

**CENTRAL ELECTRICITY REGULATORY COMMISSION  
NEW DELHI**

**Petition No. 363/GT/2020**

**Coram:**

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

**Date of order: 5<sup>th</sup> October, 2023**

**IN THE MATTER OF**

Petition for revision of tariff of Koldam Hydroelectric Project (800 MW) for the period from COD (18.7.2015) to 31.3.2019 after truing-up exercise.

**AND**

**IN THE MATTER OF**

NTPC Limited,  
NTPC Bhawan,  
Core-7, Scope Complex,  
7, Institutional Area, Lodhi Road,  
New Delhi - 110 003

**...Petitioner**

Vs

1. Uttar Pradesh Power Corporation Limited,  
Shakti Bhawan, 14, Ashok Marg  
Lucknow – 226 001
2. Jaipur Vidyut Vitran Nigam Limited,  
Vidyut Bhawan, Janpath,  
Jaipur – 302 005
3. Ajmer Vidyut Vitran Nigam Limited,  
Old Power House, Hathi Bhata,  
Jaipur Road, Ajmer
4. Jodhpur Vidyut Vitran Nigam Limited,  
New Power House, Industrial Area,  
Jodhpur
5. Tata Power Delhi Distribution Limited,  
Grid Substation, Hudson Road,  
Kingsway Camp, Delhi – 110 009



6. BSES Rajdhani Power Limited,  
BSES Bhawan, Nehru Place,  
New Delhi- 110 019
7. BSES Yamuna Power Limited,  
Shakti Kiran Building, Karkardooma  
New Delhi – 110 092
8. Haryana Power Purchase Centre,  
Shakti Bhawan, Sector – VI,  
Panchkula, Haryana – 134 109
9. Punjab State Power Corporation Limited,  
The Mall, Patiala – 147 001
10. Himachal Pradesh State Electricity Board Limited,  
Kumar Housing Complex Building-II, Vidyut Bhawan  
Shimla – 171 004
11. Power Development Department,  
Government of J&K,  
Civil Secretariat, Srinagar
12. Electricity Department (Chandigarh),  
Union Territory of Chandigarh,  
Addl. Office Building, Sector-9 D  
Chandigarh
13. Uttarakhand Power Corporation Limited,  
Urja Bhavan, Kanwali Road  
Dehradun – 248 001

**...Respondents**

**Parties present:**

Ms. Swapna Seshadri, Advocate, NTPC  
Ms. Ritu Apurva, Advocate, NTPC  
Ms. Surbhi Gupta, Advocate, NTPC

**ORDER**

This Petition has been filed by the Petitioner, NTPC Limited for revision of tariff of Koldam Hydroelectric Power Project (800 MW) (in short 'the generating station') for the period from the actual date of commercial operation (COD) of the generating station (18.7.2015) till 31.3.2019 in terms of Regulation 8(1) of the



Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 (in short 'the 2014 Tariff Regulations').

### **Background**

2. The generating station with a total capacity of 800 MW comprises of four units of 200 MW each. All the four units of the generating station were declared under commercial operation on 18.7.2015. The Commission vide its order dated 5.4.2018 in Petition No.107/GT/2015 (in short 'order dated 5.4.2018') had determined the tariff of the generating station for the period from COD (18.7.2015) to 31.3.2019, subject to truing up. The capital cost and annual fixed charges determined in the aforesaid order is as under:

#### ***Capital Cost allowed***

*(Rs. in lakh)*

	<b>2015-16 (18.7.2015 to 31.3.2016)</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Opening capital cost	637282.31	644936.98	670553.34	678099.40
Additional capital expenditure allowed	7654.67	25616.36	7546.06	0.00
<b>Closing capital cost</b>	<b>644936.98</b>	<b>670553.34</b>	<b>678099.40</b>	<b>678099.40</b>
Average capital cost	641109.65	657745.16	674326.37	678099.40

#### ***Annual Fixed Charges allowed***

*(Rs. in lakh)*

	<b>2015-16 (18.7.2015 to 31.3.2016)</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Depreciation	29744.65	30516.47	31285.76	31460.81
Interest on Loan	39417.80	38029.37	36068.73	33126.78
Return on Equity	40345.67	41392.56	42436.03	42673.47
Interest on Working Capital	3440.48	3511.46	3573.19	3584.42
O&M Expenses	16650.6	17756.22	18935.24	20192.54
<b>Total</b>	<b>129599.22</b>	<b>131206.08</b>	<b>132298.95</b>	<b>131038.03</b>

### **Present Petition**

3. As stated, the Petitioner, in terms of Regulation 8(1) of the 2014 Tariff Regulations, has filed the present Petition for truing-up of tariff of the generating



station for the period 2014-19. The capital cost and annual fixed charges claimed by the Petitioner, are as under:

**Capital Cost claimed**

(Rs. in lakh)

	2015-16 (18.7.2015 to 31.3.2016)	2016-17	2017-18	2018-19
Opening capital cost	659730.31	664955.95	678165.31	690864.00
Add: Addition during the year	941.90	8741.02	10494.32	4522.76
Less: De-capitalization during the year	15.59	74.05	414.12	200.08
Add: Discharges during the year	4299.33	4542.39	2618.50	# 4091.03
<b>Closing capital cost</b>	<b>664955.95</b>	<b>678165.31</b>	<b>690864.00</b>	<b>699277.72</b>
Average capital cost	662343.13	671560.63	684514.66	695070.86

# Subsequently, the Petitioner vide affidavit dated revised its discharges claim for the year 2018-19 to Rs.9313.34 lakh. However, the Petitioner has not furnished revised tariff forms pertaining to capital cost and annual fixed charges claim.

**Annual Fixed Charges claimed**

(Rs. in lakh)

	2015-16 (18.7.2015 to 31.3.2016)	2016-17	2017-18	2018-19
Depreciation	32255.29	32707.46	33242.27	33629.44
Interest on Loan	40093.59	38919.69	33560.33	32442.86
Return on Equity	41681.92	42261.98	43077.19	43856.19
Interest on Working Capital	3579.50	3687.19	3696.27	3791.03
O&M Expenses	17210.17	18352.92	19571.55	20871.11
<b>Sub-total (A)</b>	<b>134820.47</b>	<b>135929.24</b>	<b>133147.61</b>	<b>134590.63</b>
Impact of wage revision	72.62	938.18	1425.59	1770.28
Impact of GST	0.00	0.00	128.87	179.82
<b>Sub-total (B)</b>	<b>72.62</b>	<b>938.18</b>	<b>1554.46</b>	<b>1950.10</b>
<b>Total (A+B)</b>	<b>134893.08</b>	<b>136867.42</b>	<b>134702.07</b>	<b>136540.73</b>

4. The Petitioner has filed certain additional information vide affidavit dated 12.8.2021 and 15.9.2022. the Respondent UPPCL has filed reply vide its affidavit dated 28.12.2021 and the Petitioner has filed its rejoinder to the same vide affidavit dated 7.1.2022. The Petition was heard through virtual hearing, on 6.1.2023, and the Commission, after directing the Petitioner to file certain additional information, reserved its order in the petition. The Petitioner, in compliance, has submitted the



additional information vide affidavit dated 16.3.2023, after serving copies on the Respondents. Based on the submissions and the documents available on record, we proceed for truing-up the tariff of the generating station for the period 2014-19, as stated in the subsequent paragraphs.

