

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 157/TT/2017

Coram:

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

Date of Order : 05.07.2018

In the matter of:

Approval of transmission tariff for transmission asset “(a) LILO of Hyderabad-Kurnool 400kV S/C line at Maheshwaram pooling station along with associated bays and (b) Establishment of 765/400 kV GIS pooling station at Hyderabad (Maheshwaram) with 2X1500MVA 765/400 kV Transformers and 2 nos. 240 MVAR Bus Reactor 765 kV alongwith associated bays at Maheshwaram pooling stations under “Sub-Station Works associated with Hyderabad (Maheshwaram) pooling station” from COD to 31.3.2019 under Regulation 86 of Central Electricity Regulatory Commission (Conduct of business) Regulations, 1999 and Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014.

And in the matter of:

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

....Petitioner

Vs

1. 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
PandT 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 Karanataka
- 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 Powergrid NM Transmission Ltd.
B-9, Qutab institutional Area,
Katwaria Sarai,
New Delhi-110016
- 17 Transmission Corporation of Telangana Limited,
Vidhyut Sudha, Khairatabad,
Hyderabad- 500082



18. Maheshwaram Transmission Ltd.
F-1, Mira Corporate Suits,
1 and 2, Mathura Road, Ishwar Nagar,
New Delhi – 110065

...Respondents

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

For Respondents : Shri S. Vallinayagam, Advocate, 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 "(a) LILO of Hyderabad-Kurnool 400 kV S/C line at Maheshwaram pooling station along with associated bays and (b) Establishment of 765/400 kV GIS pooling station at Hyderabad (Maheshwaram) with 2X1500 MVA 765/400 kV Transformers and 2 nos. 240 MVAR Bus Reactor 765 kV alongwith associated bays at Maheshwaram Pooling Stations (hereinafter referred to as "transmission assets") under "Sub-station works associated with Hyderabad (Maheshwaram) pooling station" (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 Investment Approval (IA) for implementation of "Sub-station works associated with Hyderabad (Maheshwaram) Pooling station" in Southern Region was accorded by the Board of Directors of the petitioner vide the Memorandum Ref: C/CP/Maheshwaram PS dated 27.3.2015 at an estimated cost of ₹55006 lakh including an IDC of ₹3192 lakh (based on December, 2014 price level).



3. The scope of the scheme was discussed and agreed in the 35th, 36th and 37th meeting of the Standing Committee on Power System Planning of the Southern region held on 4.1.2013, 4.9.2013 and 31.7.2014 respectively. The transmission scheme was further agreed in 23rd meeting of SRPC held on 26.10.2013.

4. The instant transmission system was scheduled to be put into commercial operation within 36 months from the date of approval (24.3.2015) of Board of Director of the petitioner i.e. by 24.3.2018 matching with the transmission lines under project 'Provision of line bays for the scheme-connectivity lines for Maheshwaram (Hyderabad) 765/400 kV pooling station' being implemented under tariff based competitive bidding and '765 kV D/C Wardha-Hyderabad link' being implemented by PGCIL.

5. The scope of work covered under the transmission system is broadly as follows:-

Transmission Line

a) LILO of Hyderabad – Kurnool 400 kV S/C line at Maheshwaram (PG) Sub-station – 6.89 km

Sub-station

b) Establishment of 765/400 kV GIS station at Hyderabad (Maheshwaram) Pooling Station with 2x1500 MVA, transformers

- i. 2 number 765 kV transformer bays for 2x1500 MVA transformers
- ii. 2 number 765 kV reactor bays for 2x240 MVAR Bus Reactor.
- iii. 2 number 400 kV transformer bays for 2x1500 MVA transformers.
- iv. 2 number 400 kV line bays for terminating LILO of Hyderabad – Kurnool 400 kV S/C line

Reactive Compensation

c) 2x240 MVAr Bus Reactors



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

(₹ in lakh)		
Asset-IA	2017-18	2018-19
Depreciation	972.20	1874.55
Interest on Loan	1028.47	1884.88
Return on Equity	1163.41	2254.50
Interest on Working Capital	81.06	152.41
O&M Expenses	231.11	407.46
Total	3476.25	6573.80

(₹ in lakh)		
Asset-IB	2017-18	2018-19
Depreciation	277.28	539.43
Interest on Loan	278.37	510.72
Return on Equity	318.65	619.90
Interest on Working Capital	25.26	47.56
O&M Expenses	118.53	215.06
Total	1018.09	1932.67

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

(₹ in lakh)		
Asset-IA	2017-18	2018-19
Maintenance Spares	59.16	61.12
O&M expenses	32.86	33.96
Receivables	988.66	1095.63
Total	1080.68	1190.71
Interest	81.06	152.41
Rate of Interest	12.80%	12.80%

(₹ in lakh)		
Asset-IB	2017-18	2018-19
Maintenance Spares	31.22	32.26
O&M expenses	17.35	17.92
Receivables	297.98	322.13
Total	346.55	372.31
Interest	25.26	47.66
Rate of Interest	12.80%	12.80%

8. The petitioner has served the petition on the respondents and notice of this application has been published in the newspapers in accordance with Section 64 of the Electricity Act, 2003 ("the Act"). No comments have been received from the

public in response to the notices published by the petitioner under Section 64 of the Act. TANGEDCO, Respondent No.4, vide affidavit dated 22.9.2017 has filed its reply in the matter and the petitioner has filed its rejoinder to the same. Matter was heard on 20.3.2018 and the Commission reserved its order in the petition. The objections raised by the respondent and the clarifications given by the petitioner are addressed in the relevant paragraphs of this order.

