

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 40/TT/2014

Coram:

**Shri A.S. Bakshi, Member
Dr. M.K. Iyer, Member**

**Date of Hearing : 14.03.2016
Date of Order : 23.03.2016**

In the matter of:

Determination of transmission tariff for 765/400 kV, 1X1500 MVA, ICT-1 at Dharmjaygarh Substation along with associated bays under "Supplementary Transmission Scheme of upcoming IPP Projects in Chhattisgarh" in Western Region for the 2014-19 tariff period under Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 and Regulation 86 of Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999.

And in the matter of:

Power Grid Corporation of India Ltd.
'SAUDAMINI', Plot No-2,
Sector-29, Gurgaon -122 001 (Haryana).

.....**Petitioner**

Versus

1. Chhattisgarh State Electricity Board
P.O. Sunder Nagar, Dangania, Raipur
Chhattisgarh – 492 013
2. Madhya Pradesh Power Management Company Limited
Shakti Bhawan, Rampur
Jabalpur –482 008
3. Maharashtra State Electricity Distribution Co. Limited
4th Floor, Prakashgad, Plot no. 9,
Andheri (East),
Mumbai – 400 052
4. Gujarat Urja Vikas Nigam Limited



Sardar Patel Vidyut Bhawan,
Race Course Road, Vadodara – 390 007

5. Electricity Department
Govt. of Goa
Vidyut Bhawan, Panaji,
Near Mandvi Hotel, Goa – 403 001
6. Electricity Department
Administration of Daman & Diu
Daman – 396 210
7. Electricity Department
Administration of Dadra Nagar Haveli,
U.T., Silvassa – 396 230
8. Madhya Pradesh Audyogik Kendra
Vikas Nigam(Indore) Ltd.
3/54, Press Complex, Agra-Bombay Road,
Indore – 452 008

.....Respondents

The following were present:-

For Petitioner: Shri S.S. Raju, PGCIL
 Shri Rakesh Prasad, PGCIL
 Shri Jasbir Singh, PGCIL
 Shri Aryaman Saxena, PGCIL
 Shri M.M. Mondal, PGCIL

For Respondent: None.

ORDER

The present petition has been filed by Power Grid Corporation of India Ltd. (“the petitioner”) for determination of tariff for 765/400 kV, 1X1500 MVA, ICT-1 at Dharmjaygarh Substation along with associated bays under “Supplementary Transmission Scheme of upcoming IPP Projects in Chhattisgarh” in Western Region under Central Electricity Regulatory Commission (Terms and Conditions



of Tariff) Regulations, 2014 (hereinafter referred to as “the 2014 Tariff Regulations”) for the period from COD (9.7.2014) to 31.3.2019.

2. The respondents are distribution licensees or electricity departments or power procurement companies of States, who are procuring transmission service from the petitioner, mainly beneficiaries of Western Region.

3. The brief facts of the case are as follows:-

(a) The investment approval for the project was accorded by Board of Directors of the petitioner company vide Memorandum No. C/CP/WR-241 dated 22.3.2012 at an estimated cost of ₹13219 lakh, which included IDC of ₹716 lakh. Further, approval of RCE for the project was accorded by Board of Directors of the petitioner company vide Memorandum No. C/CP/RCE- WR-241 dated 9.12.2014 at an estimated cost of ₹14460 lakh, which included IDC of ₹576 lakh. The revised approved apportioned cost for the instant asset is ₹5120.72 lakh.

(b) The scope of the instant project is as under:-

Substations:

1. Extension of 765/400 kV Dharmjaygarh/Korba Pooling station by 2x1500 MVA, 765/400 kV ICT.

(c) The date of the commercial operation of the instant transmission asset was 9.7.2014. The petitioner has submitted certificate issued by WRLDC in support of the claim of trial operation for declaring commercial



operation. The petitioner has also submitted the single line diagram of the transmission asset.

- (d) The petitioner vide affidavit dated 24.11.2015 submitted the apportioned cost vis-à-vis FR cost and completed cost for the asset covered in this petition is as follows:

Assets	COD (Actual)	Apportioned Cost as per FR	Apportioned cost as per RCE	Estimated completion cost as per Auditor's Certificate
ICT-I at Dharamjaygarh (covered under instant Petition)	9.7.2014	5460.63	5120.72	5072.59

- (e) The petitioner was directed to explain the usage of asset in terms of other assets on the sub-station i.e. which lines commissioned and power flow. The petitioner vide affidavit dated 31.10.2014 submitted that, 2 nos of 765/400 kV, ICTs at Dharamjaygarh under Supplementary Transmission Scheme for upcoming projects in Chhatisgarh were agreed in the 32nd Standing Committee meeting (SCM) of Western Region held on 13.5.2011, as BALCO TPS and Vandana Vidyuth requested to change the connectivity from Champa PS to Dharamjaygarh sub-station. Further, dedicated 400 kV transmission lines between above generating stations to Dharamjaygarh sub-station are to be constructed by respective agency as agreed in SCM. In the 7th coordination committee meeting held on 25.2.2014, representative of BALCO TPS stated that commissioning



activities of two generating units i.e. U#1 (300 MW) and U#2 (300 MW) have been completed. The expected commissioning of these units was May, 2014. Both the transmission assets have been commissioned in June and July 2014.