### **Capital Cost**

5. 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 capitalisation and de-capitalisation 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.*
- xxx”*

6. The Commission vide its order dated 5.4.2018 in Petition No. 107/GT/2015 had approved the opening capital cost of Rs.637282.31 lakh, as on 18.7.2015 and further granted liberty to the Petitioner, to claim the expenditure of Rs.22448 lakh paid directly to sub-vendors/ sub-contractors towards materials, staff cost, administrative and other expenses, mainly to expedite the works along with all supporting documents detailing items including LD charges and status of the arbitration claim etc. The relevant portion of the order is extracted below:

#### **“Commission's view**

*40. It is observed from the submission of the parties that the petitioner, based on the certification by M/s ITD, had made direct payment to sub-vendors/ sub-contractors towards materials, Staff cost Administrative and other expenses, mainly to expedite the works. The petitioner has also clarified that the amount paid to the sub-vendors/sub-contractors was actually spent towards the execution and completion of work and thus forms an integral part of the capital cost. It is further observed from the petitioner's submission that the Contractor, M/s ITD has invoked the arbitration clause of the contract, raising certain claims which have been disputed by the petitioner. In our view, since the payment was made by the Petitioner in respect of the works already executed, the observations of the DIA that the amount paid by the petitioner to the contractor is beyond the provisions of the Contract is erroneous. It is noticed that the petitioner has classified the said amount as advance considering the fact that the “arbitration claim”*



by the Contractor is pending before the Court. **Since, complete details of the disputed amount and the nature and status of "Arbitration" has not been made available by the petitioner, we are not inclined to allow the claim in this order. However, liberty is granted to the petitioner to claim the expenditure of ₹22448 lakh along with all supporting documents detailing items including LD charges and status of the arbitration claim etc., at the time of truing up exercise in terms of Regulation 8 of the 2014 Tariff Regulations. However, the balance expenditure under this head beyond COD and up to the cut-off date is allowed to be capitalised as and when incurred subject to the ceiling limit of Rs.4470.00 lakh. We direct accordingly."**

7. In view of the above, the difference of the capital cost approved and claimed as on COD is of Rs.22448 lakh. The Petitioner in justification for the same has submitted as under:

*"It is submitted that M/s ITD has preferred 4 no. Arbitration cases. Out of the same Arbitrator's award for two (02) nos. cases have been given on 11.09.2018 and 18.04.2019 in favor of M/s ITD amounting to Rs.201.09 crore and Rs.26.16 crore (plus escalation & interest) respectively. Same has been claimed in the capital cost admitted as on COD.*

*Further, remaining two arbitration matters of M/s ITD claiming Rs.381.70 crore and Rs.127.65 crore is under process of hearing and therefore these amounts have not been claimed in the capital cost admitted as on COD. However, an appropriate liberty is being sought to claim the same after decision in the arbitration proceedings.*

*The supporting documents along with details of work and claims awarded is attached as Annexure-A."*

8. The matter has been examined. It is noticed that in terms of the directions of the Commission vide order dated 5.4.2018, the Petitioner has submitted that out of four arbitration cases of M/s ITD, award in two arbitration cases have been given on 11.9.2018 and 18.4.2019, respectively, in favor of M/s ITD is amounting to Rs.201.09 crore and Rs.26.16 crore (plus escalation & interest), respectively, and the same has been claimed in the capital cost admitted as on COD. The Respondent UPPCL has submitted that the above orders are issued in different year, the claim of the Petitioner should be allowed by the Commission during the year of issue of these orders. In this regard, it is noticed that the amount finalized in these awards i.e., Rs. 227.25 crore (Rs.201.09 crore + Rs 26.16 crore) has not



been capitalized and does not form part of gross block during 2018-19.

9. However, on perusal of the cumulative cash expenditure statement furnished by the Petitioner, it is observed that the net capital advance as on COD of the generating station is Rs.24.01 crore only. As such, it is clear that the amount of Rs. 224.48 crore is not part of advances as on COD and had been actually incurred towards civil works which is forming part of the capitalized gross block in the books of the accounts of the Petitioner. Additionally, the above amount paid to sub-contractors was for the original scope of work and duly certified by the main contractor M/s ITD.

10. In view of the above, we allow the amount of Rs.224.48 crore, incurred by the Petitioner, as part of capital cost as on COD of the generating station, subject to the Petitioner, furnishing complete details of the arbitration cases, duly reconciling the above amount of Rs.224.48 crore claimed, and with clear confirmation that the above amount was brought to notice in the arbitration proceedings, along with all supporting documents detailing items including LD charges, at the time of truing up of tariff of the generating station, for the period 2019-24. Accordingly, the capital cost of Rs.6597.30 crore (Rs.6372.82 crore + Rs.224.48 crore) as on the COD of the generating station is allowed.

### **Additional capital expenditure**

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

*“14. Additional Capitalization and De-capitalization:*

*(1) The capital expenditure in respect of the new project or an existing project incurred or projected to be incurred, on the following counts within the original scope of work, after the date of commercial operation and up to the cut-off date may be*



*admitted by the Commission, subject to prudence check:*

*(i) Un-discharged liabilities recognized to be payable at a future date;*

*(ii) Works deferred for execution;*

*(iii) Procurement of initial capital spares within the original scope of work, in accordance with the provisions of Regulation 13;*

*(iv) Liabilities to meet award of arbitration or for compliance of the order or decree of a court of law; and*

*(v) Change in law or compliance of any existing law:*

*Provided that the details of works asset wise/work wise included in the original scope of work along with estimates of expenditure, liabilities recognised to be payable at a future date and the works deferred for execution shall be submitted along with the application for determination of tariff.”*

*(2) The capital expenditure incurred or projected to be incurred in respect of the new project on the following counts within the original scope of work 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) Deferred works relating to ash pond or ash handling system in the original scope of work; and*

*(iv) Any liability for works executed prior to the cut-off date, after prudence check of the details of such un-discharged liability, total estimated cost of package, reasons for such withholding of payment and release of such payments etc.*

*(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 un-discharged 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 capitalisation 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.  
xxx”

12. The Petitioner has claimed following additional capital expenditure for the period 2014-19, based on auditor certified statement, is as under:

	<b>(Rs. in lakh)</b>			
	<b>2015-16 (18.7.2015 to 31.3.2016)</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Closing Gross Block as per audited books	704903.78	* 681666.11	* 703945.51	* 714885.67
Less: Opening Gross Block as per audited books	700869.50	* 675400.97	* 681666.11	* 703945.51
Additional capital expenditure as per audited books	4034.28	* 6265.13	* 22279.41	*10940.16
Less: IND AS adjustment as per auditor certified statement	-	(-) 492.33	78.14	93.33



Additional capital expenditure as per IGAAP for the generating station as per auditor certified statement	4034.28	6757.46	22201.26	10846.83
Less: Exclusions	2181.75	(-) 4752.66	(-) 219.03	2429.33
Less: Un-reconciled gap with respect to IND AS adjustment	-	-	-	0.66
Net additional capital expenditure claimed (on accrual basis)	1852.53	11510.12	22420.29	8416.84
Less: Un-discharged liabilities included in above	926.22	2843.15	12348.00	4091.03
Less: Un-reconciled gap with respect to liabilities	-	-	-	3.12
Net additional capital expenditure claimed (on cash basis) before discharges	926.31	8666.97	10072.28	4322.69
Add: Discharge of liabilities	4299.33	4542.39	2618.50	9313.34
<b>Total additional capital expenditure claimed (on cash basis)</b>	<b>5225.64</b>	<b>13209.36</b>	<b>12690.78</b>	<b>13636.03</b>

\* As per IND AS.

13. The projected additional capital expenditure allowed for the period 2014-19 in order dated 5.4.2018 and the actual additional capital expenditure (before de-capitalization and discharges) claimed by the Petitioner, in this petition, are as under:

(Rs. in lakh)

	2015-16 (18.7.2015 to 31.3.2016)	2016-17	2017-18	2018-19
Projected additional capital expenditure allowed in order dated 5.4.2018 in Petition No. 107/GT/2015	7654.67	25616.36	7546.06	0.00
Actual additional capital expenditure claimed	941.90	8741.02	10486.41	4522.76

14. The year-wise projected additional capital expenditure (before de-capitalization and discharges) claimed by the Petitioner in respect of the generating station for the period 2014-19, are as under:

(Rs. in lakh)

Head of Work /Equipment	2015-16 (18.7.2015 to 31.3.2016)	2016-17	2017-18	2018-19	Total
<b>Preliminary Works</b>					
Prime Consultant (EDF)	163.81	79.60	3.66	-	247.07