Date of Commercial Operation (COD)

9. The petitioner, initially in the petition has submitted that the anticipated COD of the instant assets was 1.7.2017. However, the petitioner vide affidavit dated 21.9.2017 has submitted that the asset was split into two on the basis of the COD. The petitioner has claimed the date of the commercial operation of the instant transmission assets as follows:-

Srl. No.	Asset	Asset Name	Actual COD
1	Asset-IA	(a) Hyderabad (Maheshwaram) - Kurnool 400 kV S/C line along with associated bays at Maheshwaram Pooling Station and (b) Establishment of 765/400 kV GIS Pooling Station at Hyderabad (Maheshwaram) with 1X1500MVA 765/400 kV Transformers-I and 2 nos 240 MVAR Bus Reactor 765 kV alongwith associated bays at Hyderabad (Maheshwaram) pooling stations	31.8.2017
2	Asset-IB	400 kV Maheshwaram-Hyderabad S/C line alongwith associated bays and 1X1500MVA 765/400 kV ICT-II alongwith associated bays at Maheshwaram Pooling station	6.9.2017

10. The petitioner vide affidavit dated 27.12.2017 and 13.2.2018 has furnished RLDC, CMD and SRPC certificates in terms of the provisions of Regulation 24(2)(iii) of the 2014 Tariff Regulations. The petitioner has also furnished the copy of duly certified capital cost incurred up to actual COD and projected to be incurred along with the relevant tariff forms. The petitioner has further furnished



the details of upstream/ downstream system at Maheshwaram Sub-station as under:-

Srl. No	Name of Asset	Status	Remarks
1	765 kV D/C Nizamabad-Hyderabad (Maheshwaram) T/L	Commissioned on 31.8.2017	Upstream (Subject line)
2	Hyderabad (Maheshwaram) - Kurnool 400 kV S/C T/L	Commissioned on 31.8.2017	Downstream (Subject line)
3	400 kV Maheshwaram-Hyderabad S/C T/L	Commissioned on 6.9.2017	Downstream (Subject line)
4	400 kV D/C Maheshwaram-Mehboobnagar T/L	Commissioned on 16.12.2017	Downstream Executed by TBCB (MTL). Connected with downstream system of STU network.
5	400 kV D/C Maheshwaram-Maheshwaram (TS) T/L	Anticipated in November, 2017	Downstream Executing by Telangana TS

11. We have considered the submissions of the petitioner with regard to the COD of the instant assets. As stated above, the scheduled COD of the instant assets was 24.3.2018 as per the Investment Approval. The petitioner has initially claimed anticipated date of commercial operation of the instant assets as 1.7.2017 in the petition. Subsequently, the petitioner vide affidavit dated 21.9.2017 has submitted the actual COD of Asset-IA and Asset-IB as 31.8.2017 and 6.9.2017 respectively. It is noticed that the petitioner, in justification of the same, has furnished RLDC certificates dated 9.8.2017 and 20.11.2017 for assets I A and I B respectively. The petitioner has also submitted the CEA certificates dated 8.3.2017 and 21.6.2017 under Regulation 43 of CEA (Measures related to safety and Electricity supply) Regulations, 2010 and CMD certificate required under the Grid Code. Taking into consideration the submissions made by the petitioner as well as the documents submitted, the date of commercial operation approved for Assets-IA and IB is 31.8.2017 and 6.9.2017 respectively.



Capital Cost

12. Based on the revised Auditor certificate on actual COD, the capital cost claimed as on COD and projected additional capital expenditure are as under:-

(₹ in lakh)

Particulars	AppORTIONED cost	As per Auditor Certificate			
		Capital cost up to COD	ACE 2017-18	ACE 2018-19	Projected completion cost
Asset-IA	42600.01	31228.56	3660.66	4538.62	39427.84
Asset-IB	12406.46	8859.33	989.91	781.51	10630.75
Total	55006.47	40087.89	4650.57	5320.13	50058.59

Cost Variation

13. The petitioner has submitted that there is variation in cost of certain items. The petitioner has submitted that the lowest possible market prices for required product/services as per detailed designing is obtained through open competitive bidding process and the contracts are awarded on the basis of lowest evaluated eligible bidder. There is increase of about ₹2337 lakh in sub-station equipment. Cost variation of supply period is mainly attributable to inflationary trends prevalent during the execution of project and also market forces prevailing at the time of bidding process of various packages. As regards price variation from FR to award, the contracts for various packages under this project were awarded to the lowest evaluated and responsive bidder on the basis of Open Competitive Bidding. The price variation from award to final execution is mainly on the basis of PV based on indices as per provision of respective contracts. There is reduction of around ₹6527 lakh on account of overheads and IDC with respect to FR due to early COD of the assets and increase of about ₹620 lakh on accounts of actual Custom Duty, Excise Duty etc paid while importing of the equipment.

14. As the rates adopted in the instant petition were different from the rates adopted in Petition No.156/TT/2017, the petitioner was directed to give the reasons. The petitioner, vide affidavit dated 16.4.2018, has submitted that the FR in case of Petition No. 156/TT/2017 was prepared based on April, 2016 price level whereas price level of December, 2014 was considered in the present petition. The FR is prepared on the basis of SOR which is prepared on the basis of the average of unit rates of latest three bids/LOAs/Raw material prices in order to achieve the cost efficiency and it gets updated by the petitioner on quarterly basis. Therefore, the rates considered in FR may undergo changes based on their respective price level. Accordingly, rates considered in the petitions are different. Further, combination of various items constitutes a bus bar module and is dependent upon whether it is an extension or a completely new Sub-station. In case of Petition No. 156/TT/2017, the cost of the bus bar module was less, as it was a sub-station extension. However, the cost in the present petition is higher as it is a complete bus bar module serving 8 nos. of bays.

