

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 403/TT/2014

Coram:

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

**Date of Hearing : 26.02.2015
Date of Order : 19.07.2016**

In the matter of:

Approval of transmission tariff for Gooty-Madhugiri 400 kV D/C line along with the associated bays and establishment of new 400/220 kV Sub-station at Madhugiri with 2x500 MVA transformers (COD: 1.12.2015) under "Transmission System associated with System Strengthening-XIII in Southern Regional Grid" 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 -122 001

.....Petitioner

Vs

1. Karnataka Power Transmission Corporation Limited (KPTCL),
Kaveri Bhawan, Bangalore-560 009
2. Transmission Corporation of Andhra Pradesh Limited (APTRANSCO),
Vidyut Soudha,
Hyderabad-500 082
3. Kerala State Electricity Board (KSEB),
Vaidyuthi Bhavanam,
Pattom, Thiruvananthapuram-695 004
4. Tamilnadu Generation and Distribution Corporation Limited
NPKRR Maaligai, 800, Anna Salai, Chennai-600 002
5. Electricity Department,
Government of Goa,
Vidyuti Bhawan, Panaji, Goa 403 001



6. Electricity Department,
Government of Pondicherry,
Pondicherry-605 001
7. Eastern Power Distribution Company of Andhra Pradesh Limited (APEPDCL),
APEPDCL, P&T Colony,
Seethmmadhara, Vishakhapatnam,
Andhra Pradesh
8. Southern Power Distribution Company of Andhra Pradesh Limited (APSPDCL),
Srinivasasa Kalyana Mandapam Backside,
Tiruchanoor Road, Kesavayana Gunta,
Tirupati-517 501, Chittoor District, Andhra Pradesh
9. Central Power Distribution Company of Andhra Pradesh Limited (APCPDCL),
Corporate Office, Mint Compound,
Hyderabad-500 063
10. Northern Power Distribution Company of Andhra Pradesh Limited (APNPDCL),
Opp. NIT Petrol Pump,
Chaitanyapuri, Kazipet,
Warangal-506 004, Andhra Pradesh
11. Bangalore Electricity Supply Company Limited (BESCOM),
Corporate Office, K.R. Circle,
Bangalore-560 001, Karnataka
12. Gulbarga Electricity Supply Company Limited (GESCOM),
Station Main Road, Gulbarga, Karnataka
13. Hubli Electricity Supply Company Limited (HESCOM),
Navanagar, PB Road,
Hubli, Karnataka
14. MESCOM Corporate Office,
Paradigm Plaza, AB Shetty Circle,
Mangalore-575 001, Karnataka
15. Chamundeswari Electricity Supply Corporation Limited (CESC),
927, L J Avenue, Ground Floor,
New Kantharaj Urs Road, Saraswatipuram,
Mysore-570 009, Karnataka

.....Respondents

For Petitioner : Ms Swapna Seshadri, Advocate for PGCIL
Shri S.S. Raju, PGCIL
Shri Jasbir Singh, PGCIL
Smt. Sangeeta Edwards, PGCIL
Shri M.M. Mondal, PGCIL



For Respondents : Sh. S. Vallinayagam, Advocate for TANGEDCO

ORDER

The instant petition has been filed by Power Grid Corporation of India Limited. (PGCIL) for approval of the transmission tariff for Gooty-Madhugiri 400 kV D/C line along with the associated bays and establishment of new 400/220 kV Sub-station at Madhugiri with 2x500 MVA transformers under "Transmission System associated with System Strengthening-XIII in Southern Regional Grid" (hereinafter referred to as "transmission asset") for the tariff block 2014-19, in terms of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 (hereinafter "the 2014 Tariff Regulations").

2. This order has been issued after considering PGCIL's affidavit dated 20.5.2015, 25.2.2016, 2.3.2016 and 27.4.2016.

3. The petitioner was entrusted with the implementation of System strengthening-XII in Southern Regional Grid. The scope of the scheme was discussed and agreed in 28th SCM meeting dated 15.6.2009 and 10th SRPC meeting dated 2.7.2009. The Investment Approval (IA) for the project was accorded by the Board of Directors of the petitioner vide Memorandum No. C/CP/SRSS-XIII dated 27.10.2011 for 261st meeting held on 22.10.2011, for "System Strengthening-XIII in Southern Region Grid" at an estimated cost of ₹48749 lakh including IDC of ₹1940 lakh (based on 2nd quarter, 2011 price level). The project was scheduled to be commissioned within 32 months from the date of IA of Board of Directors i.e.



27.10.2011. Therefore, the scheduled date of commissioning of the transmission system was 27.6.2014. The Board of Directors of the petitioner company has accorded approval for Revised Cost Estimates (RCE) at an estimated cost of ₹63946 lakh including IDC of ₹3667 lakh (based on April 2015 price level).

4. The scope of work covered under the project approved in Investment Approval dated 27.10.2011 has been modified vide RCE dated 22.12.2015. The revised scope of the project as per the RCE dated 22.12.2015 is as follows:-

Transmission Line:

- (i) Gooty-Madhugiri 400 kV D/C line;
- (ii) Madhugiri-Yelahanka 400 kV D/C (Quad) line with a small portion to be strung on multi-circuit tower of the SRSS-XII scheme with high ampacity conductor in Bengaluru Area;

Sub-Station:

- (i) 400/220 kV Sub-station (New) at Madhugiri with 2x500 MVA transformers with provision of establishing a 765/400 kV Sub-station in future in the same switchyard;
- (ii) Extension of Gooty 400/220 kV Sub-station;
- (iii) Extension of Yelahanka 400/220 kV Sub-station;

Reactive Compensation:

- (i) 1x63 MVAR Bus Reactor at 400/220 kV Sub-station at Madhugiri.

5. The petitioner vide affidavit dated 25.2.2016 has submitted the actual date of commercial operation of the instant transmission asset. The actual date of commercial operation of the instant asset is as follows:-



Particulars	Scheduled COD	Actual COD	Delay
Gooty-Madhugiri 400 kV D/C line along with the associated bays and establishment of new 400/220 kV Sub-station at Madhugiri with 2x500 MVA transformers	27.6.2014	1.12.2015	17 months

6. Annual Fixed Charges for the instant asset were approved by the Commission vide its order dated 22.12.2014, subject to adjustment as per Regulation 7 (7) (iii) and (iv) of the 2014 Tariff Regulations, as per the petitioner's initial claim of tariff for the instant assets from the anticipated COD of 1.2.2015 in the instant petition for 2014-15 and 2015-16. However, during the hearing dated 6.10.2015, the petitioner submitted the revised anticipated date of commercial operation as 1.11.2015. As such, vide order dated 6.4.2016 in the instant petition, the applicability of PoC tariff was extended till 30.9.2016 or till the issue of final tariff, whichever is earlier.

