CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI

Petition No. 230/GT/2020

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

Date of Order: 27th June, 2023

IN THE MATTER OF

Petition for truing-up of tariff of Rihand STPS, Stage-I (1000 MW) for the period 2014-19.

AND

IN THE MATTER OF

NTPC Limited,
NTPC Bhawan, Core-7, Scope Complex,
7, Institutional Area, Lodhi Road,
New Delhi-110003 **…. Petitioner**

Vs

1. Uttar Pradesh Power Corporation Limited,
   Shakti Bhawan, 14, Ashok Marg,
   Lucknow 226001
2. Rajasthan Urja Vika Nigam Limited,
   (on behalf of DISCOMs of Rajasthan)
   Vidyut Bhawan, Janpath, Jaipur 302005
3. Tata Power Delhi Distribution Limited,
   Grid Substation, Hudson Road,
   Kingsway Camp, Delhi- 110019
4. BSES Rajdhani Power Limited,
   2nd Floor, B-Block,BSES Bhawan,
   Nehru Place, New Delhi- 110019
5. BSES Yamuna Power Limited,
   Shakti Kiran Building,
   Karkardooma, Delhi- 110092
6. Haryana Power Purchase Center,
   Shakti Bhawan, Sector-VI,
   Panchkula, Haryana - 134109

7. Punjab State Power Corporation Limited,
   The Mall, Patiala- 147001

8. Himanchal State Electricity Board Limited,
   Kumar Housing Complex Building-II,
   Vidyut Bhawan, Shimla – 171004

9. Power Development Department (J&K),
   Government of J&K, Secretariat,
   Srinagar

10. Electricity Department (Chandigarh),
    Union Territory of Chandigarh,
    Additional Office Building,
    Sector 9D- Chandigarh

11. Uttarakhand Power Corporation Limited,
    Urja Bhawan, Kanwali Road,
    Dehradun-248001, Uttarakhand

…Respondents

Parties Present:

Shri Anand. K. Ganesan, Advocate NTPC
Shri Swapna Seshadri, Advocate, NTPC
Shri Ritu Apurva, Advocate, NTPC
Shri Deepak Thakur, Advocate, NTPC
Shri Mansoor Ali Shoket, Advocate, TPDDL
Shri Nitin Kala, Advocate, TPDDL
Shri Kunal Singh, Advocate TPDDL
Ms. Shefali Sobti, TPDDL
Shri Anupam Varma, BRPL/BYPL
Shri Aditya Ajay, Advocate, BRPL/BYPL
Shri Rahul Kinra, Advocate, BRPL/BYPL
Ms. Megha Bajpeyi, BRPL

ORDER

This petition has been filed by the Petitioner, NTPC Limited, for truing up of tariff of Rihand Super Thermal Power Station, Stage I (1000 MW) (in short 'the generating station') for the period 2014-19, in terms of Regulation 8 of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 (in short 'the 2014 Tariff Regulations').The generating station with a total capacity of 1000 MW comprises of two units of 500 MW each. The dates of commissioning of various units of the generating station are as under:

Unit I	1.1.1990
Unit II	1.1.1991

2. The Commission vide its order dated 23.8.2016 in Petition No.291/GT/2014 had determined the tariff of the generating station for the period 2014-19. Aggrieved by this order, the Petitioner had filed Review Petition (Petition No. 58/RP/2016) on the issue of 'non-consideration of water charges of Rs.394.82 lakh actually paid by the Petitioner to Uttar Pradesh Jal Vidyut Nigam Limited (UPJVNL)' and the same was allowed vide order dated 6.4.2017. Accordingly, the capital cost allowed vide order dated 23.8.2016 and the annual fixed charges allowed vide order dated 6.4.2017 are as under:

Capital Cost allowed

(Rs. in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Opening capital cost	242348.24	242348.24	242348.24	242348.24	242348.24
Add: Addition during the year/ period	0.00	0.00	0.00	0.00	0.00
Closing capital cost	242348.24	242348.24	242348.24	242348.24	242348.24
Average capital cost	242348.24	242348.24	242348.24	242348.24	242348.24

Annual Fixed Charges allowed

(Rs. in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	5374.50	5374.50	1343.62	0.00	0.00
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Return on Equity	23563.03	23677.30	23677.30	23677.30	23677.30
Interest on Working Capital	4325.51	4398.15	4364.63	4468.18	4543.38
O&M Expenses	16394.82	17404.82	18474.82	19614.82	20824.82
Compensation Allowance	1000.00	500.00	0.00	0.00	0.00
Special Allowance	0.00	3988.13	8482.74	9021.40	9594.25
Annual Fixed Charges	50657.86	55342.89	564343.11	56781.69	58639.75
Unrecovered Depreciation	0.00	0.00	179.12	0.00	0.00
Total	**50657.86**	**55342.89**	**56522.23**	**56781.69**	**58639.75**

Present Petition

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

"8. Truing up

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

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

4. Accordingly, in terms of the above regulations, the Petitioner, has filed this petition and has claimed the capital cost and annual fixed charges, for the period 2014-19 as under:

Capital Cost claimed

(Rs. in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Capital cost	242348.24	242360.80	242396.16	242259.85	242546.38
Add: Addition	0.75	35.36	36.00	407.30	2929.64
Less: Decapitalisation	-	-	172.30	125.76	253.48
Less: Reversal	-	-	-	-	-
Add: Discharges	11.82	-	-	4.98	11.06
Closing Capital Cost	242360.80	242396.16	242259.85	242546.38	245233.60
Average Capital cost	242354.52	242378.48	242328.01	242403.12	243889.99

Annual Fixed Charges claimed

(Rs. in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	5376.32	5393.31	1363.9	202.5	1604.47
Interest on Loan	-	-	-	3.67	25.97
Return on Equity	23563.61	23679.2	23681.3	23693.4	23846.6
Interest on Working Capital	5078.84	5149.85	5273.57	5408.81	5562.93
O&M Expenses	16629.42	17605.8	18827.3	19762.5	21083.5
Compensation Allowance	1000	500	-	-	-
Special Allowance	-	3988.13	8482.74	9021.4	9594.25
Total	51648.19	56316.2	57628.8	58092.3	61717.7
Un-Recovered Depreciation	-	-	179.12	-	-
Total (A)	**51648.19**	**56316.2**	**57807.9**	**58092.3**	**61717.7**
Additional O&M Expenditure					
Impact of Pay Revision*	-	29.80	2377.91	2584.31	3100.97
Impact of GST	-	-	-	148.60	206.47
Ash Transportation Expenditure	-	-	-	-	-
Total (Additional O&M) (B)	-	29.80	2377.91	2732.91	3307.44
Total (A+B)	**51648.19**	**56346**	**60185.9**	**60825.2**	**65025.1**

