

**CENTRAL ELECTRICITY REGULATORY COMMISSION**

**NEW DELHI**

**Petition No. 292/TT/2013**

**Coram:**

**Shri Gireesh B. Pradhan, Chairperson  
Shri A. K. Singhal, Member  
Shri A. S. Bakshi, Member**

**Date of Hearing : 26.03.2015**

**Date of Order : 08.02.2016**

**In the matter of:**

Approval of transmission tariff from COD to 31.3.2014 for 400/220 kV 125 MVAR, Bus Reactor along with associated bays at Patna Sub-station under Transmission System for "Transfer of Power from Generation Projects in Sikkim to NR/WR Part-B" in Eastern Region for tariff block 2009-14 period, under Regulation-86 of Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999 and Central Electricity Regulatory Commission (Terms and Condition) Regulations, 2009

**And in the matter of**

Power Grid Corporation of India Limited,  
"Saudamani", Plot No.2,  
Sector-29, Gurgaon -122 001

**.....Petitioner**

**Vs**

1. Gati Infrastructure Chuzachen limited  
1-7-293, MG Road, 268, Udyog Vihar, Phase-IV,  
Secunderabad, Andhra Pradesh - 500003
2. Gati Infrastructure Bhasmay Power Limited  
1-7-293, MG Road, 268, Udyog Vihar, Phase-IV,  
Secunderabad, Andhra Pradesh – 500003
3. PTC India limited  
2<sup>nd</sup> Floor, NBCC Tower  
15, Bhikaji Cama Palace



New Delhi

4. Lanco Energy Pvt. Limited  
Plot no. 397, Phase-III, 2nd Floor,  
Udyog Vihar, Gurgaon,  
Haryana- 120016
5. Dans Energy Pvt. Limited,  
5<sup>th</sup> Floor, DLF Building No. 8, tower C,  
DLF Cyber City Phase-II  
Gurgaon, Haryana-122002
6. Jal Power Corporation Limited,  
405-406, Raja house, 30-31,  
Nehru Place, New Delhi- 110019
7. Madhya Bharat Power Corporation Limited,  
E-585, Greater Kailash, Part-II,  
New Delhi-110048
8. Madhya Pradesh Power Management Company Ltd.,  
Shakti Bhawan, Rampur  
Jabalpur-482 008.
9. Maharashtra State Electricity Distribution Company Limited,  
Prakashgad, 4th floor  
Andehri (East), Mumbai-400 052.
10. Gujarat Urja Vikas Nigam Ltd.,  
Sardar Patel Vidyut Bhawan,  
Race Course Road, Vadodara-390 007.
11. Electricity Department, Government of Goa,  
Vidyut Bhawan, Panaji,  
Near Mandvi Hotel, Goa-403 001.
12. Electricity Department,  
Administration of Daman and Diu,  
Daman-396210.
13. Electricity Department,  
Administration of Dadra Nagar Haveli,  
U.T. Silvassa-396 230.
14. Chhattisgarh State Electricity Board,



P.O. Sunder Nagar, Dangania, Raipur  
Chhattisgarh-492 013.

15. Madhya Pradesh Audyogik Kendra Vikas Nigam (Indore) Ltd.,  
3/54, Press Complex, Agra-Bombay Road  
Indore-452 008.
16. Rajasthan Rajya Vidyut Prasaran Nigam Ltd.,  
Vidyut Bhawan, Vidyut Marg,  
Jaipur- 302 005.
17. Ajmer Vidyut Vitran Nigam Ltd.,  
400 kV GSS Building (Ground Floor), Ajmer Road,  
Heerapura, Jaipur.
18. Jaipur Vidyut Vitran Nigam Ltd.,  
400 kV GSS Building (Ground Floor), Ajmer Road,  
Heerapura, Jaipur.
19. Jodhpur Vidyut Vitran Nigam Ltd.,  
400 kV GSS Building (Ground Floor), Ajmer Road,  
Heerapura, Jaipur.
20. Himachal Pradesh State Electricity Board  
Vidyut Bhawan, Kumar House Complex Building II  
Shimla-171 004
21. Punjab State Electricity Board,  
The Mall, Patiala-147 001.
22. Haryana Power Purchase Centre,  
Shakti Bhawan, Sector-6  
Panchkula (Haryana)-134 109
23. Power Development Department,  
Govt. of Jammu and Kashmir,  
Mini Secretariat, Jammu.
24. Uttar Pradesh Power Corporation Ltd.,  
Shakti Bhawan, 14, Ashok Marg,  
Lucknow-226 001.
25. Delhi Transco Ltd.,  
Shakti Sadan, Kotla Road,  
New Delhi-110 002.



26. BSES Yamuna Power Ltd.,  
Shakti Kiran Building, Karkardooma,  
Delhi-110 092.
27. BSES Rajdhani Power Ltd.,  
BSES Bhawan, Nehru Place,  
New Delhi.
28. North Delhi Power Ltd.,  
Power Trading & Load Dispatch Group,  
Cennet Building, Adjacent to 66/11 kV Pitampura-3,  
Grid Building, Near PP Jewellers,  
Pitampura, New Delhi-110 034.
29. Chandigarh Administration,  
Sector-9, Chandigarh.
30. Uttarakhand Power Corporation Ltd.,  
Urja Bhawan, Kanwali Road,  
Dehradun.
31. North Central Railway,  
Allahabad.
32. New Delhi Municipal Council,  
Palika Kendra, Sansad Marg,  
New Delhi-110 002.
33. Bihar State Electricity Board  
Vidyut Bhawan, Bailey Road  
Patna-800 001.
34. West Bengal State Electricity Distribution Company Ltd.  
Bidyut Bhawan, Bidhan Nagar  
Block DJ, Sector-II, Salt Lake City  
Kolkata-700 091.
35. Grid Corporation of Orissa Ltd.  
Shahid Nagar, Bhubaneswar-751 007.
36. Damodar Valley Corporation  
DVC Tower, Maniktala  
CIVIC Centre, VIP Road  
Kolkata-700 054.