15. TANGEDCO in its reply has raised the following issues:-

- a) There is cost reduction of 8.84% and steep variation in cost of certain individual elements. The breakup of the project cost indicates the vague price variation of certain elements and wrong estimation by the petitioner. The rates adopted for the same work as well as the description of the equipment are different in all petitions. The petitioner may be directed to submit (i) the reasons for awarding the contract with huge escalation from the estimated cost of individual elements without negotiations and (b) standard cost data for the quarter pertaining to the award period and movement of price indices and rate variation due to price indices movement from December, 2014 to the quarter of final supply.

b) The petitioner has not followed the procedures in awarding contracts under Domestic Competitive Bidding and has to place on record the complete proceedings of the competitive bidding process so as to ensure transparency in costing of the transmission projects. Moreover, the petitioner has not brought on record the cost variation from FR to award cost.

c) The tariff forms furnished by the petitioner reveal that the cost of certain equipment are included in arriving at the total cost as on COD as under:-

- i. 800 kV GIS bus Auxiliary bus bar module for spare transformer
- ii. 800 kV GIS Auxiliary bus bar module for spare line and bus reactor
- iii. 400 kV SF6 GIS auxiliary bus bar module for spare transformer.

d) In the absence of any spare transformer, spare reactor and line being connected to the system and brought into beneficial use, inclusion of the costs of the above mentioned bay modules is illegitimate. Hence, the petitioner should avoid including assets which are not required for the system. The IDC, IEDC and cost of spares may be restricted based on the restricted capital cost excluding the cost of assets which are not in use.

16. The petitioner in its rejoinder has submitted as under:-

(a) The head wise variation of cost with respect to FR and actual expenditure incurred has been submitted. As regards cost variation, the cost estimate is prepared based on SOR and the actual cost is obtained through competitive bidding process. Being extension package for an already existing GIS Sub-station, most of the systems are established and therefore could be completed ahead of schedule and utilizing the already existing man power leading to lesser IDC and IEDC. The difference in



Custom Duty is also due to reduction in the GIS equipment cost obtained during competitive bidding process and also due to charging of reduced CD. After Investment Approval, the award letters are placed on the executing agencies on the basis of a tendering process as per best industry practices and due diligence including justification of bid prices vis-à-vis estimated cost before placing the awards. Further, cost control measures are taken during execution of the project and only under unavoidable situations caused by the actual soil/terrain conditions, crossing requirements (river, Power line, Railway line, forest stretches and any other compelling technical reason), the cost may undergo changes.

(b) Open competitive bidding route is followed and by providing equal opportunity to all eligible firms for procurement, lowest possible market prices for required product/services is obtained and contracts are awarded on the basis of lowest evaluated eligible bidder for separate projects. Different packages cannot be compared as total equipment/items for different packages are different and award is placed for the overall project as against individual item. Accordingly lowest bid price received for the overall project is awarded wherein price for a particular item may happen to be higher than the price for the same item awarded in a different package. With regard to description of item, different projects have different requirement. Further, the nomenclature followed by different vendors is different and the description provided in the LOA is considered for a particular project.

(c) The Gas insulated switchgear (GIS) at Maheshwaram is of one and half breaker scheme. Unlike in AIS, the GIS modules for the complete diameter



have to be installed to comply with one and half breaker scheme for connectivity with both the main buses 1 and 2. Moreover, in case of GIS, even though the construction is modular, it cannot be inferred that it can be charged module-wise in an installation. It is known fact that the GIS being of compact design, the area requirement of GIS are very less as compared to Air insulated switchgears. The compact design has its own unique problems as well. As in the present case, if only the bus connected with diameter which is presently utilized for power flow is charged and the remaining part of bus is not going to be charged, necessary end pieces would be required to insulate it from other part which is difficult to plan for each instance. Each additional end piece would in turn require additional space which will increase the land requirement adversely impacting the benefits of the GIS. In case the GIS is planned bay-wise, it would increase the requirement of end piece, extension piece etc. leading to adverse impact of the cost in addition to the fact that whenever additional bus or bays are to be connected, the required HV Test would need to be done which would unnecessarily expose the existing GIS to harsh HV test. A GIS equipment can only be exposed to HV test for a limited number of times only. Thus, it is not practical to carry out HV test with each increasing number of bays. Repeated opening for extension will increase the vulnerability of GIS for exposure to faults which may be caused due to ingress of dust, moisture etc. Further, each extension and HV test would require the shutdown of complete station which may not be practical each time. Accordingly, the cost of these bays was included along with the instant petition. Accordingly, the petitioner has prayed that the contentions of TANGEDCO may be dismissed and tariff may be granted as prayed.



17. The TANGEDCO has contended that the cost of the 800 kV GIS Auxiliary bus bar module for spare transformer, for spare line and reactor and 400 kV SF6 GIS auxiliary bus bar module for spare transformer are not into beneficial use in the absence of any spare transformer, spare reactor and also stated that these items may not be included under capital cost. The petitioner has submitted that the GIS modules for the complete diameter have to be installed to comply with one and half breaker scheme for connecting both the main buses 1 & 2. The bus connected with diameter which is utilized for power flow is charged and remaining part of bus is not going to be charged, necessary end pieces shall be required to insulate it from other part which is difficult to plan for each instance. We have considered the submissions of the petitioner and respondent. We are of the view that GIS substation is a compact design in nature and if GIS is planned bay-wise it would increase the cost and repeated opening for extension of GIS module will increase the vulnerability of GIS for exposure to faults. Therefore the cost of the above the 800 kV GIS Auxiliary bus bar module for future extension such as spare transformer, spare line and reactor and 400 kV SF6 GIS auxiliary bus bar module for spare transformer needs to be considered in the capital cost.

