

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 176/TT/2017

Coram:

**Shri P. K. Pujari, Chairperson
Shri A. K. Singhal, Member
Dr. M. K. Iyer, Member**

Date of Order : 18.09.2018

In the matter of:

Approval of transmission tariff for the 2014-19 tariff period for “**ASSET-I:** 01x125 MVA 400 kV Bus Reactor-3 along with associated bays and equipment at Vijayawada Substation, 01x500 MVA 400/220/33 kV ICT-3 along with associated bays and equipment each at Hyderabad (Ghanapur) and Vijayawada Sub-station, **ASSET-II:** 01x125 MVA 400 kV Bus Reactor-4 along with associated bays at Vijayawada Sub-station, **ASSET-III:** 1x500 MVA, 400/220/33 kV ICT along with associated bays and equipment at Pugalur Sub-station, **ASSET-IV:** Conversion of 50 MVAR line reactors at Madakathara end on both circuits of Ellapally (Palakkad)–Madakathara (North Trissur) 400 kV D/C line into switchable reactors by providing necessary switching arrangement, **ASSET-V:** 1x500 MVA, 400/220/33 kV ICT along with associated bays and equipment at Trichy Sub-station, **ASSET-VI:** Replacement of existing 2x315 MVA 400/220 kV transformers with 2x500 MVA transformers and utilize the replaced 2x315 MVA transformers as regional spare at Narendra Sub-station under System strengthening-XX” in Southern Region under Regulation 86 of Central Electricity Regulatory Commission (Conduct of business) Regulations, 1999 and Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014.

And in the matter of:

Power Grid Corporation of India Limited,
“Saudamini”, Plot No. 2,
Sector 29, Gurgaon-122001
Haryana

....Petitioner

Vs

1. Karnataka Power Transmission Corporation Ltd.
Kaveri Bhavan, Bangalore – 560 009
2. Transmission Corporation of Andhra Pradesh Ltd.
Vidyut Soudha, Hyderabad– 500082
3. Kerala State Electricity Board
Vaidyuthi Bhavanam, Pattom,
Thiruvananthapuram –695 004



- 4 Tamil Nadu Electricity Board
NPKRR Maaligai, 800, Anna Salai
Chennai – 600 002
5. Electricity Department
Government of Goa
Vidyuti Bhawan, Panaji,
Goa-403001
- 6 Electricity Department
Govt. of Pondicherry,
Pondicherry - 605001
- 7 Eastern Power Distribution Company of Andhra Pradesh Limited
P and T Colony, Seethmmadhara,
Vishakhapatnam, Andhra Pradesh.
- 8 Southern Power Distribution Company of Andhra Pradesh Limited
Srinivasasa Kalyana Mandapam Backside,
Tiruchanoor Road, Kesavayana Gunta,
Tirupati- 517501,
Chittoor District, Andhra Pradesh
- 9 Central Power Distribution Company of Andhra Pradesh Limited
Corporate Office, Mint Compound,
Hyderabad – 500063, Andhra Pradesh
- 10 Northern Power Distribution Company of Andhra Pradesh Limited
Opp. NIT Petrol Pump Chaitanyapuri,
Kazipet, Warangal – 506004 Andhra
Pradesh
- 11 Bangalore Electricity Supply Company Ltd.
Corporate Office, K.R. Circle
Bangalore – 560001 Karnataka
- 12 Gulbarga Electricity Supply Company Ltd., Station
Main Road, Gulbarga, Karnataka
- 13 Hubli Electricity Supply Company Ltd.,
Navanagar, PB Road,
Hubli, Karnataka
- 14 MESCOM Corporate Office,
Paradigm Plaza, AB Shetty Circle
Mangalore – 575001 Karnataka
- 15 Chamundeswari Electricity Supply Corporation Ltd.
927, L J Avenue
Ground Floor, New Kantharaj URS Road
Saraswatipuram, Mysore – 570 009



16 Transmission Corporation of Telangana Limited,
Vidhyut Sudha, Khairatabad,
Hyderabad- 500082

...Respondents

For Petitioner : Shri S. S. Raju, PGCIL
Shri B. Dash, PGCIL
Shri Rakesh Prasad, PGCIL
Shri Mohd. Mohsin, PGCIL
Shri Vivek Kumar Singh, PGCIL
Shri Abhay Choudhary, PGCIL

For Respondents : Shri S. Vallinayagam, Advocate, TANGEDCO
Ms. E. Shyamala, TANGEDCO
Ms. K.S. Indra Kumari, TANGEDCO

ORDER

The present petition has been filed by the petitioner, Power Grid Corporation of India Ltd. ("PGCIL") seeking approval of transmission tariff for transmission asset "Asset -I: 01x125 MVAr 400 kV Bus Reactor-3 along with associated bays and equipment at Vijayawada Sub-station, 01x500 MVA 400/220/33 kV ICT-3 along with associated bays and equipment each at Hyderabad (Ghanapur) and Vijayawada Sub-station, Asset-II: 01x125 MVAr 400 kV Bus Reactor-4 along with associated bays at Vijayawada Sub-station, Asset - III: 1x500 MVA, 400/220/33 kV ICT along with associated bays and equipment at Pugalur Sub-station, Asset-IV: Conversion of 50 MVAR line reactors at Madakathara end on both circuits of Ellapally (Palakkad)-Madakathara (North Trissur) 400 kV D/c line into switchable reactors by providing necessary switching arrangement, Asset-V: 1x500 MVA,400/220/33 kV ICT along with associated bays and equipment at Trichy Sub-station, Asset-VI: Replacement of existing 2x315 MVA 400/220 kV transformers with 2x500 MVA transformers and utilize the replaced 2x315 MVA transformers as regional spare at Narendra Sub-station (hereinafter referred to as "transmission assets") under System



strengthening-XX” in Southern Region (hereinafter referred to as “transmission system”) for 2014-19 tariff period under Central Electricity Regulation Commission (Terms and Conditions of Tariff) Regulations, 2014 (hereinafter referred to as “the 2014 Tariff Regulations”).

2. The petitioner has made the following prayers:-

- “(i) Approve the Transmission Tariff for the tariff block 2014-19 block for the assets covered under this petition, as per para – 8.2 above.
- (i) Allow the Petitioner to approach Hon’ble Commission for suitable revision in the norms for O&M expenditure for claiming the impact of wage hike, if any, during period 2014-19.
- (ii) Invoke the provision of regulation -4(3)(ii) of CERC (Terms and Conditions of Tariff) Regulations’ 2014 and Regulation – 24 of CERC (Conduct of Business) Regulations’ 1999 for approval of DOCO of Asset-V as 15.06.2017.
- (iii) Allow the petitioner to recover the shortfall or refund the excess Annual Fixed Charges, on account of Return on Equity due to change in applicable Minimum Alternate/Corporate Income Tax rate as per the Income Tax Act, 1961 (as amended from time to time) of the respective financial year directly without making any application before the Commission as provided under clause 25 of the Tariff regulations 2014.
- (iv) Approve the reimbursement of expenditure by the beneficiaries towards petition filing fee, and expenditure on publishing of notices in newspapers in terms of Regulation 52 Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014, and other expenditure (if any) in relation to the filing of petition.
- (v) Allow the petitioner to bill and recover Licensee fee and RLDC fees and charges, separately from the respondents in terms of Regulation 52 Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014.
- (vi) Allow the petitioner 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.
- (vii) Allow the Petitioner to bill and recover Service tax on Transmission Charges separately from the respondents, if at any time service tax on transmission is withdrawn from negative list at any time in future. Further, any taxes and duties including cess etc. imposed by any statutory/Govt/municipal authorities shall be allowed to be recovered from the beneficiaries.
- (viii) Allow the petitioner to bill and recover GST on Transmission charges separately from the respondents, if GST on Transmission of electricity is withdrawn from the exempted (negative) list at any time in future. Further any taxes and duties including cess, etc. imposed by any Statutory/Govt./Municipal Authorities shall be allowed to be recovered from



the beneficiaries.

- (ix) Allow tariff up to 90% of the Annual Fixed Charges in accordance with clause 7 (i) of Regulation 7 Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 for purpose of inclusion in the PoC charges.
- (x) Allow the petitioner to bill Tariff from actual DOCO and also the petitioner may be allowed to submit revised Certificate and tariff Forms for anticipated elements (as per the Relevant Regulation) based on actual DOCO. and pass such other relief as Hon'ble Commission deems fit and appropriate under the circumstances of the case and in the interest of justice.

3. The Investment Approval (IA) for implementation of "System strengthening-XX works" in Southern Region was accorded by the Board of Directors of the petitioner on 4.8.2014 vide the Memorandum Ref: C/CP/SRSS-XX PS dated 8.8.2014 at an estimated cost of ₹28849 lakh including an IDC of ₹1733 lakh (based on June, 2014 price level).

4. The Revised Cost Estimate (RCE) of the project was accorded by Board of Directors of the petitioner vide the Memorandum Ref: C/CP/PA1617-01-0R-RCE006 dated 13.1.2017 at an estimated cost of ₹37609 lakh including an IDC of ₹1896 lakh (based on April, 2016 price level).

5. The scope of the scheme was discussed and agreed in the 33rd and 34th meeting of the Standing Committee on Power System Planning of the Southern Region held on 20.10.2011 and 16.4.2012 respectively. The transmission scheme was further ratified in the 18th, 19th and 20th meeting of SRPC held on 23.12.2011, 1.6.2012 and 28.9.2012 respectively.

