CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI

Petition No. 206/TT/2016

Coram:

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

Date of Order: 29.09.2017

In the matter of:

Approval of transmission tariff for **Asset-I:** 1 No. 1x500 MVA ICT at 400/220 kV Subhasgram Sub-station along with the associated bays and 2 Nos. of 220 kV equipped line bays at 400 kV Subhasgram Sub-station and **Asset-II**: Shifting of 2x50 MVAR line Reactor from Patna end of 400 kV Kahalgaon/Barh-Patna D/C line to Balia end of 400 kV Patna-Balia D/C line under Transmission System for "Eastern Region Strengthening Scheme-VIII" in Eastern Region from COD to 31.3.2019 under Regulation 86 of Central Electricity Regulatory Commission (Conduct of business) Regulations, 1999 and Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014.

And in the matter of:

Power Grid Corporation of India Limited,
"Saudamini", Plot No. 2,
Sector 29, Gurgaon-122001
Haryana **….Petitioner**

Vs

1. Bihar State Power (Holding) Company Limited,
   (Formerly Bihar State Electricity Board-BSEB),
   Vidyut Bhavan, Bailey Road, Patna-800 001

2. West Bengal State Electricity Distribution Company Limited,
   Bidyut Bhawan, Bidhan Nagar,
   Block DJ, Sector-II, Salt Lake City,
   Calcutta-700 091

3. Grid Corporation of Orissa Limited,
   Shahid Nagar, Bhubaneswar-751 007

4. Jharkhand State Electricity Board,
   In Front of Main Secretariat,
   Doranda, Ranchi-834 002

5. Damodar Valley Corporation,
DVC Tower, Maniktala,
Civic Centre, VIP Road,
Calcutta-700 054

6. Power Department,
Govt. of Sikkim,
Gangtok-737 101 **….Respondents**

For Petitioner : Shri S. S. Raju, PGCIL
Shri Amit Yadav, PGCIL
Shri M. M. Mondal, PGCIL
Shri S.K. Venkatesan, PGCIL

For Respondents : Shri R. B. Sharma, Advocate, BSP(H)CL

ORDER

The present petition has been filed by Power Grid Corporation of India Ltd. (“the petitioner”) seeking approval of transmission tariff for Asset I: 01 No. 1x500 MVA ICT at 400/220 kV Subhasgram Sub-station along with the associated bays and 02 Nos. of 220 kV equipped line bays at 400 kV Subhasgram Sub-station and Asset II: Shifting of 2x50 MVAR line Reactor from Patna end of 400 kV Kahalgaon/Barh-Patna D/C line to Balia end of 400 kV Patna-Balia D/C line under Transmission System for “Eastern Region Strengthening Scheme-VIII” in Eastern Region (hereinafter referred to as “transmission system”) for 2014-19 tariff period under Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 (hereinafter referred to as “the 2014 Tariff Regulations”).

2. The Investment Approval (IA) and expenditure sanction for the transmission system was accorded by the Board of Directors of the petitioner vide Memorandum No. C/CP/ERSS-VIII dated 28.8.2013 at an estimated cost of

₹7348 lakh including an IDC of ₹361 lakh (based on April 2013 price level). The instant transmission system was scheduled to be commissioned within 20 months from the date of IA. Therefore, the scheduled date of commissioning of the instant transmission system was 26.4.2015.

3. The Revised Cost Estimate (RCE) for the transmission system was accorded approval by the Board of Directors of the petitioner vide Memorandum No. C/CP/RCE-ERSS-VIII dated 19.2.2016 at the cost of ₹9568 lakh including IDC of ₹111 lakh (based on August, 2015 price level).

4. The scope of work covered under "Eastern Region Strengthening Scheme VIII" is as follows:-

a) Installation of Bus Reactor

i. 2x125 MVAR bus reactor at Muzaffarpur (one 125 MVAR reactor would be installed by replacing the existing 63 MVAR bus reactor at Muzaffarpur, which shall be used as spare)
ii. 1x125 MVAR bus reactor at Rourkela
iii. 1x125 MVAR bus reactor at Indravati
iv. Replacement of existing 1x63 MVAR bus reactor with 1x125 MVAR bus reactor at Jeypore (63 MVAR reactor thus released shall be used as spare reactor)

b) Shifting of Line Reactor

Shifting of 2x50 MVAR line reactors from Patna end of 400 kV Kahalgaon/Barh-Patna D/C line to Balia end of 400 kV Patna-Balia D/C line.

c) Augmentation of Transformation Capacity

Addition of 1x500 MVA, 400/220 kV ICT with associated bays at Subhasgram along with 2 nos. of 220 kV equipped line bays.

5. The details of petitions under which the scope of the instant transmission system is covered are as follows:-

S. No.	Name of Asset	Actual COD	Remarks
1	**Asset I:** 1 No. 1x500 MVA ICT at 400/220 kV Subhasgram Sub-station along with the associated bays and 2 Nos. of 220 kV equipped line bays at 400 kV Subhasgram Sub-station.	29.1.2015	Petition No. 475/TT/2015. However, vide order dated 23.5.2016 the petitioner was directed to file fresh petition for tariff of Asset-I*.
2	**Asset II:** 125 MVAR Bus Reactor-I Muzaffarpur Sub-station alongwith bays	1.4.2015	
3	**Asset III:** 125 MVAR Bus Reactor-II replacing existing 63 MVAR Bus Reactor at Muzaffarpur alongwith bays.	5.3.2015	
4	**Asset:** 1 No. 125 MVAR Bus Reactor and associated bays at 400 kV Rourkela Sub-station	2.2.2015	Petition No. 142/TT/2015
5	**Asset I:** 1 No. of 1x125 MVAR Bus Reactor and associated bay at 400 kV Indravati Sub-station.	3.8.2015	Petition No. 174/TT/2015
6	**Asset II:** 1 No. of 1x125 MVAR Bus Reactor and associated bay at 400 kV Jeypore Sub-station	2.12.2015	
7.	**Asset I*:** 1 No. 1x500 MVA ICT at 400/220 kV Subhasgram Sub-station along with the associated bays and 2 Nos. of 220 kV equipped line bays# at 400 kV Subhasgram Sub-station.	29.1.2015	*Re-filed* in instant petition
8.	**Asset II:** Shifting of 2x50 MVAR line Reactor from Patna end of 400 kV Kahalgaon/Barh-Patna D/C line to Balia end of 400 kV Patna-Balia D/C line	11.2.2016	Instant petition

6. The petitioner has submitted that it has been entrusted with the implementation of Eastern Region Strengthening Scheme VIII (ERSS-VIII). To contain the over voltage issue in sub-stations in Eastern Region and to cater to the increase in demand in Subhasgram area of Kolkata in WB, a comprehensive system strengthening scheme has been evolved which interalia include reactive compensations at 400 kV sub-stations of Muzaffarpur, Rourkela, Indravati and Jeypore of Eastern Region. 2x125 MVAR bus reactors were to be installed at Muzaffarpur, 1x125 MVAR bus reactors were to be installed each at Rourkela,

Indravati and Jeypore. Due to space constraint, 1x125 MVAR reactor at Muzaffarpur and Jeypore were to be installed by replacing 1x63 MVAR bus reactor. The 2 nos. of 63 MVAR bus reactors thus released from Muzaffarpur and Jeypore shall be used as regional spare.

