

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 98/GT/2020

Coram:

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

Date of Order: 2nd May, 2022

IN THE MATTER OF

Petition for revision of tariff of Tehri Hydroelectric Power Project, Stage-I (1000 MW) for the period from 1.4.2014 to 31.3.2019 after truing-up

AND

IN THE MATTER OF

THDC India Limited,
Bhagirath Puram,
Rishikesh-249001, Uttarakhand

....Petitioner

Vs

1. Punjab State Power Corporation Limited,
The Mall, Patiala – 147001 (Punjab)
2. Haryana Power Utilities,
Shakti Bhawan, Sector 6,
Panchkula – 134 109 (Haryana)
3. Uttar Pradesh Power Corporation Limited,
Shakti Bhawan, 14, Ashok Marg,
Lucknow – 226001 (UP)
4. BSES Rajdhani Power Limited,
BSES Bhawan, Nehru Place,
New Delhi-110019
5. BSES Yamuna Power Limited,
3rd Floor, Shakti Kiran Building, Karkardooma,
New Delhi-110092
6. Tata Power Delhi Distribution Limited,
33 KV Grid Sub-Station Building, Hudson Lane, Kingsway Camp,
Delhi-110009



7. Chandigarh Administration,
1st Floor, UT Secretariat, Sector 9-D,
Chandigarh-160009
8. Uttarakhand Power Corporation Limited,
Urja Bhawan, Kanwali Road,
Dehradun-248001 (UK)
9. Himachal Pradesh State Electricity Board Limited,
Vidyut Bhawan, Shimla-171004
10. Jaipur Vidyut Vitran Nigam Limited,
Vidyut Bhawan, Janpath, Jyotinagar,
Jaipur-302005 (Rajasthan)
11. Ajmer Vidyut Vitran Nigam Limited,
Old Powerhouse, Hatthi Bhatta, Jaipur road,
Ajmer-305001 (Rajasthan)
12. Jodhpur Vidyut Vitran Nigam Limited,
New Powerhouse, Industrial Area,
Jodhpur-342003 (Rajasthan)
13. Power Development Department,
Government of J&K, Civil Secretariat,
Jammu -180001 (J&K)

....Respondents

Parties present:

Ms. Anushree Bardhan, Advocate, THDCIL
Ms. Srishti Khindaria, Advocate, THDCIL
Shri Ravi Nair, Advocate, THDCIL
Shri Rajesh Sharma, THDCIL
Shri Mukesh Kumar Verma, THDCIL
Shri Ajay Vaish, THDCIL
Shri Rakesh Singh, BRPL
Shri Brijesh Kumar Saxena, UPPCL
Shri Raunak Jain, Advocate, TPDDL
Shri Ravindra Khare, MPPMCL
Ms. Megha Bajpeyi, BRPL
Shri R.B. Sharma, Advocate, BRPL
Shri Mohit Mudgal, Advocate, BYPL

ORDER

This petition has been filed by the Petitioner THDC, for truing up the tariff of Tehri Hydroelectric Power Project, Stage-I (4 x 250 MW) (the generating



station) for the period from 1.4.2014 to 31.3.2019 in accordance with 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 located in the State of Uttarakhand is a storage type hydro power generating station, providing peaking power and is designed to produce annual energy generation of 2797 MUs. The Tehri Hydro Power Complex comprises of the generating station (1000 MW), Tehri Pumped Storage Generating station (1000 MW) and downstream power station at Koteshwar (400 MW). The entire Tehri Power Complex is scheduled to have an aggregate capacity of 2400 MW. The generating station comprises of four units with a capacity of 250 MW each. The dates of commercial operation of the units of the generating station are as under:

Unit-IV	22.9.2006
Unit-III	9.11.2006
Unit-II	30.3.2007
Unit-I/ Generating station	9.7.2007

3. The Commission vide its order dated 20.3.2017 in Petition No. 172/GT/2015 revised the tariff of the generating station, after truing up exercise for the 2009-14 tariff period. Aggrieved by the said order, the Petitioner had filed Review Petition No. 20/RP/2017 (in Petition No.172/GT/2015) on certain grounds. During the pendency of this review petition, the Commission vide its order dated 29.3.2017 in Petition No. 178/GT/2015 determined the tariff of the generating station for the 2014-19 tariff period. Thereafter, the Review Petition No.20/RP/2017 was partially allowed and the capital cost and annual fixed charges for the tariff periods 2009-14 and 2014-19 respectively were revised vide order dated 5.12.2017.



Accordingly, the capital cost and annual fixed charges determined by order dated 5.12.2017 were as under:

Capital Cost allowed

	(Rs. in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Capital Cost	705372.64	706052.34	707686.88	709193.68	711182.69
Add: Additional capital expenditure allowed	679.70	1634.54	1506.80	1989.01	3823.96
Closing Capital Cost as on 31 st March of the year	706052.34	707686.88	709193.68	711182.69	715006.65

Annual Fixed Charges allowed

	(Rs. in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Return on Equity	53355.92	53614.07	53614.07	53614.07	53614.07
Interest on Loan	24260.10	20038.02	15623.89	11177.81	6866.07
Depreciation	37063.58	37080.85	37156.14	37210.21	37315.63
Interest on Working Capital	3818.61	3806.05	3789.66	3777.58	3775.70
O & M Expenses	21340.78	22757.81	24268.93	25880.39	27598.84
Total	139839.00	137296.80	134452.68	131660.05	129170.31

4. The Petitioner has filed the present petition for truing up of tariff of the generating station for the 2014-19 tariff period, and has claimed the following capital cost and annual fixed charges:

Capital cost claimed

	(Rs. in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Capital Cost	705372.64	708835.16	713113.40	717304.00	723725.64
Add: Addition during the year/ period	6370.99	4530.49	4620.24	6374.95	613.03
Less: Decapitalization during the year/ period	3894.15	272.36	532.11	102.38	10.26
Less: Reversal during the year/period	0.00	0.00	0.00	0.00	0.00
Add: Discharge during the year/ period	985.68	20.11	102.46	149.07	20.64
Closing Capital Cost	708835.16	713113.40	717304.00	723725.64	724349.05

Annual Fixed Cost claimed

	(Rs. in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	37133.88	37261.77	37410.34	37602.41	37738.85
Interest on Loan	24199.35	20383.37	16287.36	9848.11	6303.04
Return on Equity	53355.00	53613.50	53613.50	53613.50	53755.11
Interest on Working	3818.81	3818.15	3608.86	3500.22	3404.59



Capital					
O & M Expenses	21340.78	22757.81	24268.93	25880.39	27598.84
Total	139847.81	137834.61	135189.00	130444.64	128800.43

5. Reply to the Petition has been filed by the Respondent UPPCL (vide affidavit dated 28.5.2020), Respondent MPPMCL (vide affidavit dated 23.7.2020), Respondent BRPL (vide affidavit dated 24.7.2020). The Petitioner has filed its rejoinder to the said replies vide affidavits dated 20.7.2020, 26.7.2020/8.9.2020 and 16.9.2020 respectively. The matter was heard on 27.7.2020 and the Commission vide ROP directed the Petitioner to file certain additional information. In compliance, the Petitioner has filed the additional information on 24.7.2020 and 28.8.2020, after serving copies to the Respondents. The Petitioner vide affidavit dated 12.4.2021 has modified/corrected its submission (regarding main generating equipment for 2015-16) made earlier vide affidavit dated 28.8.2020. Thereafter, this petition, along with Petition No. 97/GT/2020 (tariff of the generating station for 2019-24 tariff period) was heard through video conferencing on 29.6.2021 and the Commission reserved its order in these matters. Based on the submissions of the parties, and the documents available on record, we now proceed to examine the claim of the Petitioner, in this petition, in subsequent paragraphs.

Capital Cost

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

*“9 (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 modernization as admitted by this Commission in accordance with Regulation 15.
xxx”*

7. Clause (3) of Regulation 9 of the 2014 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. The Commission vide its order dated 5.12.2017 in Review Petition No. 20/RP/2017 (in Petition No.172/GT/2015) had approved the capital cost of Rs.705372.64 lakh for the generating station as on 31.3.2014. The Petitioner, in this petition, has claimed the opening capital cost of Rs.705372.64 lakh as on 1.4.2014, for the purpose of tariff and the same has been considered as the opening capital cost as on 1.4.2014 for the purpose of truing-up of tariff of the generating station for the 2014-19 tariff period.

Additional capital expenditure for the 2014-19 tariff period

8. Clause (3) of Regulation 7 of the 2014 Tariff Regulations provides that the application for determination of tariff shall be based on admitted capital cost including any additional capital expenditure already admitted up to 31.3.2014 (either based on actual or projected additional capital expenditure) and estimated additional capital expenditure for the respective years of the 2014-19 tariff period.

9. Regulation 14 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;*
- (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.;*
- (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 powerhouse 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"

10. The Petitioner, in Form-9C, has submitted the reconciliation statement of the actual additional capital expenditure, as against capital additions as per books of accounts for the 2014-19 tariff period as under:

	2014-15	2015-16	2016-17	2017-18	2018-19
Addition made in Gross Block of Fixed Assets as per Books	2748.19	4438.85	6039.05	6314.90	898.75
Less: Liability up to 31 st march of the year	0.00	0.00	0.00	0.00	0.00
Add: Discharged liability (created up to cut-off date)	118.44	1.82	8.33	148.88	0.66



	2014-15	2015-16	2016-17	2017-18	2018-19
Add: Discharged liability (created after cutoff date up to 2014)	867.24	0.00	0.00	0.19	0.00
Less: Liability during the year i.e. after 31.3.2014	18.29	108.53	0.00	19.98	249.43
Add: Discharged liability (created from 2014-15 & onward)	0.00	18.29	93.50	0.00	19.98
Less: Minor assets or assets not considered for tariff	253.06	72.19	84.32	22.35	46.54
Net Additional Capital Expenditure claimed prior to adjustment of liability, but after De-capitalization	3462.52	4278.25	6056.56	6421.64	623.42
Form 9A (Gross Additions)	6389.28	4639.02	4620.24	6394.93	862.46
Less Form 9B(i) (De-capitalization)	3894.15	272.36	532.11	102.38	10.26
Net Additional capitalization as per Form 9C	2495.13	4366.66	4088.14	6292.55	852.20
Add Discharged Liability as per Form 11	985.68	20.11	102.46	149.07	20.64
Less Liability as per Form 9A	18.29	108.53	0.00	19.97	249.43
Net Additional Capital Expenditure	3462.52	4278.25	4190.60	6421.65	623.42

11. The year-wise break-up of the actual net additional capital expenditure claimed by the Petitioner is summarized as under:

	2014-15	2015-16	2016-17	2017-18	2018-19	(Rs. in lakh) Total
Addition during the year / period	6370.99	4530.49	4620.24	6374.95	613.03	22509.70
Less: De-capitalization during the year / period	3894.15	272.36	532.11	102.38	10.26	4811.25
Add: Discharges during the year / period	985.68	20.11	101.83	149.07	20.64	1277.33
Net Additional capitalization during the year	3462.52	4278.25	4189.97	6421.64	623.42	18975.78

12. The Respondent, UPPCL has submitted that the assets for which additional capital expenditure has been claimed by the Petitioner are in wide variance with the projected additional capital expenditure in terms of assets capitalized. The Respondent, BRPL has submitted that the additional capital expenditure claimed for the 2014-19 tariff period under Regulation 14(3)(viii) of the 2014 Tariff Regulations, can be justified only if such a claim is on account of damage caused by natural calamities and due to geological reasons accompanied with expenditure



needed on additional work necessary for successful and efficient plant operation. It has submitted that as the claim is not referable to such reasons, the same is liable to be rejected. The Respondent has pointed out that the Petitioner has also claimed large amounts towards minor items under Regulation 14(3)(viii) of the 2014 Tariff Regulations which are also not permissible under the proviso to Regulation 14(3)(x) of the 2014 Tariff Regulations. The Respondent, MPPMCL has submitted that Petitioner has claimed many expenses as additional capital expenditure under Regulation 14(3) (iii) of the 2014 Tariff Regulations, without providing the relevant documents/ recommendations of appropriate authority. It has also submitted that the Petitioner has claimed various items under proviso to Regulation 14(3)(viii), which do not directly pertain to the efficient operation of the generating station.