5. The Respondents UPPCL and TPDDL have filed their replies vide affidavit dated 6.3.2020/17.7.2021 and 30.8.2021, respectively. In response, the Petitioner has filed its rejoinder to the said replies on 26.5.2021/8.11.2021(UPPCL) and on 30.8.2021 (TPDDL). The Petitioner has also filed certain additional information vide its affidavits dated 30.6.2021 and 16.7.2021, after serving copies on the Respondents. The Petition was heard through video conferencing on 23.8.2022, and the Commission, reserved

its order in the matter, after directing the Petitioner to submit certain additional information. In compliance to the directions, the Petitioner has filed the additional information vide affidavit dated 8.9.2022. Based on the submissions of the parties and the documents available on record and on prudence check, we proceed for truing up the tariff of the generating station for the period 2014-19, as stated in the subsequent paragraphs.

Capital Cost

6. Regulation 9(1) of the 2014 Tariff Regulations provides that the capital cost as determined by the Commission after prudence check, in accordance with this regulation, shall form the basis of determination of tariff for existing and new projects. Regulation 9(3) of the 2014 Tariff Regulations provides as under:

> *"9. Capital Cost:*
> *(3) The Capital cost of an existing project shall include the following:*
> *(a) the capital cost admitted by the Commission prior to 1.4.2014 duly trued up by excluding liability, if any, as on 1.4.2014.*
> *(b) additional capitalisation and de-capitalisation for the respective year of tariff as determined in accordance with Regulations 14.*
> *expenditure on account of renovation and modernisation as admitted by this Commission in accordance with Regulation 15;"*

7. The Commission vide its order dated 23.8.2016 in Petition 291/GT/2014 had approved the annual fixed charges of the generating station for the period 2014-19, considering the opening capital cost of Rs. 242348.24 lakh (on cash basis). Accordingly, in terms of Regulation 9(3) of the 2014 Tariff Regulations, the capital cost of Rs. 242348.24 lakh, as on 31.3.2014, has been considered as opening capital cost as on 1.4.2014.

Additional Capital Expenditure

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

> *"14. Additional Capitalisation and De-capitalisation:*

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

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

(ii) Works deferred for execution;

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

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

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

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

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

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

(ii) Change in law or compliance of any existing law;

(iii) Deferred works relating to ash pond or ash handling system in the original scope of work; and

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

(3) The capital expenditure, in respect of existing generating station or the transmission system including communication system, incurred or projected to be incurred on the following counts after the cut-off date, may be admitted by the Commission, subject to prudence check:

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

(ii) Change in law or compliance of any existing law;

(iii) Any expenses to be incurred on account of need for higher security and safety of the plant as advised or directed by appropriate Government Agencies of statutory authorities responsible for national security/internal security;

(iv) Deferred works relating to ash pond or ash handling system in the original scope of work;

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

(vi) Any liability for works admitted by the Commission after the cut-off date to the extent of discharge of such liabilities by actual payments;

(vii) Any additional capital expenditure which has become necessary for efficient operation of generating station other than coal /lignite-based stations or transmission system as the case may be. The claim shall be substantiated with the technical justification duly supported by the documentary evidence like test results carried out

by an independent agency in case of deterioration of assets, report of an independent agency in case of damage caused by natural calamities, obsolescence of technology, up-gradation of capacity for the technical reason such as increase in fault level;

(viii) In case of hydro generating stations, any expenditure which has become necessary on account of damage caused by natural calamities (but not due to flooding of power house attributable to the negligence of the generating company) and due to geological reasons after adjusting the proceeds from any insurance scheme, and expenditure incurred due to any additional work which has become necessary for successful and efficient plant operation;

(ix) In case of transmission system, any additional expenditure on items such as relays, control and instrumentation, computer system, power line carrier communication, DC batteries, replacement due to 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-materialisation 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 stabilisers, refrigerators, coolers, computers, fans, washing machines, heat convectors, mattresses, carpets etc. brought after the cut-off date shall not be considered for additional capitalisation for determination of tariff w.e.f. 1.4.2014:

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

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

9. The additional capital expenditure claimed by the Petitioner, duly supported by auditor certificate, for the period 2014-19, is as under:

(Rs. in lakh)

	2014-15	**2015-16**	**2016-17**	**2017-18**	**2018-19**
Closing gross block as per audited books *	1080186.13	1105233.32	757168.12	765184.87	785394.17
Less: Opening gross block as per audited books *	1059905.03	1080186.13	697385.33	757168.12	765184.87
Additional capital expenditure as per audited books *	20281.10	25047.19	59782.79	8016.76	20209.30
Less: Additional capital expenditure pertaining to another Stages/ Solar #	18589.17	21859.45	41509.99	2908.68	8255.07

Additional capital expenditure as per books for the generating station #	1691.93	3187.74	18272.80	5108.08	11954.23
Less: IND AS adjustment #	0.00	0.00	(-) 6273.17	577.88	(-)1247.63
Additional capital expenditure as per IGAAP for the generating station #	1691.93	3187.74	11999.61	5685.95	10706.60
Less: Exclusions	1323.26	3141.64	12126.74	5383.92	7904.96
Additional capital expenditure claimed for the generating station (on accrual basis)	368.67	46.10	(-) 127.13	302.02	2801.63
Less: Un-discharged liabilities included above	367.92	10.74	9.17	20.49	125.47
Additional capital expenditure claimed for the generating station (on cash basis)	0.75	35.36	(-)136.30	281.53	2676.16
Add: Discharges of liabilities	11.82	0.00	0.00	4.98	11.06
Net additional capital expenditure claimed including discharges for the generating station (on cash basis)	**12.56**	**35.36**	**(-)136.30**	**286.51**	**2687.22**

* *As per IGAAP for the period 2014-16 and IND AS for the period 2016-19. # Duly certified by the auditor*

Exclusions

10. The summary of exclusions from books of accounts, as claimed (on accrual basis) by the Petitioner is as under:

(Rs. in lakh)

