

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 233/GT/2020

Coram:

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

Date of Order: 15th December, 2022

IN THE MATTER OF

Petition for determination of tariff for the 2019-24 tariff period in respect of Ranganadi Hydroelectric Project (405 MW) of NEEPCO Limited.

AND

IN THE MATTER OF

North Eastern Electric Power Corporation Limited
Corporate Office: Brookland Compound
Lower New Colony, Shillong 793003

...Petitioner

Vs

1. Assam Power Distribution Company Limited
"Bijulee Bhawan", Paltanbazar
Guwahati 781001, Assam.
2. Meghalaya Power Distribution Corporation Limited
Lumjinshai, Short Round Road
Shillong -799001, Meghalaya.
3. Tripura State Electricity Corporation Limited
Bidyut Bhavan, North Banamalipur,
Agartala -799001, Tripura.
4. Power & Electricity Department,
Government of Mizoram,
New Secretariat Complex,
Kawlpeitha, Aizwal- 796001
5. Manipur State Power Distribution Company Limited,
3rd Floor, New Directorate Building, Near 2nd M.R Gate,
Imphal- Dimapur Road, Imphal- 795001, Manipur.



6. Department of Power, Vidyut Bhawan,
Government of Arunachal Pradesh,
Itanagar-791111, Arunachal Pradesh.

7. Department of Power,
Government of Nagaland,
Electricity House, A G Colony,
Kohima- 797001, Nagaland.

8. North Eastern Regional Power Committee,
NERPC Complex, Dong Parmaw Lapalang,
Shillong-793006, Meghalaya.

9. North Eastern Regional Load Despatch Centre
Dongtieh, Lower Nongrah, Lapalang,
Shillong -793006, Meghalaya.

....Respondents

Parties Present:

Shri Devapriya Choudhury, NEEPCO
Shri Sushanta Deka, NEEPCO
Shri Munin Choudhury, NEEPCO
Shri Bornali Deori, NEEPCO
Ms. Elizabeth Pyrbot, NEEPCO

ORDER

The Petitioner, NEEPCO Ltd has filed this petition for determination of tariff of Ranganadi Hydroelectric Project (3 x 135 MW) (in short 'the generating station') for the period 2019-24, in accordance with the provisions of the Central Electricity Regulatory Commission (Terms & Conditions of Tariff) Regulations, 2019 (hereinafter referred to as 'the 2019 Tariff Regulations').

Background

2. The generating station comprises of three units of 135 MW each and is a run of the river scheme with pondage, having a Head Race Tunnel and a surface Power House. The tail race discharge of the generating station is diverted to Dikrong River through an open channel of 56 meters length. The date of commercial operation of the three units of the generating station are as under:



Units	COD
Unit-I	12.2.2002
Unit-II	12.2.2002
Unit-III	12.4.2002

3. Petition No. 40/GT/2015 was filed by the Petitioner for approval of tariff of the generating station for the 2014-19 tariff period and the Commission vide its order dated 5.1.2016 in Petition No. 40/GT/2015 had approved the annual fixed charges of the generating station. The annual fixed charges allowed as above, were revised corrigendum order dated 7.3.2016 in Petition No. 40/GT/2015 after applying the effective tax rate applicable for the year 2014-15 for all the years for the tariff period 2014-19. Thereafter, by order dated 7.6.2021 in Petition no. 273/GT/2019, the capital cost and the annual fixed charges of the generating station for the period 2014-19 was revised after truing-up exercise, as follows:

Capital Cost allowed

	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Capital Cost	146759.23	147832.47	147858.40	147910.41	147792.36
Additional Capital Expenditure Allowed	1073.24	25.93	52.01	(-) 118.05	772.44
Discharge of liabilities	0.00	0.00	0.00	0.00	379.51
Closing Capital Cost	147832.47	147858.40	147910.41	147792.36	148944.31

Annual Fixed Charges allowed

	2014-15	2015-16	2016-17	2017-18	2018-19
Return on Equity	15158.95	16353.28	18531.29	16684.13	15477.19
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Depreciation	7775.70	1768.68	1770.83	1777.41	1848.02
Interest on Working Capital	916.44	831.47	909.18	896.18	901.33
O&M Expenses	7033.08	7500.36	7998.68	8530.12	9096.86
Total Annual Fixed Charges	30884.16	26453.79	29209.98	27887.84	27323.40

Present Petition

4. The Petitioner has filed the present petition for determination of tariff of the generating station for the 2019-24 tariff period, in terms of the 2019 Tariff



Regulations. Accordingly, the capital cost and the annual fixed charges claimed by the Petitioner are as follows:

Capital Cost claimed

(Rs. in lakh)

	2019-20	2020-21	2021-22	2022-23	2023-24
Opening capital cost	152007.29	155077.55	156709.42	157057.15	157071.65
Add: Addition during the year	3347.15	1789.49	599.00	14.50	14.00
Less: De-capitalisation during the year	276.89	157.62	251.27	0.00	0.00
Less: Reversal during the year	0.00	0.00	0.00	0.00	0.00
Add: Discharges during the year	0.00	0.00	0.00	0.00	0.00
Closing capital cost	155077.55	156709.42	157057.15	157071.65	157085.65
Average capital cost	153542.42	155893.49	156883.29	157064.40	157078.65

Annual Fixed Charges claimed

(Rs. in lakh)

	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	2390.37	2493.35	2540.07	2555.68	2556.36
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Return on Equity	15120.04	15187.05	15215.26	15220.42	15220.82
Interest on Working Capital	798.06	787.69	814.04	840.80	868.53
O&M Expenses	12095.88	12672.44	13276.47	13909.30	14572.30
Total Annual Fixed Charges	30404.35	31140.53	31845.84	32526.20	33218.01

5. The Respondent, APDCL has filed the replies vide affidavit dated 12.11.2021 and the Petitioner vide affidavit dated 23.11.2021 has filed its rejoinder to the said reply. The Petition was heard on 15.3.2022, through video conferencing and the Commission, after directing the Petitioner to submit certain additional information reserved its order in the petition. None appeared on behalf of the Respondents. In compliance thereof, the Petitioner vide affidavit dated 1.4.2022 has filed the additional information, after serving copy on the Respondents. Taking into consideration the submissions of the parties and the documents available on record, we proceed to examine the claims of the Petitioner, in this petition, on prudence check, as stated in the subsequent paragraphs.



Capital Cost

6. Regulation 19 (3) of the 2019 Tariff Regulations provides as under:

(a) Capital cost admitted by the Commission prior to 1.4.2019 duly tried up by excluding liability, if any, as on 1.4.2019;

(b) Additional capitalization and de-capitalization for the respective year of tariff as determined in accordance with these regulations;

(c) Capital expenditure on account of renovation and modernisation as admitted by this Commission in accordance with these regulations;

(c) Capital expenditure on account of ash disposal and utilization including handling and transportation facility;

(d) Capital expenditure incurred towards railway infrastructure and its augmentation for transportation of coal upto the receiving end of generating station but does not include the transportation cost and any other appurtenant cost paid to the railway; and

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

7. The Commission vide its order dated 7.6.2021 in Petition No. 273/GT/2019 had allowed the closing capital cost of Rs. 148944.31 lakh, as on 31.3.2019. The same has been considered as opening capital cost, as on 1.4.2019, in accordance with Regulation 19(3) of the 2019 Tariff Regulations.

Additional Capital Expenditure

8. Regulations 25 and 26 of the 2019 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 31.3.2019 (either based on actual or projected additional capital expenditure) and estimated additional capital expenditure for the respective years of the 2019-24 tariff period. Clauses (1) and (2) of Regulations 25 and Regulation 26 of the 2019 Tariff Regulations, provides as under:

“25. Additional Capitalization within the original scope and after the cut-off date:



(1) *The additional capital expenditure incurred or projected to be incurred in respect of an existing project or a new project on the following counts within the original scope of work and after the cut-off date may be admitted by the Commission, subject to prudence check:*

- (a) *Liabilities to meet award of arbitration or for compliance of the directions or order of any statutory authority, or order or decree of any court of law;*
- (b) *Change in law or compliance of any existing law;*
- (c) *Deferred works relating to ash pond or ash handling system in the original scope of work;*
- (d) *Liability for works executed prior to the cut-off date;*
- (e) *Force Majeure events;*
- (f) *Liability for works admitted by the Commission after the cut-off date to the extent of discharge of such liabilities by actual payments; and*
- (g) *Raising of ash dyke as a part of ash disposal system.*

(2) *In case of replacement of assets deployed under the original scope of the existing project after cut-off date, the additional capitalization may be admitted by the Commission, after making necessary adjustments in the gross fixed assets and the cumulative depreciation, subject to prudence check on the following grounds:*