Head of Work /Equipment	2015-16 (18.7.2015 to 31.3.2016)	2016-17	2017-18	2018-19	Total
<b>Land</b>					
Private Land (Freehold)	-	8.32	47.61	-	55.93
Leased Land	-	0.00	-	-	0.00
Land under reservoir	-	469.47	-	4.22	473.69
Land Acquisition Office Admin expenses	38.43	64.32	57.52	51.92	212.19
Land Reference Cases	30.34	39.97	1857.58	2927.23	4855.12
<b>Rehabilitation &amp; Resettlement (R&amp;R)</b>					
R&R Works	-	-	13.43	-	13.43
Hydro Engg. College	-	3749.99	-	-	3749.99
<b>Buildings (Township &amp; Infra)</b>					
<b>Township</b>					
Construction of Balance Quarters, misc. township works completion & other associated facilities at township	0.99	323.77	5.44	32.14	362.33
<b>Infrastructure</b>					
Implementation of Offsite Buildings: Admin Building along with VSAT Building, construction of Trainee Hostel, CISF Barracks, Armory, Gate Complex, Mess, Recreation Centre, CISF Complex (CISF A, B, C Type Quarters, Internal Roads/Pathways/Culvert, auditor	-	1621.57	4241.54	41.40	5904.51
<b>Miscellaneous Works</b>					
Plant Boundary Wall & Fencing	-	-	26.44	125.44	151.88
Permanent water supply scheme (civil works)	-	-	-	31.02	31.02
Flood Forecasting & Flood Warning System	-	-	157.51	-	157.51
Boat for reservoir inspection	-	-	74.32	-	74.32
Misc. plant civil works	-	1.04	319.72	43.97	364.73
Misc. plant electrical Works	38.76	589.41	38.74	-	666.92
Miscellaneous IT & communication Works	2.94	18.20	69.48	-	90.62
Lab Equipment	-	-	-	18.72	18.72
Providing of Floating boom barrier in the reservoir	25.29	-	-	-	25.29
Weigh Bridge & EOT Crane for Store	-	-	21.91	-	21.91
<b>Tools and Plants</b>					
Tools and Plants	-	6.80	13.12	(-) 7.07	12.85
<b>Communications: Construction/ resurfacing of new/ existing roads and associated works</b>					
Right bank Protection work of river Satluj from Maitri setu to Diversion tunnel	-	-	198.41	241.19	439.60



Head of Work /Equipment	2015-16 (18.7.2015 to 31.3.2016)	2016-17	2017-18	2018-19	Total
Area development work at right bank of river Satluj from Maitri setu to Diversion tunnel	-	-	-	-	-
Construction of new road of length 1.66 Km	-	-	114.95	-	114.95
Restoration/ protection works & surfacing works: Maitri Setu to PWD road junction to bottom outlet on right bank. Construction of approach road to CISF main gate in front of FQA lab & peripheral road at Harnoda	-	252.43	-	-	252.43
Surfacing work on road for CISF gate to spillway control room & from gallery No.14 to 13	-	-	170.91	-	170.91
Construction of Retaining wall along left bank of River in front of Power House	-	-	-	-	-
Removal of Boulder from Rover to lower down the River Bed to avoid Head Loss	-	-	188.42	-	188.42
<b>Environment &amp; Ecology</b>					
Supply, installation, testing & commissioning & maintenance of seismic observatory station for NTPC Koldam	-	-	-	-	-
Real time online monitoring of 15% min environmental flow	12.88	-	-	-	12.88
<b>Major Civil Works</b>					
Additional Protection work in Plunge pool area	73.78	1159.56	159.79	189.70	1582.83
Dam-Misc works	124.06	203.75	89.03	(-) 4.78	412.05
<b>HM-Works</b>					
Providing fix rope drum hoist for individual gates of Draft Tube	-	-	701.85	-	701.85
<b>Electro-Mechanical Works</b>					
Initial Spares	52.32	55.91	1021.53	397.77	1527.52
BHEL (MARUBENI) EM Package	310.31	(-) 3.85	433.66	178.58	918.71
Remote Operation	-	-	243.62	-	243.62
<b>MBOAs</b>					
Hospital equipment	1.80	1.95	-	-	3.75
Furniture and fixtures	1.12	7.56	40.75	92.94	142.38
Other office equipment	2.06	21.57	41.47	48.85	113.96
EDP, WP machines & SATCOM equipment	37.07	46.16	68.03	52.44	203.70
Vehicles including speed boats	5.73	-	-	-	5.73
Electrical installations	-	-	-	(-) 0.04	-
Communication equipment	-	-	24.98	10.10	35.07



Head of Work /Equipment	2015-16 (18.7.2015 to 31.3.2016)	2016-17	2017-18	2018-19	Total
Laboratory and workshop equipment	17.02	101.17	46.22	46.83	211.24
Software	3.18	-	2.68	0.20	6.06
Package ERV	0.00	(-) 77.39	0.00	0.00	(-) 77.39
Other adjustment	0.00	(-) 0.25	(-) 7.92	0.00	(-) 8.17
<b>Total</b>	<b>941.90</b>	<b>8741.02</b>	<b>10486.41</b>	<b>4522.76</b>	<b>24692.09</b>

**Additional capital expenditure up to cut off date**

15. The COD of the generating station is 18.7.2015 and hence the cut-off date, in terms of the 2014 Tariff Regulations, is 31.3.2018. The Petitioner has claimed additional capital expenditure of Rs.24692.09 lakh during the period 2015-19, which includes Rs.20169.33 lakh up to 31.3.2018 (i.e., up to cut-off date) and Rs.4522.76 lakh during 2018-19 (i.e., after cut-off date). It is pertinent to mention that the Commission in its order dated 5.4.2018 had approved the additional capital expenditure of Rs.40817.09 lakh up to cut-off date.

16. The Respondent, UPPCL has submitted that the additional capital expenditure may be allowed, on the basis of outcome of the arbitration award, in the year when it is given. The Respondent has further submitted that the arbitration award for Rs.26.16 crore was given in 18.4.2019, which falls during the period 2019-24 (i.e under the 2019 Tariff Regulations) and hence the additional capitalization may be allowed during the period 2019-24 only. The Respondent has also contended that the adjudication in respect of claims for Rs. 381.70 crore and Rs. 127.65 crore is under process and since the same is yet to achieve finality, allowing the additional capitalization of these two amounts, would be premature and the same may be considered upon completion of the adjudication process with the declaration of the arbitration award.



17. The Commission vide ROP for the hearing dated 6.1.2023, had directed the Petitioner to submit Form-5A and Form-5B, for prudence check of the actual additional capital expenditure claimed, within the original scope of work, as on the cut-off date. In response, the Petitioner has submitted the required forms vide its affidavit dated 16.3.2023.

18. The matter has been considered. It is observed that the Petitioner has claimed total additional capital expenditure of Rs.20169.33 lakh during the period 2015-18 (i.e., up to cut-off date) as against the total additional capital expenditure of Rs.40817.09 lakh allowed during the period 2015-18 (i.e., up to cut-off date) in order dated 5.4.2018. From the justification submitted by the Petitioner, it is evident that the actual additional capital expenditure claimed for the years 2015-16, 2016-17 and 2017-18 are in respect of un-discharged liabilities, balance works under different packages which are within the original scope of work and is within the cut-off date of the generating station (i.e., 31.3.2018). Accordingly, the claim of the Petitioner for the period 2015-18, excluding the claim for initial spares (being dealt separately), is allowed under Regulation 14(1)(i) and 14(1)(ii) of the 2014 Tariff Regulations) is allowed. Hence, the total additional capital expenditure of Rs.19039.57 lakh (Rs.20169.33 lakh *minus* Rs.1129.75 lakh- excluding initial spares), claimed for the period 2015-18 is allowed, on prudence check, under Regulation 14(1)(i) and 14(1)(ii) of the 2014 Tariff Regulations.

**Additional capital expenditure after cut-off date i.e., 2018-19**

19. The Petitioner has claimed additional capital expenditure of Rs.4522.76 lakh in 2018-19 i.e., after cut-off date, under Regulation 14(1)(ii), 14(2)(i), 14(2)(iv) read



with Regulation 54 of the 2014 Tariff Regulations. The Commission in its order dated 5.4.2018 had not approved any additional capital expenditure for the year 2018-19.

20. The Commission vide its order dated 13.3.2019 in Petition No.228/MP/2018 filed by the Petitioner seeking extension of the cut-off date, had granted liberty to the Petitioner to claim additional capitalization in respect of the proposed works as and when incurred, in terms of the provisions of the 2019 Tariff Regulations, and observed that the same will be considered in accordance with law. Since the works claimed for additional capitalization for 2018-19 is within the original scope of work, the amount of Rs.4124.99 lakh (Rs.4522.76 lakh *minus* Rs.397.77 lakh), excluding claim of initial spares, is allowed for 2018-19.

