

**CENTRAL ELECTRICITY REGULATORY COMMISSION  
NEW DELHI**

**Petition No. 107/TT/2017**

**Coram:**

**Shri P.K. Pujari, Chairperson  
Shri I.S. Jha, Member**

**Date of Order: 17.08.2020**

**In the matter of:**

Truing up of transmission tariff of 2009-14 tariff period under Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2009 and determination of transmission tariff for 2014-19 tariff period under Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 of four assets under transmission system associated with Parbati-III-HEP in Northern Region under Regulation 86 of Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999.

**And in the matter of:**

Power Grid Corporation of India Ltd.  
"SAUDAMINI", Plot No-2,  
Sector-29, Gurgaon -122001(Haryana).

**...Petitioner**

**Vs**

1. Rajasthan Rajya Vidyut Prasaran Nigam Ltd.  
Vidyut Bhawan, Vidyut Marg, Jaipur - 302 005.
2. Ajmer Vidyut Vitran Nigam Ltd.  
400 kV GSS Building (Ground Floor), Ajmer Road,  
Heerapura, Jaipur.
3. Jaipur Vidyut Vitran Nigam Ltd.  
400 kV GSS Building (Ground Floor), Ajmer Road,  
Heerapura, Jaipur.
4. Jodhpur Vidyut Vitran Nigam Ltd.  
400 kV GSS Building (Ground Floor), Ajmer Road,  
Heerapura, Jaipur.



5. Himachal Pradesh State Electricity Board  
Vidyut Bhawan,  
Kumar House Complex Building-II,  
Shimla-171 004.
6. Punjab State Electricity Board  
Thermal Shed Tia,  
Near 22 Phatak,  
Patiala-147001.
7. Haryana Power Purchase Centre  
Shakti Bhawan, Sector-6,  
Panchkula (Haryana) 134 109.
8. Power Development Department  
Government of Jammu & Kashmir,  
Mini Secretariat, Jammu.
9. Uttar Pradesh Power Corporation Ltd.  
(Formerly Uttar Pradesh State Electricity Board)  
Shakti Bhawan, 14, Ashok Marg,  
Lucknow - 226 001.
10. Delhi Transco Ltd.  
Shakti Sadan, Kotla Road,  
New Delhi-110 002.
11. BSES Yamuna Power Ltd.  
BSES Bhawan, Nehru Place,  
New Delhi.
12. BSES Rajdhani Power Ltd.  
BSES Bhawan, Nehru Place,  
New Delhi.
13. North Delhi Power Ltd.  
Power Trading & Load Dispatch Group,  
Cennet Building, Adjacent To 66/11 kV Pitampura-3  
Grid Building, Near PP Jewelers'  
Pitampura, New Delhi – 110034.
14. Chandigarh Administration  
Sector -9, Chandigarh.
15. Uttarakhand Power Corporation Ltd.  
Urja Bhawan, Kanwali Road,



Dehradun.

16. North Central Railway  
Allahabad.

17. New Delhi Municipal Council  
Palika Kendra, Sansad Marg,  
New Delhi-110002.

18. Parbati Koldam Transmission Company Ltd.  
5th Floor, JMD Galleria,  
Sohna Road, Sector 48,  
Gurgaon.

19. National Hydroelectric Power Corporation Ltd.  
N.H.P.C. Office Complex,  
Faridabad (Haryana)121 003.

.....Respondents

**For Petitioner** : Shri S. S. Raju, PGCIL  
Shri V.P. Rastogi, PGCIL  
Shri B. Dash, PGCIL, PGCIL  
Shri A.K. Verma, PGCIL  
Shri Amit K. Jain, PGCIL

**For Respondents** : Shri R.B. Sharma, Advocate, BRPL  
Shri Mohit Mudgal, Advocate, BRPL  
Shri Sanjay Srivastav, BRPL  
Shri Azad Akber, PKTCL

### **ORDER**

The present petition has been filed by Power Grid Corporation of India Ltd. ("PGCIL") for truing up of transmission tariff based on actual capital expenditure for the period from the COD to 31.3.2014 in respect of Asset-I: 400 kV D/C Parbati Pooling Point-Amritsar line along with associated bays and Asset-II:80 MVAR bus reactor at Parbati Pooling Point along with associated bays. The Petition has also been filed for determination of the final tariff for 2014-19 tariff period and truing up of the transmission tariff for 2009-14 tariff period in respect of Asset-III: LILO of 2<sup>nd</sup> ckt



of Parbati-II-Koldam Transmission Line at Pooling Station and LILO at Parbati-III (Portion c-d) and Asset-IV: LILO of 2<sup>nd</sup> ckt of Parbati-II-Koldam Transmission Line at Pooling Station along with associated bays and LILO of Parbati-III (Portion e-f). The Assets-I to IV are hereinafter referred to as “the transmission assets/ Combined Asset” under Transmission System associated with Parbati-III-HEP” (hereinafter referred to as the “Transmission System”). Truing up of transmission tariff for the 2009-14 tariff period is being carried out under Regulation 6 of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2009 (hereinafter referred to as “the 2009 Tariff Regulations”). The Petition also involves determination of tariff for the 2014-19 tariff period in terms of Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 (hereinafter referred to as “the 2014 Tariff Regulations”) for the transmission assets/ Combined Asset. Henceforth, Asset-I shall be called Asset-1; Asset-II shall be called Asset-2; Asset-III shall be called Asset-3; and Asset-IV shall be called Asset-4 to distinguish these assets from assets of Petition No. 91/TT/2012.

2. The Petitioner has made the following prayers in the instant petition:-

- “1. Approve the Transmission Tariff for the tariff block 2009-14 block for the Assets covered under this petition, as per para-23 above. The adjustment billing shall be raised.*
- 2. Admit the capital cost as on 31.03.2014 as claimed in the Petition and approve the Additional Capitalization incurred during 2009-14 period and Additional Capitalization incurred projected to be incurred during the tariff block 2014-19 as claimed in the petition.*
- 3. Approve the Transmission Tariff for the tariff block 2014-19 block for the Assets covered under this petition, as per para–25.3above.*
- 4. Allow the Petitioner to recover the shortfall or refund the excess Annual Fixed Charges, on account of Return on Equity due to change in applicable*



*Minimum Alternate/Corporate Income Tax rate as per the Income Tax Act, 1961 (as amended from time to time) of the respective financial year directly without making any application before the Commission as provided under clause 25 of the Tariff Regulations 2014.*

5. *Allow the Petitioner to approach Hon'ble Commission for suitable revision in the norms for O&M expenditure for claiming the impact of wage hike, if any, during period 2014-19.*
6. *Approve the reimbursement of expenditure by the beneficiaries towards petition filing fee, and expenditure on publishing of notices in newspapers in terms of Regulation 52 Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014, and other expenditure ( if any) in relation to the filing of petition.*
7. *Allow the Petitioner if GST is imposed on transmission charges under the proposed GST w.e.f. 01.04.2016 the same may be allowed to be recovered from the beneficiaries.*
8. *Allow the Petitioner to bill and recover Service tax on Transmission Charges separately from the respondents, if at any time service tax on transmission is withdrawn from negative list at any time in future. Further, any taxes and duties including cess etc. imposed by any statutory/Govt/municipal authorities shall be allowed to be recovered from the beneficiaries.*
9. *Allow the Petitioner to bill and recover License fee separately from the Respondents.*

*and pass such other relief as Hon'ble Commission deems fit and appropriate under the circumstances of the case and in the interest of justice.”*

3. The brief facts of the case are as follows: -

(i) The administrative approval and expenditure sanction for the Transmission System was accorded by Government of India through Ministry of Power's Letter No. 12/19/2004-PG dated 31.7.2006 for ₹55724 lakh including an IDC of ₹2661 lakh. Subsequently, it was approved by the Board of the Petitioner vide Memorandum dated 9.8.2006. The Transmission System was to be completed within 42 months from the date of Investment Approval. The revised cost estimates (RCE) was approved by the Board of Directors of the Petitioner on 25.6.2013 for ₹77525 lakh, including IDC of ₹14242 lakh (based on April 2013 price level). The scope of work covered under the



Transmission System associated with Parbati-III-HEP in Northern Region is as follows: -

**Transmission Lines:**

1. LILO of Parbati-II-Koldam/Nalagarh 400 kV line at Parbati Pooling Point (quad conductor);
2. LILO of one 400 kV circuit of Parbati-II-Parbati Pooling Point at Parbati-III HEP (quad conductor);
3. Parbati Pooling Point-Amritsar 400 kV D/C line (twin conductor).