- (a) *The useful life of the assets is not commensurate with the useful life of the project and such assets have been fully depreciated in accordance with the provisions of these regulations;*
- (b) *The replacement of the asset or equipment is necessary on account of change in law or Force Majeure conditions;*
- (c) *The replacement of such asset or equipment is necessary on account of obsolescence of technology; and*
- (d) *The replacement of such asset or equipment has otherwise been allowed by the Commission.*

26. Additional Capitalization beyond the original scope

(1) *The capital expenditure, in respect of existing generating station or the transmission system including communication system, incurred or projected to be incurred on the following counts beyond the original scope, may be admitted by the Commission, subject to prudence check:*

- (a) *Liabilities to meet award of arbitration or for compliance of order or directions of any statutory authority, or order or decree of any court of law;*
- (b) *Change in law or compliance of any existing law;*
- (c) *Force Majeure events;*
- (d) *Need for higher security and safety of the plant as advised or directed by appropriate Indian Government Instrumentality or statutory authorities responsible for national or internal security;*
- (e) *Deferred works relating to ash pond or ash handling system in addition to the original scope of work, on case to case basis:*



Provided also that if any expenditure has been claimed under Renovation and Modernization (R&M) or repairs and maintenance under O&M expenses, the same shall not be claimed under this Regulation;

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

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

9. The year-wise projected additional capital expenditure claimed by the Petitioner for the 2019-24 tariff period are as under:

(Rs. in lakh)

	2019-20	2020-21	2021-22	2022-23	2023-24	Total
Regulation 25(2)(a)	75.11	0.00	0.00	0.00	0.00	75.11
Regulation 25(2)(c)	1456.67	720.00	120.00	0.00	0.00	2296.67
Regulation 25(2)(d)	21.00	0.00	0.00	0.00	0.00	21.00
Regulation 26(1)(d)	47.00	235.49	0.00	0.00	0.00	282.49
Regulation 76 & 77	1747.37	834.00	479.00	14.50	14.00	3088.87
Total projected additional capital expenditure claimed	3347.15	1789.49	599.00	14.50	14.00	5764.14

10. The Petitioner has claimed the total Rs. 5764.14 lakh towards various assets/works pertaining to the Construction of Executive Guest House, Installation of CCTV monitoring system, Dam Safety Monitoring System, Construction of check Dam, Construction of Protection wall, Construction of Permanent Office Building, Construction of Additional Permanent Quarters, etc. The detailed justification of the works allowed and disallowed, on prudence check, are as under:

2019-20

11. The Petitioner has claimed projected additional capital expenditure of Rs. 3347.15 lakh in 2019-20 and the same is examined below:



(Rs. in lakh)

Sl.No.	Item	Regulation (s)	Amount claimed	Justification by Petitioner	Remarks for Admissibility	Amount allowed
1	Capital Maintenance of Main Inlet Valve	25(2)(c)	1091.55	Maintenance work of Main Inlet Valve (MIV) of all the three units of powerhouse was taken up for replacement of the old components such as Service Seal, Maintenance Seal, Sealing Rings etc. of the MIVs. This was necessary for improvement of performance of the turbines.	With regard to items claimed from Sl. No.1 to Sl. No.10, the Petitioner has submitted that the additional capital expenditure has been claimed as capital spares. As per Regulation 35(2)(c) of the 2019 Tariff Regulations, the capital spares are to be allowed separately, on actual consumption basis, as part of the O&M expenses.	0.00
2	Capital Maintenance of Turbine (2 Units)	25(2)(c)	253.50	The capital maintenance of the two turbines of Dikrong P.H. was taken up for servicing of the Guide vanes, lubrication system, Bushes and replacement of other damaged components of the turbines. This was necessary for improvement of performance of the turbines.	Accordingly, the said assets claimed by the Petitioner under additional capital expenditure is not allowed . However, the Petitioner is granted liberty to analyze and claim the assets along with proper details/justification at the time of truing up of tariff. In case, these assets forms part of the additional capital expenditure, then the same may be claimed under Regulation 25 or Regulation 26 of the 2019 Tariff Regulations. In case, the asset is actually consumed as capital spares, then the same may be claimed under Regulation 35(2)(c) of the 2019 Tariff Regulations, as part of the O&M	0.00
3	Retrofitting of Centralized Grease Lubrication (CGL) System in Power House	25(2)(a)	75.11	The work was taken up as a retrofitting work of the existing CGL system which was found to be unserviceable and beyond any further repair. Since this system is vital to the efficient operation of the turbine, hence the work was taken up.		0.00
4	Retrofitting of Steel wire Rope in	25(2)(c)	10.89	Replacement of the damaged rope was done to ensure		0.00



Sl.No.	Item	Regulation (s)	Amount claimed	Justification by Petitioner	Remarks for Admissibility	Amount allowed
	Surge Shaft Gate			proper operation of the Surge-Shaft Gate, necessary for the efficient operation of the Plant.	expenses.	
5	Procurement of new Fire Tender against Dikrong Power House	25(2)(d)	21.00	Provision of a Fire Tender was already approved under additional capital expenditure for the 2014-19 tariff period which is stationed at 43km to cater to Dam and adjoining structures. The additional Fire Tender is claimed to solely cater the requirement of Power House and Switchyard. Since the distance between Power House & Dam is around 30 km, the Fire Tender already procured would not be able to cater to the exigency requirement of Power House. Accordingly, another fire tender has been planned to procure to ensure safety of the Power House and Switchyard.		0.00
6	Installation of Standalone DR & EL system for Numerical Relays in Power House	26(1)(d)	42.00	The work was taken up as per the requirements of North Eastern Regional Power Committee (NERPC), CEA, as per MoM on the PCC meeting.		0.00
7	Retrofitting of Electric Motor in Surge Shaft gate Hoist	25(2)(c)	0.73	Replacement of the damaged Hoisting Motor was done to ensure proper operation of the		0.00



Sl.No.	Item	Regulation (s)	Amount claimed	Justification by Petitioner	Remarks for Admissibility	Amount allowed
				Surge-Shaft Gate, necessary for the efficient operation of the Plant.		
8	Design, Manufacture, supply, installation & commissioning of 1-No.of Hydraulically operated Trash Rack Cleaning Machine (TRCM) with associated supporting structures at the Intake of RHEP (3x135 MW) Yazali, Lower Subansiri, A.P.	76 & 77	1023.95	The work has been taken up to carry out continuous cleaning of debris at the tunnel intake to ensure smooth entry of water in to the tunnel without any hindrances. The additional capital expenditure is necessary for the efficient operation of the generating station.		0.00
9	Providing Services for Collecting Hydrological Data from upper catchment of Ranganadi River for an period of one year	76 & 77	56.76	The work is essential to provide data for the simulation model of the Real Time Hydro-Metrological monitoring in the Catchment Area of the generating station. Necessary for effective Reservoir management and subsequently efficient operation of the generating station.		0.00
10	Supply, Installation, Commissioning & Testing of OTT Q Liner-2 for 3 x 135 MW.	76 & 77	20.42	This equipment is required to facilitate the collection of data required for hydro metrological monitoring of catchment area.		0.00
11	Construction of Executive Guest House at	25(2)(c)	100.00	The work has been taken up against the non-completed	The Petitioner has clarified that the Construction of the	100.00



Sl.No.	Item	Regulation (s)	Amount claimed	Justification by Petitioner	Remarks for Admissibility	Amount allowed
	Power House at Hoj			works already accounted for in the Revised Cost Estimate of RHEP but has not been taken up. Considering the price escalation, the present day estimated cost is tentatively arrived at Rs 200.0 lakh out of which Rs 50.00 lakh has been earmarked for 2019-20 and Rs 150.00 lakh has been earmarked for 2020-21.	Permanent Colony was provisioned in RCE, considering that the operation of the plant would be taken up from Doimukh. However due to various reasons, this could not be materialized and hence a permanent setup against this Plant has become a necessity. It has also submitted that the temporary quarters build during the construction period has outlived its life and therefore permanent residential quarters is required to accommodate the employees of the both at 43 km and Hoj. Accordingly, the Petitioner has claimed the expenditure under Regulation 25(2)(c) of the 2019 Tariff Regulations. Considering the fact that the proposed additional capital expenditure is for replacement of assets deployed under the original scope of work of project and the assets are in use, the claim of the Petitioner is allowed under Regulation 25(2)(a) in exercise of 'Power to Relax' under Regulation 76 of the 2019 Tariff Regulations. The decapitalization value of old asset has been	