7. As regards Asset II, the petitioner has submitted that at present there are 2x50 MVAR line reactors at Patna end of 257 km long Kahalgaon-Patna 400 kV D/C (quad) line. As the line was subsequently looped-in and looped-out at Barh TPS resulting in 217 km long Kahalgaon-Barh 400 kV D/C line and 93 km long Barh-Patna 400 kV D/C line, the reactors at Patna end of Barh-Patna 400 kV D/C line provides high degree of compensation resulting in resonance like phenomena when one of the D/C line is out of service. On the other hand, existing Patna-Balia 400 kV D/C (quad) line is 195 km long having no line reactors at either end. Thus, it was proposed to shift the 2x50 MVAR line reactors from Patna and to install them as fixed line reactors at Balia end in NR of 400 kV Patna-Balia D/C line.

8. The petitioner has claimed the cost of shifting of Asset-II as tariff in the instant petition and submitted that the tariff for Asset-II (the plant and machinery), covered under Kahalgaon Stage-II Phase-I project would continue to be recovered in the Petition No. 560/TT/2014. It is the case of inter-unit transfer. The tariff of 2x50 MVAR reactor at Patna Sub-station is allowed since from 2007 and the reactors have completed useful life of 10 years. In case the cost of shifting of Asset-II is allowed for 25 years, there will be a mismatch in the recovery of the cost of the FSC over the 25 years.

9. In order to address this issue, the Commission in the past has decided that in case of inter-unit transfer, the assets shall be de-capitalised in the books of accounts of the transmission system where the asset was originally commissioned and capitalised in the books of accounts of the transmission system where it is transferred. In the instant case, the two reactors have been shifted from Patna to Balia. Therefore, the said assets need to be de-capitalised from the books of account for the assets at Patna and capitalised in the books of account for the assets at Balia. The petitioner is directed to carry out the decapitalisation and corresponding capitalisation of the assets within a period of six months and claim the revised tariff of the “two reactors” at Balia at the time of truing-up. In so far as the expenditure involved in inter-unit transfer is concerned, this is in the nature of revenue expenditure and is allowed as a onetime pass through. Since the “two reactors” were dismantled and shifted to Balia and thereafter, commissioned on 11.2.2016, the tariff of the assets shall be determined afresh with reference to the COD as 11.2.2016. Accordingly, the petitioner after carrying out necessary de-capitalisation of the assets at Patna and capitalisation at Balia shall seek fresh determination of the tariff with effect from 11.2.2016. Therefore, the tariff for shifting of Asset-II is not allowed in this order.

10. However, the petitioner is directed to provide complete details of expenses incurred on shifting the instant asset supported by documentary evidence for a prudence check by the Commission. Further, there can be more cases of multiple shifting of such FSC/Reactors etc. from one project to another or even within the same project at some other locations. Therefore, in order to avoid

multiplicity of tariff revisions, the tariff revision in such cases will be allowed once at the end of tariff block under truing-up provisions.

11. Therefore, tariff for Asset-I i.e. 1x500 MVA ICT at 400/220 kV Subhasgram Sub-station along with the associated bays and 2 Nos. of 220 kV equipped line bays at 400 kV Subhasgram Sub-station only is allowed in the instant order.

12. The details of the transmission charges claimed by the petitioner for the instant asset are as under:-

(₹ in lakh)

Particulars	2014-15 (pro-rata)	2015-16	2016-17	2017-18	2018-19
Depreciation	12.25	125.82	141.59	144.28	144.28
Interest on Loan	14.49	137.69	143.82	134.57	122.13
Return on Equity	13.65	140.19	157.76	160.75	160.75
Interest on working capital	1.92	15.14	16.25	16.36	16.28
O & M Expenses	17.91	105.91	109.43	113.06	116.81
Total	**60.22**	**524.75**	**568.86**	**569.02**	**560.25**

13. The interest on working capital claimed by the petitioner for the instant asset are as under:-

(₹ in lakh)

Particulars	2014-15 (pro-rata)	2015-16	2016-17	2017-18	2018-19
Maintenance Spares	15.38	15.89	16.41	16.96	17.52
O & M Expenses	8.54	8.83	9.12	9.42	9.73
Receivables	57.44	87.46	94.81	94.84	93.38
Total	**81.36**	**112.17**	**120.34**	**121.22**	**120.64**
Rate of Interest	13.50%	13.50%	13.50%	13.50%	13.50%
Interest	**1.92**	**15.14**	**16.25**	**16.36**	**16.29**

14. No comments or suggestions have been received from the general public in response to the notices published by the Petitioner under Section 64 of the Electricity Act, 2003. Bihar State Power (Holding) Company Limited (BSP(H)CL), Respondent No.1, has filed its reply vide affidavit dated 21.12.2016. The

petitioner has filed its rejoinder to the reply filed of BSP(H)CL vide affidavit dated 19.1.2017. The issues raised by BSP(H)CL and the clarifications given by the petitioner are dealt in respective paragraphs of the order.

15. BSP(H)CL has submitted that the petitioner has not filed the mandatory certificates required under Appendix-VI of the 2014 Tariff Regulations. BSP(H)CL has further submitted that an agency may be asked to represent the interest of consumer in the instant petition as the representation and participation in the proceedings is integral part of hearing in terms of Section 94(3) of the Electricity Act, 2003. BSP(H)CL has also submitted that the petitioner has not furnished the Transmission Service Agreement (TSA) as required under Regulation 3(63) of the 2014 Tariff Regulations.

16. In response, the petitioner in its rejoinder has submitted that the CEA certificate has been filed. As regards nominating an agency to represent the case on behalf of the beneficiaries, the petitioner has submitted that they are providing copy of the petitions to all the respondents and publishing the tariff notices in newspaper to invite attention of all the stakeholders and opportunity of hearing is also granted to all the stakeholders. As such, there is no need to appoint any agency. As regards the TSA, the petitioner has submitted that repeatedly BSP(H)CL was asked to sign the TSA, but BSP(H)CL has not signed it. In the absence of the same, the Model TSA holds good.