- (f) The petitioner was directed to submit the progress of the generating stations for which this scheme was planned, their installed capacity and LTA. The petitioner vide affidavit dated 31.10.2014 submitted that, BALCO TPS-4x300 MW is ready for synchronization. Consent for operation from Chhattisgarh Govt. is expected by end of December 2014. COD of 1st unit is expected to take 2 months from the date of consent to operate i.e. Feb 2015. Subsequent units would commercialize with gap of one month for each unit. Vandana Vidyuth TPS-2x135 MW “1x270 MW. The first unit is expected to be commissioned by April 2015, second unit start up connection is not available and third unit is expected in 2017.
- (g) The petitioner was directed vide letter dated 3.6.2014, to submit whether scope of project of Champa was revised and its implications. The petitioner, vide affidavit dated 31.10.2014, has submitted that, earlier interconnection of BALCO TPS and Vanadana Vidyuth was provided at Champa Pooling station. However, in 32nd meeting of the standing committee on power system planning in Western Region held on 13th May 2011 at NRPC, Katwaria Sarai, New Delhi, these IPPs requested connectivity from 765 kV Dharamjaygarh switching station instead of earlier agreed Champa Pooling station because of following facts:



- Proximity of their generating plants to Dharamjaygarh sub-station
- Anticipating severe ROW near Champa Pooling station.

The change in connectivity request had been agreed. The petitioner submitted that, to facilitate the interconnection strengthening of Dharamjaygarh/Korba sub-station by installing 2x1500 MVA ICT was also agreed. Accordingly, dedicated transmission system by the project developer is as under:

- **BALCO TPS-** Dharamjaygarh/Korba 400 kV D/C (High Capacity Line)
- **Vandana Vidyut TPS-** Dharamjaygarh/Korba 400 kV D/C Line.

(h) The petitioner has claimed revised transmission charges vide affidavit dated 24.11.2015 as under:-

(₹ in lakh)					
Particulars	2014-15 (Pro-rata)	2015-16	2016-17	2017-18	2018-19
Depreciation	135.20	223.25	252.15	259.41	259.41
Interest on Loan	178.66	276.32	292.86	277.06	250.69
Return on Equity	158.56	263.61	299.05	308.06	308.06
Interest on Working Capital	16.70	25.83	27.96	28.26	27.94
O&M Expenses	105.43	149.52	154.49	159.62	164.91
Total	594.55	938.53	1026.51	1032.41	1011.01

(i) The details submitted by the petitioner in support of its claim for interest on working capital are given hereunder:-



(₹ in lakh)

Particulars	2014-15 (Pro-rata)	2015-16	2016-17	2017-18	2018-19
Maintenance Spares	21.71	22.43	23.17	23.94	24.74
O & M Expenses	12.06	12.46	12.87	13.30	13.74
Receivables	136.02	156.42	171.09	172.07	168.50
Total	169.79	191.31	207.13	209.31	206.98
Rate of Interest (%)	13.50	13.50	13.50	13.50	13.50
Pro-rata Interest	16.70	25.83	27.96	28.26	27.94

4. The Annual transmission charges for the instant asset was allowed under Regulation 7(7) of the 2014 Tariff Regulations for inclusion in the Point of Connection (POC) charges vide order dated 23.6.2014. The petitioner has submitted additional information vide affidavits dated 28.5.2014, 1.7.2015 and 31.10.2014. In response to letter dated 3.6.2014, 4.8.2015 the petitioner submitted reply vide affidavit dated 31.10.2014 and 24.11.2015 respectively. The petitioner was also directed to submit replies to the additional queries raised vide ROP dated 16.3.2016. The petitioner has however not submitted any replies regarding the same.

5. The petitioner has served the petition to the respondents and notice of this application has been published in the newspapers in accordance with Section 64 of the Electricity Act, 2003 ("the Act"). No comments have been received from the public in response to the notices published by the petitioner under Section 64 of the Act. The hearing in this matter was held on 14.3.2016. None of the respondents have filed their reply. Having heard the representatives of the petitioner and perused the material on record, we proceed to dispose of the petition.



Commercial Operation Date (“COD”)

6. The petitioner has claimed the date of the commercial operation of the instant transmission asset as 9.7.2014. Regulation 4(3) of the 2014 Tariff Regulations provides as follows:-

“4. Date of Commercial Operation: The date of commercial operation of a generating station or unit or block thereof or a transmission system or element thereof shall be determined as under:

xxx

(3) Date of commercial operation in relation to a transmission system shall mean the date declared by the transmission licensee from 0000 hour of which an element of the transmission system is in regular service after successful trial operation for transmitting electricity and communication signal from sending end to receiving end:

xxx
xxx”

7. The petitioner has submitted WRLDC Certificate indicating completion of successful trial operation in accordance with Regulation 5 of the 2014 Tariff Regulations. Accordingly, the commercial operation date of the transmission asset has been considered as 9.7.2014 and the tariff is worked out from COD to 31.3.2019.