**Sub-station:**

1. New 400 kV Parbati Pooling Point Gas Insulated Sub-station;
2. Extension of 400/220 kV Amritsar Sub-station.

(ii) The Petitioner claimed final transmission tariff of the 2009-14 tariff period in Petition No. 91/TT/2012 for the following transmission assets covered under Parbati-III-HEP in Northern Region:-

Sl. No.	Name of the Assets (asset details as in Petition No. 91/TT/2012)	Actual COD
1	<b>Asset-I:</b> 400 kV D/C Parbati Pooling Point-Amritsar line alongwith associates bays.	1.8.2013
2	<b>Asset-II:</b> LILO of 400 kV Parbati-II- Koldam line ckt II at Parbati III along with associated bays and LILO of 400 kV Parbati-III-Koldam at Parbati Pooling Point along with associated bays.	1.8.2013
3	<b>Asset-III:</b> 80 MVAR bus reactor at Parbati Pooling Point along with associated bays.	1.8.2013
4	<b>Asset-IV:</b> LILO of 400 kV Parbati-II- Koldam ckt I at Parbati Pooling Point along with associated bays.	1.4.2014

(iii) The Commission vide order dated 26.5.2015 in Petition No. 91/TT/2012 allowed final tariff in respect of Asset-I i.e. 400 kV D/C Parbati Pooling Point-Amritsar line along with associates bays and Asset-III i.e. 80 MVAR bus reactor at Parbati Pooling Point along with associated bays only for the 2009-14 period. Thus, no tariff in respect of Asset-II and Asset-IV was allowed in Petition No. 91/TT/2012.



(iv) The tariff for Asset-II was not allowed in order dated 26.5.2015 in Petition No. 91/TT/2012, as a portion of the LILO of Asset-II could not be utilized as the Koldam Switchyard did not achieve COD. Relevant portion of the order dated 26.5.2015 is as under: -

*“6. A portion of the LILO circuits of Asset-II is not utilized as the Koldam switchyard has not been commissioned and the part of LILO cannot be put to trial operation without the line getting connected at the other end as per the APTEL order dated 2.7.2012 in Appeal No. 123 of 2011. Further, the petitioner has neither prayed for declaration of date of commercial operation under Regulation 3(12)(C) of the 2009 Tariff Regulations nor disclosed the information that the portion of LILO are not in use. Punjab State Power Corporation Limited (PSPCL), Respondent No. 6, has also raised this issue in their submission. Since the Koldam Switchyard has not been commissioned, we are not inclined to grant tariff for Asset-II in this petition. The petitioner is at liberty to file the tariff of this asset when complete LILO is put into regular service after test charge and trial operation.”*

(v) As regards disallowance of tariff of Asset-IV, the Commission vide order dated 26.5.2015 in Petition No. 91/TT/2012 opined that the asset was put into commercial operation on 1.4.2014 and since Petition No. 411/TT/2014 was filed by the Petitioner claiming its tariff as per the 2014 Tariff Regulations, there was no need to determine tariff in Petition No. 91/TT/2012.

(vi) Aggrieved with the order of the Commission dated 26.5.2015 in Petition No. 91/TT/2012, NHPC filed Review Petition No.25/RP/2015. The Commission vide order dated 29.12.2015 allowed the Review Petition No. 25/RP/2015 of NHPC observing as under: -

*“11. Coming to the merit of review, we find that NHPC in its letter dated 12.6.2013 had requested PGCIL to commission the transmission line by 1.8.2013. Since PGCIL has acted on the request of NHPC, the transmission charges for the date of Commission till the date of commercial operation was directed to be paid to NHPC. NHPC has submitted in the review petition that they have an indemnification agreement with PGCIL to take care of the delay and further that there are other generators which are linked to the transmission line. These facts were not brought by PGCIL to the notice of the Commission. Moreover, NHPC was also not made a party to the petitioner by PGCIL as a result of which NHPC did not have the opportunity to present its case. Keeping in view this factor, we are of the view that there is sufficient reason to allow the review petition. Accordingly, we recall para 23 of the impugned order and direct that the original petition shall be set down for hearing on the limited aspect of sharing of the transmission charges of the transmission line. PGCIL is directed to serve the necessary material in this respect on NHPC and any other*



*generator which is affected by this transmission line. The parties shall complete their pleading within a period of 15 days from the date of issue of this order. The petition shall be listed for hearing on 19.1.2016”*

(vii) In terms of order dated 29.12.2015 in Review Petition No. 25/RP/2015, Petition No. 91/TT/2012 was reopened and heard after according due opportunity to NHPC. The Commission vide order dated 21.7.2016 in Petition No. 91/TT/2012 observed as under: -

*“15. In our order dated 29.12.2015 in Petition No. 25/RP/2015, we have recalled para 23 of the order dated 26.5.2015 in Petition No. 91/TT/2012 and set down the hearing of the petition on the limited aspect of the transmission charges of the transmission line. In the light of the discussion in the preceding paragraphs, paragraph 23 of the order dated 26.5.2015 shall be read as under:-*

*“23. In view of the requirement of NHPC as conveyed by its letter dated 12.6.2013, the petitioner has commissioned the asset with effect from 1.8.2013. Unit # 1 and 2 of Parbati HEP-III of NHPC were commissioned on 24.3.2014. Since the transmission assets were commissioned with effect from 1.8.2013 at the request and behest of NHPC, we are of the view that the transmission charges from 1.8.2013 to 23.3.2014 shall be borne by NHPC in terms of Regulation 8(6) of Central Electricity Regulatory Commission (Sharing of Inter-State Transmission Charges and Losses) Regulations, 2010 as amended from time to time. The CTU is directed to examine whether these transmission assets were used by other generators during the period in question, and if so, the transmission charges paid by them shall be utilised to reduce the liability of NHPC.”*

(viii) The Petitioner filed Review Petition No. 19/RP/2015 for review of the order dated 26.5.2015 in Petition No. 91/TT/2012 on the limited issue of disallowance of tariff for Asset-II. The Commission disposed of the Review Petition No. 19/RP/2015 vide order dated 7.9.2016 with the following observations: -

*“14..... In the present case, the petitioner has prayed for declaration of CoD of the LILOs (b-c-d) and (e-f-g) under Regulation 3(12) of the 2009 Tariff Regulations. We find that the part of the LILO i.e. (b-c) and (f-g) are not in use as they were not connected to any transmission line or generating station at the end of “b” and “g”. Therefore the portion of line (b-c) and (f-g) cannot be declared under commercial operation under Regulation 3(12) of 2009 Tariff Regulations. Accordingly, we allow commercial operation of the transmission line represented by (c-d-e-f) of Asset II under Regulation 3(12) of 2009 Tariff Regulations.*

*15. It is observed that Asset-II was completed on the request of NHPC and part of the asset (c-d-e-f as per diagram above at para 7) ready for use to evacuate*





power from Parbati-III HEP which was commissioned on 24.3.2014. Although PGCIL has claimed COD of Asset-II as 1.8.2013, it is further noticed that the metering arrangement was installed at NHPC end portion of Asset-II. The Petitioner requested NHPC to file the date when bays associated with the (b-c-d) were ready at Parbati-III Switchyard. However, NHPC did not furnish the same, keeping in view that the meters were installed on 28.8.2013 we conclude that bays at NHPC end were ready on 28.8.2013. Hence, we grant COD of asset c-d-e-f as 1.9.2013 as per the 2009 Tariff Regulations. Therefore, we direct that NHPC should be liable to pay the charges from 1.9.2013 till 23.4.2014. With effect from 23.4.2014, the transmission charges of (c-d-e-f) portion of the diagram at para 7 of Asset-II shall be included in the PoC charges as provided under Central Electricity Regulatory Commission (Sharing of Inter-State Transmission Charges and Losses) Regulations, 2010. As regards, (b-c) and (f-g) of the above diagram at para 7, these elements will be declared under commercial operation with effect from the date of commercial operation of line a-b and g-h respectively. The Petitioner was directed to submit the details of the cost of the portion of the transmission line represented by (c-d-e-f) of Asset II as on 1.9.2013 for determination of tariff within 15 days from the issue of this order.

.....

16. The instant review petition is allowed to the extent directed above and accordingly, the staff of the Commission is directed to work out the transmission tariff for(c-d-e-f) portion of Asset-II in Petition No.91/TT/2012 on receipt of required information from the review petitioner.”