### **Initial spares**

21. The cut-off date of the generating stations is 31.3.2018. Regulation 13 of the 2014 Tariff Regulations, provides for the capitalization of initial spares as a percentage of the Plant & Machinery cost upto the cut-off date, subject to ceiling limit of 4%. The Petitioner has claimed total initial spares for Rs.1527.52 lakh (Rs.52.32 lakh in 2015-16, Rs.55.91 lakh in 2016-17, 1021.53 lakh in 2017-18 and 397.77 lakh in 2018-19) after COD under Regulation 14(1)(ii), 14(1)(iii) and Regulation 54 of the 2014 Tariff Regulations. In justification, the Petitioner has submitted that the capitalized spares pertain to the original scope of work and are within the cut-off date of the generating station. For the year 2018-19 (i.e. after cut-off date) the Petitioner has submitted that the works are within the original scope of work and the Commission vide its order dated 13.3.2019 in Petition No.228/MP/2018 in respect of cut-off date extension, has granted liberty to the Petitioner



to claim capitalization in respect of the proposed works as and when incurred in terms of the provisions of the 2019 Tariff Regulations and that the same will be considered in accordance with law. The Petitioner vide its additional submission dated 15.9.2022, has submitted that this was part of initial packages of system and supply of initial spares was also received before the cut-off date. However, payment was released after reconciliation of package. It has further stated that the delay in capitalization of the initial spares would avoid front loading of tariff due to the delayed servicing of their cost, and hence, there would be no undue burden on beneficiaries. The Petitioner has also submitted that the Commission in its Order dated 8.1.2022 in Petition No. 408/GT/2020 (pertaining to truing-up of tariff for the period 2014-19 and for determination of tariff for the period 2019-24, in respect of Maithon Right Bank Thermal Power Project) had allowed the spares even after cut-off date.

22. The Commission vide ROP dated 6.1.2023 directed the Petitioner to furnish the complete details regarding deferred works and actual capital expenditure on initial spares incurred after COD upto cut-off date. In response, the Petitioner vide affidavit dated 16.3.2023 has submitted as under:

*(Rs in lakh)*

	<b>Accrual Basis</b>	<b>Un-discharged Liability</b>	<b>Cash Basis</b>
2015-16	154.40	102.08	52.32
2016-17	75.00	19.09	55.91
2017-18	1088.23	66.70	1021.53
2018-19	459.93	62.15	397.77

23. The matter has been considered. It is observed that the Petitioner has claimed initial spares of Rs.1129.76 lakh (on cash basis) during the period 2015-18. The total initial spares, on cash basis, up to the cut-off date is Rs.3081.75 lakh





(Rs.1830.83 lakh as on COD of the generating station + Rs.1129.76 lakh added on cash basis after COD of the generating station to 31.3.2018 + Rs.121.17 lakh discharged between COD of the generating station to 31.3.2018). Further, there is balance un-discharged liabilities of Rs.66.70 lakh up to cut-off date. The total value of initial spares works out to Rs.3148.45 lakh (Rs.3081.75 lakh + Rs.66.70 lakh), on accrual basis. As per Regulation 14(1)(iii) of the 2014 Tariff Regulations, the procurement of initial spares, up to the cut-off date, are allowed up to the ceiling limit. As per Form-5B submitted by the Petitioner, vide affidavit dated 24.3.2023, the Plant & Machinery cost (excluding initial spares) as on 31.3.2019 is Rs.67915.01 lakh. It is noticed that the component of Plant & Machinery cost in additional capital expenditure for 2018-19 is Rs.178.58 lakh. Accordingly, the Plant & Machinery cost (excluding initial spares) as on 31.3.2018, is worked out as Rs.67736.43 lakh (Rs.67915.01 lakh *minus* Rs.178.58 lakh). Considering the ceiling limit of 4% of Plant & Machinery cost, in terms of Regulation 13 of the 2014 Tariff Regulations, the ceiling limit for initial spares works out to Rs.2822.35 lakh. Accordingly, the initial spares allowed to the Petitioner in the additional capital expenditure is restricted to the admissible limit of Rs.2822.35 lakh. Accordingly, the initial spares allowed for the purpose of tariff is as under:

		<i>(Rs in lakh)</i>			
		2015-16 (18.7.2015 to 31.3.2016)	2016-17	2017-18	2018-19
<b>(1)</b>	<b>On accrual basis</b>				
A	Opening	1830.83	1985.23	2060.22	2822.35
B	Addition	154.40	75.00	762.13	0.00
<b>C</b>	<b>Closing (A+B)</b>	1985.23	2060.22	2822.35	2822.35
<b>(2)</b>	<b>Liabilities included above</b>				
D	Opening	0.00	102.08	19.09	0.00
E	Addition	102.08	19.09	0.00	0.00
F	Discharges	0.00	102.08	19.09	0.00
<b>G</b>	<b>Closing (D+E-F)</b>	102.08	19.09	0.00	0.00



<b>(3)</b>	<b>On cash basis (including discharges)</b>				
H	Opening (A-D)	1830.83	1883.14	2041.13	2822.35
I	Addition (B-E)	52.31	55.91	762.13	0.00
J	Discharges (F)	0.00	102.08	19.09	0.00
<b>K</b>	<b>Closing (H+I+J)</b>	<b>1883.14</b>	<b>2041.13</b>	<b>2822.35</b>	<b>2822.35</b>

### **Discharge of liabilities**

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

<i>(Rs. in lakh)</i>			
<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
4299.33	4542.39	2618.50	9313.34

25. The discharge of liabilities as claimed above is in order and hence allowed.

Further, the flow of un-discharged liabilities corresponding to the assets/works allowed for the period 2014-19, is as under:

<i>(Rs. in lakh)</i>				
	<b>2015-16 (18.7.2015 to 31.3.2016)</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Opening liabilities	18077.55	14703.26	8974.64	18473.24
Add: Liabilities added during the year	926.22	2843.15	12281.30	4028.88
Less: Discharge of liabilities	4299.33	4542.39	2618.50	9313.34
Less: Reversal of liabilities	1.18	4029.38	164.21	0.00
<b>Closing liabilities</b>	<b>14703.26</b>	<b>8974.64</b>	<b>18473.24</b>	<b>13188.77</b>

### **De-capitalization**

26. The Regulation 14(4) of the 2014 Tariff regulations provides as under:

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

27. The de-capitalization of assets claimed by the Petitioner for the period 2014-19, is as under:



*(Rs. in lakh)*

	<b>2015-16 (18.7.2015 to 31.3.2016)</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
De-capitalization of MBOAs	15.59	50.98	102.53	145.95
De-capitalization of spares	0.00	23.07	311.60	54.13
<b>Total</b>	<b>15.59</b>	<b>74.05</b>	<b>414.12</b>	<b>200.08</b>

28. Based on the submissions of the Petitioner, since the above assets are not in use/unserviceable, the Petitioner's claim is allowed under this head.

### **Exclusions**

29. The summary of exclusions from books of accounts under different heads for the purpose of tariff are shown as follows:

*(Rs. in lakh)*

<b>Head of Work / Equipment</b>	<b>2015-16 (18.7.2015 to31.3.2016)</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Loan ERV	2212.79	(-) 691.28	(-) 59.78	2472.64
Inter Unit Transfer	(-) 29.85	(-) 32.00	4.97	(-) 43.31
Reversal of Liability	(-) 1.18	(-) 4029.38	(-)164.21	0.00
<b>Total Exclusions allowed</b>	<b>2181.75</b>	<b>(-) 4752.66</b>	<b>(-) 219.03</b>	<b>2429.33</b>

#### **a) Loan ERV**

30. The Petitioner has sought the exclusion of loan ERV and has submitted that it is allowed to bill loan ERV directly on the beneficiaries as per the 2014 Tariff Regulations. Hence, the exclusion of the said amount under this head is in order and is allowed as under:

*(Rs. in lakh)*

<b>2015-16 (18.7.2015 to 31.3.2016)</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
2212.79	(-) 691.28	(-) 59.78	2472.64