	2014-15	**2015-16**	**2016-17**	**2017-18**	**2018-19**
Items not allowed in 2014-19	960.46	911.03	9518.92	541.24	50.80
Items not claimed as additional capitalisation in 2014-19	0.00	1699.37	2133.13	2509.18	201.14
Loan FERV	55.70	63.36	(-)619.22	943.92	(-)128.99
Capitalisation of Capital Spares	550.66	855.25	1309.20	1317.36	7729.51
Inter-Unit Transfer	0.00	(-)0.32	(-)0.50	9.91	(-)57.91
Reversal of Liabilities	0.00	(-)207.44	(-)7.45	(-)8.95	(-)194.84
De-capitalisation of Spares: Not Part of Capital Cost	(-)205.57	(-)174.96	(-)154.33	(-)30.73	(-)13.36
Capitalisation of MBOA	0.00	0.00	7.01	261.51	325.99
De-Capitalisation: MBOA Not Part of Capital Cost	0.00	0.00	0.00	(-)102.60	(-)6.02
De-capitalisation of MBOA: Part of Capital Cost	(-)23.79	(-)4.64	(-)60.02	(-)56.92	(-)1.36
De-capitalisation of MGR Wagon No. B23-Part of Capital Cost	(-)14.19	0.00	0.00	0.00	0.00
Ind-AS Adjustment- Capital Overhauling	0.00	0.00	0.00	0.00	0.00
Total Exclusions claimed	**1323.26**	**3141.64**	**12126.74**	**5383.92**	**7904.96**

11. We first examine the exclusions claimed by the Petitioner, as under:

Items not allowed for the period 2014-19

12. The Petitioner has claimed an amount of Rs. 960.46 lakh in 2014-15, Rs.911.03 lakh in 2015-16, Rs.9518. 92 lakh in 2016-17, Rs.541.24 lakh in 2017-18 and Rs.50.80 lakh in 2018-19 under exclusion, towards items that were not allowed during the period 2014-19. The items claimed by the Petitioner under this head include works related to raising of Ash dyke, works related to R&M activities of ESP, replacement of switchgear in CHP area, TG auxiliary control system and R&M of ash slurry pump house. It is observed that the Commission has not allowed any additional capital expenditure at the time of determination of tariff for the period 2014-19, in order dated 23.8.2016 in Petition 291/GT/2014. In view of the above, the capitalization of the above items is allowed under exclusion.

Items not claimed as additional capitalisation for the period 2014-19

13. The Petitioner has claimed an amount of Rs.1699.37 lakh in 2015-16, Rs.2133 lakh in 2016-17, Rs.2509.18 lakh in 2017-18 and Rs. 201.14 lakh in 2018-19, towards items that have not been claimed as additional capital expenditure during the period 2014-19. The items under this head include R&M activities of various systems and associated decapitalisation. It is observed that the Petitioner has not claimed any additional capital expenditure of these items during the period 2014-19. In view of the same, the claim of the Petitioner under the above heads is allowed under exclusion.

Loan FERV

14. The Petitioner has claimed exclusion of loan FERV of Rs.55.70 lakh in 2014-15, Rs.63.36 lakh in 2015-16, (-) Rs.619.22 lakh in 2016-17, Rs.943.92 lakh in 2017-18

and (-) Rs. 128.99 lakh in 2018-19. In justification for the same, the Petitioner has submitted that since it is entitled to directly claim FERV on foreign currency loans as per the 2014 Tariff Regulations the same has been kept under exclusions. As the Petitioner is entitled to bill the claim for loan FERV, directly from the beneficiaries, the Petitioner's claim under this head is allowed.

Capitalisation of Capital Spares

15. The Petitioner has claimed exclusion of capital spares of Rs. 550.66 lakh in 2014-15, Rs. 855.25 lakh in 2015-16, Rs. 1309.20 lakh in 2016-17, Rs. 1317.36 lakh in 2017-18 and Rs. 7729.51 lakh in 2018-19. In justification for the same, the Petitioner has submitted that the capital spares capitalized after the cut-off date, are not allowable as per the 2014 Tariff Regulations and accordingly the same has been claimed as exclusion. As the capitalization of spares over and above initial spares procured after the cut-off date of the generating station is not allowed as part of capital cost as per the 2014 Tariff Regulations, the claim of the Petitioner is allowed.

Inter-Unit Transfer

16. The Petitioner has claimed exclusion of (-) Rs.0.32 lakh in 2015-16, (-) Rs.0.50 lakh in 2016-17 and Rs.9.91 lakh in 2017-18 and (-) Rs.57.91 lakh in 2018-19, on account of inter-unit transfer of assets to/ from the generating station. In justification for the same, the Petitioner has submitted that since the Commission is not considering the temporary inter-unit transfer of assets, for the purpose of tariff, the same has been kept under exclusions. The Commission, in its various orders while dealing with the application for additional capitalisation in respect of other generating stations of the Petitioner had decided that both positive and negative entries arising out of inter-unit transfers of a temporary nature shall be ignored for the purposes of

tariff. In line with the said decision, the exclusion of the said amounts on account of inter-unit transfer is allowed.

Reversal of Liabilities

17. The Petitioner has claimed exclusion of reversal of liabilities of (-) Rs.207.44 lakh in 2015-16, (-) Rs.7.45 lakh in 2016-17, and (-) Rs.8.95 lakh in 2017-18 and (-) Rs. 194.84 lakh in 2018-19. In justification for the same, the Petitioner has submitted that the tariff is allowed on cash basis and liabilities do not form part of tariff, and accordingly the reversal of the same has been kept under exclusion. Since tariff is allowed on cash basis, the exclusion of reversal of un-discharged liabilities is allowed for the purpose of tariff.

De-capitalisation of Spares (Not Part of Capital Cost)

18. The Petitioner has claimed exclusion of de-capitalisation of capital spares of Rs.205.57 lakh in 2014-15, Rs.174.96 lakh in 2015-16, Rs.154.33 lakh in 2016-17, Rs.30.73 lakh in 2017-18 and Rs.13.36 lakh in 2018-19. In justification for the same, the Petitioner has submitted that these capital spares do not part of allowed capital cost of the generating station and accordingly their de-capitalisation has been claimed as exclusions. It is observed from the submission of the Petitioner that these capital spares do not form part of the capital cost allowed to the generating station. Accordingly, the Petitioner’s claim for exclusion under this head is allowed.

Capitalisation of MBOA

19. The Petitioner has claimed an amount of Rs. 7.01 lakh in 2016-17, Rs.261.51 lakh in 2017-18 and Rs. 325.99 lakh in 2018-19 as capitalisation of MBOA under exclusion. In justification for the same, the Petitioner has submitted that capitalisation of MBOA beyond cut-off date is not admissible as per the 2014 Tariff Regulations and accordingly the capitalisation of these MBOA are claimed under exclusion. As

capitalization of MBOA after the cut-off date of the generating station is not allowed as part of the capital cost, in terms of the 2014 Tariff Regulations, the claim of the Petitioner is allowed.

