

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 105/TT/2012

Coram:

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

**Date of Hearing : 20.10.2014
Date of Order : 29.04.2015**

In the matter of:

Approval of transmission tariff for (a) Kalpakkam PFBR-Sirucheri 230 kV D/C Line (Anticipated DOCO: 1.11.2011) (b) Kalpakkam PFBR-Arani 230 kV D/C Line (Anticipated DOCO: 1.3.2012) (c) Kalpakkam PFBR-Kanchipuram 230 kV D/C Line (Anticipated DOCO: 1.3.2012) under Transmission System associated with Kalpakkam PFBR (500 MW) in Southern Region for tariff block 2009-14, under Regulation-86 of Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999 and Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2009.

And in the matter of:

Power Grid Corporation of India Limited,
"Saudamani", Plot No.2,
Sector-29, Gurgaon -122 001, (Haryana)

.....**Petitioner**

Vs

1. Karnataka Power Transmission Corporation Limited,
(KPTCL), Kaveri Bhavan,
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. Tamil Nadu Generation and Distribution Corporation Limited,
(Formerly Tamil Nadu Electricity Board-TNEB),
NPKRR Maaligai, 800, Anna Salai,
Chennai-600 002
5. Electricity Department,
Govt. of Goa, Vidyuti Bhawan,
Panaji, Goa-403 001
6. Electricity Department,
Govt. of Pondicherry,
Pondicherry-605 001
7. Eastern Power Distribution Company of Andhra Pradesh Limited,
(APEPDCL), 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, Andhra Pradesh
10. Northern Power Distribution Company of Andhra Pradesh Limited,
(APNPDCL), Opposite NIT Petrol Pump,
Chaitanyapuri, Kazipet,
Warangal-506 004, Andhra Pradesh
11. Bangalore Electricity Supply Co. Limited, (BESCOM),
Corporate Office, K.R. circle,
Bangalore-560 001, Karnataka
12. Gulbarga Electricity Supply Co. Limited, (GESCOM),
Station Main Road, Gulbarga,
Karnataka
13. Hubli Electricity Supply Co. Limited, (HESCOM),
Navanagar, PB Road, Hubli,
Karnataka
14. MESCOM Corporate Office,
Paradigm Plaza, AB Shetty Circle,
Mangalore-575 5001, Karnataka

15. Chamundeswari Electricity Supply Corporation Limited,
(CESC), # 927, L J Avenue, Ground Floor,
New Kantharaj Urs Road, Saraswatipuram,
Mysore-570 009, Karnataka

16. Bharatiya Nabhikiya Vidyut Nigam Limited,
(BHAVINI), Kalpakkam-603 102

....Respondents

For petitioner : Ms. Seema Gupta, PGCIL
Shri M. M. Mondal, PGCIL
Shri S.K Venkatesan, PGCIL
Shri S.S Raju, PGCIL
Ms. Sangeeta Edwards, PGCIL

For respondents : Shri V. Viswanathan, BHAVINI
Shri David K.A, BHAVINI

ORDER

The petition has been filed by Power Grid Corporation of India Limited (PGCIL) seeking approval of the transmission tariff for (a) Kalpakkam PFBR-Sirucheru 230 kV D/C Line (b) Kalpakkam PFBR-Arani 230 kV D/C Line (c) Kalpakkam PFBR-Kanchipuram 230 kV D/C Line under Transmission System associated with Kalpakkam PFBR (500 MW) in Southern Region, for tariff block 2009-14 based on the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2009 (hereinafter referred to as "the 2009 Tariff Regulations").

2. The Investment Approval (IA) for the transmission project was accorded by Board of Directors of the petitioner vide letter No. C/CP/KPFBR dated 17.3.2010 at an estimated cost of ₹13858 lakh, including IDC of ₹799 lakh (based on 3rd quarter, 2009 price level). The project was scheduled to be commissioned



within 24 months from the date of investment approval by 16.3.2012 i.e. 1.4.2012. The scope of work covered under "Transmission System associated with Kalpakkam PFBR (500 MW)" in Southern Region is as follows:-

Transmission Lines

- a) Kalpakkam PFBR-Kanchipuram 230 kV D/C Line
- b) Kalpakkam PFBR-Arani 230 kV D/C Line
- c) Kalpakkam PFBR-Sirucheri 230 kV D/C Line

Sub-Stations

- a) Extension of existing 230 kV TNEB Sub-stations at Kanchipuram, Arani and Sirucheri Sub-stations

3. The petitioner claimed transmission tariff for the instant assets from the anticipated date of commercial operation (DOCO) in the petition. The Commission directed the petitioner to confirm the status of commissioning of assets. The petitioner in reply, vide affidavit dated 13.8.2013 has submitted the details of actual DOCO. The details of scheduled and actual DOCO in respect of assets covered under the instant petition are as follows:-

S.No.	Description	Scheduled DOCO	Actual DOCO
1	Kalpakkam PFBR-Sirucheri,* 230 kV D/C Line (hereinafter referred to as "Asset-I")	1.4.2012	1.12.2011
2	Kalpakkam PFBR-Arani 230 kV D/C line (hereinafter referred to as "Asset-II")	1.4.2012	1.4.2012
3	Kalpakkam PFBR-Kanchipuram 230 kV D/C Line (hereinafter referred to as "Asset-III")	1.4.2012	1.9.2012

* Preponement requested by BHAVINI vide their letter dated 22.1.2009

4. The Commission granted provisional tariff vide order dated 29.3.2012 as modified vide order dated 11.7.2012, under Regulation 5(4) of the 2009 Tariff Regulations subject to adjustment as provided under Regulation 5(3) of the 2009 Tariff Regulations.

