112	PUMPS	1598471	151855
51	411114	WIELDING SETS	110865	10532
52	411118	FORKLIFTER		0
53	411130	OTHER EQUIPMENTS	487359	46299
54	411201	WATER SUPPLY	21206728	708305
55	411202	SEWERAGE AND EFFLUENT DISPOSAL SYSTEM	4351694	145347
56	411401	POWER SUPPLY SYSTEM-POWER PLANT	5260624	277761
57	411402		1858314	98119
58	411403		918690	48507
59	411501	CARS	369969	35147
60	411504	PICK UP VAN	1	0
61	411505	FIRE TENDERS	1365574	129730
62	411508	TRUCKS/TANKERS	755275	71751
63	411511	MOTOR CYCLE	143200	13604
64	411701	FURNITURE-FIXTURES-OFFICE	10644194	673777
65	411702	FURNITURE-FIXTURES-RESIDENTIAL	110922	7021
66	411703		93708	5932
67	411704	FURNITURE-FIXTURES-SCHOOL	344519	21808
68	411705	FURNITURE-FIXTURES-CLUB	110344	6985



Sr. No.	GL_Code	Name of the Assets	Gross Block as on 31-03-2017	Depreciation Amount for the year 2017-18
69	411706	FURNITURE-FIXTURES-HOSPITAL	249839	15815
70	411707	FURNITURE-FIXTURES-FIELD HOSTEL/ TRANSIT HOSTEL	1928813	122094
71	411801	COMPUTERS	5496268	824440
72	411803	PRINTERS	608420	91263
73	411804	OTHER EDP EQUIPMENTS	740803	111120
74	411805	SATELLITE COMMUNICATION SYSTEM	274671	41201
75	411806		1184000	177600
76	411902	TELEPHONE TELEX MACHINES	1073016	67922
77	411903	INTERIOR COMMUNICATION EQUIPMENTS	1352227	85596
78	412003	PHOTOCOPY/ DUPLICATING MACHINES	1302191	82429
79	412005	HOSPITAL EQUIPMENTS	1559831	98737
80	412006	CLUB EQUIPMENTS	840871	53227
81	412007	TRANSIT HOSTEL/ GUEST HOUSE EQUIPMENTS	157278	9956
82	412008	AIR CONDITIONERS	2650780	251824
83	412011	REFRIGERATORS OTHER THAN FOR OFFICE/ AIR COOLERS/	1818993	115142
84	412012	SCHOOL EQUIPMENTS	13950	883
85	412020	OTHER OFFICE EQUIPMENTS	1142170	72299
86	412101	R & D EQUIPMENT (OTHER THAN PLANT AND MACHINERY LAB)	11444400	724431
87	412201	INTANGIBLE ASSETS - COMPUTER SOFTWARE	1997899	299685
88	412501	TELEVISIONS/MUSIC SYSTEMS- OTHER THAN FOR OFFICE,	12492434	790771
89	412502	LABORATORY TESTING AND METER TESTING EQUIPMENTS	2793905	176854
90	412503	MISC.(OTHER) ASSETS EQPT.	8734738	552909
91	412601	CAPITAL EXPENDITURE ON ASSETS NOT OWNED BY NHDC		0
92	412801	FIXED ASSETS OF MINOR VALUE >750<5000	1951609	1951609
		<b>TOTAL</b>	<b>30304193881</b>	<b>1362987306</b>
		<b>Weighted Average Rate of Depreciation ( %)</b>		<b>4.4977%</b>