(ix) By way of Commission's order dated 7.9.2016 in Review Petition No. 19/RP/2015, Asset-II as filed in Petition No. 91/TT/2012 was divided into four assets, namely, (i) LILO of 2nd ckt of Parbati-II-Koldam T/L at Parbati-III (c-d Portion), (ii) LILO of 2nd ckt of Parbati-II-Koldam T/L at Banala Pooling Station alongwith associated bays (e-f Portion) with revision in COD from 1.8.2013 to 1.9.2013 in both the said assets, (iii) LILO of 2nd ckt of Parbati-II-Koldam T/L at Parbati-III (b-c portion), and (iv) LILO of 2nd ckt of Parbati-II-Koldam T/L at Banala Pooling Station along with associated bays (f-g portion). The Commission vide said order also observed that tariff for (c-d-e-f) portion of Asset-II will be worked out upon receipt of the information from the Review Petitioner.

(x) In response to the Commission's query vide RoP dated 20.6.2017 in the present petition, the Petitioner vide affidavit dated 24.8.2017 clarified that the other assets of the instant project are covered in Petition No. 136/TT/2017 and their details are as under: -



Sl. No.	Assets
1.	Loop-out of 1 <sup>st</sup> Ckt. of 400 kV D/C Parbati-II-Koldam Transmission Line at Banala.
2.	Loop-In of 1 <sup>st</sup> Ckt. of 400 kV D/C Parbati-II-Koldam Transmission Line at Banala.
3.	LILO of 2 <sup>nd</sup> Ckt. of Parbati-II-Koldam T/L at Pooling Station along with associated bays at LILO at Parbati-III <b>(b-c portion)</b> .
4.	LILO of 2 <sup>nd</sup> Ckt. of Parbati-II-Koldam T/L at Pooling Station along with associated bays and LILO at Parbati-III <b>(f-g portion)</b>

(xi) Consequent upon splitting of Asset-II as filed in Petition No. 91/TT/2012 into four assets vide order dated 7.9.2016 in Review Petition No. 19/RP/2015, two portions of the said Asset-II (of Petition No. 91/TT/2012) have been included in the present petition as Asset-3 i.e. LILO of 2<sup>nd</sup> ckt of Parbati-II-Koldam T/L at Parbati-III (Portion c-d ) with COD as 1.9.2013 and Asset-4 i.e. LILO of 2<sup>nd</sup> ckt of Parbati-II-Koldam T/L at Parbati Pooling Station along with associated bays (Portion e-f) with COD as 1.9.2013 (Schematic diagram is attached as Annexure-I to this order). Thus, the instant petition is filed in respect of the following four assets: -

Asset	Assets	COD
1	400 kV D/C Parbati Pooling Point –Amritsar line along with associated bays.	1.8.2013
2	80 MVAR bus reactor at Parbati Pooling Point along with associated bays.	1.8.2013
3	LILO of 2 <sup>nd</sup> ckt of Parbati-II-Koldam T/L at Parbati-III <b>(Portion c-d)</b>	1.9.2013
4	LILO of 2 <sup>nd</sup> ckt of Parbati-II-Koldam T/L at Parbati Pooling Station along with associated bays <b>(Portion e-f)</b>	1.9.2013

4. In view of above, the instant petition involves a) truing up of transmission tariff in respect of Asset-1 and Asset-2 for 2009-14 period, b) determination of final tariff and truing up of transmission tariff in respect of Assets-3 and Asset-4 for 2009-14



period, and c) determination of tariff of Combined Asset for 2014-19 period.

5. The Petitioner has published the notice of this application in the newspapers in accordance with Section 64 of Electricity Act, 2003. No comments have been received from the public in response to the notices published by the Petitioner under Section 64 of the Act. Uttar Pradesh Power Corporation Ltd. (UPPCL), Respondent No. 9 has filed its reply vide affidavit dated 1.6.2017 and has raised issues of RCE, MAT rate, additional capitalization and sharing of transmission charges. The Petitioner has filed rejoinder vide affidavit dated 14.6.2017 to the reply of UPPCL. BSES Rajdhani Power Limited (BRPL), Respondent No. 12, has filed reply vide affidavit dated 6.11.2017 and has raised issues of additional capitalization, time over-run, OPGW, wage revision, reimbursement of expenditure towards filing fee, license fee etc. The Petitioner has filed rejoinder to the reply of BRPL vide affidavit dated 14.3.2018. Pursuant to the judgment of APTEL dated 16.7.2018 in Appeal Nos. 281 of 2016 and 81 of 2017, BRPL vide affidavit dated 16.8.2018 has also filed its reply and raised the issues that tariff for a part of the transmission line is not permissible under the 2009 Tariff Regulations and the 2014 Tariff Regulations and that COD of various assets require fresh consideration. BRPL has submitted that time over-run and cost over-run need to be worked out once COD of various assets is re-assessed. The Petitioner has filed rejoinder to the reply of BRPL vide affidavit dated 14.9.2018. The objections raised by the Respondents and their response by the Petitioner have been dealt in the relevant paragraphs of this order.



### **Date of Commercial Operation**

6. BRPL in its reply filed vide affidavit dated 2.11.2017 on the aspect of truing up of tariff for 2009-14 period referred to the petition of the Petitioner and submitted that all the assets were put into commercial operation except Asset-1. BRPL has further mentioned the date of commercial operation of the assets as under:-

- Asset-1: 400 kV D/C Parbati Pooling Point-Amritsar line along with associated bays with COD as 1.4.2014.
- Asset-2: 80 MVAR Bus Reactor at Parbati Pooling Point along with associated bays with COD as 1.8.2013.
- Asset-3: LILO of 400 kV Parbati-II-Koldam/Nalagarh Ckt I at Parbati Pooling Point along with associated bays with COD as 1.4.2014.
- Asset-4: LILO of 400 kV Parbati-II-Koldam Ckt. II at Parbati-III along with associated bays and LILO of 400 kV Parbati-III-Koldam at Parbati Pooling Point along with associated bays with COD as 1.8.2013.

7. BRPL has submitted that Asset-1 with COD as 1.4.2014 is covered by the provisions of the 2014 Tariff Regulations. Referring to the petition, BRPL has submitted that the Commission in Review Petition No. 19/RP/2015 allowed the use of the portion of Asset-2, namely, portion c-d-e-f at the instance of NHPC to evacuate power from Parbati-III HEP observing that tariff of this portion of Asset-2 will be borne by NHPC from 1.9.2013 to 23.4.2014 and would be included in POC charge thereafter. On basis of these submissions, assertion of BRPL is that entire Asset-2 will not be part of the truing up exercise and that Asset-1 and Asset-2 will be covered by the provisions of the 2014 Tariff Regulations. BRPL has submitted that no CMD and CEA certificates as per Appendix-VI of the 2014 Tariff Regulations have been filed by the Petitioner in support of COD of Asset-3 and Asset-4.



8. In response, the Petitioner vide affidavit dated 14.3.2018 has narrated the history of the assets filed in Petition No. 91/TT/2012 and other related petitions for setting at rest the ambiguity due to the reply of BRPL concerning the assets, their tariff period and CODs. Petition No. 91/TT/2012 was initially filed by the Petitioner for determination of tariff of the following assets for 2009-14 period: -

<b>Sri No.</b>	<b>Name of the Assets</b>	<b>Actual COD</b>
1	<b>Asset-I:</b> 400 kV D/C Parbati Pooling Point-Amritsar line along with associates bays.	1.8.2013
2	<b>Asset-II:</b> LILO of 400 kV Parbati-II- Koldam line ckt II at Parbati III along with associated bays and LILO of 400 kV Parbati-III-Koldam at Parbati Pooling Point along with associated bays.	1.8.2013
3	<b>Asset-III:</b> 80 MVAR bus reactor at Parbati Pooling Point along with associated bays.	1.8.2013
4	<b>Asset-IV:</b> LILO of 400 kV Parbati-II- Koldam Ckt-I at Parbati Pooling Point along with associated bays.	1.4.2014

9. The Petitioner has clarified that tariff of Asset-I and Asset-III was allowed in Petition No. 91/TT/2012 vide order dated 26.5.2015. The tariff in respect of Asset-II was disallowed as a portion of the LILO of Ckts. of Asset-II remained unutilized as the Koldam Switchyard was not commissioned and part of the LILO cannot be put to trial operation without the line getting connected at the other end as per the APTEL order dated 2.7.2012 in Appeal No. 123 of 2011. The Commission in the said order dated 26.5.2015 also observed that the Petitioner had filed Petition No. 411/TT/2014 claiming tariff of Asset-IV and as such no tariff was determined in respect of this asset in Petition No. 91/TT/2012. The Petitioner has submitted that COD of Asset-1, Asset-2, Asset-3 and Asset-4 covered in instant Petition No.107/TT/2017 is



1.8.2013, 1.8.2013, 1.9.2013 and 1.9.2013 respectively which was prior to 4<sup>th</sup> Amendment to the Central Electricity Regulatory Commission (Indian Electricity Grid Code) Regulations, 2010 and, therefore, CMD certificate for these assets is not applicable.