37. Power Department  
Govt. of Sikkim  
Gangtok-737 101

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

.....**Respondents**

For Petitioner : Shri S.S. Raju, PGCIL  
Shri Jasbir Singh, PGCIL  
Shri M.M. Mondal, PGCIL  
Shri S.K. Venkatesan, PGCIL

For Respondents : None

**ORDER**

The instant petition has been filed by Power Grid Corporation of India Ltd. (PGCIL) for approval of the transmission tariff for 400/220 kV 125 MVAR, Bus Reactor along with associated bays at Patna Sub-station under Transmission System for "Transfer of Power from Generation Projects in Sikkim to NR/WR Part-B" in Eastern Region for tariff block 2009-14 period, in terms of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2009 (hereinafter "the 2009 Tariff Regulations").

2. The investment approval for the transmission project was accorded by the Board of Directors of the petitioner company, vide C/CP/Sikkim Generation projects-Part-B Ph-I IPPs (Part-B), dated 17.3.2011, at an estimated cost of



₹158512 lakh, including IDC of ₹10183 lakh (based on 3rd Quarter, 2010 price level). As per the investment approval, the transmission asset was scheduled to be commissioned within 32 months from the date of investment approval, i.e. by 1.8.2013.

3. The scope of work covered under the scheme is as follows:-

### **Transmission Line**

- a) LILO of Teesta III- Kishanganj 400 kV D/C line (quad) at Rangpo
- b) Rangpo- New Melli 220 kV D/C line
- c) LILO of Gangtok- Rangit 132 kV S/C line at Rangpo and Termination of Gangtok- Rangpo/ Chuzachen & Melli- Rangpo/ Chuzachen 132 kV line at Rangpo
- d) LILO of Teesta V- Siliguri 400 kV D/C line at Rangpo.
- e) Kishanganj- Patna 400 kV D/C (quad) line

### **Sub-stations**

- a) Establishment of 400/220/132 kV Gas Insulated at Rangpo with 16X105 MVA , 400/220 kV 1-Phase transformers and 3X100 MVA , 220/132 kV 1- Phase transformers.
- b) Establishment of 220kV GIS switching station at New Melli
- c) Extension of bays at Kishanganj 400/220 kV Sub-station
- d) Extension of bays at Patna 400/220 kV Sub-station



4. The above system requirements under Part-B (also under Part-A and C) were discussed and agreed in the 27<sup>th</sup> SCM of NR held on 30.5.2009 and 29<sup>th</sup> SCM of WR held on 16.9.2009. The scope of system was further discussed in the 16<sup>th</sup> ERPC held on 18.12.2010.

5. The instant petition covers only one asset i.e. 125 MVAR, 400 kV Bus Reactor along-with associated bays at Patna Sub-station (hereinafter referred to as the transmission asset). The asset covered in the instant petition is not included in the investment approval explicitly. Later on, the petitioner has submitted the relevant portion of DPR vide affidavit dated 28.10.2014, wherein 1x125 MVAR Bus Reactor along-with associated bays at Patna Sub-station has been included.

6. This order has been issued after considering the petitioner's affidavits dated 14.8.2014, 28.10.2014 and 25.8.2015.

7. The petitioner has claimed transmission charges for the instant asset as under:-

<b>(₹ in lakh)</b>	
Particulars	2013-14
Depreciation	22.81
Interest on Loan	12.26
Return on equity	26.23
Interest on working capital	3.73
O & M Expenses	43.64
Total	108.67

8. The details submitted by the petitioner in support of its claim for interest on working capital are given overleaf:-



(₹ in lakh)	
Particulars	2013-14
Maintenance Spares	9.82
O & M expenses	5.46
Receivables	27.17
Total	42.45
Interest	3.73
Rate of Interest	13.20%

9. 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. Replies has been filed by Maharashtra State Electricity Distribution Company Limited (MSEDCL) Respondent No. 9, vide affidavit dated 4.1.2014 and Jaipur Vidyut Vitran Nigam Limited (JVVNL) Respondent No. 18, vide affidavit dated 9.1.2014. The respondents have raised the issues regarding additional capital expenditure, rate of interest on loan, initial spares, additional RoE, reimbursement of expenditures, and licence fee. The objections raised by the MSEDCL and JVVNL in their replies are addressed in the relevant paragraphs of this order.

10. Having heard the representatives of the petitioner present at the hearing and perused the material on record, we proceed to dispose of the petition.

### **Capital cost**

11. Regulation 7 of the 2009 Tariff Regulations provides as follows:-

**“(1) Capital cost for a project shall include:-**

- (a) The expenditure incurred or projected to be incurred, including interest during construction and financing charges, any gain or loss on account of foreign exchange risk variation during construction on the loan – (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 fund deployed, - up to the date of commercial operation of the project, as admitted by the Commission, after prudence check.

(b) capitalised initial spares subject to the ceiling rates specified in regulation 8; and

(c) additional capital expenditure determined under regulation 9.

Provided that the assets forming part of the project, but not in use shall be taken out of the capital cost.

(2) The capital cost admitted by the Commission after prudence check shall form the basis for determination of tariff:

Provided that in case of the thermal generating station and the transmission system, prudence check of capital cost may be carried out based on the benchmark norms to be specified by the Commission from time to time:

Provided further that in cases where benchmark norms have not been specified, prudence check may include scrutiny of the reasonableness of the capital expenditure, financing plan, interest during construction, use of efficient technology, cost over-run and time over-run, and such other matters as may be considered appropriate by the Commission for determination of tariff.”

12. The details of the apportioned approved cost, cost as on COD and estimated/projected additional capital expenditure for the transmission asset, submitted by the petitioner vide affidavit dated 25.8.2015, is as follows:-

(₹ in lakh)

Apportioned approved cost	Expenditure up to COD	Expenditure from COD to 31.3.2014	Expenditure during 2014-15*	Estimated expenditure 2015-16	Total estimated expenditure
925.09	602.34	91.22	7.70	204.11	905.37

\*Expenditure up to 31.3.2015 has been verified from the audited statements of Accounts of PGCIL, by the Auditor.