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

(₹ in lakh)				
Particulars	2015-16	2016-17	2017-18	2018-19
Depreciation	594.58	1867.52	1946.50	1961.59
Interest on Loan	328.76	995.79	989.21	943.77
Return on equity	717.01	2253.60	2354.67	2377.51
Interest on Working Capital	55.02	171.29	177.06	178.72
O & M Expenses	312.50	968.59	1000.70	1033.93
Total	2007.87	6256.79	6468.14	6495.52

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



(₹ in lakh)				
Particulars	2015-16 (pro-rata)	2016-17	2017-18	2018-19
Maintenance Spares	140.63	145.29	150.11	155.09
O & M expenses	78.13	80.72	83.39	86.16
Receivables	1003.94	1042.80	1078.02	1082.59
Total	1222.70	1268.81	1311.52	1323.84
Rate of Interest	13.50%	13.50%	13.50%	13.50%
Interest	55.02	171.29	177.06	178.72

9. No comments or suggestions have been received from the general public in response to the notices published by the petitioner under Section 64 of the Electricity Act, 2003. Tamil Nadu Generation and Distribution Corporation Limited, (TANGEDCO), a subsidiary of TNEB Limited and one of the successor entities to the erstwhile Tamil Nadu Electricity Board (TNEB), Respondent No. 4 and Kerala State Electricity Board Limited (KSEBL), Respondent No. 3 have filed reply dated 24.11.2014 and 1.12.2014 respectively. The respondents have submitted that there is anomaly in original approved cost, wherein the petitioner has indicated cost of ₹39760 lakh for Gooty-Madhugiri 400 kV D/C line and establishment of new 400/220 kV substation at Madhugiri with 2x500 MVA transformer as against the total original approved cost of ₹48749 lakh for the whole project and as such checking of cost is required and cost over-run. The respondents have further raised the issues of additional capitalisation, delay in commissioning, claim for revision in O&M Expenses with reference to any wage hike. The petitioner has filed rejoinder to the reply of TANGEDCO and KSEBL vide affidavits dated 29.1.2015 and 13.2.2015. The issues raised by TANGEDCO and KSEBL and the clarification given by the petitioner are addressed in the relevant paragraphs of this order.



10. Having heard the representatives of the parties and perused the material available on record we proceed to dispose of the petition.

Date of Commercial operation (COD)

11. The petitioner has claimed the date of the commercial operation of the instant transmission asset as 1.12.2015. However, as the instant asset is only a part of the system as per the Investment Approval, the petitioner was directed to submit status of 220 kV lines i.e. Madhugiri-Antharasanahalli, Madhugiri-Nittur and Madhugiri-Madhugiri-II. In response, the petitioner vide affidavit dated 25.2.2016 has submitted that these 220 kV Lines i.e. Madhugiri-Antharasanahalli, Madhugiri-Nittur and Madhugiri-Madhugiri-II have to be implemented by KPTCL. The status of commissioning of downstream at Madhugiri Sub-station was discussed in 27th TCC and SRPC meeting held on 12.5.2015 and following the recommendations of TCC, SRPC concurred that PGCIL could declare commercial operation of 400 kV Gooty-Madhugiri D/C line along with Madhugiri PS as and when they get commissioned without linking the same to downstream system.

12. The petitioner has submitted the self declaration COD certificate dated 1.12.2015, in respect of the claim of COD in accordance with Regulation 5 (3) of the 2014 Tariff Regulations indicating completion of successful trial operation vide affidavit dated 25.2.2016. The petitioner was directed to submit RLDC certificate for charging of instant asset. In response, the petitioner has submitted that in consistent with the definition of "Trial Run" as per Regulation 3 (62) read with Regulation 5 (2) of the 2014 Tariff Regulations, the trial operation needs to be carried out so that after successful charging, there is a continuous power flow for 24



hours in the transmission system or any element thereof. Regulation 3 (53) defines the term "Regular Service" which can be done only after trial run and issuance of certificate in this regard by the concerned RLDC.

13. However, Regulation 4 (3) Proviso (ii) is an exception to the above situation wherein a transmission system or any element thereof is prevented from regular service due to reason not attributed to the transmission licensee or its contractor or supplier, but on account of delay in commissioning of the down-stream system.

Regulation 4(3) of the 2014 Tariff Regulations provides as follows:-

"4. Date of Commercial Operation

The date of commercial operation of a generating station or unit or block thereof or a transmission system or element thereof shall be determined as under:

xxxxxxxxx

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

Provided that:

- (i) where the transmission line or substation is dedicated for evacuation of power from a particular generating station, the generating company and transmission licensee shall endeavour to commission the generating station and the transmission system simultaneously as far as practicable and shall ensure the same through appropriate Implementation Agreement in accordance with Regulation 12(2) of these Regulations:
- (ii) in case a transmission system or an element thereof is prevented from regular service for reasons not attributable to the transmission licensee or its supplier or its contractors but is on account of the delay in commissioning of the concerned generating station or in commissioning of the upstream or downstream transmission system, the transmission licensee shall approach the Commission through an appropriate application for approval of the date of commercial operation of such transmission system or an element thereof."

14. TANGEDCO has submitted that the petitioner be directed to submit the date of test charging the line, date of trial operation and actual date of putting the line in



regular use for determination of COD as per Tariff Regulations. We have considered the submissions of the petitioner and TANGEDCO and are of the view that the instant case is covered under Regulation 4 (3) Proviso (ii) of the 2014 Tariff Regulations. Accordingly, the petitioner, vide RoP for hearing dated 6.10.2015 was directed to submit CEA certificate under Regulation 43 of CEA (Measures Related to safety & Electricity Supply) Regulations, 2010. In response, the petitioner vide affidavit dated 25.2.2016 has submitted the CEA certificate dated 13.11.2015. The petitioner, vide affidavit dated 27.4.2016 has submitted, the trial run operation certificate (RLDC certificate) dated 21.4.2016.

15. Accordingly, we observe that instant asset was ready for regular service but was unable to provide such service due to non readiness of downstream network which has to be developed by KPTCL. Further, the issue was also decided in 27th TCC and SRPC meeting in this regard. The petitioner has submitted the RLDC certificate and CEA certificate. As such, as per Regulation 4(3)(ii) of 2014 Tariff Regulations, the commercial operation date of the instant transmission asset has been considered and allowed to be 1.12.2015.

Capital cost

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

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

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

- (a) the expenditure incurred or projected to be incurred up to the date of commercial operation of the project;
- (b) Interest during construction and financing charges, on the loans (i) being equal to 70% of the funds deployed, in the event of the actual equity in excess of 30% of



the funds deployed, by treating the excess equity as normative loan, or (ii) being equal to the actual amount of loan in the event of the actual equity less than 30% of the funds deployed;

(c) Increase in cost in contract packages as approved by the Commission;
(d) Interest during construction and incidental expenditure during construction as computed in accordance with Regulation 11 of these regulations;

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

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

(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.

17. The petitioner has submitted CA Certificate dated 31.12.2015 for the capital cost claimed by the petitioner as on actual COD (i.e. 1.12.2015) and estimated additional capital expenditure projected to be incurred for the instant transmission asset. As per the Auditors' Certificate the expenditure up to 31.3.2015 has been verified from the books of account of the project and the projected expenditure is on the basis of details furnished by the Management. The capital cost claimed by the petitioner and considered for determination of tariff is as given below:-

Original approved apportioned cost	Revised approved apportioned cost	Cost incurred up to actual COD	Estimated additional capital expenditure			Total estimated completion cost
			2015-16	2016-17	2017-18	
32964.00	43107.15	36537.40	652.95	2446.53	776.37	40413.25

Cost over-run

18. TANGEDCO, before the submission of RCE by the petitioner had submitted that the Commission should prudently check the cost and limit the capital cost before awarding the tariff in the instant petition. KSEBL also before the submission



of RCE by the petitioner had submitted that against the total approved apportioned cost of ₹32964 lakh, the anticipated completion cost is projected as ₹39760 lakh, so there is a cost over-run of ₹6800 lakh over the approved cost.

19. The petitioner, vide RoP for hearing dated 24.11.2014 was directed to submit detailed clarifications alongwith documentary evidence for cost over-run as per the original petition. The petitioner vide affidavit dated 20.5.2015 had submitted the reasons for cost variation on account of price variation, quantity variation and increase in compensation towards crop, tree PTCC and forest etc. We noted that there were variations in the transformer cost also. After, detailed perusal of the petitioners' submissions in this regard, we have noted that the transformer costs in the instant petition are reasonable. However, in the meantime, the petitioner vide affidavit dated 25.2.2016 has submitted the revised cost estimates (i.e. RCE) and the total estimated completion cost of ₹40413.25 lakh is within the revised approved apportioned cost of ₹43107.15 lakh as per RCE. Hence, there is no cost over-run in the instant asset.