Date of commercial operation

17. The petitioner has submitted that the instant asset consists of 2 no. of 220 kV line bays for downstream network that was charged and declared under commercial operation on 29.1.2015 at "no load" condition. The petitioner has

submitted that the corresponding downstream network of WBSETCL (220 kV D/C Subhasgram {PG}-Sirkhol {WB}) is yet to be commissioned. The petitioner has submitted that the system requirement for system strengthening at Subhasgram (PG) Sub-station interalia with a provision of additional 2 no. of 220 kV line bays at Subhasgram to enable WBSETCL to construct a 220 kV D/C line from Subhasgram (PG) to 220 kV Sirkhol Sub-station was discussed and agreed in the Standing committee Meeting of ER held on 8.2.2012 at NRPC New Delhi and the same was further discussed and agreed in the 21st TCC and ERPC Meeting held on 20th and 21st April, 2012 at Rajarhat, Kolkata. Accordingly, the petitioner undertook the implementation of 2 no. line bays at Subhasgram (PG) Sub-station for termination of 220 kV D/C line from Sirkhol (Baruipur) Sub-station under the scope of WBSETCL. The petitioner has submitted that it continuously pursued with the WBSETCL for timely commissioning of downstream network matching with the Subhasgram (PG) Sub-station. During discussions, it was informed by WBSETCL that they have already completed detailed route survey for the proposed 220 kV D/C line. However, as the land for Sirkhol 220 kV Sub-station is yet to be handed over to WBSETCL, they could not take up the project. As such, it was decided that WBSETCL will proceed with the construction of Subhasgram (PG) to Laxmikantapur 220 kV D/C line and Sirkhol 220 kV Sub-station would be established by LILO of this line whenever the same is materialized.

18. The petitioner also submitted that consequent to finalization of the planning of the ISTS and downstream network, the downstream networks of STUs are to be commissioned matching with ISTS Sub-station/network. However, at the time of implementation of the project, even after realizing that

the downstream network is getting delayed, it was not possible to delay the completion/commissioning of the ISTS/Upstream networks beyond a certain period due to financial and contractual reasons and obligations. The petitioner has submitted that the 200 kV bays were not utilized due to delay in COD of the downstream network under the scope of STU, which were beyond the control of the petitioner. Therefore, the petitioner has sought the approval of the COD of the 220 kV line bays under the second proviso to Regulation 4(3) of the 2014 Tariff Regulations.

19. The petitioner was directed to submit the certificate under Regulation 43 of CEA (Measures related to safety & electric supply) and clarify whether the ICT is in operation since its COD. In response, the petitioner, vide affidavit dated 6.1.2017, has submitted that 400/220 kV Subhasgram (PG) is an existing sub-station. The existing ICTs having capacity of 2x315 MVA were presently getting loaded at around 75% of its rating and has been further increasing due to load growth around Subhasgram area. The existing 315 MVA ICTs, covered under ERSS, at 400/220 kV Subhasgram Sub-station (PG) were put into commercial operation on 1.3.2007 and 1.4.2007 and are covered in Petition No. 485/TT/2014. Due to load constraint, the current project was planned for augmentation of 400/220 kV transformer capacity from 2x315 MVA to (2x315+1x500) MVA at 400/220 kV existing Subhasgram Sub-station. The petitioner has further submitted that the instant ICT was thus commissioned in already existing sub-station and the same is in operation from its COD. The same is also certified by RLDC charging certificate. The instant ICT is independent of the 2 no. of 220 kV line bays and the non-charging of the 2 no. of 220 kV line bays has no bearing on the power flow and commissioning of 315 MVA ICT at

Subhasgram which had been duly declared under commercial operation w.e.f. 21.01.2015.

20. BSP(H)CL has submitted that the petitioner has sought the approval of COD of the two line bays at 400 kV Subhasgram Sub-station under the second proviso of Regulation 4(3) of the 2014 Tariff Regulations as the petitioner was not able to put the two line bays into commercial operation because of the non-commissioning of the downstream assets by WBSETCL. However, the petitioner has not filed the CEA certificate and the certificate signed by CMD of the petitioner regarding the COD of the two line bays. In response, the petitioner has submitted, vide affidavit dated 19.1.2017, that Regulation 4(1) of the 2014 Tariff Regulations pertains to generating unit or block of the thermal generating station and COD letter w.r.t. subject assets, as per Regulation 4(3) of the 2014 Tariff Regulations, has been filed.

21. In response, the petitioner, vide affidavit dated 6.2.2017, has submitted that the downstream connectivity has been established at 400/220 kV Subhasgram Sub-station by means of connectivity of Subhasgram (PGCIL) to Laxmikantapur, Jeerat, Newtown and Subhasgram (WBSETCL). The petitioner has also reiterated the submissions made in affidavit dated 6.1.2017 with regard to the ICT at Subhasgram.

22. We have considered the submissions made by the petitioner and BSP(H)CL. The petitioner has claimed the COD of the 500 MVA ICT at Subhasgram Sub-station alongwith associated bays as 29.1.2015. It is observed that the ICT was commissioned in existing sub-station and the same is in operation from its COD and the same is supported by the RLDC charging

certificate dated 19.2.2015. The 220 kV Bus is already connected to WBSETCL system and hence power is flowing through this ICT from the date of its commercial operation. Accordingly, the COD of the ICT at Subhasgram Sub-station is approved as 29.1.2015. As regards the two line bays, the petitioner has submitted that the bays were charged and declared the commercial operation on 29.1.2015 at "no load" condition and sought the approval of COD under the second proviso of Regulation 4(3) of the 2014 Tariff Regulations as the 220 kV downstream system i.e. 220 kV D/C Subhasgram-Sirkhol (WB) under the scope of WBSETCL was not commissioned. The 220 kV bays were not utilized due to delay in completion of the downstream network under the scope of WBSETCL and the petitioner has not entered into any Indemnification Agreement with WBSETCL. Therefore, we are not inclined to grant COD of the two 220 kV line bays under the second proviso to Regulation 4(3) of the 2014 Tariff Regulations and the petitioner is directed to file a fresh petition matching with the downstream system of WBSETCL. Accordingly, tariff only for the ICT at Subhasgram Sub-station is allowed in this order from the COD, i.e. 29.1.2015

Capital cost

23. Clause (1) and (2) of Regulation 9 of the 2014 Tariff Regulations provides as follows:-

> "(1) 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."
>
> (2) The Capital Cost of a new project shall include the following:
>
> (a) the expenditure incurred or projected to be incurred up to the date of commercial operation of the project;
>
> (b) Interest during construction and financing charges, on the loans (i) being equal to 70% of the funds deployed, in the event of the actual equity in excess of 30% of the funds deployed, by treating the excess equity as normative loan, or (ii) being

equal to the actual amount of loan in the event of the actual equity less than 30% of the funds deployed;

(c) Increase in cost in contract packages as approved by the Commission;

(d) Interest during construction and incidental expenditure during construction as computed in accordance with Regulation 11 of these regulations;

(e) capitalised Initial spares subject to the ceiling rates specified in Regulation 13 of these regulations;

(f) expenditure on account of additional capitalization and de-capitalisation determined in accordance with Regulation 14 of these regulations;

(g) adjustment of revenue due to sale of infirm power in excess of fuel cost prior to the COD as specified under Regulation 18 of these regulations; and

(h) adjustment of any revenue earned by the transmission licensee by using the assets before COD.