#### **b) Inter-unit transfer**

31. The Petitioner has submitted that the Commission has not been considering the inter-unit transfers as part of tariff and hence, kept the same under exclusions. We



are of the considered view that both positive and negative entries arising out of inter-unit transfers of temporary nature shall be ignored for the purpose of tariff. Therefore, the exclusion of inter-unit transfer as claimed by the Petitioner is allowed as under:

<i>(Rs. in lakh)</i>			
2015-16 (18.7.2015 to 31.3.2016)	2016-17	2017-18	2018-19
(-) 29.85	(-) 32.00	4.97	(-) 43.31

**c) Reversal of Liability**

32. The Petitioner has claimed exclusion of reversal of liabilities and in justification for the same, has submitted that since tariff is determined on cash basis, the liability reversal has been kept under exclusion. In view of this, the exclusion of the said amounts, is allowed as under:

<i>(Rs. in lakh)</i>			
2015-16 (18.7.2015 to 31.3.2016)	2016-17	2017-18	2018-19
(-) 1.18	(-) 4029.38	(-) 164.21	0.00

33. Accordingly, the summary of exclusions allowed/ not allowed for the period 2014-19, is as under:

<i>(Rs. in lakh)</i>				
	2015-16 (18.7.2015 to 31.3.2016)	2016-17	2017-18	2018-19
Exclusions claimed (A)	2181.75	(-) 4752.66	(-) 219.03	2429.33
Exclusions allowed (B)	2181.75	(-) 4752.66	(-) 219.03	2429.33
Exclusion not Allowed (A-B)	0.00	0.00	0.00	0.00

**Net additional capital expenditure allowed**

34. Based on the above, the net additional capital expenditure allowed for the period 2014-19, is as under:



(Rs. in lakh)

Sl. No.	Head of Work /Equipment	Additional Capital Expenditure allowed				
		2015-16 (18.7.2015 to31.3.2016)	2016-17	2017-18	2018-19	Total
<b>A</b>	<b>Original Scope of work</b>					
	<b>Preliminary Works</b>					
1	Prime Consultant (EDF)	163.81	79.60	3.66	0.00	247.07
	<b>Land</b>					
2	Private Land (Freehold)	0.00	8.32	47.61	0.00	55.93
	Leased Land	0.00	0.00	0.00	0.00	0.00
3	Land under reservoir	0.00	469.47	0.00	4.22	473.69
4	Land Acquisition Office Admin expenses	38.43	64.32	57.52	51.92	212.19
5	Land Reference cases	30.34	39.97	1857.58	2927.23	4855.12
	<b>Rehabilitation &amp; Resettlement (R&amp;R)</b>					
6	R&R Works	0.00	0.00	13.43	0.00	13.43
7	Hydro Engg. College	0.00	3749.99	0.00	0.00	3749.99
	<b>Buildings (Township &amp; Infra)</b>					
	<b>Township</b>					
8	Construction of Balance Quarters, misc. township works completion & other associated facilities at township	0.99	323.77	5.44	32.14	362.33
	<b>Infrastructure</b>					
9	Implementation of Offsite Buildings: Admin Building along with VSAT Building, construction of Trainee Hostel, CISF Barracks, Armory, Gate Complex, Mess, Recreation Centre, CISF Complex (CISF A, B, C Type Quarters, Internal Roads/ Pathways/ Culvert	0.00	1621.57	4241.54	41.40	5904.51
	<b>Miscellaneous Works</b>					
10	Plant Boundary Wall & Fencing	0.00	0.00	26.44	125.44	151.88
11	Permanent water supply scheme (civil works)	0.00	0.00	0.00	31.02	31.02
12	Flood Forecasting & Flood Warning System	0.00	0.00	157.51	0.00	157.51
13	Boat for reservoir inspection	0.00	0.00	74.32	0.00	74.32
14	Misc. Plant civil works	0.00	1.04	319.72	43.97	364.73
15	Misc. Plant electrical Works	38.76	589.41	38.74	0.00	666.92
16	Miscellaneous IT & communication Works	2.94	18.20	69.48	0.00	90.62
17	Lab Equipment	-	0.00	0.00	18.72	18.72
18	Providing of Floating boom barrier in the reservoir	25.29	0.00	0.00	0.00	25.29
19	Weigh Bridge & EOT Crane for Store	0.00	0.00	21.91	0.00	21.91
	<b>Tools and Plants</b>					
20	Tools and Plants	0.00	6.80	13.12	(-)7.07	12.85
	<b>Communications: Construction/ resurfacing of new/ existing roads and associated works</b>					



Sl. No.	Head of Work /Equipment	Additional Capital Expenditure allowed				
		2015-16 (18.7.2015 to31.3.2016)	2016-17	2017-18	2018-19	Total
21	Right bank Protection work of river Satluj from Maitri setu to Diversion tunnel	0.00	0.00	198.41	241.19	439.60
	Area development work at right bank of river Satluj from Maitri setu to Diversion tunnel	0.00	0.00	0.00	0.00	0.00
22	Construction of new road of length 1.66 Km	0.00	0.00	114.95	0.00	114.95
23	Restoration/ protection works & surfacing works: Maitri Setu to PWD road junction to bottom outlet on right bank. Construction of approach road to CISF main gate in front of FQA lab & peripheral road at Harnoda	0.00	252.43	0.00	0.00	252.43
24	Surfacing work on road for CISF gate to spillway control room & from gallery No.14 to 13	0.00	0.00	170.91	0.00	170.91
25	Removal of Boulder from Rover to lower down the River Bed to avoid Head Loss	0.00	0.00	188.42	0.00	188.42
<b>Environment &amp; Ecology</b>						
26	Real time online monitoring of 15% min environmental flow	12.88	0.00	0.00	0.00	12.88
<b>Major Civil Works</b>						
27	Additional Protection work in Plunge pool area	73.78	1159.56	159.79	189.70	1582.83
28	Dam-Misc works	124.06	203.75	89.03	(-) 4.78	412.05
<b>HM-Works</b>						
29	Providing fix rope drum hoist for individual gates of Draft Tube	0.00	0.00	701.85	0.00	701.85
<b>Electro-Mechanical Works</b>						
31	BHEL (MARUBENI) EM Package	310.31	(-) 3.85	433.66	178.58	918.71
32	Remote Operation	0.00	0.00	243.62	0.00	243.62
<b>MBOAs</b>						
33	Hospital equipment	1.80	1.95	0.00	0.00	3.75
34	Furniture and fixtures	1.12	7.56	40.75	92.94	142.38
35	Other office equipment	2.06	21.57	41.47	48.85	113.96
36	EDP, WP machines & SATCOM equipment	37.07	46.16	68.03	52.44	203.70
37	Vehicles including speed boats	5.73	0.00	0.00	0.00	5.73
38	Electrical installations	0.00	0.00	0.00	(-) 0.04	-0.04
39	Communication equipment	0.00	0.00	24.98	10.10	35.07
40	Laboratory and workshop equipment	17.02	101.17	46.22	46.83	211.24
41	Software	3.18	0.00	2.68	0.20	6.06
42	Package ERV	0.00	(-) 77.39	0.00	0.00	(-) 77.39
43	Other adjustment	0.00	(-) 0.25	(-) 7.92	0.00	(-) 8.17
<b>Sub-total</b>		<b>889.58</b>	<b>8685.11</b>	<b>9464.88</b>	<b>4124.99</b>	<b>23164.56</b>



Sl. No.	Head of Work /Equipment	Additional Capital Expenditure allowed				
		2015-16 (18.7.2015 to31.3.2016)	2016-17	2017-18	2018-19	Total
B	Initial Spares	52.32	55.91	762.13	0.00	784.47
<b>C</b>	<b>De-capitalization</b>					
44	De-capitalization of MBOAs	(-) 15.59	(-) 50.98	(-) 102.53	(-) 145.95	(-) 315.04
45	De-capitalization of spares	0.00	(-) 23.07	(-) 311.60	(-) 54.13	(-) 388.80
	<b>Sub-total</b>	<b>(-) 15.59</b>	<b>(-) 74.05</b>	<b>(-) 414.12</b>	<b>(-) 200.08</b>	<b>(-) 703.84</b>
<b>D</b>	Total additional capitalization allowed before discharges (A+B+C)	926.31	8666.97	9812.89	3924.91	23331.09
E	Add: Discharge of liabilities	4299.33	4542.39	2618.50	9313.34	20773.56
<b>F</b>	<b>Net additional capital expenditure allowed (D+E)</b>	<b>5225.64</b>	<b>13209.36</b>	<b>12431.39</b>	<b>13238.26</b>	<b>44104.65</b>

### **Capital Cost allowed for the period 2014-19**

35. Accordingly, the capital cost allowed for the period 2014-19, is as under:

	<i>(Rs. in lakh)</i>			
	2015-16 (18.7.2015 to 31.3.2016)	2016-17	2017-18	2018-19
Opening capital cost	659730.31	664955.95	678165.31	690596.70
Additional capital expenditure allowed	5225.64	13209.36	12431.39	13238.26
Closing capital cost	<b>664955.95</b>	<b>678165.31</b>	<b>690596.70</b>	<b>703834.96</b>
Average capital cost	662343.13	671560.63	684381.01	697215.83

### **Debt-Equity Ratio**

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

*(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 utilisation 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 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 modernisation expenditure for life extension shall be serviced in the manner specified in clause (1) of this regulation.