18. We have considered the submissions of the petitioner and TANGEDCO. It is observed that the cost variation is not attributable to the petitioner. Further, the estimated completion cost of the instant assets is within the approved apportioned cost. Accordingly, the cost variation is allowed.

Implementation Schedule

19. The petitioner has stated that the transmission scheme, as per the approval, was scheduled to be commissioned in 36 months from the date of approval of Board of Director i.e. 24.3.2015 with best efforts matching with the



transmission lines under project “Provision of Line bays for the Scheme- Connectivity lines for Maheshwaram (Hyderabad) 765/400 kV Pooling Station” being implemented under tariff based competitive bidding and “765 kV D/C Wardha-Hyderabad link” being implemented by PGCIL. Therefore, the scheduled COD was 24.3.2018 against which the assets were put under commercial operation on 31.8.2017 and 6.9.2017. The petitioner has further submitted that the instant assets were put into commercial before the scheduled COD to match with the COD of TBCB line and Wardha-Hyderabad 765 Link. Accordingly, there is no time over-run.

Interest During Construction (IDC)

20. 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 considered for the purpose of calculating IDC for the asset. Accordingly, the IDC allowed is as under:-

(₹ in lakh)					
	Total IDC (As per Auditor's Certificate) up to COD	Entitled IDC up to 31.8.2017 as worked out	IDC Dis-allowed due to computation difference	Un-discharged portion of entitled IDC as on COD*	IDC allowed on cash basis
a	b	c	D=(b-c)	e	F = (c-e)
Asset-IA	1310.56	1307.68	2.88	664.11	643.58
Asset-IB	378.90	374.70	4.20	212.76	161.94
Total	1689.46	1682.39	7.08	876.87	805.52

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

Incidental Expenditure During Construction (IEDC)

21. The allowable IEDC has been determined by considering the percentage of IEDC on Hard Cost as indicated in the Abstract Cost Estimate as per original Investment Approval, which is 10.75% for the instant asset. The details of IEDC



claimed and allowed is as under:-

(₹ in lakh)

Asset	IEDC	
	Claimed as per Auditor's certificate dated 7.11.2017	Allowed
Asset-IA	848.71	848.71
Asset-IB	352.85	352.85
Total	1201.56	1201.56

Initial spares

22. 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%
- (v) Gas Insulated Sub-station (GIS)-5.00%
- (vi) Communication system-3.5%

Provided that:

(a) 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) xxx

(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 and IEDC in its tariff application.”

23. The petitioner vide affidavit dated 16.4.2018 has submitted the following year wise capitalization and discharge details of initial spares:-



(₹ in lakh)

Asset	Total Spares as per Certificate	Discharge upto COD	Year wise Discharge	
			2017-18	2018-19
Asset-IA	1567.57	-	619.20	948.37
Asset-IB	419.49	210.20	148.92	60.37

24. The petitioner has claimed initial spares for Asset-IA and Asset-IB amounting to ₹1567.57 lakh and ₹419.49 lakh respectively. The initial spares are within the ceiling limit of 5% of GIS Pooling Station as per Regulation 13(i) of the 2014 Tariff Regulations. No spares have been claimed by the petitioner for transmission line.

Capital cost allowed as on COD

25. Based on the above, the capital cost allowed as on COD under Regulation 9(2) of the 2014 Tariff Regulation is summarized as under:-

(₹ in lakh)

Assets	Capital cost as on COD claimed by petitioner	IDC dis-allowed	Undischarged IDC as on COD	Capital Cost as on COD considered for tariff calculation
1	2	3	4	7= (2-3-4)
Asset-IA	31228.56	2.88	664.11	30561.58
Asset-IB	8859.33	4.20	212.76	8642.37

Additional Capital expenditure

26. 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.”

27. 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.”

28. The cut-off date for the instant transmission asset is 31.3.2020.

29. The petitioner has claimed the additional capital expenditure based on the cost certified by the Auditor. The petitioner has submitted that the additional capitalization incurred/ projected to be incurred in the instant asset is on account of balance/retention payments. The ACE claimed is as under:-

Particulars	Regulation	(₹ in lakh)			
		Asset-1A		Asset-1B	
		2017-18	2018-19	2017-18	2018-19
1. Discharge of liabilities on other than IDC	14(1)(i)	2703.85	839.41	989.90	552.54
2. Add cap towards works deferred for execution (by addition into gross block)	14(1)(ii)	956.82	3699.21	0.00	228.97
3. Total add-cap as per Auditor Certificate (excluding discharge of IDC liability)(1+2)		3660.67	4538.62	989.90	781.51
4. Discharge of IDC Liability	14(1)(i)	598.19	69.10	150.49	64.65
Total		4258.86	4607.72	1140.39	846.16

30. As stated, the worked out undischarged IDC as on COD has been allowed as additional capital expenditure during the year of discharge. Further, the discharge of liability other than IDC has been allowed provisionally which shall be



reviewed at the time of truing-up. Accordingly, the additional capital expenditure allowed is as under:-

	Regulation	(₹ in lakh)			
		Asset-1A		Asset-1B	
		2017-18	2018-19	2017-18	2018-19
1. Discharge of liabilities on other than IDC	14(1)(i)	2703.84	839.42	989.90	552.55
2. Add cap towards works deferred for execution (by addition into gross block)	14(1)(ii)	956.82	3699.21	0.00	228.97
3. Discharge of IDC Liability	14(1)(i)	598.19	65.92	150.49	62.27
Total		4258.85	4604.55	1140.39	843.79

31. Based on the above, the capital cost as on COD and the additional capital expenditure considered for computation of tariff for the instant assets is summarized below:-