De-capitalisation of MBOA (Not Part of capital cost)

20. The Petitioner has claimed exclusion of de-capitalisation of MBOA of Rs.102.60 lakh in 2017-18 and Rs.6.02 lakh in 2018-19. In justification for the same, the Petitioner has submitted that these MBOA's do not part of the allowed capital cost of the generating and accordingly their de-capitalisation has been claimed as exclusions. Since, these de-capitalised MBOA's do not form part of the allowed capital cost of the generating station, the exclusion claimed under this head is allowed.

De-capitalisation of MBOA (Part of capital cost)

21. The Petitioner has claimed exclusion of de-capitalisation of MBOA for Rs 23.79 lakh in 2014-15, Rs.4.64 lakh in 2015-16, and Rs.60.02 lakh in 2016-17, Rs.56.92 lakh in 2017-18 and Rs.1.36 lakh in 2018-19. In justification for the same, the Petitioner has submitted that as the capitalisation of expenditure against these items are not allowed for the purpose of tariff under the 2014 Tariff Regulations, the de-capitalisation of the same has been claimed as exclusions. Since Regulation 14(4) of the 2014 Tariff Regulations provides that in case of de-capitalisation of assets, the original cost of such assets shall be removed from the admitted capital cost of the generating station, the claim of the Petitioner under this head is not allowed.

De-capitalisation of MGR Wagon (Part of capital cost)

22. The Petitioner has claimed exclusion of de-capitalisation of MGR Wagon of Rs.14.19 lakh in 2014-15. In justification, the Petitioner has submitted that as the capitalisation of expenditure against these items are not being allowed for the purpose of tariff under the 2014 Tariff Regulations, the de-capitalisation of the same has been

claimed as exclusions. Since Regulation 14(4) of the 2014 Tariff Regulations provides that in case of de-capitalisation of assets, the original cost of such assets shall be removed from the admitted capital cost of the generating station, the claim of the Petitioner under this head is not allowed.

23. Based on the above, the summary of exclusions allowed and disallowed for the period 2014-19, is as under:

(Rs. in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Items not allowed in 2014-19	960.46	911.03	9518.92	541.24	50.80
Items not claimed as additional capitalisation in 2014-19	0.00	1699.37	2133.13	2509.18	201.14
Loan FERV	55.70	63.36	(-)619.22	943.92	(-)128.99
Capitalisation of Capital Spares	550.66	855.25	1309.20	1317.36	7729.51
Inter-Unit Transfer	0.00	(-)0.32	(-)0.50	9.91	(-)57.91
Reversal of Liabilities	0.00	(-)207.44	(-)7.45	(-)8.95	(-)194.84
De-capitalisation of Spares: Not Part of capital cost	(-)205.57	(-)174.96	(-)154.33	(-)30.73	(-)13.36
Capitalisation of MBOA	0.00	0.00	7.01	261.51	325.99
De-Capitalisation: MBOA Not Part of Capital Cost	0.00	0.00	0.00	(-)102.60	(-)6.02
De-capitalisation of MBOA: Part of Capital Cost	0.00	0.00	0.00	0.00	0.00
De-capitalisation of MGR Wagon No. B23-Part of capital cost	0.00	0.00	0.00	0.00	0.00
Ind As Adjustment Capital Overhauling	0.00	0.00	0.00	0.00	0.00
Total Exclusions Allowed	**1361.25**	**3146.28**	**12186.76**	**5440.84**	**7906.32**
Total Exclusions Disallowed	**(-)37.98**	**(-)4.64**	**(-)60.02**	**(-)56.92**	**(-)1.36**

Additional Capital Expenditure

24. The additional capital expenditure claimed by the Petitioner, on cash basis, for the period 2014-19, is as under:

(Rs. in lakh)

	Regulation	2014-15	2015-16	2016-17	2017-18	2018-19
Compensation to Sh. Laxman/ Puja Singh	14 (3) (v)	0.75	-	-	-	-
Freehold land Plant/office	14(3)(i), 14(3)(ii) 14(3)(V)	-	0.74	-	0.13	3.00
Effluent Quality Monitoring System (EQMS) - Main Equipment Supply	14(3)(ii)	-	34.61	-	-	-
Land settlement, project affected persons (PAP)	14(3)(i), 14(3)(v)	-	-	36.00	-	-

1ST Raising of Central Ash Dyke Lagoon-II	14(3)(iv)	-	-	-	16.99	-
LED Lighting	14(3)(ii)	-	-	-	390.18	491.35
HFO to LDO conversion Stage-1		-	-	-	-	1618.25
3RD Raising of Central Ash Dyke Lagoon – I	14(3)(iv)	-	-	-	-	817.04
Decapitalization of Spares (Part of capital cost)	14(4)	-	-	(-)172.30	(-)87.92	(-)205.82
Decapitalization against LED Lighting		-	-	-	(-)37.84	(-)47.66
Additional capital expenditure claimed (before discharge of liabilities)		**0.75**	**35.35**	**(-)136.30**	**281.54**	**2676.16**
Add: Discharge of Liabilities		11.82	-	-	4.98	11.06
Net Additional capital expenditure claimed (including discharges of liabilities)		**12.57**	**35.35**	**(-)136.30**	**286.52**	**2687.22**

25. We now examine the actual additional capital expenditure claimed by the Petitioner for the period 2014-19, as under:

Compensation to Sh. Laxman /Puja Singh

26. The Petitioner has claimed expenditure of Rs. 0.75 lakh in 2014-15, under Regulation 14(3)(v) of the 2014 Tariff Regulations, towards compensation paid to Shri. Lakshman/Puja Singh. In justification for the same, the Petitioner has submitted that the said compensation amount was paid for fruit bearing trees which belonged to Sh. Lakshman/Puja Singh, that existed on the project site, which was damaged at the time of execution of the project. It has submitted that the additional payments incurred are in the nature of discharge of balance payments made by the Petitioner.

27. The Respondent UPPCL has submitted that the Petitioner has claimed the balance payment towards tree compensation with a delay of approximately 25 years. It has further submitted that the compensation payment is an inter-se settlement between the Petitioner and the concerned party and has not arisen out of any court award.