13. In response to the above, the Petitioner in its rejoinder has submitted that it had filed affidavit revising the actual additional capital expenditure for 2014-15 and projected expenditure for the period 2015-19, based on which the Commission vide its order dated 29.3.2017 in Petition No. 178/GT/2015 had observed that the said affidavit will be considered at the time of truing up with detailed justification. It has also pointed out that asset-wise reply has been submitted and certain expenditure towards additional capitalization has been claimed due to compliance of the orders and IB recommendations. The Petitioner has further submitted that it has submitted all relevant information/documents for the 2014-19 tariff period and further additional documentary proof and detailed justifications with regard to the additional capital expenditure have already been submitted in its rejoinder to the reply filed by Respondent UPPCL. The Petitioner has clarified that it has not claimed any items which are in the nature of O&M expenses and also not claimed



any assets against replacement of old assets.

14. We have considered the matter. The submission of the Respondent BRPL that the additional capital expenditure claimed under Regulation 14(3)(viii) of the 2014 Tariff Regulations, can be justified only if such a claim is on account of damage caused by natural calamities and due to geological reasons accompanied with expenditure needed on additional work necessary for successful and efficient plant operation is not acceptable. In our view, Regulation 14(3)(vii) of the 2014 Tariff Regulations provides for additional capitalization of expenditure which has become necessary on account of damage caused by natural calamities and also for expenditure incurred due to any additional work which has become necessary for successful and efficient plant operation. Accordingly, based on the submissions of the parties, we proceed to examine the claims of the Petitioner for the 2014-19 tariff period and on prudence check, allow the same, as detailed below:

2014-15

Sl. No.	Works	Claimed (Rs. in lakh)	Allowed (Rs. in lakh)	Reasons for admissibility
A. Regulation 14(3) (viii) (already admitted)				
1	2-ton capacity auxiliary hoist for draft tube gate cavern	10.31	10.31	The Petitioner has submitted that no arrangement for Draft tube Gate groove and Gates is provided at Upper expansion chamber. Thus, the requirement of 2-ton capacity Auxiliary hoist was necessitated for proper, safe and efficient maintenance of Draft Tube Gate grooves. It is observed that the Commission vide its order dated 29.3.2017 in Petition No. 178/GT/2015, had allowed the additional capitalization of this asset/work for Rs.10.00 lakh in year 2014-15. Considering the fact that the assets/works are considered necessary for the successful and efficient plant operation of the generating station, the additional capital expenditure is allowed under Regulation



Sl. No.	Works	Claimed (Rs. in lakh)	Allowed (Rs. in lakh)	Reasons for admissibility
				14(3)(viii) of the 2014 Tariff Regulations.
2	Strong motion accelerographs (sma) set	161.95	161.95	The Petitioner has submitted that as per recommendation of the Standing Advisory Committee, strong motorway motion accelerograph is required because of yields and response of the structure like dam, spillway, powerhouse and its behavior during an earthquake. Such records also provide us insight status and condition of structure after an earthquake. It is observed that the Commission vide its order dated 29.3.2017 in Petition No. 178/GT/2015, had allowed the additional capitalization for this asset/work for Rs.162.00 lakh in 2014-15. Considering the fact that the assets/works are considered necessary for the successful and efficient plant operation of the generating station, the expenditure is allowed under Regulation 14(3)(viii) of the 2014 Tariff Regulations.
3	Grouting work in powerhouse complex	1346.53 753.79	1346.53 753.79	The Petitioner has submitted that these works have been carried out as recommended by HP Moscow and Russian consultant after commissioning of the project for efficient plant operation. Considering the fact that these works will facilitate successful and efficient plant operation of the generating station, the expenditure is allowed under Regulation 14(3)(viii) of the 2014 Tariff Regulations.
4	Computer software	13.48	0.00	Considering the fact that the expenditure incurred is for assets which are not directly related to Plant & Machinery, the additional capitalization claimed is not allowed .
A. Regulation 14(3) viii (New Item)				
5	Heavy duty polyester webbing sling with -250mm	0.81	0.00	Considering the fact that the expenditure incurred is for assets which are in the nature of O&M expenses, the additional capitalization claimed is not allowed .
6	Ungalvanized steel core wire rope sling rope dia.32mm	0.33	0.00	
7	Ungalvanized steel core wire rope sling rope dia.32mm	0.12	0.00	
8	Alloy steel grade 63 d-shackle capacity 25 ton body dia 56mm	0.12	0.00	



Sl. No.	Works	Claimed (Rs. in lakh)	Allowed (Rs. in lakh)	Reasons for admissibility
9	Polyester web anti abrasive sleeve with 250 mm (4ply) capacity 25 ton x length 1 mtrs thickness 14mm	0.06	0.00	
10	Vertical submersible	1.47	1.47	The Petitioner has submitted that these assets have been procured in order to meet any exigencies in case of accumulation of water due to any reason inside the powerhouse and other location and this is the basic requirement for the safety of the Powerhouse. Considering the fact that the assets/works are considered necessary for the successful and efficient plant operation of the generating station, the expenditure is allowed under Regulation 14(3)(viii) of the 2014 Tariff Regulations.
11	End suction pump	1.41	1.41	
12	Spilt casing pump horizontal type	2.93	2.93	
13	Construction of driver room near admin block B. Puram	2.82	0.00	Considering the fact that the expenditure incurred is for assets/works which are not directly related to Plant and Machinery, the additional capitalization claimed is not allowed .
14	Construction of server room	2.26	0.00	
15	Construction of photo gallery at top terrace	1.27	0.00	
16	Tipper 01 number	15.12	15.12	The Petitioner has submitted that to meet out the requirement of transportation of goods/materials on the project additional tipper have been purchased for efficient plant operation. Considering the fact that the assets/works are considered necessary for the successful and efficient plant operation of the generating station, the expenditure is allowed under Regulation 14(3)(viii) of the 2014 Tariff Regulations.
17	Tata lpt 709	8.81	8.81	The Petitioner has submitted that TATA LPT was required for CISF personnel (VazraVahan) for security of the project. Considering the fact that the assets/works are considered for safety of the plant, the expenditure claimed is allowed under Regulation 14(3)(iii) of the 2014 Tariff Regulations.
18	Pre-fab dock system	87.29	87.29	The Petitioner has submitted that the asset/work is a basic requirement for proper boarding and lighting out of motorboat and



Sl. No.	Works	Claimed (Rs. in lakh)	Allowed (Rs. in lakh)	Reasons for admissibility
				Barrage and docking of boats. Considering the fact that the assets/works are considered necessary for the successful and efficient plant operation of the generating station, the expenditure is allowed under Regulation 14(3)(viii) of the 2014 Tariff Regulations.
19	Const. of 5 numbers bath room CISF line	0.38	0.00	Considering the fact that the expenditure incurred is for assets which are not directly related to Plant and Machinery, the additional capitalization claimed is not allowed .
20	Construction of tin shed house for new DG set	5.14	0.00	The Petitioner has submitted that the construction of tin shed is required to protect DG set from weather related effect. This DG set is required to maintain electricity uninterruptedly for Admin block or guest house and is for successful and efficient plant operation. Considering the fact that the expenditure incurred is for assets which are not directly related to Plant and Machinery, the additional capitalization claimed is not allowed .
21	Drilling cutting machine	11.15	0.00	Considering the fact that the expenditure incurred is for assets which are in the nature of tools & tackles, the additional capitalization claimed is not allowed .
22	Submersible pump set 75 hp	10.44	0.00	The Petitioner has submitted that new pump is required to strengthen the drinking water scheme of the project colony and is for successful and efficient operation of plant. Considering the fact that the expenditure incurred is for assets which are not directly related to Plant and Machinery, the additional capitalization claimed is not allowed .
23	Centrifugal multistage pump set kirlosker make 150hp 1 number	5.75	0.00	The Petitioner has submitted that Pump is required for strengthening the drinking water scheme of the project Colony which is essentially required for proper functioning. Considering the fact that the expenditure incurred is for assets which are not directly related to Plant and machinery, the additional capitalization of the same is not allowed .
24	Kirlosker make centrifugal multistage pump set model mll 11 stage 125 hp 1	18.56	0.00	The Petitioner has submitted that to meet out the drinking water requirement of the colony, water supply scheme of the project need to be strengthened. Hence new pump was procured. Considering the fact that the



Sl. No.	Works	Claimed (Rs. in lakh)	Allowed (Rs. in lakh)	Reasons for admissibility
	number			expenditure incurred is for assets which are not directly related to Plant and machinery, the additional capitalization of the same is not allowed .
	Total	2462.30	2389.60	
B. New Items-Regulation 14(3) (vii) & Regulation 14(3)(viii)				
25	Rehabilitation expenses	3819.52	3819.52	The Petitioner in compliance to the directions of the Commission has submitted that the total expenditure of Rs.38.19 crore was incurred during 2014-15 for Rehabilitation works in compliance of the order of GOI dated 9.12.1998, the decision taken in meeting with Joint Secretary (Hydro)- GOI held on 5.2.2008, meeting dated 30.6.2011 under Chairmanship of Secretary (Power)-GOI, the direction/order of Hon'ble Supreme Court and the decision taken in meeting held on 11.6.2015 with Secretary (Irrigation), GOI wherein decision was taken to release funds under different heads. The fund was released in a phased manner, as per progress of work. During 2014-15, a net sum of Rs.38.19 crore was spent. Considering the submissions of the Petitioner in justification of the claim and the fact that the expenditure is for assets/works is for compliance of the order or decree of a court of law, the same is allowed under Regulation 14(3)(i) of the 2014 Tariff Regulations.
	Total	3819.52	3819.52	
C. Regulation 14(3)(iii) (already admitted)				
26	IB recommendations (night vision device 2 numbers)	4.05	4.05	The Petitioner has submitted that the expenditure has been incurred as per IB recommendation for safety and security of the project. The Petitioner has submitted that the documents are confidential in nature and can be produced to the Commission, if required. It is observed that the Commission vide its order dated 29.3.2017 in Petition No 178/GT/2015, had allowed the additional capitalization for this asset/work for Rs.10.00 lakh in 2014-15. Considering the fact that the expenditure is for assets/works which are considered necessary for safety & security of the generating station, the same is allowed under Regulation 14(3)(iii) of the 2014 Tariff Regulations.
27	Installation of high mast	49.43	49.43	The Petitioner has submitted that the expenditure incurred is to maintain



Sl. No.	Works	Claimed (Rs. in lakh)	Allowed (Rs. in lakh)	Reasons for admissibility
				adequate illumination over the DAM and Plant area, as a measure to prevent burglary, sabotage and terrorist activity as per the recommendation of IB. The Petitioner has submitted that the documents are confidential in nature and can be produced to the Commission, if required. Considering the fact that the expenditure is for assets/works which are considered necessary for safety & security of the generating station, the same is allowed under Regulation 14(3)(iii) of the 2014 Tariff Regulations.
28	Cyber roam	5.88	0.00	Considering the fact that the expenditure incurred is for assets which are in the nature of Software the additional capitalization of the same is not allowed .
29	Tipper 01 number	15.12	15.12	The Petitioner has submitted that to meet out the requirement of transportation of goods/materials on the project additional tipper have been purchased for efficient plant operation. Considering the fact that the assets/works are considered necessary for successful and efficient plant operation of the generating station, the expenditure is allowed under Regulation 14(3)(viii) of the 2014 Tariff Regulations.
	Total	74.48	68.60	
30	JCB loader 01 number	14.69	0.00	The Petitioner has submitted that a small size machine was required that could work inside gallery for their cleanliness and could work at the place where loader cannot work due to space constraint. Considering the fact that the expenditure incurred is for assets which are not directly related to Plant and Machinery, the additional capitalization claimed is not allowed .
	Total	14.69	0.00	
Total Additional Expenditure (A + B + C +D)		6370.99	6277.72	

15. Accordingly, the total additional capital expenditure allowed is Rs.6277.72 lakh (Rs.68.60 lakh + Rs.2389.60 lakh + Rs.3819.52 lakh) in 2014-15.

