

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 65/TT/2015

Coram:

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

**Date of Hearing: 06.10.2015
Date of Order : 14.07.2016**

In the matter of

Approval of transmission tariff for 400 kV D/C (Quad) Balipara-Bongaigaon Transmission Line alongwith associated bays at Bongaigaon Sub-station and Balipara Sub-station including 30% Fixed Series Compensation at Balipara and 4x63 MVAR, 420 kV Line Reactors (2 nos. each at Bongaigaon and Balipara end) (anticipated DOCO-7.11.2014) under Transmission System for immediate evacuation of power from Kameng HEP (Part-B of North East-Northern/Western Interconnector-I) for tariff block 2014-19 under Regulation-86 of Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999 and Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014.

And in the matter of

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

.....**Petitioner**

Vs

1. Assam Electricity Grid Corporation Limited,
(Formerly Assam State Electricity Board),
Bijulee Bhawan, Paltan bazaar,
Guwahati-781 001, Assam

2. Meghalaya Energy Corporation Limited,
(Formerly Meghalaya State Electricity Board),
Short Round Road, "Lumjingshai",
Shillong-793 001, Meghalaya



3. Government of Arunachal Pradesh,
Itanagar, Arunachal Pradesh
4. Power and Electricity Department,
Government of Mizoram,
Aizawl, Mizoram
5. Manipur State Electricity Distribution Company Limited,
(Formerly Electricity Department, Government of Manipur),
Keishampat, Imphal
6. Department of Power,
Government of Nagaland,
Kohima, Nagaland
7. Tripura State Electricity Corporation Limited,
Vidyut Bhawan, North Banamalipur,
Agartala, Tripura (W)-799 001, Tripura
8. ONGC Tripura Power Corporation Limited,
6th Floor, A Wing, IFCI Towers,
New Delhi-110 019
9. NTPC Limited,
NTPC Bhawan, Scope Complex,
Institutional Area, Lodhi Road,
New Delhi-110 003

.....Respondents

For petitioner : Shri R.K. Srivastav, PGCIL
Shri S.S Raju, PGCIL
Shri Vivek Kumar Singh, PGCIL
Shri Kaushik Goswami, PGCIL
Shri S.K. Venkatesan, PGCIL
Shri M.M. Mondal, PGCIL

For respondents : None

ORDER

In the instant petition, Power Grid Corporation of India Limited (PGCIL) has sought approval of transmission tariff for 400 kV D/C (Quad) Balipara-Bongaigaon



Transmission Line alongwith associated bays at Bongaigaon Sub-station and Balipara Sub-station including 30% Fixed Series Compensation at Balipara and 4x63 MVAR, 420 kV Line Reactors (2 nos. each at Bongaigaon and Balipara end) (hereinafter referred to as "transmission asset") under Transmission System for immediate evacuation of power from Kameng HEP (Part-B of North East-Northern/Western Interconnector-I) in North-Eastern Region for tariff block 2014-19 under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 (hereinafter referred to as the "2014 Tariff Regulations").

2. Investment Approval (IA) of the project was accorded by Board of Directors of the petitioner vide Memorandum No. C/CP/NER-NR, WR Intr-I dated 27.2.2009 at an estimated cost of ₹1113019 lakh including IDC of ₹106605 lakh (based on 4th Quarter, 2008 price level). The revised cost estimate was approved by Board of Directors of the petitioner vide Memorandum No. C/CP/RCE:NE-NR/WR Interconnector-I dated 9.12.2015 at a cost of ₹1376271 lakh including IDC of ₹174732 lakh (based on April, 2015 price level). The instant assets are covered under Part-B of the project and were scheduled to be commissioned within 48 months from the date of IA i.e. by 26.2.2013, say 1.3.2013.

3. The revised broad scope of work covered under the project is as follows:-

Transmission Lines:

Part A: North East/Northern Western Interconnector-I

a. Biswanath Chariyali-Agra±800 kV, 6000 MW HVDC



- bipole line; : 1971 km
- b. Balipara-Biswanath Chariyali 400 kV D/C line; : 73 km
- c. LILO of Ranganadi-Balipara 400 kV D/C line
at Biswanath Chariyali (Pooling Point); : 52 km
- d. Biswanath Chariyali-Biswanath Chariyali (AEGCL)
132 kV D/C line. : 22 km

Part-B: Transmission System for immediate evacuation of power from Kameng HEP

- a. Kameng-Balipara 400 kV D/C line; : 65 km
- b. Balipara-Bongaigaon 400 kV D/C line (Quad conductor)
with 30% Fixed Series Compensation at Balipara end. : 300 km

Part-C: Transmission System for immediate evacuation of power from Lower Subansiri HEP

- a. Lower Subansiri-Biswanath Chariyali (Pooling Point)
400 kV two sub-station (2) D/C lines with twin lapwing
Conductor. : 2x175 km

Sub-stations:

Part A: North-East/Northern Western Interconnector-I

- a. Establishment of 400/132 kV Pooling Station at Biswanath Chariyali
with 2x200 MVA, 400/132/33 kV transformers along with associated line bays;
- b. HVDC rectifier module of 3000 MW at Biswanath Chariyali and
inverter module of 3000 MW capacity at Agra;
- c. Augmentation of 400 kV Agra Sub-station by 4x105 MVA, 400/220/33
kV transformer along with associated bays;
- d. Extension of 400 kV line bays at Balipara Sub-station;
- e. Extension of 132 kV line bays of Biswanath Chariyali (AEGCL).

Part-B: Transmission System of immediate evacuation of power from Kameng HEP

- a. 2nd 315 MVA, 400/220 kV ICT at Misa;



- b. Extension of 400 kV line bays at Bongaigaon and Balipara Sub-stations.

Part C: Transmission System for immediate evacuation of power from Lower Subansiri HEP

- a. Extension of 400 kV line bays at Biswanath Chariyali Pooling Sub-station.

Reactive Compensation

A. Line reactors

S.No.	Name of line	Line Reactor
1	L. Subansiri-Biswanath Chariyali 400 kV 2xD/C line	1x63 MVAR* at Biswanath Chariyali end on each Ckt. (Total 4 nos. of reactors)
2	Balipara-Bongaigaon 400 kV D/C line (Quad Moose)	1x63 MVAR at both end of each Ckt. (Total 4 nos. of reactors)
3	Balipara-Biswanath Chariyali 400 kV D/C line resulting from LILO of Ranganadi-Balipara 400 kV d/C line at Biswanath Chariyali	1x50 MVAR Existing Fixed line reactor in each circuit at Balipara end to be made switchable at the present location itself

*Switchable line reactor

B. Bus reactors

S.No.	Name of Sub-station	Bus Reactor
1	Biswanath Chariyali	2x80 MVAR
2	Bongaigaon	1x80 MVAR
3	Balipara	1x80 MVAR
4	Lower Subansiri	1x80 MVAR*
5	Kameng	1x80 MVAR*



*These reactors would be a part of generation switchyard

4. Annual Fixed Cost for the transmission asset was allowed vide order dated 15.4.2015 under Regulation 7(7) of the 2014 Tariff Regulations, subject to adjustment as per the said Regulation.