### **Cost over-run**

13. MSEDCL has pointed out that there is variation in capital cost when compared to the 'FR' cost.

14. The total estimated completion cost of the project, is ₹905.37 lakh against apportioned approved FR cost of ₹925.09 lakh. Thus, there is no cost over-run. However, there is cost variation in some of the elements. Accordingly, the petitioner was directed to submit the variation in cost under sub-head "Foundation for structures and miscellaneous civil works" by 78.53 %. In response to it, the petitioner vide affidavit dated 28.10.2014 has submitted that the bids for a particular package containing many small components (items) are invited on overall basis and comparison of bidder's prices, hence decision of the successful bidder is done on the basis of the total bid price of each bidder. Price comparison of any individual item is not done for the above purpose. The package, based on the above overall comparison is awarded on a whole based on the lowest cost of complete package which may include many small items. The rates of individual items are asked, only for the purpose of on an account payment and not for any comparison.

15. The petitioner was directed vide letter dated 21.4.2014 to clarify the difference in text portion of the petition and subject matter of the petition given in Form 5D. In response to that petitioner vide affidavit dated 14.8.2014 has submitted that the subject petition has been filed for the determination of transmission tariff for 125 MVAR, 400 kV Bus Reactor along-with associated bays at Patna Sub-station. The subject matter including text portion and the tariff forms are corresponding to



the subject mentioned asset only. However, in the Form 5D, the transmission asset has been inadvertently missed and due to some typographical error “Replacement of equipment and associated work for a 400 kV Purnea Sub-station extension” had got mentioned under the head of “Name of Sub-station”. There is no discrepancy regarding capital cost and additional capital expenditure/ de-capitalisation or regarding replacement of equipment in the subject petition.

16. We have considered the submission of petitioner and documents available on record. It is observed that variation in cost is due to hard cost, accordingly the cost variation is allowed.

**Time over-run**

17. As per Investment Approval (IA), the project was scheduled to be commissioned within 32 months from the date of investment approval i.e. by 1.12.2013. The instant transmission asset has been commissioned on 1.8.2013. Hence there is no time over-run.

**Treatment of IDC and IEDC**

18. The Commission, vide RoP dated 26.3.2015, had sought the details of IDC on cash basis from the petitioner. In response, the petitioner vide affidavit dated 25.8.2015 submitted the details following details related to IDC on cash basis:-

(₹ in lakh)			
Claimed on accrual basis	Claimed on cash basis up to COD	Balance IDC discharged in FY 2013-14	Allowed on cash basis up to COD (Foreign Loan)
8.80	8.01	0.79	8.01



The petitioner also submitted that the above mentioned balance IDC of amount ₹0.79 lakh is not already included in the additional capital expenditure of 2013-14. Hence, this 'Balance IDC' has been added up in the additional capital expenditure of 2013-14, which changes its amount from ₹91.22 lakh to ₹92.01 lakh.

19. On the basis of details of loans submitted by the petitioner, it is observed that the Form 13 mentions a Foreign Loan (FC-Bond) and the petitioner has further submitted the IDC computations vide affidavit dated 25.8.2015. Both the IDC claimed as on COD on cash basis and the IDC balance amount are being considered for the tariff calculations.

### **Computation of "IEDC"**

20. The petitioner has not submitted any supporting document in relation to the IEDC claim. In the absence of detailed computation of IEDC, it is proposed that the percentage on hard cost indicated in the abstract cost estimate, may be considered as the allowable limit to the IEDC. In the current petition, 5.00% of the hard cost is being taken as IEDC limit as per the abstract cost estimate and the IEDC claimed is ₹9.36 lakh which is below 5.00% of the hard cost, as on COD. Hence, the IEDC claimed by the petitioner has been allowed for the purpose of tariff determination and the same has been allowed to be capitalized as on COD, which is as follows: -

(₹ in lakh)		
Claimed	Worked Out	Allowed for tariff computation
9.36	9.36	9.36



### **Treatment of initial spares**

21. Regulation 8 of 2009 Tariff Regulations provides that initial spares shall be capitalised as a percentage of the original project cost, subject to following ceiling norms:-

Transmission line	0.75%
Transmission sub-station	2.5%
Series compensation devices & HVDC Station	3.5%

22. JVVNL has submitted that initial spares should be allowed as per norms specified in 2009 Tariff Regulations.

23. The petitioner was directed vide letter dated 8.1.2014 to submit the quantum of initial spares recommended by the OEM for the instant transmission asset. Initial spares have been claimed for green field sub-station. However the bus reactor has been commissioned in the existing sub-station, the reason / justification for claiming higher initial spares was sought in view of this from the petitioner.

24. In response to it, the petitioner vide affidavit dated 28.10.2014 has submitted that the bay at Patna Sub-station is commissioned as extension of existing sub-station. In a green field sub-station (i.e. new sub-station) normally a large number of bays are commissioned under single project and the spares are taken against these large numbers of bays. But in this case only one bay at Patna Sub-station is commissioned instead of such large number of bays and sub-station equipment for green field project. This means population of equipments and total capital cost for green field project is much higher than the project cost of an extension project.



Even though similar type of spares have been procured for this system as is normally done for green field project. Compared to projects having assets in green field sub-stations, the percentage of cost of initial spares with respect to the project capital cost is higher on account of less project capital cost of lesser population of equipments in present project for each sub-station.

25. The petitioner has claimed initial spares for the asset, as per 2009 Tariff Regulations. The cost of initial spares claimed for the sub-stations of the transmission asset is ₹59.11 lakh up to cut-off date. The petitioner has vide affidavit dated 25.8.2015, indicated the year wise payment made against the initial spares for the instant asset. The initial spares discharged up to 31.3.2014 are being considered for the tariff calculation purpose, as per the 2009 Tariff Regulations. We are of the view that all the discharged/ un-discharged liability against the initial spares after 31.3.2014 period would be considered in the next tariff period on year-wise basis and the variance, if any, in the discharge of the initial spares up to 31.3.2014 would be reviewed at the time of truing-up, once the actual expenditure in the commissioning of the asset is provided up to its respective cut-off date. The details of the claimed initial spares and allowed initial spares, year-wise are given hereunder:-

(₹ in lakh)					
Total initial spares claimed up to actual cut-off date	Initial spares claimed up to COD	Initial spares claimed from COD to 31.3.2014	Total initial spares allowable, as per estimated capital cost up to actual cut-off date	Allowed up to COD (As per affidavit 25.8.2015)	Allowed from COD to 31.3.2014 (As per affidavit 25.8.2015)
59.11	5.11	0.00	21.70	5.11	0.00