5. The transmission charges claimed by the petitioner based on the actual DOCO are as under:-

(₹ in lakh)

Particulars	Asset-I		
	2011-12 (Pro-rata)	2012-13	2013-14
Depreciation	38.88	124.88	127.90
Interest on Loan	45.46	139.06	131.27
Return on equity	38.29	123.06	126.06
Interest on Working Capital	3.93	12.44	12.67
O & M Expenses	30.96	98.18	103.80
Total	157.52	497.62	501.70

(₹ in lakh)

Particulars	Asset-II		Asset-III	
	2012-13	2013-14	2012-13 (Pro-rata)	2013-14
Depreciation	281.16	294.51	141.87	253.29
Interest on Loan	332.43	322.30	170.30	285.71
Return on equity	278.23	291.49	140.31	250.54
Interest on Working Capital	29.66	30.56	15.13	26.71
O & M Expenses	165.31	174.73	85.29	154.55
Total	1086.79	1113.59	552.90	970.80

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

(₹ in lakh)

Particulars	Asset-I		
	2011-12 (pro-rata)	2012-13	2013-14
Maintenance Spares	13.93	14.73	15.57
O & M Expenses	7.74	8.18	8.65
Receivables	78.76	82.94	83.62
Total	100.43	105.85	107.84
Rate of Interest	11.75%	11.75%	11.75%
Interest	3.93	12.44	12.67

(₹ in lakh)

Particulars	Asset-II		Asset-III	
	2012-13	2013-14	2012-13 (pro-rata)	2013-14
Maintenance Spares	24.80	26.21	21.93	23.18
O & M Expenses	13.78	14.56	12.18	12.88
Receivables	181.13	185.60	157.97	161.80
Total	219.71	226.37	192.08	197.86
Rate of Interest	13.50%	13.50%	13.50%	13.50%
Interest	29.66	30.56	15.13	26.71

7. 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 (hereinafter referred to as "the Act"). Tamil Nadu Generation and Distribution Corporation Ltd. (TANGEDCO), Respondent No. 4, has filed replies vide affidavit dated 24.11.2011 and 7.12.2012. Bharatiya Nabhikiya Vidyut Nigam Limited (BHAVINI), Respondent No. 16, has filed its submissions on 26.11.2013 and 31.12.2013. The petitioner has filed rejoinders to the reply filed by TANGEDCO, vide affidavit dated 21.8.2012. TANGEDCO has raised the issue of delay in obtaining IA, date of commercial operation, additional return on equity, inflated FR cost and O&M Expenses. BHAVINI has raised the issue of payment of transmission charges of Kalpakkam PFBR-Sirucheri D/C 230 kV line. The objections raised by the respondents and the clarifications given by the petitioner are addressed in the relevant paragraphs of this order.

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

9. TANGEDCO has raised the following issues:-

(a) The petitioner has not fulfilled the conditions for declaration of DOCO including prior approval of the Commission as prescribed in Regulation 3 (12) (c) of the 2009 Tariff Regulations.

(b) The petitioner may be directed to submit the dates of test charging, trial operation and regular use of the subject lines before finalizing the DOCO for the subject lines. The date of commercialization of the subject lines shall be finalized in par with the date of commercialization of the

Kalpakkam PFBR unit so that the beneficiaries are not burdened with transmission tariff for the idly charged lines.

10. BHAVINI filed an application seeking review of the Commission's order dated 11.7.2012 but it was neither accompanied by the requisite fee nor supported by an affidavit. The main contention of BHAVINI in its application dated 26.11.2013, reply dated 31.12.2013 and during the hearing on 26.11.2013 and 20.10.2014 are as follows:-

(a) The Indemnification Agreement dated 9.9.2008 between BHAVINI and the petitioner states that "for the purpose of indemnification, the Zero date would be 1.12.2011" and with a note that, "To advance the commissioning of one of the above line to meet the pre-commissioning evacuation requirement of Kalpakkam Project, the best effort schedule would be May, 2011. The total transmission charges for advancement of one of the above line would be payable by BHAVINI from the date of its commissioning till it become regional scheme". Thus, the Agreement very clearly confirms that BHAVINI agreed to pay the transmission charges if and only if the advancement of commissioning of transmission line between Kalpakkam PFBR-Sirucheri, 230 kV D/C line took place before the zero date, i.e., 1.12.2011.

(b) The petitioner did not advance the commissioning of the Kalpakkam PFBR-Sirucheri, 230 kV D/C transmission line from 1.12.2011 to May, 2011 but declared the commercial operation of Associated Transmission System Kalpakkam PFBR-Sirucheri, D/C 230 kV line w.e.f.

1.12.2011 i.e., on zero date stated in the Indemnification Agreement dated 9.9.2008. This has been confirmed by the petitioner vide their notification dated 30.11.2011.

(c) As per the Indemnification Agreement, BHAVINI had the liability to pay the transmission charges for Asset-I only if it was commissioned before May, 2011. As the said asset was not commissioned before May, 2011, BHAVINI had to make alternate arrangement to source power from Madras Atomic Power Station (MAPS) to meet its urgent need of PFBR commissioning power and did not use Kalpakkam PFBR-Sirucheri, D/C 230 kV line during the period 1.12.2011 to 31.3.2012. The transmission charges for the period starting from 1.12.2011 to 31.3.2012 were paid as per the orders of the Commission under protest. The order allowing provisional transmission tariff may be partially reviewed and the petitioner may be directed to refund the transmission charges paid along with interest.

11. The petitioner was directed vide letter dated 10.7.2014 to furnish the following information:-

“1) How COD of Kalpakkam PFBR-Sirucheri 230 kV D/C line could be declared, when the plant has not been commissioned and the transmission line for evacuation of power from BHAVINI Station is not in regular use?

2) How the assets included in the instant petition are being used?

3) The petitioner has not commissioned the 230 kV Kalpakkam-Sirucheri D/C line as requested by BHAVINI in May, 2011. Why the transmission charges of this line is recovered from BHAVINI from the date of commercial operation (1.12.2011) to the scheduled date of completion (1.4.2012), since Indemnification Agreement provides for payment of IDC only?”

12. The petitioner vide its affidavit dated 26.9.2014 has submitted that as per the Investment Approval the scheduled date of completion of the instant assets is

1.4.2012 and Asset-I was commissioned on 1.12.2011, four months before the scheduled date of commercial operation. As per the Annexure dated 23.1.2009 of the Indemnification Agreement BHAVINI has requested for advancement of the commissioning of one of the three lines on best efforts basis to May, 2011 to meet its pre-commissioning evacuation requirement of Kalpakkam. On the basis of request by BHAVINI, Asset-I was put under commercial operation on 1.12.2011. BHAVANI has agreed to bear the transmission charges in case of advancement of the asset from the date of its commissioning till it becomes part of Regional Scheme. Thereafter, the transmission charges shall be shared by the beneficiaries, as per Central Electricity Regulatory Commission (Sharing of Inter-State Transmission Charges and Losses) Regulations, 2010. The petitioner has further submitted that the instant assets were being used for drawl of power by BHAVINI for commissioning activities.