	(₹ in lakh)			
	Capital Cost as on COD considered for tariff calculation	Additional capitalization for 2017-18	Additional capitalization for 2018-19	Total admitted cost as on 31.3.2019
Asset-IA	30561.58	4258.85	4604.55	39424.97
Asset-IB	8642.37	1140.39	843.79	10626.55
Total	39203.95	5399.24	5448.34	50051.52

Debt- Equity ratio

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

“(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 maybe 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 capital cost on the dates of commercial operation arrived at as above and additional capitalization allowed have been considered in the normative debt-equity ratio of 70:30. Accordingly, the Debt-Equity Ratio for the instant assets is as under:-

(₹ in lakh)

Asset-IA				
Particular	As on COD		As on 31.3.2019	
	Capital Cost	%	Capital Cost	%
Debt	21393.20	70.00	27597.57	70.00
Equity	9168.38	30.00	11827.40	30.00
Total	30561.58	100.00	39424.97	100.00

(₹ in lakh)

Asset-IB				
Particular	As on COD		As on 31.3.2019	
	Capital Cost	%	Capital Cost	%
Debt	6049.66	70.00	7438.59	70.00
Equity	2592.71	30.00	3187.96	70.00
Total	8642.37	100.00	10626.55	100.00

Return on Equity

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

“24. Return on Equity:(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.”

35. The petitioner has claimed ROE at the rate of 19.61% for the 2017-19 period after grossing up the ROE of 15.50% with MAT rate as per the above said Regulation. 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.

36. The Return on Equity has been worked out in accordance with Regulations 24 and 25 of the 2014 Tariff Regulations. The rate of pre-tax return on equity for all the financial year during 2014-19 period has been determined by grossing up the base rate of 15.50% with effective tax rate of 20.961%. This rate of pre-tax return on equity is subject to true up based on the effective tax rate of respective financial year applicable to the petitioner company. Accordingly, the RoE allowed is as follows:-

(₹ in lakh)		
Asset-IA	2017-18	2018-19
Opening Equity	9168.47	10446.13
Addition due to Additional Capitalization	1277.66	1381.36
Closing Equity	10446.13	11827.49
Average Equity	9807.30	11136.81
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)	1122.37	2184.04

(₹ in lakh)		
Asset-IB	2017-18	2018-19
Opening Equity	2592.71	2934.83
Addition due to Additional Capitalization	342.12	253.14
Closing Equity	2934.83	3187.97
Average Equity	2763.77	3061.40
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)	307.38	600.37

Additional RoE

37. The petitioner has submitted that the assets covered in the instant petitioner were put into commercial operation within the timeline specified in the 2014 and hence additional RoE may be allowed in terms of the Regulation 24(i) of the



Tariff Regulations, 2014. The petitioner vide affidavit dated 27.12.2017 has submitted RPC certificate as under:-

Srl. No	Transmission elements	COD
Sub-station works associated with Hyderabad (Maheshwaram) Pooling Station		
(i)	1500 MVA, 765/400 kV ICT-1 and its bays at Maheshwaram GIS	31.8.2017
(ii)	2X240 MVAR, 765 kV Bus reactors and its bays at Maheshwaram GIS	31.8.2017
(iii)	400 kV Maheshwaram-Kurnool bays at Maheshwaram GIS	31.8.2017
(iv)	1500 MVA, 765/400 kV ICT-2 and its bays at Maheshwaram GIS	6.9.2017
(v)	400 kV Maheshwaram-Hyderabad bays at Maheshwaram GIS	6.9.2017

38. We have considered the submissions of the petitioner. It is noticed that SRPC has certified certain elements fulfilling the requirements of regulation 24(2)(iii) of the 2014 Tariff Regulations and recommended for additional RoE in respect of these elements under the said regulation. It is further observed that the petitioner has claimed additional RoE for LILO of Hyderabad-Kurnool 400 kV S/C line at Maheshwaram PS. The line length of LILO of Hyderabad-Kurnool 400 kV S/C line is 1.74 km. As per Regulation 24(2)(vi) of the 2014 Tariff Regulations, additional RoE shall not be admissible for transmission line having length of less than 50 km. Accordingly, additional ROE is not granted for LILO of Hyderabad-Kurnool 400 kV S/C line. Since, the petitioner has not furnished breakup of cost for ICT's and Bus reactors at Maheshwaram and LILO of Hyderabad-Kurnool 400 kV D/C line, additional RoE has not been considered at this stage. However, additional RoE is admissible for the following, subject to furnishing of breakup of cost of ICTS and bus reactors at the time of truing-up of tariff:-

Srl. No.	Transmission elements	Whether Additional RoE is admissible
Sub-station works associated with Hyderabad (Maheshwaram) Pooling Station		
(i)	1500 MVA, 765/400 kV ICT-1 and its bays at Maheshwaram GIS	Yes
(ii)	2X240 MVAR, 765 kV Bus reactors and its bays at Maheshwaram GIS	Yes
(iii)	400 kV Maheshwaram-Kurnool bays at Maheshwaram GIS	Yes
(iv)	1500 MVA, 765/400 kV ICT-2 and its bays at Maheshwaram GIS	Yes
(v)	400 kV Maheshwaram-Hyderabad bays at Maheshwaram GIS	Yes
(vi)	LILO of Hyderabad-Kurnool 400 kV D/C line	No

39. Due to non-availability of segregated cost, additional ROE is not considered in the tariff computation and the same shall be considered at the time of truing-up on receipt of segregated cost and funding details.

Interest on Loan (IoL)

40. 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.”

41. In these calculations, IoL has been worked out as under:-

(i) The Gross Normative loan has been considered as per the Loan amount determined based on the debt equity ratio applied on the allowed capital cost.