Time over-run

20. The project was scheduled to be commissioned within 32 months from the date of investment approval of 27.10.2011. Accordingly, the scheduled date of commercial operation works out to 27.6.2014 against which, the instant asset has been commissioned on 1.12.2015. Thus, there is time over-run of 17 months in the commissioning of instant asset. Accordingly, the petitioner was directed to submit, vide RoP for the hearing held on 24.11.2014 and 6.10.2015, chronology of activities related to RoW issue/time over-run and details of time over-run respectively.



21. The petitioner vide affidavit dated 2.3.2016 have submitted the reasons for delay in commissioning of the asset is as follows:

Right of Way:

- a) Intensive Right of Way problems encountered during execution of the work. The work was totally stalled by Karnataka Rajya Raithu Sangha. During concreting at Loc. No.69/0, 69/5,70/1 to 70/3, 71/0 to 71/3 and 85/0 work has been stopped by Raithu Sangha members and local villagers and forced the petitioner to dismantle the template later on. The mob also threatened the staff of the petitioner for which a complaint was lodged in Medigesi police station, Madhugiri Taluk. The RoW issues at Location No.69/5 were resolved after intervention of district administration and deployment of security force.
- b) Further, at location no 83C-0, 90, 89, and 88/0, the work was completed after intervention of administration and judiciary. Several incidence of this type occurred which delayed the completion of transmission asset.
- c) Transmission lines under execution in and around Bangalore have been facing severe RoW issues for quite a long time and the matter was also taken up at the highest level of the state government for extending the support in completion of the line. Time and against the progress of the lines and downstream system were discussed in the SRPC meeting.
- d) The line was commissioned in the month of December, 2015 with the support of the state administration and the RoW problems were persisting



till the commissioning of line. Such issues were amicably resolved with intervention of administration and judiciary.

22. The petitioner, vide affidavit dated 2.3.2016, has also submitted the chronology of the events, which is as follows:-

Date	Chronology of ROW meetings held with Assistant Commissioner Madhugiri Taluk, Deputy Commissioner Tumkur District and the Land Owners
20.2.2013	A letter was given to DC, Tumkur requesting for their kind cooperation in resolving the ROW issues at Kasapura Village Madhugiri Taluka.
16.6.2013	During casting works at Loc No. 69/0, owner along with a mob of Raithu Sanga members and local villagers has stopped the works and forced POWERGRID to dismantle the template. The mob also threatened the staff of POWERGRID and INAUENSA. A complaint was lodged in Medigesu PS, Madhugiri Taluk against land Owner and Raithu Sanga members
19.6.2013	DC Tumkur was approached and appraised the problem of Rythu Sangha on his date of joining at District Head quarters, Tumkur. He has advised us to give specific location nos. and delegated the issue to ADC Tumkur. ADC, Tumkur told that he will instruct Asst. Commissioner, Madhugiri for resolving the ROW issues at Medigesu Hobili, Madhugiri
25.6.2013	DC Tumkur was approached and letter submitted again giving location specific complaints pertaining to 69/0, 71/0 and 69/5. He advised us to meet Asst Commissioner, Madhugiri for resolving the ROW issues at Medigesu Hobili, Madhugiri.
22.10.2013	DC conducted a meeting with Karnataka Rajya Rythu Sangha Tumkur leaders. The KRRS leaders Mr. K.T Gangadhara, Working President, Karnataka state.
4.1.2014	Letter was submitted to DC Tumkur regarding 10 ROW locations and compensation paid. DC received the letter in person and assured to do needful.
9.1.2014	Letter was submitted to DC Tumkur regarding ROW at locations 69/0 and 70/2 requesting to call the owners for discussions. DC Tumkur marked the letter to AC Madhugiri for doing needful.
31.1.2014	Meeting with AC Madhugiri at a different location at Koratagere Tahsil office. Rythu Sanga entered the meeting accompanied by the farmers. AC Madhugiri requested them to come up with their expectation. They asked for time upto 8.2.11 to come up with a proposal. On 10.2.11 they came back and informed that their Tumkur leaders only can decide after meeting with DC Tumkur. AC Madhugiri appraised the matter to DC Tumkur.
19.2.2014	Meeting with DC Tumkur in his office and letter submitted. Rythu Sangha demands for land compensation for tower base and line corridor (as given by KIAD8) were appraised to him. He was requested to talk to KRRS leaders. He advised POWERGRID to call senior officials meeting to decide on compensation that can be paid one time.
22.2.2014	Meeting with DC Tumkur by SR-II regarding finalisation of tower wise



	compensation.
28.2.2014	DC Tumkur vide his proceedings dated 28.02.14 awarded tower wise one time ex-gratia in addition to crop compensation.
13.3.2014	Approached and convinced owner at 89/0 DO type tower and he agreed for compensation as per the DC order.
17.3.2014	Owner at 89/1 was also approached. He did not agree to the DC proceedings as his land was located on roadside of Tovinakere industrial area.
19.3.2014	Subsequently the neighboring field owner agreed to locate tower in his piece of land. Work pending as in absence of arranging gang.
31.3.2014	Owner at 78/0 was approached. He agreed to accept compensation. However he consulted Raithu Sangha Mr Shankarappa, Secretary Madhugiri Raithu Sangha.
24.3.2014	DC Tumkur was contacted by SR 2 and were advised to comeback after General Elections on 17.01.11 as Raithu Sangha have threatened to boycott the elections.
26.4.2014	Meeting with DC Tumkur and KRRS leader KT Gangadhara could not happen as KRRS did not attend the meeting due to preoccupation with another state.
29.4.2014	ED, SR-I along with ED SR2 and other senior officials of KPTCL met Chief Minister of Karnataka, Power Minister at Bangalore regarding ROW and compensation
6.5.2014	As per decision of top management ROW locations from Tumkur <i>end</i> are' proposed to be taken up first. Owner at 97/0 was approached. He refused to accept notice asking for deviation in line alignment. Also told that he will discuss with other land owners and meet DC.
7.5.2014	Owner at 93/0 was contacted and given intimation notice. Owner at 93A/0 has also accepted notice. In absence to arrange gang
9.5.2014	Owner at 97/0 Sivanna was contacted. He was not willing to locate the tower in his land located outside Tumkur SS boundary and asked us to first complete.
17.5.2014	Owner at 95/0 Veeradasalah was contacted and he agreed. In absence to arrange gang.
19.5.2014	Owners of 93B/0 and 94/0 were contacted. 93B/0 owner did not agree stating that they own a small piece of land. Will be taken up subsequently. Owner at 94/0 agreed, but was not sure that the tower is located in his piece of land and wants to make a site visit. Site visit planned for 22.05.14.
22.10.2014	Owner above (65B/I) was requested to take back the cheque returned by him and allow us to carry out tower erection, stating that DC Anantapur orders if any will be considered at a later stage and he will get the differential amount if due. He was not convinced and asked for compensation at par with neighboring Karnataka taluk of Madhugiri before doing further works in his land.
1.11.2014	Panchnama carried out in Pavagada Taluk, in areas where stringing work is balance and in sections(16km) where stringing is completed as a follow up of meeting dated 10.09.14. 20 locations completed
8.11.2014	Panchnama carried out in Pavagada Taluk, in areas where stringing work is balance and in sections(16km) where stringing is completed as a follow up of meeting dated 10.09.14. 27 Locations completed
22.11.2014	Punchnama carried out in Pavagada Taluk, in areas where stringing work is balance and in sections(16km) where stringing is completed as a follow



