CENTRAL ELECTRICITY REGULATORY COMMISSION NEW DELHI

Petition No. 178/GT/2015

Coram:

Shri Gireesh. B. Pradhan, Chairperson Shri A.K.Singhal, Member Shri A.S. Bakshi, Member Dr. M. K. Iyer, Member

Date of Order : 29.3.2017

In the matter of

Determination of tariff of Tehri Hydroelectric Power Project (HPP), Stage-I (1000 MW) for the period 2014-19

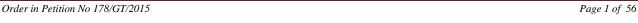
And in the matter of

THDC India Ltd Bhagirath Puram, Rishikesh-249001 Uttarakhand

.....Petitioner

Vs

- Punjab State Power Corporation Limited, The Mall, Patiala – 147001 (Punjab)
- Haryana Power Utilities,
 Shakti Bhawan, Sector 6,
 Panchkula 134 109 (Haryana)
- Haryana Power Utilities,
 Shakti Bhawan, Sector 6,
 Panchkula 134 109 (Haryana)
- 4. Uttar Pradesh Power Corporation Limited, Shakti Bhawan, 14 Ashok Marg, Lucknow – 226001 (UP)
- 5. BSES Rajdhani Power Ltd., BSES Bhawan, Nehru Place, Behind Nehru Place Bus Terminal, New Delhi-110019
- 6. BSES Yamuna Power Ltd., 3rd Floor, Shakti Kiran Building,





Karkardooma, Near Court, New Delhi-110092

- 7. TATA Power Delhi Distribution Ltd., 33 KV Grid Sub-Station Building, Hudson Lane, Kingsway Camp, Delhi-110009
- Engineering Deptt, Chandigarh Administration, 1st Floor, UT Secretariat, Sector 9-D, Chandigarh-160009
- Uttarakhand Power Corporation Ltd., Urja Bhawan, Kanwali Road, Dehradun-248001 (UK)
- 10. HPSEB Limited, Vidyut Bhawan, Shimla-171004
- Jaipur Vidyut Vitran Nigam Ltd.,
 Vidyut Bhawan,
 Janpath,
 Jyotinagar, Jaipur-302005 (Rajasthan)
- Ajmer Vidyut Vitran Nigam Ltd.,
 Old Power House,
 Hatthi Bhatta, Jaipur road,
 Ajmer-305001 (Rajasthan)
- 13. Jodhpur Vidyut Vitran Nigam Ltd., New Power House, Industrial Area Jodhpur-342003 (Rajasthan)
- 14. Power Development Department, Govt. of J&K, Civil Secretariat, Jammu -180001 (J&K)

...Respondents

Parties present:

For Petitioner: Ms. Anushree Bardhan, Advocate, THDC

Ms. Poorva Saigal, Advocate, THDC

Shri Ajay K. Mathur, THDC Shri J.K. Hatwal, THDC

Shri Manoj Kumar Tyagi, THDC Shri H. Chakrabarty, THDC Shri Sarosh M. Siddiqui, THDC

For Respondents: Shri Alok Shankar, Advocate, TPDDL

Ms. Shimpy Mishra, TPDDL Shri B.L. Sharma, JVVNL Shri Tarun Ahuja, JVVNL

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ORDER

This petition has been filed by the petitioner THDC, for determination of tariff of Tehri Hydroelectric Power Project, Stage-I (4x250 MW) (the generating station) for the period from 1.4.2014 to 31.3.2019 based on the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 ("the 2014 Tariff Regulations").

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 these units of the generating station are as under:

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

3. The Commission vide order dated 27.1.2015 determined the tariff of the generating station for the period 2009-14. Thereafter, the Commission vide order 20.3.2017 in Petition No. 172/GT/2015 had revised the annual fixed charges of the generating station for the period 2009-14 as under:

(₹in lakh)

| | 2009-10 | 2010-11 | 2011-12 | 2012-13 | 2013-14 |
|-----------------------------|-----------|-----------|-----------|-----------|-----------|
| Return on Equity | 47507.18 | 49247.30 | 49295.63 | 50089.37 | 53109.13 |
| Interest on Loan | 41464.65 | 38238.32 | 34532.51 | 30943.53 | 27946.07 |
| Depreciation | 35930.58 | 36107.51 | 36334.31 | 36589.25 | 36734.02 |
| O&M Expenses | 19509.92 | 20625.88 | 21805.68 | 23052.97 | 24371.60 |
| Interest on Working Capital | 3579.15 | 3607.68 | 3595.20 | 3604.64 | 3674.08 |
| Total | 147991.48 | 147826.70 | 145563.33 | 144279.76 | 145834.90 |

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4. The petitioner vide affidavit dated 27.6.2015 has sought approval of tariff for the period 2014-19 period in accordance with the provisions of the 2014 Tariff Regulations. Accordingly, the capital cost and the annual fixed charges claimed by the petitioner for the period 2014-19 are as under:

Capital Cost

(₹in lakh)

| | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
|-------------------------------------|-----------|-----------|-----------|-----------|-----------|
| Opening Capital Cost | 709380.52 | 710777.19 | 714133.04 | 717431.66 | 720874.48 |
| Add: Additional capital expenditure | 1430.90 | 3385.67 | 3795.00 | 3557.50 | 4315.50 |
| Less: De Capitalization | 34.20 | 29.82 | 496.38 | 114.68 | 346.04 |
| Closing Capital Cost | 710777.22 | 714133.04 | 717431.66 | 720874.48 | 724843.94 |
| Average Capital Cost | 710078.87 | 712455.12 | 715782.35 | 719153.07 | 722859.21 |

Annual Fixed Charges

(₹in lakh)

| | | | | | (V III IUKII) |
|--------------------------------|-----------|-----------|-----------|-----------|----------------|
| | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
| Depreciation | 37329.53 | 37461.77 | 37627.59 | 37769.97 | 37930.31 |
| Interest on Loan | 24293.60 | 20188.32 | 15945.24 | 11700.43 | 7429.75 |
| Return on Equity | 53354.95 | 53613.46 | 53613.46 | 64490.29 | 64490.29 |
| Interest on Working Capital | 4103.77 | 4115.02 | 4124.36 | 4390.33 | 4413.06 |
| O&M Expenses | 26378.24 | 28129.75 | 29997.57 | 31989.41 | 34113.50 |
| Total | 145460.09 | 143508.32 | 141308.21 | 150340.41 | 148376.90 |

5. In compliance with the directions of the Commission, the petitioner has filed additional information and has served copies on the respondents. The respondents, UPPCL and BRPL have filed replies in the matter and the petitioner has filed rejoinder to the said replies. The Commission after hearing the parties reserved order in the petition on 22.9.2015. It is noticed that the petitioner vide affidavit dated 16.9.2016 has revised the actual additional capital expenditure and decapitalization of 2014-15 but has not submitted any detailed justification for the same. Accordingly, the same has not been considered in this order. However, the said affidavit shall be considered at the time of truing up of tariff subject to the petitioner submitting reasons/justifications for actual capital expenditure and de-capitalization for the said year. Based on the submissions of the parties, and the documents available on record, we now proceed to examine the claim of the petitioner, as discussed in the subsequent paragraphs.

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Capital Cost as on 1.4.2014

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

"The Capital cost of an existing project shall include the following:

- (a) the capital cost admitted by the Commission prior to 1.4.2014 duly trued up by excluding liability, if any, as on 1.4.2014;
- (b) additional capitalization and de-capitalization for the respective year of tariff as determined in accordance with Regulation 14; and
- (c) expenditure on account of renovation and modernisation as admitted by this Commission in accordance with Regulation 15."
- 7. The annual fixed charges claimed by the petitioner are based on opening capital cost of ₹709380.52 lakh as on 1.4.2014, as against ₹ 704121.77 lakh as on 31.3.2014 admitted by the Commission vide order dated 20.3.2017 in Petition No. 172/GT/2015. Accordingly, the capital cost of ₹ 704121.77 lakh has been considered as opening capital cost as on 1.4.2014.

Additional Capital Expenditure

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 tariff period 2014-15 to 2018-19. Regulation 14 of the 2014 Tariff Regulations, provides as under:

"14. Additional Capitalisation and De-capitalisation:

- "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 generating station as
- advised or directed by appropriate Government Agencies of statutory authorities responsible for national security/internal security;
- (iv) Deferred works relating to ash pond or ash handling system in the original scope of work;
- (v) Any liability for works executed prior to the cut-off date, after prudence check of the details of such un-discharged liability, total estimated cost of package, reasons for such withholding of payment and release of such payments etc.;

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- (vi) Any liability for works admitted by the Commission after the cut-off date to the extent of discharge of such liabilities by actual payments;
- (vii) Any additional capital expenditure which has become necessary for efficient operation of generating station other than coal / lignite based stations or transmission system as the case may be. The claim shall be substantiated with the technical justification duly supported by the documentary evidence like test results carried out by an independent agency in case of deterioration of assets, report of an independent agency in case of damage caused by natural calamities, obsolescence of technology, up-gradation of capacity for the technical reason such as increase in fault level;
- (viii) In case of hydro generating stations, any expenditure which has become necessary on account of damage caused by natural calamities (but not due to flooding of power house attributable to the negligence of the generating company) and due to geological reasons after adjusting the proceeds from any insurance scheme, and expenditure incurred due to any additional work which has become necessary for successful and efficient generating station operation;
- (ix) In case of transmission system, any additional expenditure on items such as relays, control and instrumentation, computer system, power line carrier communication, DC batteries, replacement due to obsolesce of technology, replacement of switchyard equipment due to increase of fault level, tower strengthening, communication equipment, emergency restoration system, insulators cleaning infrastructure, replacement of porcelain insulator with polymer insulators, replacement of damaged equipment not covered by insurance and any other expenditure which has become necessary for successful and efficient operation of transmission system; and
- (x) Any capital expenditure found justified after prudence check necessitated on account of modifications required or done in fuel receiving system arising due to non-materialization of coal supply corresponding to full coal linkage in respect of thermal generating station as result of circumstances not within the control of the generating station:

Provided that any expenditure on acquiring the minor items or the assets including tools and tackles, furniture, air-conditioners, voltage stabilizers, refrigerators, coolers, computers, fans, washing machines, heat convectors, mattresses, carpets etc. brought after the cut-off date shall not be considered for additional capitalization for determination of tariff w.e.f. 1.4.2014:

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

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

9. The year-wise break-up of the projected additional capital expenditure claimed for the period 2014-19 is summarized as under:

(₹in lakh)

| | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 | Total |
|---|---------|---------|---------|---------|---------|----------|
| Proposed additional capital expenditure on gross basis. | 1430.90 | 3385.67 | 3795.00 | 3557.50 | 4315.50 | 16484.57 |
| Proposed de-capitalization | 34.20 | 29.82 | 496.38 | 114.68 | 346.04 | 1021.12 |
| Net proposed additional capital expenditure | 1396.70 | 3355.85 | 3298.62 | 3442.82 | 3969.46 | 15463.45 |

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- 10. The respondent, BRPL has submitted that the additional capital expenditure claimed by the petitioner for the period 2014-19 under Regulation 14(3)(iii), cannot be permitted as the petitioner has not submitted any documents to substantiate the expenditure for security of generating station under Regulation 14(3)(vii) and (viii). It has also submitted that in respect of expenditure claimed, the petitioner has failed to submit any technical justification supported by documentary evidence. It has further submitted that the works claimed under Regulation 14(3)(ix) are only applicable to the transmission companies and not the generating stations. Accordingly the respondent has prayed that the Commission may reject the claims made under Regulation 14(3)(x) as the same is applicable to coal based generating stations.
- 11. The respondent, UPPCL has submitted that the capitalization of assets may be allowed only when the same is being put to use and when it gives benefit to the beneficiaries. It has further submitted that the petitioner's claims of additional capital expenditure with regard to the minor assets are not admissible under any provision of the 2014 Tariff Regulations and accordingly, may be disallowed.
- 12. In response, the petitioner vide affidavit dated 18.11.2015, has revised the provisions of the Regulations under which the claims for additional capital expenditure has been made during the period 2014-19. The petitioner has further submitted that the assets/items claimed shall be put to use independently of the year mentioned against them.
- 13. Accordingly, the petitioner has submitted that:
- a) The expenditure has been considered in various years for construction of Type-II and Type-III quarters in Koti Colony and the final electrification is proposed in 2018-19 but the building shall be put to use year-wise with temporary electrification in phased manner as shown.