Capital Cost

8. The petitioner has claimed capital cost of ₹3262.49 lakh as on date of commercial operation i.e. 9.7.2014 vide Auditor certificate dated 14.10.2015. The petitioner has also clarified that the capital cost also includes the cost of initial spares, interest during construction and incidental expenditure during



construction. The petitioner has submitted item wise break up of each element of capital cost in affidavit dated 25.11.2015.

9. Regulation 9 (1) and (2) and 10 (1) of the 2014 Tariff Regulations specify as follows:-

“9. Capital Cost: (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.”

“10. Prudence Check of Capital Expenditure: The following principles shall be adopted for prudence check of capital cost of the existing or new projects:

(1) In case of the thermal generating station and the transmission system, prudence check of capital cost may be carried out taking into consideration the benchmark norms specified/to be specified by the Commission from time to time: Provided that in cases where benchmark norms have not been specified, prudence check may include scrutiny of the capital expenditure, financing plan, interest during construction, incidental expenditure during construction for its reasonableness, use of efficient technology, cost over-run and time over-run, competitive bidding for procurement and such other matters as may be considered appropriate by the Commission for determination of tariff.”



10. The petitioner, vide affidavit dated 24.11.2015, has submitted the revised submissions i.e. element wise details of undischarged liabilities as on COD and on closing of each financial year during the 2014-19 tariff period based on Auditor's Certificate dated 14.10.2015. It is further submitted by the petitioner that, expenditure cost certificate has been prepared on cash basis except ₹1.25 lakh of IDC accrued as on COD. Form 4A has been submitted by depicting liability of IDC only. The petitioner was also directed vide letter dated 4.8.2015 to clarify whether Form 4A has been submitted on cash basis or Auditor's certificate has been submitted on accrual basis. In response the petitioner submitted vide affidavit dated 24.11.2015 that, Form 4A has been prepared as per Auditor's certificate and is on cash basis. The projected expenditure is based on estimates likely to be incurred from 1.10.2015 to 31.3.2016 and from 1.4.2016 to 31.3.2017. Auditor's certificate has been prepared on cash basis from expenditure incurred upto 31.3.2015 and for period 1.4.2015 to 30.9.2015.

11. The capital cost of ₹3261.24 lakh after adjusting IDC has been considered to work out the tariff subject to prudence check as discussed in subsequent paragraphs.

Time over-run

12. As per the investment approval dated 22.3.2012, the scheme was scheduled to be commissioned within 24 months from the date of investment approval. Accordingly, the schedule completion date works out to 21.3.2014. However, the actual commissioning of the subject asset was 9.7.2014. The



petitioner has submitted that there is a delay of 100 days (3 months) in commissioning of subject transmission assets.

13. The petitioner has submitted, the following reasons for delay:-

- a) **Withdrawal of L1 bidder and re-tendering of the package-** There was a delay of 10 months due to withdrawal of the L1 bidder and re-tendering of the package. The petitioner submitted that the same was a force majeure condition due to unexpected event and hence delay in execution of the project is beyond the control of the petitioner.

14. The petitioner, vide ROP dated 16.3.2016, was directed to submit the following: (i) Rate of L1 bidder (ii) Details of EMD recovered from L1 bidder and adjustment of the same in capital cost (iii) Increase in re-tendering cost. In response, the petitioner vide affidavit dated 22.3.2016 has submitted that, post submission and opening of bids the lowest bidder, i.e. Siemens Limited sought increase in bid price on the pretext of change in taxes and duties in Union Budget 2012-13 vide their letter dated 10.4.2012 which was not tenable as per terms of bidding documents and their letter claiming compensation and consequent increase in bid prices, resulted in withdrawal of the bid. The bidding process was annulled and fresh bids were invited in line with the CVC's provisions which state that there should be re-tendering in a fair and transparent manner in such situations where L1 bidder withdraws their offer before work order is placed. Accordingly, the bidding was annulled and the bid security submitted by Siemens amounting ₹411 lakh was encashed promptly in May 2012. This encashment of bid security was done at pre-award stage at a point of time there was no contract



in place and credit for this amount of ₹411 lakh was given through corporate IEDC. Subsequent to annulment of bidding process fresh bids were invited vide Notice Inviting Tender (NIT) published on 6.6.2012 under Single Stage Two Envelope (SSTE) Bidding Procedure and order was placed on 11.1.2013. The petitioner also submitted that, this caused a delay of 9 months and work could be started on January 2013. With regard to increase in re-tendering cost, it is submitted that, price quoted by the lowest bidder i.e. Siemens was EURO 38,65,382 plus ₹212,86,43,718 (excluding Taxes and Duties) as against awarded price of EURO 38,65,382 plus USD 6,85,476 plus ₹ 235,31,33,096 (excluding taxes and duties) to L&T Limited after re-tendering. The difference in prices quoted by Siemens and L&T could be due to various market forces including taxes and duties at the time of furnishing their respective bids and pricing strategies followed by them to decide the spread of their total prices over different items.