**FY 2018-19**

<b>Sr. No.</b>	<b>GL_Code</b>	<b>Name of the Assets</b>	<b>Gross Block as on 31-03-2018</b>	<b>Depreciation Amount for the year 2018-19</b>
1	410111	LAND- LEASE HOLD	8296491	277103
2	410121	LAND- RIGHT OF USE	9960091101	332667043
3	410201	ROADS	39799905	1329317
4	410203	BRIDGES & CULVERTS	15465447	516546
5	410204	AERODROMES, HELIPAD AND AIR STRIPS	1158541	38695
6	410301	BUILDING CONTAINING HYDRO ELECTRIC GENERATING PLANT	2077822431	69399269
7	410304	OFFICE BUILDINGS-PERMANENT	20193898	674476
8	410305	OFFICE BUILDINGS-TEMPORARY	132451	132451
9	410306	STORES AND GODOWN BUILDINGS	21562267	720180
10	410321	TRANSIT CAMP & FIELD HOSTEL	45630116	1524046
11	410322	SCHOOL BUILDINGS	3606873	120470
12	410323	HOSPITAL BUILDINGS	2408964	80459
13	410324	CLUB BUILDING	10983777	366858
14	410325	RESIDENTIAL BUILDING-PERMANENT	149288812	4986246
15	410326	RESIDENTIAL BUILDING-TEMPORARY	1493526	1493526
16	410328	BUILDINGS-OTHERS	49096117	1639810
17	410329	OTHER CIVIL WORKS	32544596	1086990
18	410601	DAMS AND BARRAGES	5253142384	277365918
19	410602	POWER CHANNELS	321979030	17000493
20	410605	PENSTOCKS	407122830	21496085
21	410606	TAILRACE CHANNELS	279857635	14776483
22	410608	HYDROMECHANICAL WORKS-DAMS AND BARRAGES	2349216489	124038631
23	410610	HYDROMECHANICAL WORKS-TUNNELS AND CANALS	520819473	27499268
24	410611	HYDROMECHANICAL WORKS-TAIL RACE INCLUDING DRAFT TU	78541717	4147003
25	410701	MAIN GENERATING EQUIPMENT	5512367561	291053007
26	410702	GENERATOR STEP UP TRANSFORMER	567308512	29953889
27	410703	OTHER POWER PLANT TRANSFORMER	47365546	2500901
28	410704	COOLING WATER SYSTEMS	198102188	10459796
29	410705	EHV SWITCHGEAR SYSTEMS	177184169	9355324
30	410707	DC SYSTEMS/ BATTERY SYSTEMS	26124914	1379395



Sr. No.	GL_Code	Name of the Assets	Gross Block as on 31-03-2018	Depreciation Amount for the year 2018-19
31	410708	POWER AND CONTROL CABLES	89923630	4747968
32	410709	AIR CONDITIONING AND VENTILATION SYSTEMS	45556269	2405371
33	410710	POWER LINE CARRIER COMMUNICATION SYSTEMS	36011461	1901405
34	410711	CONTROL, METERING AND PROTECTION SYSTEM	511963921	27031695
35	410712	AUXILIARY AND ANCILLARY SYSTEMS	458227578	24194416
36	410713	MISCELLANEOUS POWER PLANT EQUIPMENTS	645678585	34091829
37	410714		32026938	1691022
38	410801	SUBSTATION-TRANSFORMERS	5192569	274168
39	410802		69300	3659
40	410803	SWITCH GEAR INCLUDING CABLE CONNECTIONS	174455303	9211240
41	410805	UNDERGROUND CABLE AND DUCT SYSTEM	736437	38884
42	410806	MISC. EQPT.	459000	24235
43	410904	INTERNAL DISTRIBUTION LINES IN TOWNSHIP AND WORK S	14619185	771893
44	410905	STREET LIGHTING, ETC.	8169462	431348
45	411002	DIESEL GENERATING SETS	7976049	421135
46	411102	LOADERS	1748637	166121
47	411103	DUMPERS	919931	87393
48	411104	TIPERS	1333605	126692
49	411109	CRANES	10459368	993640
50	411112	PUMPS	3739656	355267
51	411114	WIELDING SETS	110865	10532
52	411118	FORKLIFTER	855941	81314
53	411130	OTHER EQUIPMENTS	487359	46299
54	411201	WATER SUPPLY	21206728	708305
55	411202	SEWERAGE AND EFFLUENT DISPOSAL SYSTEM	5913796	197521
56	411401	POWER SUPPLY SYSTEM-POWER PLANT	5260624	277761
57	411402		1858314	98119
58	411403		918690	48507
59	411501	CARS	369969	35147
60	411504	PICK UP VAN	1	0



Sr. No.	GL_Code	Name of the Assets	Gross Block as on 31-03-2018	Depreciation Amount for the year 2018-19
61	411505	FIRE TENDERS	1365574	129730
62	411508	TRUCKS/TANKERS	755275	71751
63	411511	MOTOR CYCLE	143200	13604
64	411701	FURNITURE-FIXTURES-OFFICE	10644194	673777
65	411702	FURNITURE-FIXTURES-RESIDENTIAL	124282	7867
66	411703		93708	5932
67	411704	FURNITURE-FIXTURES-SCHOOL	344519	21808
68	411705	FURNITURE-FIXTURES-CLUB	110344	6985
69	411706	FURNITURE-FIXTURES-HOSPITAL	249839	15815
70	411707	FURNITURE-FIXTURES-FIELD HOSTEL/ TRANSIT HOSTEL	1928815	122094
71	411801	COMPUTERS	6193983	929097
72	411803	PRINTERS	730825	109624
73	411804	OTHER EDP EQUIPMENTS	740803	111120
74	411805	SATELLITE COMMUNICATION SYSTEM	274671	41201
75	411806		1184000	177600
76	411902	TELEPHONE TELEX MACHINES	1073016	67922
77	411903	INTERIOR COMMUNICATION EQUIPMENTS	1352227	85596
78	411904		53522	3388
79	412003	PHOTOCOPY/ DUPLICATING MACHINES	1302191	82429
80	412005	HOSPITAL EQUIPMENTS	1559831	98737
81	412006	CLUB EQUIPMENTS	861031	54503
82	412007	TRANSIT HOSTEL/ GUEST HOUSE EQUIPMENTS	250755	15873
83	412008	AIR CONDITIONERS	2628780	249734
84	412011	REFRIGERATORS OTHER THAN FOR OFFICE/ AIR COOLERS/	1818993	115142
85	412012	SCHOOL EQUIPMENTS	13950	883
86	412020	OTHER OFFICE EQUIPMENTS	1120370	70919
87	412101	R & D EQUIPMENT (OTHER THAN PLANT AND MACHINERY LAB)	11444400	724431
88	412201	INTANGIBLE ASSETS - COMPUTER SOFTWARE	1997899	299685