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- b) It has submitted that the hospital building shall be put to use in 2016-17 after completing construction work and installation of LAN with temporary electrification and the final electrification is proposed to be done in 2017-18.
- c) The battery banks commissioned during the year 2002-03 have undergone physical deformation, corrosion of positive straps and decomposition of lead plates during the operation as a result of which the performance is deteriorating. Further, since the DC supply system plays a vital role in uninterrupted temporary electrification, the final electrification is proposed to be done in 2018-19.
- 14. We have considered the submissions of parties. Accordingly, we proceed to examine the claims of the petitioner for the period 2014-19 on prudence check and allow the same as detailed below:

2014-15

(₹in lakh)

| SI. N. | | Claimed | Approved | Regulation | Justification | Remarks on admissibility |
|-----------|---|---------|----------|------------|--|---|
| 1 | SUPPLY ERECTION OF 2T CAPACITY AUXILIARY HOIST FOR DRAFT TUBE | 10.00 | 10.00 | 14(3)viii | One no. additional winch to be installed for proper, safe and efficient maintenance and operation of HM equipment in Dam & Power House and as per ORT. | Considering the fact that the asset will facilitate the successful and efficient operation |
| 2 | SUPPLY ERECTION OF 10T CAPACITY AUXILIARY HOIST FOR DRAFT TUBE | 30.00 | 30.00 | 14(3)viii | One no. additional winch to be installed for proper, safe and efficient maintenance and operation of HM equipment in Dam & Power House and as per ORT. | of plant, the same is allowed under Regulation 14(3) (viii) of the 2014 Tariff Regulations. |
| 3 | INTERNAL ELECTRIFICATION OF SERVER AND DRIVER ROOM | 3.00 | 0.00 | 14(3)viii | In most of the areas of B. Puram colony, power supply is | Since the |

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| SI. N. | | Claimed | Approved | Regulation | Justification | Remarks on admissibility |
|-----------|--------------------------------|---------|----------|------------|--|--|
| | | | | | distributed through LT overhead lines. At various locations, the lines are running close to the buildings due to space constraint. Moreover, due to continuous raming of monkeys, the lines are getting tripped frequently and some time damaging the electrical equipments. Hence, the LT overhead lines are required to be replaced by aerial bunched cables considering safety aspect. The unauthorised tapping of electricity can also be prevented. | expenditure incurred for the asset is in the nature of O&M expenses, the same is not allowed. |
| 4 | INTERNAL DISTRIBUTION LINES | 49.43 | 49.43 | 14(3)iii | As per IB requirement Six No's High Mast has been installed in DAM Area. | Since the Masts have been installed based on IB requirements and considered necessary for the safety of the plant, the same is allowed under Regulation 14(3)(iii) of the 2014 Tariff Regulations. |
| 5 | ENERGY SAVING TUBE FIXTURES | 3.00 | 0.00 | 14(3)viii | To save electricity, it has been decided to replace the existing electrical facility/appliances by energy saving appliances/ equipment with a target as 35% annually. The plan and action is | The expenditure towards procurement of these assets is in the nature of minor assets, hence the same is not allowed. |

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| SI. N. | | Claimed | Approved | Regulation | Justification | Remarks on admissibility |
|-----------|--|---------|----------|------------|---|--|
| | | | | | under process. | |
| 6 | Electrification at Oil Filtration Plant | 3.53 | 0.00 | 14(3)viii | Internal electrification work of oil filtration plant at mokri | The expenditure towards procurement of these assets is in the nature of minor assets, hence the same is not allowed. |
| 7 | DOCK system at Reservoir | 87.29 | 0.00 | 14(3)viii | Construction of PER-FAB DOCK system in Tehri reserviour | Since the petitioner has not submitted any justification for the expenditure, |
| 8 | ROAD AND CULVETS | 242.87 | 0.00 | 14(3)viii | Construction of new road | the same is disallowed. |
| 9 | PROCUREMENT OF JCB 135 ROBOT SKID STEER LOADER | 14.69 | 14.69 | 14(3)viii | Being a small size machine could work inside gallery for their cleaniness and could work at the place where loader cannot work due to space constraint. | As the expenditure is considered necessary for the efficient operation of the project, the same is allowed under Regulation 14(3)(viii) of 2014 Tariff Regulations |
| 10 | PROCUREMENT OF SURVEY BOAT | 71.31 | 0.00 | 14(3)viii | For reservoir survey work (siltation, water quality test, complete inspection and survey work of profile at both reservoir banks). | The procurement of this asset has been allowed earlier. Hence, this being a repetitive requirement and would be considered at the time of truing up subject to submission of relevant documents for the consideration of the Commission. |
| 11 | PROCUREMENT OF TWO TWIN ENGINE PATROLLING BOAT | 54.03 | 54.03 | 14(3)viii | For safety and security work (to be done by CISF). | Since the expenditure is necessary for the safety and security of the plant, the expenditure is allowed. |
| 12 | PROCUREMENT AND INSTALLATION OF STRONG MOTION ACCELOGRAPH | 162.00 | 162.00 | 14(3)viii | This expenditure is essential to provide accomodation to employees. A useful life of most of the residences in B. puram and Koti have been completed and it | As the expenditure incurred by the petitioner is for the benefit of employees of the project, the same is allowed under Regulation 14(3)(viii) of 2014 Tariff Regulations. |

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| SI. N. | | Claimed | Approved | Regulation | Justification | Remarks on admissibility |
|-----------|------------------------------------|---------|----------|------------|---|---|
| | | | | | is necessary to construct new residences in lieu of old and damaged residences. | |
| 13 | OFC TO PH,HOSPITAL, KOTI | 60.00 | 60.00 | 14(3)viii | Laying the OFC cable cable from B. Puram to Power House, Koti colony and new building of Hospital in B. Puram as at present radio device is used. | |
| 14 | CCTV | 150.00 | 44.35 | 14(3)viii | Upgradation/ Enhancement of existing CCTV system. | Since, the expenditure claimed is necessary for the |
| 15 | WI-FI DEVICES | 7.50 | 2.26 | 14(3)viii | Wi-fi devices for internet connection at different locations viz Power House, Guest House and office etc. | safety and security of the generating station, the same has been allowed under Regulation 14(3)(iii) of the 2014 Tariff |
| 16 | Unified Threat Management (UTM) | 14.00 | 4.22 | 14(3)viii | UTM device installed at B.Puram office for cyber security. | Regulations. The gross value of the old assets has been de-capitalized as 105.65 lakh, 5.24 lakh, 9.78 lakh respectively under assumed deletions |
| 17 | WIRELESS FOR CISF | 20.00 | 5.91 | 14(3)iii | Replacement of old wireless system with new wireless system for CISF. | Since the wireless sets are considered necessary for the safety of the plant, the same has been allowed under Regulation 14(3)(iii) of the 2014 Tariff Regulations. The gross value of the old asset has been de-capitalized as 14.09 lakh under assumed deletions. |
| 18 | MISC WORKS | 78.36 | 0.00 | 14(3)viii | Expenses on various works for Rehabilitation | Since no proper justification has been submitted by the petitioner, the expenditure is not allowed. |

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| SI. N. | | Claimed | Approved | Regulation | Justification | Remarks on admissibility |
|-----------|--|---------|----------|------------|---|---|
| 19 | PROCUREMENT OF INSPECTION VEHICLE | 50.00 | 50.00 | 14(3)viii | Provision has been kept for purchase of new vehicle that will replace old vehicle in use of transportation of officers and shift staff. | Considering the |
| 20 | PROCUREMENT OF UTILITY MINI TRUCK | 8.00 | 8.00 | 14(3)viii | Provision has been kept for purchase of new vehicle that will replace old vehicle in use of transportation of goods / materials. | Considering the fact that the asset will facilitate the successful and efficient operation of plant, the same is allowed under Regulation 14(3) (viii) of the 2014 Tariff Regulations. |
| 21 | PROCUREMENT OF WHEEL LOADER/ BACKHOE | 120.00 | 120.00 | 14(3)viii | Provision has been kept for purchase of new equipment that will replace old equipment to maintain the various roads of the project, dragging work and other development works at various locations of the project site. | The gross value of the old asset has been de-capitalized as 84.52 lakh under assumed deletions. |
| 22 | I.B.RECOMMENDATION | 10.00 | 10.00 | 14(3) iii | As per statutory requirements of IB | Considering the requirements as per IB |
| 23 | FIRE FIGHTING | 5.00 | 5.00 | 14(3)iii | As per statutory requirements of IB | recommendations, the expenditure is allowed under Regulation 14(3) (iii) of the 2014 Tariff Regulations. However, the petitioner is directed to submit the details regarding the recommendation at the time of truing up of tariff. |
| 24 | HOSPITAL items | 2.00 | 2.00 | 14(3)viii | As per requirement, provision has been kept for purchase of new items to replace with old items / | The expenditure towards procurement of these assets is for the benefit of employees of the project, hence the |

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| SI. N. | | Claimed | Approved | Regulation | Justification | Remarks on admissibility |
|-----------|--|---------|----------|------------|---|--|
| | | | | | additional requirements. | same is allowed. |
| 25 | CISF BARRACK | 10.00 | 10.00 | 14(3) iii | As per statutory requirements | Considering the requirements as per IB recommendations, the expenditure is allowed under Regulation 14(3) (iii) of the 2014 Tariff Regulations. However, the petitioner is directed to submit the details regarding the recommendation at the time of truing up of tariff. |
| 26 | MISC. PLANT AND MACHINERAY | 61.89 | 0.00 | 14-3(viii) | Misc. Equipments | Since no justification has been submitted by the petitioner, the expenditure is disallowed. |
| 27 | WINCH AND RUNNER INSPECTION PLATFORM | 23.00 | 0.00 | 14(3)viii | Additional devices are required for taking up unit maintenance as a parallel activity for economic reasons. | The expenditure towards procurement of these assets is in the nature of tools and tackles/ minor assets, hence the same is not allowed. |
| 28 | CT FOR SST | 8.00 | 0.00 | 14(3)viii | Additional CTs are required for modified protection system of SST. | As, the expenditure towards procurement of these assets is in the nature of spare assets, the same is not allowed. |
| 29 | INSTALLATION OF HIGH MAST | 47.00 | 47.00 | 14(3) iii | To meet out the IB requirement. | Considering the requirements as per IB recommendations, the expenditure is allowed under Regulation 14(3) (iii) of the 2014 Tariff Regulations. |
| 30 | MODIFICATION OF GOVERNING SOFTWARE FROM OEM | 25.00 | 25.00 | 14(3)viii | To facilitate RGMO/ FGMO testing in Tehri Unit as a pilot project under the directives of MoP, Gol. | As the expenditure claimed is necessary for efficient operation of the generating station, the same is allowed under |

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| SI. N. | | Claimed | Approved | Regulation | Justification | Remarks on admissibility |
|-----------|-------|---------|----------|------------|---------------|--|
| | | | | | | Regulation 14(3)(ii) of the 2014 Tariff Regulations. |
| | TOTAL | 1430.90 | 713.90 | | | |

<u>2015-16</u>

(₹in lakh)

| SI. N. | | Claimed | Approved | Regulation | Submission of the petitioner | Remarks on admissibility |
|-----------|--|---------|----------|------------|---|--|
| 1 | SUPPLY ERECTION OF PENSTOCK INSPECTION DEVICE | 37.00 | 37.00 | 14(3)viii | One no. additional winch to be installed for proper, safe and efficient maintenance and operation of HM equipment in Dam & Power House and as per ORT. | Considering the fact that the asset will facilitate the successful and efficient operation of |
| 2 | INTERNAL AND EXTERNAL ELECTRIFICATI ON OF CISF BARRACK | 18.00 | 18.00 | 14(3)viii | It was intimated by BCM Deptt. that CISF barrack shall be constructed at B. Puram for which electrification work is required. As such work is under progress by civil & electrical Deptt. | plant, the same is allowed under Regulation 14(3) (viii) of the 2014 Tariff Regulations. |
| 3 | INSTALLATION OF AERIAL BUNCHED CABLES IN B.PURAM | 18.00 | 18.00 | 14(3)∨iii | In most of the areas of B. Puram colony, power supply is distributed through LT overhead lines. At various locations, the lines are running close to the buildings due to space constraint. Moreover, due to continuous raming of monkeys, the lines are getting tripped frequently and some time damaging the electrical equipments. Hence, the LT overhead lines are required to be replaced by arial bunched cables considering safety | As the expenditure incurred by the petitioner is for the benefit of employees working in the project, the same is allowed under Regulation 14(3)(viii) of 2014 Tariff Regulations. |