10. We have considered the above submissions of the Petitioner and BRPL and have also perused the record. BRPL has contended that COD of Asset-1 being 1.4.2014, it is covered by the provisions of 2014 Tariff Regulations. BRPL has contended that Commission's order dated 7.9.2016 in Review Petition No. 19/RP/2015 paved the way for use of the portion of Asset-2, namely, c-d-e-f at the instance of NHPC to evacuate power from Parbati-III HEP with the observation that tariff of this portion of Asset-2 will be borne by NHPC from 1.9.2013 to 23.4.2014. Contending such, BRPL has submitted that entire Asset-2 will not be part of the truing up exercise and that Asset-1 and Asset-2 will be covered by the provisions of the 2014 Tariff Regulations.

11. On careful study of record and submissions of the Petitioner and BRPL, we feel it appropriate to cull out the relevant extracts of our orders of tariff and review petitions so that proper facts of assets, CODs and tariff allowed may be understood.

12. The Commission vide order dated 26.5.2015 in Petition No. 91/TT/2012 with regard to disallowance of Asset-II observed as under: -

*"6. A portion of the LILO circuits of Asset-II is not utilized as the Koldam switchyard has not been commissioned and the part of LILO cannot be put to trial operation without the line getting connected at the other end as per the APTEL order dated 2.7.2012 in Appeal No. 123 of 2011. Further, the petitioner has neither prayed for declaration of date of commercial operation under Regulation 3(12)(C) of the 2009 Tariff Regulations nor disclosed the information that the portion of LILO are not in use.*



*Punjab State Power Corporation Limited (PSPCL), Respondent No. 6, has also raised this issue in their submission. Since the Koldam Switchyard has not been commissioned, we are not inclined to grant tariff for Asset-II in this petition. The petitioner is at liberty to file the tariff of this asset when complete LILO is put into regular service after test charge and trial operation.”*

13. The Commission vide order dated 26.5.2015 with regard to tariff of Asset-IV further observed as under:-

*“7. Asset-IV has been commissioned in the 20014-19 tariff period and the petitioner has already claimed tariff as per the 2014 Tariff Regulations for this asset in Petition No. 411/TT/2014.”*

14. The Commission vide order dated 7.9.2016 in Review Petition No. 19/RP/2015 filed by the Petitioner for declaration of COD of Asset-II opined as under: -

*“15. It is observed that Asset-II was completed on the request of NHPC and part of the asset (c-d-e-f) ready for use to evacuate power from Parbati-III HEP which was commissioned on 24.3.2014. Although PGCIL has claimed COD of Asset-II as 1.8.2013, it is further noticed that the metering arrangement was installed at NHPC end portion of the Asset-II. The petitioner requested NHPC to file the date when bays associated with the (b-c-d) were ready at Parbati-III Switchyard. However, NHPC did not furnish the same, keeping in view that the meters were installed on 28.8.2013 we conclude that bays at NHPC end were ready on 28.8.2013. Hence, we grant COD of asset c-d-e-f as 1.9.2013 as per the 2009 Tariff Regulations. Therefore, we direct that NHPC should be liable to pay the charges from 1.9.2013 till 23.4.2014. With effect from 23.4.2014, the transmission charges of (c-d-e-f) portion of Asset-II shall be included in the PoC charges as provided under Central Electricity Regulatory Commission(Sharing of Inter-State Transmission Charges and Losses) Regulations, 2010 .As regards, (b-c) and (f-g), these elements will be declared under commercial operation with effect from the date of commercial operation of line a-b and g-h respectively. The petitioner is directed to submit the details of the cost of the portion of the transmission line represented by (c-d-e-f) of Asset-II as on 1.9.2013 for determination of tariff within 15 days from the issue of this order.”*

15. A perusal of the above orders makes it clear that vide order dated 26.5.2015 in Petition No. 91/TT/2012, tariff of Asset-I and Asset-III i.e. 400 kV D/C Parbati-Amritsar T/L along with associated bays at both ends and 400 kV 80 MVAR Bus Reactor at Parbati Pooling Station along with associated bays respectively was allowed. The tariff in respect of Asset-II, i.e. LILO of 2<sup>nd</sup> Ckt of Parbati-II-Koldam T/L at Pooling Station along with associated bays and LILO at Parbati-III was disallowed



as a portion of the LILO of ckts. of Asset-II remained unutilized as the Koldam Switchyard was not commissioned. Asset-IV, i.e. LILO of Parbati-II Koldam Ckt-I at Parbati Pooling Point along with associated bays, was alienated from Petition No.91/TT/2012 as the Petitioner claimed its tariff in Petition No. 411/TT/2014 in view of its COD being on 1.4.2014 which was covered under the 2014 Tariff Regulations.

16. A careful perusal of the order dated 7.9.2016 in Review Petition No. 19/RP/2015 with regard to COD of portions of Asset-II, we notice that the Commission observed that Asset-II was completed on the request of NHPC and part of the asset (c-d-e-f) was ready for use to evacuate power from Parbati-III HEP which was executed on 24.3.2014. In the facts and circumstances of the case, the Commission approved the COD of portion c-d-e-f of Asset-II as 1.9.2013 as per the 2009 Tariff Regulations with directions to NHPC to bear the transmission charges from 1.9.2013 till 23.4.2014. The Commission further observed that the transmission charges of (c-d-e-f) portion of Asset-II post 23.4.2014 shall be included in the PoC charges as provided under Central Electricity Regulatory Commission (Sharing of Inter-State Transmission Charges and Losses) Regulations, 2010 (hereinafter referred to as "2010 Sharing Regulations"). As regards, (b-c) and (f-g) portions, these elements will be declared under commercial operation with effect from the date of commercial operation of line portions (a-b) and (g-h) respectively.

17. In view of above discussions, the contentions of BRPL that COD of Asset-1 is 1.4.2014 and that entire Asset-2 will not be part of the truing up exercise or that Asset-1 and Asset-2 will be covered by the provisions 2014 Tariff Regulations, are





misplaced. In view of the aforesaid discussions, no finding is called for on the submissions of BRPL.

18. With regard to determination of tariff for 2014-19 period, BRPL has submitted that the Petitioner is claiming tariff of Asset-3 and Asset-4 with COD as 1.4.2014. BRPL has further submitted that tariff of part of the asset c-d-e-f will be w.e.f 23.4.2014 and tariff of remaining portions of the asset shall be from the date of COD of entire asset. BRPL has submitted that there is inconsistency on record as the Auditor's Certificate filed is in respect of LILO of 2<sup>nd</sup> Ckt. of Parbati-II-Koldam T/L at Parbati Pooling Point whereas the Investment Approval is for LILO of 400 kV Parbati-II/Koldam Nalagarh Ckt.-II at Parbati Pooling Point. BRPL has submitted that COD of Asset-3 is 1.4.2014 and the Auditor's Certificate shows the COD of Asset-3 as 1.9.2013.

19. In response, the Petitioner has reiterated its submissions as summarized in the preceding paragraphs.

20. We have considered the above submissions of the Petitioner and BRPL and have perused the record carefully. In our opinion, no finding is required to be given with regard to the contentions of BRPL that COD of Asset-3 and Asset-4 is claimed by the Petitioner as 1.4.2014 or that there is inconsistency on record in the Auditor's Certificate with regard to LILO of 2<sup>nd</sup> Ckt. of Parbati-II-Koldam T/L at Parbati Pooling Point as the Investment Approval is for LILO of 400 kV Parbati-II-Koldam/Nalagarh Ckt.I at Parbati Pooling Point or that COD of Asset-3 is 1.4.2014 and the Auditor's Certificate shows the COD of Asset-3 as 1.9.2013 for the simple reason that we



have already approved the COD of assets in our earlier orders dated 26.5.2015 in Petition No. 91/TT/2012 and dated 7.9.2016 in Petition No. 19/RP/2015. We further note that the Petitioner has clearly set out the descriptions of the assets in paragraphs 6 and 12 of the instant petition. Thus, we conclude that the submissions of BRPL on the issues of COD of assets are misplaced and, hence, summarily rejected.