28. The matter has been considered. It has been observed that the Petitioner has claimed the expenditure of Rs. 0.75 lakh, as a discharge of liability in nature of balance payment under Regulation 14(3)(v) of the 2014 Tariff Regulations. However, it is observed that these liabilities do not form part of the undischarged liabilities approved by the Commission in its earlier tariff orders, and has only been brought out and claimed in the present petition. Further, the Petitioner has not stated reference of any court order or any other adjudicating authority based on which compensation has been paid. Accordingly, the claim of the Petitioner for additional capitalisation of the compensation payment made to Sh. Lakshman Singh/Puja Singh is **not allowed**.

Freehold land plant/ office

29. The Petitioner has claimed additional capital expenditure of Rs.0.74 lakh in 2015-16, Rs. 0.00 lakh in 2016-17, Rs.0.13 lakh in 2017-18 and Rs.3.00 lakh in 2018-19 on cash basis, along with undischarged liabilities of Rs. 367.92 lakh in 2014-15, Rs.10.74 lakh in 2015-16, Rs. 9.17 lakh in 2016-17, Rs. 7.80 lakh in 2017-18 and Rs.9.15 lakh in 2018-19, towards free hold land for Plant and Office under Regulations 14(3)(i), 14(3)(ii) 14(3)(v) of the 2014 Tariff Regulations. In justification for the same, the Petitioner has submitted that the interest portion paid/payable towards enhanced compensation for land, as per various court orders, was earlier not indicated in the cost of land, as accounting standards did not permit the same. It has however stated, that after the receipt of opinion of the Expert Advisory Committee of Institute of Chartered Accountants of India and as opined, the interest paid/ payable has been capitalised now as cost of land. Accordingly, the Petitioner has stated that the amount has been capitalised as interest, which would be payable for settlement of Land compensation cases, pending in various courts. It has also stated that some cases are still pending in various courts.

30. The Petitioner has submitted the copy of the opinion received from the Expert Advisory Committee of Institute of Chartered Accountants of India, wherein, it has been opined as follows:

> "*The interest portion on the enhanced compensation awarded by the court should be included as cost of the land to extent they relate to the period upto the date of court's award. Any interest beyond the period should be treated as revenue expenditure and charged to profit and loss account from the year of incurrence. "*

31. In view of the above, the claim of the Petitioner towards free hold land along with the corresponding undischarged liabilities, is **allowed**.

Effluent Quality Monitoring System (EQMS)

32. The Petitioner has claimed additional capital expenditure of Rs.34.61 lakh towards EQMS, main equipment supplies on cash basis under Regulation 14(3)(ii) of the 2014 Tariff Regulations. In justification for the same, the Petitioner has submitted that continuous monitoring of effluent quality has been made mandatory by Central Pollution Control Board (CPCB) vide its direction dated 5.2.2014 for the units including thermal power plant. The Petitioner has also submitted the copy of the directions dated 5.2.2014 received from CPCB.

33. The Respondent UPPCL has submitted that the Petitioner is eligible for Special allowance from 2015-16 and the Petitioner has claimed the benefits of Special Allowance from 2015-16 hence, these expenses should be met out of the Special Allowance.

34. The matter has been considered. It is noticed that CPCB vide its direction dated 5.2.2014 has mandated the Petitioner to install EQMS. Since the claim of the Petitioner is for compliance to the existing law and in terms of the directions of the statutory authority, the claim of the Petitioner for EQMS **is allowed** under Regulation 14(3)(ii) of the 2014 Tariff Regulations.

Land settlement, Project affected Persons

35. The Petitioner has claimed additional capital expenditure of Rs. 36 lakh in 2016-17, towards Land settlement, Project Affected Persons (PAP), under Regulation 14(3)(i) read with Regulation 14(3)(v) of the 2014 Tariff Regulations. In justification for the same, the Petitioner has submitted that payments have been made, on account of settlement of long pending issues, relating to compensation to PAP and consequent cash disbursement to PAPs (12 Nos) for 3 lakhs each. The Petitioner has also furnished the list of PAPs and the methodology for arriving at the compensation amount of Rs. 3 lakh.

36. The Respondent UPPCL has submitted that the expenditure fails to satisfy the criteria of Regulation 14(3)(i) of the 2014 Tariff Regulations as the compensation has not been paid as a result of any legal action. It has further submitted that the Petitioner is claiming the Special allowance from 2015-16 and hence these expenditures should be met out of the same.

37. The matter has been considered. We agree with the submissions of the Respondent UPPCL. Since the compensation amount paid is not on account of any arbitration award or order of Court, the claim for additional capitalisation under Regulation 14(3)(i) of 2014 Tariff Regulations, does not arise. Moreover, the liabilities on this count, were also not admitted by the Commission in any of its previous orders and hence does not satisfy the criteria of Regulation 14(3)(v) of the 2014 Tariff regulations. In view of the above, the claim of the Petitioner under this head is **not allowed**.

1st Raising of Central Ash Dyke Lagoon-II

38. The Petitioner has claimed additional capital expenditure of Rs. 16.99 lakh on cash basis, along with undischarged liability of Rs. 12.70 lakh in 2017-18, under Regulation 14(3)(iv) of the 2014 Tariff Regulations. In justification of the same, the Petitioner has submitted that Commission vide its order dated 29.7.2016 in Petition No 317/GT/2014 had allowed the capitalisation towards 1st raising of the central ash dyke lagoon- II in 2013-14 and the amount claimed under this head, is the balance payments/ adjustments of already approved and capitalised works.

39. We have considered the matter. Since the Commission vide its order dated 29.7.2016 had approved the total expenditure of Rs.751.71 lakh towards the 1st raising of ash dyke lagoon II and since the present claim of the Petitioner is towards the balance payments/ adjustments against the approved works, the claim of the Petitioner of Rs.16.99 lakh, along with the undischarged liability of Rs.12.70 lakh is **allowed**.

HFO to LDO conversion Stage-1

40. The Petitioner has claimed additional capital expenditure of Rs. 1618.25 lakh along with undischarged liability of Rs. 53.66 lakh in 2018-19, under Regulation 14(3)(ii) of the 2014 Tariff Regulations. In justification for the same, the Petitioner has submitted that Hon'ble Supreme Court of India vide its order dated 24.10.2017 in W. P.(C) No (s).13029/1985 has banned the use of HFO (Furnace Oil) in the States of UP, Haryana & Rajasthan and has ordered for switching to Light Diesel Oil (LDO) in Thermal Power Plants. In view of this, the Petitioner has submitted that it has taken up the fuel system conversion in its various power stations including the present

generating station. The Petitioner has also submitted the copy of the judgement of Hon’ble Supreme Court.