24. The petitioner, vide affidavit dated 6.2.2017, has submitted Auditor's Certificate dated 31.1.2017 for expenditure incurred/projected to be incurred alongwith tariff forms in respect of the ICT at Subhasgram Sub-station as on COD and details of additional capitalization incurred/projected to be incurred from COD to 31.3.2019. The details are as under:-

(₹ in lakh)

Particulars	Land	Buildings	Transmission Line	Sub-station	PLCC	Total
Expenditure up to 31.3.2014	-	-	-	435.50	-	435.50
Expenditure from 1.4.2014 to 28.1.2015	-	-	-	84.75	-	84.75
Expenditure from 29.1.2015 to 31.3.2015	-	-	-	1614.78	-	1614.78
Expenditure from 1.4.2015 to 31.3.2016	-	-	-	495.86	-	495.86
Expenditure from 1.4.2016 to 31.12.2016	-	-	-	0.00	-	0.00
Estimated Expenditure from 1.1.2017 to 31.3.2017	-	-	-	101.60	-	101.60
TOTAL	**-**	**-**	**-**	**2732.49**	**-**	**2732.49**

* Capital Cost is verified from the books of accounts of PGCIL by the Auditor, up to 31.12.2016.
* The balance projected expenditure for the period 1.1.2017 to 31.3.2017 is certified by the auditor based on the statement furnished by the management.

25. The petitioner has submitted the details of the approved apportioned capital cost as on the date of COD and estimated additional capital expenditure incurred and projected to be incurred for the instant transmission asset vide affidavit dated 5.10.2016 and Auditors' certificates dated 11.5.2016 and 12.7.2016. The details submitted by the petitioner are as under:-

(₹ in lakh)

FR approved apportioned cost	Cost as per RCE	Expenditure upto COD	Projected expenditure during			Estimated completion cost
			COD to 31.3.2015	2015-16	2016 -17	
2085.74	3544.30	637.74	1979.46	607.84	124.54	3349.58

Cost Over-run

26. The petitioner has claimed completion cost of ₹2732.49 lakh, as against the total approved apportioned cost of ₹2891.33 lakh as per RCE. As such, there is no cost over-run when compared to the RCE apportioned cost. BSP(H)CL has submitted that there is cost over-run when compared to the FR cost and the petitioner has not submitted proper justification for the cost variation. The petitioner was directed to give the reasons for cost variation.

27. The petitioner vide affidavit dated 20.2.2017 has submitted the reasons for cost variation and they are as follows:-

a) The cost variation is mainly due to variation in award cost received in competitive bidding compared to initial estimates as well as civil works executed as per site conditions. For procurement, open competitive bidding route is followed and by providing equal opportunity to all eligible firms, lowest possible market prices for required product/services is obtained and contracts are awarded on the basis of lowest evaluated eligible bidder. The best competitive bid prices against tenders may happen to be lower or higher than the cost estimate depending upon prevailing market conditions.

b) Price Variation (PV):

The price variation from the FR (i.e., April 2013) upto November 2014 (i.e., the period of major supplies) is attributable to inflationary trends prevalent during the execution of project and also market forces prevailing at the time of bidding process of various packages. The trend of variation in indices of various major raw materials like HG Zinc, EC Grade Al, Copper, Insulating material, Resin, Clay, Cement and lime etc. The petitioner has submitted that price variation can be bifurcated into two parts i.e., one from FR to Award of various Contract and other from Contract to final execution. With regard to price variation from FR to award, it is submitted that the contracts for various packages under this project were awarded to the lowest evaluated and responsive bidder, on the basis of Open Competitive Bidding. The award prices represent the lowest prices available at the time of bidding of various packages. The price variation from award to final execution is mainly on the basis of PV based on indices as per provision of respective contracts.

As per its policy, the bid prices are invited for the complete scope of work on overall basis. The break-up of these prices are for the purpose of on-account payment only. The comparison of prices for a particular package is also done with its cost estimate on overall basis. The provision regarding this policy has been included in the 'Works and Procurement Policy and Procedure', Vol.-I of POWERGRID (para B4.11.3.7) which, inter-alia, stipulates that the qualified bidder, whose bid is determined as the lowest evaluated, techno-commercially responsive and, who is considered to have the capacity and capability to perform the Contract based on the assessment, if carried out, will be recommended for award and the recommended price shall be compared with the approved cost estimate. The comparison can be done only between total recommended price and the total cost estimate. Price of individual items will not be compared for the above purpose. Further, the procurement framework of the petitioner, which adopts best procurement practices, has been assessed by the World Bank. Similar items may not always have the same rate in different contracts awarded during the same period or even within the same contract. The differences of rates may be because of various market forces and the pricing strategies followed by bidder(s) to decide the spread of their total prices over different items. Such pricing strategies may be different in case of different bidders and different packages. Further, a more realistic approach for analyzing the prices would be to examine the prices for complete FR cost vis-à-vis the actual completed cost of the project instead of analyzing the same on price component-wise basis as the procurement by the petitioner is done on the overall basis.

c) Variation in Quantities

The cost variation in foundations for structures is mainly attributable to the variation in quantity of excavation, reinforcement steel, cement and concrete due to actual site conditions. Increase in cost of switchgear due to increase of 73 nos. Bus Post Insulator, which were not considered in the FR.

28. We have considered the submission of the petitioner and respondent. As we have observed in similar other petitions, the cost estimates of the petitioner

are not realistic in case of instant assets. We are of the view that the petitioner should adopt a prudent procedure to make cost estimates of different elements of the transmission projects more realistic. The estimated completion cost of the instant asset is ₹2732.49 lakh which is within revised approved apportioned cost of ₹2891.33 lakh. Thus, there is no cost over-run in case of the instant assets when compared to the revised approved apportioned cost of RCE. Accordingly, the capital cost claimed by the petitioner is allowed and considered for the purpose of computation of tariff.