37. The debt-equity ratio of 70:30m as approved in order dated 5.4.2018m has been retained for the purpose of tariff. Accordingly, the details of debt-equity ratio in respect of the generating station, as on COD and as on 31.3.2019, is as under:

	Capital cost as on 18.7.2015		Net additional capital expenditure		Capital cost as on 31.3.2019	
	(Rs. in lakh)	%	(Rs. in lakh)	%	(Rs. in lakh)	%
Debt	461811.22	70%	30873.25	70%	492684.47	70%
Equity	197919.09	30%	13231.39	30%	211150.49	30%
<b>Total</b>	<b>659730.31</b>	<b>100%</b>	<b>44104.65</b>	<b>100%</b>	<b>703834.96</b>	<b>100%</b>

### **Return on Equity**

38. 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.”

39. 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.”*

40. The Petitioner has claimed tariff, considering the rate of return on equity (ROE) of 20.977% in 2015-18 and 21.032% in 2018-19. The Petitioner has arrived at these rates, after grossing up base rate of ROE of 16.50% with the MAT rate of 21.3416% in 2015-18 and 21.5488% in 2018-19. The rate of ROE as claimed by the Petitioner is in order and is accordingly considered for the purpose of tariff. Accordingly, ROE has been computed as under:



(Rs. in lakh)

	2015-16 (18.7.2015 to 31.3.2016)	2016-17	2017-18	2018-19
Notional Equity - Opening	197919.09	199486.78	203449.59	207179.01
Addition of Equity due to additional capital expenditure	1567.69	3962.81	3729.42	3971.48
Normative Equity - Closing	199486.78	203449.59	207179.01	211150.49
Average Normative Equity	198702.94	201468.19	205314.30	209164.75
Return on Equity (Base Rate)	16.500%	16.500%	16.500%	16.500%
Tax Rate for the year	21.342%	21.342%	21.342%	21.549%
Rate of Return on Equity (Pre-Tax)	20.977%	20.977%	20.977%	21.032%
<b>Return on Equity (annualized)</b>	<b>41681.92</b>	<b>42261.98</b>	<b>43068.78</b>	<b>43991.53</b>
<b>Return on Equity (Pro-rata)</b>	<b>29382.33</b>	<b>42261.98</b>	<b>43068.78</b>	<b>43991.53</b>

### Interest on Loan

41. 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 2014-19 tariff period shall be deemed to be equal to the depreciation allowed for the corresponding year/period. In case of de-capitalisation of assets, the repayment shall be adjusted by taking into account cumulative repayment on a pro rata basis and the adjustment should not exceed cumulative depreciation recovered upto the date of de-capitalisation of such asset.*

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

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

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

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

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

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

*(8) The changes to the terms and conditions of the loans shall be reflected from the date of such refinancing.*



(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 reenactment 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.”

42. Interest on loan has been computed as under:

- i) Gross normative loan corresponding to 70% of the admissible capital cost works out to Rs.461811.22 lakh as on COD.
- ii) Cumulative repayment as on COD being 'nil', the net normative opening loan as on COD works out to Rs.461811.22 lakh.
- iii) Addition to normative loan on account of additional capital expenditure approved above has been considered.
- iv) Depreciation allowed has been considered as repayment of normative loan during the respective year of the period 2014-19. Further, repayments have been adjusted for de-capitalization of assets/works considered during the respective year.
- v) The weighted average rate of Interest on loan, as furnished by the Petitioner is considered for the period 2014-19 after prudence check.

43. Accordingly, the computation of Interest on loan is as under:

	<b>(Rs. in lakh)</b>			
	<b>2015-16 (18.7.2015 to 31.3.2016)</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Gross opening loan	461811.22	465469.16	474715.72	483417.69
Cumulative repayment of loan upto previous year	0.00	22737.07	55441.06	88663.86
Net Loan Opening	461811.22	442732.10	419274.66	394753.83
Addition due to additional capital expenditure	3657.95	9246.56	8701.97	9266.78
Repayment of loan during the year	22737.34	32707.46	33235.78	33733.22
Less: Repayment adjustment on a/c of de-capitalization	0.27	3.47	12.97	23.77
Repayment of loan during the period (Net)	22737.07	32703.99	33222.80	33709.46
Net Loan Closing	442732.10	419274.66	394753.83	370311.15
Average Loan	452271.66	431003.38	407014.24	382532.49
Weighted Average Rate of Interest of loan	8.8648%	9.0293%	8.2397%	8.5047%
<b>Interest on Loan (annualized)</b>	<b>40093.12</b>	<b>38916.53</b>	<b>33536.59</b>	<b>32533.23</b>
<b>Interest on Loan (pro-rata)</b>	<b>28262.36</b>	<b>38916.53</b>	<b>33536.59</b>	<b>32533.23</b>



## **Depreciation**

44. 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 maybe, shall not be allowed to be recovered at a later stage during the useful life and the extended life.*

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

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

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

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

*(7) The generating company or the transmission license, as the case may be, shall submit the details of proposed capital expenditure during the fag end of the project (five years before the useful life) along with justification and proposed life extension. The*



Commission based on prudence check of such submissions shall approve the depreciation on capital expenditure during the fag end of the project.

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

45. Necessary calculations for depreciation is as under:

	<i>(Rs. in lakh)</i>			
	<b>2015-16 (18.7.2015 to31.3.2016)</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Average capital cost (A)	662343.13	671560.63	684381.01	697215.83
Value of freehold land (other than for reservoir) included above (B)	13367.05	13998.15	14678.30	15197.57
Weighted average rate of depreciation (C)	4.8699%	4.8704%	4.8563%	4.8383%
Balance useful life (D)	35.00	34.30	33.30	32.30
Aggregated depreciable value [E = (A-B) x 90%]	584078.47	591806.24	602732.44	613816.44
Remaining depreciable value (F = E - K of previous year/period)	584078.47	569069.17	547291.38	525152.57
<b>Depreciation (annualized) (G = A x C)</b>	<b>32255.29</b>	<b>32707.46</b>	<b>33235.78</b>	<b>33733.22</b>
<b>Depreciation (pro-rata) (H = G x 258/366)</b>	<b>22737.34</b>	<b>32707.46</b>	<b>33235.78</b>	<b>33733.22</b>
Cumulative depreciation (at the end of the period) (I = H + K of previous year/period)	22737.34	55444.53	88676.84	122397.09
Less: Cumulative depreciation adjustment due to de-capitalization (J)	0.27	3.47	12.97	23.77
Net cumulative depreciation (at the end of the period) (K = I - J)	22737.07	55441.06	88663.86	122373.32

### **Operation & Maintenance Expenses**

46. Sub-clause (d) of clause (3) of Regulation 29 of the 2014 Tariff Regulations provides as under:

“29. Operation and Maintenance Expenses:

#### **3. Hydro Generating Station**

“(d) In case of the hydro generating stations declared under commercial operation on or after 1.4.2014, operation and maintenance expenses shall be fixed at 4% and 2.50% of the original project cost (excluding cost of rehabilitation & resettlement works) for first year of commercial operation for stations less than 200 MW projects and for stations more than 200 MW respectively and shall be subject to annual escalation of 6.64% per annum for the subsequent years.”