### **Time Over-run**

21. BRPL has submitted that the project was required to be completed within a period of 42 months from the date of Investment Approval dated 31.7.2006. Thus, the entire work was required to be completed by 31.1.2010. It has submitted that Assets-3 was completed on 1.4.2014 while Asset-4 was not executed in entirety and that there is huge time over-run in their completion. It has submitted that the Petitioner has not filed any justification for time over-run in respect of these two assets. BRPL has further submitted that the Petitioner was required to file documents such as DPR, CPM analysis, PERT chart and Bar Chart. Referring to Appellate Tribunal's judgment dated 1.7.2014 in Appeal No. 169 of 2013, BRPL has submitted that in the absence of documents like DPR, CPM analysis, PERT chart and bar chart, time over-run may not be allowed. BRPL has submitted to disallow the claim of IDC and IEDC for time over-run in respect of Asset-3 and Asset-4.

22. In response, the Petitioner vide affidavit dated 14.3.2018 has submitted that the instant petition is a true up petition and that submissions with regard to delay have already been made in Petition No.91/TT/2012 and the Commission has



already condoned the delay after finalizing the various transmission elements with COD covered in the petition. The Petitioner vide affidavit dated 14.9.2018 has submitted that justifications for delay of the assets covered under Parbati-III HEP have already been furnished in Petitions No. 91/TT/2012 and Petition No. 411/TT/2014 which also include the assets covered in the present petition.

23. We have considered the submissions of the Petitioner and BRPL and have perused the record. In the context of time over-run, we feel it appropriate to refer to the relevant excerpts of order dated 26.5.2015 in Petition No. 91/TT/2012 and the same are as under: -

***“Time Over-run***

20. *The petitioner was directed to submit the detailed justification and reasons along with documentary evidence for delay, separately for each asset covered in the petition, including details of activities as per PERT chart, work affected and the duration of delay in the activities along with the reasons and agency responsible for delay. JDVVNL, BRPL and PSPCL have also raised the issue of time over-run resulting in cost over-run.*

21. *In response, petitioner vide affidavit dated 20.9.2013 has submitted as under:-*

***a)Sub-Station:***

*The land initially selected could not be acquired due to stiff resistance from land owners after initiating the acquisition process in April, 2005. The petitioner initiated the process for identification of alternate land after request from State Government Authorities for the same in March, 2006. Accordingly, the proposal for acquisition was forwarded to State Government of Himachal Pradesh (HP) in May, 2006. Thus, a total of 2.94 Hectare land has been acquired in April, 2009 for Parbati pooling GIS station comprising 1.89 Hectare of private land and 1.054 Hectare from Forest Department, Government of India. After rigorous follow up, Section-IV, Section-VI and Section-IX under Land Acquisition was received on November 28, 2006, May 14, 2007 and October 23, 2007 respectively. The land was finally allotted to the petitioner by Government of HP on March 31, 2009 and possession was handed over in April, 2009. The proposal for transfer of forest land of 1.05 Hectare was processed under Forest (Conservation) Act, 1980 and in-principle approval from Regional MoEF was received only in September, 2009 and the forest land was finally transferred to the petitioner in May, 2010 after depositing cost of compensatory afforestation and NPV of land to Government of HP. Thus, the land acquisition took about 5 years (April, 2005 to May, 2010).*



**b)Line: Parbati-Amritsar Line****i. H.P Portion:**

The delay was due to Forest Clearance as some part of land which was proposed to be diverted for construction of transmission line at Mandi was coming under Forest area. There was strong agitation against this diversion by Mahila Mandal of Nau Doghari Village. Some portion of transmission line was also passing through Nargu Wild Life Sanctuary which was earlier taken as forest land. Revised case avoiding Sanctuary area was prepared and submitted. First stage forest clearance was obtained on 11.6.2012, Stage-II clearance for 400kV D/C Parbati Pooling Station to Amritsar Line (Banala End) obtained on 11.9.2012. Corrigendum to final approval was issued on 19.11.2012. Further, tree felling orders by the DFO to H.P. Forest Development Corporation were given progressively during 1.12.2012 to 9.1.2013. Tender approval process and award by HPSFDC went on till 23.3.2013. The petitioner has submitted the status of delay in forest clearance in the case of Parbati-Amritsar line (HP Portion) in detailed chronological order of events supported by various documents to establish that Forest clearance in HP portion took about 6 years (October, 2006 to September, 2012) and about 5 months (November, 2012 to March, 2013) were taken for permission of tree cutting. The progress of work of Parbati-Amritsar transmission line was affected by extreme weather/heavy rains from (November, 2012 to March, 2013 and May-June, 2013).

**ii. Punjab Portion:**

The proposal for Forest Clearance was submitted in July, 2008 and 1st stage forest clearance was obtained on 23.4.2010 but Stage-II forest clearance was delayed. Punjab Forest Department was demanding tree cost and land cost in addition to CA and NPV and Stage-II Clearance obtained on 28.5.2012. The petitioner has submitted the status of delay in forest clearance in the case of Parbati-Amritsar line (Punjab Portion) in detailed chronological order of events supported by various documents to establish that Final Approval Stage-II Clearance for 400 kV D/C Parbati Pooling station to Amritsar line (Hoshiarpur End) was granted by MoEF, New Delhi on 28.5.2012. The forest clearance in Punjab portion of transmission line took about 4 years (July, 2008 to May, 2012).

iii. The petitioner after obtaining Stage-II forest clearance in May 2012, sought permission for marking and felling of trees. Government of HP granted permission for cutting of Trees in March/April, 2013 and the work on this portion of land could be started only in April, 2013. Besides the issue of trees felling, the terrain being high altitude had faced extreme weather condition due to high fall and snow deposit during November, 2012 to February, 2013 and thereby reducing the working period of construction gang by 4/5 months. The terrain again became worst and work stopped due to severe rainfall during May/June, 2013. The petitioner thereafter had deployed working gang, as soon as the terrain become suitable for working on top priority and succeeded in commissioning the transmission assets in August, 2013.

22. We have considered the submissions made by the petitioner and respondents. The assets were commissioned on 1.8.2013. The delay in forest clearance and acquisition of land for sub-station as well as time taken in tree cutting



*permission and snowfall period is considered beyond the control of the petitioner and accordingly the delay of 42 months is condoned.”*

24. The Commission vide order dated 26.5.2015 in Petition No. 91/TT/2012 allowed the tariff of Asset-I and Asset-III. The Commission allowed Review Petition No. 25/RP/2015 of NHPC and re-opened Petition No. 91/TT/2012 on the issue of sharing of transmission charge and vide order dated 21.7.2016 re-affirmed its earlier order dated 26.5.2015. The Commission has discussed the reasons in detail for disallowance of tariff of Asset-II and alienation of Asset-IV from Petition No. 91/TT/2012. The Commission has also set out the reasons in detail for allowing COD of assets c-d-e-f (portion of Asset-II) in Petition No.19/RP/2015 vide order dated 7.9.2016.

25. On careful perusal of earlier orders of the Commission dated 26.5.2015 and 21.7.2016 in Petition No. 91/TT/2012, order dated 29.12.2015 in Petition No. 25/RP/2015, order dated 7.9.2016 in Petition No. 19/RP/2015 and order dated 30.7.2016 in Petition No.411/TT/2014, we do not find any discussion or observation with regard to condonation of time over-run in respect of Asset-II i.e. LILO of 2<sup>nd</sup> Ckt of Parbati-II-Koldam T/L at Pooling Station along with associated bays and LILO at Parbati-III. The Commission dealt with the issue of time over-run for the first time in order dated 26.5.2015 in Petition No. 91/TT/2012 while allowing tariff of Asset-I and Asset-III. The Commission in the aforesaid order dated 26.5.2015 did not discuss anything regarding condonation of time over-run of Asset-II while not approving its COD.



26. In absence of any observations of the Commission in orders dated 26.5.2015 and 21.7.2016 in Petition No.91/TT/2012 regarding the time over-run in respect of Asset-II, we are unable to accept the contention of the Petitioner that the Commission has condoned the time over-run in respect of Asset-II covered in Petition No. 91/TT/2012. Further, in the absence of any submissions of the Petitioner regarding time over-run in case of Asset-3 and Asset-4 in the instant petition, we are not in a position to take any view on the issue of time over-run in respect of Asset-3 and Asset-4, which are parts of Asset-II covered in Petition No. 91/TT/2012. Accordingly, the IDC and the IEDC for the period of time over-run in case of instant Assets-3 and 4 are not capitalized.