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| SI. N. | | Claimed | Approved | Regulation | Submission of the petitioner | Remarks on admissibility |
|-----------|-----------------------------------|---------|----------|------------|--|--|
| | | | | | aspect. The unathorised tapping of elecrticity can also be prevented. | |
| 4 | ENERGY SAVING TUBE FIXTURES | 4.00 | 0.00 | 14(3)viii | To save electricity, it has been decided to replace the existing electrical facility/appliances by energy saving appliances/ equipment with a target as 35% annually. The plan and action is under process. | The expenditure towards procurement of these assets is in the nature of minor assets and hence the same is not allowed. |
| 5 | DG SETS | 20.00 | 20.00 | 14(3)viii | Various building are being constructed/ proposed to be constructed by civil Deptt Whereever, it is essential to install DG set as per requirement, then it will be procured. Presently one no. is proposed for new hospital building. Also one no. is proposed for CISF control room as per the requirement. | As the expenditure incurred by the petitioner is for the benefit of employees of the project, the same is allowed under Regulation 14(3)(viii) of 2014 Tariff Regulations. |
| 6 | HYDRAULIC LIFTER ON TRUCK | 8.00 | 0.00 | 14(3)viii | There are around 650 nos of street light including the road upto spillway. Therefore, it is required for day to day maintenance work within desired time and safely. | Since the expenditure incurred for the asset is in the nature of O&M expenses, the same is not allowed. |
| 7 | ENERGY SAVING CELLING FANS | 5.00 | 0.00 | 14(3)viii | To save electricity, it has been decided to replace the existing electrical facility/appliances by energy saving appliances/ equipment with a target as 35% annually. The plan and action is under process. | The expenditure towards procurement of these assets is in the nature of minor assets and hence same is not allowed. |
| 8 | TRANSFORMER OIL TEST KIT | 2.00 | 0.00 | 14(3)viii | There are three nos 5 MVA power | |

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| SI. N. | | Claimed | Approved | Regulation | Submission of the petitioner | Remarks on admissibility |
|-----------|---|---------|----------|------------|--|--|
| | | | | | transformers installed at 33/11 KV sub station for feeding power supply to Power Plant auxillariries, spillways, colony, water supply. Also 20 nos distribution transformers are installed at different locations of colonies, water supply and other places. For testing of transformer oil as per schedule, one oil test kit is very much essential to be kept as the earlier one is very old and sometimes not functioning properly. Hence, may cause non- operational at any time. | |
| 9 | RENOVATION OF MULTIPURPOS E HALL | 15.00 | 15.00 | 14(3) viii | Renovation of multipurpose hall is required for proper functioning of it. Tehri HPP is in a remote place and multipurpose hall is being used to facilitate various functions of employees. | As the expenditure incurred by the petitioner is for the benefit of employees of the project, the |
| 10 | ECO PROOFING OF MULTIPURPOS E HALL | 20.00 | 20.00 | 14(3) viii | Eco proofing of multipurpose hall is required for proper functioning of Multipurpose hall. Multipurpose hall is only place for various official functions. | - same is allowed under Regulation 14(3)(viii) of 2014 Tariff Regulations. |
| 11 | OTHER CIVIL STRUCTURE | 142.89 | 0.00 | 14(3) viii | In BCM and RCM Deptt. various small works may come at any moment. It is not possible to forsee these works at this moment. So a provision is being made for some | Since the petitioner has not submitted any justification for the expenditure, the same is not allowed. |

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| SI. N. | | Claimed | Approved | Regulation | Submission of the petitioner | Remarks on admissibility |
|-----------|--|---------|----------|------------|---|--|
| | | | | | miscrllaneous works on lump sum basis. | |
| 12 | Quarter TYPE-II & III AT KOTI | 100.00 | 100.00 | 14(3) viii | This expenditure is essential to provide accomodation to employees. A useful life of most of the residences in B. puram and Koti have been completed and it is necessary to construct new residences in lieu of old and damaged residences. | As the expenditure incurred by the petitioner is for the benefit of employees of the project, the same is allowed under Regulation 14(3)(viii) of 2014 Tariff Regulations. |
| 13 | MODIFICATION OF T2A QTRS | 10.00 | 10.00 | 14(3) viii | Modification of T2A Qtrs is required for proper functioning and use of these residences. | |
| 14 | PROTECTION WORK OF HILL ABOVE DAM EAST NEAR CISF CHECK POST | 100.00 | 100.00 | 14(3) viii | Construction of Protection wall near CISF check post to protect the Dam area & land slide occuring for hill side of Dam East. | |
| 15 | TREATMENT OF ADIT 4B | 250.00 | 0.00 | 14(3) viii | These planned works shall provide additional strength to the various structures of Tehri HPP and required for efficient operation of HPP units. However, the works subject to finalisation of design schemes. | The petitioner has not submitted any justification/clarificati on for the expenditure incurred |
| 16 | TREATMENT OF ADIT 4A | 200.00 | 0.00 | 14(3) viii | These planned works shall provide additional strength to the various structures of Tehri HPP and required for efficient operation of HPP units. However, the works subject to finalisation of design schemes. | for these works. Hence, the same shall be considered at the time of truing- up of tariff subject to the when these works being completed. |
| 17 | GEOPHYSICAL TESTING | 105.00 | 0.00 | 14(3) viii | These planned works shall provide additional strength | |

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| SI. N. | | Claimed | Approved | Regulation | Submission of the petitioner | Remarks on admissibility |
|-----------|--|---------|----------|------------|---|---|
| | | | | | to the various structures of Tehri HPP and required for efficient operation of HPP units. However, the works subject to finalisation of design schemes. | |
| 18 | COMPRESSIVE GROUTING WORKS IN POWER HOUSE COMPLEX | 605.00 | 0.00 | 14(3) viii | These planned works shall provide additional strength to the various structures of Tehri HPP and required for efficient operation of HPP units. However, the works subject to finalisation of design schemes. | |
| 19 | CONSTRUCTIO N OF 9 ROOMS FOR SEISMOLOGICA L NETWORK STATIONS IN DIFFERENT LOCATIONS | 50.00 | 50.00 | 14(3) viii | Installation of seismologigal equipment for monitoring of local sesimocity/ micro eartquake activities around Tehri and Uttarkashi Region. | |
| 20 | INSTALLATION OF VENTILATION SYSTEM OF AGBR Under Ground OF TEHRI DAM | 34.00 | 34.00 | 14(3) viii | Providing fresh air in AGRBR Gallery for proper working & activities going day to day. | Considering the fact that the assets will |
| 21 | PROVIDING AND FIXING OF CANOPY IN AGRBR U/G OF TEHRI DAM | 30.00 | 30.00 | 14(3) viii | For chanelising the seepage water from crest of gallery and their asthetic view. | facilitate the successful and efficient operation of plant, the same is allowed under |
| 22 | PROCURERME NT AND INSTALLATION OF REAL TIME FLOOD FORECASTING | 272.50 | 272.50 | 14(3) viii | For the establishment of metrological stations and flood forecasting systems. | Regulation 14(3) (viii) of the 2014 Tariff Regulations. |
| 23 | PROCURERME NT AND INSTALLATION OF ADDITIONAL SESIMOLOGICA L NETWORK | 225.00 | 225.00 | 14(3) viii | For the monitoring of local seismocity/ micro earthquake activities around Tehri Region. | |
| 24 | LAN-ADIT-3 | 11.68 | 11.68 | 14(3) viii | To provide LAN connection in office at Adit-3 as presently no LAN | |

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| SI. N. | | Claimed | Approved | Regulation | Submission of the petitioner | Remarks on admissibility |
|-----------|---|---------|----------|------------|---|---|
| | | | | | connection is available. | |
| 25 | EPABX | 403.00 | 135.64 | 14(3) viii | Existing exchange purchased in 1996 is of absolute technology therefore, new exchange with ADSL and cabling to be replaced. | Considering the fact that the asset will facilitate the successful and efficient operation of plant, the same is allowed under Regulation 14(3) (viii) of the 2014 Tariff Regulations. The assumed deletion considered is 267.36 lakh. |
| 26 | MISC REHABILITATIO N WORKS | 64.20 | 0.00 | 14(3) viii | Expenses on various works for Rehabilitation | Since no justification has been submitted by the petitioner, the expenditure is disallowed. |
| 27 | PROCUREMEN T OF PUMP AND MOTOR SET | 5.00 | 1.68 | 14(3) viii | Provision has been kept for purchase of new pump and motor that will replace old pump and motor in use of drinking water supply for project colony. | Considering the fact that the asset will facilitate the successful and efficient operation of plant, the same is allowed under Regulation 14(3) (viii) of the 2014 Tariff Regulations. The assumed deletions are considered at 3.32 lakh. |
| 28 | PROCUREMEN T OF INSPECTION VEHICLE | 50.00 | 50.00 | 14(3) viii | Provision has been kept for purchase of new vehicle that will replace old vehicle in use of transportation of officers and shift staff. | Considering the fact that the asset will facilitate the successful and efficient operation of plant, the same is allowed under Regulation 14(3) (viii) of the 2014 Tariff Regulations. The de-capitalization for vehicles have been provided by the petitioner. However, the petitoner is directed to submit the item wise details of decapitalitions at the time of truing up. |
| 29 | PROCUREMEN T OF FIRE TENDER | 20.00 | 20.00 | 14(3) iii | Provision has been kept for purchase of new vehicle that will replace old | Considering the requirements as per IB recommendations, the expenditure is |

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| SI. N. | | Claimed | Approved | Regulation | Submission of the petitioner | Remarks on admissibility |
|-----------|---|---------|----------|------------|--|---|
| | | | | | vehicle in use of transportation of CISF personal and fire staff. | allowed under Regulation 14(3) (iii) of the 2014 Tariff Regulations. |
| 30 | PROCUREMEN T OF SCHOOLBUS /STAFF BUS | 40.00 | 40.00 | 14(3) viii | Provision has been kept for purchase of new vehicle that will replace old vehicle in use of transportation of student and shift staff. | Considering the fact that the asset will |
| 31 | PROCUREMEN T OF GOODS TRANSPORT VEHICLES / TRUCKS | 16.00 | 16.00 | 14(3) viii | Provision has been kept for purchase of new vehicle that will replace old vehicle in use of transportation of goods/ materials. | facilitate the successful and efficient operation of plant, the same is allowed under Regulation 14(3) (viii) of the 2014 Tariff Regulations. The de-capitalization for vehicles have been provided by the petitioner. However, the petitioner is directed to submit the item wise details of decapitalitions at the time of truing up. |
| 32 | PROCUREMEN T OF UTILITY MINI TRUCK | 8.00 | 8.00 | 14(3) viii | Provision has been kept for purchase of new vehicle that will replace old vehicle in use of transportation of goods / materials. | |
| 33 | PROCUREMEN T OF CRANE | 50.00 | 50.00 | 14(3) viii | Provision has been kept for purchase of new equipment that will replace old equipment in use of loading and unloading of materials. | |
| 34 | I.B.RECOMMEN DATION | 40.00 | 40.00 | 14(3) iii | As per statutory requirements | Considering the requirements as per |
| 35 | FIRE FIGHTING | 30.00 | 30.00 | 14(3) iii | As per statutory requirements. | IB recommendations, the expenditure is allowed under Regulation 14(3) (iii) of the 2014 Tariff Regulations. |
| 36 | HOSPITAL | 10.00 | 3.37 | 14(3) viii | As per requirement, provision has been kept for purchase of new items to replace with old items / additional requirements. | The expenditure claimed is allowed under Regulation 14(3)(viii) of 2009 Tariff Regulations as the expenditure is for the benefit of employees of the project. The assumed deletions have been considered as 6.63 lakh. |
| 37 | CISF BARRACK | 5.00 | 5.00 | 14(3) iii | As per statutory requirements | Considering the requirements as per |