(₹ in lakh)

Approved apportioned		**Cost on COD**
Cost as per FR	**Cost as per RCE**	
2085.74	2891.33	520.25

Time Over-run

29. As per the Investment Approval dated 27.8.2013, the commissioning schedule of the project was 20 months from the date of Investment Approval. Accordingly, the assets were to be declared under commercial operation by 27.4.2015 against which the instant assets are commissioned from 29.1.2015. Thus, there is no time over-run in case of the instant assets.

Interest During Construction (IDC)

30. The petitioner, vide auditor's certificates dated 31.1.2017, has claimed the IDC of ₹6.43 lakh on COD. The petitioner has further submitted a statement showing the details of IDC discharged upto COD as ₹25.06 lakh.

31. The petitioner has also furnished the details of the loans availed, viz. date of drawl, rate of interest, interest payment dates etc. which are as follows:-

Name of the Loan/ Bond	Date of disbursement	Loan amount (₹ lakh)	Rate of interest
SBI 10000-Drawn-2400	1.5.2014	364.18	10.25%
Total	-	**364.18**	-

32. The loan amount on COD shown in the above statement is in conformity with Forms 6, 12B and 9C. The petitioner was directed to furnish documents in support of the interest rate for SBI loan for 2014-15. The petitioner, vide affidavit dated 6.1.2017, has furnished the letter from the bank regarding the payment of interest for the period 1.1.2015 to 31.1.2015. As per the letter, the rate of interest for the period 1.1.2015 to COD is though confirmed, the petitioner has not furnished any document in support of the ROI claimed for the period prior to 1.1.2015 (i.e. from drawl date, i.e.1.5.2014 to 31.12.2014). Similarly, it is observed that the petitioner has claimed ₹6.43 lakh of IDC in cash basis as on COD against ₹25.06 lakh due till the last interest payment date of 1.1.2015. The petitioner has not furnished reasons pertaining to this difference in IDC due for payment and IDC paid till COD. The petitioner has also not furnished details of year wise discharge of the undischarged IDC. As such, the IDC of ₹6.43 lakh on cash basis has been allowed on COD, based on the Auditors certificate dated 31.1.2017 and the statement furnished vide affidavit dated 6.2.2017.

(₹ in lakh)

Name of the Loan /Bond	Date of Disburse-ment	Loan Amount	Interest Rate	Interest calculated up to COD	Interest due upto annual interest payment date (1.1.2015) before COD	Interest claimed on COD on cash basis	Interest on cash basis allowed as on COD
SBI 10000-Drawn -2400	1.5.2014	364.18	10.25%	27.92	25.06	6.43	**6.43**

33. The IDC allowed as above would be reviewed at the time of truing-up. The petitioner is directed to furnish the documentary evidence with respect to the rate of interest from drawl of the loan till COD and a reconciliation of the IDC calculated till annual payment date/COD with the IDC discharged till COD and also the details of the actual year-wise discharge of IDC after COD.

Incidental Expenditure During Construction (IEDC)

34. The petitioner, vide Auditor's Certificates dated 6.2.2017, has claimed IEDC of ₹5.27 lakh as on COD. It is observed that the IEDC claimed by the petitioner is less than the allowable limit of IEDC indicated in the RCE which is ₹78 lakh (apportioned). Accordingly, the same is being considered while calculating capital cost as on COD.

Treatment of Initial Spares

35. Regulation 13 of the 2014 Tariff Regulations specifies ceiling norms for capitalization of initial spares in respect of transmission system as under:-

> **"13. Initial Spares**
>
> Initial spares shall be capitalised as a percentage of the Plant and Machinery cost upto cut-off date, subject to following ceiling norms:
> (d) Transmission system
>
> (i) Transmission line - 1.00%
> (ii) Transmission Sub-station (Green Field) - 4.00%
> (iii) Transmission Sub-station (Brown Field) - 6.00%
> (iv) Series Compensation devices and HVDC Station - 4.00%
> (v) Gas Insulated Sub-station (GIS)-5.00%
> (vi) Communication system-3.5%
>
> Provided that:
> (i) where the benchmark norms for initial spares have been published as part of the benchmark norms for capital cost by the Commission, such norms shall apply to the exclusion of the norms specified above:
>
> (ii) where the generating station has any transmission equipment forming part of the generation project, the ceiling norm for initial spares for such equipments

shall be as per the ceiling norms specified for transmission system under these regulations:

(iii) Once the transmission project is commissioned, the cost of initial spares shall be restricted on the basis of plant and machinery cost corresponding to the transmission project at the time of truing up:

(iv) for the purpose of computing the cost of initial spares, plant and machinery cost shall be considered as project cost as on cut-off date excluding IDC, IEDC, Land Cost and cost of civil works. The transmission licensee shall submit the break up of head wise IDC & IEDC in its tariff application."

36. The petitioner, vide auditor's certificate dated 31.1.2017, has claimed initial spares amounting to ₹68.55 lakh. The allowable initial spares and excess initial spares, if any, claimed in respect of the asset has been calculated as follows:-

(₹ in lakh)

Plant and Machinery cost excl. IDC, IEDC, land cost and cost of civil works)	Initial Spares Claimed against Capital Cost Claimed as on Cut-off date	Ceiling Limit as per the 2014 Tariff Regulations	Initial Spares works out	Excess Initial Spares claimed
2720.79	68.55	6.00%	163.55	**0.00**

37. The initial spares claimed by the petitioner are within the limits specified in Regulation 13 of the 2014 Tariff Regulations and therefore the same is being allowed.

<u>Additional capital expenditure</u>

38. Clause (1) of Regulation 14 of the 2014 Tariff Regulations provides as under:-

"(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) Undischarged 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; 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 recognized to be payable at a future date and the works deferred for execution shall be submitted along with the application for determination of tariff."

39. Clause (13) of Regulation 3 of the 2014 Tariff Regulations defines "cut-off" date as under:-

"cut-off date" means 31st March of the year closing after two years of the year of commercial operation of whole or part of the project, and in case the whole or part of the project is declared under commercial operation in the last quarter of the year, the cut-off date shall be 31st March of the year closing after three years of the year of commercial operation".