27. The Petitioner was directed to file certain information vide ROP dated 20.6.2017. In response, the Petitioner has submitted the information vide affidavit dated 24.8.2017. Having heard the representatives of the Petitioner on various dates including on 15.3.2018 and 13.2.2020 and perused the material available on record, we proceed to dispose of the petition.

28. The instant petition is filed pursuant to the Commission's order dated 26.5.2015 in Petition No. 91/TT/2012 and order dated 7.9.2016 in Review Petition No. 19/RP/2015 in respect of the following assets: -

Srl. No.	Assets	COD	Remark
<b>Asset-1</b>	400 kV D/C Parbati Pooling Point–Amritsar line along with associates bays.	1.8.2013	Truing up of tariff for 2009-14 period and determination of tariff for 2014-19 period.
<b>Asset-2</b>	80 MVAR bus reactor at Parbati Pooling Point along with associated bays.	1.8.2013	



<b>Asset-3</b>	LILO of 2 <sup>nd</sup> ckt of Parbati-II-Koldam T/L at Pooling station and LILO at Parbati-III (Portion c-d)	1.9.2013	Final and truing up of transmission tariff for 2009-14 period with Revised COD 1.9.2013 as per the Commission's order dated 7.9.2016 in Petition No. 19/RP/2015.
<b>Asset-4</b>	LILO of 2 <sup>nd</sup> ckt of Parbati-II-Koldam T/L at Pooling Station along with associated bays and LILO of Parbati-III (Portion e-f)	1.9.2013	

29. The tariff in respect of Asset-1 and Asset-2 covered in the present petition was determined vide order dated 26.5.2015 in Petition No. 91/TT/2012 in accordance with the 2009 Tariff Regulations. The tariff allowed for 2009-14 tariff period in respect of Asset-1 and Asset-2 is as under:-

Particulars	(₹ in lakh)	
	Asset-1 2013-14 (pro-rata)	Asset-2 2013-14 (pro-rata)
Depreciation	2221.67	32.67
Interest on Loan	2634.14	39.38
Return on Equity	2241.93	33.35
Interest on WC	176.15	4.73
O&M Expenses	305.34	43.64
<b>Total</b>	<b>7579.24</b>	<b>153.77</b>

30. The trued-up tariff claimed for the assets covered in the instant petition is as below: -

Particulars	(₹ in lakh)			
	Asset-2 2013-14 (pro-rata)	Asset-2 2013-14 (pro-rata)	Asset-3 2013-14 (pro-rata)	Asset-4 2013-14 (pro-rata)
Depreciation	2254.37	32.94	33.27	28.96
Interest on Loan	2671.87	39.68	39.03	33.71
Return on Equity	2551.06	37.72	37.07	32.17
Interest on WC	184.69	4.84	2.51	4.22
O&M Expenses	305.34	43.64	0.90	38.59
<b>Total</b>	<b>7967.33</b>	<b>158.82</b>	<b>112.78</b>	<b>137.65</b>

31. The capital cost of ₹63458.11 lakh for subject Asset-1 and ₹952.61 lakh for



subject Asset-2 was considered as on COD for determination of tariff in order dated 26.5.2015 in Petition No. 91/TT/2012.

### **Truing Up of Annual Fixed Charges for Tariff Period 2009-14**

32. The tariff of the instant assets is trued up based on the actual capital expenditure during the period from COD of respective assets to 31.3.2014 in the subsequent paragraphs.

### **Capital Cost**

33. The Petitioner has claimed the following capital cost as on COD for the assets covered in the instant petition: -

(₹ in lakh)		
<b>Asset</b>	<b>COD</b>	<b>Cost as per Auditor's Certificate dated 10.11.2016</b>
<b>Asset-1</b>	1.8.2013	65475.35
<b>Asset-2</b>	1.8.2013	968.93
<b>Cost as per Revised COD</b>		
<b>Asset-3</b>	1.9.2013	1055.22
<b>Asset-4</b>	1.9.2013	928.15

### **Interest During Construction (IDC)**

34. The Petitioner has submitted the information relating to IDC duly certified and mentioned the year-wise discharge of the entire IDC claimed. On the basis of the information submitted by the Petitioner, the IDC has been worked out up to COD of Asset-1 and Asset-2 and up to scheduled commercial operation date of Asset-3 and Asset-4 taking into consideration the loan details as mentioned in Form-13 and the working sheet of IDC submitted by the Petitioner in the original petition. The IDC has been worked out after allowing delay of Asset-1 and Asset-2. Delay has not been





condoned in respect of Asset-3 and Asset-4, hence IDC in respect of them has been disallowed. The details submitted by the Petitioner and IDC worked out as on COD of all the assets is as under: -

(₹ in lakh)

Particulars	Asset-1	Asset-2	Asset-3	Asset-4
<b>Total accrued IDC claimed (As per Auditor's certificate)</b>	11843.34	182.67	190.92	167.84
Total accrued IDC allowed	11843.34	182.67	40.15	36.58
IDC allowed as on COD (cash basis)	9737.67	165.60	40.15	36.58
IDC liability as on COD	2105.67	17.07	0.00	0.00
IDC allowed to be discharged in 2013-14	2061.15	16.92	0.00	0.00
IDC Allowed to be discharged in 2014-15	33.25	0.00	0.00	0.00
<b>Total IDC Allowed</b>	11832.07	182.52	40.15	36.58
Remaining IDC not declared to be discharged during the years presumed to be discharged during 2015-16.	11.27	0.15	0.00	0.00

35. The above IDC worked out is allowed to be capitalized in the true up calculations of 2009-14. The remaining IDC which has not been discharged during the financial years as shown above in the table is considered to be discharged during 2015-16 and is allowed during 2015-16 period.

#### **Incidental Expenditure During Construction (IEDC)**

36. There are eight assets in total in this Transmission System, of which four assets are covered in the present petition and the remaining four assets are covered in Petition No. 136/TT/2017. The assets covered in Petition No. 136/TT/2017 are (i) Asset-V: Loop-out of 1st Ckt of 400 kV D/C Parbati-II-Koldam Transmission Line at Banala, (ii) Asset-VI: Loop in of 1st ckt of 400 kV D/C Parbati-II-Koldam Transmission Line at Banala, (iii) Asset-VII: LILO of 2nd Ckt of Parbati-II- Koldam T/L at Pooling Station and LILO at Parbati-III (b-c Portion), and Asset-VIII: LILO of 2nd CKt of Parbati-II- Koldam T/L at Pooling Station along with associated Bays and



LILO at Parbati-III (f-g Portion). All the assets of this Transmission System have been declared under commercial operation.

37. Before dealing with the issue of IEDC in the present case, we feel it appropriate to refer to the Commission's order dated 4.2.2020 in Petition No 1/TT/2019 wherein the Commission observed as under:

*"Incidental Expenditure During Construction (IEDC)*

*23. The Petitioner has claimed IEDC of the assets covered in the petition and submitted Auditor certificate in support of the same. We observe that all the assets of the transmission system "Common Scheme for 765 kV Pooling Station and Network for NR, Import by NR from ER and Common Scheme for network for WR and Import by WR from ER and from NER/SR/WR via ER" have been put under commercial operation, either during 2009-14 period or during 2014-19 period.*

*24. The Appellate Tribunal for Electricity (APTEL), vide its judgment dated 2nd December 2019 in Appeal Nos. 95 of 2018 and 140 of 2018 on the issue of "IEDC to be considered in tariff" has held that IEDC should be computed only on actual basis after due prudence check based on the data submitted by the Appellant in accordance with the Tariff Regulations.*

*Further, vide para 7.12 of the judgment, ATE has, inter alia, observed that ".....without prejudice to the contention that hard costs should not be considered, even if hard cost is to be seen then, at least "IEDC" including contingencies should be applied".*