2015-16



Sl. No.	Works	Claimed (Rs. in lakh)	Allowed (Rs. in lakh)	Reason for admissibility
A. Regulation 14(3) (viii) (Already Admitted)				
1	Digitizer for siemens 100 m a X-ray machine with 19' LCD monitor & UPS 2kv etc - Hospital equipment	8.93	8.93	The Petitioner has submitted that the equipment have been purchased for proper health checkup of O&M staff. It is observed that the Commission vide its order dated 29.3.2017 in Petition No 178/GT/2015 had allowed the additional capitalization for this asset/work for Rs.5.92 lakh, in 2016-17. Considering the fact that the assets/works are considered necessary for the successful and efficient operation of the plant, the expenditure claimed is allowed under Regulation 14(3)(viii) of the 2014 Tariff Regulations.
2	Runner inspection device for generating station (4x250mw) powerhouse (O&M)	16.23	16.23	The Petitioner has submitted that an additional device was required for taking up maintenance of 2 Units as a parallel activity for early restoration. This device is required to facilitate accurate visual inspection of underwater parts like upper cone and runner. The device also ensures safety of the personnel carrying out the job, since the conventional method are quite unsafe and time taking. With the use of this device, the inspecting persons can go very close to the surface for visual inspection and other diagnostic testing. It is observed that the Commission vide its order dated 29.3.2017 in Petition No 178/GT/2015 had allowed the additional capitalization for this asset/work for Rs.75.00 lakh, in year 2016-17. Considering the fact that the assets/works are considered necessary for the successful and efficient plant operation of the generating station, the expenditure is allowed under Regulation 14(3)(viii) of the 2014 Tariff Regulations.
A. Regulation 14(3) (viii) (New Items)				
3	Winch 2-ton capacity	0.68	0.00	The Petitioner has submitted that miscellaneous types of loading & unloading works are carried out vertically in project area. Therefore, winch of 2 T capacity was procured to attend the same safely and smoothly. Considering the fact that the expenditure incurred is for assets which are in the nature of O&M expenses, the additional capitalization claimed is not allowed .
4	Electromagnetic flow meter	1.85	1.85	The Petitioner has submitted that the flow meters are installed to monitor cooling water



Sl. No.	Works	Claimed (Rs. in lakh)	Allowed (Rs. in lakh)	Reason for admissibility
				flow to shaft seal. Originally, pressure based mechanical dial type flow meters were installed in Cooling Water pipelines. Those flow meters used to display faulty readings and generated erroneous signals which lead to tripping of Units during peaking hours, attracting penalties. After installation of electromagnetic flow meters, tripping and thus penalties have been avoided. Considering the fact that the assets/works are considered necessary for the successful and efficient plant operation of the generating station, the expenditure is allowed under Regulation 14(3)(viii) of the 2014 Tariff Regulations. The Petitioner has however, not considered the de-capitalization of old asset/work and hence, an amount of Rs.1.19 lakh has been considered under 'Assumed Deletions'.
5	Eot crane 10 T capacity for draft tube gate	26.30	26.30	The Petitioner has submitted that periodic inspection of TRT is a very critical activity of civil works keeping in view Plant generation. EOT Crane of 10 T Capacity for Draft Tube Gate was required to facilitate this critical activity as man, material and machine are to be vertically carried out from EL 637 M to EL 577 M through this crane safely for inspection and repair purpose. Considering the fact that the assets/works are considered necessary for successful and efficient plant operation of the generating station, the expenditure is allowed under Regulation 14(3)(viii) of the 2014 Tariff Regulations. The Petitioner has, however, not considered the de-capitalization of old asset/work and hence, the amount of Rs.16.15 lakh has been considered under 'Assumed Deletions'.
6	Water supply equipment pump control panel with 75hp starter (mech.)	18.94	18.94	The Petitioner has submitted that Pump and Starter are purchased for strengthening the water supply scheme of underground Powerhouse. Considering the fact that the assets/works are considered necessary for successful and efficient plant operation of the generating station, the expenditure is allowed under Regulation 14(3)(viii) of the 2014 Tariff Regulations.
7	Power to construction Works - LT line near Dibnu	9.43	0.00	Considering the fact that the expenditure incurred is for assets which are not directly related to Plant and Machinery, the additional capitalization claimed is not allowed .



Sl. No.	Works	Claimed (Rs. in lakh)	Allowed (Rs. in lakh)	Reason for admissibility
8	Lab & testing equipment	1.26	0.00	Considering the fact that the expenditure incurred is for assets which are in the nature of O&M expenses, the additional capitalization claimed is not allowed .
9	Bio station bst - with 12 v, lamp power adaptor	2.42	0.00	Considering the fact that the expenditure incurred is for assets which are not directly related to Plant and Machinery, the additional capitalization claimed is not allowed .
10	Led flood light filling 150 w 240 v-280 vac	1.03	0.00	Considering the fact that the expenditure incurred is for assets which are in the nature of O&M expenses, the additional capitalization claimed is not allowed .
11	Construction of server room and driver room for IT department and admin block-b puram (bcm)	1.36	0.00	Considering the fact that the expenditure incurred is for assets which are not directly related to Plant and machinery, the additional capitalization claimed is not allowed .
12	Parking shed at admin block	3.80	0.00	
13	Extension of road in Project area (Part 1)	113.11	0.00	The Petitioner has submitted that new road is constructed in B.Puram colony area. Considering the fact that the expenditure incurred is for assets which are not directly related to Plant and machinery, the additional capitalization of the same is not allowed .
14	Protection Work of road between Ch 570 to 650 M in B.Puram Colony	33.80	0.00	The Petitioner has submitted that Protection work was done for new constructed road between Ch 570 to 650 M in Project area. Considering the fact that the expenditure incurred is for assets which are in the nature of minor asset the additional capitalization of the same is not allowed
15	Protection Work of road between Ch 290 to 370 M in B. Puram Colony	7.64	0.00	The Petitioner has submitted that Protection work was done for new constructed road between Ch 290 to 370 M in Project Area. Considering the fact that the expenditure incurred is for assets which are in the nature of O&M the additional capitalization of the same is not allowed .
16	Extension of road in Project area (Part 2)	0.81	0.00	The Petitioner has submitted that new road constructed in B. Puram colony area. Considering the fact that the expenditure incurred is for assets which are not directly related to Plant and Machinery, the additional capitalization claimed is not allowed .
17	QC lab	0.55	0.00	Considering the fact that the expenditure



Sl. No.	Works	Claimed (Rs. in lakh)	Allowed (Rs. in lakh)	Reason for admissibility
	equipment			incurred is for assets which are minor in nature, the additional capitalization claimed is not allowed .
18	Safety equipment smoke detector - power house (safety)	7.53	7.53	The Petitioner has submitted that the expenditure has been incurred to protect plant from any fire accident and to act on fire incidence well in advance. Considering the fact that the assets/works are considered necessary for the safety & security of the generating station, the expenditure claimed is allowed under Regulation 14(3)(iii) of the 2014 Tariff Regulations.
	Total	255.67	79.78	
B. Regulation 14(3) iii (New Items)				
19	Royal Enfield motorcycle bullet model 350 uce - uk09a/7454	1.07	1.07	The Petitioner has submitted that the motorcycle has been purchased for CISF unit, Tehri for security purpose. The Petitioner has submitted that the documents are confidential in nature and can be produced in front of Commission, if required. Considering the fact that the expenditure is for assets/works which are considered necessary for the safety of the generating station, the same is allowed under Regulation 14(3)(iii) of the 2014 Tariff Regulations.
20	Multizone doorframe metal detector cist	2.04	2.04	The Petitioner has submitted that metal detector has been purchased for safety of Dam and underground Powerhouse as per requirement of CISF. The Petitioner has submitted that the documents are confidential in nature and can be produced in front of Commission, if required. Considering the fact that the expenditure is for assets/works which are considered necessary for safety of the generating station, the same is allowed under Regulation 14(3)(iii) of the 2014 Tariff Regulations.
21	Under Vehicle Inspection System (uvis) trolley mirror – CISF powerhouse	0.40	0.40	The Petitioner has submitted that trolley mirror has been purchased for safety of Dam and underground Powerhouse as per requirement of CISF. The Petitioner has submitted that the documents are confidential in nature and can be produced in front of Commission, if required. Considering the fact that the expenditure is for assets/works which are considered necessary for safety of the generating station and is within the balance limit, the same is allowed under Regulation 14(3)(iii)



Sl. No.	Works	Claimed (Rs. in lakh)	Allowed (Rs. in lakh)	Reason for admissibility
				of the 2014 Tariff Regulations.
22	Residential building - 5 numbers cp bathroom for cist	0.76	0.00	Considering the fact that the expenditure incurred is for assets which are not directly related to Plant and Machinery, the additional capitalization claimed is not allowed .
23	Other building - cist barrack	202.81	202.81	The Petitioner has submitted that due to induction of additional CISF staff at project area, 03 numbers additional barrack constructed for their accommodation. The Petitioner has submitted that the documents are confidential in nature and can be produced in front of Commission, if required. Considering the fact that the expenditure is for assets/works which are considered necessary for safety of the generating station and is within the balance limit, the same is allowed under Regulation 14(3)(iii) of the 2014 Tariff Regulations.
	Total	207.08	206.32	
C. New Items- Regulation 14(3)(vii) and Regulation 14(3)(viii)				
24	Rehabilitation expenses	4067.75	4067.75	The Petitioner in compliance to the directions of the Commission has furnished that the additional capital expenditure has been made in compliance to the Hon'ble supreme Court's order dated 15.4.2011 and 13.5.2011 and in reference of meeting held on 30.6.2011 under the chairmanship of JS (H) GOI on various rehabilitation issues, wherein decision was taken to release funds under different heads. The fund was released in a phased manner, as per progress of work. During 2015-16, a net sum of Rs.40.68 crore was spent. Considering the submissions of the Petitioner in justification of the claim and the fact that the expenditure is for assets/works is for compliance of the order or decree of a court of law, the same is allowed under Regulation 14(3)(i) of the 2014 Tariff Regulations.
	Total	4067.75	4067.75	
Total (A+B+C)		4530.49	4353.84	

16. Accordingly, the total additional capital expenditure allowed is Rs.4353.84 lakh (Rs.79.78 lakh + Rs.206.32 lakh + Rs.4067.75 lakh) in 2015-16.