13. During the hearing on 20.10.2014, the petitioner was directed to submit the usage of the instant lines, whether they have been included in PoC charges and the provisions under which DOCO for the transmission line has been declared. BHAVINI was directed to submit the status of generating project and its expected unit wise date of commercial operation.

14. The petitioner vide its affidavit dated 13.11.2014 has submitted that Asset-I and Asset-II have been included in PoC charges since 1.4.2012 and Asset-III has been included in POC charges since 1.9.2012. The lines were commissioned to meet the requirement of start-up power and subsequently, for evacuation of power from their plant as per the matching commissioning generation schedule

indicated by BHAVINI. The petitioner has submitted that the date of commercial operation of these assets was discussed and agreed by all the constituents of SR during 19th meeting of TCC and 20th meeting of SRPC held at Hyderabad on 27/28th September, 2012. The 230 kV BHAVINI-Sirucheri D/C line and 230 kV BHAVINI-Arani D/C line are being utilized for drawing commissioning power for BHAVINI PFBR apart from transmission of power from Sirucheri to Arani and vice versa. As regards the commissioning of 230 kV BHAVINI-Kanchipuram D/C line, the same was discussed and agreed by all the constituents of SR during 19th meeting of TCC and 20th meeting of SRPC held at Hyderabad on 27.9.2012 and 28.9.2012.

15. No further response has been received from BHAVINI. BHAVINI should have filed the status of generating units and their anticipated date of commissioning within the time stipulated by the Commission. Non-filing of this information by BHAVINI is not appreciated by us.

16. As regards the date of commercial operation, Regulation 3(12)(c) of the 2009 Tariff Regulations provides as follows:-

“Date of commercial operation’ or ‘CoD’ means;

(c) in relation to the transmission system, the date declared by the transmission licensee from 0000 hour of which an element of the transmission system is in regular service after successful charging and trial operation:

Provided that the date shall be the first day of a calendar month and transmission charge for the element shall be payable and its availability shall be accounted for, from that date:

Provided further that in case an element of the transmission system is ready for regular service but is prevented from providing such service for reasons not attributable to the transmission licensee, its suppliers or contractors, the Commission may approve the date of commercial operation prior to the element coming into regular service.”

17. We have considered the submissions made by TANGEDCO, BHAVINI and the petitioner. As regards Asset-I, BHAVINI requested for early commissioning of the asset to meet its start-up power requirements and has agreed to bear the transmission charges till it becomes part of the regional asset. The asset was not commissioned in May, 2011 as required by BHAVINI. The petitioner has claimed the Assets-I and II were commissioned on 1.12.2011 and 1.4.2012 respectively. The date of commercial operation certificate of Assets-I and II, submitted by the petitioner indicate that the lines have been declared commercial after successful commissioning. As per Regulation 3(12)(c) of the 2009 Tariff Regulations, the petitioner should have approached the Commission for approval of the date of commercial operation in case it is prevented from providing such service for reasons not attributable to it. In this case, the petitioner has declared the commercial operation without the prior approval of the Commission. It is observed that BHAVINI switchyard is connected to Arani and Sirucheri and it will cause power to flow from Sirucheri to Arani and vice-versa in view of the nature of electrical system. Energisation certificates dated 30.11.2011 and 20.3.2012 were issued by CEA. It is however observed that CEA gave permission to energise since the lines were connected at both ends i.e. Kalpakkam end and Sirucheri/Arani end. Hence, the date of commercial operation of Assets-I and II have been approved as 1.12.2011 and 1.4.2012 respectively. As per the submissions of the petitioner, Assets-I and II are being utilized for drawing start up power for BHAVINI PFBR. These assets were planned for evacuation of power from BHAVINI. In the absence of commissioning of BHAVINI, these assets could not be put to regular use for supply of power to

the constituents of the Southern Region. Therefore, till the unit of BHAVINI is commissioned, the transmission charges of Assets-I and II shall be borne by BHAVINI in accordance with Regulation 8(6) of the Central Electricity Regulatory Commission (Sharing of Transmission Charges) Regulations, 2010.

18. As regards Asset-III, i.e. Kalpakkam-Kanchipuram line, the Kanchipuram Sub-station of TANGEDCO has not yet been commissioned. The petitioner has submitted that the line was declared commercial in consultation with the beneficiaries in 20th SRPC meeting. However, as per Regulation 3(12)(c) of the 2009 Tariff Regulations, as above, in case an element of the transmission system is ready for regular service but is prevented from providing such service for reasons not attributable to the transmission licensee, the Commission may approve the date of commercial operation prior to the element coming into regular service. Even though the petitioner has not approached the Commission for approval of date of commercial operation as provided under Regulation 3(12)(c) of the 2009 Tariff Regulations prior to putting Asset-III into regular service, the Commission has to consider whether the requirements of the regulations have been complied with for declaration of commercial operation of the transmission line. Hon'ble Appellate Tribunal for Electricity in its judgement dated 2.7.2012 in Appeal No. 123 of 2011 has observed as follows:-

“..... merely charging of the line from one end without the switchgear, protection and metering arrangement being ready at the other end, even if not in the scope of work of the transmission licensee, would not entitle the line for declaration of commercial operation”

In the light of the above observation of Appellate Tribunal, it needs to be considered whether the line is capable of regular use. It is seen that the charging

certificate dated 31.8.2012 issued by CEA is for the purpose of only testing Asset-III. Further, it is an admitted fact that the sub-station to which the line is to be connected at the other end is yet to be developed by TANGEDCO. Therefore, Asset-III cannot be put to any regular service even if declared under commercial operation. Considering all these factors we are not inclined to approve declaration of the commercial operation of Asset-III with effect from 1.9.2012 as claimed by the petitioner.

19. It has been observed that Asset-I and Asset-II have been included in PoC charges since 1.4.2012 and Asset-III has been included in PoC charges since 1.9.2012 on the basis of the provisional tariff allowed vide order dated 29.3.2012. As stated in para 17, the transmission charges in case of Assets-I and II shall be borne by BHAVINI and accordingly, NLDC is directed to exclude the tariff for Assets-I and II from the PoC charges. Further, as the date of commercial operation of Asset-III has not been approved, NLDC is also directed to exclude Asset-III from the PoC charges and the transmission charges already collected from the beneficiaries shall be adjusted as provided under Regulation 5 of the 2009 Tariff Regulations.