6. The scope of work covered under system strengthening-XX in Southern Region is as follows:-

Sub-station:

These are the existing substations owned by POWERGRID and shall have provisions to accommodate the following as under in this project:



1. Extension of 400/220 kV Sub-station at Hyderabad (Ghanapur)
 - i. 1x 500 MVA, 400/220/33 kV ICT
 - ii. 1 number 400 kV transformer bay for 1x 500 MVA transformer
 - iii. 1 number 220 kV transformer bay for 1x 500 MVA transformer
2. Extension of 400/220 kV Sub-station at Warangal
 - i. 1x 500 MVA, 400/220/33 kV ICT
 - ii. 1 number 400 kV transformer bay for 1x 500 MVA transformer
 - iii. 1 number 220 kV transformer bay for 1x 500 MVA transformer
3. Extension of 400/220 kV Sub-station at Khammam
 - i. 1x 500 MVA, 400/220/33 kV ICT
 - ii. 1 number 400 kV transformer bay for 1x 500 MVA transformer
 - iii. 1 number 220 kV transformer bay for 1x 500 MVA transformer
4. Extension of 400/220 kV Sub-station at Vijayawada
 - i. 1x 500 MVA, 400/220/33 kV ICT
 - ii. 1 number 400 kV transformer bay for 1x 500 MVA transformer
 - iii. 1 number 220 kV transformer bay for 1x 500 MVA transformer
 - iv. 2x125 MVAR, 400 kV Bus reactors
 - v. 2 numbers 400 kV Bus reactor bays
5. Extension of 400/220 kV Sub-station at Gooty
 - i. 1x 500 MVA, 400/220/33 kV ICT
 - ii. 1 number 400 kV transformer bay for 1x 500 MVA transformer
 - iii. 1 number 220 kV transformer bay for 1x 500 MVA transformer
6. Extension of 400/220 kV Sub-station at Cuddapah
 - i. 1x 500 MVA, 400/220/33 kV ICT
 - ii. 1 number 400 kV transformer bay for 1x 500 MVA transformer
 - iii. 1 number 220 kV transformer bay for 1x 500 MVA transformer
7. Extension of 400/230 kV Sub-station at Malekuttaiyur
 - i. 1x 500 MVA, 400/220/33 kV ICT
 - ii. 1 number 400 kV transformer bay for 1x 500 MVA transformer
 - iii. 1 number 230 kV transformer bay for 1x 500 MVA transformer
8. Extension of 400/220 kV Sub-station at Somanahalli
 - i. 1x 500 MVA, 400/220/33 kV ICT
 - ii. 1 number 400 kV transformer bay for 1x 500 MVA transformer
 - iii. 1 number 220 kV transformer bay for 1x 500 MVA transformer
9. Extension of 400/220 kV Sub-station at Mysore
 - i. 1x 500 MVA, 400/220/33 kV ICT
 - ii. 1 number 400 kV transformer bay for 1x 500 MVA transformer
 - iii. 1 number 220 kV transformer bay for 1x 500 MVA transformer
10. Extension of 400/230 kV Sub-station at Pugalur
 - i. 1x 500 MVA, 400/220/33 kV ICT
 - ii. 1 number 400 kV transformer bay for 1x 500 MVA transformer
 - iii. 1 number 230 kV transformer bay for 1x 500 MVA transformer



11. Extension of 400/230 kV Sub-station at Trichy
 - i. 1x 500 MVA, 400/220/33 kV ICT
 - ii. 1 number 400 kV transformer bay for 1x 500 MVA transformer
 - iii. 1 number 230 kV transformer bay for 1x 500 MVA transformer
12. Extension of 400/220 kV Sub-station at Narendra
 - i. Replacement of existing 2x315 MVA 400/220 kV transformers with 2x 500 MVA transformers and utilize the replaced 2x315 MVA transformers as regional spare; location to keep the spare shall be decided later.
13. Extension of 400/220 kV Sub-station at Trissur
 - i. Conversion of 50 MVAR line reactors at Madakathara end on both circuits of Ellapally (Palakkad)–Madakathara (North Trissur) 400 kV D/C line into switchable reactors by providing necessary switching arrangement.

Reactive Compensation (already covered above)

- i. Conversion of 50 MVAR line reactors at Madakathara end on both circuits of Ellapally (Palakkad)–Madakathara (North Trissur) 400 kV D/C line into switchable reactors by providing necessary switching arrangement.
- ii. 2x125 MVAR Bus reactors at Vijayawada 400 kV Sub-station

7. The details of the assets covered in the instant transmission system along with the petition number is given below:-

Srl. No.	Asset	Schedule COD as per IA	COD	Covered in Petition No.
1	1x500 MVA, 400/220 kV ICT at Malekuttaiyur Sub-station along with associated bays and equipment.	4.2.2017 (30 months from I.A.)	March, 2016	23/TT/2016
2	1x500 MVA, 400/220 kV ICT at Somanahalli Sub-station along with associated bays and equipment.		August, 2016	
3	1x500 MVA,400/220 kV ICT at Mysore Sub-station along with associated bays and equipment		September, 2016	
6	01x125 MVAr 400 kV Bus Reactor-3 along with associated bays and equipment at Vijayawada Sub-station, 01x500 MVA 400/220 kV ICT-3 along with associated bays and equipment each at Hyderabad (Ghanapur) and Vijayawada Sub-station: Asset-I	4.2.2017 (30 months from I.A.)	27.3.2017	Covered under current petition
7	01x125 MVAr 400 kV Bus Reactor-4 along with associated bays at Vijayawada Sub-station: Asset-II		2.4.2017	



8	1x500 MVA,400/220 kV ICT along with associated bays and equipment at Pugalur Sub-station: Asset-III	31.3.2017
9	Conversion of 50 MVAR line reactors at Madakathara end on both circuits of Ellapally (Palakkad)–Madakathara(North Trissur) 400 kV D/c line into switchable reactors by providing necessary switching arrangement: Asset-IV	28.3.2017
10	1x500 MVA,400/220 kV ICT along with associated bays and equipment at Trichy Sub-station: Asset-V	10.6.2017
11	Replacement of existing 2x315 MVA 400/220 kV transformers with 1x 500 MVA transformers and utilize the replaced 1x315 MVA transformers as regional spare at Narendra Sub-station: Asset-VI(A)	14.12.2017
12	Replacement of existing 1x315 MVA 400/220 kV transformers with 1x 500 MVA transformers and utilize the replaced 1x315 MVA transformers as regional spare at Narendra Sub-station: Asset-VI(B)	16.4.2018

8. The details of the assets yet to be put into commercial operation are as follows:-

Srl. No.	Assets	Remarks
1	1x500 MVA, 400/220/33 kV ICT along with associated bays and equipment at Warangal Sub-station	Under implementation.
2	1x500 MVA, 400/220/33 kV ICT along with associated bays and equipment at Khammam Sub-station	
3	1x500 MVA, 400/220/33 kV ICT along with associated bays and equipment at Gooty Sub-station	
4	1x500 MVA, 400/220/33 kV ICT along with associated bays and equipment at Cuddapah Sub-station	

9. Annual Fixed Cost was granted for the instant transmission assets vide order dated 5.10.2017 under the first proviso to Regulation 7(7) of the 2014 Tariff Regulations for inclusion in the PoC charges.



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

(₹ in lakh)			
Asset-I	2016-17	2017-18	2018-19
Depreciation	3.50	300.83	350.03
Interest on Loan	3.80	313.66	339.79
Return on Equity	3.90	335.18	390.00
Interest on Working Capital	0.44	36.01	39.35
O&M Expenses	3.81	292.63	302.33
Total	15.45	1278.31	1421.50

(₹ in lakh)		
Asset-II	2017-18	2018-19
Depreciation	45.30	54.83
Interest on Loan	47.11	53.31
Return on Equity	50.47	61.09
Interest on Working Capital	6.58	7.28
O&M Expenses	66.33	68.71
Total	215.79	245.22

(₹ in lakh)			
Asset-III	2016-17	2017-18	2018-19
Depreciation	0.20	90.10	108.05
Interest on Loan	0.22	94.02	105.52
Return on Equity	0.22	100.39	120.39
Interest on Working Capital	0.03	12.12	13.39
O&M Expenses	0.29	113.06	116.81
Total	0.96	409.69	464.16

(₹ in lakh)			
Asset-IV	2016-17	2017-18	2018-19
Depreciation	0.15	16.06	18.76
Interest on Loan	0.16	16.49	17.95
Return on Equity	0.17	17.89	20.90
Interest on Working Capital	0.08	8.06	8.45
O&M Expenses	1.38	133.02	137.42
Total	1.94	191.52	203.48

(₹ in lakh)		
Asset-V	2017-18	2018-19
Depreciation	75.64	106.23
Interest on Loan	77.68	102.22
Return on Equity	84.28	118.36
Interest on Working Capital	9.96	13.23
O&M Expenses	91.39	116.81
Total	338.95	456.85



(₹ in lakh)		
Asset-VI(A)	2017-18	2018-19
Depreciation	21.38	77.88
Interest on Loan	21.10	73.01
Return on Equity	23.83	86.77
Interest on Working Capital	1.45	5.18
O&M Expenses	0.00	0.00
Total	67.76	242.84

(₹ in lakh)	
Asset-VI(B)	2018-19
Depreciation	70.90
Interest on Loan	72.55
Return on Equity	78.99
Interest on Working Capital	4.85
O&M Expenses	0.00
Total	227.29

11. The details of the interest on working capital claimed by the petitioner are as under:-

(₹ in lakh)			
Asset-I	2016-17	2017-18	2018-19
Maintenance Spares	42.52	43.89	45.35
O&M Expenses	23.62	24.39	25.19
Receivables	191.58	213.05	236.92
Total	257.72	281.33	307.46
Interest (pro-rata)	0.44	36.01	39.35
Rate of Interest	12.80%	12.80%	12.80%

(₹ in lakh)		
Asset-II	2017-18	2018-19
Maintenance Spares	9.98	10.31
O&M Expenses	5.54	5.73
Receivables	36.07	40.87
Total	51.59	56.91
Interest (pro-rata)	6.58	7.28
Rate of Interest	12.80%	12.80%

(₹ in lakh)			
Asset-III	2016-17	2017-18	2018-19
Maintenance Spares	16.18	16.96	17.52
O&M Expenses	8.99	9.42	9.73
Receivables	59.63	68.28	77.36
Total	84.80	94.66	104.61
Interest (pro-rata)	0.03	12.12	13.39
Rate of Interest	12.80%	12.80%	12.80%



(₹ in lakh)

Asset-IV	2016-17	2017-18	2018-19
Maintenance Spares	19.25	19.95	20.61
O&M Expenses	10.70	11.09	11.45
Receivables	30.07	31.92	33.91
Total	60.02	62.96	65.98
Interest (pro-rata)	0.08	8.06	8.45
Rate of Interest	12.80%	12.80%	12.80%

(₹ in lakh)

Asset-V	2017-18	2018-19
Maintenance Spares	16.96	17.52
O&M Expenses	9.42	9.73
Receivables	69.89	76.14
Total	96.27	103.40
Interest (pro-rata)	12.32	13.23
Rate of Interest	12.80%	12.80%

(₹ in lakh)

Asset-VI(A)	2017-18	2018-19
Maintenance Spares	-	-
O&M Expenses	-	-
Receivables	37.85	40.47
Total	37.85	40.47
Interest (pro-rata)	1.45	5.18
Rate of Interest	12.80%	12.80%

(₹ in lakh)

Asset-VI(B)	2018-19
Maintenance Spares	-
O&M Expenses	-
Receivables	39.53
Total	39.53
Interest	4.85
Rate of Interest	12.80%

12. The petitioner has published the notice of this application 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. TANGEDCO, Respondent No.4, vide affidavit dated 18.9.2017 has filed its reply in the matter and the petitioner has filed its rejoinder to the same. The objections raised by the



respondent and the clarifications given by the petitioner are addressed in the relevant paragraphs of this order.