(ii) The depreciation allowed has been considered as Normative repayment of loan;

(iii) The weighted average rate of interest on actual loan portfolio has been worked out by considering the Gross amount of loan, repayment and rate of interest as mentioned in the petition;

(iv) Weighted average rate of interest on actual average loan worked out is applied on the normative average loan during the year to arrive at the interest on loan.

42. Detailed calculation of the weighted average rate of interest has been given in **Annexure-I to II** to this order.

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

Asset-IA	(₹ in lakh)	
	2017-18	2018-19
Gross Normative Loan	21393.10	24374.30
Cumulative Repayment upto previous Year	0.00	947.50
Net Loan-Opening	21393.10	23426.80
Addition due to Additional Capitalization	2981.20	3223.18
Repayment during the year	947.50	1843.76
Net Loan-Closing	23426.80	24806.23



Average Loan	22409.95	24116.51
Weighted Average Rate of Interest on Loan	7.8357%	7.8285%
Interest on Loan	1024.73	1887.95

(₹ in lakh)		
Asset-IB	2017-18	2018-19
Gross Normative Loan	6049.66	6847.93
Cumulative Repayment upto previous Year	0.00	276.10
Net Loan-Opening	6049.66	6571.84
Addition due to Additional Capitalization	798.27	590.65
Repayment during the year	276.10	539.26
Net Loan-Closing	6571.84	6623.23
Average Loan	6310.75	6597.53
Weighted Average Rate of Interest on Loan	7.7455%	7.7401%
Interest on Loan	277.21	510.65

Depreciation

44. 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.”

45. The petitioner has claimed actual depreciation as a component of Annual Fixed Charges. Depreciation has been calculated in accordance with Regulation 27 of the 2014 Tariff Regulations which provides as under:-

“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:

46. The instant Assets-IA and IB have been put under commercial operation as on 31.8.2017 and 6.9.2017 respectively. The asset will complete 12 years beyond the tariff period 2014-19. Accordingly, 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.

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



(₹ in lakh)

Asset-IA	2017-18	2018-19
Gross Block as on COD	30561.58	34820.43
Addition during 2014-19	4258.85	4604.55
Gross Block	34820.43	39424.97
Average Gross Block	32691.00	37122.70
Rate of Depreciation	5.0742%	5.0742%
Depreciable Value	28798.19	32702.17
Remaining depreciable value	28798.19	31754.67
Depreciation	947.50	1843.76

(₹ in lakh)

Asset-IB	2017-18	2018-19
Gross Block as on COD	8642.37	9782.76
Addition during 2014-19	1140.39	843.79
Gross Block	9782.76	10626.55
Average Gross Block	9212.57	10204.66
Rate of Depreciation	5.2845%	5.2845%
Depreciable Value	8291.31	9184.19
Remaining depreciable value	8291.31	8908.10
Depreciation	276.10	539.26

Operation and Maintenance Expenses (O&M Expenses)

48. The O&M Expenses claimed by the petitioner is as under:-

(₹ in lakh)

Element	2017-18	2018-19
Asset-IA	231.11	407.46
Asset-IB	118.53	215.06

49. The petitioner has submitted line length of LILO of Hyderabad-Kurnool 400 kV D/C line as 6.97 km and LILO of Hyderabad-Kurnool and Maheshwaram-Hyderabad D/C line as 3.501 km. We have considered the submissions of the petitioner and the O&M Expenses for LILO of Hyderabad-Kurnool 400 kV D/C line calculated from 6.9.2017. Accordingly, the O&M Expenses allowed are as under:-

(₹ in lakh)

Asset-IA	2017-18	2018-19
2 Nos. 400 kV GIS Bays at Maheshwaram Pooling Station	66.34	117.46
3 Nos. 765 kV Bays at Maheshwaram Pooling	163.00	288.60



Station		
Total	229.34	406.06
Asset-IB		
400 kV GIS Bays at Maheshwaram Pooling Station	64.47	117.46
1 No. 765 kV Bays at Maheshwaram Pooling Station	52.80	96.20
Maheshwaram - Kurnool 400 kV D/C line	1.5487	2.82
Total	118.8241	216.48

50. As stated, 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.

51. TANGEDCO in its reply has submitted that there is no provision in Tariff Regulation for revising the normative O&M charges based on actual. The Commission has arrived at the O&M rates based on past five years actual O&M expenses which includes the wage hikes during the previous five years and 10% margin over and above the effective CAGR of O&M Expenses has been allowed. The beneficiaries are overburdened due to the exorbitant O&M rates when compared to the rates of State Transmission utilities. Therefore, the request for revision of O&M rates should not be allowed.

52. In response, the petitioner has submitted that being a CPSU, the scheme of wage revision is binding on the petitioner. However, the actual impact of wage



hike (due w.e.f. 1.1.2017) has not been factored in fixation of the normative O&M rates prescribed for the 2014-19 tariff block. In line with the Regulation 19(f)(ii) of the 2009 Tariff Regulations for 2009-14 tariff block, norms for O&M Expenses for the year 2009-10 were derived considering the impact of wage hike of the employees under PSUs. Accordingly, the petitioner has prayed for suitable revision in the norms for O&M Expenses for claiming the impact of wage hike during period 2014-19.

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

Interest on Working Capital

54. 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;”



55. The petitioner is entitled to claim interest on working capital 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

Operation and maintenance expenses have been considered for one month of the allowed O&M Expenses.

Rate of interest on working capital

As per proviso 3 of Regulation 28 of the 2014 Tariff Regulation, SBI Base rate of 9.10% as on 1.4.2017 plus 350 Bps i.e. 12.60% has been considered for the asset, as the rate of interest on working capital.