Capital cost

20. Regulation 7 of the 2009 Tariff Regulations provides as follows:-

“(1) Capital cost for a project shall include:-

- (a) The expenditure incurred or projected to be incurred, including interest during construction and financing charges, any gain or loss on account of foreign exchange risk variation during construction on the loan – (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 fund deployed, - up to the date of

commercial operation of the project, as admitted by the Commission, after prudence check.

(b) capitalised initial spares subject to the ceiling rates specified in regulation 8; and

(c) additional capital expenditure determined under regulation 9:

Provided that the assets forming part of the project, but not in use shall be taken out of the capital cost.

(2) The capital cost admitted by the Commission after prudence check shall form the basis for determination of tariff;

Provided that in case of the thermal generating station and the transmission system, prudence check of capital cost may be carried out based on the benchmark norms to be specified by the Commission from time to time:

Provided further that in cases where benchmark norms have not been specified, prudence check may include scrutiny of the reasonableness of the capital expenditure, financing plan, interest during construction, use of efficient technology, cost over-run and time over-run, and such other matters as may be considered appropriate by the Commission for determination of tariff.”

21. The details of apportioned approved cost, capital cost as on actual the date of commercial operation and estimated additional capital expenditure projected to be incurred for the assets covered in this petition are as follows:-

(₹ in lakh)						
Name of asset	Apportioned approved cost	Expenditure incurred up to DOCO	Expenditure incurred (DOCO to 31.3.2013)	Estimated additional capital expenditure 2013-14	Estimated additional capital expenditure 2014-15	Total estimated completion cost
Asset-I	2605.00	2055.21	312.16	72.88	0.00	2440.25
Asset-II	6747.00	5124.28	362.34	143.19	0.00	5629.81

Cost over-run

22. It is noted that the total estimated completion cost is within the apportioned approved cost as per FR in the case of Asset-I and Asset-II. Hence, there is no cost over-run in the case of Asset-I and Asset-II.

23. TANGEDCO has submitted that the actual length of lines under the project has increased from 206.24 km as per FR to 222.871 km during actual

construction, whereas the actual completed cost is ₹12343 lakh (later revised to ₹12984.05 lakh by the petitioner) compared to FR cost of ₹13859 lakh which is a clear indication of highly inflated FR costs. The petitioner has submitted that the actual line length has increased marginally as the original award was based on the walkover survey and the quantity considered for feasibility report/award was tentative. The transmission line route alignment of the three lines was envisaged within the vicinity of the Chennai city. During route alignment/detailed survey carried out for the three lines during 2009, routes of all the three lines had to be reviewed considering the rapid urbanization and industrialization across the city. Further, the route alignment had to be adjusted to optimize the routes with minimum ROW constraints and avoiding forest stretches for faster implementation of the projects, leading to marginal increase in line length. The petitioner further submitted that the cost estimate is broad indicative cost worked out generally on the basis of average unit rates of recently awarded contracts. For procurements, open competitive bidding route is followed and by providing equal opportunity to all eligible firms, lowest possible market price for required product/services is obtained and contracts are awarded on the basis of lowest evaluated eligible bidder. The best competitive bid prices against tenders may happen to be lower or higher than the cost estimates depending upon prevailing market condition.

24. The Commission vide letter dated 30.11.2014 directed the petitioner to give reasons for the increase in cost of tower steel, increase in number of towers and length of the conductors, the reasons for disproportionate increase in cost of the towers steel, details of cost of tower foundation on plain vis-a-vis that of the

pile foundation. Number of river crossings actually found while constructing the lines and the reason for encountering river crossing when the same was not anticipated in FR. Detailed break-up of 'Balance & Retention' payments as per Regulation 9 (1) of the 2009 Tariff Regulations.

25. The petitioner in response has submitted as under:-

(i) The construction of the instant assets has been executed through a single contract with the scope covering the supply & erection of tower material, conductor and insulators for construction of the lines. The award of the contract was finalized through competitive bidding and the unit prices for various items of the contract are uniform for all the lines. The original award was based on the walkover survey conducted in 2005 and the quantities considered for feasibility report/award were tentative; and

(ii) The transmission line route alignment of the lines was envisaged within the vicinity of the Chennai city. Further, the route alignment was adjusted to optimize the route with minimum ROW constraints and avoiding forest stretches for faster implementation of the projects, leading to marginal increase in lengths and decrease/increase in suspension towers (DA towers) and increase in the number of the angle towers (DB, DC & DD type). Approximately 4MT, 6.6MT, 7MT & 9MT and tower extensions are considered as per the requirement, which would explain the reason for increase in the tower material.

26. The petitioner has submitted the following details of finalized route length and change in tower quantities:-

(a) Kalpakkam-Sirucheri transmission line

S. No.	Description	As per LOA	Final Qty.
A	Line Length	35.00 km	36.176 km
B	Tower Quantity		
1	DA Type	93 Nos.	67 Nos.
2	DB Type	07 Nos.	28 Nos.
3	DC Type	12 Nos.	13 Nos.
4	DD Type	18 Nos.	32 Nos.
	Total	130 Nos.	140 Nos.
C	Weight of Tower Material	834 MT	1065 MT

(b) Kalpakkam-Arani transmission line

S. No.	Description	As per LOA	Final Qty.
A	Line Length	103.50 km	106.345 km
B	Tower Quantity		
1	DA Type	293 Nos.	294 Nos.
2	DB Type	21 Nos.	53 Nos.
3	DC Type	24 Nos.	26 Nos.
4	DD Type	27 Nos.	39 Nos.
5	400 kV DD Type	Nil	2 Nos.
	Total	365 Nos.	414 Nos.
C	Weight of Tower Material	2217 MT	2577 MT

27. Due to increase in length of the lines, the requirement of conductor, which is directly proportionate to the length of the line (6.06 km of conductor including wastage per km of transmission line), has increased. The weight of tower material in each line is dependent on the combination of suspension & angle towers used in the line. Accordingly the average cost per km of each line shall be varying based on the developments encountered. As per the FR, Asset-II was envisaged to have 2 nos. of river crossing/pile locations.

28. The petitioner, as regards to the break-up of "Balance & Retention" payments, has submitted that the projected balance expenditure after the date of commercial operation of the instant assets includes the following:-

“- The progressive payments under the contracts to be released for the just concluding works/Supplies before commissioning & other balance minor works to be completed.