	up of meeting dated 10.09.14. 31 locations completed
1.12.2014	Panchnama carried out in Pavagada Taluk, in areas where stringing work is balance and in sections (16kM) where stringing is completed as a follow up of meeting dated 10.09.14. 35 locations completed
6.12.2014	Panchnama carried out in Tavagada Taluk, in areas where stringing work is balance and in sections(15kM) where stringing is completed as a follow up of meeting dated 10.09.14. Allocations completed
20.12.2014	Panchnama carried out in Pavagada Taluk, in areas where stringing work is balance and in sections(16 kM) where stringing is completed as a follow up of meeting dated 10.09.14. 48 locations completed.
23.12.2014	Owner at location 69/5 Kasapura village, Medigesi Hobli, Madhugiri Taluk was preventing entry for casting foundation. He was not listening to Raithu Sangha also to abide by the DC order for compensation. Therefore complaint was lodged with SI Medigesi. Police called the party and could not convince him. He wanted diversion of the line. Police advised us to give a complaint to DC Tumkur, so that they can use force as per his directions. Letter was submitted to DC Tumkur stating the situation and asking police protection. Action awaited on the letter
24.12.2014	SE, APTransco forwarded the representation of Madakasira farmers(through Viswa Gomatha Sangham) wrongly sent to him from Anantapur Collectorate, regarding less compensation to CAO Anantapur with a request to report compliance on Prajavani, Govt of AP
29.12.2014	A letter was submitted to Tahsildar Koratagere for clearing ROW at location 89/1 by Sri Keshavamurthy, who is obstructing foundation works at this location, demanding shifting the location of the tower
31.12.2014	Mr. Nagaraju of Viswa Gomataha Sangham along with Sri Yerragamanna and three other farmers attended a meeting at Pavagada Office on behalf of farmers of Madakasira. They were demanding compensation for tower footing, trees and corridor at par with Madhugiri as per orders issued by DC Tumkar as their lands lie in between Pavagada and Madhugiri taluks. It was explained to them that tower footing can be considered only at rates prevalent in that area as AP is a separate state and trees compensation can be considered at enhanced rates if ordered by Collector Anantapur. Further, it was made clear that no corridor payment was made so far and cannot be considered. The farmers were not fully convinced and decided to talk to other farmers and meet Collector Anantapur. However they requested to enumerate trees and clear crop compensation. It was informed to them that except for a couple of locations crop compensation was already paid in 2 stages during foundation and tower erection and stringing was not done as it was obstructed by them. It was requested to allow us to complete balance tower erection. They in turn asked a week's time for discussing and deciding and deciding the issue with other farmers.
10.5.2015	Farmers at location 879-89 were called for a meeting at site. RI told the farmers that compensation for land damages will be deposited to Asst Commr Madugiri account. Farmers wanted compensation for small trees also in 30m width and asked to call Horticulture official. They also wanted survey to be done and area of damage and compensation to be intimated before allowing stringing work. Matter was also appraised to Tahsildar Koratagere.
11.5.2015	DSP Madhugiri was met In the evening at his office. 69/5 foundation pending ROW status was Informed to him. He noted down the details and assured to take necessary action.



14.5.2015	AGM projects along with Manager law met AC Tumkur. AC Tumkur assured full support for clearing ROW In Tumkur Taluk, They also met DC Tunmkur and requested to convene a common meeting with Police and Revenue officials at the level of Tahsildar to extend necessary cooperation at Taluk levels. DC Tumkur agreed to convene a joint meeting, AGM submitted a letter to DC Tumkur. Meanwhile local farmers at Bisadihalli, CN Durga Hobli, Tovinakere, Koratagere Taluk were mot again to start work In 87B-88-89 section where work got held up. Only 2 or 3 farmers turned up and meeting was postponed to 15.5.2016. AGM also visited above ROW site, ASI Medigesu was met regarding loc 69/5 Kasapura village foundation ROW again. He informed that DC orders are required as the party Is not agreeable to any solution whatsoever. He also Informed that additional force needs to be provided for clearing ROW.
15.5.2015	Farmers at location 878-89 Bisadihalli, CN Durga Hobli, Tovinakere, Koratagere Taluk were requested again to attend meeting at site. However farmers did not turn up at site due to nominations for local body meeting, Farmer at location 69/5 was met for convincing him regarding tree and tower footing compensation, he refused to accept or agree to sign JMC prepared by Revenue and horticulture officials and demanded diversion of the line, DC meeting scheduled for 5PM was cancelled due to Hon'ble CM visit to Davangere via Tumkur.
21.5.2015	A meeting was organised with farmers in 92-93 section at Kenchanahalli village near loc.92 along with RI, KORA and other village elders. Farmers objected to stringing work demanding additional land damages compensation @ 10lakhs per acre against DC order of 2lakhs/acre. Matter was informed to Asst Commr. Tumkur. Owner of location 83C/0 obstructing tower erection.
22.5.2015	Letter was submitted to Tahsildar Pavagada against farmers of Bommathanahalli, Kurubarahalli and Balampalli who were obstructing work demanding direct payment of corridor compensation Instead of through Revenue Authorities. AC Tumkur gave instructions to CI Tumkur Rural for ROW clearing at Kenchanahalli. CI gave Instructions to SI Kora for necessary action. SI made site visit and could not convince 92-93 section owners. He in turn Informed the same to Asst. Commr Tumkur,
23.5.2015	ROW in section 55-55A(locations 55/6,55/7) by farmer Ramanjaneyulu. Discussed with owner 55/7 location along with concerned RI Pavagada, Demanding advance land damage compensation.
24.5.2015	ROW in section 5S-55A(locations 55/6,55/7) by farmer Ramanjaneyulu. Discussed with KRRS(Raithu Sanga) and agreeing for land damage survey n advance, insulator hoisting and pilot paying was agreed by farmers. Scheduled DC meeting was postponed.



26.5.2015	A meeting was called by DC Tumkur between farmers, Powergrid and KRRS(Raithu Sanga), On request from Raithu Sangha decision was given by DC Tumkur to pay land damages compensation in advance before stringing.
9.6.2015	A request was given to AC Tumkur to refund the land damage compensation of Rs.1.14Cr deposited with AC Tumkur account so that same will be disbursed to farmers by Powergrid In advance as per OC Instruction In meeting dated 26.5.15.
11.6.2015	SP Tumkur office Issued police protection orders for location 69/5, Kasapura village, Medigesu Hobli, Madhugiri Taluk.
27.6.2015	A letter was given to AC Madhugiri and SP Tumkur to provide police protection for location 83C-0, Bommathlmanahalli village, Doddori Hobli, Madhugiri Taluk which was pending since long and last tower erection left as the land owner was not agreeing for tree cutting after casting of foundation. SP gave orders to CI, Badavanahalli to provide protection and advised us to meet him.
29.6.2015	Final notice issued as per advise of Asst Commissioner, Madhugiri to Land owner at location 83C-0, Bommathlmanahalli village, Doddori Hobli, Madhugiri Taluk which was pending since long and last tower erection left as the land owner was not agreeing for tree cutting after casting of foundation, SP gave orders to CI, Badavanahalli to provide protection and advised us to meet him.
30.7.2015	A letter was written to ADC Tumkur to resolve ROW during stringing in between locations 88-89-90 falling under Bisadihalli & Muddegowdanahalli villages under CN Durga Hobli Koratagere Taluk. Stringing-in these sections was held up since 3months due to ROW created by around 20 farmers stating that compensation for land damages is very low and small hybrid trees in the 16m corridor also need to be compensated. ADC Tumkur advised us to wait for 3 days as Assembly sessions are In progress. A letter was written to SP Tumkur to provide police protection for stringing in between locations 88-89-90 falling under Bisadihalli & Muddegowdanahalli villages under CN Durga Hobli Koratagere Taluk. Stringing In these sections was held up since 3months due to ROW created by around 20 farmers stating that compensation for land damages is very low and small hybrid trees In the 16m corridor also need to be compensated. SP Tumkur advised CI Koratagere to take appropriate action for ROW clearance.
1.8.2015	CI Koratagere PS was contacted and he advised us to wait as there was a Raithu Sangha meeting scheduled for 3rd August with ADC Tumkur(New DC yet to join). A written complaint was also given to Circle Inspector Koratagere for providing police protection. Addl DC Tumkur was also contacted and she informed that there was no formal meeting and the farmers wanted to represent their case.
11.8.2015	CI Koratagere PS informed that Police protection will be provided from next day 12.8.15
12.8.2015	CI Koratagere PS provided Police protection with 15 policemen and 2 ASIs for stringing between locations 89 and 88/0 near Bisadihalli