2016-17



Sl. No.	Works	Claimed (Rs. in lakh)	Allowed (Rs. in lakh)	Reason for admissibility
A. Regulation 14(3) (viii) (already admitted)				
1	Wi fi device	1.86	1.86	The Petitioner has submitted that the expenditure is for Wi-Fi Connectivity at project's office area & Powerhouse. It is observed that the Commission in its order dated 29.3.2017 in Petition No 178/GT/2015 had allowed the additional capitalization for this asset/work for Rs.2.26 lakh in 2014-15. Considering the fact that the assets/works are considered necessary for the successful and efficient plant operation of the generating station, the expenditure is allowed under Regulation 14(3)(viii) of the 2014 Tariff Regulations.
2	Club building construction of multipurpose hall between C&D type	21.67	21.67	The Petitioner has submitted that the restoration is also essential to protect the EL-840M road which is the only connecting road for movement/ transportation of heavy equipment of Generating station/PSP & KHEP. It is observed that the Commission in its order dated 29.3.2017 in Petition No. 178/GT/2015 had allowed the additional capitalization for this asset/work for Rs.450.00 lakh in 2017-18. Considering the fact that the assets/works are considered necessary for the successful and efficient plant operation of the generating station, the expenditure is allowed under Regulation 14(3)(viii) of the 2014 Tariff Regulations.
3	DG set	2.46	2.46	The Petitioner has submitted that the additional capital expenditure has been made in order to monitor reservoir area during the monsoon (Disaster Management Work). Considering the fact that the assets/works are necessary for the successful and efficient plant operation of the generating station, the expenditure is allowed under Regulation 14(3)(viii) of the 2014 Tariff Regulations.
A. New Items - Regulation 14(3)(viii)				
4	Main generating equipment - installation & commissioning of 800 xa HMI & IMS upgradation	190.54	190.54	The Petitioner has submitted that the older version of CPU's (supporting Win NT/200) & accessories of the installed OS AS520 working on Window NT platform was obsolete because of advancement and adoption of latest technologies by manufacturing companies. Further, Microsoft has globally withdrawn all support for earlier platforms i.e. Window NT, XP and server 2003 system. Spare machine (CPU)



Sl. No.	Works	Claimed (Rs. in lakh)	Allowed (Rs. in lakh)	Reason for admissibility
				<p>similar to existing configuration was also not available in the market for last past few years. The old system used to experience technical snag like hanging and crashing of CPU at several times during operation. In the event of OS getting non-operational, operator had the only option to operate the machine from Unit Control Board i.e. manually. In that case, operator was not able to monitor various operating parameter of the unit and trends. Therefore, up-gradation of existing OS to the latest operating system and latest server platform was essentially required for efficient working.</p> <p>Considering the fact that the assets/works are considered necessary for successful and efficient plant operation of the generating station, the expenditure is allowed under Regulation 14(3)(viii) of the 2014 Tariff Regulations. It is noticed that the Petitioner has not considered the de-capitalization of old asset/work and hence, the amount of Rs.116.97 lakh has been considered under 'Assumed Deletions',</p>
5	Plant Battery bank	342.78	342.78	<p>The Petitioner has submitted that the existing battery banks were procured in year 2002 and commissioned during 2003-04. These banks had undergone physical deformation, corrosion of positive strap and decomposition of lead plates over the operating cycle as a result of which the performance was deteriorating. For the control & protection system of the plant, healthiness of the DC battery bank is absolutely essential. In the event of disruption of DC supply, control & protection system shall no longer be in operation and will lead to shut down of the plant. Therefore, it is evident that DC supply system equipped with battery bank plays instrumental role in un-interrupted operation of the plant and hence replacement of the existing battery banks was done.</p> <p>Considering the fact that the assets/works are considered necessary for the successful and efficient operation of the generating station, the expenditure is allowed under Regulation 14(3)(viii) of the 2014 Tariff Regulations. It is noticed that the Petitioner has not considered the de-capitalisation of old asset/work and hence, the amount of</p>



Sl. No.	Works	Claimed (Rs. in lakh)	Allowed (Rs. in lakh)	Reason for admissibility
				Rs.210.44 lakh has been considered under 'Assumed Deletions',
6	Lab & testing equipment flame photometer	0.97	0.00	Considering the fact that the expenditure incurred is for assets which are in the nature of tools & tackles, the additional capitalization claimed are not allowed .
7	Common meter reading instrument (cmri) (handheld computer PC lite)	0.61	0.00	
8	Lab & testing equipment - flexural strength testing equipment and beam molds	3.82	0.00	
9	Fabrication generator maintenance device	3.58	0.00	Considering the fact that the expenditure incurred is for asset which is in the nature of O&M expenses, the additional capitalization claimed is not allowed .
10	Video conferencing system for ED Office	3.19	0.00	Considering the fact that the expenditure incurred is for assets which are not directly related to Plant and Machinery, the additional capitalization claimed is not allowed .
11	2 numbers transformer oil storage tank - powerhouse	26.97	0.00	Considering the fact that the expenditure incurred is for assets which are not directly related to Plant and Machinery, the additional capitalization claimed is not allowed .
12	Office building in central store at Koti	14.77	0.00	
13	Car, jeep, motorcycle - GPS system	0.68	0.00	The Petitioner has claimed these expenditures in order to fulfil the needs during the visits of dignitaries to the project site. As the additional capital expenditure incurred on procurement of vehicles for dignitaries do not contribute to the efficient operation of the generating station, the claim is not allowed .
14	Car, jeep, motorcycle – Toyota Fortuner Sigma 4 for VIP guests	35.35	0.00	
15	Oxygen monitoring equipment for powerhouse	2.98	0.00	Considering the fact that the expenditure incurred is for assets which are minor in nature, the additional capitalization claimed is not allowed .
16	Water supply equipment laying of 100mm dia GI pipe line from Ilo dam site to Khand nala	16.38	0.00	Considering the fact that the expenditure incurred is for assets which are not directly related to Plant and Machinery, the additional capitalization claimed is not allowed .



Sl. No.	Works	Claimed (Rs. in lakh)	Allowed (Rs. in lakh)	Reason for admissibility
17	Online transformers dry out system	24.52	24.52	The Petitioner has submitted that this device removes the moisture content from the transformer oil and winding insulation in the running and idle condition of the transformer for the healthiness of the transformer. Putting the transformer under continues dry out is aimed at mitigating the possibility of outage of the transformer for a longer duration. Considering the fact that the assets/works are considered necessary for the successful and efficient plant operation of the generating station, the expenditure is allowed under Regulation 14(3)(viii) of the 2014 Tariff Regulations.
18	Substations equipment - 250 kva DG set	16.63	0.00	The Petitioner has submitted that the asset/work has been claimed for alternate power supply of New office building at B. Puram. Considering the fact that the expenditure incurred is for assets which are in the nature of O&M expenses, the additional capitalization claimed is not allowed .
19	Electric panel	13.47	0.00	Considering the fact that the expenditure incurred is for assets which are in the nature of O&M expenses, the additional capitalization claimed is not allowed .
20	Illumination system	0.38	0.00	Considering the fact that the expenditure incurred is for assets which are not directly related to Plant and Machinery, the additional capitalization claimed is not allowed .
21	Main generating equipment-Transformer winding resistance measuring kit, model tem 25 with laptop	7.03	0.00	Considering the fact that the expenditure incurred is for assets which are in the nature of tools & tackles, the additional capitalization claimed are not allowed .
22	HV magnetizing kit - powerhouse	3.23	0.00	
23	Hydro static level measurement system - powerhouse	9.11	0.00	
24	Uniphose 225pm portable gas monitor with rechargeable (nimh battery)	1.50	0.00	Considering the fact that the expenditure incurred is for assets which are not directly related to Plant and Machinery, the additional capitalization claimed is not allowed .



Sl. No.	Works	Claimed (Rs. in lakh)	Allowed (Rs. in lakh)	Reason for admissibility
25	Search light	0.07	0.00	Considering the fact that the expenditure incurred is for assets which are minor in nature, the additional capitalization claimed is not allowed .
26	Small value sound level meter	0.03	0.00	
27	Safety equipment - resistance meter	0.12	0.00	
29	Main generation spares	100.15	0.00	Considering the fact that capitalization of spares is not allowed after the cutoff date, the additional capitalization claimed is not allowed .
30	Main generating equipment - 420kv, 2000a busduct	7.37	7.37	The Petitioner has submitted that the expenditure is outstanding payment of M/S Siemens towards retention amount for the services portion of Gas Insulated Switchgear (GIS) system for Generating station against agreement No. THDC/RKSH/188/AG(ii). Considering the fact that amount incurred is towards outstanding payments made and keeping in view that the asset/work is necessary for successful and efficient plant operation of the generating station; the expenditure claimed is allowed under Regulation 14(3)(viii) of the 2014 Tariff Regulations.
	Total	852.21	591.19	
B. Regulation 14(3)(vii) and Regulation 14(3) (viii)				
31	Rehabilitation Expenses	3570.43	3570.43	The Petitioner in compliance to the directions of the Commission has furnished that in compliance of GOI Office Memorandum dated 26.8.2016 in reference of meeting held on 30.6.2011 & 10.08.2016 under the chairmanship of JS (H) GOI on various rehabilitation issues, wherein decision was taken to release funds under different heads. The fund was released in a phased manner, as per progress of work. During 2016-17, a net sum of Rs.35.70 crore was spent. Considering the submissions of the Petitioner in justification of the claim and the fact that the expenditure is for assets/works is for compliance of the order or decree of a court of law, the same is allowed under Regulation 14(3)(i) of the 2014 Tariff Regulations.
	Total	3570.43	3570.43	
C. Regulation 14(3)(iii) (New Item)				
32	CCTV camera setup	173.76	173.76	The Petitioner has submitted that the additional capital expenditure has been made for the purpose of complete



Sl. No.	Works	Claimed (Rs. in lakh)	Allowed (Rs. in lakh)	Reason for admissibility
				surveillance of total DAM area, Powerhouse & all entry gates of project area as per requirement of CISF. It is observed that the asset/work was earlier allowed by the Commission for Rs.44.35 lakh vide order dated 29.3.2017 in Petition No. 178/GT/2015. Considering the fact that the expenditure is for assets/works which are considered necessary for safety of the generating station, the same is allowed under Regulation 14(3)(iii) of the 2014 Tariff Regulations.
33	Street light pole	18.52	0.00	Considering the fact that the expenditure incurred is for assets which are not directly related to Plant and Machinery, the additional capitalization claimed is not allowed .
34	Safety Equipment - Electronic ID Verification System	4.16	4.16	The Petitioner has submitted that the documents in support of the expenditure are confidential in nature and can be produced to the Commission, if required. Considering the fact that the expenditure is for assets/works which are considered necessary for the safety of the generating station and is within the balance limit, the same is allowed under Regulation 14(3)(iii) of the 2014 Tariff Regulations.
35	Boom barrier	1.17	1.17	The Petitioner has submitted that the documents are confidential in nature and can be produced to the Commission, if required. Considering the fact that the expenditure is for assets/works which are considered necessary for safety of the generating station and is within the balance limit, the same is allowed under Regulation 14(3)(iii) of the 2014 Tariff Regulations.
	Total	197.60	179.09	
	Total additional expenditure (A + B +C)	4620.24	4340.71	

17. Accordingly, the total additional capital expenditure allowed is Rs.4340.71 lakh (Rs.179.09 lakh + Rs.591.19 lakh + Rs.3570.43 lakh) in 2016-17.

2017-18

Sl. No.	Works	Claimed (Rs. in lakh)	Allowed (Rs. in lakh)	Reason for admissibility
A. Regulation 14(3) viii (New Item)				
1	Toe	474.54	474.54	The Petitioner has submitted that the
		296.58	296.58	



Sl. No.	Works	Claimed (Rs. in lakh)	Allowed (Rs. in lakh)	Reason for admissibility
	strengthening			restoration is also essential to protect the EL-840M road which is the only connecting road for movement/ transportation of heavy equipment of generating station/PSP & KHEP. Considering the fact that the assets/works are considered necessary for successful and efficient operation of the generating station, the expenditure is allowed under Regulation 14(3)(viii) of the 2014 Tariff Regulations.
2	Main generating equipment- hp air compressor including fresh water-cooling arrangement & accessories- powerhouse	225.27	0.00	The Petitioner has submitted that the High-Pressure Compressor was procured for stability of compressed air system which creates high pressure air for the operation of Units and reactive power synchronization mode. Considering the fact that the expenditure incurred is for assets which are in the nature of O&M the additional capitalization of the same is not allowed .
3	Ambulance	6.10	6.10	The Petitioner has submitted that the expense has been incurred for hospital duty vehicle that has been purchase against BER vehicle UP08-3894 (De-capitalized on 2009-10 as per books of accounts). It is to be noted, that the Commission vide its order dated 29.3.2017 in Petition no 178/GT/2015 had allowed the additional capitalization for this asset/work for Rs.15.00 lakh, in year 2018-19. Considering the fact that the assets/works are considered necessary for successful and efficient plant operation of the generating station, the expenditure is allowed under Regulation 14(3)(viii) of the 2014 Tariff Regulations.
4	Tata Starbus school bus	0.50	0.50	The Petitioner has submitted that the expense has been incurred for vehicle for the transportation of students at project. It is to be noted, that the Commission vide its order dated 29.3.2017 in Petition no 178/GT/2015 had allowed the additional capitalization for this asset/work for Rs.80.00 lakh, in year 2016-17. Considering the fact that the asset/ works is considered necessary for the successful and efficient plant operation of the generating station, the expenditure is allowed under Regulation 14(3)(viii) of the 2014 Tariff Regulations.
A. New Items- Regulation 14(3) (viii)				
5	Early warning system-dam	201.72	201.72	The Petitioner has submitted that the additional capital expenditure has been made to establish flood forecast system for protection of DAM & other Structure.