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

Asset-IA	(₹ in lakh)	
	2017-18	2018-19
Maintenance Spares	58.95	60.91
O&M expenses	32.75	33.84
Receivables (2 months)	971.65	1078.27
Total	1063.35	1173.01
Interest rate	12.60 %	12.60%
Interest	78.19	147.80

(₹ in lakh)		
Asset-IB	2017-18	2018-19
Maintenance Spares	31.35	32.26
O&M expenses	17.42	17.92
Receivables (2 months)	294.99	318.64
Total	343.76	368.82
Interest rate	12.60%	12.60%
Interest	24.56	46.47

Annual Transmission charges for the period 2014-19

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

(₹ in lakh)		
Asset-IA	2017-18	2018-19
Depreciation	947.50	1843.76
Interest on Loan	1024.73	1887.95
Return on Equity	1122.37	2184.04
Interest on Working	78.19	147.80
O&M Expenses	229.34	406.06
Total	3402.12	6469.61

(₹ in lakh)		
Asset-IB	2017-18	2018-19
Depreciation	276.10	539.26
Interest on Loan	277.21	510.65
Return on Equity	307.38	600.37
Interest on Working Capital	24.56	46.47
O&M Expenses	118.53	215.06
Total	1003.78	1911.82

Filing Fee and Publication Expenses

58. The petitioner has sought reimbursement of fee paid by it for filing the petition and publication expenses, in terms of Regulation 52 of the 2014 Tariff Regulations. The petitioner shall be entitled for reimbursement of the filing fees and publication expenses in connection with the present petition, directly from the beneficiaries on pro-rata basis in accordance with clause (1) of Regulation 52 of the 2014 Tariff Regulations.

Licence Fee and RLDC Fees and Charges

59. 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

60. 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. The Service Tax has been subsumed by GST. Accordingly, the petitioner's prayer has become infructuous.

Goods and Services Tax

61. The petitioner has prayed for reimbursement of tax, if any, on account of proposed implementation of GST. The petitioner has submitted that the Commission should allow to recover GST from the beneficiaries, if imposed on transmission charges under the proposed GST when implemented by Government of India. We are of the view that petitioner's prayer is premature.

Sharing of Transmission Charges

62. The transmission charges shall be recovered on monthly basis in accordance with Regulation 43 of the 2014 Tariff Regulations and shall be shared by the beneficiaries and long term transmission customers in Central Electricity Regulatory Commission (Sharing of Inter State Transmission Charges and Losses) Regulations, 2010 as amended from time to time.

63. This order disposes of Petition No. 157/TT/2017.

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

sd/-
(A. S. Bakshi)
Member

sd/-
(A. K. Singhal)
Member

sd/-
(P. K. Pujari)
Chairperson



CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN			
(₹ in lakh)			
	Details of Loan	2017-18	2018-19
1	SBI		
	Gross loan opening	1435.20	1435.20
	Cumulative Repayment upto COD/previous year	0.00	0.00
	Net Loan-Opening	1435.20	1435.20
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	1435.20	1435.20
	Average Loan	1435.20	1435.20
	Rate of Interest	8.90%	8.90%
	Interest	127.73	127.73
	Rep Schedule		
2	Bond LIII		
	Gross loan opening	1351.58	1351.58
	Cumulative Repayment upto COD/previous year	0.00	0.00
	Net Loan-Opening	1351.58	1351.58
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	1351.58	1351.58
	Average Loan	1351.58	1351.58
	Rate of Interest	8.13%	8.13%
	Interest	109.88	109.88
	Rep Schedule		
3	Bond LVII		
	Gross loan opening	5591.31	5591.31
	Cumulative Repayment upto COD/previous year	0.00	0.00
	Net Loan-Opening	5591.31	5591.31
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	5591.31	5591.31
	Average Loan	5591.31	5591.31
	Rate of Interest	7.20%	7.20%
	Interest	402.57	402.57
	Rep Schedule		
4	Bond LIV		
	Gross loan opening	2543.74	2543.74
	Cumulative Repayment upto COD/previous year	0.00	0.00
	Net Loan-Opening	2543.74	2543.74
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	2543.74	2543.74
	Average Loan	2543.74	2543.74
	Rate of Interest	7.97%	7.97%
	Interest	202.74	202.74



	Rep Schedule		
5	Bond LVIII		
	Gross loan opening	1726.02	1726.02
	Cumulative Repayment upto COD/previous year	0.00	0.00
	Net Loan-Opening	1726.02	1726.02
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	1726.02	1726.02
	Average Loan	1726.02	1726.02
	Rate of Interest	7.89%	7.89%
	Interest	136.18	136.18
	Rep Schedule		
6	SBI (2016-17) (Q4)		
	Gross loan opening	1560.00	1560.00
	Cumulative Repayment upto COD/previous year	0.00	0.00
	Net Loan-Opening	1560.00	1560.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	1560.00	1560.00
	Average Loan	1560.00	1560.00
	Rate of Interest	8.90%	8.90%
	Interest	138.84	138.84
	Rep Schedule		
7	SBI (2017-2018) (Q1)		
	Gross loan opening	4338.70	4338.70
	Cumulative Repayment upto COD/previous year	0.00	0.00
	Net Loan-Opening	4338.70	4338.70
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	4338.70	4338.70
	Average Loan	4338.70	4338.70
	Rate of Interest	7.95%	7.95%
	Interest	344.93	344.93
	Rep Schedule		
8	SBI (2017-2018) (Q1)		
	Gross loan opening	0.00	161.30
	Cumulative Repayment upto COD/previous year	0.00	0.00
	Net Loan-Opening	0.00	161.30
	Additions during the year	161.30	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	161.30	161.30
	Average Loan	80.65	161.30
	Rate of Interest	7.95%	7.95%
	Interest	6.41	12.82
	Rep Schedule	Not available	