13. During the hearing on 8.8.2018, the learned counsel for TANGEDCO requested two weeks' time to file "written submissions" in the matter. The Commission granted time upto 27.8.2018 and observed that if the "written submissions" are not received by the said date, the matter will be disposed of on the basis of the information on record. TANGEDCO has not filed the "written submissions". Accordingly, the matter is disposed of on the basis of the information on record.

14. This order has been issued after considering the petitioner's affidavits dated 20.7.2017, 21.9.2017, 14.3.2018, 16.3.2018, 16.4.2018, and 17.5.2018.

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

Date of Commercial Operation (COD)

16. As per the Investment Approval dated 4.8.2014, the scheduled COD of the instant assets was 4.2.2017. The petitioner has submitted that Assets- I, II, III, IV, VI(A) and VI(B) were put under commercial operation on 27.3.2017, 2.4.2017, 31.3.2017, 28.3.2017, 14.12.2017 and 16.4.2018 respectively. In support of COD of Assets-I, II, III, IV, VI(A) and VI(B), the petitioner has submitted RLDC charging certificates dated 2.6.2017, 15.5.2017, 26.12.2017, and 16.4.2018, CEA certificates dated 8.3.2017, 20.3.2017, 22.3.2017, 8.12.2017 and 5.4.2018 under Regulation 43 of CEA (Measures Related to Safety & Electricity Supply) Regulations, 2010 and CMD certificate as required under Grid Code. Accordingly, the COD of the Assets I, II, III, IV, VI(A) and VI(B)



is approved as 27.3.2017, 2.4.2017, 31.3.2017, 28.3.2017, 14.12.2017 and 16.4.2018 respectively.

17. The petitioner has sought approval of COD of Assets-V under proviso (ii) of Regulation 4(3) of the 2014 Tariff Regulations as the petitioner was prevented from putting to use Asset-V because of the delay in COD of the downstream assets under the scope of TANTRANSCO. In support, the petitioner has submitted "No load" charging certificate dated July, 2017 and CEA Energisation certificate dated 7.6.2017 to show that the Assets-V was ready from 10.6.2017. However, since TANTRANSCO is not a party to the present proceedings, we are not inclined to approve the COD of Asset-V, which is under the scope of TANTRANSCO, at this stage. We would like to hear TANTRANSCO before approving the COD and tariff of Asset-V. Accordingly, we direct the petitioner to file a separate petition for approval of tariff for Asset-V, making TANTRANSCO as a party.

Capital cost

18. 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 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."

19. The details of apportioned approved cost, capital cost as on COD and incurred/projected additional capital expenditure and the estimated completion cost of the instant assets are as follows:-

Name of the Asset	Approved apportioned cost	Revised apportioned cost as per RCE	Capital cost as on COD	Estimated additional capital expenditure		Total estimated completion cost
				2017-18	2018-19	
Asset-1	5394.81	6939.78	5083.17	1380.32	331.64	6795.13
Asset-II	858.19	1120.61	769.66	221.32	94.85	1085.83
Asset-III	2347.62	2442.69	1462.44	528.91	110.25	2101.6
Asset-IV	179.9	411.73	273.65	70.03	23.34	367.02
Asset-VI(A)	1378.86	1845.31	1323.31	135	66.89	1525.20
Asset-VI(B)	1346.77	1845.31	1335.09	-	182.96	1518.05

Cost over-run

20. The petitioner has submitted that the price variation under the project is attributable to the inflationary trend prevailing during execution of project and the market forces prevailing at the time of bidding process of various packages. The petitioner further submitted that the contracts for various packages under this project were awarded to the lowest evaluated and responsive bidder, on the basis of global/domestic competitive bidding, after publication of NITs in leading newspapers. Thus, the award prices represent the lowest prices available at the time of bidding of various packages.



21. The Commission vide order dated 5.10.2017 has directed the petitioner to submit justification of cost variation of 22.46%, 23.41% and 56.30% in comparison with FR Cost w.r.t. RCE cost for Assets-I, II and IV respectively. In response, the petitioner vide affidavit dated 14.3.2018 has submitted that the price variation of ₹1438 lakh has been incurred/likely to be incurred under contract on the basis of provision of respective contracts. It is due to the reasons attributable to inflationary trends prevalent during execution of project from June, 2014 (OBD of package-July, 2014) to March, 2016. The petitioner also submitted that based on the site requirement, new equipment were installed at various sub-stations under the instant project which were not envisaged in the FR which resulted in increase in the cost as compared to FR cost. As per 34th meeting of the standing committee on Power System Planning of Southern Region, it was decided that the petitioner will implement 220 kV transformer bay in those sub-stations also where 220 kV switchyard is not owned by the petitioner. On account of this, an expenditure of ₹824 lakh was incurred/ likely to be incurred for inter-connection between 220 kV Gantry of existing Hyderabad, Gooty, Cuddapah, Khammam and Vijayawada Sub-stations of the petitioner adjacent to 220 kV buses in respective existing TSTRANSCO and APTRANSCO 220 kV switchyards.

22. TANGEDCO has submitted that there is cost over-run of about ₹1813 lakh when compared to the FR apportioned cost due to change in price levels. The petitioner has failed to exercise due diligence in estimating the capital investment cost. The petitioner has stated that the estimates are prepared as per the well-defined procedures. However, the breakup of the project cost furnished in Form 5 exhibits that the estimates are vague and unrealistic. The petitioner is not exercising care and is not prudent in preparing cost estimates.



23. We have considered the submissions of the petitioner and TANGEDCO. The petitioner has submitted that the cost variation is due to variation in price levels, addition of 220 kV transformer bay at existing Hyderabad, Gooty, Cuddapah, Khammam and Vijayawada. It is observed that the estimated completion cost is within the RCE. Therefore, the cost variation is allowed.

Time over-run

24. As per the Investment Approval dated 4.8.2014, the scheduled COD of the transmission scheme was 30 months from the date of Investment approval. Hence, the scheduled COD was 4.2.2017 against which Asset-I, II, III, IV, VI(A) and VI(B) were put into commercial operation on 27.3.2017, 2.4.2017, 31.3.2017, 28.3.2017, 14.12.2017 and 16.4.2018 respectively. Hence there is time over-run of 1 month 23 days, 1 month 29 days, 1 month 27 days, 1 month 24 days, 10 months 10 days and 14 months 12 days in case of Asset-I, II, III, IV, VI(A) and VI(B) respectively.

25. As regards the time over-run in case of Assets-I to IV, the petitioner has submitted that addition/augmentation/replacement was proposed/carried out in the existing sub-stations. These sub-stations are at major load centers and are carrying sizable portion of load flow. There were shutdown issues, which was required for integration of the new assets and this has led to minor time over-run.

26. The petitioner has submitted that the time over-run in case of Asset-V is due to the time taken for matching with the downstream assets under the scope of TANTRANSCO. The petitioner has submitted that it was coordinating with TANTRANSCO since 2016 to match with the COD of ICT at Trichy with the downstream assets and in support has submitted the minutes of the SRPC



meeting held on 27.8.2016. The petitioner has submitted that the downstream assets are likely to take some more time and it is not possible for the petitioner to delay the construction due to contractual obligations and hence sought approval of COD of Asset-V under proviso (ii) of Regulation 4(3) of the 2014 Tariff Regulations. We have already stated that for this asset, the petitioner shall file a separate petition. Thus, it is not being considered in this petition.

27. The petitioner has submitted that Asset-VI(A) was ready for replacement works w.e.f. approved date of shutdown i.e. 25.6.2017. However, due to system constraint the shutdown was not approved by KPTCL till 25.11.2017. Accordingly, the shutdown for replacement of ICT at Narendra was availed on 25.11.2017 and ICT was put into commercial operation on 14.12.2017.

28. TANGEDCO has submitted that being the CTU and TSP, the petitioner should have anticipated the issues with regard to availing shutdown for integration of the assets and hence the justifications submitted by the petitioner are not acceptable.

29. We have considered the submissions of the petitioner and TANGEDCO and the documents on record regarding time over-run. There is a time over-run of about 1 month 23 days, 1 month 29 days, 1 month 27 days, 1 months 24 days, 10 months 10 days and 14 months 12 days in COD of the Assets-1, II, III, IV, VI(A) and VI(B) respectively. The petitioner has submitted that the time over-run in case of Assets-I to IV, was due to non-availability of shutdown. The petitioner has not submitted any documentary evidence of viz. date of application for shutdown and when the permission for shutdown was granted in case of Assets-I to IV. The petitioner was specifically directed to submit the chronology of the activities alongwith documentary evidence. However, from the submissions of



the petitioner, it is not clear whether the delay is due to shut down or for any other reason. Therefore, we are not inclined to condone the time delay for Asset-I to IV.