15. We have considered the submissions of the petitioner. There has been delay of 100 days (about 3 months) in the commissioning of the assets. The petitioner has claimed that the reasons for time over-run were due to withdrawal of L1 bidder and re-tendering of the package. It is observed that the substantial time has been lapsed on account of the delay. The Hon'ble Appellate Tribunal for Electricity in its judgment dated 27.4.2011 in Appeal No.72/2010 has laid down the principle to be followed to determine the liability for time over-run in three scenarios as under:-



- (a) Due to factors entirely attributable to the project developer;
- (b) Due to the factors beyond the control of project developer; and
- (c) Not covered under (a) and (b).

16. In the first scenario, the additional cost due to time over-run would be entirely borne by the project developer and the LD amount, if any, would be retained by them. In the second scenario, the additional cost due to time over-run shall be capitalized, however, the benefit of LD and the insurance proceeds, if any, to be reduced from the capital cost. In the last scenario, the additional cost due to time over-run including LD and insurance proceeds could be shared between the project developer and the beneficiaries.

17. In the present case, against the delay of 100 days in commissioning of subject asset, the delay was mainly on account of withdrawal of L1 bidder and retendering as evidenced by the petitioner. The petitioner has submitted the letter dated 10.4.2012, in which Siemens Limited sought increase in bid price on the pretext of change in taxes and duties in Union Budget 2012-13. The letter submitted by Siemens claiming compensation on account of increase in excise duty, CVD and service tax. The petitioner has also submitted the CVC provisions, Notice Inviting Tender as on 6.6.2012, Notification of award of SSTE placed on 11.1.2013. There has been substantial delay on account of withdrawal of Siemens. In view of all the submitted relevant documents we are of the view that the delay is not attributable to the petitioner. Hence, the delay is covered in the second scenario and accordingly, the delay of 100 days is condoned. However, petitioner is directed to submit the details of action taken against L1 bidder



including forfeiture of EMD at the time of truing up for adjustment in the capital cost.

Cost over-run

18. The petitioner submitted that, there is no cost over-run in comparison to FR cost apportioned. The cost difference is mainly due to lower award cost received in competitive bidding compared to initial estimates. For procurement open competitive bidding route is followed and by providing equal opportunity to all eligible firms, lowest market prices for required product/services is obtained and contracts awarded on basis of lowest evaluated bidder. The best competitive bid prices against tenders are lower than the cost estimates depending on prevailing market conditions.

IDC/IEDC

19. The petitioner was directed vide letter dated 26.2.2015 to submit the computation of IDC from date of infusion of debt fund upto SCOD as per Regulation 11(A) of the 2014 Tariff Regulations and from SCOD to actual COD of the asset. Further the petitioner was directed to submit the details of IEDC during the period of delay in commissioning of the Asset (i.e. SCOD to actual COD).

The details submitted by the petitioner is as follows:-

(₹ in lakh)			
Component	Upto SCOD	SCOD to Actual COD	Total
IDC	114.04	40.26	154.30
IEDC	(-)2.7	4.53	1.83



20. However, the petitioner has subsequently submitted revised tariff forms vide affidavit dated 24.11.2015. The IDC and IEDC claimed based on the revised forms are as follows:

(₹ in lakh)

Component	Claimed by Petitioner
IDC	159.12
IEDC	4.71
Total	163.83

21. The petitioner has submitted the IDC on cash basis for its revised submissions as ₹157.87 lakh discharged up to COD and ₹1.25 lakh discharged in 2014-15. It is also submitted that accrued IDC discharged during 2014-15 is not included in additional capitalization. For IEDC, it is submitted that entire IEDC has been discharged as on COD. Accordingly IDC and IEDC allowed are as follows:

(₹ in lakh)

Component	Discharged upto COD	IDC for 2014-15	Total
IDC	157.87	1.25	159.12
IEDC	4.71	-	4.71
Total	162.58	1.25	163.83

Treatment of Initial spares:

22. Regulation 13(d) of the 2014 Tariff Regulations provides that initial spares shall be capitalised as a percentage of 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%”



23. The petitioner has claimed initial spares of ₹101.31 lakh for sub-station of the subject asset.

24. The petitioner was directed vide affidavit dated 4.8.2015 to submit the year wise details of discharging the same among sub-station and transmission line. The petitioner vide affidavit dated 24.11.2015 submitted that, liability pertaining to initial spares discharged is as given below:

(₹ in lakh)			
Asset	Transmission Line	Sub-station	Total
Initial Spares up to COD and includes as per Auditor's Certificate	-	-	-
Estimated 2014-15 Add cap	-	-	-
Estimated 2015-16 Add Cap	-	-	-
Estimated 2016-17		101.31	101.31

25. The initial spares are calculated considering the percentage of initial spares to the total cost i.e. plant and machinery cost excluding IDC, IEDC, land cost and cost of civil works as per the Auditor's certificate dated 14.10.2015. The proportionate initial spares are considered after adjustment of IDC and IEDC. The initial spares for sub-station works out as (2.26%) which is within the ceiling limits in accordance to the 2014 Tariff regulations.