47. In Commission's order dated 5.4.2018, the capital cost of Rs. 678099.40 lakh and Rehabilitation & Resettlement (R&R) expenses of Rs.12074.55 lakh as on cut-off date of the generating station i.e. 31.3.2018, was considered and the O&M expenses allowed for the period 2014-19 in terms of Regulation 29(3)(d) of the 2014 Tariff Regulations, is as under:

<i>(Rs in lakh)</i>			
<b>2015-16 (18.7.2015 to 31.3.2016)</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
16650.62	17756.22	18935.24	20192.54

48. The Petitioner has claimed O&M expenses for the period 2014-19, as under:

<i>(Rs in lakh)</i>			
<b>2015-16 (18.7.2015 to 31.3.2016)</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
17210.17	18352.92	19571.55	20871.11

49. Considering the revised capital cost of Rs.690596.70 lakh, as on the cut-off date i.e., 31.3.2018 and R&R expenses of Rs.8215.36 lakh, as on cut-off date of the generating station, the O&M expenses has been worked out and allowed in line with Regulation 29(3)(d) of the 2014 Tariff Regulations as under:

<i>(Rs in lakh)</i>				
	<b>2015-16 (18.7.2015 to 31.3.2016)</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
O&M expenses (annualized)	17059.53	18192.29	19400.25	20688.43
O&M expenses (pro-rata)	12025.57	18192.29	19400.25	20688.43

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

#### ***Impact of wage revision***

50. The Petitioner has claimed an amount of Rs.4206.67 lakh (Rs.72.62 lakh in 2015-16, Rs.938.18 lakh in 2016-17, Rs.1425.59 lakh in 2017-18 and Rs.1770.28 lakh in 2018-19) towards pay revision of Employees w.e.f. 1.1.2017 and that of Central Industrial Security Force (in short "CISF") w.e.f. 1.1.2016 for the generating



station during the period 1.1.2016 to 31.3.2019. Further, the impact of increase in gratuity limit from 10 lakhs to 20 lakhs consequent upon amendment in Payment of Gratuity Act, 1972 has also been implemented in the year ended 31.3.2017.

51. The Petitioner has submitted the impact of the pay revision of Employees, CISF and Kendriya Vidyalaya Staff for the generating station for the period 1.4.2014 to 31.3.2019, as under:

<i>(Rs. in lakh)</i>				
<b>Period</b>		<b>NTPC Employee</b>	<b>CISF Staff</b>	<b>Total</b>
01.01.2016-31.03.2016	Pre-Revised	0.00	235.18	235.18
	Post Revision	0.00	286.37	286.37
	Wage rev. impact	0.00	51.19	51.19
01.04.2016-31.03.2017	Pre-Revised	1000.38	910.52	1910.90
	Post Revision	1722.40	1126.66	2849.06
	Wage rev. impact	722.02	216.14	938.16
01.04.2017-31.03.2018	Pre-Revised	4916.05	1004.67	5920.72
	Post Revision	6034.92	1311.40	7346.32
	Wage rev impact	1118.87	306.73	1425.60
01.04.2018-31.03.2019	Pre-Revised	3594.23	1114.36	4708.59
	Post Revision	5024.30	1454.57	6478.87
	Wage rev impact	1430.07	340.21	1770.28
Total Impact during the period	Pre-Revised	9510.66	3264.73	12775.39
	Post Revision	12781.62	4179.00	16960.62
	Wage revision impact	3270.96	914.27	4185.23

52. The Petitioner vide its affidavit dated 12.8.2021 has submitted the following:

- a. Break-up of actual O&M expenditure for the tariff period 2014-19 in the format issues by this Hon'ble Commission in other cases;
- b. Detailed break up of actual O & M expenses of corporate centre/ other offices in the format prescribed by this Hon'ble Commission in other cases;
- c. Break-up of claimed wage revision impact on employees cost, expenses on corporate centre and on salaried of CISF & KV employees of the generating station for 2014-19 tariff period;

53. The Respondent UPPCL has submitted that the Petitioner has prayed for the increased employee cost with effect from 1.1.2017/ 1.1.2016 due to revision in the salary and wages. The Respondent has further submitted that the Petitioner in para 19 of the Petition has stated that the Commission in the Explanatory Memorandum



to the Draft 2019 Tariff Regulations had not considered such revision, while arriving at normative O&M expenses for the period 2019-24. The Respondent has further submitted that on the issue of revision of normative O&M consequent upon such pay revision, the Commission vide its order dated 28.7.2016 in Petition No. 290/GT/2014, had observed as under:

*“61. Accordingly, the prayer of the petitioner for enhancement of O&M expenses if any, due to pay revision may be examined by the Commission, on a case to case basis, subject to the implementation of pay revision as per DPE guidelines and the filing of an appropriate application by the petitioner in this regard.”*

54. The Respondent has also submitted that based on the above, the Petitioner is required to submit appropriate application for examination of the Commission and thus, there is no scope for revision of O&M expenses, as a result of such pay revision in the present petition. The Respondent has also stated that O&M expenses may be allowed as decided in the 2014 Tariff Regulations.

55. In response, the Petitioner has submitted that the Commission vide its order dated 2.9.2021 in Petition No. 300/GT/2020, (NTPC vs UPPCL & ors), had principally allowed the said claim and therefore this issue is no more *res integra*. The details with respect to the said claims has been submitted by the Petitioner vide its additional affidavit dated 12.8.2021.

56. As regards the impact of wage revision in O&M expenses, paragraph 29(4) of the draft 2014 Tariff Regulations states as under:

*“29 (4) The impact of wage revision if any, during the tariff period shall be allowed in due consideration of Government of India, Department of Public Enterprise guidelines and considering following percentage of O&M as employee cost:*

*Coal/Lignite based Stations: 40%  
Gas/liquid fuel based stations: 32%  
Hydro Generating Stations: 46%  
Transmission system: 40%”*





57. The Commission in paragraph 33.2 of the SOR to the 2014 Tariff Regulations had observed the following:

*"33.2 The draft Regulations provided for a normative percentage of employee cost to total O&M expenses for generating stations and transmission system with an intention to provide a ceiling limit so that the same should not lead to any exorbitant increase in the O&M expenses resulting in spike in tariff. The Commission shall examine the increase in employee expenses on case to case basis and shall consider the same if found appropriate, to ensure that overall impact at the macro level is sustainable and thoroughly justified. Accordingly, clause 29(4) proposed in the draft Regulations has been deleted. The impact of wage revision shall only be given after seeing impact of one full year and if it is found that O&M norms provided under Regulations are inadequate/insufficient to cover all justifiable O&M expenses for the particular year including employee expenses, then balance amount may be considered for reimbursement."*

58. It is observed that the above methodology as indicated in SOR suggests comparison of normative O&M expenses with actual O&M expenses on year-to-year basis. However, in this respect, the following facts need consideration:

- a) The norms are framed based on the averaging of the actual O&M expenses of past five years to capture the year-on-year variations in sub-heads of O&M expenses.
- b) Certain cyclic expenditure may occur with a gap of one year or two years and as such adopting a longer duration i.e. five years for framing of norms also captures such expenditure which is not incurred on year-to-year basis.
- c) When the generators find that their actual expenditure has gone beyond the normative O&M in a particular year, they put departmental restrictions and try to bring the expenditure for the next year below the norms.

59. In consideration of above, the Commission finds it appropriate to compare the normative O&M expenses with the actual O&M expenses for a longer duration, so as to capture the variation in sub-heads of O&M expenses, due to above mentioned facts. Accordingly, it is decided that for ascertaining as to whether the O&M expense norms provided under the Regulations are adequate/ sufficient to cover all justifiable O&M expenses, including employee expenses, after wage revision, the comparison of the normative and actual O&M expenses shall be made for three years i.e., 2016-



19, on combined basis, which commensurate with the wage revision claim being spread over the three years.