5. The petitioner initially claimed transmission tariff for the instant asset from the anticipated date of commercial operation in tariff block 2009-14 in Petition No.45/TT/2013. Subsequently, the petitioner vide affidavit dated 5.6.2014 in Petition No. 45/TT/2013 submitted revised anticipated date of commercial operation of instant asset as 1.7.2014 i.e. during the 2014-19 period. Therefore, the petitioner was directed to file a fresh petition in respect of instant asset for determination of transmission tariff under the 2014 Tariff Regulations. The details of the instant asset and its scheduled COD and actual COD are as under:-

Particulars	Schedule COD as per IA	Actual COD	Delay
400 kV D/C (Quad) Balipara-Bongaigaon T/L alongwith associated bays at Bongaigaon Sub-station and Balipara Sub-station including 30% FSC at Balipara with 4x63 MVAR, 420 kV line Reactors at both ends	1.3.2013	7.11.2014	21 months

6. This order has been issued after considering petitioner's affidavits dated 19.6.2015, 17.11.2015, 5.2.2016 and 6.6.2016.



7. The details of the transmission charges claimed by the petitioner are as below:-

Particulars	(₹ in lakh)				
	2014-15 (pro-rata)	2015-16	2016-17	2017-18	2018-19
Depreciation	2397.27	6130.74	6220.21	6257.00	6257.00
Interest on Loan	3412.88	8308.44	7832.46	7279.00	6680.64
Return on equity	1780.61	4595.43	4695.64	4736.88	4736.88
Interest on Working Capital	189.97	477.51	472.22	462.64	450.26
O & M Expenses	275.98	712.77	736.32	760.90	786.15
Total	8056.71	20224.89	19956.85	19496.42	18910.93

8. The details submitted by the petitioner in support of its claim for Interest on Working Capital are as under:-

Particulars	(₹ in lakh)				
	2014-15 (pro-rata)	2015-16	2016-17	2017-18	2018-19
Maintenance Spares	103.49	106.92	110.45	114.14	117.92
O & M expenses	57.50	59.40	61.36	63.41	65.51
Receivables	3356.96	3370.82	3326.14	3249.40	3151.82
Total	3517.95	3537.14	3497.95	3426.95	3335.25
Rate of Interest	13.50%	13.50%	13.50%	13.50%	13.50%
Interest	474.92	477.51	472.22	462.64	450.26

9. No comments have been received from the general public in response to the notices published in news papers by the petitioner under Section 64 of the Electricity Act, 2003. None of the respondents have filed a reply.

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



Capital Cost

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

“(1) The Capital cost as determined by the Commission after prudence check in accordance with this regulation shall form the basis of determination of tariff for existing and new projects.”

(2) The Capital Cost of a new project shall include the following:

(a) the expenditure incurred or projected to be incurred up to the date of commercial operation of the project;

(b) Interest during construction and financing charges, on the loans (i) being equal to 70% of the funds deployed, in the event of the actual equity in excess of 30% of the funds deployed, by treating the excess equity as normative loan, or (ii) being equal to the actual amount of loan in the event of the actual equity less than 30% of the funds deployed;

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

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

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

(f) expenditure on account of additional capitalization and de-capitalisation determined in accordance with Regulation 14 of these regulations; 39

(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.

12. The petitioner has submitted the revised cost estimate (RCE) vide affidavit dated 5.2.2016. The details of revised approved apportioned cost, actual expenditure incurred as on the date of commercial operation and details of additional capital expenditure (hereinafter “add cap”) incurred/projected to be



incurred for the instant asset alongwith revised tariff forms have been submitted by the petitioner vide affidavit dated 6.6.2016 (Auditors' Certificate dated 11.6.2015) and are summarized as follows:-

Approved apportioned cost	Revised approved apportioned cost	Cost as on COD	Add-cap			Estimated completion cost
			2014-15	2015-16	2016-17	
102220.99	115967.79	113537.96	1571.34	1995.17	1395.18	118499.65

(₹ in lakh)

13. As per the Auditors's Certificate submitted by the petitioner, expenditure upto 31.3.2015 has been verified from the audited statements of account of the petitioner.

Cost over-run

14. The total estimated completion cost exceeds the revised approved apportioned cost and there is cost over-run in case of instant asset. The petitioner vide affidavit dated 23.1.2015 has submitted reasons for cost over-run as follows:-

a) Increase in estimated completion cost in comparison to approved apportioned cost is because of increase in award cost received in competitive bidding compared to initial estimates (FR cost). For procurement, open competitive bidding route is followed and by providing equal opportunity to all eligible firms, lowest possible market prices for required product/services is obtained and contracts are awarded on the basis of lowest evaluated eligible bidder. The best competitive bid prices against tenders may happen to be lower or higher than the cost estimate depending upon prevailing market conditions.

b) Increase in transmission line length from estimated 303 km (as per FR) to 309 km (as per actual), increases the cost by about ₹4745 lakh (approx.). The cost increase is broadly on account of increase in number of tension tower due to actual line routing and line length, There are 384 nos. of tension towers as per actual against 252 nos. tension towers estimated. This resulted in increase of cost of tower steel material, conductors, hardware fitting, earth wire, insulators etc



c) The Civil works (excavation, concreting, revetment, benching etc) also increased due to increase in line length and the cost of about ₹3360 lakh is on account of increase in compensation against transmission line construction for crop, tree and PTCC. However, such compensation has been paid as per actual crops and trees encountered at site assessed by district revenue authorities.

15. We have considered the submission of the petitioner. However, the capital cost of instant asset is restricted to revised approved apportioned cost of ₹115967.79 lakh. This approach has been upheld by the Appellate Tribunal for Electricity in its order dated 28.11.2013 in Appeal No. 165 of 2012. Subsequently, the Commission, in its order dated 18.2.2014 in Petition No. 216/TT/2012, has considered the approved apportioned cost of individual asset for restricting the capital expenditure due to cost over-run for the purpose of tariff determination. The same approach has been adopted in the present case and capital expenditure has been restricted to revised approved apportioned cost.

Time over-run

16. The instant asset was scheduled to be commissioned within 48 months from the date of IA i.e. 27.2.2009. Accordingly, the scheduled commissioning works out to 26.2.2013, say 1.3.2013. The instant asset was commissioned on 7.11.2014. Thus, there is time over-run of 21 months in commissioning of instant asset.