26. The petitioner has claimed capital cost of ₹3262.49 lakh as on COD in the petition and additional capitalization of ₹642.86 lakh, ₹870.73 lakh and ₹296.52 lakh for the years 2014-15 and 2015-16 and 2016-17 respectively. We have



considered the capital cost of ₹3261.24 lakh as on 31.3.2014 (after adjusting IDC and IEDC) for determination of tariff for the 2014-19 tariff period.

Particulars	₹ in lakh
Capital Cost Claimed (a)	3262.49
IDC discharged as on COD (included in capital cost)	157.87
IDC in 2014-15 (b)	1.25
Capital Cost Approved (a)-(b)	3261.24

Additional Capital Expenditure

27. The petitioner has proposed additional capitalization of ₹642.86 lakh, ₹870.73 lakh and ₹296.52 lakh for the years 2014-15, 2015-16 and 2016-17 respectively towards balance and retention payment under Regulation 14(1) (i) of 2014 Tariff Regulations. We have considered the submissions of the petitioner. The additional capitalization considered is ₹644.11 lakh (including accrued IDC for 2014-15), ₹870.73 lakh and ₹296.52 lakh for 2014-15, 2015-16 and 2016-17 respectively. The total capital cost including additional capitalisation is well within the approved revised apportioned cost. Total additional capitalization of ₹1811.36 lakh for the 2014-19 tariff period is allowed under Regulation 14(1)(i) of the 2014 Tariff Regulations.

(₹ in lakh)

Particulars	Cost as per revised Investment Approval is ₹5120.72 lakh							Total capital cost including additional capitalisation as on 31.3.2019
	Capital cost as on COD	Additional capitalization projected					Total additional capitalization	
		2014-15	2015-16	2016-17	2017-18	2018-19		
As claimed by petitioner	3262.49	642.86	870.73	296.52	-	-	1810.11	5072.60
As approved	3261.24	644.11	870.73	296.52	-	-	1811.36	5072.60



Debt:Equity Ratio

28. Regulation 19 (1) of the 2014 Tariff Regulations specifies as under:-

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

Provided that:

- i. where equity actually deployed is less than 30% of the capital cost, actual equity shall be considered for determination of tariff:
- ii. the equity invested in foreign currency shall be designated in Indian rupees on the date of each investment:
- iii. any grant obtained for the execution of the project shall not be considered as a part of capital structure for the purpose of debt : equity ratio.”

29. The petitioner has considered debt:equity ratio as 70:30 as on COD. We have considered debt:equity ratio of 70:30 as on COD and for additional capitalization during 2014-15, 2015-16 and 2016-17 respectively. The details of the debt:equity as on the date of COD to 31.3.2019 considered for the purpose of tariff computation for the 2014-19 tariff period is as follows:-

(₹ in lakh)

Asset	As on COD		Additional capitalization during 2014-19		As on 31.3.2019	
	Amount	(%)	Amount	(%)	Amount	(%)
Debt	2282.87	70.00	1267.95	70.00	3550.82	70.00
Equity	978.37	30.00	543.41	30.00	1521.78	30.00
Total	3261.24	100.00	1811.36	100.00	5072.60	100.00

Interest on Loan (“IOL”)

30. Clause (5) & (6) of Regulation 26 of the 2014 Tariff Regulations provides as under:-



“(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.”

31. The petitioner vide letter dated 4.8.2015 was directed to submit,
- Details regarding drawl of SBI loans, infusion of SBI loans into the project and applicable interest rate from date of drawl/infusion of SBI loan till the actual COD.
 - Actual loan deployed, reason for early drawl of loan for the funding of additional capitalization, utilization of the loan from date of drawl of the loan and infusion in the project and treatment of interest on loan paid during the said period.
 - Treatment of interest accrued/paid during that period, in case of variation in the date of drawal of loan and infusion of the same in the project.
 - Applicable interest rate from date of drawl/infusion of SBI loan till actual COD.
32. The petitioner vide affidavit dated 24.11.2015 submitted that, all domestic loans/bonds are raised as common pool of funding for all the projects under construction and loans allocated to the project based on expenditure incurred



periodically. Any interest earned on the surplus fund during the period between drawl of loans/bonds and actual deployment is credited through corporate IEDC annually. It is further submitted by the petitioner that, SBI loan has been deployed upto COD and not in additional capitalization. Copy of proof of SBI rate of interest is also submitted by the petitioner.

33. The petitioner was directed vide letter dated 26.2.2015 to submit details of default interest payment if any. In response the petitioner vide affidavit dated 1.7.2015 submitted that, there is no default in interest payment on loans.