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| SI. N. | | Claimed | Approved | Regulation | Submission of the petitioner | Remarks on admissibility |
|-----------|----------------------------------|---------|----------|------------|---|---|
| | | | | | | IB recommendations, the expenditure is allowed under Regulation 14(3) (iii) of the 2014 Tariff Regulations. |
| 38 | MAIN GENEARTING EQUIPMENTS | 81.40 | 81.40 | 14(3) viii | Liability for Main Generating Equipment | The expenditure is in the form of liability and hence allowed |
| 39 | CT ANALYSER | 20.00 | 0.00 | 14(3) viii | For frequent qualitative testing of various CTs installed in Power House. | The expenditure towards procurement of these assets is in the nature of tools & tackles/ minor assets and hence the same is not allowed. |
| 40 | INSTALLATION OF HIGH MAST | 3.00 | 3.00 | 14(3)iii | To meet out IB requirement | Considering the requirements as per IB recommendations, the expenditure is allowed under Regulation 14(3) (iii) of the 2014 Tariff Regulations. |
| 41 | FLOOD PREVENTIVE SCHEME | 210.00 | 210.00 | 14(3)iii | Flood preventive scheme is required to be installed in Tehri HEP under the directives of CEA. | The submissions have been considered. In our view, the expenditure towards floor prevention works are recurring in nature and shall be met from the O&M expenses allowed to the generating station. Hence, expenditure is not allowed. The petitioner is at liberty to approach the Commission with relevant details/justifications at the time of truing up of tariff. |
| 42 | SC VALVES | 27.00 | 9.09 | 14(3) viii | The old SC valves of Russian make are obsolete and shall be replaced by indigenised valves. | Considering the fact that the asset will facilitate the successful and efficient operation of plant, the same is allowed under Regulation 14(3) (viii) of the 2014 Tariff Regulations. The assumed deletions are |

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| SI. N. | | Claimed | Approved | Regulation | Submission of the petitioner | Remarks on admissibility |
|-----------|---|---------|----------|------------|---|---|
| | | | | | | considered as 17.91 lakh |
| 43 | PROCUREMEN T OIL FILTRATION SYSTEM | 20.00 | 0.00 | 14(3) viii | For maintaining operational parameters of GT oil. | Since the expenditure incurred for the asset is in the nature of O&M expenses, the same is not allowed. |
| | TOTAL | 3385.67 | 1664.36 | | | |

<u>2016-17</u>

(₹in lakh)

| SI. N. | | Claimed | Approved | Regulation | Submission of the petitioner | Remarks on admissibility |
|-----------|---|---------|----------|------------|--|--|
| 1 | SUPPLY ERECTION OF INSPECTION DEVICE AT ILO | 40.00 | 40.00 | 14(3)viii | One no. additional winch to be installed for proper, safe and | |
| 2 | SUPPLY ERECTION OF INSPECTION DEVICE 2 NO | 75.00 | 75.00 | 14(3)viii | efficient maintenance and operation of HM equipment inDam & Power House ans as per ORT. | Considering the fact that the asset |
| 3 | INTERNAL AND EXTERNAL ELECTRIFICATION OF HPP OFFICE NEAR ADIT 3 | 64.00 | 64.00 | 14(3)viii | It was intimated by BCM Deptt. that HPP office building shall be constructed near adit-3 for which electrification work is required. | will facilitate the successful and efficient operation of plant, the same is allowed under Regulation 14(3) (viii) of the 2014 Tariff Regulations. |
| 4 | ELECTRIFICATION OF MODULAR FURNITURE AT DAM & PLANNING AND OTHER DEPTTS | 13.50 | 13.50 | 14(3)viii | Modular furniture at Dam & Planning Deptt. was installed and the electrification of the same is to be carried out by Electrical Deptt. | Tallii Regulations. |
| 5 | ARRANGEMENT OF LIGHTINING PROTECTION OF QC/CMTL/HOSPITA L TTGH BUILDING | 23.00 | 0.00 | 14(3)viii | This work is required to be carried out as per OHSAS requirement as also safety point of view. | Since the expenditure incurred for the asset is in the nature of O&M expenses, the same is not allowed. |
| 6 | SHIFTING OF 33/11 KV SUBSTATION CONTROL ROOM | 55.00 | 55.00 | 14(3) viii | The 33/11 KV sub station is the main sub station feeding power supply to power plant auxillaries, | Considering the fact that the asset will facilitate the successful and efficient operation of plant, the same |

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| SI. N. | | Claimed | Approved | Regulation | Submission of the petitioner | Remarks on admissibility |
|-----------|-------------------------------|---------|----------|------------|--|---|
| | ENERGY SAVING | | | | spillways, water supply, colonies and construction works. The control room of sub station building has come under settlement zone for which damages has been occured on the walls and floor of the building. Due to said reason some of the 11 KV breaker trolleys has been found damaged and the breaker panels has started mal funcytioning. If this continues the whole witchboard may cause non-operational resulting complete power failure. As per the rsuggestion of technical team the control room building can be sifted to near by building after confirmation by Geology Deptt. For the time being, BCM Deptt. was instructed to take immediate precautionary measures of the building to avoid further damages. | is allowed under Regulation 14(3) (viii) of the 2014 Tariff Regulations. |
| 7 | TUBE FIXTURES | 3.00 | 0.00 | 14(3) viii | To save electricity, it has been | |
| 8 | ENERGY SAVING CELLING FANS | 5.00 | 0.00 | 14(3) viii | decided to replace the existing electrical facility/appliances by energy saving appliances/ equipment with a target as 35% annually. The plan and action is under process. | The expenditure towards procurement of these assets is in the nature of minor assets and hence the same is not allowed. |

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| SI. N. | | Claimed | Approved | Regulation | Submission of the petitioner | Remarks on admissibility |
|-----------|---|---------|----------|------------|---|--|
| 9 | TRANSFORMER OIL FILTERATION MACHINE | 10.00 | 0.00 | 14(3) viii | There are three nos. 5MVA power transformers installed at 33/11 kV sub station for feeding power supply to power plant auxiliaries, spillways, colonies, water supply and construction works. Also 20 nos. distribution transformers are installed at different locations of colonies, water supply and other places. For filtration of transformer oil as per schedule, one oil filtration machine is very much essential to be kept as the earlier one is very old and sometimes not functioning properly, hence may cause non operational at any time. | Since the expenditure to be incurred for the asset is in the nature of O&M expenses, the same is not allowed. |
| 10 | HPP OFFICE BUILDING NEAR ADIT-3 | 360.00 | 360.00 | 14(3) viii | Const. of office for Tehri HPP is required for proper functioning and controlling of Tehri HPP project near power house site. | As the expenditure is for the benefit of |
| 11 | HOSPITAL BUILDING | 450.00 | 450.00 | 14(3) viii | New hospital building is required in B.puram as existing hospital is functioning from a temporary building and to take care of the staff posted at Tehri Project a permanent hospital is needed. | employees of the project, which will facilitate for the efficient and successful operation of the plant, the same is allowed under Regulation 14(3)(viii) of 2014 Tariff Regulations |
| 12 | TYPE-II & III AT KOTI | 300.00 | 300.00 | 14(3) viii | This expenditure is essential to provide | |

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| SI. N. | | Claimed | Approved | Regulation | Submission of the petitioner | Remarks on admissibility |
|-----------|--|---------|----------|------------|--|--|
| | | | | | accomodation to employees. A useful life of most of the residences in B. puram and Koti have been completed and it is necessary to construct new residences in liue of old and damaged residences. | |
| 13 | ADDITIONAL WORK AT TYPE- IV,DUPLEX,FIELD HOSTEL | 15.00 | 0.00 | 14(3) viii | Additional works are required for proper functioning of these residences. This expenditure is essential to incraese the efficency of employees as well as generating station. | Since the expenditure incurred for the asset is in the nature of O&M expenses, the same is not allowed. |
| 14 | CHANNELISATION OF NALA BETWEEN CISF BARRACK TO CISF FIRE RESIDENCE AT B.PURAM | 150.00 | 150.00 | 14(3) viii | It is mandatory requirement for safety of project. | The expenditure is claimed towards safety and security of station. Hence the same is allowed under Regulation 14(3)(iii) |
| 15 | PROTECTION WORK OF B.PURAM TO ZERO BRIDGE ROAD AT CH 7.1 KM RIGHT BANK NEAR ZERO BRIDGE | 200.00 | 0.00 | 14(3) viii | To protect the B. Puram Zero bridge road for transportation of heavy equipments of the project. | Since the expenditure incurred for the asset is in the nature of O&M expenses, the same is not allowed. |
| 16 | TREATMENT OF 2 NOS OF DRAFTTUBE WITH CHEMICAL GROUTING &EPOXY MORTAR | 200.00 | 0.00 | | These planned works shall provide additional strength to various structures of Tehri HPP and required | The petitioner has not submitted any justification/clarific ation for the expenditure incurred for these |
| 17 | CONSOLIDATION GROUTING OF MGS-3 | 440.00 | 0.00 | 14(3) viii | for efficient operation of HPP | works. Hence, the same shall be considered at the |
| 18 | SLOPE STABILITY MEASURES FOR INTAKE STRUCTURE & BEHTOGI NALAH | 500.00 | 0.00 | | units. However, the works are subject to finalisation of design schemes. | time of truing-up of tariff subject to the when these works being completed. |
| 19 | HOSPITAL BUILDING LAN | 12.00 | 12.00 | 14(3) viii | To provide LAN connection in new | The expenditure claimed is allowed |

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| SI. N. | | Claimed | Approved | Regulation | Submission of the petitioner | Remarks on admissibility |
|-----------|---|---------|----------|------------|---|--|
| | | | | | Hospital building. | under Regulation 14(3)(viii) of 2014 Tariff Regulations as the expenditure is for the benefit of employees of the project. |
| 20 | LAN | 2.00 | 0.00 | 14(3) viii | To provide LAN connection in new built rooms in Administrative building | The expenditure towards procurement of these assets is in the nature of minor assets, hence the same is not allowed. |
| 21 | MISC WORKS | 12.50 | 0.00 | 14(3) viii | Expenses on various works for Rehabilitation | Since no justification has been submitted by the petitioner, the expenditure is disallowed. |
| 22 | PROCUREMENT OF PUMP AND MOTOR SET | 6.00 | 2.22 | 14(3) viii | Provision has been kept for purchase of new pump and motor that will replace old pump in use of drinking water supply for project colony. | The expenditure claimed is allowed |
| 23 | PROCUREMENT OF INSPECTION VEHICLE | 40.00 | 40.00 | 14(3) viii | Provision has been kept for purchase of new vehicle that will replace old vehicle in use of transportation of officers and shift staff. | under Regulation 14(3)(viii) of 2014 Tariff Regulations as the expenditure is for the benefit of employees of the project. The petitioner has provided de- |
| 24 | PROCUREMENT OF MOTOR CYCLE | 5.00 | 1.85 | 14(3) viii | Provision has been kept for purchase of new vehicle that will replace old vehicle in use of transportation of CISF personal and staff. | capitalisation value of Amublance and school vehicle. The assumed deletions of ₹3.78 lakh for Pump & motor set and ₹3.15 lakh for |
| 25 | PROCUREMENT OF AMBULANCE | 15.00 | 15.00 | 14(3) viii | Provision has been kept for purchase of new vehicle that will replace old vehicle in use of transportation of patient and medical staff. | motor cycle has been considered respectively. |