### **Capital cost as on COD**

26. The capital cost considered after adding allowable initial spare up to COD is ₹547.55 lakh.

(₹ in lakh)

Capital cost as per CA certificate dated 15.7.2015	Less IDC & IEDC claimed	IDC on cash basis allowed	IEDC allowed	Less initial spares claimed as on cut-off date	initial spares allowed as on COD	Capital cost as on COD considered for tariff
602.34	18.16	8.01	9.36	59.11	5.11	547.55

### **Projected additional capital expenditure**

27. Clause (1) of Regulation 9 of the 2009 Tariff Regulations provides as under:-

“Additional Capitalisation: (1) The capital expenditure 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;
- (ii) Works deferred for execution;
- (iii) Procurement of initial capital Spares within the original scope of work, subject to the provisions of Regulation 8;
- (iv) Liabilities to meet award of arbitration or for compliance of the order or decree of a court; and
- (v) Change in Law:”

28. Clause (11) of Regulation 3 of the 2009 Tariff Regulations defines “cut-off” date as under:-

“cut-off date” means 31<sup>st</sup> March of the year closing after 2 years of the year of commercial operation of the project, and in case the project is declared under commercial operation in the last quarter of the year, the cut-off date shall be 31<sup>st</sup> March of the year closing after 3 years of the year of commercial operation”.



29. The cut-off date of the transmission asset falls in the next tariff block. As per the Form 9, the petitioner has claimed additional capital expenditure ₹91.22 lakh from COD to 31.3.2014

30. The petitioner has claimed additional capital expenditure under Regulation 9(1) of 2009 Tariff Regulations towards balance/retention payment may be allowed upto 31.3.2014. Additional capital expenditure for 2014-15 and 2015-16 may be dealt as per 2014 Tariff Regulations. MSEDCL has submitted that the petitioner's has claim of total additional capital expenditure of under Regulation 9(1) of 2009 Tariff Regulations may be allowed after prudence check.

31. We have considered the submissions of the petitioner and MSEDCL. The additional capital expenditure claimed by the petitioner is allowed under Regulation 9(1) of the 2009 Tariff Regulations as it is within the cut-off and within the approved apportioned cost.

32. The additional capital expenditure considered after adding the allowable initial spares in the 2013-14 are given as follows:-

(₹ in lakh)		
Claimed additional capital expenditure for 2013-14	Additional capital expenditure after adding the allowable initial spares for 2013-14	Allowable additional capital expenditure after adding balance IDC
91.22	91.22	92.01

The allowable additional capital expenditure (2013-14) for the purpose of tariff calculation is ₹92.01 lakh.





## Debt- equity ratio

33. Regulation 12 of the 2009 Tariff Regulations provides as under:-

“12. Debt-Equity Ratio (1) For a project declared under commercial operation on or after 1.4.2009, 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 where equity actually deployed is less than 30% of the capital cost, the actual equity shall be considered for determination of tariff:

Provided further that the equity invested in foreign currency shall be designated in Indian rupees on the date of each investment.

**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, provided such premium amount and internal resources are actually utilised for meeting the capital expenditure of the generating station or the transmission system.

(2) In case of the generating station and the transmission system declared under commercial operation prior to 1.4.2009, debt-equity ratio allowed by the Commission for determination of tariff for the period ending 31.3.2009 shall be considered.

(3) Any expenditure incurred or projected to be incurred on or after 1.4.2009 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.”

34. Details of debt-equity in respect of the asset as on the date of commercial operation are as follows:-

(₹ in lakh)		
Particulars	Amount	%
Debt	383.29	70.00
Equity	164.26	30.00
<b>Total</b>	<b>547.55</b>	<b>100.00</b>

35. Detail of debt-equity ratio of asset as on 31.3.2014 is as per details given overleaf:-



(₹ in lakh)		
Particulars	Amount	%
Debt	447.69	70.00
Equity	191.87	30.00
<b>Total</b>	<b>639.56</b>	<b>100.00</b>

### Return on equity

36. Regulation 15 of the 2009 Tariff Regulations provides as under:-

“15. (1) Return on equity shall be computed in rupee terms, on the equity base determined in accordance with regulation 12.

(2) Return on equity shall be computed on pre-tax basis at the base rate of 15.5% for thermal generating stations, transmission system and run of the river generating station, and 16.5% for the storage type generating stations including pumped storage hydro generating stations and run of river generating station with pondage and shall be grossed up as per clause (3) of this regulation:

Provided that in case of projects commissioned on or after 1st April, 2009, an additional return of 0.5% shall be allowed if such projects are completed within the timeline specified in **Appendix-II**:

Provided further that the additional return of 0.5% shall not be admissible if the project is not completed within the timeline specified above for reasons whatsoever.

(3) The rate of return on equity shall be computed by grossing up the base rate with the Minimum Alternate/Corporate Income Tax Rate for the year 2008-09, as per the Income Tax Act, 1961, as applicable to the concerned generating company or the transmission licensee, as the case may be:

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

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

Where t is the applicable tax rate in accordance with clause (3) of this regulation.

(5) The generating company or the transmission licensee as the case may be, shall recover the shortfall or refund the excess Annual Fixed charge on account of Return on Equity due to change in applicable Minimum Alternate/ Corporate Income Tax Rate as per the Income Tax Act, 1961 (as amended from time to time) of the respective financial year directly without making any application before the Commission;

Provided further that Annual Fixed charge with respect to the tax rate applicable to the generating company or the transmission licensee, as the case may be, in line with the provisions of the relevant Finance Acts of the respective financial year



during the tariff period shall be trued up in accordance with Regulation 6 of these regulations".

37. The petitioner claimed additional RoE of 0.5% for completion of the instant asset within the timeline specified in the 2009 Tariff Regulations. The petitioner has submitted that as per Appendix-II of 2009 Tariff Regulations, in case of a scheme having combination of the various types of projects, the qualifying time schedule of the activity having maximum time period shall be considered for the scheme as a whole. In line with this, the timeline for this project is same as for 400 kV D/C Twin Transmission Line i.e. 34 months for hilly area from the date of investment approval. The petitioner has submitted that the instant transmission asset has been commissioned in 28 months and hence qualifies for additional RoE of 0.5%.