	village, Muddegowdanahalli of CN Durga Hobli near Tovinakere. Work was Initially Interrupted by villagers who were taken Into custody, Later on two leaders Jagdish and Suresh of UKS Raithu Sangha also interrupted the work. They were advised by the CI not to Interfere as the work was being done with Police protection as per SP orders. Thereafter the leaders left the site.
13.8.2015	CI Koratagere PS provided Police protection with 15 policemen and 2 ASIs for stringing between locations 90 and 89 and 88/0 near Bisadihalli village, Muddegowdanahalli of CN Durga Hobli near Tovinakere.
14.8.2015	CI Koratagere PS provided Police protection with 15 policemen and 2 ASIs for stringing between locations 90 and 89 and 88/0 near Bisadihalli village of CN Durga Hobli near Tovinakere.
16.8.2015	CI Koratagere PS provided Police protection with 15 policemen and 2 ASIs for Power line crossing shutdown stringing between locations 89A-89/1-89 and 88/0 near Bisadihalli village, Muddegowdanahalli of CN Durga Hobli near Tovinakere. Work was interrupted by a group of 10 villagers for an hour by standing in front of the tractors used for pilot pulling. One of the villagers even climbed 89/0 tower also stating that compensation was poor. He did not listen to his father Chikkanna also owner of the location land. Villagers left after police arrived on the location from the next section where work was in progress.
20.8.2015	Letter was submitted to Tahsildar Madhugiri regarding ROW created by farmers near location 69/0 Sattenganahalli, Kasapura, Medigesi Hobli Madhugiri Taluk. The farmers are having only cultivation rights and no ownership documents.
26.9.2015	A complaint was given to P1 Badavanahalli PS regarding disruption of work and physical assault of contractor supervisor by Venkatesh at location 78/7 Dabbegatta village, Oodderi Hobli, Madhugiri Taluk in section 78-79. Police visited the spot and advised the farmer not to obstruct work. ROW cleared.
29.9.2015	A complaint was lodged at Badavanahalli PS regarding disruption of insulator hoisting work at by Hanumanthappa of Bilnagurke village, Belladamadugu, Madhugiri at location 78/0, due to dispute in sub-division of tower footing area and corridor land with his father inlaw Veera Lingappa SI Badavanahalli and team visited the location and advised the farmer not to obstruct work. ROW cleared.
30.10.2015	Letter was written to DC Tumkur and submitted for resolving ROW at locations 91,92,93 Kenchanahalli near Tumkur. Farmers were preventing fixing of jumpers and spacers at above locations stating that DC has advised Powergrid to stop work in a press statement till compensation enhancement issue is settled. DC advised us to wait for ten days.
2.11.2015	Letter was written to SP Tumkur for providing Police protection at locations 91,92, 93 Kenchanahalli near Tumkur. SP Tumkur directed Circle Inspector Tumkur rural to provide Police protection at above locations.



4.11.2015	Circle Inspector Tumkur rural advised us to carry out work from 5.11.15 with police protection from SI, Kora PS.
5.11.2015	Jumper works and space ring at location 93 and 92 done with Police protection. Villagers at location 92 Kenchanahalli resisted and beat up 4 labour Complaint was also lodged with Kora PS. Afterwards Sub-Inspector Kora advised them rumkur rural advised us to carry out work from 5.11.15 with Police protection from SI, Kora Police station.
6.11.2015	Jumper works and spacing, earthing at location 91 done with police protection from SI, Kora PS.

23. TANGEDCO has submitted that the petitioner has completed only a part of the transmission system approved that too after a delay. KSEBL has submitted that the reason of time over-run has been mentioned as disputes arising from RoW issues, for which, documentary proofs have been submitted by the petitioner.

24. We have considered the submissions of the petitioner, TANGEDCO and KSEBL. It is observed that the time over-run in commissioning of the instant asset is due to serious RoW problems encountered by the petitioner during execution of work. From the chronology of RoW events submitted by the petitioner, it is observed that the petitioner approached the District Collector on 20.2.2013, for resolving the RoW issues at Kasapura village. This was followed by series of RoW issues at various locations. The petitioner has taken up these RoW issues with the State Government Authorities at various levels, including the Chief Minister of Karnataka. These issues continued upto 6.11.2015, when the petitioner could complete the work with the police protection. The asset was commissioned by the petitioner within 24 days of resolving the RoW issues. The petitioner took 32 months to resolve the RoW issues. We are of the view that 17 months of time over-run due to RoW issues is beyond the control of the petitioner.



25. The Hon'ble Appellate Tribunal for Electricity in its judgment dated 27.4.2011 in Appeal No.72/2010 has laid down the principle to be followed to determine the liability for time over-run in three scenarios as under:-

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

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

26. Accordingly, the time over-run of 17 months in respect of instant asset is condoned. Further, as the time over-run of 17 months in commissioning of subject asset is not attributable to the petitioner, the IDC and IEDC during the period is capitalized.

Treatment of IDC and IEDC

27. The petitioner has claimed Interest During Construction (IDC) of ₹1541.92 lakh on accrual basis as per Auditors' Certificate dated 31.12.2015. The petitioner vide affidavit dated 25.2.2016 has submitted a statement showing IDC computation where loan wise IDC amount is missing, but the statement indicates that ₹1154.33 lakh has been discharged as on COD.

28. According to the IDC statement, the petitioner had infused a loan capital of ₹ 100 lakh (i.e. Bond XXXIII) on 8.7.2010 which is prior to the date of investment approval (i.e. 27.10.2011). As the petitioner has not submitted any justification in this regard, the investment approval date (i.e. 27.10.2011) has been considered as the date of infusion for Bond XXXIII for the purpose of IDC determination. In addition, the petitioner, has mentioned the amount of proposed loan (i.e. Bond L) amounting ₹4118.58 lakh in Form-9C and Form-12B, whereas in IDC Statement the loan amount against the proposed loan (i.e. Bond L) is shown as ₹4389.90 lakh. As such, the loan amount as mentioned in Form-9C has been considered for IDC computation.

29. Further, the petitioner has not mentioned the amount of IDC claim towards the Foreign Currency loan (i.e. IBRD-IV loan) and also no computation is available for verification of this amount as the details like date of infusion, amount of infusion in both foreign currency and in INR, exchange rates as on date of drawl/infusion and as on actual COD are not available. This information was not provided by the petitioner despite raising queries in this regard. Accordingly, IDC on foreign loan has not been considered in the instant petition due to absence of required information. However, IDC on cash basis in respect of domestic loan has been allowed. As such, IDC has been worked out as ₹408.63 lakh and allowed as on COD on cash basis. The admissible amount of IDC towards foreign loan shall be determined on receipt of complete and proper information at the time of truing-up.

30. The balance amount of ₹1133.29 lakh (i.e. ₹1541.92 lakh-₹408.63 lakh), pertaining to un-discharged IDC and IDC towards foreign loan has been reduced



from the capital cost as on COD. The balance IDC to be discharged after COD shall be allowed as additional capital expenditure of concerned year at the time of truing-up subject to submission of required details. The petitioner is once again directed to submit information regarding justification for infusion of debt fund before investment approval for the project, provide the date of infusion, amount of Infusion in both FC & INR, exchange rates as on date of drawl and as on actual COD for IBRD IV and details related to the payment of actual IDC on cash basis and loan wise IDC discharged after COD at the time of truing-up.