41. The Respondent UPPCL has submitted that this claim should be met out of the Special allowance being availed by the Petitioner.

42. We have considered the matter. It has been observed that the Hon’ble Supreme Court vide its judgement dated 24.10.2017, had ordered ban of using the furnace oil and Pet Coke in the States of UP, Haryana and Rajasthan, with effect from 1.11.2017. Thus, the Petitioner, in compliance with the directions of Hon’ble Supreme Court, has carried out the work for conversion of HFO to LDO for the generating station. In this background, the claim of the Petitioner for Rs. 1618.25 lakh along with undischarged liability of Rs. 53.66 lakh **is allowed**.

3rd Raising of Central Ash Dyke Lagoon-I

43. The Petitioner has claimed additional capital expenditure of Rs. 817.04 lakh on cash basis, along with undischarged liability of Rs. 62.66 lakh in 2018-19, under Regulation 14(3)(ii) of the 2014 Tariff Regulations. In justification for the same, the Petitioner has submitted that in order to have optimum utilisation of land for ash disposal, conservation of forest/cultivating land and compliance with the directions of statutory bodies, capacity of the Central Ash dyke Lagoon-I is being enhanced by 3rd raising of the ash dyke for catering the need of disposal of ash from the generating station.

44. The Respondent UPPCL has submitted that the Commission has already disallowed similar claim of the Petitioner vide its order dated 23.8.2016 in Petition 291/GT/2014 and has directed the Petitioner to meet the claim from the special allowance.

45. The matter has been considered. It has been observed that a similar claim of the Petitioner for raising of Maithini Ash dyke was disallowed by the Commission vide its order dated 23.8.2016 in Petition 291/GT/2014. As such, considering the fact that the Petitioner has opted for "Special Allowance" in order to meet the expenses for R&M of the generating station. In this background, we are not inclined to allow the projected additional capital expenditure against the Ash Dyke work.

LED Lighting with corresponding de-capitalisation

46. The Petitioner has claimed additional capital expenditure of Rs. 390.18 lakh in 2017-18 Rs.491.35 lakh in 2018-19, along with corresponding de-capitalisation of Rs. 37.84 lakh in 2017-18 and Rs.47.66 lakh in 2018-19, under Regulation 14(3)(ii) of the 2014 Tariff Regulations. In justification for the same, the Petitioner has submitted that the Hon'ble Prime Minister of India, on 5.1.2015, has launched National LED Programme, with an objective to reduce energy consumption, by using energy efficient lighting. In line with the objective, Unnat Jyoti by affordable LEDs for all (UJALA) and Street Lighting National Programme is being implemented by EESL. In this regard, Ministry of Power (MOP), GOI vide letter dated 2.8.2017, has mandated the Petitioner to replace all old bulbs with LED bulbs in all NTPC buildings including compound/ street lighting occupied by the Petitioner. The Petitioner has also submitted that since any directions of GOI are required to be implemented and has the force of law, it took the work of replacing the old lights with LED lighting in the premises of the station compound/ building owned and operated by the Petitioner.

47. The Respondent UPPCL has submitted that since the Petitioner is claiming Special Allowance and hence the expenditure under this head should be met out of the same. We have considered the matter. In our view, the MOP, GOI letter is

recommendatory in nature and cannot be construed as a 'change in law' event or compliance to an existing law. Moreover, the benefits of replacement of existing lighting system with LED lighting system, accrues to the Petitioner. It is pertinent to mention that the similar claim of the Petitioner has not been allowed by the Commission in various petitions of the Petitioner.

48. In view of the above, the additional capital expenditure claimed on account of installation of LED lighting system is **not allowed**. Therefore, the corresponding decapitalisation has also not been considered.

Decapitalisation of Spares

49. The Petitioner has claimed de-capitalisation of capital spares forming part of the admitted capital cost of Rs.172.30 lakh in 2016-17, Rs.87.92 lakh in 2017-18, Rs.205.82 lakh in 2018-19, under Regulation 14(4) of the 2014 Tariff Regulations, which provides that in case of de-capitalisation of assets, the original cost of such asset shall be removed from the admitted capital cost of the generating station. Accordingly, the de-capitalisation claimed under this head is **allowed** for the purpose of tariff.

Discharge of Liabilities

50. The discharges of liabilities claimed by the Petitioner, is as under:

(Rs. in lakh)

	2014-15	**2015-16**	**2016-17**	**2017-18**	**2018-19**
Out of liabilities deducted as on 1.4.2009	-	-	-	-	-
Other liabilities	11.82	-	-	4.98	11.06
Total	**11.82**	**-**	**-**	**4.98**	**11.06**

51. The discharges as claimed above are in order and has been considered for the purpose of tariff. Further, considering the reversal of liabilities, during the period 2014-

19, corresponding to the admitted capital cost, the flow of un-discharged liabilities corresponding to the admitted capital cost is as under:

(Rs. in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Out of Liabilities Prior to 2009					
Opening Liabilities	188.68	188.68	188.68	188.68	188.68
Addition During the Period	0.00	0.00	0.00	0.00	0.00
Discharges during the Period	0.00	0.00	0.00	0.00	0.00
Reversal during the Period	0.00	0.00	0.00	0.00	0.00
Closing Liability	188.68	188.68	188.68	188.68	188.68
Other liabilities					
Opening Liabilities	188.94	545.04	555.78	564.95	580.46
Addition During the Period	367.92	10.74	9.17	20.49	62.81
Discharges during the Period	11.82	0.00	0.00	4.98	11.06
Reversal during the Period	0.00	0.00	0.00	0.00	1.64
Closing Liability	545.04	555.78	564.95	580.46	630.58