*25. As per the APTEL judgment, computation of IEDC of the Project is to be made on actual basis after applying due prudence. The Petitioner files tariff petitions for individual assets and Commission decides tariff for these assets, which are subsequently combined when all the assets of the Project are brought under commercial operation. Thus, prudence can only be applied with reference to the combined IEDC as per FR Cost /RCE on completion of the Project. The present petition is a true up (2009-14) petition, and as mentioned in para 23, all the assets of the Project have been commissioned and their tariff determined on individual basis. As a part of prudence exercise, the IEDC allowed as per respective tariff orders for all the assets of the Project has been compared with the IEDC (including contingencies) for the Project as per RCE. We observe that the IEDC allowed for the Project, except that for the eight assets of the present petition, is Rs 7424.85 lakh which is well within the IEDC limit of Rs 13959.00 lakh as per RCE. The actual IEDC (as claimed) against the eight assets of the present petition is Rs 2604.12 lakh. After disallowing an amount of ₹4.50 lakh, ₹3.13 lakh and ₹33.03 lakh, in case of Asset-3, Asset-7 and Asset- 8 respectively due to time over run, ₹2563.56 lakh is being allowed as IEDC.*

*26. We reiterate that Commission has applied prudence in the above manner in the present case as all the assets of the Project have been commissioned. For asset wise*



*tariff determination, the Commission intends to continue with the existing practice of IEDC and prudence shall be applied on the IEDC, once the Project is fully commissioned.”*

38. It is observed that in the present case, RCE dated 25.6.2013 does not explicitly indicate the actual amount of IEDC incurred, which is otherwise distinctly shown in RCE in other Transmission Systems. To obviate this difficulty, we have referred to the Investment Approval, dated 9.8.2006, accorded to the Transmission System. We find that the percentage indicated in the Abstract Cost Estimate, which was so far being applied on the hard cost for working out IEDC limit, is 5%. Further, the contingencies percentage is indicated as 3%.

39. Thus, in the present case, in the absence of actual figures of IEDC in RCE, we are slightly deviating from the APTEL's directions while deciding the limits for IEDC. As per RCE, the hard cost for transmission lines and sub-stations taken together is ₹49354 lakh and applying the factor of 8% (i.e. 5% + 3%), IEDC limit works out to ₹3948.32 lakh.

40. In Petition No. 136/TT/2017, total of actual IEDC incurred for the four assets as per the respective Auditor's Certificates is ₹117.74 lakh. This, considered together with the IEDC amount being allowed in the present petition, i.e. ₹3101.40 lakh works out to ₹3219.14 lakh, which is well within IEDC limits as stated above. Thus, the entire IEDC claimed in the present petition is being allowed.

41. The Petitioner has submitted that the entire IEDC claimed in respect of all the assets of the instant petition has been discharged as on COD. While considering the Petitioner's claim for IEDC, we have taken note of the fact that the delay in respect



of Asset-3 and Asset-4 has not been allowed.

(₹ in lakh)

Assets	IEDC Claimed on COD	IEDC Allowed as on COD	IEDC Disallowed
Asset-1	3008.44	3008.44	0.00
Asset-2	46.04	46.04	0.00
Asset-3	49.31	24.95	24.36
Asset-4	43.43	21.97	21.46

### Capital cost as on COD

42. The capital cost considered as on COD after allowing IDC and IEDC on cash basis is as follows: -

(₹ in lakh)

Asset	Capital Cost claimed as on COD before considering IDC & IEDC	Less: IDC Disallowed (Time over-run/ Excess Claim)	Less: IDC (Un-discharged as on COD	Less: IEDC (Time over-run/ Excess Claim)	Capital Cost as on COD after considering IDC & IEDC
Asset-1	65475.35	0.00	2105.67	0.00	63369.68
Asset-2	968.93	0.00	17.07	0.00	951.86
Asset-3	1055.22	150.77	0.00	24.36	880.09
Asset-4	928.15	131.26	0.00	21.46	775.43

### Initial Spares

43. The Petitioner had initially claimed Initial Spares for Asset-1 and Asset-3 only. The Petitioner vide affidavit dated 24.8.2017 had submitted the year-wise payment made against the Initial Spares for the Asset-1 and Asset-3 which is as under:-

(₹ in lakh)

Particulars		Discharged as on COD	Liability as on COD	2013-14	2014-15	2015-16	Total
Asset-1	T/L	251.87	82.21	0.00	54.23	27.98	334.08
	S/S	348.32	91.08	71.18	8.19	11.71	439.40
Asset-3	T/L	121.58	13.51	0.00	0.00	13.51	135.09

44. The assets covered in the instant Transmission System are covered in the



present petition and Petition No. 136/TT/2017. The details of the assets covered in the instant Transmission System are as follows:-

<b>Asset</b>	<b>Petition No.</b>	<b>Asset name</b>
<b>Asset-1</b>	107/TT/2017 (present petition)	400 kV D/C Parbati-Amritsar T/L with Bays (T/L Portion)
<b>Asset-2</b>		400 kV 80MVAR Bus Reactor at Parbati-Pooling station
<b>Asset-3</b>		LILO (c-d) portion
<b>Asset-4</b>		LILO (e-f) portion
<b>Asset-V</b>	136/TT/2017	Loop-out of 1st Ckt of 400 kV D/C Parbati-II-Koldam Transmission Line at Banala
<b>Asset-VI</b>		Loop-in of 1st Ckt of 400 kV D/C Parbati-II- Koldam Transmission Line at Banala
<b>Asset-VII</b>		LILO (b-c) portion
<b>Asset-VIII</b>		LILO (f-g) portion

45. The Petitioner has submitted that the Initial Spares of Asset-4, Asset-VII and Asset-VIII, as mentioned in the above table, have been collectively capitalized in Asset-3 of the instant petition. Assets now named as Asset-3, Asset-4, Asset-VII and Asset-VIII was earlier Asset-II in Petition No. 91/TT/2012 which split into four assets pursuant to Commission's order dated 7.9.2016 in Petition No. 19/RP/2015. The Petitioner vide affidavit dated 18.3.2020 has claimed the following Initial Spares: -

(₹ in lakh)			
<b>Initial Spares</b>			
<b>Transmission Line</b>		<b>Capital Cost</b>	<b>Initial Spares</b>
Asset-3: c-d	107/TT/2017	<b>1167.42</b>	<b>80.77</b>
Asset-4: e-f		<b>470.92</b>	<b>32.90</b>
Asset-VII: b-c	136/TT/2017	166.27	13.68
Asset-VIII: f-g		100.71	8.28
<b>Total</b>		<b>1905.32</b>	<b>135.09</b>

46. The Petitioner has not submitted the segregated details of discharge of Initial Spares in respect of above Asset-3 and Asset-4. Hence, the Initial Spares claimed in respect of Asset-3 and Asset-4 are considered to be discharged as on COD.



47. UPPCL has submitted that the Petitioner is required to explain as to why Initial Spares for Asset-1 is claimed at the rate of 6.09% for GIS instead of 3.5% and for Amritsar Sub-station at the rate of 5.130% instead of 2.5% in terms of Regulation 8 of the 2009 Tariff Regulations.

48. In response, the Petitioner has submitted that the instant assets are brownfield sub-stations and Initial Spares are necessary for smooth and reliable functioning of the grid.

49. We have considered the submissions of the Petitioner and UPPCL. The Initial Spares have been worked out as per the ceiling mentioned in the 2009 Tariff Regulations. The cut-off dates of all the assets in the instant petition is 31.3.2016 which is beyond the 2009-14 tariff period. The Petitioner has submitted the capital expenditure based on the Auditor's Certificate which has been verified from the audited figures of accounts by the Auditor up to 31.3.2016. Therefore, the allowable Initial Spares during 2009-14 period have been worked out after considering the capital cost up to 31.3.2016 and the same is also the cut-off date. The details of the Initial Spares claimed and allowed for the instant assets are summarized as under: -

Description		Capital Cost up to cut-off date considered (i.e. 31.3.2016) (₹ in lakh)	Total Initial Spares claimed (₹ in lakh)	Ceiling Limits as per Regulation 8 of the 2009 Tariff Regulations (in%)	Initial Spares worked out (₹ in lakh)	Excess Initial Spares claimed (₹ in lakh)
Asset-1	T/L	57066.83	334.08	0.75	428.71	0.00
	S/S (GIS)	9368.94	380.78	3.50	326.00	54.78
	S/S (Extn)	1704.05	58.62	2.50	42.19	16.43
Asset-3	T/L	1167.42	80.23	0.75	8.22	72.01
Asset-4	T/L	470.92	32.90	0.75	3.31	29.59



50. The Auditor's Certificate in respect of Asset-1 as submitted by the Petitioner shows separate Initial Spares for GIS sub-station and for sub-station extension without segregating their costs. Therefore, we have considered capital cost of the said two types of sub-stations, namely, GIS and extension and segregated them on pro-rata basis by identifying the cost of plant and machinery. The Initial Spares claimed for PLCC has also been added on pro-rata basis to the cost of GIS sub-station and sub-station extension based on the plant and machinery cost.