Sl.No.	Item	Regulation (s)	Amount claimed	Justification by Petitioner	Remarks for Admissibility	Amount allowed
					considered under 'Assumed Deletions'.	
12	Installation CCTV monitoring system in strategic locations of Plant.	26(1)(d)	5.00	The work has been taken up in compliance to the recommendations of Ministry of Home Affairs (MoHA) as recorded in the Report of CEA, Ministry of Power, dated September, 2011.	The Petitioner has submitted that the required expenditure has been planned as per the recommendations of the MoHA, GOI, the CEA and MoP, GOI. However, the Petitioner has not submitted any documentary evidence in support of the claim. However, as the work is considered necessary for the safety and security of the generating station, the additional capital expenditure claimed is allowed under Regulation 26(1)(d) of the 2019 Tariff Regulations. The Petitioner is directed to submit the recommendations of the aforesaid authorities, at the time of truing up of tariff.	5.00
13	Permanent Water Supply Scheme at Power House at Hoj	76 & 77	100.00	Since the Commissioning of the plant, there has been no proper / permanent scheme for providing of drinking water to the employees of the Power House. The proposed permanent water supply scheme is essential for providing reliable and safe drinking water to the employees working in the Power	The Petitioner has neither indicated the relevant provision of the regulation which is to be relaxed nor has mentioned any difficulty in the implementation of regulations, in support of its prayer for exercise of the power under Regulation 76 and Regulation 77 of the 2019 Tariff Regulations. Also, the reasons for not including the scheme	0.00



Sl.No.	Item	Regulation (s)	Amount claimed	Justification by Petitioner	Remarks for Admissibility	Amount allowed
				House.		
14	Plantation of the Reservoir area and its surroundings of RHEP Yazali, A.P.	76 & 77	20.00	Plantation of the Reservoir area is to be done which will help in reducing soil erosion and inflow of silt into the Reservoir. This will prevent decrease in storage capacity of Reservoir and power generation.	within the original scope of work, is also not clear. However, keeping in view that the expenditure claimed is in the nature of O&M expenses, the claim is not allowed .	0.00
15	Dam Safety Monitoring System for all commissioned Dams of NEEPCO (for Ranganadi Dam)	76 & 77	303.05	The work is considered necessary to provide an effective monitoring system of the parameters of the Dam, necessary for efficient and safe operation of the Plant.	The Petitioner has neither indicated the relevant provision of the regulation which is to be relaxed nor has mentioned any difficulty in the implementation of regulations, in support of its prayer for exercise of the power under Regulation 76 and Regulation 77 of the 2019 Tariff Regulations. However, the Petitioner in its rejoinder has clarified that the expenditure is for upgradation of the existing system for better monitoring of the safety parameters of Dam and is required for the optimum performance of Dam in interest of the safety of Plant and also to prevent any adverse effects in the downstream areas. As the work is considered necessary for the safety and security of the generating station, the additional capital expenditure	303.05



Sl.No.	Item	Regulation (s)	Amount claimed	Justification by Petitioner	Remarks for Admissibility	Amount allowed
					claimed is allowed under Regulation 26(1)(d) in exercise of 'Power to Relax' under Regulation 76 of the 2019 Tariff Regulations. The Petitioner is directed to submit relevant documents, in support of the claim at the time of truing-up of tariff.	
16	Construction of Check Dam on Peil Nallah, Pitapool, Yazali, A.P.	76 & 77	16.00	There is huge amount of silt that enters into the Ranganadi Reservoir through Peil Nallah. In order to arrest the silt from entering into the Reservoir one Check Dam is to be constructed. This will prevent decrease in storage capacity of Reservoir and power generation. The Respondent APDCL in its reply has submitted that an amount of Rs 14.79 lakh was already accrued by the Petitioner regarding construction of Check Dam, etc. of Pai Nallah and the amount was allowed by the Commission in order dated 7.6.2021 in Petition No. 273/GT/2019. As such, the Petitioner must clarify as to why this new item has been claimed whereas the item	The Petitioner has claimed total amounts of Rs. 19.00 lakh in 2020-21, Rs. 15.00 lakh in 2021-22, Rs. 14.50 lakh in 2022-23 and Rs. 14.00 lakh in 2023-24 under this head i.e. 'construction of Check Dam'. Considering the fact, that the expenditure is for the safe operation of the plant, the claim of the Petitioner is allowed under Regulation 26(1)(d) in exercise of the 'Power to Relax' under Regulation 76 of the 2019 Tariff Regulations. The Petitioner is directed to submit relevant documents, in support of the claim at the time of truing-up of tariff.	16.00



Sl.No.	Item	Regulation (s)	Amount claimed	Justification by Petitioner	Remarks for Admissibility	Amount allowed
				<p>was already allowed, and the works carried accordingly as mentioned by the Petitioner.</p> <p>The Petitioner has clarified that the construction of Check Dam at Pei Nallah and Pai Nallah are two separate Check Dams. The Pai Nallah is located at Poosa and the Pei Nallah is located at Pitapool. The Petitioner has prayed that the Commission may consider the claim in line with earlier approval of check Dam, which arrest the silt deposition thereby increasing the efficacy of the reservoir.</p>		
17	Construction of Protection wall against Tunnel Intake	76 & 77	207.19	<p>On depletion of Reservoir, the sausage wall was found to be damaged. The works was taken up as an additional protection measure against the Wing Wall of the Tunnel intake. The additional capital expenditure is necessary to ensure safety of Hydro Structures and effective operation.</p>	<p>Considering the fact that the expenditure is for the safe operation of the plant, the claim of the Petitioner is allowed under Regulation 26(1)(d) in exercise of the 'Power to Relax' under Regulation 76 of the 2019 Tariff Regulations. The Petitioner is directed to submit relevant documents, in support of the claim at the time of truing-up of tariff.</p>	207.19
	Total amount claimed		3347.15			
	Total amount					631.24



Sl.No.	Item	Regulation (s)	Amount claimed	Justification by Petitioner	Remarks for Admissibility	Amount allowed
	allowed					
	Additional Capital Expenditure eligible for Normal RoE		0.00			100.00
	Additional Capital Expenditure eligible for WAROI		3347.15			531.24

12. Based on the above, the total additional expenditure of Rs. 631.24 lakh is allowed in 2019-20.

2020-21

13. The Petitioner has claimed projected additional capital expenditure of Rs. 1789.49 lakh in 2020-21 and the same is examined below:

<i>(Rs. in lakh)</i>						
S.No.	Item	Regulation	Amount claimed	Justification by Petitioner	Remarks for Admissibility	Amount allowed
1	Retrofitting of Pantograph Isolator of 400 kV Switchyard.	25(2)(C)	200.00	The work has been taken up against replacement of existing Isolators due to frequent damage of accessories of the Isolators and also these types of Isolators have been phased out by the OEM and spares are also not readily available. The additional capital expenditure is necessary to ensure proper operation of the generating station.	As regard items from Sl. No.1 to 5, it is observed that the additional capital expenditure has been claimed as capital spares. As per Regulation 35(2)(c) of the 2019 Tariff Regulations, the capital spares are to be allowed separately, on actual consumption basis, as part of the O&M expenses. Accordingly,	0.00
2	Upgradation of existing Fire	25(2)(C)	300.00	The system will retrofit the		0.00



S.No.	Item	Regulation	Amount claimed	Justification by Petitioner	Remarks for Admissibility	Amount allowed
	Fighting system like installation of Deluge valves, solenoid valve, pipelines, motor control panel, hoses etc.			obsolete/ unserviceable firefighting system in the transformer yard and will ensure the safety of the Plant.	the said assets claimed by the Petitioner under additional capital expenditure is not allowed . However, the	
3	Retrofitting of Control Panel & SF6 Breakers in DPH at 43 Km	25(2)(C)	100.00	The same is required for retrofitting of the Old and obsolete equipment's to have a more efficient operation of the Diesel Power Plant.	Petitioner is granted liberty to analyze and claim the assets along with proper details/ justification at the time of	0.00
4	Retrofitting of 2 Nos. of 400 KV Circuit Breaker(CB) in 400 KV Switchyard	25(2)(C)	120.00	The work has been taken up against replacement of existing circuit breakers since the spares of the circuit breakers are of very high value and hence uneconomical for replacement. As such these type of circuit breakers are proposed to be phased out and replaced with other circuit breakers is being considered. Necessary to ensure proper operation of the Plant.	truing up of tariff. In case, these assets forms part of the additional capital then same shall be claimed under Regulation 25 and 26 of the 2019 Tariff Regulations, or otherwise, if the asset is actually consumed as capital spare, then same shall be claimed under Regulation 35(2)(c) of the 2019 Tariff Regulations as	0.00
5	Implementation of a State of Art Real Time Hydro-Meteorological Monitoring System in Catchment Area upstream of RHEP	26(1)(d)	216.49	The work is being done in co-ordination with the North East Space Application Center (NESAC), Department of Space, Government of India, for flood	part of O&M expenses.	0.00