<b>Sr. No.</b>	<b>GL_Code</b>	<b>Name of the Assets</b>	<b>Gross Block as on 31-03-2018</b>	<b>Depreciation Amount for the year 2018-19</b>
89	412501	TELEVISIONS/MUSIC SYSTEMS- OTHER THAN FOR OFFICE,	12558044	794924
90	412502	LABORATORY TESTING AND METER TESTING EQUIPMENTS	4520319	286136
91	412503	MISC.(OTHER) ASSETS EQPT.	9309789	589310
92	412601	CAPITAL EXPENDITURE ON ASSETS NOT OWNED BY NHDC		0
93	412801	FIXED ASSETS OF MINOR VALUE >750<5000	1967028	1967028
		<b>TOTAL</b>	<b>30343673109</b>	<b>1366497210</b>
		<b>Weighted Average Rate of Depreciation</b>		<b>4.5034%</b>



**Annexure II**

<b>Sr. No.</b>	<b>GL_Code</b>	<b>Name of the Assets</b>	<b>Gross Block as on 31-03-2019</b>	<b>Depreciation Amount for the year 2019-20</b>
1	410111	LAND- LEASE HOLD	8296491	277103
2	410121	LAND- RIGHT OF USE	10000417643	334013949
3	410201	ROADS	39799905	1329317
4	410203	BRIDGES & CULVERTS	15465447	516546
5	410204	AERODROMES, HELIPAD AND AIR STRIPS	1158541	38695
6	410301	BUILDING CONTAINING HYDRO ELECTRIC GENERATING PLANT	2077822431	69399269
7	410304	OFFICE BUILDINGS-PERMANENT	20193898	674476
8	410305	OFFICE BUILDINGS-TEMPORARY	132451	132451
9	410306	STORES AND GODOWN BUILDINGS	21562267	720180
10	410321	TRANSIT CAMP & FIELD HOSTEL	45630116	1524046
11	410322	SCHOOL BUILDINGS	3606873	120470
12	410323	HOSPITAL BUILDINGS	2408964	80459
13	410324	CLUB BUILDING	10983777	366858
14	410325	RESIDENTIAL BUILDING-PERMANENT	149457283	4991873
15	410326	RESIDENTIAL BUILDING-TEMPORARY	1493526	1493526
16	410328	BUILDINGS-OTHERS	49096117	1639810
17	410329	OTHER CIVIL WORKS	41617986	1390041
18	410425		63366	4011
19	410601	DAMS AND BARRAGES	5253142384	277365918
20	410602	POWER CHANNELS	321979030	17000493
21	410605	PENSTOCKS	407122830	21496085
22	410606	TAILRACE CHANNELS	287977616	15205218
23	410608	HYDROMECHANICAL WORKS-DAMS AND BARRAGES	2350262376	124093853
24	410610	HYDROMECHANICAL WORKS-TUNNELS AND CANALS	520819473	27499268
25	410611	HYDROMECHANICAL WORKS-TAIL RACE INCLUDING DRAFT TU	78541717	4147003
26	410701	MAIN GENERATING EQUIPMENT	5512367561	291053007
27	410702	GENERATOR STEP UP TRANSFORMER	567308512	29953889
28	410703	OTHER POWER PLANT TRANSFORMER	47743146	2520838
29	410704	COOLING WATER SYSTEMS	198102188	10459796
30	410705	EHV SWITCHGEAR SYSTEMS	177880369	9392083
31	410707	DC SYSTEMS/ BATTERY SYSTEMS	26124914	1379395
32	410708	POWER AND CONTROL CABLES	89923630	4747968