Sl. No.	Works	Claimed (Rs. in lakh)	Allowed (Rs. in lakh)	Reason for admissibility
				Considering the fact that the assets/works are considered necessary for the successful and efficient plant operation of the generating station, the expenditure is allowed under Regulation 14(3)(viii) of the 2014 Tariff Regulations. It is noticed that the Petitioner has not considered the de-capitalization of old asset/work and hence, the amount of Rs.117.94 lakh has been considered under 'Assumed Deletions'
6	Electromagnetic flow meter mag flow size dn 250,200,65 dc-dc& flow indicator (892-1)	7.15	7.15	The Petitioner has submitted that flow meters installed in the generating station for measuring flow of cooling water of Stator Air Coolers LGB &UGB have deteriorated. So, 02 sets (06 numbers) of deteriorated flow meters have been replaced by new 02 sets of latest versions of electromagnetic flowmeter for smooth operation of generating units. Considering the fact that the assets/works are considered necessary for successful and efficient plant operation of the generating station, the expenditure is allowed under Regulation 14(3)(viii) of the 2014 Tariff Regulations. The Petitioner has not considered the de-capitalization of old asset/work and hence, the amount of Rs.4.18 lakh has been considered under 'Assumed Deletions'
7	Installation of new Cubical Distribution Panel in mechanical department	1.42	1.42	The Petitioner has submitted that Cubical panel has been installed in mechanical department for proper distribution of power network system & safety purpose as well to cater electric load of mechanical workshop. Considering the fact that the assets/works are considered necessary for the successful and efficient plant operation of the generating station, the expenditure is allowed under Regulation 14(3)(viii) of the 2014 Tariff Regulations.
8	Spirometer with usb/pc	0.19	0.00	Considering the fact that the expenditure incurred is for assets which are in the nature of tools & tackles, the additional capitalization claimed is not allowed .
9	B.p. apparatus (make mercury)	0.18	0.00	
10	Lab & testing equipment (humidity chamber)	1.48	0.00	
11	Wireless Network between Admin building and Powerhouse	0.77	0.00	Considering the fact that the expenditure incurred is for assets which are not directly related to Plant and machinery, the additional capitalization of the same is not allowed .



Sl. No.	Works	Claimed (Rs. in lakh)	Allowed (Rs. in lakh)	Reason for admissibility
	(PGCIL lease line connectivity)			
12	Ups 3 kva	0.50	0.00	Considering the fact that the expenditure incurred is for assets which are minor in nature, the additional capitalization claimed is not allowed .
13	Lader-bcm	0.15	0.00	Considering the fact that the expenditure incurred is for assets which are in the nature of O&M expenses, the additional capitalization claimed is not allowed .
14	Cold water fish hatchery	4.84	0.00	Considering the fact that the expenditure incurred is for assets which are not directly related to Plant and Machinery, the additional capitalization claimed is not allowed .
15	Street light arrangement for internal road of hec at dibnu	20.70	0.00	Considering the fact that the expenditure incurred is for assets which are in the nature of O&M expenses, the additional capitalization claimed is not allowed .
16	Mah-scorpio s5	11.13	0.00	Considering the fact that the expenditure incurred is for assets which are not directly related to Plant and Machinery, the additional capitalization claimed is not allowed .
17	Scorpio s-10, bs(iv) 4 wd	14.30	0.00	The Petitioner has claimed these expenditures in order to fulfil the needs during the visits of dignitaries to the project site. As the additional capital expenditure incurred on procurement of vehicles for dignitaries do not contribute to the efficient operation of the generating station, the same is not allowed .
18	Tata tipper	0.21	0.21	The Petitioner has submitted that in the procurement of Telco Vehicles through Das & DR/C payment were made against Performa invoice and later on actual invoice raised for the vehicles. In the adjustment in subsequent bills. Presently outstanding amount against various P.O is adjusted in forthcoming supplies. Considering the fact that the asset/work is balance payment and for asset/work which is considered necessary for the successful and efficient plant operation of the generating station, the expenditure is allowed under Regulation 14(3)(viii) of the 2014 Tariff Regulations.
19	Other hydraulic works	1.89	1.89	The Petitioner has submitted that the expenditure is in compliance of the interim award by Arbitration Tribunal. Considering the fact that the assets/works is incurred



Sl. No.	Works	Claimed (Rs. in lakh)	Allowed (Rs. in lakh)	Reason for admissibility
				due to interim award dated 31.8.2016 of the Arbitration tribunal, the expenditure is allowed under Regulation 14(3)(iii) of the 2014 Tariff Regulations. This is however, subject to the final decision in the arbitration matter.
20	School building	36.78	0.00	Considering the fact that the expenditure incurred is for assets which are in the nature of O&M expenses, the additional capitalization claimed is not allowed .
21	New road girls hostel 1 to girls hostel 2 & around play ground	121.71	0.00	The Petitioner has submitted that New road was required to join Girls Hostel-I to New Girls Hostel-II, Dibnu & around playground. Considering the fact that the expenditure incurred is for assets which are not directly related to Plant and Machinery, the additional capitalization claimed is not allowed .
22	Treatment - slope EL 750 to 810m near old Police station	542.37	0.00	Considering the fact that the expenditure incurred is for assets which are in the nature of O&M expenses, the additional capitalization claimed is not allowed .
23	Construction P&M spares	5.30	0.00	Considering the fact that capitalization of spares is not allowed after the cutoff date, the additional capitalization claimed is not allowed .
24	Main generation spares	82.14	0.00	
25	Unclassified land (rehabilitation expenses)	4315.76	4315.76	The Petitioner has submitted that the additional capital expenditure incurred is as per Tehri Dam Rehabilitation Policy 1998 and meetings held under the Chairmanship of JS. (Hydro) GOI on 5.2.2008, Secretary (Power), GOI on 30.6.2011 and JS (Hydro) GOI on 10.8.2016. Considering the submissions of the Petitioner in justification of the claim and the fact that the assets/ works are considered necessary for the successful and efficient operation of the generating station, the expenditure is allowed under Regulation 14(3)(viii) of the 2014 Tariff Regulations.
	Total	6373.67	5305.86	
B. New Items- Regulation 14(3)(iii)				
26	CCTV system	1.05	1.05	The Petitioner has submitted that the additional capital expenditure has been incurred as per requirement of CISF. The CCTV camera has been installed for complete surveillance of DAM area, Powerhouse & all entry gates of Project. Considering the fact that the expenditure is for assets/works which are considered necessary for safety of the generating station and is within the balance limit, the
27		0.22	0.22	



Sl. No.	Works	Claimed (Rs. in lakh)	Allowed (Rs. in lakh)	Reason for admissibility
				same is allowed under Regulation 14(3)(iii) of the 2014 Tariff Regulations.
	Total	1.28	1.28	
	Total additional expenditure (A+B)	6374.95	5307.13	

18. Accordingly, the total additional capital expenditure allowed is Rs.5307.13 lakh (Rs.1.28 lakh + Rs.5305.86 lakh) in 2017-18.

2018-19

Sl. No.	Works	Claimed (Rs. in lakh)	Allowed (Rs. in lakh)	Reason for admissibility
A. Regulation 14(3) (viii) (already admitted)				
1	Establishment of real time flood forecasting system for Tehri Dam	12.06	12.06	The Petitioner has submitted that expenditure is required for early warning of flood for protection of Dam & other structure. It is to be noted, that the Commission vide its order dated 29.3.2017 in Petition no 178/GT/2015 had allowed the additional capitalization for this asset/work for Rs.272.50 lakh in year 2015-16. Considering the fact that the assets/works are considered necessary for successful and efficient plant operation of the generating station, the expenditure is allowed under Regulation 14(3)(viii) of the 2014 Tariff Regulations.
A. New Items-Regulation 14(3) (viii)				
2	Establishment of real time flood forecasting system for Tehri Dam	4.43	4.43	The Petitioner has submitted that expenditure is required for early warning of flood for protection of Dam & other structure. It is observed that the Commission vide its order dated 29.3.2017 in Petition No 178/GT/2015 had allowed the additional capitalization for this asset/work for Rs.272.50 lakh, in 2015-16. Considering the fact that the assets/works are considered necessary for the successful and efficient operation of the generating station, the expenditure is allowed under Regulation 14(3)(viii) of the 2014 Tariff Regulations.



Sl. No.	Works	Claimed (Rs. in lakh)	Allowed (Rs. in lakh)	Reason for admissibility
3	Biometric Machine	0.53	0.00	Considering the fact that the expenditure incurred is for assets which are not directly related to Plant and Machinery, the additional capitalization claimed is not allowed .
4	Biometric Machine	0.23	0.00	
5	Biometric Devices (5 numbers)	3.04	0.00	
6	Underwater colour video camera kit- hm	3.42	0.00	Considering the fact that the expenditure incurred is for assets which are in the nature of O&M expenses, the additional capitalization claimed is not allowed .
7	Purchase of BEML Wheel Loader	73.46	73.46	The Petitioner has submitted that available loaders are in very poor condition and required frequent repair. Considering the requirement of the project the said loader has been purchased and is utilized to maintain the various roads of the project, dragging work and other development work at various location at the Project site. Considering the fact that the assets/works are considered necessary for successful and efficient operation of the generating station, the expenditure is allowed under Regulation 14(3)(viii) of the 2014 Tariff Regulations.
8	Single fiber fusion splicer, OTDR (Optical time-domain reflectometer), fusion splicer tool kit	2.24	0.00	Considering the fact that the expenditure incurred is for assets which are in the nature of tools and tackles, the additional capitalization claimed is not allowed .
9	Workstation for repair and maintenance of OFC (Optical Fiber Cable) for uninterrupted monitoring/ control of Plant Equipment.	3.41	0.00	
10	BOLERO ZLX 2 WD PS-MECH	8.40	0.00	The Petitioner has claimed additional expenditure in order to fulfil the needs, during the visits of dignitaries to the project site. As the additional capital expenditure incurred on procurement of vehicles for dignitaries do not contribute to the efficient operation of the generating station, the



Sl. No.	Works	Claimed (Rs. in lakh)	Allowed (Rs. in lakh)	Reason for admissibility
				claim is not allowed .
11	Purchase of Bolero Jeep SLE	91.87	91.87	The Petitioner has submitted that considering the requirement of project, the said vehicle (jeep) has been purchased against replacement of the BER vehicle. Considering the fact that the assets/works are considered necessary for successful and efficient operation of the generating station and is on replacement basis, the expenditure is allowed under Regulation 14(3)(viii) of the 2014 Tariff Regulations. Further the Petitioner has submitted the Gross value of old asset the same has been considered under Decapitalization at paragraph 23.
12	Toyota Innova crysta 2.4 mt-7str-vx-mech	20.14	0.00	The Petitioner has claimed these expenditures in order to fulfil the needs during the visits of dignitaries to the project site. As the additional capital expenditure incurred on procurement of vehicles for dignitaries do not contribute to the efficient operation of the generating station, the claim is not allowed .
13	Bolero sle 2wd-mech	7.66	7.66	The Petitioner has submitted that considering the requirement of Project the said vehicle has been purchased against the replacement of BER vehicle. Considering the fact that the assets/works are considered necessary for successful and efficient operation of the generating station and is on replacement basis, the expenditure is allowed under Regulation 14(3)(viii) of the 2014 Tariff Regulations.
14	Purchase of TaTa Truck LPT - 1613	74.57	74.57	
15	HDPE Patrolling Boat with accessories - DAM	30.33	30.33	The Petitioner has submitted that HDPE boat was purchased for CISF patrolling in reservoir to ensure safety & security of Dam. Considering the fact that the asset is considered necessary for successful and efficient operation of the generating station, the expenditure is allowed under Regulation 14(3)(viii) of the 2014 Tariff Regulations.
16	Enterprise Antivirus for 3 years.	2.04	0.00	Considering the fact that the expenditure incurred is for assets which are in the nature of minor assets, the additional capitalization claimed is not allowed .
17	10 KVA 220 DC TO 230V 50 HZ AC industrial convector -	1.09	0.00	Considering the fact that the expenditure incurred is for assets which are in the nature of O&M expenses, the additional capitalization claimed is not allowed .