34. We have considered the weighted average rate of IOL on the basis of rate prevailing as on 1.4.2014. Further, the petitioner has prayed to allow it to bill and adjust impact on interest on loan due to change in interest rate on account of floating rate of interest applicable during 2014-19 period, if any from the respondents. The IOL has been worked out in accordance with Regulation 26 of the 2014 Tariff Regulations. The petitioner's prayer to bill and adjust the impact on interest on loan due to change in interest rate on account of floating rate of interest applicable during the 2014-19 tariff period from the respondents will be considered at the time of truing up. The details of weighted average rate of interest are placed at **Annexure-I** and the IOL has been worked out as follows:-

Particulars	(₹ in lakh)				
	2014-15 (Pro-rata)	2015-16	2016-17	2017-18	2018-19
Gross loan opening	2282.87	2733.75	3343.26	3550.82	3550.82
Cumulative Repayment upto previous year	0.00	134.86	358.11	610.26	869.66
Net Loan-Opening	2282.87	2598.89	2985.15	2940.56	2681.16



Particulars	2014-15 (Pro-rata)	2015-16	2016-17	2017-18	2018-19
Additions during the year	450.88	609.51	207.56	0.00	0.00
Repayment during the year	134.86	223.25	252.15	259.41	259.41
Net Loan-Closing	2598.89	2985.15	2940.56	2681.16	2421.75
Average Loan	2440.88	2792.02	2962.86	2810.86	2551.45
Rate of Interest (%)	10.0463	9.8981	9.8856	9.8581	9.8268
Interest	178.22	276.36	292.90	277.10	250.73

Return on Equity (“ROE”)

35. Clause (1) & (2) of Regulation 24 and Clause (2) of Regulation 25(2) 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:”

“25. Tax on Return on Equity:

(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."

Additional Return on Equity

36. The petitioner vide affidavit dated 24.11.2015 submitted that, assets are commissioned within the CERC timeline specified and thus additional ROE of 0.5% has been claimed since the elements covered in this project have been qualified time schedule for additional ROE of 0.5% as 30 months in the Appendix-II to the Regulations.

37. The petitioner has computed ROE at the rate of 20.243% after grossing up the ROE with MAT rate as per the above Regulation. The petitioner has further submitted that the grossed up ROE is subject to truing up based on the actual tax paid along with any additional tax or interest, duly adjusted for any refund of tax including the interest received from IT authorities, pertaining to the tariff period 2014-19 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.



38. Regulation 24(2)(iii) of the 2014 Tariff Regulations mandates the petitioner to submit a certificate from Regional Power Committee/National Power Committee that commissioning of the particular element will benefit the system operation in the regional/national grid. The petitioner has submitted the WRPC certificate dated 12.10.2015 vide affidavit dated 24.11.2015 which states that,

“...transmission elements of PGCIL Chhattisgarh project have been commissioned within timelines as per PGCIL letter dated 10.7.2015 and also stating that the transmission asset will be beneficial for system operation in the Western Region”.

39. Therefore we have considered the submissions made by the petitioner and accordingly allowed additional ROE of 0.5% in accordance with proviso (iii) to Regulation 24(2) of 2014 Tariff Regulations. Further, 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. The petitioner has submitted that MAT rate is applicable to the petitioner's company. 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 determined by the Commission is shown in the table below:-

(₹ in lakh)					
Particulars	2014-15 (Pro-rata)	2015-16	2016-17	2017-18	2018-19
Opening Equity	978.37	1171.61	1432.82	1521.78	1521.78
Additional Capitalization	193.23	261.22	88.96	0.00	0.00



Particulars	2014-15 (Pro-rata)	2015-16	2016-17	2017-18	2018-19
Closing Equity	1171.61	1432.82	1521.78	1521.78	1521.78
Average Equity	1074.99	1302.21	1477.30	1521.78	1521.78
Return on Equity (Base Rate) (%)	16.00	16.00	16.00	16.00	16.00
Tax rate for the year (%)	20.961	20.961	20.961	20.961	20.961
Rate of Return on Equity (Pre Tax) (%)	20.243	20.243	20.243	20.243	20.243
Return on Equity (Pre Tax)	158.15	263.61	299.05	308.05	308.05

Depreciation

40. Clause (2), (5) and (6) of Regulation 27 of the 2014 Tariff Regulations provide as follows:-

"27. Depreciation:

(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"

"(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."

41. Clause (67) of Regulation 3 of the 2014 Tariff Regulations defines useful life as follows:-



“(67) ‘Useful life’ in relation to a unit of a generating station and transmission system from the COD shall mean the following, namely:

- (a) Coal/Lignite based thermal generating station 25 years
- (b) Gas/Liquid fuel based thermal generating station 25 years
- (c) AC and DC sub-station 25 years
- (d) Gas Insulated Substation (GIS) 25 years
- (d) Hydro generating station including pumped Storage hydro generating stations 35 years
- (e) Transmission line (including HVAC & HVDC) 35 years
- (f) Communication system 15 years”

42. The petitioner has claimed depreciation considering capital expenditure of ₹3262.49 lakh as on COD with additional capitalization of ₹642.86 lakh, ₹870.73 lakh and ₹296.52 lakh for the 2014-15, 2015-16 and 2016-17 respectively for the 2014-19 tariff period.