30. As regards the time over-run in case of Asset-VI(A) and Asset-VI(B), the petitioner has submitted that the petitioner was ready for replacement of 315 MVA ICT with 500 MVA ICT and obtained the approval for shutdown on 25.6.2017 and the same was allowed only on 25.11.2017 due to constraints in KPTCL system and Assets-VI(A) and VI(B) were put into commercial operation on 14.12.2017 and 16.4.2018. The schedule COD was 4.2.2017, whereas the petitioner applied for shut down on 25.6.2017. It is clear that the petitioner has applied for shutdown after the scheduled COD and hence the time period from 4.2.2017 to 25.6.2017 is within the control of the petitioner and the same is not condoned.

31. The petitioner has submitted the minutes of the 132nd OCC meeting held on 9.6.2017. From the minutes of the 132nd OCC meeting, it is observed that the petitioner has requested for shutdown from 25.6.2017 to 15.7.2017 for ICT-1 at Narendra and 25.6.2017 to August, 2017 for ICT-2 at Narendra. The petitioner has submitted letter dated 8.11.2017 addressed to Director (Tr), KPTCL and requested for shutdown for taking up the commissioning of the ICT-1 at Narendra and finally KPTCL allowed shutdown from 25.11.2017. Therefore, we are of the view that the time over-run from 25.6.2017 to 25.11.2017 is beyond the control of the petitioner. Out of the total time delay of 10 months 10 days and 14 months 12 days in case of Assets-VI(A) and VI(B) respectively, the time over-run of 5 months is condoned. The details of the total time over-run condoned is as follows:-



Srl. No.	Name of Asset	Total time delay	Delay condoned	Delay not condoned
1	Asset-I	1 month 23 days	-	1 month 23 days
2	Asset-II	1 month 29 days	-	1 month 29 days
3	Asset-III	1 month 27 days	-	1 month 27 days
4	Asset-IV	1 months 24 days	-	1 months 24 days
6	Asset-VI (A)	10 months 10 days	5 Months	5 Months 10 Days
7	Asset-VI(B)	14 months 12 days	5 Months	9 Months 10 days

Interest During Construction (IDC)

32. The allowable IDC has been worked out considering the information submitted by the petitioner. The loan details submitted in Form-9C for period 2014-19 and date of drawl submitted in IDC statement has been taken into consideration for the purpose of calculating IDC for the asset. Accordingly, the IDC allowed for tariff has been summarised as under:-

(₹ In lakh)					
Particulars	Total IDC (As per Auditor's Certificate) up to claimed COD	Entitled IDC as worked out	IDC disallowed due to computation difference and time over-run	Un-discharged portion of entitled IDC as on COD*	IDC allowed on cash basis
a	b	c	d=b-c	e	f
Asset-I	283.73	242.31	41.42	114.59	127.71
Asset II	43.11	34.49	8.62	31.26	3.23
Asset III	63.74	50.88	12.86	30.35	20.53
Asset IV	12.69	10.45	2.24	6.88	3.56
Asset VI (A)	60.01	30.93	29.08	5.19	25.74
Asset VI (B)	140.11	83.45	56.66	2.88	80.57
Total	647.29	476.30	170.99	205.09	271.21

* The undischarged IDC as on COD has been considered as ACE during the year in which it has been discharged.

Incidental Expenditure During Construction (IEDC)

33. The petitioner has claimed IEDC as on COD, which is within the percentage on hard cost as indicated in the abstract cost estimate. In the instant petition, 10.75% of hard cost is indicated as IEDC in the abstract cost estimate.

34. The IEDC claimed and allowed are as follows:-



(₹ In lakh)

Assets	IEDC claimed	IEDC restricted and disallowed due to time over-run	IEDC allowed
Asset-I	553.14	120.74	432.40
Asset II	96.55	32.79	63.76
Asset III	69.69	3.95	65.74
Asset IV	11.65	0.63	11.02
Asset VI (A)	61.05	7.95	53.10
Asset VI(B)	75.98	15.90	60.08
Total	910.16	187.06	723.10

Initial spares

35. Regulation 13(d) 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%

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

(vi) Communication system-3.5%

Provided that:

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

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

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

(iv) for the purpose of computing the cost of initial spares, plant and machinery cost shall be considered as project cost as on cut-off date excluding IDC, IEDC,



Land Cost and cost of civil works. The transmission licensee shall submit the break up of head wise IDC & IEDC in its tariff application.”

36. The petitioner has claimed initial spare towards sub-station for all the assets except for Asset VI(B). The petitioner has not submitted the year wise capitalisation and discharge of initial spares. Hence, it is assumed that the entire initial spare are capitalised and discharged as on COD. The initial spares claimed for all the assets are within the limit prescribed in the Regulations. Thus, claimed initial spares have been allowed. The details are as follows:-

(₹ in lakh)

Assets	Sub-station (Brown Field)		
	Plant & Machinery Cost*	Initial spares for sub-station	Initial spares as % of Capital Cost
Asset-I	5958.26	216.11	3.63
Asset-II	946.17	37.32	3.94
Asset-III	1968.17	116.40	5.91
Asset-IV	342.68	19.24	5.61
Asset-VI(A)	1404.14	83.42	5.94
Asset-VI(B)	1391.96	-	-
TOTAL			

*Excluding IDC, IEDC, and Land Cost of civil Works for the purpose of Initial spares.

De-Capitalization of Asset

37. The Asset VI (A) and VI (B) are replacing the existing assets. The petitioner vide affidavit dated 16.4.2018 has mentioned that the tariff for the replaced assets are approved by the Commission in Petition No. 212/TT/2014. The petitioner further has submitted that the replace ICT shall be used as a regional spare. The petitioner vide affidavit dated 17.5.2018 has submitted the details of gross block and accumulated depreciation for both the replaced ICTs at Narendra which are reproduced below:-

(₹ in lakh)

Particulars	COD of replaced asset	Date of replacement	Gross block	Accumulated depreciation	Net Block as on the date of replacement
ICT-1 1x315 MVA replace	28.10.2005	14.12.2017	745.10	440.53	304.57



by Asset VI(A)						
ICT-2 1x315 MVA replace by Asset VI(B)	30.8.2006	16.4.2018	743.63	424.33	319.30	

The Net Block as on the date of replacement has been adjusted from the allowable capital cost as on COD of the concerned new Asset.

Capital cost allowed as on COD

38. Detail of the capital cost considered as on COD after making the necessary adjustment in respect capital expenditure of IDC and IEDC is as follows:-

							(₹ in lakh)
Particulars	Capital cost as on COD claimed by Petitioner	Dis-allowed IDC due to time over run	Un-discharged IDC as on COD	IEDC disallowed on COD.	Excess initial spare	Net cost of decapitalised Asset	Capital Cost as on COD considered for tariff calculation
1	2	3	4	5	6	7	8= (2-3-4-5-6-7)
Asset I	5083.17	41.42	114.59	120.74	0.00	0.00	4806.42
Asset II	769.66	8.62	31.26	32.79	0.00	0.00	696.99
Asset III	1462.44	12.86	30.35	3.95	0.00	0.00	1415.28
Asset IV	273.65	2.24	6.88	0.63	0.00	0.00	263.90
Asset VI(A)	1323.31	29.08	5.19	7.95	0.00	304.57	976.53
Asset VI(B)	1335.09	56.66	2.88	15.90	0.00	319.30	940.35
Total	11841.97	170.99	205.09	187.06	0.00	623.87	10654.98

Additional Capital Expenditure (ACE)

39. 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.”

40. 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”.

41. The cut-off date for Asset-I, II, III, IV, VI (A) is 31.3.2020. The cut-off date for Asset VI (B) is 31.3.2021.

42. The petitioner has claimed ACE based on the cost certified by the Auditor. In addition, the petitioner has also claimed the discharge of IDC liability. Further, the petitioner has claimed the entire ACE under Regulation 14(1)(i) and (ii) of the 2014 Tariff Regulations. The ACE claimed by the petitioner is summarized as below:-

(₹ in lakh)

Additional capital expenditure claimed							
Particulars	Regulation	Asset-I		Asset-II		Asset-III	
		2017-18	2018-19	2017-18	2018-19	2017-18	2018-19
1. Discharge of liabilities on other than IDC	14(1)(i)	841.16	292.81	535.13	71.83	100.00	35.04
2. Add cap towards works deferred for execution (by addition into gross block)	14(1)(ii)	539.16	38.83	1.62	252.16	428.91	75.21
3. Total add-cap (excluding discharge of IDC liability)(1+2)		1380.32	331.64	536.75	323.99	528.91	110.25
4. Discharge of IDC Liability	14(1)(i)	151.62	0.00	1.62	14.48	41.04	0.00
5. Total add-cap claimed as per Form 7 (3+4)		1531.94	331.64	538.37	338.47	569.95	110.25



(₹ in lakh)

Additional capital expenditure claimed						
Particulars	Regulation	Asset IV		Asset VI (A)		Asset VI (B)
		2017-18	2018-19	2017-18	2018-19	2018-19
1. Discharge of liabilities on other than IDC	14(1)(i)	10.00	13.43	50.00	56.21	105.56
2. Add cap towards works deferred for execution (by addition into gross block)	14(1)(ii)	60.03	9.91	85.00	10.68	77.40
3. Total add-cap (excluding discharge of IDC liability)(1+2)		70.03	23.34	135.00	66.89	182.96
4. Discharge of IDC Liability	14(1)(i)	8.95	0.00	0.00	33.53	50.86
5. Total add-cap claimed as per Form 7 (3+4)		78.98	23.34	135.00	100.42	233.82

43. Based on the information submitted by the petitioner the allowable ACE has been summarized as under:-

- (i) Liabilities have been considered as per the flow of liability mentioned in Form 4A and IDC liability after considering the time over-run.
- (ii) Addition to gross block has been considered as per the claim.