S.No.	Item	Regulation	Amount claimed	Justification by Petitioner	Remarks for Admissibility	Amount allowed
				forecasting of RHEP. The installation of 17 Nos. Automatic Rain Gauge and 4 Nos. Digital Water Level Recorders have already been completed. This system will provide real time flood forecasting, which will in turn help in planned operation of the Spillway Radial gates and the Power House.		
6	Construction of Check Dam at upstream side of Abdullah Nallah at the uphill side, RHEP, Yazali	26(1)(d)	19.00	There is huge amount of silt that enters into the Ranganadi Reservoir through the Abdullah Nallah. In order to arrest the silt from entering into the Reservoir one check dam is to be constructed at the upstream and uphill side. This will prevent decrease in storage capacity of Reservoir and power generation.	Considering the fact that the expenditure claimed is towards the safe operation of the plant, the same is allowed under Regulation 26(1)(d) of the 2019 Tariff Regulations. However, the Petitioner is directed to submit the requirements in terms of of Regulation 26(1)(d) of the 2019 Tariff Regulations at the time of truing-up of tariff.	19.00
7	Dam Safety Monitoring System for all commissioned Dams of NEEPCO (for Ranganadi	76 & 77	14.00	The work is considered necessary to provide an effective monitoring system of the parameters	The Petitioner has neither indicated the relevant provision of the regulation which is be	14.00



S.No.	Item	Regulation	Amount claimed	Justification by Petitioner	Remarks for Admissibility	Amount allowed
	Dam)			of the Dam necessary for the proper operation of the Plant. The remaining works which shall be required to be taken up in subsequent years against the work completed.	relaxed nor has mentioned any difficulty in the implementation of regulations, in support of its prayer for exercise of the power under Regulation 76 and Regulation 77 of the 2019 Tariff Regulations. However, the Petitioner in its rejoinder has clarified that the expenditure is for upgradation of the existing system for better monitoring of the safety parameters of Dam and is required for the optimum performance of Dam in interest of the safety of Plant and also to prevent any adverse effects in the downstream areas. As the work is considered necessary for the safety and security of the generating station, the additional capital expenditure claimed is allowed under Regulation	



S.No.	Item	Regulation	Amount claimed	Justification by Petitioner	Remarks for Admissibility	Amount allowed
					26(1)(d) in exercise of 'Power to Relax' under Regulation 76 of the 2019 Tariff Regulations. The Petitioner is directed to submit relevant documents, in support of the claim at the time of truing-up of tariff.	
8	Plantation of the catchment area near to the RHEP	76 & 77	20.00	Plantation of the Catchment area near to the Project is to be done which will help in reducing soil erosion and inflow of silt into the Reservoir. This will prevent decrease in storage capacity of Reservoir and help in power generation. The additional capital expenditure is necessary for efficient operation of the Plant.	The Petitioner has neither indicated the relevant provision of the regulation which is to be relaxed nor has mentioned any difficulty in the implementation of regulations, in support of its prayer for exercise of the power under Regulation 76 and Regulation 77 of the 2019 Tariff Regulations.	0.00
9	Permanent Water Supply Scheme at Power House at Hoj	76 & 77	100.00	Since Commissioning of the plant, there has been no proper / permanent scheme for providing of drinking water to the employees of the Power House. The proposed permanent water supply scheme is essential for providing reliable	Also, the reasons for not including the scheme within the original scope of work, is also not clear. However, keeping in view that the expenditure claimed is in the nature of O&M	0.00



S.No.	Item	Regulation	Amount claimed	Justification by Petitioner	Remarks for Admissibility	Amount allowed
				and safe drinking water to the employees working in the Power House.	expenses, the claim is not allowed .	
10	Permanent Water Supply Scheme at Administrative Complex at 43 km.	76 & 77	100.00	Since Commissioning of the plant, there has been no proper / permanent scheme for providing of drinking water to the employees of the Dam and administrative complex. The proposed permanent water supply scheme is essential for providing reliable and safe drinking water to the employees working in the Dam and administrative complex.		0.00
11	Construction of Executive Guest House at Power House at Hoj	76 & 77	150.00	The same is taken up against the non-completed works already accounted for in the Revised Cost Estimate of RHEP but has not been taken up. Considering the price escalation, the present day estimated cost is tentatively arrived at Rs 200.0 lakh out of which Rs 50.00 lakh has been earmarked for 2019-20 and Rs 150.00 lakh has been	The Petitioner has clarified that the construction of permanent colony was provisioned in RCE considering that the operation of the Plant would be taken up from Doimukh. However due to various reasons, this could not be materialized and hence a permanent setup against	150.00



S.No.	Item	Regulation	Amount claimed	Justification by Petitioner	Remarks for Admissibility	Amount allowed
				earmarked for 2020-21.	<p>the Plant has become a necessity. The temporary quarters build during the construction period has outlived its life and therefore Permanent residential quarters is required to accommodate the employees of the generating station, stationed at 43 km and Hoj respectively. Accordingly, the Petitioner has claimed the expenditure under Regulation 25(2)(c) of the 2019 Tariff Regulations. Considering the fact that the proposed additional capital expenditure is for replacement of assets deployed under the original scope of work of project and the assets are in use, the claim of the Petitioner is allowed under Regulation 25(2)(a) in exercise of</p>	



S.No.	Item	Regulation	Amount claimed	Justification by Petitioner	Remarks for Admissibility	Amount allowed
					'Power to Relax' under Regulation 76 of the 2019 Tariff Regulations. The decapitalization value of old asset has been considered under 'Assumed Deletions'.	
12	Construction of NRC Building at Power House at Hoj	76 & 77	50.00	The additional capital expenditure is required as means of recreational arrangement for the employees who are stationed at such remote location. This also provides an effective way of managing stress, which is essential in such stressful locations.	The Petitioner has neither indicated the relevant provision of the regulation which is to be relaxed nor has mentioned any difficulty in the implementation of regulations, in support of its prayer for exercise of the power under Regulation 76 and Regulation 77 of the 2019 Tariff Regulations. Considering fact that the proposed expenditure does not pertain to the operation of the generating station, the claim of the Petitioner is not allowed .	0.00
13	Construction of Permanent Office Building at Power House at Hoj	76 & 77	100.00	Since the permanent set up of the generating station is at Doimukh which is	As the Permanent Office Building is under Pare H.E. Plant	100.00



S.No.	Item	Regulation	Amount claimed	Justification by Petitioner	Remarks for Admissibility	Amount allowed
				now under Pare H.E. Plant, a permanent office setup is required for running of the Plant. Also, the office setup is presently located at 43 which is of semi-permanent type and has outlived its usefulness for which a permanent office set-up at Hoj nearby to the Power House is desirable for the efficient operation for the Plant.	(another plant of the Petitioner) and the setup has already outlived its useful life, the claim of the Petitioner is allowed under Regulation 25(2)(a) in exercise of 'Power to Relax' under Regulation 76 of the 2019 Tariff Regulations. The de-capitalized value of the old asset has been considered under 'Assumed Deletions'.	
14	Construction of Additional Permanent Quarters at 43km	76 & 77	300.00	Although the Permanent Residential quarters against RHEP has been constructed at Doimukh, however the work sites of Dam, Tunnel and Utility Services including Grid Power Distribution are located at 43km which is more than 50km from Doimukh. As such a Permanent Residential setup at 43km is required to ensure monitoring of the above vital installations on a 24X7 basis from	It is observed that the cost of existing permanent quarters is already the part of the allowed capital cost. However, considering the nature of the expenditure, the claim of the Petitioner is allowed under Regulation 25(2)(a) in exercise of 'Power to Relax' under Regulation 76 of the 2019 Tariff Regulations. The	300.00



S.No.	Item	Regulation	Amount claimed	Justification by Petitioner	Remarks for Admissibility	Amount allowed
				43km itself. Also, the communication setup/logistics arrangements in between Doimukh and 43km is prone to disruptions during monsoon period for which it is not possible to monitor this work sites from Doimukh. In view of the extreme critical monsoon period when continuous monitoring of Dam and allied structures is very much required, a permanent set up is felt essential to the efficient operation of the Plant.	decapitalization value of old asset has been considered under 'Assumed Deletions'.	
	Total amount claimed		1789.49			
	Total amount allowed					583.00
	Additional Capital Expenditure eligible for Normal RoE		0.00			550.00
	Additional Capital Expenditure eligible for WAROI		1789.49			33.00

14. Based on the above, the total additional expenditure of Rs. 583.00 lakh is allowed in 2020-21.



2021-22

15. The Petitioner has claimed projected additional capital expenditure of Rs. 599.00 lakh in 2021-22 which are discussed as follows:

<i>(Rs. in lakh)</i>						
SI.No.	Item	Regulation	Amount claimed	Justification by Petitioner	Remarks for Admissibility	Amount allowed
1	Retrofitting of 2 Nos. of 400 KV Circuit Breaker (CB) in 400 KV Switchyard	25(2)(c)	120.00	The work has been taken up against replacement of existing circuit breakers since the spares of the circuit breakers are of very high value and hence uneconomical for replacement. As such these type of circuit breakers are proposed to be phased out and replaced with other circuit breakers is being considered. Necessary to ensure proper operation of the Plant.	it is observed that the additional capital expenditure has been claimed as capital spares. As per Regulation 35(2)(c) of the 2019 Tariff Regulations, the capital spares are to be allowed separately, on actual consumption basis, as part of the O&M expenses. Accordingly, the said assets claimed by the Petitioner under additional capital expenditure is not allowed . However, the Petitioner is granted liberty to analyze and claim the assets along with proper details/ justification at the time of truing up of tariff. In case,	0.00



					these assets forms part of the additional capital then same shall be claimed under Regulation 25 and 26 of the 2019 Tariff Regulations, or otherwise, if the asset is actually consumed as capital spare, then same shall be claimed under Regulation 35(2)(c) of the 2019 Tariff Regulations as part of O&M expenses.	
2	Construction of NRC Building at Power House at Hoj	76 & 77	50.00	The additional capital expenditure is required as means of recreational arrangement for the employees who are stationed at such remote location. This also provides an effective way of managing stress, which is essential in such stressful locations.	The Petitioner has neither indicated the relevant provision of the regulation which is be relaxed nor has mentioned any difficulty in the implementation of regulations, in support of its prayer for exercise of the power under Regulation 76 and Regulation 77 of the 2019 Tariff Regulations. As the proposed expenditure does not pertain to the operation of the generating station, the claim of the	0.00



					Petitioner is not allowed.	
3	Construction of Office Building at Hoj	76 & 77	100.00	Since the permanent set up of the generating station is at Doimukh which is now under Pare H.E. Plant, a permanent office setup is required for running of the Plant . Also, the office setup is presently located at 43 which is of semi-permanent type and has outlived its usefulness for which a permanent office set-up at Hoj nearby to the Power House is desirable for the efficient operation for the Plant.	As the Permanent Office Building is under Pare H.E. Plant (another plant of the Petitioner) and the setup has already outlived its useful life, the claim of the Petitioner is allowed under Regulation 25(2)(a) in exercise of 'Power to Relax' under Regulation 76 of the 2019 Tariff Regulations. The de-capitalized value of the old asset has been considered under 'Assumed Deletions'.	100.00
4	Dam Safety Monitoring System for all commissioned Dams of NEEPCO (for Ranganadi Dam)	76 & 77	14.00	The work is considered necessary to provide an effective monitoring system of the parameters of the Dam necessary for the proper operation of the Plant. The remaining works which shall be required to be taken up in subsequent years against the work completed.	he Petitioner has neither indicated the relevant provision of the regulation which is be relaxed nor has mentioned any difficulty in the implementation of regulations, in support of its prayer for exercise of the power under Regulation 76 and Regulation 77 of the 2019 Tariff	14.00



					<p>Regulations. However, the Petitioner in its rejoinder has clarified that the expenditure is for upgradation of the existing system for better monitoring of the safety parameters of Dam and is required for the optimum performance of Dam in interest of the safety of Plant and also to prevent any adverse effects in the downstream areas. As the work is considered necessary for the safety and security of the generating station, the additional capital expenditure claimed is allowed under Regulation 26(1)(d) in exercise of 'Power to Relax' under Regulation 76 of the 2019 Tariff Regulations. The Petitioner is directed to submit relevant documents, in support of the claim at the time of truing-</p>	
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					up of tariff.	
5	Construction of Check Dam on Paaga Pu Nallah, Pitapool, Yazali, A.P.	76 & 77	15.00	There is huge amount of silt that enters into the Ranganadi reservoir through the Paaga Pu Nallah. In order to arrest the silt from entering into the reservoir one Check Dam is to be constructed. This will prevent decrease in storage capacity of Reservoir and power generation.	Considering the fact that the expenditure is for the safe operation of the plant, the claim is allowed under Regulation 26(1)(d) in exercise of 'Power to Relax' under Regulation 76 of the 2019 Tariff Regulations. However, the Petitioner is directed to submit relevant documentary evidence at the time of truing-up of tariff.	15.00
6	Construction of Additional Permanent Quarters at 43km	76 & 77	300.00	Although the Permanent Residential quarters against RHEP has been constructed at Doimukh, however the work sites of Dam, Tunnel and Utility Services including Grid Power Distribution are located at 43km which is more than 50km from Doimukh. As such a Permanent Residential setup at 43km is required to ensure monitoring of the above vital installations on a 24X7 basis from 43km itself. Also the communication setup/ logistics	It is observed that the cost of existing permanent quarters already forms part of the allowed capital cost. However, considering the nature of the expenditure, the additional capital expenditure is allowed under Regulation 25(2)(a) in exercise of 'Power to Relax' under Regulation 76 of the 2019 Tariff Regulations. The decapitalization value of old	300.00



				arrangements in between Doimukh and 43km is prone to disruptions during monsoon period for which it is not possible to monitor these work sites from Doimukh. In view of the extreme critical monsoon period when continuous monitoring of Dam and allied structures is very much required, a permanent set up is felt essential to the efficient operation of the generating station.	asset has been considered under 'Assumed Deletions'.	
	Total amount claimed		599.00			
	Total amount allowed					429.00
	Additional Capital Expenditure eligible for Normal RoE		0.00			400.00
	Additional Capital Expenditure eligible for WAROI		599.00			29.00

16. Based on the above, the total additional expenditure of Rs. 429.00 lakh is allowed in 2021-22.

2022-23

17. The Petitioner has claimed projected additional capital expenditure of Rs. 14.50 lakh in 2022-23 and the same is examined below:

<i>(Rs. in lakh)</i>						
S.No.	Item	Regulation	Amount claimed	Justification by Petitioner	Remarks for Admissibility	Amount allowed
1	Construction of Check Dam on Dindu Nallah,	76 & 77	14.50	There is huge amount of silt that enters into the Ranganadi reservoir through the Dindu	Considering the fact that the expenditure is for the safe	14.50



S.No.	Item	Regulation	Amount claimed	Justification by Petitioner	Remarks for Admissibility	Amount allowed
	Pitapool, Yazali, A.P.			Nallah. In order to arrest the silt from entering into the reservoir one Check Dam is to be constructed. This will prevent decrease in storage capacity of Reservoir and power generation.	operation of the plant, the claim of the Petitioner is allowed under Regulation 26(1)(d) in exercise of 'Power to Relax' under Regulation 76 of the 2019 Tariff Regulations. However, the Petitioner is directed to furnish relevant documentary evidence, at the time of truing-up of tariff.	
	Total amount claimed		14.50			
	Total amount allowed					14.50
	Additional Capital Expenditure eligible for Normal RoE		0.00			0.00
	Additional Capital Expenditure eligible for WAROI		14.50			14.50

18. Based on the above, the total additional expenditure of Rs. 14.50 lakh is allowed in 2022-23.

2023-24

19. The Petitioner has claimed projected additional capital expenditure of Rs. 14.00 lakh in 2023-24 and the same is examined below:



(Rs. in lakh)

S.No.	Item	Regulation	Amount claimed	Justification by Petitioner	Remarks for Admissibility	Amount allowed
1	Construction of Check Dam on Parmar Nallah, Pitapool, Yazali, A.P.	76 & 77	14.00	There is huge amount of silt that enters into the Ranganadi reservoir through the Parmar Nallah. In order to arrest the silt from entering into the reservoir one Check Dam is to be constructed. This will prevent decrease in storage capacity of Reservoir and power generation.	The item has already been dealt with in Item no. 16 of 2019-20. Accordingly, the claim is allowed .	14.00
	Total amount claimed		14.00			14.00
	Total amount allowed					
	Additional Capital Expenditure eligible for Normal RoE		0.00			0.00
	Additional Capital Expenditure eligible for WAROI		14.00			14.00

20. Based on the above, the total additional expenditure of Rs. 14.00 lakh is allowed in 2023-24.

De-capitalization

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

(Rs. in lakh)				
2019-20	2020-21	2021-22	2022-23	2023-24
276.89	157.62	251.27	0.00	0.00

22. Since the additional capital expenditure towards the decapitalized asset has not been allowed, the corresponding decapitalization of the said assets, as claimed by the Petitioner, have also not been considered for the purpose of tariff.