60. In view of the above, the following is the comparison of the normative O&M expenses allowed to the generating station for the period 2016-19 versus the actual O&M expenses incurred after considering the impact of wage revision:

*(Rs. in lakh)*

Year	Normative O&M expenses as per Regulations	Actual Audited O&M expenses	Difference between the normative and actual O&M expenses	Wage revision impact claimed
2015-16 (18.7.2015 to 31.3.2016)	12025.57	7633.32	(-) 4392.25	51.19
2016-17	18192.29	13255.64	(-) 4936.65	938.18
2017-18	19400.25	14613.27	(-) 4786.98	1425.59
2018-19	20688.43	14858.50	(-) 5829.93	1770.28
<b>Total</b>	<b>70306.55</b>	<b>50360.73</b>	<b>(-) 19945.82</b>	<b>4185.24</b>

61. It is observed from the table above that for the years for the wage revision impact i.e., 2015-16 to 2018-19, the normative O&M expenses allowed, on a combined basis, is in excess of the actual expenses incurred by the Petitioner. As such, the Commission is not inclined to allow the recovery of wage revision through additional O&M expenses, since the normative O&M expenses allowed to the generating station in terms of the 2014 Tariff Regulations are sufficient to cater to the requirement of the impact of wage revision.

### ***Impact of Goods & Services Tax***

62. The Petitioner has also claimed reimbursement of the additional tax paid due to implementation of GST in respect of generating station as additional O&M expenses and for this purpose, it has prayed for relaxation of the provisions of Regulation 29(3) in exercise of the powers under Regulation 54 and Regulation 55 of the 2014 Tariff



Regulations. The Petitioner has further submitted that the implementation of GST is a “change in law” event and the impact of the same should be passed through in tariff. As such, the tax paid in O&M expenses of plants (service portion) is claimed over and above the O&M expenses of the respective power stations. The Petitioner has submitted that it had filed Petition No. 228/MP/2018 for extension of cut-off date (31.03.2018) of the generating station, which was disposed of by the Commission vide order dated 13.3.2019 directing the Petitioner to claim the capitalization of expenditure in respect of these works, as and when incurred.

63. The Respondent UPPCL has submitted that neither adequate details along with the claims nor auditor certificate has been provided in the petition. It has further stated that as a matter of equitable justice, the O&M expenses as a whole need a comprehensive review of norms covering all expenditures considered while fixing the O&M norms in order to allow or otherwise of such additional cost on account of GST or any additional O&M on any account whatsoever.

64. In response, the Petitioner has submitted that vide order dated 14.3.2018 in Petition No. 13/SM/2017, the Commission has held that GST amounts to a ‘change in law’ and hence the impact of such change in law is to be passed through in tariff. Accordingly, the additional impact of GST in 2017-18 (1.7.2017 to 31.3.2018) and 2018-19 as submitted by the Petitioner, duly certified by statutory auditors, are as under:

<i>(Rs. in lakh)</i>	
<b>2017-18 (1.7.2017 to 31.3.2018)</b>	<b>2018-19</b>
128.87	179.82

65. The matter has been considered. It is observed that the Commission while



specifying the O&M expense norms for the period 2014-19 had considered taxes to form part of the O&M expense calculations and, accordingly, had factored the same in the said norms. This is evident from paragraph 49.6 of the SOR (Statement of Objects and Reasons) to the 2014 Tariff Regulations, which is extracted hereunder:

*“49.6 With regards to suggestion received on other taxes to be allowed, the Commission while approving the norms of O&M expenses has considered the taxes as part of O&M expenses while working out the norms and therefore the same has already been factored in...”*

66. Further, the escalation rates considered in the O&M expense norms under the 2014 Tariff Regulations is only after accounting for the variations during the period from FY 2008-09 to FY 2012-13, which in our view, takes care of any variation in taxes also. It is pertinent to mention that in case of reduction of taxes or duties; no reimbursement is ordered. In this background, we find no reason to allow the prayer for grant of additional O&M expenses towards payment of GST.

### **Interest on Working Capital**

67. The sub-section (c) of clause (1) of Regulation 28 of the 2014 Tariff Regulations provides as under:

*“28 (1) (c) Hydro generating station including pumped storage hydroelectric generating station and transmission system including communication system:  
 (i) Receivables equivalent to two months of fixed cost;  
 (ii) Maintenance spares @ 15% of operation and maintenance expenses specified in regulation 29; and  
 (iii) Operation and maintenance expenses for one month.”*

### **Working capital for Receivables**

68. The receivable component of working capital has been worked out based on two months of fixed cost as under:

<i>(Rs. in lakh)</i>			
<b>2015-16 (18.7.2015 to 31.3.2016)</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
15820.36	22617.45	22140.24	22437.87



### **Working capital for Maintenance Spares**

69. The maintenance spares @ 15% of O&M expenses is worked out and allowed as under:

<i>(Rs. in lakh)</i>			
<b>2015-16 (18.7.2015 to 31.3.2016)</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
1803.84	2728.84	2910.04	3103.26

### **Working capital for O&M Expenses**

70. The O&M expenses for 1 month for the purpose of working capital is allowed as under:

<i>(Rs. in lakh)</i>			
<b>2015-16 (18.7.2015 to 31.3.2016)</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
1002.13	1516.02	1616.69	1724.04

### **Rate of Interest on Working Capital**

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

*"(3) Rate of interest on working capital shall be on normative basis and shall be considered as the bank rate as on 1.4.2014 or as on 1st April of the year during the tariff period 2014-15 to 2018-19 in which the generating station or a unit thereof or the transmission system including communication system or element thereof, as the case may be, is declared under commercial operation, whichever is later."*

72. In terms of the above regulations, the bank rate of 13.50% (Base rate of 10% + 350 bps) as on 1.4.2014 has been considered by the Petitioner, the same has been retained for the purpose of tariff.

73. Accordingly, interest on working capital is allowed as under:

<i>(Rs. in lakh)</i>				
	<b>2015-16 (18.7.2015 to 31.3.2016)</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Working capital for O&M expenses	1002.13	1516.02	1616.69	1724.04
Working capital for Maintenance Spares	1803.84	2728.84	2910.04	3103.26
Working capital for Receivables	15820.36	22617.45	22140.24	22437.87
<b>Total Working Capital</b>	<b>18626.33</b>	<b>26862.31</b>	<b>26666.97</b>	<b>27265.17</b>
Rate of Interest	13.50%	13.50%	13.50%	13.50%
<b>Interest on Working Capital (pro-rata)</b>	<b>2514.55</b>	<b>3626.41</b>	<b>3600.04</b>	<b>3680.80</b>



### **Annual Fixed charges for the period 2014-19**

74. Based on the above, the annual fixed charges (on pro-rata basis) approved for the generating station for the period 2014-19 is summarized as under:

	<i>(Rs. in lakh)</i>			
	<b>2015-16 (18.7.2015 to 31.3.2016)</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Depreciation	22737.34	32707.46	33235.78	33733.22
Interest on Loan	28262.36	38916.53	33536.59	32533.23
Return on Equity	29382.33	42261.98	43068.78	43991.53
Interest on Working Capital	2514.55	3626.41	3600.04	3680.80
O&M Expenses	12025.57	18192.29	19400.25	20688.43
<b>Total (pro-rata)</b>	<b>94922.16</b>	<b>135704.67</b>	<b>132841.45</b>	<b>134627.22</b>

*Note: All figures under each head have been rounded. The figure in total column in each year is also rounded. As such, the sum of individual items may not be equal to the arithmetic total of the column.*

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

75. The Commission in its order dated 5.4.2018 had allowed the NAPAF of 90% for the generating station. Accordingly, the NAPAF of 90% has been considered for the generating station.

### **Design Energy**

76. The Commission in its order dated 5.4.2018 had allowed the annual Design Energy (DE) of 3054.79 MUs for the period 2014-19, for the generating station. Accordingly, the same has been considered, as per month-wise details below:

<b>Month</b>		<b>Design Energy (MUs)</b>
April	I	59.21
	II	57.80
	III	89.80
May	I	103.87
	II	186.01
	III	206.82
June	I	64.92
	II	171.32
	III	118.63
July	I	155.60



Month		Design Energy (MUs)
	II	192.00
	III	211.20
August	I	192.00
	II	192.00
	III	211.20
September	I	129.86
	II	93.03
	III	71.50
October	I	46.88
	II	44.33
	III	41.29
November	I	30.49
	II	27.94
	III	25.39
December	I	24.48
	II	24.48
	III	26.93
January	I	24.48
	II	24.48
	III	26.93
February	I	24.48
	II	24.48
	III	19.58
March	I	24.48
	II	39.39
	III	47.51
<b>Total</b>		<b>3054.79</b>

77. Petition No. 363/GT/2020 is disposed in terms of the above.

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

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

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