(₹ in lakh)

Additional capital expenditure allowed							
Particulars	Regulation	Asset I		Asset II		Asset III	
		2017-18	2018-19	2017-18	2018-19		
1. Discharge of liabilities on other than IDC	14(1)(i)	841.16	292.81	221.32	94.85	100.00	35.04
2. Add cap towards works deferred for execution (by addition into gross block)	14(1)(ii)	539.16	38.83	0	0	428.91	75.21
3. Discharge of IDC Liability	14(1)(i)	114.59	0.00	31.26	0	30.35	0.00
4. Total add-cap Allowed		1494.91	331.64	252.58	94.85	559.26	110.25

(₹ in lakh)

Additional capital expenditure allowed						
Particulars	Regulation	Asset IV		Asset VI (A)		Asset VI (B)
		2017-18	2018-19	2017-18	2018-19	2018-19
1. Discharge of liabilities on other than IDC	14(1)(i)	10.00	13.43	50.00	56.21	105.56
2. Add cap towards works deferred for execution (by addition into gross)	14(1)(ii)	60.03	9.91	85.00	10.68	77.40



block)						
3. Discharge of IDC Liability	14(1)(i)	6.88	0.00	0.00	5.19	2.88
4. Total add-cap Allowed		76.91	23.34	135.00	72.08	185.84

Debt-Equity Ratio

44. 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.”

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



(₹ in lakh)

Asset-I	Capital cost as on COD		Capital cost as on 31.3.2019	
	Amount	%	Amount	%
Debt	3364.50	70.00	4643.09	70.00
Equity	1441.92	30.00	1989.89	30.00
Total	4806.42	100.00	6632.97	100.00

(₹ in lakh)

Asset-II	Capital cost as on COD		Capital cost as on 31.3.2019	
	Amount	%	Amount	%
Debt	487.90	70.00	731.10	70.00
Equity	209.09	30.00	313.32	30.00
Total	696.99	100.00	1044.42	100.00

(₹ in lakh)

Asset-III	Capital cost as on COD		Capital cost as on 31.3.2019	
	Amount	%	Amount	%
Debt	990.70	70.00	1459.36	70.00
Equity	424.58	30.00	625.44	30.00
Total	1415.28	100.00	2084.79	100.00

(₹ in lakh)

Asset-IV	Capital cost as on COD		Capital cost as on 31.3.2019	
	Amount	%	Amount	%
Debt	184.74	70.00	254.91	70.00
Equity	79.16	30.00	109.23	30.00
Total	263.90	100.00	364.15	100.00

(₹ in lakh)

Asset-VI (A)	Capital cost as on COD		Capital cost as on 31.3.2019	
	Amount	%	Amount	%
Debt	683.57	70.00	828.53	70.00
Equity	292.96	30.00	355.08	30.00
Total	976.53	100.00	1183.61	100.00

(₹ in lakh)

Asset-VI (B)	Capital cost as on COD		Capital cost as on 31.3.2019	
	Amount	%	Amount	%
Debt	658.25	70.00	788.34	70.00
Equity	282.10	30.00	337.85	30.00
Total	940.35	100.00	1126.19	100.00

Return on Equity

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



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

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

Provided that:

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

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

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

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

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

(vi) 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:

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.”

47. The petitioner has submitted that it is liable to pay income tax at MAT rate, the RoE has been calculated @ 19.610% after grossing up the RoE with MAT rate of 20.961% as provided under Regulation 25(2)(i) of the 2014 Tariff Regulations. As per Regulation 25(3) of the 2014 Tariff Regulations, the grossed up rate of RoE at the end of the financial year shall be trued up based on actual tax paid together with any additional tax demand including interest thereon duly adjusted for any refund of tax including interest received from the IT authorities pertaining to the 2014-19 period on actual gross income of any financial year.

48. We have considered the submissions made by the petitioner and respondent. Regulation 24 read with Regulation 25 of the 2014 Tariff Regulations provides for grossing up of return on equity with the effective tax rate for the purpose of return on equity. It further provides that in case the generating company or transmission licensee is paying Minimum Alternative Tax (MAT), the MAT rate including surcharge and cess will be considered for the grossing up of return on equity. Accordingly, the MAT rate applicable during 2013-14 has been considered for the purpose of return on equity, which shall be trued up with actual tax rate in accordance with Regulation 25 (3) of the 2014 Tariff Regulations. Accordingly, the RoE allowed is as follows:-

Asset-I	(₹ in lakh)		
	2016-17 (pro-rata)	2017-18	2018-19
Opening Equity	0.00	448.47	99.49
Addition due to Additional Capitalization	1441.92	1890.39	1989.89
Closing Equity	1441.92	1666.16	1940.14
Average Equity			
Return on Equity (Base Rate)	15.50%	15.50%	15.50%
MAT rate for the Financial year 2013-14	20.961%	20.961%	20.961%
Rate of Return on Equity (Pre-tax)	19.610%	19.610%	19.610%
Return on Equity (Pre-tax)	3.87	326.75	380.48



(₹ in lakh)

Asset-II	2017-18 (pro-rata)	2018-19
Opening Equity	209.09	284.87
Addition due to Additional Capitalization	75.77	28.46
Closing Equity	284.87	313.32
Average Equity	246.98	299.09
Return on Equity (Base Rate)	15.50%	15.50%
MAT rate for the Financial year 2013-14	20.961%	20.961%
Rate of Return on Equity (Pre-tax)	19.610%	19.610%
Return on Equity (Pre-tax)	48.30	58.66

(₹ in lakh)

Asset-III	2016-17 (pro-rata)	2017-18	2018-19
Opening Equity	424.58	424.58	592.36
Addition due to Additional Capitalization	0.00	167.78	33.08
Closing Equity	424.58	592.36	625.44
Average Equity	424.58	508.47	608.90
Return on Equity (Base Rate)	15.50%	15.50%	15.50%
MAT rate for the Financial year 2013-14	20.961%	20.961%	20.961%
Rate of Return on Equity (Pre-tax)	19.610%	19.610%	19.610%
Return on Equity (Pre-tax)	0.23	99.72	119.41

(₹ in lakh)

Asset-IV	2016-17 (pro-rata)	2017-18	2018-19
Opening Equity	79.16	79.16	102.23
Addition due to Additional Capitalization	0.00	23.07	7.00
Closing Equity	79.16	102.23	109.23
Average Equity	79.16	90.70	105.73
Return on Equity (Base Rate)	15.50%	15.50%	15.50%
MAT rate for the Financial year 2013-14	20.961%	20.961%	20.961%
Rate of Return on Equity (Pre-tax)	19.610%	19.610%	19.610%
Return on Equity (Pre-tax)	0.17	17.79	20.74

(₹ in lakh)

Asset-VI(A)	2017-18 (pro-rata)	2018-19
Opening Equity	292.96	333.46
Addition due to Additional Capitalization	40.50	21.62
Closing Equity	333.46	355.08
Average Equity		
Return on Equity (Base Rate)	15.50%	15.50%
MAT rate for the Financial year 2013-14	20.961%	20.961%
Rate of Return on Equity (Pre-tax)	19.611%	19.611%
Return on Equity (Pre-tax)	18.17	67.51

(₹ in lakh)

Asset-VI(B)	2018-19 (pro-rata)
Opening Equity	282.10
Addition due to Additional Capitalization	55.75
Closing Equity	337.85



Average Equity	309.97
Return on Equity (Base Rate)	15.50%
MAT rate for the Financial year 2013-14	20.961%
Rate of Return on Equity (Pre-tax)	19.611%
Return on Equity (Pre-tax)	58.29

Interest on loan (IOL)

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

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

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

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

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

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

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

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

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

50. In these calculations, IOL has been worked out as under:-

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



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

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

51. Detailed calculation of the weighted average rate of interest is given in **Annexure-I to VI** to this order.

52. Based on above, details of IOL calculated are as follows:-

(₹ in lakh)			
Asset-I	2016-17 (pro-rata)	2017-18	2018-19
Gross Normative Loan	3364.50	3364.50	4410.93
Cumulative Repayment upto previous Year	0.00	3.48	296.72
Net Loan-Opening	3364.50	3361.02	4114.21
Addition due to Additional Capitalization	0.00	1046.44	232.15
Repayment during the year	3.48	293.24	341.47
Net Loan-Closing	3361.02	4114.21	4004.90
Average Loan	3362.76	3737.62	4059.56
Weighted Average Rate of Interest on Loan	8.1954%	8.1803%	8.1657%
Interest on Loan	3.78	305.75	331.49

(₹ in lakh)		
Asset-II	2017-18 (pro-rata)	2018-19
Gross Normative Loan	487.90	664.70
Cumulative Repayment upto previous Year	0.00	43.35
Net Loan-Opening	487.90	621.35
Addition due to Additional Capitalization	176.81	66.40
Repayment during the year	43.35	52.64
Net Loan-Closing	621.35	635.10
Average Loan	554.62	628.23
Weighted Average Rate of Interest on Loan	8.1498%	8.1492%
Interest on Loan	45.08	51.20

(₹ in lakh)			
Asset-III	2016-17 (pro-rata)	2017-18	2018-19
Gross Normative Loan	990.70	990.70	1382.18
Cumulative Repayment upto previous Year	0.00	0.20	89.70
Net Loan-Opening	990.70	990.49	1292.48
Addition due to Additional Capitalization	0.00	391.48	77.18
Repayment during the year	0.20	89.49	107.17
Net Loan-Closing	990.49	1292.48	1262.49



Average Loan	990.59	1141.49	1277.49
Weighted Average Rate of Interest on Loan	8.1706%	8.1810%	8.1911%
Interest on Loan	0.22	93.39	104.64

(₹ in lakh)

Asset-IV	2016-17 (pro-rata)	2017-18	2018-19
Gross Normative Loan	184.74	184.74	238.57
Cumulative Repayment upto previous Year	0.00	0.15	16.12
Net Loan-Opening	184.74	184.58	222.46
Addition due to Additional Capitalization	0.00	53.84	16.34
Repayment during the year	0.15	15.96	18.61
Net Loan-Closing	184.58	222.46	220.18
Average Loan	184.66	203.52	221.32
Weighted Average Rate of Interest on Loan	8.0700%	8.0555%	8.0416%
Interest on Loan	0.16	16.39	17.80

(₹ in lakh)

Asset-VI(A)	2017-18 (pro-rata)	2018-19
Gross Normative Loan	683.57	778.07
Cumulative Repayment upto previous Year	0.00	16.31
Net Loan-Opening	683.57	761.76
Addition due to Additional Capitalization	94.50	50.46
Repayment during the year	16.31	60.59
Net Loan-Closing	761.76	751.63
Average Loan	722.67	756.69
Weighted Average Rate of Interest on Loan	7.5276%	7.5099%
Interest on Loan	16.10	56.83

(₹ in lakh)

Asset-VI(B)	2018-19 (pro-rata)
Gross Normative Loan	658.25
Cumulative Repayment upto previous Year	0.00
Net Loan-Opening	658.25
Addition due to Additional Capitalization	130.09
Repayment during the year	52.31
Net Loan-Closing	736.02
Average Loan	697.14
Weighted Average Rate of Interest on Loan	8.04%
Interest on Loan	53.53

Depreciation

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

"27. Depreciation:

(1) Depreciation shall be computed from the date of commercial operation of a generating station or unit thereof or a transmission system including communication system or element thereof. In case of the tariff of all the units of a



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

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

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

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

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

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

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

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

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

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

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

54. The petitioner has claimed actual depreciation as a component of annual fixed charges. In our calculations, depreciation has been calculated in



accordance with Regulation 27 of the 2014 Tariff Regulations extracted above.