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| SI. N. | | Claimed | Approved | Regulation | Submission of the petitioner | Remarks on admissibility |
|-----------|---|---------|----------|------------|--|--|
| 26 | PROCUREMENT OF SCHOOLBUS /STAFF BUS | 80.00 | 80.00 | 14(3) viii | Provision has been kept for purchase of new vehicle that will replace old vehicle in use of transportation of student and shift staff. | |
| 27 | I.B.RECOMMENDA TION | 40.00 | 40.00 | 14(3) iii | As per statutory requirements | Considering the requirements as |
| 28 | FIRE FIGHTING | 5.00 | 5.00 | 14(3)iii | As per statutory requirements. | per IB recommendations, the expenditure is allowed under Regulation 14(3) (iii) of the 2014 Tariff Regulations. |
| 29 | HOSPITAL | 16.00 | 5.92 | 14(3) viii | As per requirement, provision has been kept for purchase of new items to replace with old items / additional requirements. | As the expenditure is for the benefit of employees of the project, which will facilitate for the efficient and successful operation of the plant, the same is allowed under Regulation 14(3)(viii) of 2014 Tariff Regulations. Assumed deletions are considered at 10.08 lakh. |
| 30 | CISF BARRACK | 10.00 | 10.00 | 14(3) iii | As per statutory requirements | Considering the fact that the expenditure incurred is as per IB recommendations, the expenditure is allowed under Regulation 14(3) (iii) of the 2014 Tariff Regulations. |
| 31 | WINCH AND RUNNER INSPECTION PLATFORM | 2.00 | 0.00 | 14(3) viii | Additional devices are required for taking up unit maintenance as a parallel activity for economic reasons. | Since the expenditure to be incurred for the asset is in the nature of O&M expenses, the |
| 32 | PROCUREMENT OF OPERATING SYSYEM | 180.00 | 0.00 | 14(3) viii | The old operating system are getting faulty frequently | same is not allowed. |

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| SI. N. | | Claimed | Approved | Regulation | Submission of the petitioner | Remarks on admissibility |
|-----------|---------------------------------|---------|----------|------------|---|--|
| | | | | | due to non- availability of spares as it became obsolete. | |
| 33 | FLOOD PREVENTATIVE SCHEME | 60.00 | 0.00 | 14(3) iii | Flood preventive scheme is required to be installed in Tehri HEP under the directives of CEA. | The submissions have been considered. In our view, the expenditure towards floor prevention works are recurring in nature and shall be met from the O&M expenses allowed to the generating station. Hence, expenditure is not allowed. |
| 34 | LIFT FOR GIS FLOOR | 35.00 | 0.00 | 14(3) viii | To ensure smooth O&M of GIS equipments. | |
| 35 | COMPRESSOR | 81.00 | 0.00 | 14(3) viii | All parallel indigeneous arrangements required to reduce the full dependency on old compressors of Russian make. Annual Mantenance of the existing compressor for operational worthiness simultaneous to the operation of machine involves an element of risk as healthiness of compressor is an absolute requirement at the plant for operation of machines. Also, mamagement of spares from Russia is a issue which need to be addressed. | Since the expenditure to be incurred for the asset is in the nature of O&M expenses, the same is not allowed. |
| 36 | SC VALVES | 10.00 | 3.70 | 14(3) viii | The old SC valves of Russian make are obsolete and shall be replaced by indigenised | Considering the fact that the asset will facilitate the successful and efficient operation |

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| SI. N. | | Claimed | Approved | Regulation | Submission of the petitioner | Remarks on admissibility |
|-----------|--|---------|----------|------------|--|---|
| | | | | | valves. | of plant, the same |
| 37 | 220 V CELL FOR 220 DC SYST | 230.00 | 230.00 | 14(3) viii | Old cells are getting damaged and will necessitate replacement. | is allowed under Regulation 14(3) (viii) of the 2014 Tariff Regulations. The petitioner has |
| 38 | PROCUREMENT OF ACB FOR BJT & DC PANELS | 50.00 | 50.00 | 14(3) viii | The old ACB in BJT and associated DC pannels required to be replaced due to obsolete technology. | provided de- capitalisation value of 220 V cell and ACB for BJT & DC panels. The assumed deletions are 6.30 lakh for SC valves. |
| | TOTAL | 3795.00 | 2003.18 | | | |

<u>2017-18</u>

(₹in lakh)

| SI. N. | | Claimed | Approved | Regulation | Submission of the petitioner | Remarks on admissibility |
|-----------|---|---------|----------|------------|--|--|
| 1 | Internal and external electrification of hospital building | 90.00 | 90.00 | 14(3) viii | It is proposed by BCM department for construction of Hospital building at B.puram. Hence electrification work is proposed to be carried out. | Considering the fact that the asset will facilitate the successful |
| 2 | Internal and external electrification of club building | 90.00 | 90.00 | 14(3) viii | It is proposed by BCM department for construction of club building at B.puram. Hence electrification work is proposed to be carried out. | and efficient operation of plant, the same is allowed under Regulation 14(3) (viii) of the 2014 Tariff Regulations. |
| 3 | CISF OFFICE BUILDING | 500.00 | 500.00 | 14(3) viii | It is mandatory requirement for safety of the project. | |
| 4 | RENOVATION OF ADMN BLOCK | 175.00 | 0.00 | 14(3) viii | It is required for proper functioning of Administartive Block. | Since the expenditure to be incurred for the asset is in the nature of O&M expenses, the same is not allowed. |

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| SI. N. | | Claimed | Approved | Regulation | Submission of the petitioner | Remarks on admissibility |
|-----------|--|------------------|----------------|-------------------|---|---|
| 5 | CLUB BUILDING | 450.00 | 450.00 | 14(3) viii | Construction of club building is required to perform various functions with which a provision of indoor games for employees. Tehri HPP is in a remote place and there is no any other specific place available for this purpose. This expenditure is essential to increase the efficiency of employees as well as generating station. | The expenditure claimed is allowed under Regulation 14(3)(viii) of 2014 Tariff Regulations as the |
| 6 | TYPE-II & III AT KOTI | 400.00 | 400.00 | 14(3) viii | This expenditure is essential to provide accommodation to employees. A useful life of most of the residences in B. puram and Koti have been completed and it is necessary to construct new residences in lieu of old and damaged residences. | same is considered necessary for the benefit of employees of the project and in turn will facilitate for the efficient and successful operation of the plant. |
| 7 | CISF FAMILY QTRS BUILDING | 3 0 0 0 | 30 0.0 0 | 14(3) viii | It is mandator y requirem ent for safety of the project. | |
| 8 | TREATMENT OF SUBSIDENCE ZONE BETWEEN TYPE-II BEND ABOVE OLD RCM OFFICE TO DAM ROAD | 250.00 | 0.00 | 14(3) viii | AS per suggestion of technical team of GM(Civil-Design), GM (O&MS) & GM (Tehri Complex). | Since no justification has been submitted by the petitioner, the expenditure is disallowed. |

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| SI. N. | | Claimed | Approved | Regulation | Submission of the petitioner | Remarks on admissibility |
|-----------|---|---------|----------|------------|---|--|
| 9 | CHANNELISAT ION OF THE BHATOGINALA BY G.I. GABION BOX & RCC WALL | 200.00 | 0.00 | | | |
| 10 | GROUTING WORKS AT TRT OUTLET AREA | 200.00 | | 14(3) viii | These planned works shall provide additional strength to the various structures of Tehri HPP and required for efficient operation of HPP units. However, the works subject to finalisation of design schemes. | The petitioner has not submitted any justification/clarification for the expenditure incurred for these works. Hence, the same shall be considered at the time of truing-up of tariff subject to the when these works being completed. |
| 11 | PROCURERME NT AND INSTALLATION OF ADDITIONAL SESIMOLOGIC AL NETWORK | 225.00 | | 14(3) viii | For the monitoring of local seismocity/ micro earthquake activities around Tehri Region. | Since the expenditure to be incurred for the asset is in the nature of O&M expenses, the same is not allowed. |
| 12 | MISC WORKS | 12.50 | 0.00 | 14(3) viii | Expenses on various works for Rehabilitation | Since no justification has been submitted by the petitioner, the expenditure is disallowed. |
| 13 | CONSTRUCTI ON OF RCC TANK FOR WATER STORAGE | 50.00 | 2.10 | 14(3) viii | Construction is required to replace old tank of drinking water supply of project colony. Provision has been kept in year 2017-18 for looking into the condition of present tank. | The expenditure claimed is allowed under Regulation 14(3)(viii) of 2014 Tariff Regulations as the expenditure is |
| 14 | FABRICATION OF STEEL TANKS FOR WATER STORAGE | 30.00 | 30.00 | 14(3) viii | Fabrication is required to replace old tank of drinking water supply of project colony. Provision has been kept in year 2017-18 for looking into the condition of present tank. | considered necessary for the benefit of employees of the project. The assumed deletions considered is ₹47.90 lakh. |

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| SI. N. | | Claimed | Approved | Regulation | Submission of the petitioner | Remarks on admissibility |
|-----------|---|---------|----------|------------|---|---|
| 15 | PROCUREMEN T OF PUMP AND MOTOR SET | 10.00 | 4.01 | 14(3) viii | Provision has been kept for purchase of new pump and motor that will replace old pump in use of drinking water supply for project colony. | The expenditure claimed is allowed under Regulation 14(3)(viii) of 2009 Tariff Regulations as the expenditure is considered necessary for the benefit of employees of the project. The assumed deletions are considered at ₹5.99 lakh |
| 16 | PROCUREMEN T OF INSPECTION VEHICLE | 40.00 | 16.05 | 14(3) viii | Provision has been kept for purchase of new vehicle that will replace old vehicle in use of transportation of officers and shift staff. | Considering the fact that the asset will facilitate the successful and efficient operation of plant, the same is allowed under Regulation 14(3) (viii) of the 2014 Tariff Regulations. The assumed deletions considered is ₹23.95 lakh. |
| 17 | PROCUREMEN T OF SCHOOLBUS /STAFF BUS | 80.00 | 32.10 | 14(3) viii | Provision has been kept for purchase of new vehicle that will replace old vehicle in use of transportation of student and shift staff. | As the expenditure is for |
| 18 | PROCUREMEN T OF GOODS TRANSPORT VEHICLES / TRUCKS | 16.00 | 6.42 | 14(3) viii | Provision has been kept for purchase of new vehicle that will replace old vehicle in use of transportation of goods/ materials. | the benefit of employees of the project, the same is allowed under Regulation 14(3)(viii) of 2014 Tariff Regulations. The assumed deletions are considered at 47.90 |
| 19 | PROCUREMEN T OF WATER TANKER | 30.00 | 12.04 | 14(3) viii | Provision has been kept for purchase of new vehicle that will replace old vehicle in use of transportation of drinking water. | lakh, 9.58 lakh, 17.96 lakh and 11.97 lakh for school bus, transport vehicles, water tanker and mini truck respectively. |
| 20 | PROCUREMEN T OF UTILITY MINI TRUCK | 20.00 | 8.03 | 14(3) viii | Provision has been kept for purchase of new vehicle that will replace old vehicle in use of | |

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| SI. N. | | Claimed | Approved | Regulation | Submission of the petitioner | Remarks on admissibility |
|-----------|--|---------|----------|------------|---|--|
| | | | | | transportation of goods / materials. | |
| 21 | PROCUREMEN T OF WHEEL LOADER/ BACKHOE | 150.00 | 60.19 | 14(3) viii | Provision has been kept for purchase of new equipment that will replace old equipment to maintain the various roads of the project, dragging work and other development works at various locations of the project site. | Considering the fact that the asset will facilitate the successful and efficient operation of plant, the same is allowed under Regulation 14(3) (viii) of the 2014 Tariff Regulations. The assumed deletions considered is 89.81 lakh and 59.87 lakh for wheel loader and excavator respectively |
| 22 | PROCUREMEN T OF EXCAVATOR | 100.00 | 40.13 | 14(3) viii | | |
| 23 | I.B.RECOMME NDATION | 20.00 | 20.00 | 14(3) iii | As per statutory requirements | Considering the fact that the expenditure |
| 24 | FIRE FIGHTING | 5.00 | 5.00 | 14(3)iii | As per statutory requirements. | incurred is as per IB recommendations, the expenditure is allowed under Regulation 14(3) (iii) of the 2014 Tariff Regulations. |
| 25 | HOSPITAL | 16.00 | 6.42 | 14(3) viii | As per requirement, provision has been kept for purchase of new items to replace with old items / additional requirements. | As the expenditure is for the benefit of employees of the project, the same is allowed under Regulation 14(3)(viii) of 2014 Tariff Regulations. The assumed deletions are 9.58 lakh |
| 26 | CISF BARRACK | 5.00 | 5.00 | 14(3) iii | As per statutory requirements | Considering the fact that the expenditure incurred is as per IB recommendations, the expenditure is allowed under Regulation 14(3) (iii) of the 2014 Tariff Regulations. |