Sl. No.	Works	Claimed (Rs. in lakh)	Allowed (Rs. in lakh)	Reason for admissibility
	O&M			
18	Solar water heating system for CISF barrak at Bhagirathi puram.	10.28	0.00	
19	Small value items such as offline UPS (1 KVA) - 45 numbers; Modems - 6 numbers, Plan Telephone set etc.	2.30	0.00	
20	Supply, installation and commissioning of Auto Pump control panel with Hooter Box at Dam dewatering gallery	1.06	1.06	The Petitioner has submitted that the procurement of Auto Pump control panel with Hooter Box for Dam dewatering pumping system is necessary for the safety of Dam. Considering the fact that the assets/works are considered necessary for successful and efficient operation of the generating station, the expenditure is allowed under Regulation 14(3)(viii) of the 2014 Tariff Regulations.
21	Portable Submersible Pump - WATER SUPPLY	1.88	1.88	The Petitioner has submitted that Submersible pump was procured for dewatering of water during heavy flooding in turbine pit. Considering the fact that the assets/works are considered necessary for successful and efficient operation of the generating station, the expenditure is allowed under Regulation 14(3)(viii) of the 2014 Tariff Regulations.
22	SF6(Sulphur Hexafluoride) gas analyser kit for 420 kv GIS (Gas Insulated Switchyard)	16.76	0.00	The Petitioner has submitted that Gas Analyzer kit is required for analyzing quality of the SF6 gas filled in various parts/components of the switchyard which is very crucial in order to ascertain the healthiness of the switchyard. Also, since SF6 gas is a greenhouse gas and quality of that gas is required to be monitored regularly as per the norms of environment/OHSAS. Hence, in view of the above SF6 gas analyzer kit was procured from OEM. Considering the fact that the expenditure incurred is for assets which are in the nature of tools and tackles, the additional capitalization claimed is not allowed .



Sl. No.	Works	Claimed (Rs. in lakh)	Allowed (Rs. in lakh)	Reason for admissibility
23	Main generation spares	121.12	0.00	Considering the fact that capitalizations of spares is not allowed after the cut-off date, the additional capitalization claimed is not allowed .
24	Miscellaneous power plant spare	27.35	0.00	
25	SUB STATION EQUIPMENT- Outdoor pedestal type factory fabricated & vermin proof cubical LT feeder pillar	3.51	3.51	The Petitioner has submitted that Old LT panel was rusted & damaged and not safe for electrical operation hence was replaced with new LT panel. Considering the fact that the assets/works are considered necessary for successful and efficient operation of the generating station, the expenditure is allowed under Regulation 14(3)(viii) of the 2014 Tariff Regulations. It is noticed that the Petitioner has not considered the de-capitalization of old asset/work and hence, the amount of Rs.1.95 lakh has been considered under 'Assumed Deletions'.
26	Additional Sewage Treatment Plant (STP), MBBR (Moving Bed Biofilm Reactor) Type having Capacity 12 KLD (Kilo Ltr per Day), installed near interface building(IFB) of Tehri HEP	7.95	0.00	The Petitioner has submitted that the additional capital expenditure has been made as per the Water (Prevention and control of Pollution) Act 1974 as amended thereafter. It was directed to install appropriate capacity of STP/up gradation of existing STP to achieve prescribed standards with time targeted schedule. Hence to meet out the latest parameters set by NGT (National Green Tribunal), the new sewage Treatment Plant (STP) of capacity 12 KLD based on MBBR Technology along with accessories was installed. Considering the fact that the expenditure incurred is for assets which are not directly related to Plant and Machinery, the additional capitalization claimed is not allowed .
	Total	531.14	300.84	
B. New Items-Regulation 14(3)(iii)				
27	Procurement of New wireless sets for CISF.	18.69	18.69	The Petitioner has submitted that expenditure was for replacement of old wireless system with new wireless sets for CISF for safety of Dam and Powerhouse. Considering the fact that the expenditure is for assets/works which are considered necessary for safety of the generating station and is within the balance limit, the same is allowed under Regulation 14(3)(iii) of the 2014 Tariff Regulations.
	Total	18.69	18.69	
C. New Items-Regulation 14(3) (vii) and Regulation 14(3)(viii)				



Sl. No.	Works	Claimed (Rs. in lakh)	Allowed (Rs. in lakh)	Reason for admissibility
28	Rehabilitation works.	63.20	63.20	The Petitioner has submitted that expenditure was incurred as per Tehri Dam Rehabilitation Policy 1998, the decision of MOP on 11.06.2016, the meetings held under Chairmanship of Joint secretary (Hydro), GOI on 20.12.18 and as per Hon'ble Supreme Court directions. Considering the submissions of the Petitioner and keeping in view that the expenditure incurred is in respect of assets/works in compliance of the order of court, the same is allowed under Regulation 14(3)(i) of the 2014 Tariff Regulations.
	Total	63.20	63.20	
	Total Additional Expenditure (A+B+C)	613.03	382.73	

19. Accordingly, the total additional capital expenditure allowed is Rs.382.73 lakh (Rs.18.69 lakh + Rs.300.84 lakh + Rs.63.20 lakh) in 2018-19.

De-capitalization

20. As regards De-capitalization, 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.”

21. The Petitioner has claimed de-capitalization (as per Form 9Bi) for assets/works such as, Computer Monitor Printer UPS, elevator, vehicles, dam (original cost) & others, vehicles Spillways (original cost)-jpil & others, residential quarters, DG. sets assembling testing commissioning, elgi four post lift, jack hammer, hydraulic-dam, tunnels, channels and penstock, Sofa/Centre table, battery system - cooling system, battery charger, crane, battery Charger, Diamond



Core Milling/Lathe/Welding Machine, Turbines Unit-1, Dam & Barrages, Canals Shafts etc., Hydraulic Works, Camera, etc., during the 2014 -19 tariff period, as under:

<i>(Rs. in lakh)</i>				
2014-15	2015-16	2016-17	2017-18	2018-19
3894.15	272.36	532.11	102.38	10.26

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

Assumed Deletions

23. As per consistent methodology adopted by the Commission, the expenditure on replacement of assets, if found justified, is allowed for the purpose of tariff, provided that the capitalization of the said asset is followed by the de-capitalization of the original value of the old asset. However, in certain cases, where de-capitalization is affected in books during the following years, to the year of capitalization of new asset, the de-capitalization of the old asset for the purpose of tariff is shifted to the very same year in which the capitalization of the new asset is allowed. Such de-capitalization which is not a book entry in the year of capitalization is termed as "Assumed deletion". Further, in absence of the gross value of the asset being de-capitalized, the same is calculated by de-escalating the gross value of new asset @ 5% per annum till the year of capitalization of the old asset.

24. It is observed that the Petitioner, while claiming the additional capital expenditure has not provided de-capitalization value of old assets which are being replaced. Accordingly, based on above methodology, the following assumed deletions, is considered as under:



		(Rs. in lakh)
Year	Asset	Assumed deletion considered
2015-16	Electromagnetic flow meter	1.25
2015-16	Eot crane 10 T capacity for draft tube gate	17.80
2016-17	Main generating equipment - installation & commissioning of 800xa HMI & IMS upgradation	122.82
2016-17	Plant battery bank	220.96
2017-18	Early warning system-dam	123.84
2017-18	Electromagnetic flow meter mag flow size dn 250,200,65 dc-dc& flow indicator (892-1)	4.39
2018-19	Sub-station Equip- Outdoor pedestal type factory fabricated & vermin proof cubical LT feeder pillar	2.05

Discharge of Liabilities

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

(Rs. in lakh)				
2014-15	2015-16	2016-17	2017-18	2018-19
985.68	20.11	101.83	149.07	20.64

26. The Petitioner has furnished the Form-16 of liabilities in the present petition. Accordingly, on prudence check, the undischarged liabilities for 2014-19 tariff period, corresponding to allowed assets/works have been considered with their respective discharges made by the Petitioner. Accordingly, the discharge of liabilities allowed during the 2014-19 tariff period is as under:

(Rs. in lakh)					
	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Un-discharged liabilities (A)	2560.38	1574.70	1654.28	1563.92	1434.67
Liability Discharged (created before 1.4.2014) (B)	985.68	1.82	8.96	149.07	0.66
Allowed Undischarged Liability (created after 1.4.2014) (C)	0.00	81.40	0.00	19.82	228.37
Allowed Discharge of Liability (created after 1.4.2014) (D)	0.00	0.00	81.40	0.00	19.82
Total allowed liability discharged (E)=[(B)+(D)]	985.68	1.82	90.37	149.07	20.47
Closing Un-discharged liabilities (F) = [(A)+(C)-(E)]	1574.70	1654.28	1563.92	1434.67	1642.56

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



	(Rs. in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Additional capital expenditure	6277.72	4353.84	4340.71	5307.13	382.73
Add: Discharge during the year/ period	985.68	1.82	90.37	149.07	20.47
Less: Assumed deletions	0.00	19.06	343.78	128.23	2.05
Less: De-capitalization	3894.15	272.36	532.11	102.38	10.26
Net additional capital expenditure	3369.25	4064.25	3555.19	5225.59	390.89

28. Accordingly, the capital cost allowed for the generating station 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	705372.64	708741.89	712806.14	716361.33	721586.93
Add: Additional capital expenditure allowed	3369.25	4064.25	3555.19	5225.59	390.89
Closing Capital Cost as on 31 st March of the year	708741.89	712806.14	716361.33	721586.93	721977.82

Debt- Equity Ratio

29. 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 utilized 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 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."

30. Gross normative loan and equity amounting to Rs.449787.64 lakh and Rs.255585.00 lakh respectively, as on 31.3.2014, as considered vide order dated 5.12.2017 in Review Petition No. 20/RP/2017 (in Petition No. 172/GT/2015), has been considered as normative loan and equity as on 1.4.2014. As stated, the Commission in its order dated 16.4.2013 in Petition No. 250/GT/2010 had approved the annual fixed charges of the generating station considering the revised debt equity ratio of 60.70:39.30 (from 62.78:37.22) as on the COD of the generating station, based on order dated 7.1.2014 in Review Petition No.7/RP/2013. The relevant portion of the order is extracted as under:

"11. We have considered the submissions of the parties. We have decided in this order that the debt equity ratio of 60.70:39.30 as on COD would be applicable for apportioning the capital cost between debt and equity as on the COD. It follows as a natural corollary that any expenditure incurred after COD shall be considered as additional capital expenditure. As regards the servicing of the additional capital expenditure through debt or equity, we are of the view that the entire amount of additional capitalization should be treated as loan so as to bring overall debt equity ratio closer to the debt equity of 70:30 during the period 2004-09. This is in line with the methodology adopted in respect of tariff orders pertaining to some of the hydro generating stations of NHPC for the period 2004-09. We order accordingly."