55. The instant assets have been put under commercial operation in the year 2017 and 2018. The asset will complete 12 years beyond the tariff period 2014-19. Hence the depreciation for entire tariff period (i.e. 2014-19) has been worked out based on Straight Line Method and at rates specified in Appendix-II to 2014 Tariff Regulations.

56. Details of the depreciation allowed are as under:-

(₹ in lakh)			
Asset-I	2016-17 (pro-rata)	2017-18	2018-19
Opening Gross Block	4806.42	4806.42	6301.33
Additional Capital expenditure	0.00	1494.91	331.64
Closing Gross Block	4806.42	6301.33	6632.97
Average Gross Block	4806.42	5553.87	6467.15
Rate of Depreciation	5.2800%	5.2800%	5.2800%
Depreciable Value	4325.78	4998.49	5820.43
Remaining Depreciable Value	4325.78	4995.01	5523.71
Depreciation	3.48	293.24	341.47

(₹ in lakh)		
Asset-II	2017-18 (pro-rata)	2018-19
Opening Gross Block	696.99	949.57
Additional Capital expenditure	252.58	94.85
Closing Gross Block	949.57	1044.42
Average Gross Block	823.28	996.99
Rate of Depreciation	5.2800%	5.2800%
Depreciable Value	740.95	897.29
Remaining Depreciable Value	740.95	853.94
Depreciation	43.35	52.64

(₹ in lakh)			
Asset-III	2016-17 (pro-rata)	2017-18	2018-19
Opening Gross Block	1415.28	1415.28	1974.54
Additional Capital expenditure	0.00	559.26	110.25
Closing Gross Block	1415.28	1974.54	2084.79
Average Gross Block	1415.28	1697.91	2029.67
Rate of Depreciation	5.2800%	5.2800%	5.2800%
Depreciable Value	1273.75	1525.42	1826.70
Remaining Depreciable Value	1273.75	1525.22	1737.01
Depreciation	0.20	89.49	107.17

(₹ in lakh)

Asset-IV	2016-17 (pro-rata)	2017-18	2018-19
Opening Gross Block	263.90	263.90	340.81
Additional Capital expenditure	0.00	76.91	23.24
Closing Gross Block	263.90	340.81	364.15
Average Gross Block	263.90	302.35	352.48
Rate of Depreciation	5.2800%	5.2800%	5.2800%
Depreciable Value	237.51	272.12	317.23
Remaining Depreciable Value	237.51	271.96	301.11
Depreciation	0.15	15.96	18.61

(₹ in lakh)

Asset-VI (A)	2017-18 (pro-rata)	2018-19
Opening Gross Block	976.53	1111.53
Additional Capital expenditure	135.00	72.08
Closing Gross Block	1111.53	1183.61
Average Gross Block	1044.03	1147.57
Rate of Depreciation	5.2800%	5.2800%
Depreciable Value	939.63	1032.81
Remaining Depreciable Value	939.63	1016.50
Depreciation	16.31	60.59

(₹ in lakh)

Asset-VI (B)	2018-19 (pro-rata)
Opening Gross Block	940.35
Additional Capital expenditure	185.84
Closing Gross Block	1126.19
Average Gross Block	1033.27
Rate of Depreciation	5.2800%
Depreciable Value	929.94
Remaining Depreciable Value	929.94
Depreciation	52.31

Operation and Maintenance Expenses (O&M Expenses)

57. The petitioner, vide affidavit dated 3.1.2017, has claimed the following O&M Expenses for Assets-I, II, III, IV and V for 2014-19 period and the petitioner has not claimed O&M Expenses for Assets VI (A) and VI (B):-

(₹ in lakh)

Assets	2016-17	2017-18	2018-19
Asset-I	3.81	292.63	302.33
Asset-II	0.00	66.33	68.71
Asset-III	0.29	113.06	116.81
Asset-IV	1.38	133.02	137.42
Asset-V	0.00	91.39	116.81



58. The norms for O&M Expenses as per Regulation 29(4)(a) of the 2014 Tariff Regulations are as follows:-

Norms for sub-station	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
400 kV	60.30	62.30	64.37	66.51	68.71
220 kV	42.21	43.61	45.06	46.55	48.10

59. The O&M Expenses allowed for the instant assets as per Regulation 29(3)(a) of the 2014 for the years 2016-17, 2017-18 and 2018-19 is as follows:

Asset	(₹ in lakh)		
	2016-17 (pro rata)	2017-18	2018-19
Asset-I			
1 No 400 kV Bus reactor Bay, 2 No's 400 kV ICT Bays	2.64	199.53	206.13
2 No's 220 kV ICT Bays	1.234	93.1	96.2
Total	3.874	292.63	302.33
Asset-II			
1 No 400 kV Bus reactor Bay		66.33	68.710
Asset-III			
1 No 400 kV ICT Bay and 1 No 220 kV ICT Bay	0.29	113.06	116.81
Asset-IV			
2 No's 400 kV Switchable line Reactor Bays	1.41	133.02	137.42

60. The petitioner has submitted that O&M Expenses for the tariff period 2014-19 had been arrived at on the basis of normalized actual O&M Expenses during the period 2008-09 to 2012-13. The petitioner has further submitted that the wage revision of the employees is due 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. TANGEDCO has submitted that any further revision in the O&M norms may not be allowed as it affects the financial status of the beneficiaries.



61. The O&M Expenses have been worked out as per the norms of O&M Expenses specified in the 2014 Tariff Regulations. As regards impact of wage revision, any application filed by the petitioner in this regard will be dealt with in accordance with the appropriate provisions of the 2014 Tariff Regulations.

Interest on Working Capital (IWC)

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

“28. Interest on Working Capital

(1) The working capital shall cover:

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

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

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

(iii) Operation and maintenance expenses for one month”

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

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

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

Receivables

Receivables as a component of working capital will be equivalent to two months fixed cost. The petitioner has claimed the receivables on the basis



of 2 months' annual transmission charges. In the tariff being allowed, receivables have been worked out on the basis of 2 months' transmission charges.

Maintenance spares

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

O&M Expenses

O&M Expenses have been considered for one month of the allowed O&M Expenses.

Rate of interest on working capital

The petitioner has claimed 12.80% as a rate of interest working capital. As per Regulation 28(3) of the 2014 Tariff Regulations, SBI Base Rate as on 1.4.2016, 1.4.2017 and 1.4.2018 plus 350 Bps shall be considered as the rate of interest on working capital for the assets commissioned during the year 2016-17, 2017-18, 2018-19 respectively. Accordingly, 12.80%, 12.60% and 12.20% are considered based on the COD of the concerned assets.

64. Accordingly, the interest on working capital is summarized as under:-

Asset-I	(₹ in lakh)		
	2016-17 (pro-rata)	2017-18	2018-19
Maintenance Spares	41.72	43.89	45.35
O & M Expenses	23.18	24.39	25.19
Receivables	187.09	208.98	232.42
Total	251.09	277.26	302.97
Interest	0.44	35.49	38.78



(₹ in lakh)

Asset-II	2017-18 (pro-rata)	2018-19
Maintenance Spares	9.98	10.31
O & M Expenses	5.54	5.73
Receivables	35.00	39.70
Total	50.52	55.74
Interest	6.35	7.02

(₹ in lakh)

Asset-III	2016-17 (pro-rata)	2017-18	2018-19
Maintenance Spares	15.88	16.96	17.52
O & M Expenses	8.82	9.42	9.73
Receivables	59.25	67.95	76.89
Total	83.95	94.34	104.15
Interest	0.03	12.07	13.33

(₹ in lakh)

Asset-IV	2016-17 (pro-rata)	2017-18	2018-19
Maintenance Spares	18.89	19.95	20.61
O & M Expenses	10.49	11.09	11.45
Receivables	29.64	31.87	33.83
Total	59.02	62.91	65.90
Interest	0.08	8.05	8.43

(₹ in lakh)

Asset-VI (A)	2017-18 (pro-rata)	2018-19
Maintenance Spares	0.00	0.00
O & M Expenses	0.00	0.00
Receivables	29.10	31.48
Total	29.10	31.48
Interest	1.08	3.97

(₹ in lakh)

Asset-VI (B)	2018-19 (pro-rata)
Maintenance Spares	0.00
O & M Expenses	0.00
Receivables	29.12
Total	29.12
Interest	3.41

Annual Transmission Charges

65. In view of the above, the annual transmission charges allowed for the instant assets are summarized hereunder:-

(₹ in lakh)

Asset-I	2016-17 (pro-rata)	2017-18	2018-19
Depreciation	3.48	293.24	341.47
Interest on Loan	3.78	305.75	331.49
Return on Equity	3.87	326.75	380.48
Interest on Working Capital	0.44	35.49	38.78
O & M Expenses	3.81	292.63	302.33
Total	15.38	1253.86	1394.55

(₹ in lakh)

Asset-II	2017-18 (pro-rata)	2018-19
Depreciation	43.35	52.64
Interest on Loan	45.08	51.20
Return on Equity	48.30	58.66
Interest on Working Capital	6.35	7.02
O & M Expenses	66.33	68.71
Total	209.41	238.23