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| SI. N. | | Claimed | Approved | Regulation | Submission of the petitioner | Remarks on admissibility |
|-----------|---|---------|----------|------------|---|---|
| 27 | PROCUREMEN T OF OPERATING SYSYEM | 20.00 | 0.00 | 14(3) viii | The old operating system are getting faulty frequently due to non- availability of spares as it became obsolete. | Since the expenditure incurred for the asset is in the nature of O&M expenses, the same is not allowed. |
| 28 | FLOOD PREVENTATIV E SCHEME | 30.00 | 0.00 | 14(3)iii | Flood preventive scheme is required to be installed in Tehri HEP under the directives of CEA. | As the expenditure towards floor prevention works are recurring in nature, the same shall be met from the O&M expenses allowed to the generating station. Hence, expenditure is not allowed. However, the petitioner is at liberty to approach the Commission with detailed justifications and directives of CEA for the same at the time of truing up of tariff. |
| 29 | LIFT FOR GIS FLOOR | 5.00 | 0.00 | 14(3) viii | To ensure smooth O&M of GIS equipments. | |
| 30 | COMPRESSOR | 10.00 | 0.00 | 14(3) viii | All parallel indigeneous arrangements required to reduce the full dependency on old compressors of Russian make. Annual Mantenance of the existing compressor for operational worthiness simultaneous to the operation of machine involves an element of risk as healthiness of compressor is an absolute requirement at the plant for operation of machines. Also, mamagement of spares from Russia is a issue which need to be addressed. | Since the expenditure incurred for the asset is in the nature of O&M expenses, the same is not allowed. |

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| SI. N. | | Claimed | Approved | Regulation | Submission of the petitioner | Remarks on admissibility |
|-----------|-----------------------------|---------|----------|------------|---|---|
| 31 | SC VALVES | 3.00 | 1.20 | 14(3) viii | The old SC valves of Russian make are obsolete and shall be replaced by indigenised valves. | Considering the fact that the asset will facilitate the successful and efficient operation of plant, the same is allowed under Regulation 14(3) (viii) of the 2014 Tariff Regulations. The petitioner has provided de-capitalisation value of 48 V cell. The assumed deletions for SC valves are considered at ₹1.80 lakh |
| 32 | 48 CELL FOR 48 V DC SYST | 25.00 | 25.00 | 14(3) viii | Old cells are getting damaged and will necessitate replacement. | |
| | TOTAL | 3557.50 | 2103.69 | | | |

2018-19

(₹in lakh)

| Sr | | Claimed | Approved | Regulation | Submission of the petitioner | Remarks on admissibility |
|----|--|---------|----------|------------|--|--|
| 1 | INTERNAL AND EXTERNAL ELECTRIFICATIO N OF CISF OFFICE BUILDING | 80.00 | 80.00 | 14(3)viii | It is proposed by BCM department for construction of CISF office building. Hence electrification work is proposed to be carried out. | As the expenditure is considered necessary for the benefit of employees of the project which in turn will facilitate efficient and successful operation of the plant, the same is allowed under Regulation 14(3)(viii) of 2014 Tariff Regulations. |
| 2 | INTERNAL AND EXTERNAL ELECTRIFICATIO N OF VARIOUS NEW BUILDINGS AT PROJECT AREAS | 115.00 | 115.00 | 14(3)viii | Various new buildings are constructed by Civil department time to time as per requirement. Hence electrification work for these buildings is required to be carried out. | |
| 3 | INTERNAL AND EXTERNAL ELECTRIFICATIO | 55.00 | 55.00 | 14(3)viii | It is proposed by BCM department for construction of | |

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| Sr | | Claimed | Approved | Regulation | Submission of the petitioner | Remarks on admissibility |
|----|---|---------|----------|------------|--|--|
| | N OF CISF FAMILY QTRS | | | | CISF family quarters. Hence electrification work is proposed to be carried out. | uanneedanty |
| 4 | INTERNAL ELECTRIFICATIO N OF TYPE-II AND III RESIDENTAL AT KOTI COLONY | 450.00 | 450.00 | 14(3)viii | It is proposed by BCM department for construction of Type-IInd & IIIrd residences at Koti colony. Hence electrification work is proposed to be carried out. | |
| 5 | TYPE-II & III AT KOTI | 400.00 | 400.00 | 14(3)viii | This expenditure is essential to provide accomodation to employees. A useful life of most of the residences in B. puram and Koti have been completed and it is necessary to construct new residences in liue of old and damaged residences. | |
| 6 | TREATMENT OF SUBSIDENCE ZONE ON LEFT BANK | 700.00 | 700.00 | 14(3)viii | Rate of subsidence is closely being monitored by D & D department before taking decision for remidial measure for treatment of subsidence.Due to which delay is occurred in preparation of drawings by D&D Department. That's why long treatment shall take considerable time of time. | Considering the fact that the asset will facilitate the successful and efficient operation of plant, the same is allowed under Regulation 14(3) (viii) of the 2014 Tariff Regulations. |
| 7 | STRENGTHING WORKS IN UNDERGROUND POWER HOUSE COMPLEX | 500.00 | 500.00 | 14(3)viii | These planned works shall provide additional strength to the various structures | |

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| Sr | | Claimed | Approved | Regulation | Submission of the petitioner | Remarks on admissibility |
|----|--|---------|----------|------------|---|--|
| | | | | | of Tehri HPP and required for efficient operation of HPP units. However, the works subject to finalisation of design schemes. | |
| 8 | RESERVOIR RIM STABILITY NEAR UNGATED SHAFT SPILLWAY & AROUND THE RIM OF RESORVIOUR | 1200.00 | 1200.00 | 14(3)viii | Stablisation is requiredfor proper safe guard ofungated shaft spillway area because of erosion and sliding of hill slope. | |
| 9 | MISC WORKS | 12.50 | 0.00 | 14(3)viii | Expenses on various works for Rehabilitation | Since no justification has been submitted by the petitioner, the expenditure is disallowed. |
| 10 | PROCUREMENT OF PUMP AND MOTOR SET | 12.00 | 5.17 | 14(3)viii | Provision has been kept for purchase of new pump and motor that will replace old pump and motor in use of drinking water supply for project colony. | The expenditure claimed is allowed under Regulation 14(3)(viii) of 2009 Tariff Regulations as the expenditure is considered necessary for the benefit of employees of the project. The assumed deletions are considered at 6.83 lakh |
| 11 | PROCUREMENT OF INSPECTION VEHICLE | 40.00 | 17.25 | 14(3)viii | Provision has been kept for purchase of new vehicle that will replace old vehicle in use of transportation of officers and shift staff. | Considering the fact that the asset will facilitate the successful and efficient operation of plant, the same is allowed under Regulation 14(3) (viii) of the 2014 Tariff Regulations. The assumed deletions are considered at 22.75 lakh. |
| 12 | PROCUREMENT OF MOTOR CYCLE | 6.00 | 2.59 | 14(3)viii | Provision has been kept for purchase of new vehicle that will replace old vehicle in use of transportation of CISF personal and staff. | Considering the fact that the asset will facilitate the successful and efficient operation of plant, the same is allowed under Regulation 14(3) (viii) of the 2014 Tariff |

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| Sr | | Claimed | Approved | Regulation | Submission of the petitioner | Remarks on admissibility |
|----|---|---------|----------|---|---|--|
| | | | | | · | Regulations. Assumed deletions are considered at 3.41 lakh. |
| 13 | PROCUREMENT OF AMBULANCE | 15.00 | 6.47 | 14(3)viii | Provision has been kept for purchase of new vehicle that will replace old vehicle in use of transportation of patient and medical staff. | The expenditure claimed is allowed under Regulation 14(3)(viii) of 2014Tariff Regulations as the expenditure is considered necessary |
| 14 | PROCUREMENT OF SCHOOLBUS /STAFF BUS | 80.00 | 34.50 | medical staff. Provision has been kept for purchase of new vehicle that will | | for the benefit of employees of the project. The assumed deletions are considered at 8.53 lakh and 45.50 lakh |
| 15 | PROCUREMENT OF CRANE | 40.00 | 17.25 | 14(3)viii | Provision has been kept for purchase of new equipment that will replace old equipment in use of loading and unloading of materials. | Considering the fact that the asset will facilitate the successful and officient operation of |
| 16 | PROCUREMENT OF WHEEL DOZER | 150.00 | 144.88 | 14(3)viii | Provision has been kept for purchase of new equipment that will replace old equipment to maintain the various roads of the project, dragging work and other development works at various locations of the project site. | efficient operation of plant, the same is allowed under Regulation 14(3) (viii) of the 2014 Tariff Regulations. The assumed deletions are considered at 22.75 lakh and 5.12 lakh for crane and wheel dozer respectively. |
| 17 | I.B.RECOMMEND ATION | 20.00 | 20.00 | 14(3) iii | As per statutory requirements | Considering the requirements as per IB recommendations, the |
| 18 | FIRE FIGHTING | 5.00 | 5.00 | 14(3)iii | As per statutory requirements. | expenditure is allowed under Regulation 14(3) (iii) of the 2014 Tariff Regulations. |
| 19 | HOSPITAL | 16.00 | 6.90 | 14(3)viii | As per requirement, | As the expenditure is considered necessary |

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| Sr | | Claimed | Approved | Regulation | Submission of the petitioner | Remarks on admissibility |
|----|---------------|---------|----------|------------|---|--|
| | | | | | provision has been kept for purchase of new items to replace with old items / additional requirements. | for the benefit of employees of the project, the same is allowed under Regulation 14(3)(viii) of 2014 Tariff Regulations. The assumed deletions are considered at 9.10 lakh |
| 20 | CISF BARRACK | 10.00 | 10.00 | 14(3) iii | As per statutory requirements | Considering the requirements as per IB recommendations, the expenditure is allowed under Regulation 14(3) (iii) of the 2014 Tariff Regulations. |
| 21 | COMPRESSOR | 9.00 | 0.00 | 14(3)viii | All parallel indigeneous arrangements required to reduce the full dependency on old compressors of Russian make. Annual Mantenance of the existing compressor for operational worthiness simultaneous to the operation of machine involves an element of risk as healthiness of compressor is an absolute requirement at the plant for operation of machines. Also, mamagement of spares from Russia is a issue which need to be addressed. | Since the expenditure incurred for the asset is in the nature of O&M expenses, the same is not allowed. |
| 22 | 1.5MVA DG SET | 400.00 | 400.00 | 14(3)viii | The existing DG sets of 01 MVA are old and will necessitate replacement to cater the additional demand. | Considering the fact that the asset will facilitate the successful and efficient operation of plant, the same is allowed under Regulation 14(3) (viii) of the 2014 Tariff Regulations. |
| | TOTAL | 4315.50 | 4170.00 | | | |

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15. It is observed that in case of the replacements of assets, though the petitioner has projected de-capitalization against buildings, vehicles, DG set and other miscellaneous assets, the petitioner has not furnished the asset wise de-capitalization as applicable in case of replacement of assets. Accordingly, in this order, the Commission has considered overall de-capitalization as submitted by the petitioner. In respect of the assets wherein the petitioner has not submitted the gross value of replaced assets like procurement of pumps sets, cranes, wheel loader, CCTV etc, the gross value of old assets from COD of the generating station till date of de-capitalization of the said assets has been arrived at after applying the de-escalation rate of 5% per annum. The petitioner is directed to submit the de-capitalized value of each assets which have been replaced during the period 2014-19 at the time of truing up of tariff in terms of Regulation 8 of the 2014 Tariff Regulations.