40. Accordingly, the cut-off date in case of the instant asset is 31.3.2018.

41. The petitioner was directed, vide RoP for hearing dated 17.11.2016, to submit the additional capital expenditure on account of balance and retention payment, nature/works against which the payment is withheld. In response, the petitioner, vide affidavit dated 6.1.2017, has submitted the following details of Balance and Retention payments:-

(₹ in lakh)

Name of Contractor	**Package**	**Amount**
Siemens	Sub-Station Supply	2071.30
	Sub-Station Erection	640.54

42. The petitioner vide affidavit dated 6.2.2017 and Auditors' certificate dated 31.1.2017 has submitted the additional capitalization incurred/estimated in case

of instant assets upto COD and projected to be incurred during 2014-15, 2015-16 and 2016-17 is as under:-

(₹ in lakh)

Cost as per FR (apportioned)	**Cost as per RCE (apportioned)**	**Add Cap COD to 31.3.2015**	**Add Cap 1.4.2015 to 31.3.2016**	**Est. Add Cap 1.4.2016 to 31.3.2017**	**Total Estimated Cost**
2085.74	2891.33	1614.78	495.86	101.60	2732.49

43. The petitioner has submitted that the additional capitalization incurred/projected to be incurred is on account of Balance/Retention Payments. The additional capitalisation is on account of Balance and Retention payments and is within cut-off date and is covered under Regulation 14(1)(i) of the 2014 Tariff Regulations. Therefore, the additional capital expenditure claimed by the petitioner is allowed.

44. Accordingly, the capital cost considered for the purpose of tariff in the present petition, after adjustment of IDC on cash basis, scrutiny of IEDC and IDC on account of undischarged liability and scrutiny of initial spares (excess claim and un-discharged liability) are shown below:-

(₹ in lakh)

Capital Cost allowable as on COD (29.1.2015)	**520.25**
Add: Add-Cap During 2014-15 (COD to 31.3.2015)	1614.78
Capital Cost as on 31.3.2015	**2135.03**
Add: Add-Cap During 2015-16	495.86
Capital Cost as on 31.3.2016	**2630.89**
Add: Add-Cap During 2016-17	101.60
Capital Cost as on 31.3.2017	**2732.49**
Total completed cost	**2732.49**

Debt-Equity Ratio

45. Clause 1 and 5 of Regulation 19 of the 2014 Tariff Regulations specifies as follows:-

"(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."

"(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."

46. The petitioner has claimed debt: equity ratio of 70:30 as on the date of commercial operation. Debt: equity ratio of 70:30 is considered as provided in Regulation 19 of the 2014 Tariff Regulations. The details of debt: equity ratio in respect of the instant assets as on the date of commercial operation and as on 31.3.2019 are as under:-

(₹ in lakh)

Particulars	**Capital cost as on tariff COD**		**Capital cost as on 31.3.2019**	
	Amount	**%**	**Amount**	**%**
Debt	364.18	70.00	1912.74	70.00
Equity	156.08	30.00	819.75	30.00
Total	**520.25**	**100.00**	**2732.49**	**100.00**

Return on Equity

47. Clause (1) and (2) of Regulation 24 and Clause (2) of Regulation 25 of the 2014 Tariff Regulations specify 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) additionalRoE shall not be admissible for transmission line having length of less than 50 kilometers.

“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."

48. The petitioner has submitted that it is liable to pay income tax at MAT rate, the RoE has been calculated @ 19.610% after grossing up the RoE with MAT rate of 20.961% as provided under Regulation 25(2)(i) of the 2014 Tariff Regulations. As per Regulation 25(3) of the 2014 Tariff Regulations, the grossed up rate of RoE at the end of the financial year shall be trued up 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 IT authorities pertaining to the 2014-19 period on actual gross income of any financial year. Any under-recovery or over-recovery of grossed up ROE after truing up shall be recovered or refunded to the beneficiaries on year to year basis. The petitioner has further submitted that adjustment due to any additional tax demand including interest duly adjusted for any refund of the tax including interest received from IT authorities shall be recoverable/adjustable after completion of income tax assessment of the financial year.

49. We have considered the submissions made by the petitioner. Regulation 24 read with Regulation 25 of the 2014 Tariff Regulations provides for grossing up of return on equity with the effective tax rate for the purpose of return on equity. It further provides that in case the generating company or transmission licensee is paying Minimum Alternative Tax (MAT), the MAT rate including surcharge and cess will be considered for the grossing up of return on equity.

Accordingly, the MAT rate applicable during 2013-14 has been considered for the purpose of return on equity, which shall be trued up with actual tax rate in accordance with Regulation 25 (3) of the 2014 Tariff Regulations. Accordingly, the RoE allowed is as under:-

(₹ in lakh)

Particulars	**2014-15 (pro-rata)**	**2015-16**	**2016-17**	**2017-18**	**2018-19**
Opening Equity	156.08	640.51	789.27	819.75	819.75
Addition due to Additional Capitalisation	484.43	148.76	30.48	0.00	0.00
Closing Equity	640.51	789.27	819.75	819.75	819.75
Average Equity	398.29	714.89	804.51	819.75	819.75
Return on Equity (Base Rate)	15.50%	15.50%	15.50%	15.50%	15.50%
Tax rate for the year 2013-14 (MAT)	20.961%	20.961%	20.961%	20.961%	20.961%
Rate of Return on Equity (Pre-tax)	19.610%	19.610%	19.610%	19.610%	19.610%
Return on Equity (Pre-tax)	**13.27**	**140.19**	**157.76**	**160.75**	**160.75**

<u>Interest on loan (IoL)</u>

50. Regulation 26 of the 2014 Tariff Regulations are provides as under:-

"(1) The loans arrived at in the manner indicated in regulation 19 shall be considered as gross normative loan for calculation of interest on loan

(2) The normative loan outstanding as on 1.4.2014 shall be worked out by deducting the cumulative repayment as admitted by the Commission up to 31.3.2014 from the gross normative loan.

(3) The repayment for each of the year of the tariff period 2014-19 shall be deemed to be equal to the depreciation allowed for the corresponding year/period. In case of decapitalization of assets, the repayment shall be adjusted by taking into account cumulative repayment on a pro rata basis and the adjustment should not exceed cumulative depreciation recovered upto the date of decapitalisation 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."

51. IoL has been worked for the instant assets as hereinafter:-

(i) Gross amount of loan, repayment of instalments and rate of interest and weighted average rate of interest on actual average loan have been considered as per the petition;

(ii) The repayment for the tariff period 2014-19 has been considered to be equal to the depreciation allowed for that period; and

(iii) Weighted average rate of interest on actual average loan worked out as per (i) above is applied on the notional average loan during the year to arrive at the interest on loan.

52. The petitioner has submitted that it be allowed to bill and adjust impact on IoL due to change in interest due to floating rate of interest applicable, if any, from the respondents. The interest on loan has been calculated on the basis of rate prevailing as on the tariff date of commercial operation. Any change in rate of interest subsequent to the tariff date of commercial operation will be considered at the time of truing- up.