- Final retention payments under the contracts which can be released after commissioning, completion of minor pending works & compliance of various contractual conditions by the contractor.

- Compensation payments to be settled for construction of the transmission lines procurement which is under progress.”

29. It is observed that there is over estimation of cost in case of Asset-I and Asset-II. The cost estimates of the petitioner are not realistic not only in this petition but also in certain other petitions. We are of the view that the petitioner should analyze the reasons for such huge variation and come out with the methodologies or procedures for preparation of cost estimates which are realistic and do not vary widely from the actual expenditure.

Time over-run

30. The project was scheduled to be commissioned within 24 months from the date of Investment Approval, i.e. 17.3.2010. Hence, the commissioning schedule comes to 16.3.2012 i.e. 1.4.2012, against which the subject assets are actually commissioned and put under commercial operation as per details given below:-

S. No.	Asset	Scheduled Commissioning as per IA	Actual DOCO
1	Asset-I	1.4.2012	1.12.2011
2	Asset-II	1.4.2012	1.4.2012

31. Thus, there is no delay in commissioning of Asset-I and Asset-II.

Initial Spares

32. The Initial Spares to be allowed as per clause 8 (iv)(a) of the 2009 Tariff Regulations for sub-station is 2.5% of total sub-station cost and 0.75% of the

total transmission line cost respectively. The petitioner has not claimed initial spares for the assets in the revised management certificate dated 19.10.2013. Hence, no initial spares are allowed for the assets in the instant petition.

33. Accordingly, the capital cost up to the date of commercial operation of the instant assets considered for the purpose of tariff purposes are as under:-

(₹ in lakh)		
Assets	Actual DOCO	Capital Cost considered for the purpose of tariff as on DOCO
Asset-I	1.12.2011	2055.21
Asset-II	1.4.2012	5124.28

Projected additional capital expenditure

34. Clause (1) of Regulation 9 of the 2009 Tariff Regulations provides as follows:-

“Additional Capitalisation: (1) The capital expenditure 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;
- (ii) Works deferred for execution;
- (iii) Procurement of initial capital Spares within the original scope of work, subject to the provisions of Regulation 8;
- (iv) Liabilities to meet award of arbitration or for compliance of the order or decree of a court; and
- (v) Change in Law.”

35. Clause (11) of Regulation 3 of the 2009 Tariff Regulations defines “cut-off” date as under:-

“cut-off date” means 31st March of the year closing after 2 years of the year of commercial operation of the project, and incase 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 3 years of the year of commercial operation”.

Therefore, cut-off date is 31.3.2014 for Asset-I and 31.3.2015 for Asset-II.

36. Details of the additional capital expenditure claimed and considered for tariff determination is as under:-

Particulars	DOCO to 31.3.2013	2013-14*	(₹ in lakh)	
			2012-13	2013-14*
	Asset-I		Asset-II	
Transmission Line	312.16	55.97	346.84	141.78
Sub-Station Equipments	-	16.91	15.50	1.41
Total	312.16	72.88	362.34	143.19

* Projected additional capital expenditure

37. The additional capital expenditure incurred/projected to be incurred in the instant assets is mainly on account of Balance/Retention Payments and it is within cut-off date as per the 2009 Tariff Regulations. However, the claim of the petitioner is admissible up to 31.3.2014 as per the 2009 Tariff Regulations.

Debt-Equity Ratio

38. Regulation 12 of the 2009 Tariff Regulations provides as under:-

“12. Debt-Equity Ratio (1) For a project declared under commercial operation on or after 1.4.2009, 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 where equity actually deployed is less than 30% of the capital cost, the actual equity shall be considered for determination of tariff:

Provided further that the equity invested in foreign currency shall be designated in Indian rupees on the date of each investment.

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, provided such premium amount and internal resources are actually utilised for meeting the capital expenditure of the generating station or the transmission system.

(2) In case of the generating station and the transmission system declared under commercial operation prior to 1.4.2009, debt-equity ratio allowed by the Commission for determination of tariff for the period ending 31.3.2009 shall be considered.

(3) Any expenditure incurred or projected to be incurred on or after 1.4.2009 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.”

39. 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. Details of debt-equity as on dates of commercial operation and 31.3.2014 considered on normative basis are as follows:-

(₹ in lakh)

Particulars	Capital cost on date of commercial operation		Capital cost on 31.3.2014	
	Asset-I	Asset-II	Asset-I	Asset-II
Debt	1438.65	3586.99	1708.18	3940.86
Equity	616.56	1537.28	732.08	1688.94
Total	2055.21	5124.27	2440.25	5629.80

Return on equity

40. Regulation 15 of the 2009 Tariff Regulations provides as under:-

“15. (1) Return on equity shall be computed in rupee terms, on the equity base determined in accordance with regulation 12.

(2) Return on equity shall be computed on pre-tax basis at the base rate of 15.5% for thermal generating stations, transmission system and run of the river generating station, and 16.5% for the storage type generating stations including pumped storage hydro generating stations and run of river generating station with pondage and shall be grossed up as per clause (3) of this regulation:

Provided that in case of projects commissioned on or after 1st April, 2009, an additional return of 0.5% shall be allowed if such projects are completed within the timeline specified in **Appendix-II**:

Provided further that the additional return of 0.5% shall not be admissible if the project is not completed within the timeline specified above for reasons whatsoever.

(3) The rate of return on equity shall be computed by grossing up the base rate with the Minimum Alternate/Corporate Income Tax Rate for the year 2008-09, as per the Income Tax Act, 1961, as applicable to the concerned generating company or the transmission licensee, as the case may be:

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

Rate of pre-tax return on equity = Base rate / (1-t)

Where t is the applicable tax rate in accordance with clause (3) of this regulation.

(5) The generating company or the transmission licensee as the case may be, shall recover the shortfall or refund the excess Annual Fixed charge on account of Return on Equity due to change in applicable Minimum Alternate/ Corporate Income Tax Rate as per the Income Tax Act, 1961 (as amended from time to time) of the respective financial year directly without making any application before the Commission;

Provided further that Annual Fixed charge with respect to the tax rate applicable to the generating company or the transmission licensee, as the case may be, in line with the provisions of the relevant Finance Acts of the respective financial year during the tariff period shall be trued up in accordance with Regulation 6 of these regulations".