31. In line with the above decision, the entire amount of admitted additional capital expenditure has been considered as loan.:



Asset	Capital Cost as on 1.4.2014		Net Additional Capitalization during 2014-19 tariff period		Capital Cost as on 31.3.2019	
	Amount	%	Amount	%	Amount	%
Debt	449787.64	63.77%	16605.18	100%	466392.82	64.60%
Equity	255585.00	36.23%	0.00	0%	255585.00	35.40%
Total	705372.64	100%	16605.18	100%	721977.82	100%

Return on Equity

32. 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.”

33. 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."

34. As regards deferred tax liability of the generating station, the Respondent BRPL has submitted the following:

- (a) Deferred tax liability is required to be dealt with in accordance with Regulation 49 of the 2014 Tariff Regulations, which restricts the claim of tax amount only to deferred tax liabilities up to 31st March 2009, whenever the same materializes.
- (b) The generating station is in commercial operation since 18.5.2004 and accordingly the provisions of the deferred tax liability and its over-payment by the beneficiaries are applicable to this generating station.
- (c) Further, during the tariff period 2004-09 there was no grossing up of the equity and the beneficiaries were paying income tax on actuals as per the 2004 Tariff Regulations. As the Respondents were paying the income tax on the generation business, without getting the benefits allowed under the Income Tax Act, 1961 and accordingly Respondents were made to pay huge amount in Income tax.
- (d) It may be noted that the Petitioner is required to pay back the extra amount of income tax after accounting for the benefits allowed under the Income Tax Act, 1961. As such, the Petitioner cannot be permitted to use the extra



payment made by the beneficiaries for its use or for payment of income tax for services offered by other profit centres, other than the operation business from this power station. Accordingly, the Petitioner should pay back the extra payment made under Regulation 49 of the 2014 Tariff Regulations.

- (e) No details of under-recovery or over-recovery of the grossed-up rate of return either claimed or refunded on year-to-year basis from/to the beneficiaries have been furnished by the Petitioner. Further it can be perused from the Profit & Loss Account for the 2014-19 tariff period that the Petitioner has not paid any Income tax during the entire tariff period. The reasons for not paying income tax is evidently clear that the infrastructure sector generating companies are entitled for huge benefits under the provisions of the Income Tax Act, 1961.

35. The Petitioner has clarified the following;

- (a) that the generating station was put to commercial operation as on 9.7.2007, instead of 18.5.2004. The Petitioner has made provision for deferred tax as per Accounting Standards in their books, which can be checked from the Balance Sheet & P&L account. However, ROE has been calculated in compliance with the 2014 Tariff Regulations.
- (b) duly audited effective tax rate, is already available in the petition. The Petitioner pays income tax on the total income earned from all the projects and the statement of income tax paid is shown in the Balance Sheet of the Petitioner. The Petitioner is maintaining books project/ unit wise and consolidate the accounts company as a whole. As per company's system, the income tax is worked out at Corporate Office and kept in the books of Corporate Office. To avoid duplicity in reflecting income tax, it is shown only in Company's balance sheet, not project wise. Therefore, effective tax rate of the Company is considered, as effective tax rate, for each individual project and is submitted in the petition.
- (c) Further, the Company being in power business is availing the benefit of tax holiday for the project from 2008-09 to 2017-18, but as per provisions of the Income Tax Act 1961, it is liable to pay a minimum tax on the deemed income computed as per provisions of section 115JB of the Income Tax Act 1961. However MAT credit as per section 115JAA of the Income tax act 1961, has been generated on the difference between normal tax liability computed as per normal provisions and the MAT tax liability, which can be claimed when company is liable to pay tax as per normal provisions i.e. 30% plus surcharge & education cess.
- (d) As such, the Company has availed MAT credit and paid tax as per MAT provision of Income Tax Act. Accordingly, the Return on Equity has been computed by grossing up the base rate with the actual rate of MAT/ Effective Tax Rate applicable for the period from 2014-15 to 2018-19. Thus, the benefit of MAT credit availed by company has been passed on to beneficiaries. Therefore, the statement of Respondent BRPL is not correct that company has not paid tax during tax holiday period.



36. We have considered the matter. It is noticed that in order to avoid duplicity in reflecting Income Tax, the same is shown only in Company's balance sheet and not project-wise. Further, it is noticed that the Return on Equity has been computed by grossing up the base rate with the actual rate of MAT/ Effective Tax Rate applicable for the period from 2014-15 to 2018-19 and that the benefit of MAT credit has been passed on to beneficiaries. Therefore, the effective tax rate of the Company is considered as the effective tax rate for each individual project and has been submitted in the petition. Considering the above, the base rate has been grossed up with the effective tax rates as per the tax Audit report furnished by the Petitioner for the 2014-19 tariff period. Accordingly, in terms of the above regulations, ROE has been computed as under:

	(Rs. in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Gross Notional Equity (A)	255585.00	255585.00	255585.00	255585.00	255585.00
Addition due to additional capitalization (B)	0.00	0.00	0.00	0.00	0.00
Closing Notional Equity (C) = (A + B)	255585.00	255585.00	255585.00	255585.00	255585.00
Average Equity (D) = [(A+C)/2]	255585.00	255585.00	255585.00	255585.00	255585.00
Return on Equity (Base Rate) (E)	16.500%	16.500%	16.500%	16.500%	16.500%
Effective Tax rate for the year (F)	20.961%	21.342%	21.342%	21.342%	21.549%
Rate of Return on Equity (G)	20.876%	20.977%	20.977%	20.977%	21.032%
Return on Equity (H) = [(D x G)]	53355.92	53614.07	53614.07	53614.07	53754.64

Interest on loan

37. 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-capitalization of assets, the repayment shall be adjusted by taking into account cumulative repayment on a pro rata basis and the adjustment should not exceed cumulative depreciation recovered upto the date of de-capitalization of such asset.

(4) Notwithstanding any moratorium period availed by the generating company or the



transmission licensee, as the case may be, the repayment of loan shall be considered from the first year of commercial operation of the project and shall be equal to the depreciation allowed for the year or part of the year.

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

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

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

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

(7) The 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.”

38. Regulation 26(5) of the 2014 Tariff Regulations provides for consideration of actual loan portfolio at the beginning of each year for computation of weighted average rate of interest (WAROI). Accordingly, WAROI has been worked out on the basis of actual loan portfolio of the respective year, applicable to the project. The repayment for the 2014-19 tariff period has been considered equal to the depreciation allowed for the respective years. Interest on loan has been calculated on the normative average loan of the year by applying the weighted average rate of interest. Accordingly, Interest on loan is worked out as under:



(Rs. in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Gross opening loan (A)	449787.64	453156.89	457221.14	460776.33	466001.93
Cumulative repayment of loan up to previous year (B)	235562.63	269077.42	304079.11	339032.74	374469.84
Net Loan Opening (C)=[(A)-(B)]	214225.01	184079.47	153142.04	121743.60	91532.08
Repayment during the year (D)	34927.32	35114.61	35314.68	35537.86	35674.66
Cumulative repayment adjustment on a/c of de-capitalization (E)	1412.53	112.92	361.05	100.76	5.68
Net Repayment (F)=[(D)-(E)]	33514.79	35001.69	34953.63	35437.11	35668.98
Addition due to additional capital expenditure (G)	3369.25	4064.25	3555.19	5225.59	390.89
Net Loan Closing (H)= (C+G-F)	184079.47	153142.04	121743.60	91532.08	56254.00
Average Loan(I)=[(C+H)/2]	199152.24	168610.76	137442.82	106637.84	73893.04
Weighted Average Rate of Interest of loan (J)	12.33%	12.26%	12.21%	9.69%	9.34%
Interest on Loan (K)=(I*J)	24555.99	20663.67	16776.80	10332.45	6899.14

Depreciation

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

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

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

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

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

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

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

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



extended life.

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

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

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

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

(7) The generating company or the transmission 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 de-capitalized asset during its useful services."

40. Cumulative depreciation amounting to Rs.214134.70 lakh as on 31.3.2014, as approved vide order dated 5.12.2017 in Review Petition No. 20/RP/2017 (in Petition No. 172/GT/2015), has been considered for the purpose of tariff. The COD of the generating station is 9.7.2007. As such, the expired life of the generating station till 31.3.2014 is 6.73 years and the balance useful life of the generating station, as on 31.3.2014, is 28.27 years. The weighted average rate of depreciation has been considered for the calculation of depreciation during the years 2014-19.

Accordingly, depreciation has been worked out as under:

	(Rs. in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Gross block (A)	705372.64	708741.89	712806.14	716361.33	721586.93
Net Additional capital expenditure during 2014-19 (B)	3369.25	4064.25	3555.19	5225.59	390.89
Closing gross block (C)=(A+B)	708741.89	712806.14	716361.33	721586.93	721977.82
Average gross block (D)=[(A+C)/2]	707057.27	710774.02	714583.74	718974.13	721782.37
Depreciable Value (E)=(D*90%)	636351.54	639696.62	643125.37	647076.72	649604.14
Remaining Depreciable Value at the beginning of the year (F)=[(E)-(Cumulative Depreciation	422216.84	392047.13	360474.19	329471.91	296562.22



	2014-15	2015-16	2016-17	2017-18	2018-19
at 'L' at the end of previous year)]					
Rate of Depreciation (G)	4.940%	4.940%	4.942%	4.943%	4.943%
Balance useful Life (H)	28.27	27.27	26.27	25.27	24.27
Depreciation (I)=(D*G)	34927.32	35114.61	35314.68	35537.86	35674.66
Cumulative Depreciation at the end of the year (J)=[(I)+(Cumulative Depreciation at 'L' at the end of previous year*)]	249062.02	282764.10	317965.86	353142.67	388716.57
Less: Depreciation adjustment on account of de-capitalization (K)	1412.53	112.92	361.05	100.76	5.68
Cumulative Depreciation at the end of the year (L)	247649.49	282651.18	317604.81	353041.91	388710.89

*Cumulative depreciation at the end of 2013-14 is Rs.214134.70 lakh.

Operation & Maintenance expenses

41. Regulation 29 (3) (b) of the 2014 Tariff Regulations provides as under:

(b) for hydro generating stations of Satluj Jal Vidyut Nigam Limited (SJVN Limited) and Tehri Development Corporation Limited (THDC), the O&M expenses shall be approved as per the following methodology:

i. The operation and maintenance expenses shall be derived on the basis of actual operation and maintenance expenses for the years 2008-09 to 2012-13, based on the audited balance sheets, excluding abnormal operation and maintenance expenses, if any, after prudence check by the Commission.

ii. The normalised operation and maintenance expenses after prudence check, for the years 2008-09 to 2012-13, shall be escalated at the rate of 6.04% to arrive at the normalized operation and maintenance expenses at the 2012-13 price level respectively and then averaged to arrive at normalized average operation and maintenance expenses for the 2008-09 to 2012-13 at 2012-13 price level. The average normalized operation and maintenance expenses at 2012-13 price level shall be escalated at the rate of 6.04% to arrive at the operation and maintenance expenses for year 2013-14 and thereafter escalated at the rate of 6.64% p.a., to arrive at the O&M expenses for the period FY 2014-15 to FY 2018-19.

42. In terms of the above regulation, the Commission vide its order dated 29.3.2017 in Petition No. 178/GT/2015 had allowed the year-wise O&M expenses for the generating station as under:

(Rs. in lakh)				
2014-15	2015-16	2016-17	2017-18	2018-19
21340.78	22757.81	24268.93	25880.39	27598.84

43. Since the claim of the Petitioner for O&M expenses is in terms of the above regulations, the same is allowed



Interest on Working Capital

44. 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

45. Accordingly, Receivable component of working capital has been worked out on the basis of two (2) months of fixed cost as under:

<i>(Rs. in lakh)</i>				
2014-15	2015-16	2016-17	2017-18	2018-19
22992.71	22654.22	22291.38	21514.07	21278.20

Working capital for Maintenance Spares

46. Maintenance spares @ 15% of O&M expenses are worked out and allowed as under:

<i>(Rs. in lakh)</i>				
2014-15	2015-16	2016-17	2017-18	2018-19
3201.12	3413.67	3640.34	3882.06	4139.83

Working capital for O&M expenses

47. O&M expenses for one (1) month for the purpose of working capital are as under:

<i>(Rs. in lakh)</i>				
2014-15	2015-16	2016-17	2017-18	2018-19
1778.40	1896.48	2022.41	2156.70	2299.90

48. 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.”