17. The petitioner has submitted the following reasons for the time over-run in commissioning of the instant asset:-

i) **Statutory clearances:** Out of 309 km of 400 kV Balipara-Bongaigaon transmission line around 4.21 km (approx.) line passes through reserved



forest, highly disturbed area, hilly terrains, causing number of clearance to be obtained before starting the work of construction of transmission line in these areas. The length of the line passing through the Reserved Forest area is 2.581 km/11.87 Ha. The work in the forest area could not be commenced on time due to late receipt of forest clearance as the forest clearance proposal for the line was submitted to Government of Assam on 31.7.2009 on priority, i.e. within 4 months from placement of contract dated 4.3.2009 and 9.3.2009 to the implementing agency. However, forest clearance of the line was accorded only on 13th August 2013 for 8.88 Ha, 24th September 2013 for 1.38 Ha and 23rd January 2014 for 1.61 Ha after 49, 50 and 54 months respectively of submission of proposal as against 10-14 months, the time generally taken for the forest clearance. The last Forest clearance was received in the month of January 2014, after a delay of around 13 months.

ii) **Difficult Terrain Conditions:** The locations in forest area were on steep hill and the same was separated from the approach by a river. After onset of rainy season in monsoon the approach to the locations became difficult. Meanwhile, heavy floods washed away the bridge on the approach over the river creating problem in transportation of man and materials. In order to curtail the delay, a rope way was erected for material transport but due to the gradient, only limited materials could be transported. Several attempts for re-construction of bridge failed due to high current in the flooded river. Ultimately, the bridge could be re-constructed after flood water receded and all along this period



progress of works suffered. Work completion in these 4 locations took considerable time.

iii) **Law & order situation:** In order to ensure execution and commissioning of the project well within the time, PGCIL placed all orders for supply of material and erection works pertaining to towers, sub-station and other related works of the said project. However, during actual execution of the project there were approximately 183 bandhs, blockades and obstructions in the State of Assam by various organizations (All Assam Student Union, KMSS, BTAD etc.) which were operational in these areas. Ethnic riot/violence erupted in BTAD (Bodo-land Territorial Autonomous District) area during the period from 21.7.2012 to 12.9.2014 severely affected the works. Working gangs left site and material transportation was also affected adversely. One stringing gang leader (Kajim Uddin) was abducted by militant groups on 25.3.2011 from loc. # 63/1 of Balipara-Dolgaon section of the line. In two separate incidents one engineer (Paidu Raju) of the pile contractor was abducted on 15.2.2013 from Tamulpur, BTAD, Assam and another Engineer (Angan Rao) was abducted on 22.12.2013 from Chirang District, Assam by militant groups. Due to these incidents normal workings hampered in adjacent locations and due to prevalent fear-psychosis gang outputs were reduced considerably. The reasons behind these blockades and bandhs was numerous demands ranging from construction and repair of roads and schools to providing drinking water in villages, as also reserving certain percentage of jobs and contracts for different communities. Constant threats by these organizations created



difficulties in executing the works. Rampant extortion bids and stoppage of works on non fulfillment of the demands had resulted loss of valuable working time causing delay in execution of work. The Kokrajhar area in the State of Assam is disputed and incidents of violence are very frequent in the area which also affected the works adversely. The law and order situation at certain locations were resolved in September, 2014 with administration support, which caused the time over-run in commissioning of transmission line by 21 months from the scheduled completion date.

iv) **Right of Way:** Problem persisted almost till completion of line i.e. September/October, 2014. However, the line was commissioned in month of November, 2014 by resolving the RoW issues and diverting the route of the line from loc-15/2 to 21/0 locations. Both erection and stringing works of 5.5 km of Dolgaon-Nalbari section of the line could not be taken up due to compensation demand of the landowners, beyond the provision of the relevant acts. PGCIL also approached district administration and Department of Power, Nagaland to resolve the issue. Further, unprecedented RoW issues emerged in the final stretch (Dolgaon-Nalbari) from loc: 55/0 to 56/0 (1.5 km). Work was stopped by the landowners supported by local public. Security provided by local administration could not resolve the crisis and ultimately large numbers of CRPF personnel were deployed at site with intervention of the Assam Government. This resulted in further delay in completion of the entire line. Similarly, in the final stretch from loc: 83/0 to 84/0 of the Nalbari-Bongaigaon portion of the line, severe resistance was faced from the land owners who



were demanding exorbitant compensation beyond admissible amounts and completion was delayed. Finally, substantial security forces were deployed from 28.10.2014 to 30.10.2014 by Kamrup administration and the line was completed. The delay due to RoW issues is about 21 months from the scheduled commissioning.

v) Threats from outfit organization/deteriorated law and order situation:

Constant threats from various underground organizations to the working gangs, contractors' engineers and PGCIL officials created immense difficulties in carrying out the works. Rampant extortion bids and warnings about not to carry out works without fulfillment of these bids resulted in loss of valuable working time till negotiations were arrived upon. These incidents could not be mitigated despite all possible support and assistance from district authorities and local administration.

18. The representative of petitioner during hearing on 6.10.2015 reiterated the submissions made in the petition and the additional affidavits. The petitioner was directed to submit the documentary evidence in support of reasons for delay and the English version of the documents (already filed) in local language. The petitioner was further directed to submit SLD of the instant asset, details of 21 months of time over-run and chronology of the activities along with documentary evidence, CEA certificate under Regulation 43 of CEA (Measures Related to Safety & Electricity Supply) Regulations, 2010 and data in respect of benchmarking of capital cost for



transmission line & sub-station/reactor as per Commissions' orders dated 27.4.2010 and 16.6.2010.

19. The petitioner, vide affidavit dated 17.11.2015, has submitted documentary evidence in support of reasons for delay and chronology of activities related to time over-run is as given below:-

(i) RoW details for 400kV D/C Quad Balipara-Bongaigaon Transmission Line				
S.N	Date	Correspondence with	District/Area	Activities
1	22.9.2010	SDO-Rangia	Kamrup	Compensation issues in Soulmari to Koya under Gorenva & Rangia circle
2	18.10.2010	SDO-Rangia	Kamrup	Reminder for Compensation issues in Soulmari to Koya under Gorenva & Rangia circle
3	11.5.2011	Dy. Commissioner	Kamrup	Law & Order problems
4	12.1.2012	Addl.DGP	Guwahati	Law & Order problems
5	16.2.2012	Addl. Chief Sect (Power)	Guwahati	Abduction of site engineer at Dhelipota
6	31.1.2013	Addl. Chief Sect (Power)	Guwahati	Threats and Law & Order problem
7	3.4.2013	Dy. Commissioner	Kamrup	Compensation issues in Soulmari areas (51/0, 55/0)
8	17.8.2013	Home-Dy Sect.	Guwahati	Law & Order situations
9	21.8.2013	Dy. Commissioner	Kamrup	Compensation issues in Barlesakona, Saulmari, Saledol areas etc
10	28.8.2013	Inspector General	Guwahati	Conductor thefting, threating etc
11	4.9.2013	Dy. Commissioner	Kamrup	Compensation issues in Barlesakona, Saulmari, Saledol areas etc
12	12.9.2013	Dy. Sect.	Guwahati	Compensation issues
13	20.9.2013	Dy. Commissioner	Chirang	Law & Order situations
14	27.9.2013	MOM by Dy.Commissioner	Kamrup	Compensation issues in Barlesakona, Saulmari, Saledol areas etc
15	10.12.2013	Inspector General	Guwahati	Law & Order situations
16	21.12.2013	Director General	Guwahati	Conductor thefting, threating etc
17	30.4.2014	Dy. Commissioner	Kamrup	Compensation issues in Barlesakona, Saulmari, Saledol areas etc
18	23.5.2014	SDO-Rangia	Rangia	Compensation issues in Saulmari, Saledol areas etc
19	28.5.2014	Land Owner	Barlesakona	Compensation issues
20	4.6.2014	Sub Divisional Police Officer	Rangia	Compensation issues in Barlesakona areas
21	13.6.2014	Sub Divisional	Rangia	Compensation issues in Barlesakona