41. The petitioner has claimed additional return of equity of 0.5% as the instant assets have been commissioned within the timeline of 24 months specified in the Appendix-II of the 2009 Tariff Regulations. TANGEDCO has submitted that the petitioner's prayer for additional return of equity should not be allowed as the assets have not been commissioned within the timeline specified in the 2009 Tariff Regulations. We have considered the submissions of petitioner and the respondent. All the assets covered in the instant petition have not been commissioned within the timeline of 24 months specified in the Appendix-II of 2009 Tariff Regulations. Accordingly, the petitioner's request for additional return on equity is not allowed.

42. Based on the above, the following return on equity has been considered:-

Particular	(₹ in lakh)				
	2011-12 (Pro-rata)	2012-13	2013-14	2012-13	2013-14
	Asset-I			Asset-II	
Opening Equity	616.56	697.77	710.21	1537.28	1645.98
Addition due to Additional Capitalisation	81.20	12.44	21.86	108.70	42.96
Closing Equity	697.77	710.21	732.08	1645.98	1688.94
Average Equity	657.17	703.99	721.14	1591.63	1667.46
Return on Equity (Base Rate)	15.50%	15.50%	15.50%	15.50%	15.50%
Tax rate for the year 2008-09 (MAT)	11.33%	11.33%	11.33%	11.33%	11.33%
Rate of Return on Equity (Pre Tax)	17.481%	17.481%	17.481%	17.481%	17.481%
Return on Equity (Pre Tax)	38.29	123.06	126.06	278.23	291.49

43. The petitioner's prayer to recover the shortfall or refund the excess Annual Fixed Charges, on account on return on equity due to change in applicable Minimum Alternate Tax/Corporate Income Tax rate as per the Income Tax Act, 1961 of the respective financial year directly without making any application before the Commission shall be dealt with Regulation 15 (3) of the 2009 Tariff Regulations. Return on Equity has been computed @ 17.481% p.a on average equity as per Regulation 15 of the 2009 Tariff Regulations.

Interest on loan

44. Regulation 16 of the 2009 Tariff Regulations provides as under:-

“16. **Interest on loan capital** (1) The loans arrived at in the manner indicated in regulation 12 shall be considered as gross normative loan for calculation of interest on loan.

(2) The normative loan outstanding as on 1.4.2009 shall be worked out by deducting the cumulative repayment as admitted by the Commission up to 31.3.2009 from the gross normative loan.

(3) The repayment for the year of the tariff period 2009-14 shall be deemed to be equal to the depreciation allowed for that year:

(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 annual depreciation allowed.

(5) The rate of interest shall be the weighted average rate of interest calculated on the basis of the actual loan portfolio at the beginning of each year applicable to the project:

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.

(7) The generating company or the transmission licensee, as the case may be, shall make every effort to re-finance the loan as long as it results in net savings on interest and in that event the costs associated with such re-financing shall be

borne by the beneficiaries and the net savings shall be shared between the beneficiaries and the generating company or the transmission licensee, as the case may be, in the ratio of 2:1.

(8) The changes to the terms and conditions of the loans shall be reflected from the date of such re-financing.

(9) In case of dispute, any of the parties may make an application in accordance with the Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999, as amended from time to time, including statutory re-enactment thereof for settlement of the dispute:

Provided that the beneficiary or the transmission customers shall not withhold any payment on account of the interest claimed by the generating company or the transmission licensee during the pendency of any dispute arising out of re-financing of loan.”

45. The petitioner’s entitlement to interest on loan has been calculated as specified in the provisions of Regulation 16 of the 2009 Tariff Regulations, on the following basis:-

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

(b) The repayment for the tariff period 2009-14 shall be deemed to be equal to the depreciation allowed for that period.

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

(d) Notwithstanding moratorium period availed by the transmission licensee, the repayment of the loan shall be considered from the first year of commercial operation of the project and shall be equal to the annual depreciation allowed.

46. Accordingly, the interest on loan has been calculated on the basis of



prevailing rate as on the date of commercial operation. Any change in rate of interest subsequent to date of commercial operation will be considered at the time of truing up.

47. Detailed calculations in support of the weighted average rates of interest have been given at Annexure-1 and 2 to this order.

48. Based on the above, interest on loan has been calculated as under:-

(₹ in lakh)

Particulars	Asset-I			Asset-II	
	2011-12 (Pro-rata)	2012-13	2013-14	2012-13	2013-14
Gross Normative Loan	1438.65	1628.12	1657.16	3586.99	3840.63
Cumulative Repayment upto previous year	-	38.88	163.77	-	281.16
Net Loan-Opening	1438.65	1589.24	1493.39	3586.99	3559.46
Addition due to additional capital expenditure	189.48	29.04	51.02	253.64	100.23
Repayment during the year	38.88	124.88	127.90	281.16	294.51
Net Loan-Closing	1589.24	1493.39	1416.50	3559.46	3365.19
Average Loan	1513.94	1541.32	1454.95	3573.23	3462.33
Weighted Average Rate of Interest on Loan	9.0079%	9.0219%	9.0221%	9.3035%	9.3089%
Interest	45.46	139.06	131.27	332.43	322.30

Depreciation

49. Regulation 17 of the 2009 Tariff Regulations provides as follows:-

“17. **Depreciation** (1) The value base for the purpose of depreciation shall be the capital cost of the asset admitted by the Commission.

(2) 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 stations, the salvage value shall be as provided in the agreement signed by the developers with the State Government for creation of the site;

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

(3) 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.

(4) Depreciation shall be calculated annually based on Straight Line Method and at rates specified in Appendix-III 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 date of commercial operation shall be spread over the balance useful life of the assets.

(5) In case of the existing projects, the balance depreciable value as on 1.4.2009 shall be worked out by deducting the cumulative depreciation as admitted by the Commission up to 31.3.2009 from the gross depreciable value of the assets.

(6) 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.”