38. JVVNL has submitted that as the project as a whole has not been completed, the petitioner's request for allowing @0.5% additional RoE as per 2009 Tariff Regulations is not acceptable.

39. We have considered the submissions of the petitioner and the respondent. We are of the considered view that for grant of additional return on equity under first proviso of Regulation 15(2) read with Appendix II of 2009 Tariff Regulations, all the elements of the transmission systems need to be completed within the time schedule specified in Appendix II of the said Regulations. This view has also been upheld by the Appellate Tribunal of Electricity in its judgment dated 10.5.2012 in Appeal No. 155/2011. Additional RoE of 0.5% is only permissible if all the assets in the project were completed within the stipulated time line specified in the Appendix-



II of the 2009 Tariff Regulations. All the elements of the instant transmission system have not been commissioned within the timeline specified in the 2009 Tariff Regulations. Hence, additional RoE of 0.5% is not allowed for the instant assets.

40. Based on the above, the return on equity considered are given hereunder:-

Particulars	(₹ in lakh)
	2013-14 (pro-rata)
Opening Equity	164.26
Addition due to Additional Capitalisation	27.60
Closing Equity	191.87
Average Equity	178.06
Return on Equity (Base Rate )	<b>15.50%</b>
Tax rate for the year 2008-09 (MAT)	20.961%
Rate of Return on Equity (Pre Tax )	19.610%
Return on Equity (Pre Tax)	<b>23.28</b>

41. The petitioner has submitted that it may be allowed to recover the shortfall or refund the excess Annual Fixed Charges, on account of return on equity due to change in applicable Minimum Alternate Tax/Corporate Income Tax rate as per the Income Tax Act, 1961 of the respective financial year directly from the beneficiaries without making any application before the Commission under Regulation 15(5) of the 2009 Tariff Regulations. We would like to clarify that the petitioner is allowed to recover the shortfall or refund the excess annual transmission charges under Regulation 15(5) of the 2009 Tariff Regulations. Accordingly, RoE has been computed @ 19.610% p.a on average equity as per Regulation 15(5) of the 2009 Tariff Regulations.



## **Interest on loan**

42. Regulation 16 of the 2009 Tariff Regulations provides as under:-

“16. **Interest on loan capital** (1) The loans arrived at in the manner indicated in regulation 12 shall be considered as gross normative loan for calculation of interest on loan.

(2) The normative loan outstanding as on 1.4.2009 shall be worked out by deducting the cumulative repayment as admitted by the Commission up to 31.3.2009 from the gross normative loan.

(3) The repayment for the year of the tariff period 2009-14 shall be deemed to be equal to the depreciation allowed for that year:

(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 annual depreciation allowed.

(5) The rate of interest shall be the weighted average rate of interest calculated on the basis of the actual loan portfolio at the beginning of each year applicable to the project:

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

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

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

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

(8) The changes to the terms and conditions of the loans shall be reflected from the date of such 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 beneficiary or the transmission customers 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.”

43. In keeping with the provisions of Regulation 16 of the 2009 Tariff Regulations, the petitioner’s entitlement to interest on loan has been calculated on the following basis:-

- (i) Gross amount of loan, repayment of instalments and rate of interest on loan have been considered as per petition ;
- (ii) The repayment for the tariff period 2009-14 has been considered to be equal to the depreciation allowed for that period;
- (iii) Notwithstanding moratorium period availed by the transmission licensee, the repayment of the loan shall be considered from the first year of commercial operation of the project and shall be equal to the annual depreciation allowed;

44. MSEDCL has submitted that there is a need to conduct prudence check on loans availed by the petitioner and the average interest rate considered for calculation of interest on long term basis. We would like to clarify that as formulated under Regulation 16(5) actual loans have been considered for computation of weighted average rate of interest.

45. Detailed calculations in support of the weighted average rates of interest have been given in Annexure to this order.



46. Based on the above, interest on loan has been calculated are as follows:-

Particulars	(₹ in lakh)
	2013-14 (pro-rata)
Gross Normative Loan	383.29
Cumulative Repayment upto Previous Year	0.00
Net Loan-Opening	383.29
Addition due to Additional capitalisation	64.41
Repayment during the year	20.89
Net Loan-Closing	426.80
Average Loan	405.04
Weighted Average Rate of Interest on Loan	4.1604%

### Depreciation

47. Regulation 17 of the 2009 Tariff Regulations provides as under:-

“17. **Depreciation** (1) The value base for the purpose of depreciation shall be the capital cost of the asset admitted by the Commission.

(2) 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 stations, the salvage value shall be as provided in the agreement signed by the developers with the State Government for creation of the site;

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

(3) 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.

(4) Depreciation shall be calculated annually based on Straight Line Method and at rates specified in Appendix-III 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 date of commercial operation shall be spread over the balance useful life of the assets.



(5) In case of the existing projects, the balance depreciable value as on 1.4.2009 shall be worked out by deducting the cumulative depreciation as admitted by the Commission up to 31.3.2009 from the gross depreciable value of the assets.

(6) 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.”

48. The transmission asset in the instant petition will complete 12 years beyond 2013-14 and thus depreciation has been calculated annually, based on Straight Line Method and at rates specified in Appendix-III to the 2009 Tariff Regulations. Accordingly, depreciation has been worked out on the basis of capital expenditure as on the date of commercial operation and additional capital expenditure incurred/projected to be incurred thereafter, wherein depreciation for the first year has been calculated on *pro-rata* basis for the part of year.

49. Based on the above, the depreciation has been considered are given hereunder:-

Particulars	(₹ in lakh)
	2013-14 (pro-rata)
Opening Gross Block	547.55
Addition during 2009-14 due to Projected Additional Capitalisation	92.01
Closing Gross Block	639.56
Average Gross Block	593.56
Rate of Depreciation	5.2800%
Depreciable Value	534.20
Remaining Depreciable Value	534.20
Depreciation	20.89





### **Operation & Maintenance Expenses (O&M Expenses)**

50. The details of elements covered and their date of commercial operation (COD) are as under:-

125 MVAR, 400 kV Bus Reactor along-with associated bays at Patna S/s	<b>COD</b>	<b>No of bays</b>
<b>Patna sub- station</b>		
400 kV Bus Reactor –III bay	1.8.2013	1

51. Clause (g) of Regulation 19 of the 2009 Tariff Regulations prescribes the norms for operation and maintenance expenses based on the type of sub-station and line. Norms prescribed in respect of the elements covered in the instant petition are as under:-

<b>Element</b>	<b>2009-10</b>	<b>2010-11</b>	<b>2011-12</b>	<b>2012-13</b>	<b>2013-14</b>
400 kV bay (₹ in lakh/ bay)	52.40	55.40	58.57	61.92	65.46

52. JVVNL has submitted that O&M expenses should be allowed as per norms prescribed in 2009 Tariff Regulations. As per the norms specified in the 2009 Tariff Regulations, allowable O&M expenses for the assets covered in the petition is ₹43.64 lakh.