		Police Officer		areas
22	3.7.2014	Office In charge	Rangia PS	ROW and Compesation related issues at Barlesakona (Loc- 67/0, 68/0, 69/0)
23	22.7.2014	Sub Divisional Officer	Rangia	ROW and Compesation related issues at Saledol, Saulmari (Loc- 51/0, 52/0-56/0)
24	6.8.2014	Office In charge	Rangia PS	ROW and Compesation related issues at Barlesakona
25	23.8.2014	Sub Divisional Officer	Rangia	ROW and Compesation related issues at Saledol, Saulmari (Loc- 51/0, 52/0-56/0)
26	3.9.2014	Dy. Commissioner	Kamrup	ROW and Compesation related issues
27	4.9.2014	Dy. Commissioner	Kamrup	Compesation issues in Soulmari areas
28	15.9.2014	Dy. Commissioner	Kamrup	Reminder for Compesation issues in Soulmari areas
29	18.9.2014	Dy. Commissioner	Kamrup	Compesation issues in saledol and Soulmari areas
30	25.9.2014	Dy. Commissioner	Kamrup	ROW and Compesation related issues at Saledol, Saulmari (Loc-53/0, 55/0-56/0)
31	9.10.2014	Office In charge	Baihata Charali PS	Police support at Saledol (Compensation)
32	10.10.2014	Sup. Of Police	Kamrup	Compensation issues at Saledol and Saulamri areas
33	27.10.2014	Sub Divisional Police Officer	Rangia	Compensation issues at Saledol and Saulamri areas. Requesting police

(ii) Forest details for 400 kV D/C Quad Balipara- Bongaigaon Transmission line							
S. N	Section	No. of locati on	District	Proposal date	Area (Ha)	Approved letter date	Time taken
1	Satbhendi RF	1	Chirang		1.38	24.9.2013	49 months & 24 days
2	Digdari RF	1	Kokrahjar	31.7.2009	1.61	23.1.2014	53 months & 23 days
3	Nakkati RF	7	Bongaigaon		8.88	13.8.2013	48 months & 13 days

20. The petitioner has not submitted the English version of the documents earlier submitted in local language. We express our displeasure. Complete and timely submission of information called for would help to arrive at fair and considered



decisions. We direct the petitioner to submit all the relevant information in future as directed within the specified timeline for speedy dispatch of petitions.

21. We have considered the other documents and submissions of the petitioner. The time over-run was mainly due to law and order problem and delay in getting forest clearance. There was law and order problem in Assam from 11.5.2011 to 10.12.2013, i.e. approximately 30 months, at different places such as Kamrup, Guwahati, Chirang. It took about 4 years to get (31.7.2009 to 23.1.2014) forest clearance and about six months (30.4.2014 to 27.10.2014) to resolve the compensation issue raised at different places (Kamrup, Rangia, Barlesakona). The time over-run due to law and order situation is subsumed in the time taken to get forest clearance. In our view, the time over-run due to law and order situation and due to forest clearance was beyond the control of the petitioner. Therefore, we are inclined to condone the delay of 21 months in commissioning of the instant asset.

Treatment of IDC and IEDC

22. As regards IDC and IEDC, Regulation 11 of the 2014 Tariff Regulations provides as follows:-

"11. Interest during construction (IDC), Incidental Expenditure during Construction (IEDC)

(A) Interest during Construction (IDC):

(1) Interest during construction shall be computed corresponding to the loan from the date of infusion of debt fund, and after taking into account the prudent phasing of funds upto SCOD.

(2) In case of additional costs on account of IDC due to delay in achieving the SCOD, the generating company or the transmission licensee as the case may be,



shall be required to furnish detailed justifications with supporting documents for such delay including prudent phasing of funds: Provided that if the delay is not attributable to the generating company or the transmission licensee as the case may be, and is due to uncontrollable factors as specified in Regulation 12 of these regulations, IDC may be allowed after due prudence check.

Provided further that only IDC on actual loan may be allowed beyond the SCOD to the extent, the delay is found beyond the control of generating company or the transmission licensee, as the case may be, after due prudence and taking into account prudent phasing of funds.

(B) Incidental Expenditure during Construction (IEDC):

(1) Incidental expenditure during construction shall be computed from the zero date and after taking into account pre-operative expenses upto SCOD:

Provided that any revenue earned during construction period up to SCOD on account of interest on deposits or advances, or any other receipts may be taken into account for reduction in incidental expenditure during construction.

(2) In case of additional costs on account of IEDC due to delay in achieving the SCOD, the generating company or the transmission licensee as the case may be, shall be required to furnish detailed justification with supporting documents for such delay including the details of incidental expenditure during the period of delay and liquidated damages recovered or recoverable corresponding to the delay:

Provided that if the delay is not attributable to the generating company or the transmission licensee, as the case may be, and is due to uncontrollable factors as specified in regulation 12, IEDC may be allowed after due prudence check:

Provided further that where the delay is attributable to an agency or contractor or supplier engaged by the generating company or the transmission licensee, the liquidated damages recovered from such agency or contractor or supplier shall be taken into account for computation of capital cost

(3) In case the time over-run beyond SCOD is not admissible after due prudence, the increase of capital cost on account of cost variation corresponding to the period of time over run may be excluded from capitalization irrespective of price variation provisions in the contracts with supplier or contractor of the generating company or the transmission licensee.

23. The petitioner vide affidavits dated 19.6.2015 and 6.6.2016 has submitted information related to IDC. The petitioner has submitted the statement of IDC discharged upto COD and IDC discharged after COD alongwith details of loan and



proposed loan for the instant asset. For the purpose of determining the IDC on cash basis, the loan details in Form-9C and revised tariff forms as provided by the petitioner have been considered. Thus, on the basis of available information, IDC amounting to ₹18153.48 lakh as on COD has been worked out on cash basis and is allowed for instant asset which is subject to true-up. The petitioner has also submitted that accrued IDC of ₹1644.64 lakh as on COD has been discharged in 2014-15 and as such is allowed for the purpose of tariff calculation in this order subject to submission of documentary evidence duly certified by the Auditors at the time of true-up. The details of IDC claimed and allowed are as under:-

(₹ in lakh)				
Claimed as on COD	Discharged upto COD	Worked out on cash basis	Accrued IDC discharged during 2014-15 (as claimed)	Accrued IDC discharged during 2014-15 (as considered)
19900.96	18256.32	18153.48	1644.64	1644.64

24. The petitioner vide affidavits dated 19.6.2015 and 6.6.2016 has also submitted information related to IEDC. The petitioner has submitted the statement of IEDC incurred upto SCOD and from SCOD to actual COD and has submitted that the entire IEDC has been paid as on COD of instant asset. The petitioner has claimed ₹4677.23 lakh upto COD for instant asset, which is within the percentage (8.00%) on Hard Cost as indicated in the Abstract Cost Estimate. Thus, IEDC of ₹4677.23 lakh as claimed upto COD has been considered for computing tariff in this order.