Assumed Deletions

- 16. As per consistent methodology adopted by the Commission, 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".
- 17. The Commission has considered assumed deletions for the period 2014-19 towards decapitalization by the petitioner on account of Sale of Assets/Assets written off/ new assets purchased during the year, replacement and deemed deletion. The petitioner has projected the

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procurement of pumps sets, cranes, wheel loader, CCTV etc and replacing the old assets during the period 2014-19. Accordingly, the assumed deletions considered are as below:

| | | | | | (₹ in iakn) |
|-------------------|---------|---------|---------|---------|-------------|
| | 2009-10 | 2010-11 | 2011-12 | 2012-13 | 2013-14 |
| Assumed deletions | 219.27 | 295.22 | 23.32 | 326.31 | 124.00 |

De-capitalization

18. It is observed that the petitioner has claimed projected de-capitalization for the period 2014-19 and has submitted that the de-capitalization statement has been prepared on assumption basis and the actual position of de-capitalization would be known only after the finalization of audited accounts in the respective year and shall be submitted during the truing up of tariff on the basis of audited accounts. The details of the de-capitalization are as under:

| | | | | | (₹in lakh) |
|---|---------|----------|---------|---------|------------|
| | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
| ſ | 34.20 | (-)29.82 | 496.38 | 114.68 | 346.04 |

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

(₹in lakh)

| | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 | Total |
|------------------------------------|---------|---------|---------|---------|---------|----------|
| Additional capital expenditure | 933.17 | 1959.58 | 2026.50 | 2430.00 | 4294.00 | 11643.25 |
| Less: Assumed deletions | 219.27 | 295.22 | 23.32 | 326.31 | 124.00 | 988.12 |
| Net additional capital expenditure | 713.90 | 1664.36 | 2003.18 | 2103.69 | 4170.00 | 10655.13 |
| Less: De-capitalisation | 34.20 | 29.82 | 496.38 | 114.68 | 346.04 | 1021.12 |
| Total | 679.70 | 1634.54 | 1506.80 | 1989.01 | 3823.96 | 9634.01 |

20. Accordingly, the capital cost in respect of the generating station for the period 2014-19 is allowed as under:

(₹in lakh)

| | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
|---|-----------|-----------|-----------|-----------|-----------|
| Opening Capital Cost | 704121.77 | 704801.47 | 706436.01 | 707942.81 | 709931.82 |
| 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 | 704801.47 | 706436.01 | 707942.81 | 709931.82 | 713755.78 |

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Debt: Equity Ratio

- 21. 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-equtiy ratio.

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

- (2) The generating Company or the transmission licensee shall submit the resolution f the Board of the company or approval from Cabinet Committee on Economic Affairs (CCEA) regarding infusion of fund from internal resources in support of the utilisation made or proposed to be made to meet the capital expenditure of the generating station or the transmission system including communication system, as the case may be.
- (3) In case of the generating station and the transmission system including communication system declared under commercial operation prior to 1.4.2014, debt-equity ratio allowed by the Commission for determination of tariff for the period ending 31.3.2014 shall be considered.
- (4) In case of generating station and the transmission system including communication system declared under commercial operation prior to 1.4.2014, but where debt:equity ratio has not been determined by the Commission for determination of tariff for the period ending 31.3.2014, the Commission shall approve the debt:equity ration based on actual information provided by the generating company or the transmission licensee as the case may be.
- (5) Any expenditure incurred or projected to be incurred on or after 1.4.2014 as may be admitted by the Commission as additional capital expenditure for determination of tariff, and renovation and modernisation expenditure for life extension shall be serviced in the manner specified in clause (1) of this regulation.

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- 22. As stated, the Commission in 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 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."
- 23. In line with the decision of the Commission in the said order, the entire amount of admitted additional capital expenditure has been considered as loan.

Return on Equity

- 24. 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

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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.
- 25. 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-rate 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.

26. The respondent, UPPCL has submitted that the petitioner has not furnished the details of calculation towards the computation of Return on Equity as per the Tariff Regulations 2014. It has further submitted that the effective tax rate is to be computed in accordance with Regulation 25.

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27. In line with the decision of the Commission in the order dated 16.4.2013 in Petition No. 250/GT/2010, the entire amount of admitted additional capital expenditure has been considered as loan and the equity as nil. The Base rate of ROE has been grossed up with the MAT rate for the year 2013-14. Accordingly, in terms of the above regulations, Return on Equity has been computed as under:

(₹in lakh)

| | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
|--|-----------|-----------|-----------|-----------|-----------|
| Notional Equity- Opening | 254402.82 | 254402.82 | 254402.82 | 254402.82 | 254402.82 |
| Addition of Equity due to additional capital expenditure | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Normative Equity-Closing | 254402.82 | 254402.82 | 254402.82 | 254402.82 | 254402.82 |
| Average Normative Equity | 254402.82 | 254402.82 | 254402.82 | 254402.82 | 254402.82 |
| Return on Equity (Base Rate) | 16.500% | 16.500% | 16.500% | 16.500% | 16.500% |
| Tax Rate for the year | 20.961% | 21.342% | 21.342% | 21.342% | 21.342% |
| Rate of Return on Equity (Pre Tax) | 20.876% | 20.977% | 20.977% | 20.977% | 20.977% |
| Return on Equity | 53109.13 | 53366.08 | 53366.08 | 53366.08 | 53366.08 |

28. The petitioner is however directed to furnish on affidavit the effective tax rates along with the Tax Audit Report for the period 2015-19 at the time of revision of tariff based on truing-up in terms of Regulation 8 of the 2014 Tariff Regulations.

Interest on Loan

- 29. Regulation 26 of the 2014 Tariff Regulations provides as under:
 - **"26. Interest on loan capital:** (1)The loans arrived at in the manner indicated in regulation 19 shall be considered as gross normative loan for calculation of interest on loan.
 - (2) The normative loan outstanding as on 1.4.2014 shall be worked out by deducting the cumulative repayment as admitted by the Commission up to 31.3.2014 from the gross normative loan.
 - (3) The repayment for each of the year of the tariff period 2014-19 shall be deemed to be equal to the depreciation allowed for the corresponding year/period. In case of decapitalization of assets, the repayment shall be adjusted by taking into account cumulative repayment on a pro rata basis and the adjustment should not exceed cumulative depreciation recovered upto the date of de-capitalization of such asset.

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- (4) Notwithstanding any moratorium period availed by the generating company orthe 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 re-enactment thereof for settlement of the dispute:

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

- 30. Interest on loan has been worked out as under:
- (a) The gross normative loan of ₹449718.95 lakh as on 1.4.2014 has been considered.
- (b) Cumulative repayment of loan of ₹235562.63 lakh as on 31.3.2014 as considered in order dated 20.3.2017 in Petition No.172/GT/2015 has been considered as on 1.4.2014.
- (c) Accordingly, the net normative opening loan as on 1.4.2014 works out to ₹214156.32 lakh.

for the consistent

- (d) Addition to normative loan on account of the admitted additional capital expenditure has been considered on year to year basis.
- (e) Depreciation allowed for the period has been considered as repayment of normative loan during the respective year for the period 2014-19.
- (f) In line with the provisions of the regulations, the weighted average rate of interest has been calculated by applying the actual loan portfolio existing as on 1.4.2014 along with subsequent additions during the period 2014-19, if any, for the generating station. In case of loans carrying floating rate of interest the rate of interest as furnished by the petitioner has been considered for the purpose of tariff.
- 31. Necessary calculation for interest on loan is as under:

(₹in lakh)

| | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
|---|-----------|-----------|-----------|-----------|-----------|
| Gross opening loan | 449718.95 | 450398.65 | 452033.19 | 453539.99 | 455529.00 |
| Cumulative repayment of loan upto previous year | 235562.63 | 272491.45 | 309437.70 | 346459.27 | 383535.04 |
| Net Loan Opening | 214156.32 | 177907.20 | 142595.49 | 107080.72 | 71993.96 |
| Addition due to additional capital expenditure | 679.70 | 1634.54 | 1506.80 | 1989.01 | 3823.96 |
| Repayment of loan during the year | 36928.82 | 36946.25 | 37021.57 | 37075.77 | 37181.36 |
| Net Loan Closing | 177907.20 | 142595.49 | 107080.72 | 71993.96 | 38636.56 |
| Average Loan | 196031.76 | 160251.35 | 124838.10 | 89537.34 | 55315.26 |
| Weighted Average Rate of Interest of Ioan | 12.3799% | 12.5199% | 12.5492% | 12.5500% | 12.5500% |
| Interest on Loan | 24268.44 | 20063.32 | 15666.14 | 11236.94 | 6942.07 |

Depreciation

- 32. 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.

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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 Generating station:

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 on1.4.2014 shall be worked out by deducting the cumulative depreciation as admitted by the Commission upto 31.3.2014 from the gross depreciable value of the assets.
- (7) The generating company or the transmission license, as the case may be, shall submit the details of proposed capital expenditure during the fag end of the project(five years before the useful life) along with justification and proposed life extension. The Commission based on prudence check of such submissions shall approve the depreciation on capital expenditure during the fag end of the project.

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- (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."
- 33. In terms of above regulations, the weighted average rate of depreciation of has been considered based on the Gross Block during the period for calculation of depreciation. The cumulative depreciation amounting to ₹214134.70 lakh as on 31.3.2014 as considered in order dated 20.3.2017 has been considered for the purpose of tariff. Further, the balance depreciable value (before providing depreciation) for the year 2014-15 works out to ₹418697.23 lakh. In Form 9(B)(i), the petitioner has submitted the de-capitalization recovered on the de-capitalisation claimed during the period. Further, pro-rata adjustment has been considered for 'Assumed deletions'. Based on the above, the cumulative depreciation adjustment on account of de-capitalisation has been considered while computing cumulative depreciation for the period 2014-19.

34. Accordingly, depreciation has been computed as follows:

(₹in lakh)

| | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
|---|-----------|-----------|-----------|-----------|-----------|
| Opening Capital Cost | 704121.77 | 704801.47 | 706436.01 | 707942.81 | 709931.82 |
| Add: Additional Capital Expenditure | 679.70 | 1634.54 | 1506.80 | 1989.01 | 3823.96 |
| Closing Capital Cost | 704801.47 | 706436.01 | 707942.81 | 709931.82 | 713755.78 |
| Average Capital Cost | 704461.62 | 705618.74 | 707189.41 | 708937.31 | 711843.80 |
| Rate of Depreciation | 5.252% | 5.246% | 5.245% | 5.239% | 5.233% |
| Depreciable value (excluding land)@ 90% | 632831.92 | 633873.33 | 635286.93 | 636860.04 | 639475.88 |
| Balance depreciable Value | 418697.23 | 382895.90 | 347383.02 | 312197.25 | 277569.46 |
| Depreciation | 36928.82 | 36946.25 | 37021.57 | 37075.77 | 37181.36 |
| Cumulative depreciation at the end of the period | 251063.52 | 288009.77 | 325031.34 | 362107.10 | 399288.46 |
| Less: Cumulative depreciation adjustment on account of decapitalisation | 86.09 | 105.86 | 368.55 | 200.69 | 302.94 |
| Cumulative depreciation at the end | 250977.43 | 287903.91 | 324662.79 | 361906.42 | 398985.53 |

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O&M Expenses

- 35. Regulation 29 (3) (b) of the 2014 Tariff Regulations provides as under:
 - "(b) for hydro generating stations of Satluj Jal Vidyut Nigam Limited (SJVNL) 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."

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36. The O & M expenses claimed by the petitioner are as under:

| | | | | (₹ in lakn) |
|----------|----------|----------|----------|-------------|
| 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
| 26378.24 | 28129.75 | 29997.57 | 31989.41 | 34113.50 |

- 37. The petitioner has furnished the actual O&M expenses for the period from 2008-09 to 2012-13 based on the audited balance sheets of the said period. On prudence check of the actual O&M expenditure for the year 2008-09 to 2012-13, the expenses of following nature have been excluded for arriving at the allowable O&M expenses:
- (a) **Productivity linked incentive and performance related pay:** The productivity linked incentive and performance related pay made to the employees of the generating station and corporate centre/service centre has not been allowed as the same has to be borne from the "incentive" earned by the petitioner by way of better performance of the generating station in terms of the provisions of the 2014 Tariff Regulations.
- (a) Losses Written Off & Loss on Sale/discarding of asset: As per the provisions of the 2014 Tariff Regulations, the petitioner is entitled to recover 90% of the asset value as depreciation. The subsequent profit/loss on sale of un-serviceable assets is to the account of the petitioner and not considered for the purpose of tariff.