50. Asset-I and II were put under commercial operation as on 1.12.2011 and 1.4.2012 respectively. Therefore, the assets will complete 12 years beyond 2013-14. Accordingly, depreciation has been calculated annually based on Straight Line Method and at rates specified in Appendix-III of 2009 Tariff Regulation, as per details as follows:-

Particulars	Asset-I			Asset-II	
	2011-12 (Pro-rata)	2012-13	2013-14	2012-13	2013-14
Opening Gross Block	2055.21	2325.89	2367.37	5124.27	5486.61
Addition due to Projected Additional Capitalisation	270.68	41.48	72.88	362.34	143.19
Closing Gross Block	2325.89	2367.37	2440.25	5486.61	5629.80
Average Gross Block	2190.55	2346.63	2403.81	5305.44	5558.21
Rate of Depreciation	5.3249%	5.3219%	5.3209%	5.2995%	5.2986%
Depreciable Value	1971.50	2111.97	2163.43	4774.90	5002.38
Remaining Depreciable Value	1971.50	2073.09	1999.66	4774.90	4721.22
Depreciation	38.88	124.88	127.90	281.16	294.51
Cumulative Depreciation	38.88	163.77	291.67	281.16	575.67

Operation & Maintenance Expenses (O&M Expenses)

51. Clause (g) of Regulation 19 of the 2009 Tariff Regulations specifies the norms for operation and maintenance expenses for the transmission system based on the type of sub-station and the transmission line. The O&M Expenses shall be admissible as under:-

(₹ in lakh)			
Element	2011-12	2012-13	2013-14
Asset-I			
36.176 km D/C Kalpakkam-Sirucheri Transmission Line	3.63	11.50	12.16
2 Nos. 220 kV bays at Sirucheri	27.33	86.68	91.64
Total	30.96	98.18	103.80
Asset-II			
106.12 km D/C Kalpakkam-Arani Transmission Line	-	78.63	83.09
2 Nos. 220 kV bays at Arani	-	86.68	91.64
Total	-	165.31	174.73

52. TANGEDCO has submitted that the 230 kV bays at Sirucheri and Arani will be maintained by TANGEDCO after commissioning of transmission lines. Under the circumstances, the petitioner's claim for O&M Expenses for these bays may not be allowed. The petitioner has clarified that O&M Expenses have been claimed as per the 2009 Tariff Regulations. We have considered the submissions of the petitioner and TANGEDCO. We are of the view that the issue of maintenance expense of the sub-stations should be settled as per the mutual agreement between the petitioner and TANGEDCO.

53. The petitioner has submitted that O&M Expenses for the year 2009-14 had been arrived at on the basis of normalized actual O & M Expenses during the period 2003-04 to 2007-08 and by escalating it by 5.72% per annum for arriving at the norms for the years of tariff period. The wage hike of 50% on

account of pay revision of the employees of public sector undertaking has also been considered while calculating the O&M Expenses for the tariff period 2009-14. The petitioner has further submitted that it may approach the Commission for suitable revision in the norms for O&M Expenses in case the impact of wage hike with effect from 1.1.2007 is more than 50%.

54. The Commission has given effect to impact of pay revision in the 2009 Tariff Regulations by factoring 50% on account of pay revision of the employees of PSUs after extensive consultations with stakeholders as one time compensation of employee cost. We do not see any reason why the admissible amount is inadequate to meet the requirement of the employee cost. In this order, we have allowed O&M Expenses as per the existing norms.

Interest on Working Capital

55. The petitioner is entitled to claim interest on working capital as per the 2009 Tariff Regulations. The components of the working capital and the petitioner's entitlement to interest thereon are discussed overleaf:-

(i) Receivables

As per Regulation 18(1) (c) (i) of the 2009 Tariff Regulations, receivables as a component of working capital will be equivalent to two months of fixed cost. The petitioner has claimed the receivables on the basis of 2 months' of annual transmission charges claimed in the petition. In the tariff being allowed, receivables have been worked out on the basis of 2 months' transmission charges.

(ii) Maintenance spares

Regulation 18 (1) (c) (ii) of the 2009 Tariff Regulations provides for maintenance spares @ 15% per annum of the O& M Expenses as part of the working capital from 1.4.2009. The value of maintenance spares has accordingly been worked out.

(iii) O & M Expenses

Regulation 18(1) (c) (iii) of the 2009 Tariff Regulations provides for O&M Expenses for one month to be included in the working capital. The petitioner has claimed O&M Expenses for 1 month of the respective year. This has been considered in the working capital.

(iv) Rate of Interest on Working Capital

In accordance with clause (3) of Regulation 18 of the 2009 Tariff Regulations, rate of interest on working capital shall be on normative basis and shall be equal to State Bank of India Base Rate plus 350 bps. The interest on working capital for both the assets covered in the petition i.e. rate of interest of 8.25% plus 350 bps as on 1.4.2011 (11.75%) and 10.00% plus 350 bps as on 1.4.2012 (13.50%) has been worked out accordingly.

56. Necessary computations in support of interest on working capital are given hereunder:-

Particulars	(₹ in lakh)				
	Asset-I			Asset-II	
	2011-12 (Pro-rata)	2012-13	2013-14	2012-13	2013-14
Maintenance Spares	13.93	14.73	15.57	24.80	26.21
O & M Expenses	7.74	8.18	8.65	13.78	14.56
Receivables	78.76	82.94	83.62	181.13	185.60
Total	100.44	105.85	107.84	219.71	226.37
Rate of Interest	11.75%	11.75%	11.75%	13.50%	13.50%
Interest	3.93	12.44	12.67	29.66	30.56

Transmission charges

57. The transmission charges being allowed for the assets are as follows:-

Particulars	Asset-I			Asset-II	
	2011-12 (Pro-rata)	2012-13	2013-14	2012-13	2013-14
Depreciation	38.88	124.88	127.90	281.16	294.51
Interest on Loan	45.46	139.06	131.27	332.43	322.30
Return on Equity	38.29	123.06	126.06	278.23	291.49
Interest on Working Capital	3.93	12.44	12.67	29.66	30.56
O & M Expenses	30.96	98.18	103.80	165.31	174.73
Total	157.53	497.62	501.70	1086.80	1113.59

Filing fee and the publication expenses

58. The petitioner has sought reimbursement of fee paid by it for filing the petition and publication expenses. The petitioner shall be entitled for reimbursement of the filing fees and publication expenses in connection with the present petition, directly from the beneficiaries on *pro-rata* basis in accordance with Regulation 42A (1) (a) of the 2009 Tariff Regulations.

Licence fee

59. The petitioner has submitted that in O&M norms for tariff block 2009-14 the cost associated with license fees had not been captured and the license fee may be allowed to be recovered separately from the respondents. The petitioner shall be entitled for reimbursement of licence fee in accordance with Regulation 42 A (1) (b) of the 2009 Tariff Regulations.