Initial Spares

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

“13. Initial Spares

Initial spares shall be capitalised as a percentage of the Plant and Machinery cost upto cut-off date, subject to following ceiling norms:

(d) Transmission system

(i) Transmission line - 1.00%

(ii) Transmission Sub-station (Green Field) - 4.00%

(iii) Transmission Sub-station (Brown Field) - 6.00%

(iv) Series Compensation devices and HVDC Station - 4.00%

(v) Gas Insulated Sub-station (GIS)-5.00%

(vi) Communication system-3.5%

Provided that:

(i) where the benchmark norms for initial spares have been published as part of the benchmark norms for capital cost by the Commission, such norms shall apply to the exclusion of the norms specified above:

(ii) where the generating station has any transmission equipment forming part of the generation project, the ceiling norm for initial spares for such equipments shall be as per the ceiling norms specified for transmission system under these regulations:

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

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

26. The petitioner has claimed initial spares of ₹466.28 lakh pertaining to sub-station in the case of instant asset, which are higher than the ceiling limit of 4.00% as specified in the 2014 Tariff Regulations. Thus, initial spares have been worked out as per the 2014 Tariff Regulations and are allowed as follows:-



(₹ in lakh)

Particulars	Total capital cost upto actual cut-off date (plant and machinery cost excluding IDC, IEDC, land cost and cost of civil works)	Initial spares claimed	Ceiling limit as per 2014 Tariff Regulations	Initial spares worked out	Excess initial spares claimed
Sub-station	9107.67	466.28	4.00%	360.06	106.22

Capital cost allowed as on COD

27. The details of the capital cost considered as on the date of commercial operation after allowing capitalization of IDC, IEDC and initial spares for the purpose of the determination of transmission tariff are as follows:-

(₹ in lakh)

Capital cost claimed as on COD (as per Auditors' Certificate)	Less: IDC and IEDC claimed	Add allowed		Less: excess Initial spares as on COD	Capital cost allowed as on COD
		IDC	IEDC		
113537.96	24578.19	18153.48	4677.23	106.22	111684.25

Additional Capital Expenditure

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

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

- (i) Undischarged liabilities recognised to be payable at a future date;
- (ii) Works deferred for execution;
- (iii) Procurement of initial capital spares within the original scope of work, in accordance with the provisions of Regulation 13;
- (iv) Liabilities to meet award of arbitration or for compliance of the order or decree of a court; and



(v) Change in Law or compliance of any existing law:"

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

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

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

Provided that the cut-off date may be extended by the Commission if it is proved on the basis of documentary evidence that the capitalisation could not be made within the cut-off date for reasons beyond the control of the project developer;"

30. The cut-off date in the case of instant transmission assets is 31.3.2017.

31. The estimated completion cost of instant asset has been restricted to revised approved apportioned cost of ₹115967.79 lakh as discussed at para-15. Therefore, additional capital expenditure of ₹1395.18 lakh for 2016-17 has not been allowed and the additional capital expenditure of ₹1995.17 lakh for 2015-16 has been restricted to ₹1067.56 lakh. However, additional capital expenditure of ₹1571.34 lakh claimed for 2014-15 has been increased by ₹1644.64 lakh, which has been claimed on account of accrued IDC as on COD but discharged during 2014-15 in case of instant asset as discussed at para-23. However, the petitioner is directed to submit the actual capital expenditure by clearly indicating the bifurcated cost of new addition to the gross block (i.e. additional capitalisation made during the year) and



the cost towards the discharge of liability (i.e. pertaining to IDC) out of the liability outstanding as on COD. The details of estimated completion capital cost as on 31.3.2019 are as follows:-

Capital cost as on COD claimed	Capital cost allowed as on COD (after adjustment of IDC/IEDC and initial spares)	Add-cap allowed for			Estimated capital cost allowed as on 31.3.2019
		2014-15	2015-16	2016-17	
113537.96	111684.25	3215.98	1067.56	-	115967.79

(₹ in lakh)

Debt- Equity Ratio

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

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

Provided that:

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

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

“(5) Any expenditure incurred or projected to be incurred on or after 1.4.2014 as may be admitted by the Commission as additional capital expenditure for determination of tariff, and renovation and modernisation expenditure for life extension shall be serviced in the manner specified in clause (1) of this regulation.”



33. The petitioner has claimed debt: equity ratio of 80:20 as on the date of commercial operation of the instant asset as per revised approved cost estimate submitted vide affidavit dated 5.2.2016. The details of debt: equity in respect of the asset covered in this petition as on date of commercial operation and as on 31.3.2019 respectively are as under:-

(₹ in lakh)

Particulars	Cost as on COD		Cost as on 31.3.2019	
	Amount	%	Amount	%
Debt	89347.40	80.00	92774.23	80.00
Equity	22336.85	20.00	23193.56	20.00
Total	111684.25	100.00	115967.79	100.00

34. The capital cost on the dates of commercial operation and as on 31.3.2019 as arrived above and additional capitalization allowed have been considered in the normative debt-equity ratio of 80:20 for the purpose of tariff calculation in this order.

Return on Equity (RoE)

35. Clause (1) and (2) of Regulation 24 and Clause (1) and (2) of Regulation 25 of the 2014 Tariff Regulations specify as under:-

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

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

Provided that:

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



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

(iii) additional RoE of 0.50% may be allowed if any element of the transmission project is completed within the specified timeline and it is certified by the Regional Power Committee/National Power Committee that commissioning of the particular element will benefit the system operation in the regional/national grid:

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

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

(vi) additional RoE shall not be admissible for transmission line having length of less than 50 kilometers.”

“25. Tax on Return on Equity:

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

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

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

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



36. The petitioner has submitted that RoE has been calculated at the rate of 19.610% after grossing up the RoE with MAT rate of 20.961% as per the above Regulations. 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.

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

Particulars	(₹ in lakh)				
	2014-15 (pro-rata)	2015-16	2016-17	2017-18	2018-19
Opening Equity	22336.85	22980.05	23193.56	23193.56	23193.56
Addition due to Additional Capitalisation	643.20	213.51	0.00	0.00	0.00
Closing Equity	22980.05	23193.56	23193.56	23193.56	23193.56
Average Equity	22658.45	23086.80	23193.56	23193.56	23193.56
Return on Equity (Base Rate)	15.50%	15.50%	15.50%	15.50%	15.50%
Tax rate for the year 2013-14 (MAT)	20.961%	20.961%	20.961%	20.961%	20.961%
Rate of Return on Equity (Pre Tax)	19.610%	19.610%	19.610%	19.610%	19.610%
Return on Equity (Pre Tax)	1765.16	4527.32	4548.26	4548.26	4548.26

Interest on Loan

39. Regulation 26 of the 2014 Tariff Regulations with regard to Interest on Loan specifies as under:-

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

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

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

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

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



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

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

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

40. In these calculations, interest on loan has been worked out as hereinafter:-
- (a) Gross amount of loan, repayment of instalments and rate of interest and weighted average rate of interest on actual average loan have been considered as per the petition;
 - (a) The repayment for the tariff period 2014-19 has been considered to be equal to the depreciation allowed for that period; and
 - (b) Weighted average rate of interest on actual average loan worked out as per (a) above is applied on the notional average loan during the year to arrive at the interest on loan.