Assumed Deletions

23. As per consistent methodology adopted by the Commission in its orders, the expenditure on replacement of assets, if found justified, is allowed for the purpose of tariff provided that the capitalization of the said asset, is followed by de-capitalization of the gross value of the old asset. However, in certain cases, where the de-capitalization is proposed to be effected during the future years to the year of capitalization of the new asset, the de-capitalization of the old asset for the purpose of tariff, is shifted to the very same year in which the capitalization of the new asset is allowed. Such de-capitalization which is not a book entry in the year of capitalization is termed as “Assumed Deletion”.

24. Accordingly, the gross value of the assets de-capitalized under ‘assumed deletions’ as considered by the Petitioner based on WPI and capitalized value of new asset is not acceptable. Therefore, the methodology of arriving at the fair value of the de-capitalized asset, i.e. escalation rate of 5% per annum from the COD has been considered in order to arrive at the gross value of old asset in comparison to the cost of new asset. In the instant petition, year of COD of the generating station is 2001-02. We have considered the value of asset under consideration as on COD as 100 and escalated it @5% till the year during which additional capital expenditure is claimed against replacement of the same. The amount claimed for additional capital expenditure against the asset is multiplied by the derived ratio from above two values i.e. value in year of COD divided by value in capitalized year. The Assumed Deletions considered for 2019-24 tariff period is as under:



(Rs. in lakh)

	2019-20	2020-21	2021-22	2022-23	2023-24
Construction of Executive Guest House at Power House at Hoj	43.36	61.94	0.00	0.00	0.00
Construction of Permanent Office Building at Power House at Hoj	0.00	41.29	39.33	0.00	0.00
Construction of Additional Permanent Quarters at 43km	0.00	123.88	117.98	0.00	0.00
Total	43.36	227.11	157.30	0.00	0.00

Discharge of liabilities

25. The Petitioner has not claimed any discharges of liabilities during the 2019-24 tariff period. Therefore, “nil” discharges are allowed during the 2019-24 tariff period.

Additional capital expenditure allowed at normal rate of RoE for the 2019-24 period

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

(Rs. in lakh)

	2019-20	2020-21	2021-22	2022-23	2023-24	Total
Admitted projected additional capital expenditure (A)	100.00	550.00	400.00	0.00	0.00	1050.00
Less: De-capitalization of assets (B)	43.36	227.11	157.30	0.00	0.00	427.76
Less: Undischarged Liabilities (C)	0.00	0.00	0.00	0.00	0.00	0.00
Add: Discharges of liabilities (against allowed assets / works) (D)	0.00	0.00	0.00	0.00	0.00	0.00
Net projected additional capital expenditure allowed (on cash basis) (E) = (A-B-C+D)	56.64	322.89	242.70	0.00	0.00	622.24

Additional capital expenditure allowed for WAROI rate of ROI for the 2019-24 period

27. In view of above, the net additional capital expenditure allowed based on WAROI rate of ROE for the 2019-24 tariff period is as under:



(Rs. in lakh)

	2019-20	2020-21	2021-22	2022-23	2023-24	Total
Admitted projected additional capital expenditure (A)	531.24	33.00	29.00	14.50	14.00	621.74
Less: De-capitalization of assets (B)	0.00	0.00	0.00	0.00	0.00	0.00
Less: Undischarged Liabilities (C)	0.00	0.00	0.00	0.00	0.00	0.00
Add: Discharges of liabilities (against allowed assets / works) (D)	0.00	0.00	0.00	0.00	0.00	0.00
Net projected additional capital expenditure allowed (on cash basis) (E) = (A-B-C+D)	531.24	33.00	29.00	14.50	14.00	621.74

Capital cost allowed

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

(Rs. in lakh)

	2019-20	2020-21	2021-22	2022-23	2023-24
Opening Capital Cost	148944.31	149532.19	149888.09	150159.79	150174.29
Net Additional capital expenditure allowed during the year/ period	587.89	355.89	271.70	14.50	14.00
Closing Capital Cost	149532.19	149888.09	150159.79	150174.29	150188.29
Average Capital Cost	149238.25	149710.14	150023.94	150167.04	150181.29

Debt-Equity Ratio

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

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

Provided that:

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

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

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

Explanation-The premium, if any, raised by the generating company or the transmission licensee, as the case may be, while issuing share capital and



investment of internal resources created out of its free reserve, for the funding of the project, shall be reckoned as paid up capital for the purpose of computing return on equity, only if such premium amount and internal resources are actually utilised for meeting the capital expenditure of the generating station or the transmission system.

(2) The generating company or the transmission licensee, as the case may be, shall submit the resolution of the Board of the company or approval of the competent authority in other cases regarding infusion of funds from internal resources in support of the utilization made or proposed to be made to meet the capital expenditure of the generating station or the transmission system including communication system, as the case may be.

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

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

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

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

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

30. The gross loan and equity amounting to Rs. 75182.74 lakh and Rs. 73761.56 lakh, respectively as on 31.3.2019, as considered in order dated 7.6.2021 in Petition No. 273/GT/2019 has been considered as the opening gross loan and equity as on 1.4.2019. Further, the admitted additional capital expenditure, has been allocated to debt and equity in the ratio of 70:30. Also, for the assets de-capitalised during the 2019-24 tariff period, the debt-equity ratio of 50:50 has been considered, as these assets were originally allocated to debt and equity in the ratio of 50:50, in the



respective tariff petitions. Accordingly, the details of debt-equity ratio in respect of the generating station as on 1.4.2019 and as on 31.3.2024 are as under:

	Capital cost upto COD / 1.4.2019		Additional capital expenditure (Rs. in lakh)		De-capitalization (Rs. in lakh)		(Rs. in lakh) Capital cost as on 31.3.2024	
	Amount	(%)	Amount	(%)	Amount	(%)	Amount	(%)
Debt (A)	75182.74	50.48	1170.22	70.00	213.88	50.00	76139.08	50.70
Equity (B)	73761.56	49.52	501.52	30.00	213.88	50.00	74049.20	49.30
Total (C) = (A) + (B)	148944.31	100.00	1671.74	100.0	427.76	100.00	150188.29	100.00

Return on Equity

31. Regulations 30 and 31 of the 2019 tariff Regulations provide as under:

“30. Return on Equity

(1) Return on equity shall be computed in rupee terms, on the equity base determined in accordance with Regulation 18 of these regulations.

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

Provided that return on equity in respect of additional capitalization after cut-off date beyond the original scope excluding additional capitalization due to Change in Law, shall be computed at the weighted average rate of interest on actual loan portfolio of the generating station or the transmission system;

Provided further that:

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

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

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

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



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

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

31. Tax on Return on Equity:

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

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

$$\text{Rate of pre-tax return on equity} = \text{Base rate} / (1-t)$$

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

Illustration-

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

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

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

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

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

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

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



grossed up rate on return on equity after truing up, shall be recovered or refunded to beneficiaries or the long term customers, as the case may be, on year to year basis.”

32. Return on Equity (ROE) for the existing asset base and additional capital expenditure allowed in this order, for the asset/work, within the original scope of work has been calculated by grossing up of base RoE at the MAT rate of 17.472% as submitted by the Petitioner. Further, based on the additional capital expenditure which are beyond the original scope and allowed in this order, ROE has been calculated considering the weighted average rate of interest of the relevant year.

Accordingly, RoE, has been worked out and allowed as under:

. in lakh)

	2019-20	2020-21	2021-22	2022-23	2023-24
Equity-Opening (A)	73761.56	73769.88	73821.33	73862.68	73862.68
Addition of Equity due to additional capital expenditure (B)	8.32	51.45	41.35	0.00	0.00
Equity-Closing (C) = (A) + (B)	73769.88	73821.33	73862.68	73862.68	73862.68
Average Equity (D) = (A+C)/2	73765.72	73795.61	73842.01	73862.68	73862.68
Return on Equity (Base Rate) (E)	16.500%	16.500%	16.500%	16.500%	16.500%
Effective Tax Rate (F)	17.472%	17.472%	17.472%	17.472%	17.472%
Rate of Return on Equity (Pre-Tax) (G) = (E)/(1-F)	19.993%	19.993%	19.993%	19.993%	19.993%
Return on Equity (Pre-Tax) annualised (H) = (D)x(G)	14747.98	14753.96	14763.23	14767.37	14767.37
Addition due to additional capitalization beyond the original scope of work					
Normative Equity - Opening (A)	0.00	159.37	169.27	177.97	182.32
Addition of Equity due to additional capital expenditure (B)	159.37	9.90	8.70	4.35	4.20
Normative Equity-Closing (C) = (A) + (B)	159.37	169.27	177.97	182.32	186.52
Average Normative Equity (D) = (A+C)/2	79.69	164.32	173.62	180.15	184.42
Return on Equity (Base Rate) (E)	9.50%	9.50%	9.50%	9.50%	9.50%
Effective Tax Rate (F)	17.472%	17.472%	17.472%	17.472%	17.472%
Rate of Return on Equity (Pre-tax) (G) = (E)/(1-F)	11.51%	11.51%	11.51%	11.51%	11.51%
Return on Equity (Pre-tax)	9.17	18.92	19.99	20.74	21.23



	2019-20	2020-21	2021-22	2022-23	2023-24
- (annualized) (H) =(D)x(G)					
Total ROE	14757.15	14772.87	14783.22	14788.10	14788.59

Interest on Loan

33. Regulation 32 of the 2019 Tariff Regulations provides as under:

“32. Interest on loan capital:

(1) The loans arrived at in the manner indicated in Regulation 18 of these regulations shall be considered as gross normative loan for calculation of interest on loan.