53. The petitioner has submitted that O&M expenses for the period 2009-14 was arrived at on the basis of normalized actual O&M expenses during the period 2003-04 to 2007-08. The wage hike of 50% on account of pay revision of the employees of public sector undertaking has also been considered while calculating the O&M



Expenses for the tariff period 2009-14. The petitioner has further submitted that it would approach the Commission for additional manpower cost on account of wage revision (if any) during the tariff block 2009-14 for claiming in the tariff.

54. While specifying the norms for the O & M expenses, the Commission has in the 2009 Tariff Regulations, given effect to impact of pay revision by factoring 50% on account of pay revision of the employees of PSUs after extensive consultations with the stakeholders, as one time compensation for employee cost. We do not see any reason why the admissible amount is inadequate to meet the requirement of the employee cost. In this order, we have allowed O&M expenses as per the existing norms.

#### **Interest on working capital**

55. The petitioner is entitled to claim interest on working capital as per the 2009 Tariff Regulations. The components of the working capital and the petitioner's entitlement to interest thereon are discussed hereunder:-

##### **(i) Receivables**

As per Regulation 18 (1) (c) (i) of the 2009 Tariff Regulations, 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 18(1)(c)(ii) of the 2009 Tariff Regulations provides for maintenance spares @ 15% per annum of the O&M expenses from 1.4.2009. The value of maintenance spares has accordingly been worked out.

## **(iii) O & M expenses**

Regulation 18(1) (c) (iii) of the 2009 Tariff Regulations provides for operation and maintenance expenses 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**

The SBI Base rate (9.70%) as on 1.4.2013 plus 350 Bps i.e. 13.20% for the transmission asset been considered as the rate of interest on working capital.

56. Necessary computations in support of interest on working capital are as follows:-

<b>Particulars</b>	<b>(₹ in lakh)</b>
	<b>2013-14 (pro-rata)</b>
Maintenance Spares	9.82
O & M expenses	5.46
Receivables	25.66
Total	40.94
Interest	3.60
Rate of interest	9.82



### **Transmission charges**

58. The transmission charges being allowed for the assets are as follows:-

<b>Particulars</b>	<b>(₹ in lakh)</b>
	<b>2013-14 (pro-rata)</b>
Depreciation	20.89
Interest on Loan	11.23
Return on equity	23.28
Interest on Working Capital	3.60
O & M Expenses	43.64
Total	102.65

### **Filing fee and the publication expenses**

59. The petitioner has sought reimbursement of fee paid by it for filing the petition and publication expenses. MSEDCL submitted that the issue of filing fee has been taken up with the Commission against its order dated 20.8.2010 in Petition No. 70/2010 and as such the claim should not be considered by the Commission. The petitioner shall also be entitled for reimbursement of the publication expenses in connection with the present petition, directly from the beneficiaries on *pro-rata* basis in accordance with Regulation 42 of the 2009 Tariff Regulations.

### **Licence fee**

60. The petitioner has submitted that in O&M norms for tariff block 2009-14 the cost associated with license fees had not been captured and the license fee may be allowed to be recovered separately from the respondents. MSEDCL has submitted that the Commission may pass such orders in respect to petitioner's request for reimbursement for licence fee, as it thinks just and proper to avoid unnecessary



burden on beneficiaries and ultimately on end consumers. . The petitioner shall be entitled for reimbursement of licence fee in accordance with Regulation 42 A (1) (b) of the 2009 Tariff Regulations.

### **Service tax**

61. The petitioner has made a prayer to be allowed to bill and recover the service tax on transmission charges separately from the respondents, if it is subjected to such service tax in future. MSEDCL has submitted that as the petitioner itself submitted that service tax on transmission has been put in the negative list it will be too early to make any comment on such an issue. We consider petitioner's prayer pre-mature and accordingly this prayer is rejected.

### **Sharing of Transmission Charges**

62. The Commission vide letter dated 8.1.2014 has sought the reasons for installations of bus reactor its utility and approval by the competent authority and status of completion of other asset covered under the scope of work approved by the Board of Directors dated 17.3.2011.

63. In response to it, the petitioner vide affidavit dated 28.10.2014 has submitted that 125 MVAR Bus Reactor at Patna 400/220 kV Sub-station of PGCIL is a part of the transmission system associated with “Transmission System for transfer of power from generation projects in Sikkim to NR/WR : Part-B”. This transmission scheme consists of a number of transmission lines including Kishanganj–Patna 400 kV D/C (quad conductor) line for transfer of power towards Patna and onwards.



Patna 400/220 kV Sub-station of the petitioner has been experiencing high voltage problem, particularly during light load conditions of the Eastern Grid. The addition of new Kishanganj - Patna 400 kV D/C (quad conductor) line of about 350 km for transfer of power from hydro generation projects in Sikkim towards Patna would result in additional generation of reactive power under light load conditions, particularly during low hydro scenario. The instant transmission asset would absorb a part of the surplus reactive power thereby helping in mitigating the high voltage phenomenon and maintaining the Grid stability.

64. The petitioner has further submitted that said transmission scheme was approved in the meeting of Standing Committee on Power System Planning for Eastern Region held on 14.9.2009 and 20.9.2010 as well as in 12th TCC/ERPC meeting held on 3.12.2009 to 4.12.2009 & 16th TCC/ERPC meeting held on 17.12.2010 to 18.12.2010.