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- **(b) Corporate Social Responsibility & Expenditure on gifts**: Expenditure is not allowed as the petitioner is required to bear such expenses from its own profits/ resources.
- **(c) Survey and Investigation Expenditure: Expenditure pertains** to under construction projects of the petitioner and is not likely to be encountered/continued during 2014-19 for the generating station.
- (d) Deferred Revenue Expenditure Written Off: In view of uncertainty regarding the extent and reoccurrence of such expenses, the same is not considered.
- 38. Based on the above discussions, the total O&M expenses (net) considered for the generating station for the period 2008-09 to 2012-13, for the purpose of working out the O&M expenses for 2014-19 is as summarized as under:

(₹in lakh)

| | | 2008-09 | 2009-10 | 2010-11 | 2011-12 | 2012-13 |
|-----|--|----------|----------|----------|----------|----------|
| (A) | Breakup of O&M expenses | | | | | |
| 1 | Consumption of Stores and spares | | | | | |
| 2 | Repair and Maintenance | | | | | |
| 2.1 | For Dam, Intake, WCS, De-Silting Chamber | | 222.05 | 1324.82 | 338.54 | 505.03 |
| 2.2 | For Power House & all other works | 2039.28 | 2063.04 | 2699.46 | 1697.45 | 2146.37 |
| | Sub-Total (Repair & Maintenance) | 2039.28 | 2285.10 | 4024.28 | 2035.99 | 2651.40 |
| 3 | Insurance | 442.98 | 377.97 | 362.19 | 574.16 | 857.56 |
| 4 | Security | 716.45 | 834.73 | 899.55 | 1041.01 | 1226.86 |
| 5 | Administrative Expenses | | | | | |
| 5.1 | Rent | 29.93 | 43.74 | 127.89 | 81.69 | 100.47 |
| 5.2 | Electricity Chuges | 1146.70 | 647.65 | 750.84 | 758.62 | 618.29 |
| 5.3 | Travelling and Conveyance | 294.05 | 228.46 | 247.69 | 224.98 | 267.46 |
| 5.4 | Cummunication | 32.53 | 51.07 | 44.09 | 60.91 | 65.63 |
| 5.5 | Advertising | 85.63 | 138.55 | 126.67 | 38.28 | 55.01 |
| 5.6 | Donations | | | | | |
| 5.7 | Entertainment | 10.57 | 0.91 | 0.50 | 0.18 | 0.32 |
| | Sub-Total (Administrative Expenses) | 1599.41 | 1110.39 | 1297.68 | 1164.66 | 1107.17 |
| 6 | Employee Cost | | | | | |
| 6.1 | Salaries, Wages and Allowances | 7352.29 | 6236.37 | 9647.27 | 8752.60 | 8292.47 |
| 6.2 | Staff Welfare Expenses | 237.40 | 259.35 | 152.02 | 134.96 | 206.93 |
| 6.3 | Productivity linked Incentive | | | | | |
| 6.4 | Expenditure on VRS | | | | | |
| 6.5 | Ex-gratia | | | | | |
| 6.6 | Performance Related Pay (PRP) | | | | | |
| | Sub Total (Employee cost) | 7589.69 | 6495.72 | 9799.29 | 8887.56 | 8499.39 |
| 7 | Loss of stores | | | | | |
| 8 | Provisions | | | | | |
| 9 | Corporate Office expenses allocation | 1664.14 | 1766.58 | 4227.78 | 3854.32 | 5110.88 |
| 10 | Other expenses (Specify Items) | | | | | |
| 11 | Total (1 to 10) | 14051.95 | 12870.49 | 20610.77 | 17557.69 | 19453.26 |
| 12 | Less : Revenues/Recoveries, if any | | | | | |
| 13 | Net Expenses | 14051.95 | 12870.49 | 20610.77 | 17557.69 | 19453.26 |

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39. The normalised operation and maintenance expenses after prudence check, for the period from 2008-09 to 2012-13 have been escalated at the rate of 6.04% to arrive at the normalized operation and maintenance expenses at the 2012-13 price level 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 have been 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 2014-19. The computations are as under:

| | | | | (| (₹in lakh) |
|----------------|------------|---------|----------|----------|------------|
| 2008-09 | | | | | |
| 2008-09 | 14051.95 | 6.04% | 848.74 | 14900.69 | 31.03.2010 |
| 2009-10 | 14900.69 | 6.04% | 900.00 | 15800.69 | 31.03.2011 |
| 2010-11 | 15800.69 | 6.04% | 954.36 | 16755.05 | 31.03.2012 |
| 2011-12 | 16755.05 | 6.04% | 1012.01 | 17767.06 | 31.03.2013 |
| | | | | | |
| 2009-10 | | | | | |
| 2009-10 | 12870.49 | 6.04% | 777.38 | 13647.87 | 31.03.2011 |
| 2010-11 | 13647.87 | 6.04% | 824.33 | 14472.20 | 31.03.2012 |
| 2011-12 | 14472.20 | 6.04% | 874.12 | 15346.32 | 31.03.2013 |
| | | | | | |
| 2010-11 | | | | | |
| 2010-11 | 20610.77 | 6.04% | 1244.89 | 21855.66 | 31.03.3012 |
| 2011-12 | 21855.66 | 6.04% | 1320.08 | 23175.74 | 31.03.2013 |
| | | | | | |
| 2011-12 | | | | | |
| 2011-12 | 17557.69 | 6.04% | 1060.48 | 18618.17 | 31.03.2013 |
| | | | | | |
| 2012-13 | | | | | |
| 2012-13 | 19453.26 | 0.00% | 0.00 | 19453.26 | 31.03.2013 |
| | | | | | |
| | Tota | | 94360.55 | | |
| | Average at | 2012-13 | | 18872.11 | |
| | Escalation | @6.04% | 1 | 1139.88 | |
| O&M at 2013-14 | | | | 20011.99 | |

(₹in lakh)

| | | | | (1111/4/11) |
|---------|----------------------|------------------------|------------|--------------|
| Year | O&M at 2013-14 level | Escalation Rate | Escalation | O&M expenses |
| 2014-15 | 20011.99 | 6.64% | 1328.80 | 21340.78 |
| 2015-16 | 21340.78 | 6.64% | 1417.03 | 22757.81 |
| 2016-17 | 22757.81 | 6.64% | 1511.12 | 24268.93 |
| 2017-18 | 24268.93 | 6.64% | 1611.46 | 25880.39 |
| 2018-19 | 25880.39 | 6.64% | 1718.46 | 27598.84 |

40. Accordingly, the year-wise O&M expenses allowed for the generating station are as under:

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 (₹ in lakh)

 2014-15
 2015-16
 2016-17
 2017-18
 2018-19

 21340.78
 22757.81
 24268.93
 25880.39
 27598.84

Interest on Working Capital

- 41. 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 hydro electric generating station and transmission system including communication system:
 - (i) Receivables equivalent to two months of fixed cost;
 - (ii) Maintenance spares @ 15% of operation and maintenance expenses specified in regulation 29; and
 - (iii) Operation and maintenance expenses for one month."
- 42. Working capital has been calculated considering the following elements:

Maintenance spares

43. Maintenance spares have been worked out and allowed as under:

(₹in lakh) 2018-19

| 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
|---------|---------|---------|---------|---------|
| 3201.12 | 3413.67 | 3640.34 | 3882.06 | 4139.83 |

Receivables

44. Receivables component of working capital has been worked out on the basis of two months of fixed cost as under:

(₹in lakh)

| 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
|----------|----------|----------|----------|----------|
| 23242.87 | 22821.88 | 22350.76 | 21888.22 | 21476.17 |

O&M Expenses

45. O&M expenses for 1 month for the purpose of working capital are as under:

| | | | | | (₹in lakh) |
|---|---------|---------|---------|---------|------------|
| ľ | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
| Ī | 1778.40 | 1896.48 | 2022.41 | 2156.70 | 2299.90 |

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- 46. 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."
- 47. 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 for the purpose of tariff.

Interest on Working Capital

48. Necessary computations in support of interest on working capital are appended below:

(₹in lakh)

| | | | | | (11111 |
|--------------------------------|----------|----------|----------|----------|----------|
| | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
| O & M expenses- 1 Month | 1778.40 | 1896.48 | 2022.41 | 2156.70 | 2299.90 |
| Maintenance Spares | 3201.12 | 3413.67 | 3640.34 | 3882.06 | 4139.83 |
| Receivables- 2 months | 23242.87 | 22821.88 | 22350.76 | 21888.22 | 21476.17 |
| Total Working Capital | 28222.38 | 28132.04 | 28013.51 | 27926.97 | 27915.90 |
| Rate of Interest | 13.50% | 13.50% | 13.50% | 13.50% | 13.50% |
| Interest on Working Capital | 3810.02 | 3797.82 | 3781.82 | 3770.14 | 3768.65 |

Annual Fixed charges for 2014-19

49. Accordingly, annual fixed charges approved for the generating station for the period from 1.4.2014 to 31.3.2019 is summarized as under:

(₹in lakh)

| | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
|-----------------------------|-----------|-----------|-----------|-----------|-----------|
| Return on Equity | 36928.82 | 36946.25 | 37021.57 | 37075.77 | 37181.36 |
| Interest on Loan | 24268.44 | 20063.32 | 15666.14 | 11236.94 | 6942.07 |
| Depreciation | 53109.13 | 53366.08 | 53366.08 | 53366.08 | 53366.08 |
| Interest on Working Capital | 3810.02 | 3797.82 | 3781.82 | 3770.14 | 3768.65 |
| O&M Expenses | 21340.78 | 22757.81 | 24268.93 | 25880.39 | 27598.84 |
| Total | 139457.20 | 136931.28 | 134104.53 | 131329.31 | 128856.99 |

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Design Energy and Normative Annual Generating station Availability Factor

50. The Design Energy as approved by CEA on completion of the project is 2797 Million units (MUs) and the NAPAF of the generating station for recovery of capacity charges is 77% as per the 2014 Tariff Regulations. Accordingly, NAPAF of 77% has been considered for this generating station for the period 2014-19. The Commission in order dated 20.3.2017 in Petition No.172/GT/2015 had approved the annual Design Energy (DE) of 2797 Million units (MUs) for the period 2009-14 in respect of this generating station. This DE has been considered for this generating station for the period 2014-19 as per month-wise details as under:

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

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| Month | | Design Energy* (MUs) |
|-------|---|----------------------|
| | Ш | 80.26 |
| | | |
| Total | • | 2797 |

Application Fee and Publication Expenses

- 51. The petitioner has sought reimbursement of filing fee and also the expenses incurred towards publication of notices for application of tariff for the period 2014-19. The petitioner has deposited the filing fees of ₹4400000 each for the years 2014-15 and 2015-16 in terms of the provisions of the Central Electricity Regulatory Commission (Payment of Fees) Regulations, 2012. Accordingly, in terms of Regulation 52 of the 2014 Tariff Regulations and in line with the decision in Commission's order dated 5.1.2016 in Petition No. 232/GT/2014, we direct that the petitioner shall be entitled to recover, the filing fees and the expenses incurred on publication of notices for the period 2014-15 and 2015-16 directly from the respondents on submission of documentary proof. The filing fees for the remaining years of the tariff period 2016-19 shall be recovered pro rata after deposit of the same and production of documentary proof.
- 52. The annual fixed charges approved for the period 2014-19 as above are subject to truing-up in terms of Regulation 8 of the 2014 Tariff Regulations.
- 53. Petition No. 178/GT/2015 is disposed of in terms of the above.

Sd/- Sd/- Sd/- Sd/- (Dr. M.K.lyer) (A. S. Bakshi) (A. K. Singhal) (Gireesh B. Pradhan)
Member Member Member Chairperson

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