52. Accordingly, the additional capital expenditure allowed for the period 2014-19, is summarized as under:

(Rs. in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Compensation to Shri. Laxman/ Puja Singh	0.00	0.00	0.00	0.00	0.00
Freehold Land Plant/Office	0.00	0.74	0.00	0.13	3.00
Effluent Quality Monitoring System (EQMS) - Main Equipment Supply	0.00	34.61#	0.00	0.00	0.00
Land Settlement, Project Affected Persons (PAP)	0.00	0.00	0.00	0.00	0.00
1st Raising Of Central Ash Dyke Lagoon-II	0.00	0.00	0.00	16.99	0.00
LED Lighting	0.00	0.00	0.00	0.00	0.00
HFO to LDO conversion Stage-1	0.00	0.00	0.00	0.00	1618.25#
3rd Raising of Central Ash Dyke Lagoon – I	0.00	0.00	0.00	0.00	0.00
Decapitalisation of Spares (Part of Capital Cost)	0.00	0.00	(-)172.30	(-)87.92	(-)205.82
Decapitalisation against LED Lighting	0.00	0.00	0.00	0.00	0.00
Additional capital expenditure allowed (before discharge of liabilities)	**0.00**	**35.36**	**(-)172.30**	**(-)70.80**	**1415.43**
Add: Discharge of Liabilities	11.82	0.00	0.00	4.98	11.06#
Exclusion not allowed	**(-)37.98**	**(-)4.64**	**(-)60.02**	**(-)56.92**	**(-)1.36**
Net Additional capital expenditure allowed (including discharges of liabilities)	**(-)26.16**	**30.72**	**(-)232.32**	**(-)122.74**	**1425.12**

 # Note: As these are new assets, admitted during the period 2014-19, depreciation has been computed by applying the weighted average rate of depreciation @ 5.28% p.a. The depreciation for existing assets has been computed considering the spreading over of the balance depreciable value.

Capital cost allowed for the period 2014-19

53. Based on above, the capital cost allowed for the generating station is as under:

(Rs. in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Opening capital cost	242348.24	242322.08	242352.80	242120.48	241997.75
Add: Additional capital expenditure	(-)26.16	30.72	(-)232.32	(-)122.73	1425.12
Closing capital cost	**242322.08**	**242352.80**	**242120.48**	**241997.75**	**243422.87**
Average capital cost	242335.16	242337.44	242236.64	242059.11	242710.31

Debt-Equity Ratio

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

"19. Debt-Equity Ratio: (1) For a project declared under commercial operation on or after 1.4.2014, the debt-equity ratio would be considered as 70:30 as on COD. If the equity actually deployed is more than 30% of the capital cost, equity in excess of 30% shall be treated as normative loan:

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

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

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

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

(2) The generating company or the transmission licensee shall submit the resolution of the Board of the company or approval from Cabinet Committee on Economic Affairs (CCEA) regarding infusion of fund from internal resources in support of the 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 the generating station and the transmission system including communication system declared under commercial operation prior to 1.4.2014, but where debt: equity ratio has not been determined by the Commission for determination of tariff for the period ending 31.3.2014, the Commission shall approve the debt: equity ratio based on actual information provided by the generating company or the transmission licensee as the case may be.

(5) Any expenditure incurred or projected to be incurred on or after 1.4.2014 as may be admitted by the Commission as additional capital expenditure for determination of

tariff, and renovation and modernisation expenditure for life extension shall be serviced in the manner specified in clause (1) of this regulation."

55. The gross normative loan and equity amounting to Rs.122192.46 lakh and Rs.120155.78 lakh, respectively, as on 1.4.2014, as considered in order dated 23.8.2016 in Petition No. 291/GT/2014, has been considered as the gross normative loan and equity as on 1.4.2014. Further, the additional capital expenditure approved above, has been allocated to debt and equity in the ratio of 70:30. Further, for the assets de-capitalised during the period 2014-19, 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 orders. Accordingly, the details of debt-equity ratio in respect of the generating station, as on 1.4.2014 and as on 31.3.2019, is as under:

(Rs. in lakh)

	Capital cost as on 1.4.2014	(%)	Additional capital expenditure	(%)	De-capitalization	(%)	Total cost as on 31.3.2019	(%)
Debt	122192.46	50.42%	1191.11	70%	313.48	50%	123070.09	50.56%
Equity	120155.78	49.58%	510.48	30%	313.48	50%	120352.78	49.44%
Total	**242348.24**	**100.00%**	**1701.59**	**100.00%**	**626.96**	**100.00%**	**243422.87**	**100.00%**

Return on Equity

56. Regulation 24 of the 2014 Tariff Regulation provides as under:

"24. Return on Equity: (1) Return on equity shall be computed in rupee terms, on the equity base determined in accordance with regulation 19.

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

Provided that:

i) in case of projects commissioned on or after 1st April, 2014, an additional return of 0.50 % shall be allowed, if such projects are completed within the timeline specified in Appendix-I:

ii) the additional return of 0.5% shall not be admissible if the project is not completed within the timeline specified above for reasons whatsoever:

iii) additional RoE of 0.50% may be allowed if any element of the transmission project is completed within the specified timeline and it is certified by the Regional Power

Committee/National Power Committee that commissioning of the particular element will benefit the system operation in the regional/national grid:

iv) the rate of return of a new project shall be reduced by 1% for such period as may be decided by the Commission, if the generating station or transmission system is found to be declared under commercial operation without commissioning of any of the Restricted Governor Mode Operation (RGMO)/ Free Governor Mode Operation (FGMO), data telemetry, communication system up to load dispatch centre or protection system:

v) as and when any of the above requirements are found lacking in a generating station based on the report submitted by the respective RLDC, RoE shall be reduced by 1% for the period for which the deficiency continues:

vi) additional RoE shall not be admissible for transmission line having length of less than 50 kilometre."

57. Regulation 25 of the 2014 Tariff Regulations provides as under:

"25. Tax on Return on Equity: (1) The base rate of return on equity as allowed by the Commission under Regulation 24 shall be grossed up with the effective tax rate of the respective financial year. For this purpose, the effective tax rate shall be considered on the basis of actual tax paid in the respect of the financial year in line with the provisions of the relevant Finance Acts by the concerned generating company or the transmission licensee, as the case may be. The actual tax income on other income stream (i.e., income of non-generation or non-transmission business, as the case may be) shall not be considered for the calculation of "effective tax rate"

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

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

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

(3) The generating company or the transmission licensee, as the case may be, shall true up the grossed up rate of return on equity at the end of every financial year based on actual tax paid together with any additional tax demand including interest thereon, duly adjusted for any refund of tax including interest received from the income tax authorities pertaining to the tariff period 2014-15 to 2018-19 on actual gross income of any financial year. However, penalty, if any, arising on account of delay in deposit or short deposit of tax amount shall not be claimed by the generating company or the transmission licensee as the case may be. Any under- recovery or over recovery of grossed up rate on return on equity after truing up, shall be recovered or refunded to beneficiaries or the long-term transmission customers/DICs as the case may be on year to year basis."