41. The petitioner has submitted that the interest on loan has been considered on the basis of rate prevailing as on anticipated COD and the change in interest due to floating rate of interest applicable, if any, for the project needs to be claimed/adjusted over the tariff block. We would like to clarify that the interest on loan has been calculated on the basis of rate prevailing as on the date of commercial operation. Any change in rate of interest subsequent to the date of commercial operation will be considered at the time of truing up.



42. Detailed calculations of the weighted average rate of interest have been given at Annexure.

43. Details of Interest on Loan calculated are as under:-

Particulars	(₹ in lakh)				
	2014-15 (pro-rata)	2015-16	2016-17	2017-18	2018-19
Gross Normative Loan	89347.40	91920.19	92774.23	92774.23	92774.23
Cumulative Repayment upto Previous Year	-	2376.46	8471.67	14595.06	20718.46
Net Loan-Opening	89347.40	89543.73	84302.56	78179.17	72055.78
Addition due to Additional Capitalisation	2572.78	854.05	-	-	-
Repayment during the year	2376.46	6095.21	6123.39	6123.39	6123.39
Net Loan-Closing	89543.73	84302.56	78179.17	72055.78	65932.38
Average Loan	89445.57	86923.15	81240.87	75117.47	68994.08
Weighted Average Rate of Interest on Loan	9.5217%	9.5146%	9.5130%	9.5046%	9.4995%
Interest	3383.37	8270.42	7728.48	7139.64	6554.07

Depreciation

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

"27. Depreciation:

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

Provided that effective date of commercial operation shall be worked out by considering the actual date of commercial operation and installed capacity of all the



units of the generating station or capital cost of all elements of the transmission system, for which single tariff needs to be determined.

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

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

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

Provided further that the capital cost of the assets of the hydro generating station for the purpose of computation of depreciated value shall correspond to the percentage of sale of electricity under long-term power purchase agreement at regulated tariff: Provided also that any depreciation disallowed on account of lower availability of the generating station or generating unit or transmission system as the case may be, shall not be allowed to be recovered at a later stage during the useful life and the extended life.

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

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

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

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

45. The transmission asset was put under commercial operation during 2014-15.

Accordingly, the instant asset will complete 12 years beyond 2018-19. Thus,



depreciation has been calculated annually based on Straight Line Method at rates specified in Appendix-II of the 2014 Tariff Regulations.

46. The details of the depreciation allowed are as under:-

Particulars	(₹ in lakh)				
	2014-15 (pro-rata)	2015-16	2016-17	2017-18	2018-19
Opening Gross Block	111684.25	114900.23	115967.79	115967.79	115967.79
Additional Capital expenditure	3215.98	1067.56	-	-	-
Closing Gross Block	114900.23	115967.79	115967.79	115967.79	115967.79
Average Gross Block	113292.24	115434.01	115967.79	115967.79	115967.79
Rate of Depreciation	5.2803%	5.2803%	5.2803%	5.2803%	5.2803%
Depreciable Value	101963.02	103890.61	104371.01	104371.01	104371.01
Remaining Depreciable Value	101963.02	101514.15	95899.34	89775.95	83652.56
Depreciation	2376.46	6095.21	6123.39	6123.39	6123.39

Operation & Maintenance Expenses (O&M Expenses)

47. Regulation 29 (4) (a) of the 2014 Tariff Regulations specifies the norms for operation and maintenance expenses for the transmission system based on the type of sub-station and the transmission line. Norms specified in respect of the elements covered in the instant petition are as under:-

Elements	2014-15	2015-16	2016-17	2017-18	2018-19
D/C quad conductor T/L (₹ lakh/km)	1.062	1.097	1.133	1.171	1.210
400 kV bay (₹ lakh/bay)	60.30	62.30	64.37	66.51	68.71

48. The petitioner has claimed normative O&M Expenses as per sub-clause (a) of clause (4) of Regulation 29 of the 2014 Tariff Regulations. Accordingly, the allowable O&M Expenses for the instant transmission asset are as follows:-



(₹ in lakh)					
Particulars	2014-15 (pro-rata)	2015-16	2016-17	2017-18	2018-19
309 km 400 kV D/C quad conductor Balipara-Bongaigaon T/L	131.26	338.97	350.10	361.84	373.89
6 nos. 400 kV bays	144.72	373.80	386.22	399.06	412.26
Total	275.98	712.77	736.32	760.90	786.15

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

50. 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, we would like to clarify that 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

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



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

(c) Hydro generating station including pumped storage hydro electric generating station and transmission system including communication system:

(i) Receivables equivalent to two months of fixed cost;

(ii) Maintenance spares @ 15% of operation and maintenance expenses specified in regulation 29; and

(iii) Operation and maintenance expenses for one month”

(3) Rate of interest on working capital shall be on normative basis and shall be considered as the bank rate as on 1.4.2014 or as on 1st April of the year during the tariff period 2014-15 to 2018-19 in which the generating station or a unit thereof or the transmission system including communication system or element thereof, as the case may be, is declared under commercial operation, whichever is later”

“(5) ‘Bank Rate’ means the base rate of interest as specified by the State Bank of India from time to time or any replacement thereof for the time being in effect plus 350 basis points;”

52. The interest on working capital is worked out in accordance with Regulation 28 of the 2014 Tariff Regulations. The rate of interest on working capital considered is 13.50% (SBI Base Rate of 10% plus 350 basis points). The interest on working capital determined is as under:-

Particulars	(₹ in lakh)				
	2014-15 (pro-rata)	2015-16	2016-17	2017-18	2018-19
Maintenance Spares	104.21	106.92	110.45	114.14	117.92
O & M expenses	57.89	59.40	61.36	63.41	65.51
Receivables	3351.88	3346.66	3266.78	3170.70	3075.30
Total	3513.98	3512.98	3438.59	3348.24	3258.74
Rate of Interest	13.50%	13.50%	13.50%	13.50%	13.50%
Interest	188.46	474.25	464.21	452.01	439.93



Transmission Charges

53. The transmission charges being allowed for the transmission asset are as under:-

Particulars	(₹ in lakh)				
	2014-15 (pro-rata)	2015-16	2016-17	2017-18	2018-19
Depreciation	2376.46	6095.21	6123.39	6123.39	6123.39
Interest on Loan	3383.37	8270.42	7728.48	7139.64	6554.07
Return on equity	1765.16	4527.32	4548.26	4548.26	4548.26
Interest on Working Capital	188.46	474.25	464.21	452.01	439.93
O & M Expenses	275.98	712.77	736.32	760.90	786.15
Total	7989.42	20079.98	19600.66	19024.21	18451.80

Filing Fee and Publication Expenses

54. The petitioner has sought reimbursement of fee paid by it for filing the petition and publication expenses. 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

55. 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

56. The petitioner submitted that service tax on transmission has been put in negative list w.e.f. 1.4.2012 and therefore the transmission charges, is exclusive of service tax and shall be born and additionally paid by the respondents. The petitioner has made a prayer to be allowed to bill and recover the service tax on transmission charges separately from the respondents, if service tax on transmission is withdrawn from negative list at any time in future. The petitioner has further prayed that if any taxes and duties including cess etc. are imposed by any statutory/Government/municipal authorities, it shall be allowed to be recovered from the beneficiaries. We consider petitioner's prayer pre-mature and accordingly this prayer is rejected.