(2) The normative loan outstanding as on 1.4.2019 shall be worked out by deducting the cumulative repayment as admitted by the Commission up to 31.3.2019 from the gross normative loan.

(3) The repayment for each of the year of the tariff period 2019-24 shall be deemed to be equal to the depreciation allowed for the corresponding year/period. In case of decapitalization of assets, the repayment shall be adjusted by taking into account cumulative repayment on a pro rata basis and the adjustment should not exceed cumulative depreciation recovered up to the date of de-capitalization of such asset.

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

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

Provided that if there is no actual loan for a particular year but normative loan is still outstanding, the last available weighted average rate of interest shall be considered; Provided further that if the generating station or the transmission system, as the case may be, does not have actual loan, then the weighted average rate of interest of the generating company or the transmission licensee as a whole shall be considered.

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

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

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

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



c) Addition to normative loan on account of additional capital expenditure allowed above has been considered;

d) The repayment for the respective years of the 2019-24 tariff period, has been considered equal to the depreciation allowed for that year subject to outstanding loan amount;

e) Further, the repayments have been adjusted for de-capitalization of assets considered for the purpose of tariff.

f) Interest on loan has been calculated on the normative average loan of the year by applying the weighted average rate of interest as claimed by the Petitioner.

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

	<i>(Rs. in lakh)</i>				
	2019-20	2020-21	2021-22	2022-23	2023-24
Gross opening loan (A)	75182.74	75602.94	75897.48	76119.13	76129.28
Cumulative repayment of loan upto previous year (B)	75182.74	75602.94	75897.48	76119.13	76129.28
Net Loan Opening (C) = (A) - (B)	0.00	0.00	0.00	0.00	0.00
Addition due to additional capital expenditure (D)	420.19	294.55	221.65	10.15	9.80
Repayment of Loan during the period (E)	449.43	449.27	330.00	10.15	9.80
Less: Repayment adjustment on a/c of decapitalization (F)	29.23	154.72	108.36	0.00	0.00
Net Repayment of Loan during the period (G) = (E) - (F)	420.19	294.55	221.65	10.15	9.80
Net Loan Closing (H) = (C) + (D) - (G)	0.00	0.00	0.00	0.00	0.00
Average Loan (I) = (C+H)/2	0.00	0.00	0.00	0.00	0.00
Weighted Average Rate of Interest on loan (J)	9.50%	9.50%	9.50%	9.50%	9.50%
Interest on Loan (K) = (I)*(J)	0.00	0.00	0.00	0.00	0.00

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

Depreciation

36. Regulation 33 of the 2019 Tariff Regulations provides as under:



“33. Depreciation:

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

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

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

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

Provided that the salvage value for IT equipment and software shall be considered as NIL and 100% value of the assets shall be considered depreciable;

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

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

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

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

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

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

(6) In case of the existing projects, the balance depreciable value as on 1.4.2019 shall be worked out by deducting the cumulative depreciation as admitted by the Commission up to 31.3.2019 from the gross depreciable value of the assets.

(7) The generating company or the transmission licensee, as the case may be, shall submit the details of proposed capital expenditure five years before the completion of



useful life of the project along with justification and proposed life extension. The Commission based on prudence check of such submissions shall approve the depreciation on capital expenditure.

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

37. Accordingly, the cumulative depreciation amounting to Rs. 99916.69 lakh as on 31.3.2019, has been considered for the purpose of tariff. The effective COD of the generating station is 12.4.2004. Since the generating station has completed 12 years of operation as on 31.3.2017, the remaining depreciable value has been spread over the balance useful life of the assets. In terms of the 2014 Tariff Regulations, the useful life of a hydro generating station was 35 years. However, the 2019 Tariff Regulations stipulates that the useful life of a hydro generating station is 40 years. Accordingly, the balance useful life of the generating station, as on 1.4.2019, has been considered as 23.59 years, in line with the 2019 Tariff Regulations. Accordingly, depreciation has been computed as under:

	<i>(Rs. in lakh)</i>				
	2019-20	2020-21	2021-22	2022-23	2023-24
Average Capital Cost (A)	149238.25	149710.14	150023.94	150167.04	150181.29
Value of freehold land included in average capital cost (B)	239.68	239.68	239.68	239.68	239.68
Land under reservoir & land lease hold (C)	0.00	0.00	0.00	0.00	0.00
Aggregated Depreciable Value (D)= (A-B+C) *90%	134098.71	134523.41	134805.83	134934.62	134947.44
Remaining aggregate depreciable value at the beginning of the year (E) = (D) - (M)	34182.02	33186.71	32154.51	30902.06	29413.77
No. of completed years at the beginning of the year (F)	16.41	17.41	18.41	19.41	20.41
Balance useful life at the beginning of the year (G) = 40 - (F)	23.59	22.59	21.59	20.59	19.59
Weighted Average Rate of Depreciation	--	--	--	--	--



	2019-20	2020-21	2021-22	2022-23	2023-24
(WAROD) (H)**					
Combined Depreciation during the year/ period (I)** = E/G	1449.24	1469.34	1489.59	1501.11	1501.77
Combined Depreciation during the year/ period (annualized) (J) = (I)	1449.24	1469.34	1489.59	1501.11	1501.77
Cumulative depreciation at the end of the year (before adjustment for de-capitalization) (K) = (J) + (Cumulative Depreciation (shown at M), at the end of the previous year)	101365.93	102806.04	104140.91	105533.67	107035.44
Less: Depreciation adjustment on account of de-capitalization (L)	29.23	154.72	108.36	0.00	0.00
Cumulative depreciation at the end of the year (M)* = (K) - (L)	101336.70	102651.32	104032.56	105533.67	107035.44

*Cumulative depreciation as on 31.03.2019 is Rs. 99916.69 ** Depreciation has been calculated on the basis of spread over balance useful life as the generating station has already completed 12 yrs.

Operation & Maintenance Expenses

38. Regulation 35(2)(a) of the 2019 Tariff Regulations provides as under:

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

	<i>(Rs. in lakh)</i>				
Particulars	2019-20	2022-21	2021-22	2022-23	2023-24
<i>Ranganadi</i>	12095.88	12672.44	13276.47	13909.30	14572.30

39. The Petitioner has claimed O&M expenses in accordance with the above Regulations and hence the same is allowed.

Security Expenses

40. The Petitioner has not claimed Security expenses as part of O&M expenses in terms of Regulation 35(2)(d) of the 2019 Tariff Regulations. Therefore, no expenditure has been considered towards security expenses.



Capital Spares

41. The third proviso to Regulation 35(1)(6) of the 2019 Tariff Regulations provides as under:

“35(1)(6) The Water Charges, Security Expenses and Capital Spares for thermal generating stations shall be allowed separately after prudence check:

Provided also that the generating station shall submit the details of year-wise actual capital spares consumed at the time of truing up with appropriate justification for incurring the same and substantiating that the same is not funded through compensatory allowance as per Regulation 17 of Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 or Special Allowance or claimed as a part of additional capitalization or consumption of stores and spares and renovation and modernization”

42. The third proviso to Regulation 35(1)(6) of the 2019 Tariff Regulations provides that the Petitioner is required to confirm that the capital spares claimed is not funded through compensatory allowance as per Regulation 17 of the 2019 Tariff Regulations or Special Allowance or claimed as a part of additional capitalisation or consumption of stores and spares and renovation and modernization. It is observed that the capital spares have been claimed as part of additional capital expenditure and same has also been included in Form 9A. As per proviso of Regulation 35(2)(c) of 2019 Tariff Regulations, the Petitioner shall claim the capital spares after consumption. Therefore, the capital spares claimed by the Petitioner is not allowed. However, the Petitioner is granted liberty to claim actual capital spares consumed (year-wise) along with proper justification and with a confirmation that the same has not been funded through compensatory allowance as per Regulation 17 of the 2019 Tariff Regulations or Special Allowance or claimed as a part of additional capitalisation or consumption of stores and spares and renovation and modernization.