31. Similarly, the petitioner has claimed Incidental Expenditure during Construction (IEDC) of ₹2255.85 lakh as per CA Certificate dated 31.12.2015. The percentage on Hard Cost as indicated in the Abstract Cost Estimate has been considered as the allowable limit of IEDC. In the instant petition, 10.75% of the Hard Cost (i.e.10% on ₹32739.63 lakh) is the maximum limit for allowing IEDC. Thus, amount of ₹2255.85 lakh claimed as IEDC as on COD is within the abstract cost i.e. 10.75% of the hard cost, it has been allowed.

Initial Spares

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

“13. Initial Spares

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

(d) Transmission system

(i) Transmission line - 1.00%

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



- (iii) Transmission Sub-station (Brown Field) - 6.00%
- (iv) Series Compensation devices and HVDC Station - 4.00%
- (v) Gas Insulated Sub-station (GIS)-5.00%
- (vi) Communication system-3.5%

Provided that:

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

(ii) -----

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

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

33. The petitioner has claimed initial spares amounting to ₹193.34 lakh and ₹277.96 lakh pertaining to transmission line and sub-station respectively. The petitioner vide affidavit dated 25.2.2016 has submitted the details of initial spares discharged up to COD and the year wise details of initial spares un-discharged as under:-

Particulars	(₹ in lakh)	
	Transmission Line	Sub-station
Expenditure towards initial spares upto COD and included in expenditure upto COD in the Auditors' Certificate	140.67	138.51
Expenditure towards initial spares from COD to 31.3.2016 (Add Cap)	52.67	49.90
Balance estimated expenditure on initial spares during 2016-17 (Add Cap)	-	89.55
Total*	193.34	277.96

*The amount towards initial spare on accrual basis and cash basis are same. Thus, there is no un-discharged initial spare as on COD.



34. The initial spares are within the norms specified in 2014 Tariff Regulations and therefore allowed.

Capital cost as on COD

35. Accordingly, the details of capital cost as on the date of commercial operation for the instant transmission asset after adjustment of IDC/IEDC and initial spares allowed is considered as per Regulation 9 (2) of the 2014 Tariff Regulations and is as under:-

(₹ in lakh)			
Capital cost as on COD claimed	Un-discharged IDC disallowed	IEDC disallowed on COD.	Capital cost as on COD considered for tariff calculation
1	2	3	4=(1-2-3)
36537.40	1133.29	-	35404.11

Projected additional capital expenditure

36. 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.

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

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

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

38. The cut-off date in the case of instant transmission asset is 31.3.2018.

39. The petitioner vide affidavit dated 25.2.2016 has submitted additional capital expenditure incurred/projected to be incurred during 2015-16, 2016-17 and 2017-18 for the instant asset covered and is as under:-

(₹ in lakh)			
2015-16	2016-17	2017-18	Total
652.95	2446.53	776.37	3875.85

40. KSEBL, before the submission of the RCE by the petitioner has submitted that the petitioner has claimed ₹7540.86 lakh as additional capital expenditure for the tariff period 2014-19. The additional capital expenditure shall be allowed only for the execution of the project components as per the original scope of the work. Hence, the additional capital expenditure may be allowed only after verifying the supporting documents of the petitioner. The additional capital expenditure incurred/projected to be incurred for the instant asset is on account of balance/retention payments and is within cutoff date and the same is allowed as per 2014 Tariff Regulations upto 2017-18 period.



Capital cost as on 31.3.2019

41. Based on the above, capital cost as on 31.3.2019 has been considered as per details given below:-

Capital cost allowed as on COD	(₹ in lakh)			Total estimated completion cost as on 31.3.2019
	2015-16	2016-17	2017-18	
35404.11	652.95	2446.53	776.37	39279.96

Debt-Equity Ratio

42. 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”

43. 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. The details of debt-equity in respect of instant asset as on the date of commercial operation and 31.3.2019 considered on normative basis are as under:-

Particulars	(₹ in lakh)		
	As on COD	As on 31.3.2019	
	Amount	Amount	% age
Debt	24782.88	27495.98	70.00
Equity	10621.23	11783.99	30.00
Total	35404.11	39279.96	100.00

Return on equity

44. 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.”

45. The petitioner has submitted that RoE has been calculated at the rate of 19.610% after grossing up the RoE with MAT rate of 20.961% based on the rate prescribed as per illustration under Regulation 25 (2) (i) of the 2014 Tariff Regulations. The petitioner has further submitted that the grossed up RoE is subject to truing up based on the actual tax paid along with any additional tax or interest, duly adjusted for any refund of tax including the interest received from IT authorities, pertaining to the tariff period 2014-19 on actual gross income of any financial year.



Any under-recovery or over-recovery of grossed up RoE after truing up shall be recovered or refunded to the beneficiaries on year to year basis.

46. 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.

47. KSEBL has submitted that the petitioner be directed to true up the grossed up rate of return on equity at the end of every financial year. However, as per Section 115JAA of the Income Tax Act 1961 the Mat payment cannot be regarded as a regular tax liability during the Tax Holiday period as the MAT paid is allowed to be set off against the regular tax liability within succeeding 10 years since the MAT credits of each assessment year are only in nature of advance tax which can be set off against regular income tax. Hence, the petitioner be directed to avail the benefit of this provision of Section 801A and get waiver of MAT. In response, the petitioner has clarified that the true up is done considering the grossed up rate at the end of every year and the petitioner is paying MAT which is minimum amount of tax after availing all the benefits including 801A.

48. We have considered the submissions made by KSEBL and the petitioner. Regulation 24 read with Regulation 25 of the 2014 Tariff Regulations provides for grossing up of return on equity with the effective tax rate for the purpose of return on equity. It further provides that in case the generating company or transmission licensee is paying Minimum Alternative Tax (MAT), the MAT rate including



surcharge and cess will be considered for the grossing up of return on equity. The petitioner has submitted that MAT rate is applicable to the petitioner's company. Accordingly, the MAT rate applicable during 2013-14 has been considered for the purpose of return on equity, which shall be trued up with actual tax rate in accordance with Regulation 25 (3) of the 2014 Tariff Regulations. Accordingly, the RoE determined is as under:-

(₹ in lakh)				
Particulars	2015-16 (pro-rata)	2016-17	2017-18	2018-19
Opening Equity	10621.23	10817.12	11551.07	11783.99
Addition due to Additional Capitalization	195.89	733.96	232.91	-
Closing Equity	10817.12	11551.07	11783.99	11783.99
Average Equity	10719.17	11184.10	11667.53	11783.99
Return on Equity (Base Rate)	15.50%	15.50%	15.50%	15.50%
Tax rate for the year 2013-14 (MAT)	20.961%	20.961%	20.961%	20.961%
Rate of Return on Equity (Pre Tax)	19.610%	19.610%	19.610%	19.610%
Return on Equity (Pre Tax)	696.84	2193.20	2288.00	2310.84

Interest on loan

49. Regulation 26 of the 2014 Tariff Regulations 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 decapitalisation of assets, the repayment shall be adjusted by taking into account cumulative repayment on a pro rata basis and the adjustment should not exceed cumulative depreciation recovered upto the date of decapitalisation of such asset.

(4) Notwithstanding any moratorium period availed by the generating company or the transmission licensee, as the case may be, the repayment of loan shall be

considered from the first year of commercial operation of the project and shall be equal to the depreciation allowed for the year or part of the year.