Deferred Tax Liability

57. The petitioner has sought recovery of deferred tax liability accrued before 1.4.2009 from the beneficiaries or long term consumers/DICs as and when materialized under Regulation 49 of the 2014 Tariff Regulations. However, the instant asset was commissioned on 7.11.2014 and hence the petitioner's prayer is infructuous.

Sharing of Transmission Charges

58. 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.

59. This order disposes of Petition No. 65/TT/2015.

sd/-
(M.K. Iyer)
Member

sd/-
(A.S. Bakshi)
Member

sd/-
(A.K. Singhal)
Member

sd/-
(Gireesh B. Pradhan)
Chairperson



Annexure

(₹ in lakh)

CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN						
	Details of Loan	2014-15	2015-16	2016-17	2017-18	2018-19
1	Bond XXXV					
	Gross loan opening	1500.00	1500.00	1500.00	1500.00	1500.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	125.00	250.00	375.00
	Net Loan-Opening	1500.00	1500.00	1375.00	1250.00	1125.00
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	125.00	125.00	125.00	125.00
	Net Loan-Closing	1500.00	1375.00	1250.00	1125.00	1000.00
	Average Loan	1500.00	1437.50	1312.50	1187.50	1062.50
	Rate of Interest	9.64%	9.64%	9.64%	9.64%	9.64%
	Interest	144.60	138.58	126.53	114.48	102.43
	Rep Schedule	12 annual instalments from 31.05.2015.				
2	Bond XXXVI					
	Gross loan opening	13000.00	13000.00	13000.00	13000.00	13000.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	866.67	1733.33
	Net Loan-Opening	13000.00	13000.00	13000.00	12133.33	11266.67
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	866.67	866.67	866.67
	Net Loan-Closing	13000.00	13000.00	12133.33	11266.67	10400.00
	Average Loan	13000.00	13000.00	12566.67	11700.00	10833.33
	Rate of Interest	9.35%	9.35%	9.35%	9.35%	9.35%
	Interest	1215.50	1215.50	1174.98	1093.95	1012.92
	Rep Schedule	15 annual instalments from 29.08.2016.				
3	Bond XXXVII					
	Gross loan opening	8400.00	8400.00	8400.00	8400.00	8400.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	700.00	1400.00	2100.00
	Net Loan-Opening	8400.00	8400.00	7700.00	7000.00	6300.00
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	700.00	700.00	700.00	700.00
	Net Loan-Closing	8400.00	7700.00	7000.00	6300.00	5600.00
	Average Loan	8400.00	8050.00	7350.00	6650.00	5950.00
	Rate of Interest	9.25%	9.25%	9.25%	9.25%	9.25%
	Interest	777.00	744.63	679.88	615.13	550.38
	Rep Schedule	12 annual instalments from 26.12.2015				
4	Bond XXVIII					
	Gross loan opening	300.00	300.00	300.00	300.00	300.00
	Cumulative Repayment upto DOCO/previous year	50.00	75.00	100.00	125.00	150.00
	Net Loan-Opening	250.00	225.00	200.00	175.00	150.00
	Additions during the year	0.00	0.00	0.00	0.00	0.00



	Repayment during the year	25.00	25.00	25.00	25.00	25.00
	Net Loan-Closing	225.00	200.00	175.00	150.00	125.00
	Average Loan	237.50	212.50	187.50	162.50	137.50
	Rate of Interest	9.33%	9.33%	9.33%	9.33%	9.33%
	Interest	22.16	19.83	17.49	15.16	12.83
	Rep Schedule	12 annual instalments from 15.12.2012				
5	Bond XXIX					
	Gross loan opening	2000.00	2000.00	2000.00	2000.00	2000.00
	Cumulative Repayment upto DOCO/previous year	333.33	500.00	666.67	833.33	1000.00
	Net Loan-Opening	1666.67	1500.00	1333.33	1166.67	1000.00
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	166.67	166.67	166.67	166.67	166.67
	Net Loan-Closing	1500.00	1333.33	1166.67	1000.00	833.33
	Average Loan	1583.33	1416.67	1250.00	1083.33	916.67
	Rate of Interest	9.20%	9.20%	9.20%	9.20%	9.20%
	Interest	145.67	130.33	115.00	99.67	84.33
	Rep Schedule	12 annual instalments from 12.03.2013				
6	Bond XXX					
	Gross loan opening	500.00	500.00	500.00	500.00	500.00
	Cumulative Repayment upto DOCO/previous year	41.67	83.33	125.00	166.67	208.33
	Net Loan-Opening	458.33	416.67	375.00	333.33	291.67
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	41.67	41.67	41.67	41.67	41.67
	Net Loan-Closing	416.67	375.00	333.33	291.67	250.00
	Average Loan	437.50	395.83	354.17	312.50	270.83
	Rate of Interest	8.80%	8.80%	8.80%	8.80%	8.80%
	Interest	38.50	34.83	31.17	27.50	23.83
	Rep Schedule	12 annual instalments from 29.9.2013				
7	Bond XXXIII					
	Gross loan opening	1000.00	1000.00	1000.00	1000.00	1000.00
	Cumulative Repayment upto DOCO/previous year	0.00	83.33	166.67	250.00	333.33
	Net Loan-Opening	1000.00	916.67	833.33	750.00	666.67
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	83.33	83.33	83.33	83.33	83.33
	Net Loan-Closing	916.67	833.33	750.00	666.67	583.33
	Average Loan	958.33	875.00	791.67	708.33	625.00
	Rate of Interest	8.64%	8.64%	8.64%	8.64%	8.64%
	Interest	82.80	75.60	68.40	61.20	54.00
	Rep Schedule	12 annual instalments from 8.07.2014				
8	Bond XXXII					
	Gross loan opening	1500.00	1500.00	1500.00	1500.00	1500.00
	Cumulative Repayment upto DOCO/previous year	125.00	250.00	375.00	500.00	625.00
	Net Loan-Opening	1375.00	1250.00	1125.00	1000.00	875.00