53. Detailed calculation of the weighted average rate of interest has been given in **Annexure** to this order.

54. Based on above, details of IoL calculated are as follows:-

(₹ in lakh)

Particulars	2014-15 (pro-rata)	2015-16	2016-17	2017-18	2018-19
Gross Normative Loan	364.18	1494.52	1841.62	1912.74	1912.74
Cumulative Repayment upto Previous Year	0.00	11.91	137.73	279.32	423.60
Net Loan-Opening	364.18	1482.61	1703.90	1633.42	1489.15
Addition due to Additional Capitalisation	1130.35	347.10	71.12	0.00	0.00
Repayment during the year	11.91	125.82	141.59	144.28	144.28
Net Loan-Closing	1482.61	1703.90	1633.42	1489.15	1344.87
Average Loan	923.39	1593.25	1668.66	1561.28	1417.01
Weighted Average Rate of Interest on Loan	8.98%	8.64%	8.62%	8.62%	8.62%
Interest	**14.09**	**137.72**	**143.85**	**134.60**	**122.16**

Depreciation

55. Regulation 27 of the 2014 Tariff Regulations with regard to depreciation specifies as below:-

> **"27. Depreciation:**
>
> (1) Depreciation shall be computed from the date of commercial operation of a generating station or unit thereof or a transmission system including communication system or element thereof. In case of the tariff of all the units of a generating station or all elements of a transmission system including communication system for which a single tariff needs to be determined, the depreciation shall be computed from the effective date of commercial operation of the generating station or the transmission system taking into consideration the depreciation of individual units or elements thereof.
>
> Provided that effective date of commercial operation shall be worked out by considering the actual date of commercial operation and installed capacity of all the units of the generating station or capital cost of all elements of the transmission system, for which single tariff needs to be determined.
>
> (2) The value base for the purpose of depreciation shall be the capital cost of the asset admitted by the Commission. In case of multiple units of a generating station or multiple elements of transmission system, weighted average life for the generating station of the transmission system shall be applied. Depreciation shall be chargeable from the first year of commercial operation. In case of commercial operation of the asset for part of the year, depreciation shall be charged on pro rata basis.
>
> (3) The salvage value of the asset shall be considered as 10% and depreciation shall be allowed up to maximum of 90% of the capital cost of the asset:
>
> Provided that in case of hydro generating station, the salvage value shall be as provided in the agreement signed by the developers with the State Government for development of the Plant:

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

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

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

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

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

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

56. The petitioner has claimed actual depreciation as a component of annual fixed charges. Depreciation has been allowed in accordance with Regulation 27 of the 2014 Tariff Regulations. The instant assets were put under commercial operation during 2014-15. Accordingly, it will complete 12 years after 2018-19. As such, depreciation has been calculated annually based on Straight Line Method at the rates specified in Appendix-II to the 2014 Tariff Regulations.

57. Details of the depreciation allowed for the instant assets are as under:-

(₹ in lakh)

Particulars	**2014-15 (pro-rata)**	**2015-16**	**2016-17**	**2017-18**	**2018-19**
Opening Gross Block	520.25	2135.03	2630.89	2732.49	2732.49
Additional Capital expenditure	1614.78	495.86	101.60	0.00	0.00
Closing Gross Block	2135.03	2630.89	2732.49	2732.49	2732.49
Average Gross Block	1327.64	2382.96	2681.69	2732.49	2732.49
Rate of Depreciation	5.28%	5.28%	5.28%	5.28%	5.28%
Depreciable Value	1194.88	2144.66	2413.52	2459.24	2459.24

Remaining Depreciable Value	1194.88	2132.76	2275.79	2179.92	2035.64
Depreciation	**11.91**	**125.82**	**141.59**	**144.28**	**144.28**

Operation & Maintenance Expenses(O & M Expenses)

58. The O&M Expenses claimed by the petitioner for the instant assets for 2014-19 period are as follows:-

(₹ in lakh)

2014-15	**2015-16**	**2016-17**	**2017-18**	**2018-19**
17.91	105.91	109.43	111.03	116.81

59. The O&M Expenses claimed by the petitioner for the instant assets are as per Regulation 29(4)(a) of the 2014 Tariff Regulations. Accordingly, the petitioner's claim is allowed and they are as under:-

(₹ in lakh)

2014-15	**2015-16**	**2016-17**	**2017-18**	**2018-19**
17.41	105.91	109.43	113.06	116.81
17.41	**105.91**	**109.43**	**113.06**	**116.81**

60. The petitioner has submitted that O&M Expenses for the tariff period 2014-19 had been arrived at on the basis of normalized actual O&M Expenses during the period 2008-09 to 2012-13. The petitioner has further submitted that the wage revision of the employees is due i.e. 1.1.2017 and actual impact of wage hike effective from a future date has not been factored in fixation of the normative O&M rates specified for the tariff period 2014-19. The petitioner has submitted that it would approach the Commission for suitable revision in norms for O&M Expenses for claiming the impact of wage hike during 2014-19, if any.

61. The O&M Expenses have been worked out as per the norms of O&M Expenses specified in the 2014 Tariff Regulations. As regards impact of wage

revision, any application filed by the Petitioner in this regard will be dealt with in accordance with the appropriate provisions of the 2014 Tariff Regulations.

Interest on Working Capital (IWC)

62. Clause 1(c) of Regulation 28 and Clause 5 of Regulation 3 of the 2014 Tariff Regulations specify as follows:-

> "**28. Interest on Working Capital**
>
> (1) The working capital shall cover:
>
> (c) Hydro generating station including pumped storage hydro electric generating station and transmission system including communication system:
>
> (i) Receivables equivalent to two months of fixed cost;
>
> (ii) Maintenance spares @ 15% of operation and maintenance expenses specified in regulation 29; and
>
> (iii) Operation and maintenance expenses for one month"
>
> (3) Rate of interest on working capital shall be on normative basis and shall be considered as the bank rate as on 1.4.2014 or as on 1st April of the year during the tariff period 2014-15 to 2018-19 in which the generating station or a unit thereof or the transmission system including communication system or element thereof, as the case may be, is declared under commercial operation, whichever is later.
>
> "(5) 'Bank Rate' means the base rate of interest as specified by the State Bank of India from time to time or any replacement thereof for the time being in effect plus 350 basis points;"

63. The petitioner is entitled to claim interest on working capital as per Regulation 28 of the 2014 Tariff Regulations. The components of the working capital and the petitioner's entitlement to interest thereon are discussed hereunder:-

(i) Receivables

Receivables as a component of working capital will be equivalent to two months fixed cost. The petitioner has claimed the receivables on the basis of 2 months' annual transmission charges. In the tariff being allowed, receivables have been worked out on the basis of 2 months' transmission charges.