(₹ in lakh)

Asset-III	2016-17 (pro-rata)	2017-18	2018-19
Depreciation	0.20	89.49	107.17
Interest on Loan	0.22	93.39	104.64
Return on Equity	0.23	99.72	119.41
Interest on Working Capital	0.03	12.07	13.33
O & M Expenses	0.29	113.06	116.81
Total	0.97	407.73	461.36

(₹ in lakh)

Asset-IV	2016-17 (pro-rata)	2017-18	2018-19
Depreciation	0.15	15.96	18.61
Interest on Loan	0.16	16.39	17.80
Return on Equity	0.17	17.79	20.74
Interest on Working Capital	0.08	8.05	8.43
O & M Expenses	1.38	133.02	137.42
Total	1.95	191.22	203.00

(₹ in lakh)

Asset-VI (A)	2017-18 (pro-rata)	2018-19
Depreciation	16.31	60.59
Interest on Loan	16.10	56.83
Return on Equity	18.17	67.51
Interest on Working Capital	1.08	3.97
O & M Expenses	0.00	0.00
Total	51.67	188.90



(₹ in lakh)	
Asset-VI (B)	2018-19 (pro-rata)
Depreciation	52.31
Interest on Loan	53.53
Return on Equity	58.29
Interest on Working Capital	3.41
O & M Expenses	0.00
Total	167.54

66. The petitioner has submitted that the claim for transmission charges and other charges is exclusive of incentive, late payment surcharge, FERV, any statutory taxes, levies, duties, cess and charges or any other kind of impositions etc. The same, if imposed, shall be borne and additionally paid by the respondents. The petitioner is entitled to FERV as provided under Regulation 50 of the 2014 Tariff Regulations and the petitioner can make other claims as per the 2014 Tariff Regulations.

Filing Fee and the Publication Expenses

67. 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. We are of the view that the petitioner shall be entitled for reimbursement of the filing fees, publication expenses and license fee in connection with the present petition, directly from the beneficiaries on pro-rata basis in accordance with clause 1 of the Regulation 52 of the 2014 Tariff Regulations.

License Fee and RLDC fees and Charges

68. The petitioner has requested to allow the petitioner to bill and recover License fee and RLDC fees and charges, separately from the respondents. TANGEDCO has submitted that the petitioner's prayer for recovery of licence may not be allowed. 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

69. 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. Service Tax is subsumed by GST and hence the petitioner's prayer is infructuous.

Goods and Services Tax

70. The petitioner has prayed for reimbursement of tax, if any, on account of proposed implementation of GST. GST is not levied on transmission at present and hence the petitioner's prayer is premature.

Sharing of Transmission Charges

71. 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.

72. The petitioner is directed to file a separate petition for approval of tariff for Asset-V, with TANTRANSCO as a party. Accordingly, this order disposes of the Petition No. 176/TT/2017.

sd/-

(Dr. M. K. Iyer)
Member

sd/-

(A. K. Singhal)
Member

sd/-

(P. K. Pujari)
Chairperson



Annexure-I

CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN OF ASSET-I				
				(₹ in lakh)
	Details of Loan	2016-17	2017-18	2018-19
1	SBI 10000 (1.5.2014)			
	Gross loan opening	721.50	721.50	721.50
	Cumulative Repayment upto COD/previous year	0.00	0.00	0.00
	Net Loan-Opening	721.50	721.50	721.50
	Additions during the year	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00
	Net Loan-Closing	721.50	721.50	721.50
	Average Loan	721.50	721.50	721.50
	Rate of Interest	8.90%	8.90%	8.90%
	Interest	64.21	64.21	64.21
	Rep Schedule	Annual		
2	Bond LI			
	Gross loan opening	745.55	745.55	745.55
	Cumulative Repayment upto COD/previous year	0.00	0.00	0.00
	Net Loan-Opening	745.55	745.55	745.55
	Additions during the year	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00
	Net Loan-Closing	745.55	745.55	745.55
	Average Loan	745.55	745.55	745.55
	Rate of Interest	8.40%	8.40%	8.40%
	Interest	62.63	62.63	62.63
	Rep Schedule	Annual		
3	Bond LIII			
	Gross loan opening	1000.00	1000.00	1000.00
	Cumulative Repayment upto COD/previous year	0.00	0.00	0.00
	Net Loan-Opening	1000.00	1000.00	1000.00
	Additions during the year	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00
	Net Loan-Closing	1000.00	1000.00	1000.00
	Average Loan	1000.00	1000.00	1000.00
	Rate of Interest	8.13%	8.13%	8.13%
	Interest	81.30	81.30	81.30
	Rep Schedule	Annual		
4	Bond LVII			
	Gross loan opening	485.04	485.04	485.04
	Cumulative Repayment upto COD/previous year	0.00	0.00	0.00
	Net Loan-Opening	485.04	485.04	485.04
	Additions during the year	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00
	Net Loan-Closing	485.04	485.04	485.04
	Average Loan	485.04	485.04	485.04
	Rate of Interest	7.20%	7.20%	7.20%
	Interest	34.92	34.92	34.92



	Rep Schedule	Annual		
5	Bond LVII			
	Gross loan opening	0.00	0.00	106.13
	Cumulative Repayment upto COD/previous year	0.00	0.00	0.00
	Net Loan-Opening	0.00	0.00	106.13
	Additions during the year	0.00	106.13	0.00
	Repayment during the year	0.00	0.00	0.00
	Net Loan-Closing	0.00	106.13	106.13
	Average Loan	0.00	53.07	106.13
	Rate of Interest	7.20%	7.20%	7.20%
	Interest	0.00	3.82	7.64
	Rep Schedule			
6	BOND LIV			
	Gross loan opening	500.00	500.00	500.00
	Cumulative Repayment upto COD/previous year	0.00	0.00	0.00
	Net Loan-Opening	500.00	500.00	500.00
	Additions during the year	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00
	Net Loan-Closing	500.00	500.00	500.00
	Average Loan	500.00	500.00	500.00
	Rate of Interest	7.97%	7.97%	7.97%
	Interest	39.85	39.85	39.85
	Rep Schedule			
	Total Loan			
	Gross loan opening	3452.09	3452.09	3558.22
	Cumulative Repayment upto COD/previous year	0.00	0.00	0.00
	Net Loan-Opening	3452.09	3452.09	3558.22
	Additions during the year	0.00	106.13	0.00
	Repayment during the year	0.00	0.00	0.00
	Net Loan-Closing	3452.09	3558.22	3558.22
	Average Loan	3452.09	3505.16	3558.22
	Rate of Interest	8.1954%	8.1803%	8.1657%
	Interest	282.91	286.73	290.55



CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN OF ASSET-II			
(₹ in lakh)			
	Details of Loan	2017-18	2018-19
1	Bond LI		
	Gross loan opening	38.40	38.40
	Cumulative Repayment upto COD/previous year	0.00	0.00
	Net Loan-Opening	38.40	38.40
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	38.40	38.40
	Average Loan	38.40	38.40
	Rate of Interest	8.40%	8.40%
	Interest	3.23	3.23
	Rep Schedule	Annual	
2	Bond LIII		
	Gross loan opening	472.45	472.45
	Cumulative Repayment upto COD/previous year	0.00	0.00
	Net Loan-Opening	472.45	472.45
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	472.45	472.45
	Average Loan	472.45	472.45
	Rate of Interest	8.13%	8.13%
	Interest	38.41	38.41
	Rep Schedule	Annual	
3	Bond LIII		
	Gross loan opening	0.00	27.92
	Cumulative Repayment upto COD/previous year	0.00	0.00
	Net Loan-Opening	0.00	27.92
	Additions during the year	27.92	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	27.92	27.92
	Average Loan	13.96	27.92
	Rate of Interest	8.13%	8.13%
	Interest	1.13	2.27
	Rep Schedule	Annual	
	Total Loan		
	Gross loan opening	510.85	538.77
	Cumulative Repayment upto COD/previous year	0.00	0.00
	Net Loan-Opening	510.85	538.77
	Additions during the year	27.92	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	538.77	538.77
	Average Loan	524.81	538.77
	Rate of Interest	8.1498%	8.1492%
	Interest	42.77	43.91



Annexure-III

CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN OF ASSET-III				
				(₹ in lakh)
	Details of Loan	2016-17	2017-18	2018-19
1	SBI 10000 (1.5.2014)			
	Gross loan opening	166.00	166.00	166.00
	Cumulative Repayment upto COD/previous year	0.00	0.00	0.00
	Net Loan-Opening	166.00	166.00	166.00
	Additions during the year	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00
	Net Loan-Closing	166.00	166.00	166.00
	Average Loan	166.00	166.00	166.00
	Rate of Interest	8.90%	8.90%	8.90%
	Interest	14.77	14.77	14.77
	Rep Schedule	Monthly		
2	Bond LI			
	Gross loan opening	54.08	54.08	54.08
	Cumulative Repayment upto COD/previous year	0.00	0.00	0.00
	Net Loan-Opening	54.08	54.08	54.08
	Additions during the year	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00
	Net Loan-Closing	54.08	54.08	54.08
	Average Loan	54.08	54.08	54.08
	Rate of Interest	8.40%	8.40%	8.40%
	Interest	4.54	4.54	4.54
	Rep Schedule	Annual		
3	Bond LIII			
	Gross loan opening	347.53	347.53	347.53
	Cumulative Repayment upto COD/previous year	0.00	0.00	0.00
	Net Loan-Opening	347.53	347.53	347.53
	Additions during the year	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00
	Net Loan-Closing	347.53	347.53	347.53
	Average Loan	347.53	347.53	347.53
	Rate of Interest	8.13%	8.13%	8.13%
	Interest	28.25	28.25	28.25
	Rep Schedule	Annual		
4	Bond LVII			
	Gross loan opening	194.83	194.83	194.83
	Cumulative Repayment upto COD/previous year	0.00	0.00	0.00
	Net Loan-Opening	194.83	194.83	194.83
	Additions during the year	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00
	Net Loan-Closing	194.83	194.83	194.83
	Average Loan	194.83	194.83	194.83
	Rate of Interest	7.20%	7.20%	7.20%