65. During hearing on 26.3.2015, the Commission directed the petitioner to file the information regarding RPC approval and status of Kishanganj- Patna line. The Commission also asked that Kishanganj- Patna line is part of system planned for evacuation of power from generation projects in Sikkim which has been developed as Part-A and Part-B. In this regard the petitioner should submit list of generators who have sought LTA, status of generation projects and the liability of payment of transmission charges and whether the petitioner has matched the commissioning of line with commissioning of generation projects, list of all the assets covered under Part-A & Part-B of the scheme with their status of



commissioning . The Commission further directed the CEA to clarify the utilization of assets covered under Part-A & Part-B of the scheme in view of non-commissioning/partial commissioning of associated generation projects.

66. In response to it, the petitioner vide affidavit dated 25.8.2015 has submitted as under:-

- (i) The SCM/ERPC approval of the Kishenganj-Patna line has been submitted with the above said affidavit. The petition for the said line shall be filed shortly;
- (ii) The 400 kV D/C (quad) Kishanganj-Patna line along with associated bays at both ends is part of the system planned for evacuation of power from generation projects in Sikkim which has been developed as Part-A & Part-B, wherein, the said transmission line along with 400 kV line bays at Kishanganj Sub-station and Patna Sub-station are part of the scope of Sikkim Part B project only;
- (iv) The list of generators who have sought LTA for whom Part-A and Part-B of the system has been planned are given as follows:-

S. No.	Generator	Capacity (MW)	LTOA (MW)
1	Teesta-III	1200	840
2	Lanco Energy Pvt. Ltd	500	500
3	Dans Energy Pvt. Ltd	96	96
4	JAL Power Corp. Ltd.	120	120
5	Madhya Bharat Power Corporation Ltd.	96	96
6	Gati Infrastructure Limited	99	99
7	Gati Infrastructure Bhasmey Power Pvt. Ltd.	51	51



LTA Agreement with above 7 generators signed simultaneously on 24.2.2010

(v) At the time of LTA agreement signing, the sharing of transmission charges was based on the postage stamp method. However, presently the sharing of transmission charges is applicable as per POC mechanism. Therefore, the transmission charges for the transmission asset under the instant project now shall be as per PoC mechanism as governed by the Central Electricity Regulatory Commission (Sharing of Inter-State Transmission Charges and Losses) Regulations, 2010 and its subsequent amendments;

(vi) As directed by the Commission vide order dated 31.5.2010 in Petition No. 233/2009 regarding the matching commissioning of transmission lines with respective generation power projects, the following chronology was discussed by the Joint Coordination Committee meetings held with the respective IPPs associated with Sikkim Phase- I (i.e. Sikkim Part A& B):

Date	JCC Meeting
20-Oct-2010	1st JCC with Sikkim Phase-1 IPPs
4-Mar-2011	2nd JCC with Sikkim Phase-1 IPPs
27-May-2011	3rd JCC with Sikkim Phase-1 IPPs
30-Jan-2012	4th JCC with Sikkim Phase-1 IPPs
21-Jan-2015	5th JCC with Sikkim Phase-1 IPPs
26-May-2015/ 7-July-2015	6th JCC with Sikkim Phase-1 IPPs/Special JCC meeting

(vi) Regarding the matching of commissioning of transmission lines with the generators, the status is as follows:-





S. No.	Generator	Commissioning Schedule	Revised status as per JCC meeting						Dedicated line status(as per latest info. available)
			1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>	4 <sup>th</sup>	5 <sup>th</sup>	6 <sup>th</sup> /Special JCC meeting	
		BPTA							
1	Teesta-III	August 2011	December 2011	February 2012	December 2012	June 2013	December 2015-May' 2016	April' 2016 to July' 2016	Teesta III – Kishanganj 400kV D/c (Quad) line likely commissioning matching with generation project
2	Lanco Energy Pvt. Ltd	November 2012	-do-	June 2012	November 2013	November 2014	April 2016	April 2018	Teesta VI Rangpo 220 kV D/C Twin moose conductor line: Dec'17
3	Dans Energy Pvt. Ltd	April' 2012	June 2012	June 2012	December 2012	December' 2012	October' 2014	July' 2015	Jorethang - New Melli 220 kV D/C line- Expected by Mar'16
4	JAL Power Corp. Ltd.	June' 2013	June' 2013	June' 2013	June' 2013	June' 2013	June' 2016	November' 2017 to Dec' 2017	Rangit IV - New Melli 220 kV D/C line expected by June16
5	Madhya Bharat Power Corporation Ltd.	September' 2014	-do-	September' 2014	June' 2014	May' 2014	June' 2018 to Jul' 2018	June' 2018 to Jul' 2018	Rougichi-Rangpo 220 kV D/C zebra conductor line Expected by Mar'17
6	Gati Infrast-	September' 2010	March' 2011	-do-	October' 2011	May' 2013	Commissioned on May'13		Chuzachen-Rangpo 132 KV D/C Zebra



	ructure Limited (chuza chen)								conductor line
7	Gati Infrastructure Bhasmey Power Pvt. Ltd.	June' 2012	-do-	-do-	June' 2013	March' 2014	December 2017	December 2017	LILO of one circuit of Chuzachen-Rangpo 132 KV D/C (Zebra) Line at bhasmey

(vii) As, regards the placing of LOA i.e. order for associated transmission system in the scope of petitioner vis-à-vis generation projects is as follows:-

- (a) The award of supply for elements of transmission system at Rangpo 400/220/132 kV GIS Sub-station, were placed on 24.3.2011 (Sub-station supply package), 8.9.2011 (Transformer supply package), 3.10.2011 (Transmission line supply package)
- (b) The award of supply for elements of transmission system at Patna 400/220 kV Sub-station, were placed on 22.3.2011 (Sub-station extension supply package) , 24.3.2011 (Reactor supply package)
- (c) The award of supply for elements of transmission system at New Melli 220 kV GIS Sub-station, were placed on 14.10.2013 (Sub-station extension supply package).