Sr. No.	GL_Code	Name of the Assets	Gross Block as on 31-03-2019	Depreciation Amount for the year 2019-20
33	410709	AIR CONDITIONING AND VENTILATION SYSTEMS	45556269	2405371
34	410710	POWER LINE CARRIER COMMUNICATION SYSTEMS	36011461	1901405
35	410711	CONTROL, METERING AND PROTECTION SYSTEM	511963921	27031695
36	410712	AUXILIARY AND ANCILLARY SYSTEMS	458227578	24194416
37	410713	MISCELLANEOUS POWER PLANT EQUIPMENTS	645860364	34101427
38	410714		32026938	1691022
39	410801	SUBSTATION-TRANSFORMERS	5192569	274168
40	410802		69300	3659
41	410803	SWITCH GEAR INCLUDING CABLE CONNECTIONS	176095503	9297843
42	410805	UNDERGROUND CABLE AND DUCT SYSTEM	736437	38884
43	410806	MISC. EQPT.	459000	24235
44	410904	INTERNAL DISTRIBUTION LINES IN TOWNSHIP AND WORK S	14619185	771893
45	410905	STREET LIGHTING, ETC.	8169462	431348
46	411002	DIESEL GENERATING SETS	7976049	421135
47	411102	LOADERS	1748637	166121
48	411103	DUMPERS	919931	87393
49	411104	TIPERS	1333605	126692
50	411109	CRANES	10459368	993640
51	411112	PUMPS	4237843	402595
52	411114	WIELDING SETS	110865	10532
53	411118	FORKLIFTER	855941	81314
54	411130	OTHER EQUIPMENTS	487359	46299
55	411201	WATER SUPPLY	21206728	708305
56	411202	SEWERAGE AND EFFLUENT DISPOSAL SYSTEM	5913796	197521
57	411401	POWER SUPPLY SYSTEM-POWER PLANT	5260624	277761
58	411402		1858314	98119
59	411403		918690	48507
60	411501	CARS	369969	35147
61	411504	PICK UP VAN	1	0
62	411505	FIRE TENDERS	1365574	129730
63	411508	TRUCKS/TANKERS	755275	71751
64	411511	MOTOR CYCLE	143200	13604
65	411701	FURNITURE-FIXTURES-OFFICE	10644194	673777
66	411702	FURNITURE-FIXTURES-RESIDENTIAL	124282	7867
67	411703		93708	0
68	411704	FURNITURE-FIXTURES-SCHOOL	344519	21808
69	411705	FURNITURE-FIXTURES-CLUB	110344	6985
70	411706	FURNITURE-FIXTURES-HOSPITAL	249839	15815
71	411707	FURNITURE-FIXTURES-FIELD HOSTEL/	2177712	137849





Sr. No.	GL_Code	Name of the Assets	Gross Block as on 31-03-2019	Depreciation Amount for the year 2019-20
		TRANSIT HOSTEL		
72	411801	COMPUTERS	6639500	995925
73	411803	PRINTERS	800705	120106
74	411804	OTHER EDP EQUIPMENTS	766385	114958
75	411805	SATELLITE COMMUNICATION SYSTEM	274671	41201
76	411806		1184000	0
77	411902	TELEPHONE TELEX MACHINES	1073016	67922
78	411903	INTERIOR COMMUNICATION EQUIPMENTS	1352227	85596
79	411904		53522	0
80	412003	PHOTOCOPY/ DUPLICATING MACHINES	1302191	82429
81	412005	HOSPITAL EQUIPMENTS	1559831	98737
82	412006	CLUB EQUIPMENTS	861031	54503
83	412007	TRANSIT HOSTEL/ GUEST HOUSE EQUIPMENTS	250755	15873
84	412008	AIR CONDITIONERS	3091637	293706
85	412011	REFRIGERATORS OTHER THAN FOR OFFICE/ AIR COOLERS/	2068941	130964
86	412012	SCHOOL EQUIPMENTS	13950	883
87	412020	OTHER OFFICE EQUIPMENTS	1123229	71100
88	412101	R & D EQUIPMENT (OTHER THAN PLANT AND MACHINERY LAB)	11444400	724431
89	412201	INTANGIBLE ASSETS - COMPUTER SOFTWARE	1997899	299685
90	412501	TELEVISIONS/MUSIC SYSTEMS- OTHER THAN FOR OFFICE,	13737144	869561
91	412502	LABORATORY TESTING AND METER TESTING EQUIPMENTS	8290419	524784
92	412503	MISC.(OTHER) ASSETS EQPT.	10300292	652008
93	412601	CAPITAL EXPENDITURE ON ASSETS NOT OWNED BY NHDC		0
94	412801	FIXED ASSETS OF MINOR VALUE >750<5000	2081941	2081941
		<b>TOTAL</b>	<b>30413424868</b>	<b>1369301841</b>
		<b>Weighted Average Rate of Depreciation</b>		<b>4.5023%</b>