49. In terms of the above regulations, the Bank Rate of 13.50% (Base Rate + 350 basis points) as on 1.4.2014 has been considered by the Petitioner. This has been considered in the calculations of working capital.

50. Accordingly, interest on working capital has been calculated as under:

	(Rs. in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
O & M Expenses	1778.40	1896.48	2022.41	2156.70	2299.90
Maintenance Spares	3201.12	3413.67	3640.34	3882.06	4139.83
Receivables	22992.71	22654.22	22291.38	21514.07	21278.20
Total Working Capital	27972.23	27964.38	27954.13	27552.82	27717.93
Rate of Interest	13.50%	13.50%	13.50%	13.50%	13.50%
Total Interest on Working capital	3776.25	3775.19	3773.81	3719.63	3741.92

Annual Fixed Charges

51. The annual fixed charges approved for the generating station for the 2014-19 tariff period are summarized as under:

	(Rs. in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	34927.32	35114.61	35314.68	35537.86	35674.66
Interest on Loan	24555.99	20663.67	16776.80	10332.45	6899.14
Return on Equity	53355.92	53614.07	53614.07	53614.07	53754.64
Interest on Working Capital	3776.25	3775.19	3773.81	3719.63	3741.92
O&M Expenses	21340.78	22757.81	24268.93	25880.39	27598.84
Total	137956.27	135925.34	133748.29	129084.40	127669.20

Auxiliary Energy Consumption and Refinancing of loan

52. The Petitioner has submitted that the Auxiliary Energy Consumption (AEC) for the 2014-19 tariff period is 1.20% and no refinancing of the loan has been done for the said period. The Respondent, BRPL has submitted that in terms of Regulations 8(2) of the 2014 Tariff Regulations, truing up was to be carried out by the Petitioner in respect of AEC and Re-financing of loan, on monthly basis, with annual



reconciliation, but no such details on monthly basis, with annual reconciliation, have been furnished in the petition. The Petitioner has clarified that that in line with the first amendment to the 2014 Tariff Regulations, in 2015, financial gains on account of auxiliary energy consumption has been shared with the Discoms. It has further submitted that there has no loan has been refinanced for the 2014-19 tariff period. In view of this, the claim of the Petitioner for AEC of 1.20% is considered.

Normative Annual Generating Station Availability Factor

53. The NAPAF of 77% has been considered for the generating station as per the 2014 Tariff Regulations.

Design Energy

54. As regards Design Energy (DE), the Petitioner has submitted that the annual DE of 2797 MUs has been considered during the 2014-19 tariff period based on the CEA approval. The Respondent, BRPL vide its reply dated 24.7.2020 has submitted as under :

- a) Since the Petitioner has considered DE as per CEA approval during the 2014-19 tariff period, it is evident that the Petitioner is not claiming the annual design energy sought in Techno-Economic Clearance (TEC) of the project, as approved by CEA.
- b) Subsequent to TEC, the Petitioner again approached the CEA with the revised inflow series data as against the data provided at the time of the TEC granted by CEA. Whereas, the Petitioner submits one set of data to the CEA to seek the TEC of the project to justify its economic viability and another after the construction of the project.
- c) The Petitioner has again approached CEA with another set of data with the sole purpose to reduce the DE. As such, the Petitioner has adopted modified design energy of 2797 MUs for the 2014-19 tariff period which may not be allowed. In the event of modification of DE, the Petitioner does not allow the benefits of secondary energy level up to the design energy allowed. (Commissions' order dated 16.4.2013 in Petition No. 250/2010 may be



referred to).

55. The Petitioner has clarified as under:

- a) The issue of design energy has been settled vide Commission's order dated 16.4.2013 in Petition No. 250 of 2010 and in the event of modification of DE, the Commission had not allowed the benefits of secondary energy up to DE. This decision of the Commission was been upheld by Appellate Tribunal for Electricity vide its judgment dated 29.5.2015 in Appeal No.103/2014 filed by the Petitioner and has therefore attained finality;
- b) CEA vide its letter dated 17.11.2004 has issued guidelines for revision of DE and directed to follow the guidelines for revision of DE. Accordingly, the Petitioner vide letter dated 15.2.2008 had submitted its proposal to CEA for revision of DE of the generating station and the same has been approved as 2797 MU by CEA in consultation with the Central Water Commission based on actual observations as under:-
 1. Revised Hydrology i.e. the observed site specific flow data available at Tehri from 1964-65 to 2006-07 recommended by IIT, Roorkee in their study and also examined and recommended by CWC.
 2. Losses in water conductor system
 3. Average efficiency of generating unit- 93.25% in 90% dependable year
 4. Irrigation releases from Tehri Reservoir based on 10 daily requirements for the period November to June, indicated by Chief Engineer (Ganga), Irrigation Department, State of UP as per their letter no. 2770/1/CE dated 2.7.2005.
 5. Area capacity characteristic of Tehri Reservoir: as considered at the time of CEA clearance with capacity at FRL and MDDL as 3540 MCM and 925 MCM respectively.
 6. Considering above actual observations and 10 daily peaking power output and design energy during 90% dependable year viz. 2004-05, Central Electricity Authority approved the design energy 2797 MU.

56. We have considered the matter. It is observed from CEA letter dated 20.1.2010 furnished by the Petitioner vide affidavit dated 27.8.2020, that the DE approved by CEA is 2797 Million units (MUs) on account of the revised hydrology and other factors such as losses in water conductor system, efficiency of generating unit, Tailrace water level and Irrigation releases. Since the DE has been approved by the CEA as stated above, and same design energy of the



generating station was considered by the Commission vide order dated 29.3.2017 in Petition No. 178/GT/2015. Accordingly, the DE for the generating station is allowed as under:

Month		Design Energy (MUs)
April	I	64.77
	II	65.54
	III	73.71
May	I	82.21
	II	72.00
	III	80.92
June	I	70.97
	II	70.07
	III	21.86
July	I	23.95
	II	25.23
	III	40.35
August	I	123.83
	II	129.50
	III	186.18
September	I	89.51
	II	94.82
	III	56.25
October	I	65.48
	II	54.79
	III	42.68
November	I	54.87
	II	55.91
	III	57.70
December	I	92.75
	II	94.60
	III	103.11
January	I	96.33
	II	99.08
	III	108.97
February	I	102.54
	II	81.36
	III	68.12
March	I	84.04
	II	82.31
	III	80.26
Total		2796.57

Summary

57. The annual fixed charges claimed and those allowed for the 2014-19 tariff period, after truing up, is summarized below:



	(Rs. in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Annual fixed charges claimed	139847.81	137834.61	135189.00	130444.64	128800.43
Annual fixed charges allowed	137956.27	135925.34	133748.29	129084.40	127669.20

58. Annexure-I given hereunder form part of the order.

59. Petition No. 98/GT/2020 is disposed of in terms of the above.

Sd/-
(Pravas Kumar Singh)
Member

Sd/-
(I.S. Jha)
Member

Sd/-
(P.K. Pujari)
Chairperson



Annexure I

Weighted Average Rate of Depreciation for the 2014-19 tariff period

(Rs. in lakh)											
Sl. no.	Name of assets	2014-15		2015-16		2016-17		2017-18		2018-19	
		Gross Block as on 01.04.2014	Depreciation Amount	Gross Block as on 01.04.2015	Depreciation Amount	Gross Block as on 01.04.2016	Depreciation Amount	Gross Block as on 01.04.2017	Depreciation Amount	Gross Block as on 01.04.2018	Depreciation Amount
1	LAND	-	-	-	-	-	-	-	-	-	-
(A)	Free Hold	1,315.04	43.32	1,315.04	43.32	1,315.04	43.32	1,315.04	43.32	1,315.04	43.32
(B)	Lease Hold	-	-	-	-	-	-	-	-	-	-
2	BUILDING	-	-	-	-	-	-	-	-	-	-
(A)	RESIDENTIAL BUILDING	5,018.71	167.62	5,019.08	167.64	4,397.13	166.31	4,397.13	166.31	4,397.13	166.31
(B)	NON RESIDENTIAL BUILDING	3,356.58	112.11	3,361.37	112.27	3,364.32	112.33	3,401.35	113.61	4,756.46	158.87
(C)	TEMPORARY BUILDING	332.26	13.10	337.40	13.27	600.20	20.05	600.20	20.05	600.20	20.05
3	ROAD & BRIDGES	1,846.41	61.67	1,846.41	61.67	2,001.77	66.86	2,001.77	66.86	2,123.48	70.32
4	MACHINERY	1,012.41	53.46	1,027.10	54.23	1,027.10	54.23	1,027.10	54.23	1,027.10	54.23
5	MACHINERY	-	-	-	-	-	-	-	-	-	-
(A)	MAIN GENERATING PLANT AND MACHINERY	1,63,574.63	8,353.54	1,70,370.66	3,027.25	1,70,334.42	3,028.51	1,71,137.01	3,036.03	1,71,428.30	3,051.45
(B)	SWITCH GEAR INCLUDING CABLE CONNECTIONS	1,742.30	31.33	1,742.30	31.33	1,742.30	31.33	1,770.05	33.46	1,731.15	31.40
6	HYDRAULIC WORKS	-	-	-	-	-	-	-	-	-	-
(A)	DAM BARRAGE & SPILLWAYS	3,36,736.32	20,347.71	3,32,883.35	20,744.27	3,32,662.30	20,732.60	3,32,662.30	20,732.60	3,32,651.24	20,731.33
(B)	UNCLASSIFIED LAND	1,44,717.74	7,641.10	1,48,537.27	7,842.77	1,52,605.01	8,057.54	1,56,115.44	8,246.06	1,60,431.20	8,473.34
(C)	Lease- IRRIGATION COMPONENT	-1,44,133.80	-7,610.26	-1,44,133.80	-7,610.26	-1,44,133.80	-7,610.26	-1,44,133.80	-7,610.26	-1,44,133.80	-7,610.26
(D)	TUNNELS, SURGETANKS, PENSTOCKS & OTHER HYDRAULIC WORKS EXCL. PSP ESSENTIAL WORKS	1,16,193.08	3,880.85	1,16,346.88	3,306.03	1,16,373.18	3,306.30	1,16,373.18	3,306.30	1,16,375.06	3,306.37
7	SELF PROPELLED VEHICLES	1,046.48	33.42	1,153.88	103.62	1,146.56	108.32	1,163.51	111.10	1,201.73	114.16
8	FURNITURE AND FIXTURE	501.34	31.74	501.34	31.74	501.34	31.74	501.03	31.72	501.24	31.73
9	WATER SUPPLY, DRAINAGE AND SEWERAGE	665.07	35.12	705.63	37.26	724.57	38.26	740.35	39.12	740.35	39.12
10	COMPANY	2,323.83	122.70	2,323.83	122.70	2,323.83	122.70	2,323.83	122.70	2,323.83	122.70
11	EQUIPMENTS	3,167.48	200.50	3,355.04	212.37	3,374.13	213.53	3,537.04	227.63	3,801.45	240.63
12	SUBSTATION EQUIPMENT	644.06	34.01	644.06	34.01	634.85	33.52	651.48	34.40	651.48	34.40
13	INTERNAL DISTRIBUTION LINES	210.33	11.11	210.33	11.11	210.33	11.11	242.70	12.81	242.70	12.81
Total		7,06,330.35	34,891.33	7,08,807.78	35,013.85	7,13,065.91	35,231.46	7,17,154.05	35,443.32	7,23,426.62	35,755.33
Depreciation		4.340%		4.340%		4.342%		4.343%		4.343%	