Service tax

60. The petitioner has made a prayer to be allowed to bill and recover the service tax on transmission charges separately from the respondents, if it is

subjected to such service tax in future. The petitioner submitted that service tax on transmission has been put on negative list w.e.f. 1.4.2012 and therefore the transmission charges, is exclusive of service tax and shall be born and additionally paid by the respondents. We consider petitioner's prayer pre-mature and accordingly this prayer is rejected.

Sharing of transmission charges

61. The provisional tariff for the instant assets was allowed vide order dated 29.3.2012 and corrigendum order dated 11.7.2012, wherein it was directed that BHAVINI would bear the transmission charges from the date of commercial operation till the scheduled date of completion. The extract of the corrigendum order is as follows:-

"The transmission charges of Kalpakkam PFBR–Sirucheri, D/C 230 kV Line from the date of commercial operation till the scheduled date of completion shall be borne by Bharatiya Nabhikiya Vidyut Nigam Limited (BHAVINI) in accordance with the Annexure-I to the Indemnification Agreement, dated 9.9.2008 between BHAVINI and Power Grid Corporation India Limited."

62. Regulation 8 (6) of the Central Electricity Regulatory Commission (Sharing of Inter-State Transmission Charges and Losses) Regulations, 2010 (hereinafter "Sharing Regulations") provides as under:-

"For long Term Customers availing supplies from inter-state generating stations, the charges payable by such generators for such Long Term supply shall be billed directly to the respective Long Term customers based on their share of capacity in such generating stations. Such mechanism shall be effective only after "commercial operation" of the generator. Till then, it shall be the responsibility of generator to pay these charges."

63. We would like to review our directions in order dated 11.7.2012 in the light of Regulation 8(6) of the Sharing Regulations. Accordingly, as stated in para 17, BHAVINI shall bear the transmission charges of Assets-I and II from the date of



commercial operation to the commercial operation of its first unit of generating station in line with Regulation 8(6) of Sharing Regulations. Thereafter, the assets shall be pooled in PoC as regional scheme. Our order dated 11.7.2012 stands revised accordingly.

64. This order disposes of Petition No. 105/TT/2012.

sd/-
(A.S. Bakshi)
Member

sd/-
(A.K. Singhal)
Member

sd/-
(Gireesh B. Pradhan)
Chairperson

Annexure-1**Asset-I**

(₹ in lakh)

CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN				
	Details of Loan	2011-12	2012-13	2013-14
1	Bond XXXI			
	Gross loan opening	50.00	50.00	50.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00
	Net Loan-Opening	50.00	50.00	50.00
	Additions during the year	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	4.17
	Net Loan-Closing	50.00	50.00	45.83
	Average Loan	50.00	50.00	47.92
	Rate of Interest	8.90%	8.90%	8.90%
	Interest	4.45	4.45	4.26
	Rep Schedule	12 annual instalments from 25.2.2014		
2	Bond XXXIV			
	Gross loan opening	1119.00	1119.00	1119.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00
	Net Loan-Opening	1119.00	1119.00	1119.00
	Additions during the year	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00
	Net Loan-Closing	1119.00	1119.00	1119.00
	Average Loan	1119.00	1119.00	1119.00
	Rate of Interest	8.84%	8.84%	8.84%
	Interest	98.92	98.92	98.92
	Rep Schedule	12 annual instalments from 21.10.2014		
3	Bond XXXV			
	Gross loan opening	269.65	269.65	269.65
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00
	Net Loan-Opening	269.65	269.65	269.65
	Additions during the year	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00
	Net Loan-Closing	269.65	269.65	269.65
	Average Loan	269.65	269.65	269.65
	Rate of Interest	9.64%	9.64%	9.64%
	Interest	25.99	25.99	25.99
	Rep Schedule	12 annual instalments from 31.5.2015.		
4	Bond XXXVIII			
	Gross loan opening	0.00	188.36	188.36
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00
	Net Loan-Opening	0.00	188.36	188.36
	Additions during the year	188.36	0.00	0.00
	Repayment during the year	0.00	0.00	0.00
	Net Loan-Closing	188.36	188.36	188.36
	Average Loan	94.18	188.36	188.36



	Rate of Interest	9.25%	9.25%	9.25%
	Interest	8.71	17.42	17.42
	Rep Schedule	Bullet Payment as on 9.3.2027		
	Total Loan			
	Gross loan opening	1438.65	1627.01	1627.01
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00
	Net Loan-Opening	1438.65	1627.01	1627.01
	Additions during the year	188.36	0.00	0.00
	Repayment during the year	0.00	0.00	4.17
	Net Loan-Closing	1627.01	1627.01	1622.84
	Average Loan	1532.83	1627.01	1624.93
	Rate of Interest	9.0079%	9.0219%	9.0221%
	Interest	138.08	146.79	146.60

Annexure-2**Asset-II**

(₹ in lakh)

CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN			
	Details of Loan	2012-13	2013-14
1	Bond XXXI		
	Gross loan opening	1141.00	1141.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	1141.00	1141.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	95.08
	Net Loan-Closing	1141.00	1045.92
	Average Loan	1141.00	1093.46
	Rate of Interest	8.90%	8.90%
	Interest	101.55	97.32
	Rep Schedule	12 annual instalments from 25.2.2014	
2	Bond XXXIV		
	Gross loan opening	324.00	324.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	324.00	324.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	324.00	324.00
	Average Loan	324.00	324.00
	Rate of Interest	8.84%	8.84%
	Interest	28.64	28.64
	Rep Schedule	12 annual instalments from 21.10.2014	
3	Bond XXXVIII		
	Gross loan opening	265.64	265.64
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	265.64	265.64
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	265.64	265.64
	Average Loan	265.64	265.64
	Rate of Interest	9.25%	9.25%
	Interest	24.57	24.57
	Rep Schedule	Bullet Payment as on 9.3.2027	
4	Bond XXXV		
	Gross loan opening	1856.35	1856.35
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	1856.35	1856.35
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	1856.35	1856.35
	Average Loan	1856.35	1856.35



	Rate of Interest	9.64%	9.64%
	Interest	178.95	178.95
	Rep Schedule	12 annual instalments from 31.5.2015.	
	Total Loan		
	Gross loan opening	3586.99	3586.99
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	3586.99	3586.99
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	95.08
	Net Loan-Closing	3586.99	3491.91
	Average Loan	3586.99	3539.45
	Rate of Interest	9.3035%	9.3089%
	Interest	333.71	329.48