	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	125.00	125.00	125.00	125.00	125.00
	Net Loan-Closing	1250.00	1125.00	1000.00	875.00	750.00
	Average Loan	1312.50	1187.50	1062.50	937.50	812.50
	Rate of Interest	8.84%	8.84%	8.84%	8.84%	8.84%
	Interest	116.03	104.98	93.93	82.88	71.83
	Rep Schedule	12 annual instalments from 29.3.2014				
9	SBI (21.03.2012)					
	Gross loan opening	28200.00	28200.00	28200.00	28200.00	28200.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	2560.56	5121.12
	Net Loan-Opening	28200.00	28200.00	28200.00	25639.44	23078.88
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	2560.56	2560.56	2560.56
	Net Loan-Closing	28200.00	28200.00	25639.44	23078.88	20518.32
	Average Loan	28200.00	28200.00	26919.72	24359.16	21798.60
	Rate of Interest	10.25%	10.25%	10.25%	10.25%	10.25%
	Interest	2890.50	2890.50	2759.27	2496.81	2234.36
	Rep Schedule	22 half yearly instalment from 31.08.2016				
10	Bond XXXVIII					
	Gross loan opening	3000.00	3000.00	3000.00	3000.00	3000.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	0.00	0.00
	Net Loan-Opening	3000.00	3000.00	3000.00	3000.00	3000.00
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	0.00	0.00
	Net Loan-Closing	3000.00	3000.00	3000.00	3000.00	3000.00
	Average Loan	3000.00	3000.00	3000.00	3000.00	3000.00
	Rate of Interest	9.25%	9.25%	9.25%	9.25%	9.25%
	Interest	277.50	277.50	277.50	277.50	277.50
	Rep Schedule	9.3.2027 Bullet Payment				
11	Bond XLI					
	Gross loan opening	11500.00	11500.00	11500.00	11500.00	11500.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	958.33	1916.67
	Net Loan-Opening	11500.00	11500.00	11500.00	10541.67	9583.33
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	958.33	958.33	958.33
	Net Loan-Closing	11500.00	11500.00	10541.67	9583.33	8625.00
	Average Loan	11500.00	11500.00	11020.83	10062.50	9104.17
	Rate of Interest	8.85%	8.85%	8.85%	8.85%	8.85%
	Interest	1017.75	1017.75	975.34	890.53	805.72
	Rep Schedule	12 annual instalments from 19.10.2016				
12	Bond XLII					
	Gross loan opening	100.00	100.00	100.00	100.00	100.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	0.00	0.00



	Net Loan-Opening	100.00	100.00	100.00	100.00	100.00
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	0.00	0.00
	Net Loan-Closing	100.00	100.00	100.00	100.00	100.00
	Average Loan	100.00	100.00	100.00	100.00	100.00
	Rate of Interest	8.80%	8.80%	8.80%	8.80%	8.80%
	Interest	8.80	8.80	8.80	8.80	8.80
	Rep Schedule	13.3.2023 Bullet Payment				
13	Bond XLIII					
	Gross loan opening	1000.00	1000.00	1000.00	1000.00	1000.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	0.00	83.33
	Net Loan-Opening	1000.00	1000.00	1000.00	1000.00	916.67
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	83.33	83.33
	Net Loan-Closing	1000.00	1000.00	1000.00	916.67	833.33
	Average Loan	1000.00	1000.00	1000.00	958.33	875.00
	Rate of Interest	7.93%	7.93%	7.93%	7.93%	7.93%
	Interest	79.30	79.30	79.30	76.00	69.39
	Rep Schedule	12 annual instalments from 20.5.2017				
14	Bond XLIV					
	Gross loan opening	2500.00	2500.00	2500.00	2500.00	2500.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	0.00	0.00
	Net Loan-Opening	2500.00	2500.00	2500.00	2500.00	2500.00
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	0.00	833.33
	Net Loan-Closing	2500.00	2500.00	2500.00	2500.00	1666.67
	Average Loan	2500.00	2500.00	2500.00	2500.00	2083.33
	Rate of Interest	8.70%	8.70%	8.70%	8.70%	8.70%
	Interest	217.50	217.50	217.50	217.50	181.25
	Rep Schedule	3 equal annual instalments 15.7.2018, 15.7.2023, 15.7.2028				
15	Bond XLV					
	Gross loan opening	8500.00	8500.00	8500.00	8500.00	8500.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	0.00	708.33
	Net Loan-Opening	8500.00	8500.00	8500.00	8500.00	7791.67
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	708.33	708.33
	Net Loan-Closing	8500.00	8500.00	8500.00	7791.67	7083.33
	Average Loan	8500.00	8500.00	8500.00	8145.83	7437.50
	Rate of Interest	9.65%	9.65%	9.65%	9.65%	9.65%
	Interest	820.25	820.25	820.25	786.07	717.72
	Rep Schedule	12 annual instalments from 28.02.2018				
16	Bond XLVI					
	Gross loan opening	6514.66	6514.66	6514.66	6514.66	6514.66



	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	0.00	0.00
	Net Loan-Opening	6514.66	6514.66	6514.66	6514.66	6514.66
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	0.00	0.00
	Net Loan-Closing	6514.66	6514.66	6514.66	6514.66	6514.66
	Average Loan	6514.66	6514.66	6514.66	6514.66	6514.66
	Rate of Interest	9.30%	9.30%	9.30%	9.30%	9.30%
	Interest	605.86	605.86	605.86	605.86	605.86
	Rep Schedule	Redeemable at par in 3 equal instalments on 04.09.2019, 04.09.2024 & 04.09.2029				
17	Bond XLVI – Add cap - 2014-15 - IDC					
	Gross loan opening	0.00	1315.71	1315.71	1315.71	1315.71
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	0.00	0.00
	Net Loan-Opening	0.00	1315.71	1315.71	1315.71	1315.71
	Additions during the year	1315.71	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	0.00	0.00
	Net Loan-Closing	1315.71	1315.71	1315.71	1315.71	1315.71
	Average Loan	657.86	1315.71	1315.71	1315.71	1315.71
	Rate of Interest	9.30%	9.30%	9.30%	9.30%	9.30%
	Interest	61.18	122.36	122.36	122.36	122.36
	Rep Schedule	Redeemable at par in 3 equal instalments on 04.09.2019, 04.09.2024 & 04.09.2029				
18	Bond XLVIII – Add cap - 2014-15					
	Gross loan opening	0.00	1257.07	1257.07	1257.07	1257.07
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	0.00	0.00
	Net Loan-Opening	0.00	1257.07	1257.07	1257.07	1257.07
	Additions during the year	1257.07	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	0.00	0.00
	Net Loan-Closing	1257.07	1257.07	1257.07	1257.07	1257.07
	Average Loan	628.54	1257.07	1257.07	1257.07	1257.07
	Rate of Interest	8.20%	8.20%	8.20%	8.20%	8.20%
	Interest	51.54	103.08	103.08	103.08	103.08
	Rep Schedule	Redeemable at par in 3 equal instalments on 23.01.2020, 23.01.2022, 23.01.2025 & 23.01.2030				
	Total Loan					
	Gross loan opening	89514.66	92087.44	92087.44	92087.44	92087.44
	Cumulative Repayment upto DOCO/previous year	550.00	991.67	2258.33	7910.56	14354.45
	Net Loan-Opening	88964.66	91095.77	89829.11	84176.88	77732.99
	Additions during the year	2572.78	0.00	0.00	0.00	0.00



	Repayment during the year	441.67	1266.67	5652.23	6443.89	7277.23
	Net Loan-Closing	91095.77	89829.11	84176.88	77732.99	70455.76
	Average Loan	90030.22	90462.44	87002.99	80954.93	74094.37
	Rate of Interest	9.5217%	9.5146%	9.5130%	9.5046%	9.4995%
	Interest	8572.43	8607.17	8276.64	7694.47	7038.57