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

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

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

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

50. In keeping with the provisions of Regulation 26 of the 2014 Tariff Regulations, the petitioner's entitlement to interest on loan has been calculated on the following basis:-

- (i) Gross amount of loan, repayment of instalments and rate of interest have been considered as per Form 9C given in the affidavit dated 25.2.2016;
- (ii) The normative repayment for the tariff period 2014-19 has been considered to be equal to the depreciation allowed for that period; 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. The petitioner has submitted that the interest on loan has been considered on the basis of rate prevailing as on COD and the change in interest due to floating rate of interest applicable, if any, for the project needs to be claimed/ adjusted over the tariff block of 5 years directly from the beneficiaries.

52. We would like to clarify that the interest on loan has been calculated on the basis of rate prevailing as on the date of commercial operation. Any change in rate of interest subsequent to the date of commercial operation will be considered at the time of truing-up.

53. Detailed calculations in support of the weighted average rates of interest have been given at Annexure.

54. Based on the above, interest on loan has been calculated are given as under:-

(₹ in lakh)				
Particulars	2015-16 (pro-rata)	2016-17	2017-18	2018-19
Gross Normative Loan	24782.88	25239.95	26952.52	27495.98
Cumulative Repayment upto Previous Year	-	577.05	2391.49	4279.41
Net Loan-Opening	24782.88	24662.90	24561.03	23216.57
Addition due to Additional Capitalization	457.07	1712.57	543.46	-
Repayment during the year	577.05	1814.44	1887.92	1903.01
Net Loan-Closing	24662.90	24561.03	23216.57	21313.56
Average Loan	24722.89	24611.96	23888.80	22265.06
Weighted Average Rate of Interest on Loan	3.8988%	3.9380%	4.0241%	4.1213%
Interest	319.54	969.23	961.31	917.62

Depreciation

55. Regulation 27 of the 2014 Tariff Regulations provide as follows:-

"27. Depreciation:

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



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

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

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

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

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

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

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

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

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

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

56. The instant transmission asset was put under commercial operation during 2014-15. Accordingly, it will complete 12 years after 2018-19. As such, depreciation



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

57. Based on the above, the depreciation has been considered are as under:-

(₹ in lakh)				
Particulars	2015-16 (pro-rata)	2016-17	2017-18	2018-19
Opening Gross Block	35404.11	36057.06	38503.59	39279.96
Additional Capital Expenditure	652.95	2446.53	776.37	-
Closing Gross Block	36057.06	38503.59	39279.96	39279.96
Average Gross Block	35730.59	37280.33	38891.78	39279.96
Rate of Depreciation	4.8717%	4.8670%	4.8543%	4.8447%
Depreciable Value	30332.03	31726.80	33129.71	33431.69
Remaining Depreciable Value	30332.03	29754.98	27940.54	26052.62
Depreciation	577.05	1814.44	1887.92	1903.01

Operation & Maintenance Expenses (O&M Expenses)

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

Element	2014-15	2015-16	2016-17	2017-18	2018-19
400 kV bay (₹ lakh/km)	60.30	62.30	64.37	66.51	68.71
200 kV bay (₹ lakh/km)	42.21	43.61	45.06	46.55	48.10
Double Circuit (Twin & Triple Conductor) (₹ lakh/km)	0.707	0.731	0.755	0.780	0.806

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

2015-16 (pro-rata)	2016-17	2017-18	2018-19
312.50	968.59	1000.70	1033.93

60. Accordingly, the petitioner's entitlement to O&M Expenses has been worked out and the allowable O&M expenses for the instant asset are as follows:-



(₹ in lakh)				
Element	2015-16 (pro-rata)	2016-17	2017-18	2018-19
208.63 km 400 kV D/C T/L	50.836	157.515	162.731	168.155
7 Nos. 400 kV bays	145.366	450.59	465.57	480.97
8 Nos. 220 kV bays	116.293	360.48	372.4	384.8
Total	312.495	968.585	1000.701	1033.925

61. 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 w.e.f. 1.1.2017 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.

62. TANGEDCO and KSEBL have submitted that the 2014 Tariff Regulations do not provide for revising the normative O&M expenses based on actuals. The Commission has arrived at the O&M rates based on past five years actual O&M Expenses and escalated at 3.02% for computing base year expenses and 3.32% escalation from 2014-15 on-wards. The enhancement in O&M expenses shall not be allowed over and above the rate specified under Regulation 29 of the 2014 Tariff Regulations. The petitioner has stated that it would approach the Commission for revision of the O&M Expenses considering the impact of wage revision due w.e.f. 1.1.2017. In response, the petitioner clarified that norms for O& M Expenditure are considered under Regulation 29(3) (a) of the tariff block 20014-19 and the Commission would do the suitable revision in the norms as the 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 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.

63. We have considered the submissions of TANGEDCO, KSEBL and the petitioner. 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

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

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

(a)-----

(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;”

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

(₹ in lakh)				
Particulars	2014-15 (pro-rata)	2015-16	2016-17	2017-18
Maintenance Spares	141.40	145.29	150.11	155.09
O & M expenses	78.55	80.72	83.39	86.16
Receivables	985.33	1018.92	1051.91	1056.77
Total	1,205.28	1,244.92	1,285.41	1,298.02
Interest Rate	13.50%	13.50%	13.50%	13.50%
Interest	53.94	168.06	173.53	175.23

Transmission charges

66. The transmission charges being allowed for the transmission asset are as follows:-

(₹ in lakh)				
Particulars	2014-15 (pro-rata)	2015-16	2016-17	2017-18
Depreciation	577.05	1814.44	1887.92	1903.01
Interest on Loan	319.54	969.23	961.31	917.62
Return on equity	696.84	2193.20	2288.00	2310.84
Interest on Working Capital	53.94	168.06	173.53	175.23
O & M Expenses	312.50	968.59	1000.70	1033.93
Total	1959.86	6113.52	6311.46	6340.62

67. 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, filing fees, license fee, RLDC fees and charges or any other kind of impositions or surcharges etc. The same if imposed shall be borne and additionally paid by the respondents. The petitioner can make claims as per the prevailing regulations. We have allowed transmission tariff as per the 2014 Tariff Regulations.

Filing fee and the publication expenses

68. 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

69. The petitioner has requested to allow the petitioner to bill and recover License fee and RLDC fees and charges, separately from the respondents. We are of the view that 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

70. The petitioner has made a prayer to be allowed to bill and recover the 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. The petitioner has further prayed that if any taxes and duties including cess etc. are



imposed by any statutory/Government/municipal authorities, it shall be allowed to be recovered from the beneficiaries. We consider petitioner's prayer pre-mature and accordingly this prayer is rejected.

Deferred Tax Liability

71. The petitioner has sought recovery of deferred tax liability accrued before 1.4.2009 from the beneficiaries or long term consumers/DICs as and when materialized under Regulation 49 of the 2014 Tariff Regulations. However, the instant asset was commissioned on 1.12.2015 and hence the petitioner's prayer is infructuous.

Sharing of Transmission Charges

72. The petitioner vide affidavit dated 27.4.2016 has submitted the RLDC charging certificate dated 21.4.2016. RLDC vide letter dated 21.4.2016 has stated the following:-

"The elements were in continuous service for 24 hours. However, there has been no power flow in the line & ICT's due to non-commissioning of other 400 kV lines emanating from Madhugiri & the associated downstream network.

73. The moot question is who would bear the transmission charges if upstream/downstream transmission system is not ready? It was decided in the 27th Meeting of SRPC dated 12.5.2015 that the petitioner could declare commercial operation without linking the same to downstream system. The relevant extract of meeting is as under:-

"PGCIL had informed that about 67 kM was pending in respect of 400 kV Gooty-Madhugiri D/C line. They were putting all efforts to complete the line by August 2015. KPTCL were requested to commission at least one evacuation feeder from Madhugiri by June/July 2015 which would ensure at least partial utilization. Other evacuation lines from Yelahanka and Madhugiri were also needed to be expedited



by KPTCL to reap benefits of the upstream system. It was suggested that 400 kV Gooty-Madhugiri D/C line along with Madhugiri PS be allowed to put under commercial operation as and when they get commissioned without linking to availability of downstream system. Vijayawada-Nellore 400 kV D/C line was also in advanced stage of commissioning and they were obtaining full support from AP administration. This line was expected by June/July 2015.”