9	Bond LV		
	Gross loan opening	2846.34	2846.34
	Cumulative Repayment upto COD/previous year	0.00	0.00
	Net Loan-Opening	2846.34	2846.34
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	2846.34	2846.34
	Average Loan	2846.34	2846.34
	Rate of Interest	7.55%	7.55%
	Interest	214.90	214.90
	Rep Schedule	Not available	
10	Bond LIX		
	Gross loan opening	0.00	588.54
	Cumulative Repayment upto COD/previous year	0.00	0.00
	Net Loan-Opening	0.00	588.54
	Additions during the year	588.54	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	588.54	588.54
	Average Loan	294.27	588.54
	Rate of Interest	7.30%	7.30%
	Interest	21.48	42.96
	Rep Schedule	Not available	
11	Bond LIX		
	Gross loan opening	0.00	0.00
	Cumulative Repayment upto COD/previous year	0.00	0.00
	Net Loan-Opening	0.00	0.00
	Additions during the year	0.00	48.37
	Repayment during the year	0.00	0.00
	Net Loan-Closing	0.00	48.37
	Average Loan	0.00	24.19
	Rate of Interest	7.30%	7.30%
	Interest	0.00	1.77
	Rep Schedule	Not available	
	Total Loan		
	Gross loan opening	21392.89	22142.73
	Cumulative Repayment upto COD/previous year	0.00	0.00
	Net Loan-Opening	21392.89	22142.73
	Additions during the year	749.84	48.37
	Repayment during the year	0.00	0.00
	Net Loan-Closing	22142.73	22191.10
	Average Loan	21767.81	22166.92
	Rate of Interest	7.8357%	7.8285%
	Interest	1705.67	1735.33



CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN			
(₹ in lakh)			
	Details of Loan	2017-18	2018-19
1	SBI10000 (1.5.2014)		
	Gross loan opening	404.80	404.80
	Cumulative Repayment upto COD/previous year	0.00	0.00
	Net Loan-Opening	404.80	404.80
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	404.80	404.80
	Average Loan	404.80	404.80
	Rate of Interest	8.90%	8.90%
	Interest	36.03	36.03
	Rep Schedule		
2	Bond LIII		
	Gross loan opening	984.42	984.42
	Cumulative Repayment upto COD/previous year	0.00	0.00
	Net Loan-Opening	984.42	984.42
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	984.42	984.42
	Average Loan	984.42	984.42
	Rate of Interest	8.13%	8.13%
	Interest	80.03	80.03
	Rep Schedule		
3	Bond LVII		
	Gross loan opening	152.69	152.69
	Cumulative Repayment upto COD/previous year	0.00	0.00
	Net Loan-Opening	152.69	152.69
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	152.69	152.69
	Average Loan	152.69	152.69
	Rate of Interest	7.20%	7.20%
	Interest	10.99	10.99
	Rep Schedule		
4	Bond LIV		
	Gross loan opening	114.26	114.26
	Cumulative Repayment upto COD/previous year	0.00	0.00
	Net Loan-Opening	114.26	114.26
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	114.26	114.26
	Average Loan	114.26	114.26
	Rate of Interest	7.97%	7.97%
	Interest	9.11	9.11
	Rep Schedule		



5	SBI (2016-17) (Q4)		
	Gross loan opening	440.00	440.00
	Cumulative Repayment upto COD/previous year	0.00	0.00
	Net Loan-Opening	440.00	440.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	440.00	440.00
	Average Loan	440.00	440.00
	Rate of Interest	8.90%	8.90%
	Interest	39.16	39.16
	Rep Schedule		
6	Bond LV		
	Gross loan opening	1956.66	1956.66
	Cumulative Repayment upto COD/previous year	0.00	0.00
	Net Loan-Opening	1956.66	1956.66
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	1956.66	1956.66
	Average Loan	1956.66	1956.66
	Rate of Interest	7.55%	7.55%
	Interest	147.73	147.73
	Rep Schedule	Not available	
7	Bond LIX		
	Gross loan opening	1998.10	1998.10
	Cumulative Repayment upto COD/previous year	0.00	0.00
	Net Loan-Opening	1998.10	1998.10
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	1998.10	1998.10
	Average Loan	1998.10	1998.10
	Rate of Interest	7.30%	7.30%
	Interest	145.86	145.86
	Rep Schedule	Not available	
8	Bond LIX		
	Gross loan opening	0.00	105.34
	Cumulative Repayment upto COD/previous year	0.00	0.00
	Net Loan-Opening	0.00	105.34
	Additions during the year	105.34	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	105.34	105.34
	Average Loan	52.67	105.34
	Rate of Interest	7.30%	7.30%
	Interest	3.84	7.69



	Rep Schedule	Not available	
9	Bond LIX		
	Gross loan opening	0.00	0.00
	Cumulative Repayment upto COD/previous year	0.00	0.00
	Net Loan-Opening	0.00	0.00
	Additions during the year	0.00	45.26
	Repayment during the year	0.00	0.00
	Net Loan-Closing	0.00	45.26
	Average Loan	0.00	22.63
	Rate of Interest	7.30%	7.30%
	Interest	0.00	1.65
	Rep Schedule	Not available	
	Total Loan		
	Gross loan opening	6050.93	6156.27
	Cumulative Repayment upto COD/previous year	0.00	0.00
	Net Loan-Opening	6050.93	6156.27
	Additions during the year	105.34	45.26
	Repayment during the year	0.00	0.00
	Net Loan-Closing	6156.27	6201.53
	Average Loan	6103.60	6178.90
	Rate of Interest	7.7455%	7.7401%
	Interest	472.75	478.25