58. The Petitioner has claimed tariff considering rate of Return on Equity (ROE) of 19.611% in 2014-15, 19.706% in 2015-18 and 19.758% in 2018-19. The Petitioner has arrived at these rates after grossing up base rate of return on equity of 15.50%

with MAT rate of 20.961% in 2014-15, 21.342% in 2015-18 and 21.549% in 2018-19. However, after rectifying the rounding off errors, the rate of ROE to be considered for the purpose of tariff works out to 19.610% for 2014-15, 19.705% for 2015-18 and 19.758% for 2018-19. Accordingly, ROE has been worked out as under:

(Rs. in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Notional Equity- Opening	120155.78	120140.34	120148.62	120032.46	119966.68
Add: Addition of Equity due to additional capital expenditure	(-) 15.44	8.29	(-) 116.16	(-) 65.79	386.10
Normative Equity – Closing	**120140.34**	**120148.62**	**120032.46**	**119966.68**	**120352.78**
Average Normative Equity	120148.06	120144.48	120090.54	119999.57	120159.73
Return on Equity (Base Rate)	15.500%	15.500%	15.500%	15.500%	15.500%
Effective Tax Rate for respective years	20.961%	21.342%	21.342%	21.342%	21.549%
Rate of Return on Equity (Pre-tax)	19.610%	19.705%	19.705%	19.705%	19.758%
Return on Equity (Pre-tax) - (annualised)	**23561.03**	**23674.47**	**23663.84**	**23645.92**	**23741.16**

<u>Interest on loan</u>

59. 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 Decapitalisation 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-capitalisation of such asset

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

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

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

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

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

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

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

(9) In case of dispute, any of the parties may make an application in accordance with the Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999, as amended from time to time, including statutory re-enactment thereof for settlement of the dispute: Provided that the beneficiaries or the long term transmission customers /DICs shall not withhold any payment on account of the interest claimed by the generating company or the transmission licensee during the pendency of any dispute arising out of re-financing of loan."

60. Interest on loan has been computed as under:

i) The gross normative loan amounting to Rs. 122192.46 lakh as consider in order dated 23.8.2016 in Petition No. 291/GT/2014, has been retained as on 1.4.2014.

ii) Cumulative repayment of Rs. 122192.46 lakh, as considered in order dated 23.8.2016 in Petition No. 291/GT/2014, has been retained as on 1.4.2014.

iii) Accordingly, the net normative opening loan as on 1.4.2014 is 'nil'.

iv) Addition to normative loan on account of additional capital expenditure approved above has been considered.

v) Depreciation allowed has been considered as repayment of normative loan during the respective year of the period 2014-19. Further, the repayments have been adjusted for de-capitalisation of assets considered for the purpose of tariff. Further also, proportionate adjustment has been made to the repayments corresponding to discharges and reversal of liabilities considered during the respective years on account of cumulative repayment adjusted, corresponding to liabilities deducted, as on 1.4.2009

vi) The Petitioner has claimed interest on loan considering weighted average rate of interest (WAROI) of 6.0690% in 2014-15, 7.3234% in 2015-16, 8.1413% in 2016-17, 8.5277% in 2017-18 and 8.2957% in 2018-19. The WAROI, has been calculated by applying the actual loan portfolio existing as on 1.4.2014, along with subsequent additions during the period 2014-19, for the generating station.

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

(Rs. in lakh)

		2014-15	**2015-16**	**2016-17**	**2017-18**	**2018-19**
A	Gross opening loan	122192.46	122181.74	122204.17	122088.02	122031.07
B	Cumulative repayment of loan upto previous year	122192.46	122181.74	122204.17	122088.02	122008.75
C	Net Loan Opening (A-B)	0.00	0.00	0.00	0.00	22.33

D	Addition due to additional capital expenditure	(-) 10.72	22.43	(-) 116.16	(-) 56.94	1039.02
E	Repayment of loan during the year	8.27	26.61	(-) 69.87	51.08	44.84
F	Repayment adjustment on account of de-capitalisation	18.99	4.17	46.29	130.35	186.46
G	Net Repayment of loan during the year (E-F)	(-) 10.72	22.43	(-) 116.16	(-) 79.27	(-) 141.62
H	Net Loan Closing (C+D-G)	0.00	0.00	0.00	22.33	1202.97
I	Average Loan [(C+H)/2]	0.00	0.00	0.00	11.16	612.65
J	WAROI	6.0690%	7.3234%	8.1413%	8.5277%	8.2957%
K	**Interest on Loan (I x J)**	**0.00**	**0.00**	**0.00**	**0.95**	**50.82**

Depreciation

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

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

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

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

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

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

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

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

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

(5) Depreciation shall be calculated annually based on Straight Line Method and at rates specified in Appendix-II to these regulations for the assets of the generating station and transmission system: Provided that the remaining depreciable value as on 31st March

of the year closing after a period of 12 years from the effective date of commercial operation of the station shall be spread over the balance useful life of the assets.

(6) In case of the existing projects, the balance depreciable value as on1.4.2014 shall be worked out by deducting the cumulative depreciation as admitted by the Commission up to 31.3.2014 from the gross depreciable value of the assets.

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

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

63. The cumulative depreciation amounting to Rs.203221.03 lakh and balance useful life of 2.25 years as on 1.4.2014 as considered in order dated 6.4.2017 in Petition No. 58/RP/2016. has been considered as on 1.4.2014. The value of freehold land amounting to Rs.3110.86 lakh, as on 1.4.2014, as considered in order dated 6.4.2017 in Petition No. 58/RP/2016 along with additions during the period 2014-19, has been considered for the purpose of tariff. The depreciation for existing assets has been computed considering spreading over of the balance depreciable value and the depreciation for assets admitted during the period 2014-19, has been computed by applying the weighted average rate of depreciation of 5.28%, as mentioned in the note to the table in paragraph 54 above. Further, proportionate adjustment has been made to the cumulative depreciation on account of de-capitalisation of assets considered during the period 2014-19. Accordingly, depreciation has been worked out as under:

(Rs. in lakh)

	2014-15	**2015-16**	**2016-17**	**2017-18**	**2018-19**
Existing Assets					
Average capital cost (A)	242335.16	242320.13	242202.03	242024.50	241861.05
Value of freehold land included above (B)	3110.86	3111.23	3111.61	3111.67	3113.24
Aggregated depreciable value [C = (A-B) x 90%]	215301.87	215288.01	215181.38	215021.55	214873.03
Remaining aggregate depreciable value at the beginning of the year (D = C – 'J' of previous year)	12080.84	6731.90	1243.92	49.26	0.00