“After deliberations, TCC had recommended that PGCIL could declare commercial operation of 400 kV Gooty-Madhugiri D/C line along with Madhugiri PS as and when they get commissioned without linking the same to downstream system”.

74. We have also pursued the minutes of meeting of 28th SCM on Power System Planning on Southern Region held on 12.5.2015. Keeping the above and minutes of meeting of 28th SCM on Power System Planning on Southern Region in view, it can be inferred that the instant asset has been established under system strengthening scheme for Southern Region and developed to in feed Bangalore.

75. The Commission in order dated 25.1.2016 in Petition No. 253/TT/2015 has held that the delay on account of commissioning of the concerned generating station or in commissioning of the upstream or downstream transmission system, the transmission licensee shall approach the Commission for approval of the date of commercial operation. The relevant extract of order is as follows:-

"7. The petitioner has prayed for approval of the assets under proviso (ii) of Regulation 4(3) of the 2014 Tariff Regulations as the downstream assets executed by UPPTCL have not been commissioned. Proviso (ii) of Regulation 4(3) of the 2014 Tariff Regulations provides as under:-

“in case a transmission system or an element thereof is prevented from regular service for reasons not attributable to the transmission licensee or its supplier or its contractors but is on account of the delay in commissioning of the concerned generating station or in commissioning of the upstream or downstream transmission system, the transmission licensee shall approach the Commission through an appropriate application for approval of the date of commercial operation of such transmission system or an element thereof.”

In the present case, the assets are anticipated to be commissioned in 31st January, 2016 and 15th March 2016. The Commission will take a view with regard to the declaration of COD of the instant assets under regulation proviso (ii) of Regulation 4(3) after the lines are certified for regular service by the concern



RLDC. The petitioner is directed to approach the Commission for this purpose with necessary documents as required under 2014 Tariff Regulations.

8. At this stage the Commission is determining the tariff under Regulation 7(7) of the 2014 Tariff Regulations, based on the anticipated COD of the transmission lines as indicated by the petitioner. It is clarified that the transmission charges are determined through this order shall be borne by the UPPTCL/UPPCL till the downstream lines are commissioned by the UPPTCL. After the downstream assets are commissioned by UPPTCL, the same shall be included in the YTC under POC mechanism".

76. Drawing analogy from the above, we are of the view that the assets have been planned to cater drawl requirements of Karnataka Discoms and due to non-availability of downstream, the assets have not been put in regular use, we direct that the transmission charges from the COD of the instant asset shall be borne by the Karnataka Discoms till the commissioning of downstream network. After that the billing, collection and disbursement of the transmission charges approved shall be governed by the provisions of Central Electricity Regulatory Commission (Sharing of Inter-State Transmission Charges and Losses) Regulations, 2010, as amended from time to time, as provided in Regulation 43 of the 2014 Tariff Regulations.

77. This order disposes of Petition No. 403/TT/2014.

sd/-
(M. K. Iyer)
Member

sd/-
(A.S. Bakshi)
Member

sd/-
(A.K. Singhal)
Member



Annexure**CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN**
(in lakh)

	Details of Loan	2015-16	2016-17	2017-18	2018-19
1	IBRD -IV				
	Gross loan opening	18250.92	18250.92	18250.92	18250.92
	Cumulative Repayment upto COD/previous year	2130.79	2130.79	3065.24	4050.49
	Net Loan-Opening	16120.13	16120.13	15185.68	14200.43
	Additions during the year	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	934.45	985.25	1038.78
	Net Loan-Closing	16120.13	15185.68	14200.43	13161.65
	Average Loan	16120.13	15652.90	14693.06	13681.04
	Rate of Interest	1.95%	1.95%	1.95%	1.95%
	Interest	314.34	305.23	286.51	266.78
	Rep Schedule	15 semi- annual installments from 15.11.2013			
2	Bond-XXXIII				
	Gross loan opening	100.00	100.00	100.00	100.00
	Cumulative Repayment upto COD/previous year	16.67	16.67	25.00	33.33
	Net Loan-Opening	83.33	83.33	75.00	66.67
	Additions during the year	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	8.33	8.33	8.33
	Net Loan-Closing	83.33	75.00	66.67	58.33
	Average Loan	83.33	79.17	70.83	62.50
	Rate of Interest	8.64%	8.64%	8.64%	8.64%
	Interest	7.20	6.84	6.12	5.40
	Rep Schedule	12 Annual Installment from 08.07.2014			
3	Bond L				
	Gross loan opening	4118.58	4118.58	4118.58	4118.58
	Cumulative Repayment upto COD/previous year	0.00	0.00	0.00	0.00
	Net Loan-Opening	4118.58	4118.58	4118.58	4118.58
	Additions during the year	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	0.00
	Net Loan-Closing	4118.58	4118.58	4118.58	4118.58
	Average Loan	4118.58	4118.58	4118.58	4118.58
	Rate of Interest	8.40%	8.40%	8.40%	8.40%
	Interest	345.96	345.96	345.96	345.96
	Rep Schedule	12 Annual Installment from 27.05.2019			
4	BOND XLVI				
	Gross loan opening	100.00	100.00	100.00	100.00
	Cumulative Repayment upto COD/previous year	0.00	0.00	0.00	0.00
	Net Loan-Opening	100.00	100.00	100.00	100.00
	Additions during the year	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	0.00
	Net Loan-Closing	100.00	100.00	100.00	100.00
	Average Loan	100.00	100.00	100.00	100.00



	Rate of Interest	9.30%	9.30%	9.30%	9.30%
	Interest	9.30	9.30	9.30	9.30
	Rep Schedule	3 installments on 04.09.2019, 04.09.2024 and 04.09.2029			
5	BOND XLVII				
	Gross loan opening	240.00	240.00	240.00	240.00
	Cumulative Repayment upto COD/previous year	0.00	0.00	0.00	0.00
	Net Loan-Opening	240.00	240.00	240.00	240.00
	Additions during the year	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	20.00
	Net Loan-Closing	240.00	240.00	240.00	220.00
	Average Loan	240.00	240.00	240.00	230.00
	Rate of Interest	8.93%	8.93%	8.93%	8.93%
	Interest	21.43	21.43	21.43	20.54
	Rep Schedule	12 Annual Installment from 20.10.2018			
6	BOND XLVIII				
	Gross loan opening	2495.36	2495.36	2495.36	2495.36
	Cumulative Repayment upto COD/previous year	0.00	0.00	0.00	0.00
	Net Loan-Opening	2495.36	2495.36	2495.36	2495.36
	Additions during the year	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	0.00
	Net Loan-Closing	2495.36	2495.36	2495.36	2495.36
	Average Loan	2495.36	2495.36	2495.36	2495.36
	Rate of Interest	8.20%	8.20%	8.20%	8.20%
	Interest	204.62	204.62	204.62	204.62
	Rep Schedule	4 installments 23.01.2020,23.01.2022,23.01.2025 and 23.01.2030			
	Total Loan				
	Gross loan opening	25304.86	25304.86	25304.86	25304.86
	Cumulative Repayment upto COD/previous year	2147.46	2147.46	3090.24	4083.82
	Net Loan-Opening	23157.40	23157.40	22214.62	21221.04
	Additions during the year	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	942.78	993.58	1067.11
	Net Loan-Closing	23157.40	22214.62	21221.04	20153.92
	Average Loan	23157.40	22686.01	21717.83	20687.48
	Rate of Interest	3.8988%	3.9380%	4.0241%	4.1213%
	Interest	902.85	893.38	873.95	852.60