43. We have computed depreciation considering capital expenditure of ₹3261.24 lakh (after adjustment of IDC and IEDC) as on COD and additional capitalization of ₹1810.11 lakh during 2014-19. The weighted average useful life of the asset has been considered as 25 years in accordance with the above regulation. The details of the depreciation allowed are given hereunder:-

(₹ in lakh)					
Particulars	2014-15 (Pro-rata)	2015-16	2016-17	2017-18	2018-19
Opening Gross block	3261.24	3905.35	4776.08	5072.60	5072.60
Additional Capitalization	644.11	870.73	296.52	0.00	0.00
Closing Gross block	3905.35	4776.08	5072.60	5072.60	5072.60
Average Gross block	3583.30	4340.72	4924.34	5072.60	5072.60
Rate of Depreciation (%)	5.178	5.143	5.120	5.114	5.114
Depreciable Value	3224.97	3906.64	4431.91	4565.34	4565.34
Elapsed Life of the assets at beginning of the year	0	1	2	3	4
Weighted Balance Useful life of the assets	25	24	23	22	21



Particulars	2014-15 (Pro-rata)	2015-16	2016-17	2017-18	2018-19
Remaining Depreciable Value	3224.97	3771.78	4073.80	3955.08	3695.68
Depreciation	134.86	223.25	252.15	259.41	259.41

Operation & Maintenance Expenses (“O&M Expenses”)

44. Regulation 29(4)(a) of the 2014 Tariff Regulations specifies the following norms for O&M Expenses:-

Particulars	2014-15 (Pro-rata)	2015-16	2016-17	2017-18	2018-19
(Norms)- 400 kV bays(₹ lakh/ bay)	60.30	62.30	64.37	66.51	68.71
(Norms)- 765 kV bays(₹ lakh/ bay)	84.42	87.22	90.12	93.11	96.20
No of Bays (400 kV)	1	1	1	1	1
No of Bays (765 kV)	1	1	1	1	1
O&M Expense	105.18	149.52	154.49	159.62	164.91

45. The petitioner has claimed O&M Expenses as specified in sub-clause (a) of clause (4) of Regulation 29 of the 2014 Tariff Regulations. The details of O&M Expenses allowed are given hereunder:-

Asset	Year				
	2014-15 (Pro-rata)	2015-16	2016-17	2017-18	2018-19
O&M Expenses	105.18	149.52	154.49	159.62	164.91

(₹ in lakh)

46. The petitioner has submitted that norms for O&M Expenses for the tariff period 2014-19 have been arrived on the basis of normalized actual O&M Expenses during the period 2008-13. The petitioner has further submitted that the wage revision of the employees of the petitioner is due during the 2014-19



tariff period and actual impact of wage hike, which will be effective at a future date, has not been factored in fixation of the normative O&M rate specified for the tariff period 2014-19. The petitioner has prayed to be allowed to approach the Commission for suitable revision in the norms of O&M Expenses for claiming the impact of such increase.

47. 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”)

48. As per 2014 Tariff Regulations the components of the working capital and the interest thereon are discussed hereinafter:-

(i) Receivables

As per Regulation 28(1) (c) (i) of the 2014 Tariff Regulations, receivables will be equivalent to two months average billing calculated on target availability level. The petitioner has claimed the receivables on the basis of 2 months transmission charges claimed in the petition. In the tariff being allowed, receivables have been worked out on the basis of 2 months transmission charges.

(ii) Maintenance Spares



Regulation 28 (1) (c) (ii) of the 2014 Tariff Regulations provides for maintenance spares @ 15% per annum of the O&M Expenses from 1.4.2014. The petitioner has claimed maintenance spares for the instant asset and value of maintenance spares has accordingly been worked out as 15% of O&M Expenses.

(iii) O & M Expenses

Regulation 28 (1) (c) (iii) of the 2014 Tariff Regulations provides for operation and maintenance expenses for one month to be included in the working capital. The petitioner has claimed O & M Expenses for the instant asset and value of O & M Expenses has accordingly been worked out by considering 1 month O&M Expenses.

(iv) Rate of interest on working capital

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 transmission system including communication system or element thereof, as the case may be, is declared under commercial operation, whichever is later. Further, the 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. The rate of interest on working capital considered is 13.50% (SBI Base Rate of 10% plus 350 basis points).



49. The interest on working capital allowed is shown in the table below:-

(₹ in lakh)

Particulars	2014-15 (Pro-rata)	2015-16	2016-17	2017-18	2018-19
Maintenance Spares	15.78	22.43	23.17	23.94	24.74
O & M expenses	8.76	12.46	12.87	13.30	13.74
Receivables	98.84	156.43	171.09	172.07	168.51
Total	123.39	191.31	207.14	209.32	206.99
Rate of Interest (%)	13.50	13.50	13.50	13.50	13.50
Interest	16.66	25.83	27.96	28.26	27.94

Annual Transmission Charges

50. The detailed computation of the various components of the annual fixed charges for the transmission asset for the tariff period 2014-19 is summarised below:-

(₹ in lakh)

Particulars	2014-15 (Pro-rata)	2015-16	2016-17	2017-18	2018-19
Gross Block					
Opening Gross Block	3261.24	3905.35	4776.08	5072.60	5072.60
Additional Capitalization	644.11	870.73	296.52	0.00	0.00
Closing Gross Block	3905.35	4776.08	5072.60	5072.60	5072.60
Average Gross Block	3583.30	4340.72	4924.34	5072.60	5072.60
Rate of Depreciation	5.178	5.143	5.120	5.114	5.114
Depreciable Value	3224.97	3906.64	4431.91	4565.34	4565.34
Elapsed Life of the assets at beginning of the year	0	1	2	3	4
Weighted Balance Useful life of the assets	25	24	23	22	21
Remaining Depreciable Value	3224.97	3771.78	4073.80	3955.08	3695.68
Depreciation	134.86	223.25	252.15	259.41	259.41
Interest on Loan					