	Interest	14.03	14.03	14.03
	Rep Schedule	Annual		
5	BOND LIV			
	Gross loan opening	107.37	107.37	107.37
	Cumulative Repayment upto COD/previous year	0.00	0.00	0.00
	Net Loan-Opening	107.37	107.37	107.37
	Additions during the year	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00
	Net Loan-Closing	107.37	107.37	107.37
	Average Loan	107.37	107.37	107.37
	Rate of Interest	7.97%	7.97%	7.97%
	Interest	8.56	8.56	8.56
	Rep Schedule			
6	SBI (2016-2017) (Q4)			
	Gross loan opening	125.17	125.17	153.90
	Cumulative Repayment upto COD/previous year	0.00	0.00	0.00
	Net Loan-Opening	125.17	125.17	153.90
	Additions during the year	0.00	28.73	0.00
	Repayment during the year	0.00	0.00	0.00
	Net Loan-Closing	125.17	153.90	153.90
	Average Loan	125.17	139.54	153.90
	Rate of Interest	8.90%	8.90%	8.90%
	Interest	11.14	12.42	13.70
	Rep Schedule			
	Total Loan			
	Gross loan opening	994.98	994.98	1023.71
	Cumulative Repayment upto COD/previous year	0.00	0.00	0.00
	Net Loan-Opening	994.98	994.98	1023.71
	Additions during the year	0.00	28.73	0.00
	Repayment during the year	0.00	0.00	0.00
	Net Loan-Closing	994.98	1023.71	1023.71
	Average Loan	994.98	1009.35	1023.71
	Rate of Interest	8.1706%	8.1810%	8.1911%
	Interest	81.30	82.57	83.85



Annexure-IV

CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN OF ASSET-IV				
(₹ in lakh)				
	Details of Loan	2016-17	2017-18	2018-19
1	SBI 10000 (1.5.2014)			
	Gross loan opening	30.00	30.00	30.00
	Cumulative Repayment upto COD/previous year	0.00	0.00	0.00
	Net Loan-Opening	30.00	30.00	30.00
	Additions during the year	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00
	Net Loan-Closing	30.00	30.00	30.00
	Average Loan	30.00	30.00	30.00
	Rate of Interest	8.90%	8.90%	8.90%
	Interest	2.67	2.67	2.67
	Rep Schedule	Monthly		
2	Bond LI			
	Gross loan opening	10.24	10.24	10.24
	Cumulative Repayment upto COD/previous year	0.00	0.00	0.00
	Net Loan-Opening	10.24	10.24	10.24
	Additions during the year	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00
	Net Loan-Closing	10.24	10.24	10.24
	Average Loan	10.24	10.24	10.24
	Rate of Interest	8.40%	8.40%	8.40%
	Interest	0.86	0.86	0.86
	Rep Schedule	Annual		
3	Bond LIII			
	Gross loan opening	62.80	62.80	62.80
	Cumulative Repayment upto COD/previous year	0.00	0.00	0.00
	Net Loan-Opening	62.80	62.80	62.80
	Additions during the year	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00
	Net Loan-Closing	62.80	62.80	62.80
	Average Loan	62.80	62.80	62.80
	Rate of Interest	8.13%	8.13%	8.13%
	Interest	5.11	5.11	5.11
	Rep Schedule	Annual		
4	Bond LVII			
	Gross loan opening	30.94	30.94	37.20
	Cumulative Repayment upto COD/previous year	0.00	0.00	0.00
	Net Loan-Opening	30.94	30.94	37.20
	Additions during the year	0.00	6.26	0.00
	Repayment during the year	0.00	0.00	0.00
	Net Loan-Closing	30.94	37.20	37.20
	Average Loan	30.94	34.07	37.20
	Rate of Interest	7.20%	7.20%	7.20%
	Interest	2.23	2.45	2.68
	Rep Schedule	Annual		



5	BOND LIV			
	Gross loan opening	51.32	51.32	51.32
	Cumulative Repayment upto COD/previous year	0.00	0.00	0.00
	Net Loan-Opening	51.32	51.32	51.32
	Additions during the year	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00
	Net Loan-Closing	51.32	51.32	51.32
	Average Loan	51.32	51.32	51.32
	Rate of Interest	7.97%	7.97%	7.97%
	Interest	4.09	4.09	4.09
	Rep Schedule	Annual		
	Total Loan			
	Gross loan opening	185.30	185.30	191.56
	Cumulative Repayment upto COD/previous year	0.00	0.00	0.00
	Net Loan-Opening	185.30	185.30	191.56
	Additions during the year	0.00	6.26	0.00
	Repayment during the year	0.00	0.00	0.00
	Net Loan-Closing	185.30	191.56	191.56
	Average Loan	185.30	188.43	191.56
	Rate of Interest	8.0700%	8.0555%	8.0416%
	Interest	14.95	15.18	15.40



Annexure-V

CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN OF ASSET-VI (A)		
(₹ in lakh)		
Details of Loan	2017-18	2018-19
1 Bond L		
Gross loan opening	2.17	2.17
Cumulative Repayment upto COD/previous year	0.00	0.00
Net Loan-Opening	2.17	2.17
Additions during the year	0.00	0.00
Repayment during the year	0.00	0.00
Net Loan-Closing	2.17	2.17
Average Loan	2.17	2.17
Rate of Interest	8.40%	8.40%
Interest	0.18	0.18
Rep Schedule	Annual	
2 Bond LI		
Gross loan opening	46.88	46.88
Cumulative Repayment upto COD/previous year	0.00	0.00
Net Loan-Opening	46.88	46.88
Additions during the year	0.00	0.00
Repayment during the year	0.00	0.00
Net Loan-Closing	46.88	46.88
Average Loan	46.88	46.88
Rate of Interest	8.40%	8.40%
Interest	3.94	3.94
Rep Schedule	Annual	
3 Bond LIII		
Gross loan opening	224.30	224.30
Cumulative Repayment upto COD/previous year	0.00	0.00
Net Loan-Opening	224.30	224.30
Additions during the year	0.00	0.00
Repayment during the year	0.00	0.00
Net Loan-Closing	224.30	224.30
Average Loan	224.30	224.30
Rate of Interest	8.13%	8.13%
Interest	18.24	18.24
Rep Schedule	Annual	
4 Bond LIX		
Gross loan opening	421.74	421.74
Cumulative Repayment upto COD/previous year	0.00	0.00
Net Loan-Opening	421.74	421.74
Additions during the year	0.00	0.00
Repayment during the year	0.00	0.00
Net Loan-Closing	421.74	421.74
Average Loan	421.74	421.74



	Rate of Interest	7.30%	7.30%
	Interest	30.79	30.79
	Rep Schedule	Annual	
5	Bond LX		
	Gross loan opening	207.76	292.16
	Cumulative Repayment upto COD/previous year	0.00	0.00
	Net Loan-Opening	207.76	292.16
	Additions during the year	84.40	23.47
	Repayment during the year	0.00	0.00
	Net Loan-Closing	292.16	315.63
	Average Loan	249.96	303.90
	Rate of Interest	7.20%	7.20%
	Interest	18.00	21.88
	Rep Schedule	Annual	
	Total Loan		
	Gross loan opening	902.85	987.25
	Cumulative Repayment upto COD/previous year	0.00	0.00
	Net Loan-Opening	902.85	987.25
	Additions during the year	84.40	23.47
	Repayment during the year	0.00	0.00
	Net Loan-Closing	987.25	1010.72
	Average Loan	945.05	998.99
	Rate of Interest	7.5276%	7.5099%
	Interest	71.14	75.02



Annexure-VI

CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN OF ASSET-VI (B)		
(₹ in lakh)		
	Details of Loan	2018-19
1	Bond LI	
	Gross loan opening	315.51
	Cumulative Repayment upto COD/previous year	0.00
	Net Loan-Opening	315.51
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	315.51
	Average Loan	315.51
	Rate of Interest	8.40%
	Interest	26.50
	Rep Schedule	Annual
2	Bond LIII	
	Gross loan opening	63.97
	Cumulative Repayment upto COD/previous year	0.00
	Net Loan-Opening	63.97
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	63.97
	Average Loan	63.97
	Rate of Interest	8.13%
	Interest	5.20
	Rep Schedule	Annual
3	Bond LIV	
	Gross loan opening	364.38
	Cumulative Repayment upto COD/previous year	0.00
	Net Loan-Opening	364.38
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	364.38
	Average Loan	364.38
	Rate of Interest	7.97%
	Interest	29.04
	Rep Schedule	Annual
4	Bond LVIII	
	Gross loan opening	25.00
	Cumulative Repayment upto COD/previous year	0.00
	Net Loan-Opening	25.00
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	25.00
	Average Loan	25.00
	Rate of Interest	7.89%
	Interest	1.97
	Rep Schedule	Annual
5	Bond LIX	
	Gross loan opening	25.00



	Cumulative Repayment upto COD/previous year	0.00
	Net Loan-Opening	25.00
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	25.00
	Average Loan	25.00
	Rate of Interest	7.30%
	Interest	1.83
	Rep Schedule	Annual
6	BOND LX	
	Gross loan opening	105.11
	Cumulative Repayment upto COD/previous year	0.00
	Net Loan-Opening	105.11
	Additions during the year	29.49
	Repayment during the year	0.00
	Net Loan-Closing	134.60
	Average Loan	119.86
	Rate of Interest	7.20%
	Interest	8.63
	Rep Schedule	Annual
7	SBI (2018-2019) (7.85%)	
	Gross loan opening	0.00
	Cumulative Repayment upto COD/previous year	0.00
	Net Loan-Opening	0.00
	Additions during the year	6.11
	Repayment during the year	0.00
	Net Loan-Closing	6.11
	Average Loan	3.06
	Rate of Interest	7.85%
	Interest	0.24
	Rep Schedule	
	Total Loan	
	Gross loan opening	898.97
	Cumulative Repayment upto COD/previous year	0.00
	Net Loan-Opening	898.97
	Additions during the year	35.60
	Repayment during the year	0.00
	Net Loan-Closing	934.57
	Average Loan	916.77
	Rate of Interest	8.0076%
	Interest	73.41