43. Based on the above, the O&M expenses allowed for the generating station is as under:



		<i>(Rs. in lakh)</i>				
		2019-20	2020-21	2021-22	2022-23	2023-24
Installed Capacity (MW) (A)		405.00	405.00	405.00	405.00	405.00
O&M Expenses under Reg.35(1) in Rs lakh / MW (B)	Claimed	12095.88	12672.44	13276.47	13909.30	14572.30
	Allowed	12095.88	12672.44	13276.47	13909.30	14572.30
Capital Spares (in Rs lakh) (C)	Claimed	0.00	0.00	0.00	0.00	0.00
	Allowed	0.00	0.00	0.00	0.00	0.00
Security Expenses (in Rs lakh) (D)	Claimed	0.00	0.00	0.00	0.00	0.00
	Allowed	0.00	0.00	0.00	0.00	0.00
Total O&M Expenses as allowed (including Water charges and capital spares consumed) (E) = (B+C+D)	Claimed	12095.88	12672.44	13276.47	13909.30	14572.30
	Allowed	12095.88	12672.44	13276.47	13909.30	14572.30

Interest on Working Capital

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

“34. Interest on Working Capital: (1) The working capital shall cover

(c) For Hydro generating station (Including Pumped Storage Hydro Generating Station) and transmission system:

(i) Receivables equivalent to 45 days of annual fixed cost;

(ii) Maintenance spares @ 15% of operation and maintenance expense including security expenses; and

(iii) Operation and maintenance expenses including security expenses for one month”

Working capital for Receivables

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

<i>(Rs. in lakh)</i>				
2019-20	2020-21	2021-22	2022-23	2023-24
3574.56	3656.55	3731.47	3814.50	3888.69

Working capital for Maintenance Spares

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



<i>(Rs. in lakh)</i>				
2019-20	2020-21	2021-22	2022-23	2023-24
1814.38	1900.87	1991.47	2086.40	2185.85

Working capital for O&M expenses

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

<i>(Rs. in lakh)</i>				
2019-20	2020-21	2021-22	2022-23	2023-24
1007.99	1056.04	1106.37	1159.11	1214.36

Rate of Interest of working Capital

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

“34(3) Rate of interest on working capital shall be on normative basis and shall be considered as the bank rate as on 1.4.2014 or as on 1st April of the year during the tariff period 2019-24 in which the generating station or a unit thereof or the transmission system including communication system or element thereof, as the case may be, is declared under commercial operation, whichever is later.” Provided that in case of truing-up, the rate of interest on working capital shall be considered at bank rate as on 1st April of each of the financial year during the tariff period 2019-24.”

49. In accordance with Regulation 34(3) of the 2019 Tariff Regulations, the rate of interest on working capital considered on projection basis, for the 2019-24 tariff period is 12.05% (i.e. 1-year SBI MCLR of 8.55% as on 1.4.2019 + 350 basis points). As the tariff of the generating station for 2019-24 tariff period is being determined during 2022-23, SBI MCLR as on 1.4.2020 (7.75%), 1.4.2021 (7.00%) and 1.4.2022 (7.00%) is also available which is lower in comparison to the same, as on 1.4.2019 (8.55%), we find it prudent to allow the rate of interest for the year 2019-20 is 12.05%, 2020-21 is 11.25%, 2021-24 is 10.50% (i.e. 1 year SBI MCLR of 7.75% as on 1.4.2020 + 350 basis points, 1 year SBI MCLR of 7.00% as on 1.4.2021 + 350 basis points and 1 year SBI MCLR of 7.00% as on 1.4.2022 + 350 basis points) subject to revision at the time of truing-up of tariff, based on the bank rate as on 1st



April of each financial year. Accordingly, Interest on working capital is allowed as under:

	<i>(Rs. in lakh)</i>				
	2019-20	2020-21	2021-22	2022-23	2023-24
Working capital for O&M expenses (one month)	1007.99	1056.04	1106.37	1159.11	1214.36
Working capital for Maintenance Spares	1814.38	1900.87	1991.47	2086.40	2185.85
Working capital for Receivables	3574.56	3656.55	3731.47	3814.50	3888.69
Total Working capital	6396.93	6613.45	6829.31	7060.00	7288.89
Rate of interest (%)	12.05%	11.25%	10.50%	10.50%	10.50%
Interest on Working capital for	770.83	744.01	717.08	741.30	765.33

Annual Fixed Charges

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

	<i>(Rs. in lakh)</i>				
	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation (A)	1449.24	1469.34	1489.59	1501.11	1501.77
Interest on Loan (B)	0.00	0.00	0.00	0.00	0.00
Return on Equity (C)	14757.15	14772.87	14783.22	14788.10	14788.59
Interest on Working Capital (D)	770.83	744.01	717.08	741.30	765.33
O&M Expenses (E)	12095.88	12672.44	13276.47	13909.30	14572.30
Total AFC (F) = (A+B+C+D+E)	29073.11	29658.67	30266.36	30939.81	31628.00

Note: (1) All figures are on annualized basis. (2) All figures under each head have been rounded. The figure in total column in each year is also rounded. As such the sum of individual items may not be equal to the arithmetic total of the column.

Normative Annual Plant Availability Factor (NAPAF)

51. The Petitioner has claimed NAPAF of 88% which is in accordance with Regulation 50(4) of the 2019 Tariff Regulations, accordingly, the same is allowed.

Design Energy (DE)

52. The Petitioner has claimed design energy of 1509.69 MUs for the 2019-24 tariff period. However, the Commission vide its order dated 7.6.2021 in Petition No.273/GT/2019 had observed the following:



“52. The Commission in its order dated 5.1.2016 in Petition No. 40/GT/2015 had considered the annual Design Energy (DE) of 1509.69 million units for this generating station. It is, however, noticed that in Petition No. 139/MP/2016 (NEEPCO v APDCL & 9 ors), the Petitioner had prayed for recovery of Energy Charge shortfall during the period of 2012-15, as well as the modification of DE for 2014-17 for calculation of ECR till the energy charge shortfall of the previous years has been made up for by the generating station, where actual energy generated by the station during a year is less than its approved design energy for reasons beyond the control of the generating company. The Commission, while disposing of the said petition by order dated 17.10.2017, had directed the Petitioner to approach CEA for revision of DE for the period 2014-15 onwards. In compliance with the said direction, the Petitioner has approached CEA. It is noticed that CEA vide its letter dated 14.3.2021 (Letter Ref No.CEA-HY-12-32/6/2020- HPA Division dated 14.3.2021) has approved DE of the generating station as 1293.73 MU and the same has been communicated by the Petitioner to the Commission vide its letter dated 15.3.2021. In this background and keeping in view that the present petition is for truing-up of tariff for the 2014-19 tariff period, we allow the Design Energy of 1293.73 MU as approved by CEA, for the generating station, as per month-wise details as under”

53. Accordingly, the annual Design Energy (DE) of 1293.73 Mus, as approved by order dated 7.6.2021 in Petition No.273/GT/2019, has been considered for the period 2019-24 as per month-wise details as under:

Months	Days	Design Energy (MU)
June	10	46.88
	10	92.34
	10	92.34
July	10	52.48
	10	48.00
	11	89.56
August	10	38.18
	10	31.12
	11	39.09
September	10	28.22
	10	92.34
	10	72.72
October	10	30.84
	10	25.61
	11	33.55
November	10	22.93
	10	22.19
	10	20.78
December	10	20.45
	10	21.19
	11	25.22
January	10	19.17
	10	18.64
	11	24.04



Months	Days	Design Energy (MU)
February	10	18.24
	10	17.77
	8	11.43
March	10	17.77
	10	20.92
	11	25.52
April	10	21.12
	10	23.80
	10	38.88
May	10	38.47
	10	29.70
	11	22.27
Total		1293.73

Application Fee and Publication Expenses

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

55. Similarly, RLDC fees & charges paid by the Petitioner in terms of the Central Electricity Regulatory Commission (Fees and Charges of Regional Load Dispatch Centre and other related matters) Regulations, 2015, shall be recovered from the beneficiaries. In addition, the Petitioner is entitled recovery of statutory taxes, levies, duties, Cess etc. levied by the statutory authorities in accordance with the 2014 Tariff Regulations.

Summary

56. The annual fixed charges claimed and allowed for the 2019-24 tariff period are summarized below:



<i>(Rs in lakh)</i>					
Annual fixed charges	2019-20	2020-21	2021-22	2022-23	2023-24
Claimed	30404.35	31140.53	31845.84	32526.20	33218.01
Allowed	29073.11	29658.67	30266.36	30939.81	31628.00

57. The annual fixed charges approved above are subject to trueing up in terms of Regulation 13 of the 2019 Tariff Regulations.

58. Petition No. 233/GT/2020 is disposed of in terms of the above.

Sd/-
(Pravas Kumar Singh)
Member

Sd/-
(Arun Goyal)
Member

Sd/-
(I.S. Jha)
Member