Particulars	2014-15 (Pro-rata)	2015-16	2016-17	2017-18	2018-19
Gross Normative Loan	2282.87	2733.75	3343.26	3550.82	3550.82
Cumulative Repayment upto Previous Year	0.00	134.86	358.11	610.26	869.66
Net Loan-Opening	2282.87	2598.89	2985.15	2940.56	2681.16
Additions	450.88	609.51	207.56	0.00	0.00
Repayment during the year	134.86	223.25	252.15	259.41	259.41
Net Loan-Closing	2598.89	2985.15	2940.56	2681.16	2421.75
Average Loan	2440.88	2792.02	2962.86	2810.86	2551.45
Weighted Average Rate of Interest on Loan (%)	10.0463	9.8981	9.8856	9.8581	9.8268
Interest	178.22	276.36	292.90	277.10	250.73
Return on Equity					
Opening Equity	978.37	1171.61	1432.82	1521.78	1521.78
Additions	193.23	261.22	88.96	0.00	0.00
Closing Equity	1171.61	1432.82	1521.78	1521.78	1521.78
Average Equity	1074.99	1302.21	1477.30	1521.78	1521.78
Return on Equity (Base Rate) (%)	16.00	16.00	16.00	16.00	16.00
MAT Rate for the year 2013-14 (%)	20.961	20.961	20.961	20.961	20.961
Rate of Return on Equity (Pre Tax) (%)	20.243	20.243	20.243	20.243	20.243
Return on Equity (Pre Tax)	158.15	263.61	299.05	308.05	308.05
Interest on Working Capital					
Maintenance Spares	15.78	22.43	23.17	23.94	24.74
O & M expenses	8.76	12.46	12.87	13.30	13.74
Receivables	98.84	156.43	171.09	172.07	168.51
Total	123.39	191.31	207.14	209.32	206.99
Interest	16.66	25.83	27.96	28.26	27.94
Annual Transmission Charges					
Depreciation	134.86	223.25	252.15	259.41	259.41



Particulars	2014-15 (Pro-rata)	2015-16	2016-17	2017-18	2018-19
Interest on Loan	178.22	276.36	292.90	277.10	250.73
Return on Equity	158.15	263.61	299.05	308.05	308.05
Interest on Working Capital	16.66	25.83	27.96	28.26	27.94
O & M Expenses	105.18	149.52	154.49	159.62	164.91
Total	593.07	938.56	1026.55	1032.43	1011.04

Filing Fee and Publication Expenses

51. 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. 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

52. 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.

Service Tax

53. The petitioner has sought to recover Service Tax on Transmission Charges separately from the respondents, if at any time service tax on



transmission is withdrawn from negative list in future. We are of the view that the petitioner's prayer of Service Tax is premature.

Sharing of Transmission Charges

54. 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, as provided in Regulation 43 of the 2014 Tariff Regulations.

55. This order disposes of Petition No. 40/TT/2014.

Sd/-
(Dr. M. K. Iyer)
Member

Sd/-
(A.S. Bakshi)
Member



ANNEXURE-I

DETAILS OF LOAN BASED ON ACTUAL LOAN PORTFOLIO 2014-19

(₹ in lakh)

Particulars	Interest Rate (%)	Loan deployed as on 1.4.2014	Additions during the tariff period	Total
SBI(21.3.2012)-Loan 1-	10.25	300.00	0.00	300.00
SBI(21.3.2012)-Loan 2-	10.25	1764.98	0.00	1764.98
BOND-XLV-Loan 3-	9.65	100.00	0.00	100.00
SBI (2014-15)-Loan 4-	10.25	118.76	0.00	118.76
BOND XLVII-ADD CAP FOR 2014-15-	8.93	0.00	36.00	36.00
BOND XLVIII-ADD CAP FOR 2014-15-	8.20	0.00	299.00	299.00
BOND XLIX-ADD CAP FOR 2014-2015	8.15	0.00	115.00	115.00
Total		2283.74	450.00	2733.74

CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN FOR TARIFF PERIOD 2014-19

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Gross Opening Loan	2283.74	2733.74	2733.74	2733.74	2733.74
Cumulative Repayments of Loans upto Previous Year	0.00	0.00	0.00	187.72	383.77
Net Loans Opening	2283.74	2733.74	2733.74	2546.02	2349.97
Add: Drawl(s) during the year	450.00	0.00	0.00	0.00	0.00
Less: Repayment(s) of Loan during the year	0.00	0.00	187.72	196.05	199.05
Net Closing Loan	2733.74	2733.74	2546.02	2349.97	2150.92
Average Net Loan	2508.74	2733.74	2639.88	2448.00	2250.45
Rate of Interest on Loan (%)	10.0463	9.8981	9.8856	9.8581	9.8268
Interest on Loan	252.04	270.59	260.97	241.32	221.15