(ii) Maintenance spares

Regulation 28 of the 2014 Tariff Regulations provides for maintenance spares @ 15% per annum of the O&M expenses. The value of maintenance spares has accordingly been worked out.

(iii) O & M expenses

Operation and maintenance expenses have been considered for one month as a component of working capital. The petitioner has claimed O&M expenses for 1 month of the respective year as claimed in the petition. This has been considered in the working capital.

(iv) Rate of interest on working capital

As per Proviso 3 of Regulation 28 of the 2014 Tariff Regulations SBI Base Rate plus 350 bps as on 1.4.2014 (i.e.13.50%) has been considered as the rate of interest on working capital for all the assets.

64. The interest on working capital as determined is shown in the table given below:-

(₹ in lakh)

Particulars	2014-15 (pro-rata)	2015-16	2016-17	2017-18	2018-19
Maintenance Spares	15.37	15.89	16.41	16.96	17.52
O & M expenses	8.54	8.83	9.12	9.42	9.73
Receivables	9.57	87.46	94.81	94.84	93.38
Total	**33.49**	**112.18**	**120.35**	**121.22**	**120.64**
Rate of interest	13.50%	13.50%	13.50%	13.50%	13.50%
Interest	**0.77**	**15.14**	**16.25**	**16.36**	**16.29**

Transmission charges

65. The transmission charges being allowed for the instant assets are summarized hereunder:-

(₹ in lakh)

Particulars	2014-15 (pro-rata)	2015-16	2016-17	2017-18	2018-19
Depreciation	11.91	125.82	141.59	144.28	144.28
Interest on Loan	14.09	137.72	143.85	134.60	122.16
Return on equity	13.27	140.19	157.76	160.75	160.75
Interest on Working Capital	0.77	15.14	16.25	16.36	16.29
O & M Expenses	17.41	105.91	109.43	113.06	116.81
Total	**57.44**	**524.78**	**568.89**	**569.05**	**560.28**

Filing Fee and Publication Expenses

66. The petitioner has sought reimbursement of fee paid by it for filing the petition and publication expenses, in terms of Regulation 52 of the 2014 Tariff Regulations. BSP(H)CL has submitted that filing fee and other expenses may not be allowed. The petitioner shall be entitled for reimbursement of the filing fees and publication expenses in connection with the present petition, directly from the beneficiaries on pro-rata basis in accordance with clause (1) of Regulation 52 of the 2014 Tariff Regulations.

Licence Fee and RLDC Fees and Charges

67. The petitioner has requested to allow the petitioner to bill and recover License fee and RLDC fees and charges, separately from the respondents. The petitioner shall be entitled for reimbursement of licence fee and RLDC fees and charges in accordance with Clause (2)(b) and (2)(a) respectively of Regulation 52 of the 2014 Tariff Regulations.

Sharing of Transmission Charges

68. The billing, collection and disbursement of the transmission charges approved shall be governed by the provisions of Central Electricity Regulatory Commission (Sharing of Inter-State Transmission Charges and Losses) Regulations, 2010, as amended from time to time.

69. This order disposes of Petition No. 206/TT/2016.

sd/-	sd/-	sd/-	sd/-
(M.K. Iyer)	**(A.S. Bakshi)**	**(A.K. Singhal)**	**(Gireesh B. Pradhan)**
Member	**Member**	**Member**	**Chairperson**

Annexure

(₹ in lakh)

	CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN					
	Details of Loan	**2014-15**	**2015-16**	**2016-17**	**2017-18**	**2018-19**
1	**SBI COD Loan**					
	Gross loan opening	364.18	**364.18**	**364.18**	**364.18**	**364.18**
	Cumulative Repayment upto COD/previous year	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
	Net Loan-Opening	364.18	364.18	364.18	364.18	364.18
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	0.00	0.00
	Net Loan-Closing	364.18	364.18	364.18	364.18	364.18
	Average Loan	364.18	364.18	364.18	364.18	364.18
	Rate of Interest	10.25%	10.25%	10.25%	10.25%	10.25%
	Interest	37.33	37.33	37.33	37.33	37.33
2	**Bond (XLVIII) (Add-cap)-1**					
	Gross loan opening	**0.00**	**309.42**	**309.42**	**309.42**	**309.42**
	Cumulative Repayment upto COD/previous year	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
	Net Loan-Opening	0.00	309.42	309.42	309.42	309.42
	Additions during the year	309.42	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	0.00	0.00
	Net Loan-Closing	309.42	309.42	309.42	309.42	309.42
	Average Loan	154.71	309.42	309.42	309.42	309.42
	Rate of Interest	8.20%	8.20%	8.20%	8.20%	8.20%
	Interest	12.69	25.37	25.37	25.37	25.37
3	**Bond (XLIX) (Add-cap)-2**					
	Gross loan opening	**0.00**	**820.92**	**820.92**	**820.92**	**820.92**
	Cumulative Repayment upto COD/previous year	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
	Net Loan-Opening	0.00	820.92	820.92	820.92	820.92
	Additions during the year	820.92	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	0.00	0.00
	Net Loan-Closing	820.92	820.92	820.92	820.92	820.92
	Average Loan	410.46	820.92	820.92	820.92	820.92
	Rate of Interest	8.15%	8.15%	8.15%	8.15%	8.15%
	Interest	33.45	66.90	66.90	66.90	66.90
4	**Bond (LI) (Add-cap)-3**					
	Gross loan opening	**0.00**	**0.00**	**347.10**	**347.10**	**347.10**
	Cumulative Repayment upto COD/previous year	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
	Net Loan-Opening	0.00	0.00	347.10	347.10	347.10
	Additions during the year	0.00	347.10	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	0.00	0.00
	Net Loan-Closing	0.00	347.10	347.10	347.10	347.10
	Average Loan	0.00	173.55	347.10	347.10	347.10
	Rate of Interest	8.40%	8.40%	8.40%	8.40%	8.40%
	Interest	0.00	14.58	29.16	29.16	29.16

	Total Loan					
	Gross loan opening	364.18	1494.52	1494.52	1494.52	1494.52
	Cumulative Repayment upto COD/previous year	0.00	0.00	0.00	0.00	0.00
	Net Loan-Opening	364.18	1494.52	1841.62	1841.62	1841.62
	Additions during the year	1130.34	347.10	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	0.00	0.00
	Net Loan-Closing	1494.52	1841.62	1841.62	1841.62	1841.62
	Average Loan	929.35	1668.07	1841.62	1841.62	1841.62
	Rate of Interest	**8.98%**	**8.64%**	**8.62%**	**8.62%**	**8.62%**
	Interest	**83.47**	**144.18**	**158.76**	**158.76**	**158.76**