(d) The award of supply for elements of transmission system at Kishanganj 400/220 kV GIS Sub-station, were placed on 7.11.2013 (Reactor supply package), 24.3.2011 & 12.8.2011 (Transmission line supply package)

67. CEA has submitted its views vide letter no. 66/11/2015/PSP & PA-II/ 197 dated 14.10.2015. CEA has made the following observations:-

i) The status of Phase-1 Gen Projects in Sikkim is given below:-

Sl. No.	Name of the Generation Plant	Installed Capacity (MW)	Original commissioning Schedule	Expected commissioning Schedule
1	Teesta-III	200x6 = 1200	2011-12	2016-17
2	Chuzachen	49.5x2 = 99	2010-11	Commissioned

ii) The details of transmission system for evacuation of power from the above two projects in Sikkim are as follows:-

Part-A: Transmission System for development of pooling station at Kishanganj and associated transmission works (under PGCIL scope)

- a) Establishment of New 2x315 MVA, 400 kV sub-station at Kishanganj - by November 2015 (capacity revised to 2x500 MVA in 17<sup>th</sup> SCM of ER);
- b) LILO of Siliguri-Purnea 400 kV D/C line (quad) at new pooling station Kishanganj - by November, 2015;
- c) LILO of New Purnea - New Siliguri 400 kV D/C line (being



reconducted with twin HTLS conductor) at Kishanganj (this element has been deleted in the 16th Standing Committee Meeting of Eastern Region held on 2.5.2014 at NRPC, New Delhi);

d) LILO of Siliguri - Dalkhola 220 kV D/C line at new 400 kV pooling station at Kishanganj - by November, 2015;

e) LILO of Gangtok-Melli 132 kV S/C line upto Rangpo, where Chuzachen-Rangpo 132 kV D/c would be connected so as to form Chuzachen-Gangtok and Chuzachen-Melli 132 kV S/C lines (this would be temporary arrangement till establishment of Rangpo pooling Sub-station under Part-B of the scheme and termination of Gangtok-Rangpo, Melli-Rangpo and Chuzachen-Rangpo 132kV lines at Rangpo) - Part Commissioned.

iii) The status of other Phase-1 Gen Projects in Sikkim is as follows:-

Sl. No.	Name of the Generation Plant	Installed Capacity (MW)	Original commissioning Schedule	Expected commissioning Schedule
1.	Teesta-VI	125x4 = 500	2012-13	2018-19
2.	Jorethang	48x2 = 96	2012-13	Commissioned
3.	Rangit-IV	40x3 = 120	2012-13	2018-19
4.	Rongnichu	48x2 = 96	2015-16	2017-18
5.	Bhasme	25.5x2 = 51	2012-13	2017-18

iv) The details of transmission system for evacuation of power from the above projects in Sikkim is given hereunder:-



Part-B: Transmission System for development of pooling substation within Sikkim and transfer of power to a new pooling station Kishanganj.

- a) Establishment of 400/220/132 kV (400/220 kV, 16x105 MVA, Single Phase transformers and 220/132 kV, 3x100 MVA) Gas Insulated Sub-station at Rangpo –Commissioned;
- b) Establishment of 220 kV Gas Insulated switching station at New Melli – Commissioned;
- c) LILO of Teesta III – Kishanganj 400 kV D/C line (quad, Teesta III - Kishanganj 400 kV D/c line to be constructed through JV route) at Rangpo - by December, 2015;
- d) Rangpo - New Melli 220kV D/C line (with twin Moose conductor) - Commissioned
- e) LILO of Gangtok-Rangit 132 kV S/C line at Rangpo and termination of Gangtok-Rangpo/Chujachen and Melli - Rangpo/Chujachen 132 kV lines (constructed under part-A through LILO of Gangtok-Melli 132 kV S/c line upto Rangpo) at Rangpo Sub-station - Part commissioned
- f) LILO of Teesta V-Siliguri 400kV D/c line at Rangpo - Commissioned
- g) Kishanganj - Patna 400 kV D/C (quad) line - By November, 2015
- v) Presently one 132 kV circuit from Chujachen HEP is connected with Rangpo Sub-station and other circuit is connected to Melli 132 kV Sub-station bypassing Rangpo Sub-station. The Jorethang HEP is connected through LILO of one circuit of New



Melli-Rangpo 220 kV D/C line at Jorethang.

- vi) Presently power from Chuzachen HEP and Jorethang HEP is being evacuated through Rangpo 400/220/132 kV Sub-station to New Silliguri.
- vii) Further, the commissioning of 400/220 kV Sub-station at Kishanganj along with associated LILO works would provide an alternative path for evacuation of hydro power from Teesta-V (510 MW), Rangit -III (3x20 MW), Chuzachen (99 MW) and Jorethang (96 MW) HEPs from New Silliguri 400 kV Sub-station and would help in meeting increasing load demand of Bihar.

68. We have considered the submission of petitioner and views of CEA vide its letter dated 14.10.2015. Patna 400/220 kV Sub-station has been experiencing high voltage problem, particularly during light load conditions of the Eastern Grid and commissioning of bus reactor at Patna Sub-station has helped in mitigating overvoltage problem. CEA has also clarified that commissioning of 400/220 kV Sub-station at Kishanganj along with associated LILO works would help in meeting increasing load demand in Bihar. Accordingly, we approve the transmission asset covered in the instant petition to be included in PoC charges under Central Electricity Regulatory Commission (Sharing of Transmission Charges & Losses) Regulations, 2010.

69. 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.



70. This order disposes of Petition No. 292/TT/2013.

-sd-  
**(A.S. Bakshi)**  
Member

-sd-  
**(A.K. Singhal)**  
Member

-sd-  
**(Gireesh B. Pradhan)**  
Chairperson



## CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN

		(₹ in lakh)
Details of Loan		2013-14
<b>1</b>	<b>FC BOND (17.1.2013) - COD</b>	
	Gross loan opening	421.66
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	421.66
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	421.66
	Average Loan	421.66
	Rate of Interest	3.875%
	Interest	16.34
	Rep Schedule	The Note matures on 17.1.2023
<b>2</b>	<b>Bond XLIII ( Add.Cap. 2013-2014)</b>	
	Gross loan opening	0.00
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	0.00
	Additions during the year	63.85
	Repayment during the year	0.00
	Net Loan-Closing	63.85
	Average Loan	31.93
	Rate of Interest	7.93%
	Interest	2.53
	Rep Schedule	12 annual installments from 20.05.2017
	<b>Total Loan</b>	
	Gross loan opening	421.66
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	421.66
	Additions during the year	63.85
	Repayment during the year	0.00
	Net Loan-Closing	485.51
	Average Loan	453.58
	Rate of Interest	4.1604%
	<b>Interest</b>	18.87