51. The excess Initial Spares as indicated in the table above have been deducted from the capital cost of the assets as on COD and considered after allowing IDC and IEDC as on cash basis.

52. The liability of Initial Spares in respect of Asset-1 as mentioned in the table above (under paragraph 49) has been deducted from the capital cost of the asset as on COD to arrive at the capital cost of the asset on cash basis. The Initial Spares claimed above in respect of Asset-3 and Asset-4 is considered to be discharged as on COD. After adjustment of excess Initial Spares, the allowable capital cost as on COD is as under: -

(₹ in lakh)

Asset	Capital Cost as on COD after considering IDC & IEDC	Less: Excess Initial Spares as on COD	Less: Un-discharged Initial Spare as on COD	Capital Cost as on COD after considering IDC, IEDC & Initial Spares
Asset-1	63369.68	71.21	173.29	63125.17
Asset-2	951.86	0.00	0.00	951.86
Asset-3	880.09	72.01	0.00	808.07
Asset-4	775.43	29.59	0.00	745.84



### **Additional Capital Expenditure**

53. UPPCL has submitted that the Petitioner has claimed gross additional capitalization of ₹3566.85 lakh during 2009-14 period in case of the aforementioned four assets. UPPCL has further submitted that in case the additional capitalization is on account of unexplained balance and retention payment of ₹3394.45 lakh in case of Asset-1, ₹19.72 lakh in case of Asset-2, ₹100.37 lakh in case of Asset-3 and ₹52.31 lakh in case of Asset-4, item-wise liability discharge statement should be provided for justification of the above amount.

54. BRPL has submitted that the actual/ estimated additional capitalization in case of Asset-1 and Asset-2 is beyond the cut-off period. Therefore, justification for the same is required to be provided in Form-7.

55. We have considered the submissions of the parties. The claim of additional capitalization up to 31.3.2014 falls under Regulation 9(1)(i) of the 2009 Tariff Regulations and hence the same is allowed after allowing IDC and Initial Spare as mentioned below: -

(₹ in lakh)

Asset	Capital Cost as on COD	2013-14				Capital Cost as on 31.03.2014
		Claimed Add-Cap	Add: Allowed IDC on cash basis	Add: Initial Spares discharged	Total Add-Cap Allowed	
Asset-1	63125.17	1333.30	2061.15	71.18	3465.63	66590.80
Asset-2	951.86	2.80	16.92	0.00	19.72	971.58
Asset-3	808.07	75.16	0.00	0.00	75.16	883.23
Asset-4	745.84	35.44	0.00	0.00	35.44	781.28





## **Debt: Equity**

56. Clause 1 and 3 of Regulation 12 of the 2009 Tariff Regulations provides as follows:-

*“(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.*

.....

*(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 modernization expenditure for life extension shall be serviced in the manner specified in clause (1) of this regulation.”*

57. The Petitioner has claimed true up of Annual Fixed Charge based on debt-equity ratio of 70:30 admitted as on COD vide order dated 26.5.2015 in Petition No. 91/TT/2012 for Asset-1 and Asset-2. The debt-equity ratio of 70:30 as on COD for the Asset-1 to 4 is in accordance with the 2009 Tariff Regulations and is considered for the purpose of truing up of the tariff for 2009-14, the details of which are as under:-

(₹ in lakh)

<b>Asset-1</b>	<b>As on COD</b>		<b>As on 31.3.2014</b>	
	<b>Amount</b>	<b>%</b>	<b>Amount</b>	<b>%</b>
Debt	44187.63	70.00	46613.57	70.00
Equity	18937.55	30.00	19977.24	30.00
<b>Total</b>	<b>63125.17</b>	<b>100.00</b>	<b>66590.80</b>	<b>100.00</b>

(₹ in lakh)

<b>Asset-2</b>	<b>As on COD</b>		<b>As on 31.3.2014</b>	
	<b>Amount</b>	<b>%</b>	<b>Amount</b>	<b>%</b>
Debt	666.30	70.00	680.11	70.00
Equity	285.56	30.00	291.47	30.00
<b>Total</b>	<b>951.86</b>	<b>100.00</b>	<b>971.58</b>	<b>100.00</b>



(₹ in lakh)

Asset-3 Particulars	As on COD		As on 31.3.2014	
	Amount	%	Amount	%
Debt	565.65	70.00	618.26	70.00
Equity	242.42	30.00	264.97	30.00
Total	808.07	100.00	883.23	100.00

(₹ in lakh)

Asset-4 Particulars	As on COD		As on 31.3.2014	
	Amount	%	Amount	%
Debt	522.09	70.00	546.90	70.00
Equity	223.75	30.00	234.39	30.00
Total	745.84	100.00	781.28	100.00

### Interest on Loan (IOL)

58. Regulation 16 of the 2009 Tariff Regulations provides the methodology for working out weighted average rate of interest on loan. The Petitioner has submitted the weighted average rate of interest on loan based on its actual loan portfolio and rate of interest.

59. UPPCL has submitted that capital cost of Asset-1 has decreased by ₹56.49 lakh. As against this, AFC has increased by ₹388.07 lakh due to increase in ROE on account of increase in MAT rates. UPPCL has further submitted that weighted average rate of interest approved by the Commission was 9.0259% but the same went down to 9.02%. The Petitioner should offer explanation for increase in IOL from ₹2634.14 lakh to ₹2670.00 lakh especially when the capital cost as well as rate of interest both were reduced. UPPCL has further submitted that the capital cost of Asset-2 has not increased after truing up. ROE has increased from ₹33.35 lakh to ₹37.72 lakh on account of increase in MAT rates. IOL has increased from ₹39.38 lakh to ₹39.68 lakh despite fall in weighted average rate of interest from 9.0663% to



9.06% and the Petitioner should explain the same.

60. In response, the Petitioner vide affidavit dated 14.6.2017 submitted that the Commission vide order dated 26.5.2015 in Petition No. 91/TT/2012 admitted the capital cost of ₹63458.11 lakh as on COD as against the capital cost of ₹65475.35 lakh as per Auditor's certificate after deducting accrued IDC of ₹1971.36 lakh and excess spares of ₹45.88 lakh in case of Asset-1. The Petitioner has clarified that in the petition, accrued IDC of ₹2094.40 lakh was deducted from COD cost and added in the additional capitalization for the period 2013-14 and 2014-15 when the accrued IDC was discharged. The accrued IDC was not deducted as per Auditor's certificate. The Petitioner has submitted that after considering the additional capitalization for the period 2013-14 including the accrued IDC discharged, the total expenditure upto 31.3.2014 is ₹66752.16 lakh and accordingly loan deployed is ₹46726.52 lakh and related IOL is ₹2671.87 lakh which is recorded in Form 13A.

61. With regard to Asset-2, the Petitioner has submitted that the Commission admitted the capital cost of ₹952.61 lakh as on COD after deducting accrued IDC of ₹16.92 lakh as against ₹952.01 lakh as claimed by the Petitioner after deducting accrued IDC of ₹16.92 lakh. The Petitioner has shown accrued IDC of ₹16.92 lakh as deducted from COD and added the same in the additional capitalization for 2013-14 when the accrued IDC was discharged. The Petitioner has clarified that this accrued IDC was not deducted in the additional capitalization as per Auditor's certificate. The Petitioner has submitted that additional capitalization for the period 2013-14 including accrued IDC discharged, the total expenditure up to 31.3.3014 is



₹971.73 lakh and loan deployed is ₹680.21 lakh and related IOL is ₹39.68 lakh which is mentioned in Form 13A.

62. We have considered the submissions of the parties. IOL is considered based on gross amount of loan, repayment of installments, rate of interest and weighted average rate of interest on actual average loan as per the petition. The repayment for the 2009-14 tariff period has been considered to be equal to the depreciation allowed for that period. The weighted average rate of interest on actual average loan is worked out as per Regulation 16 of the 2009 Tariff Regulations on the notional average loan during the year to arrive at the interest on loan. The details of weighted average rate of interest are placed at **Annexure-II to V** and IOL has been worked out and allowed as follows: -

Particulars	(₹ in lakh)			
	Asset-1	Asset-2	Asset-3	Asset-4
	2013-14 (pro-rata)	2013-14 (pro-rata)	2013-14 (pro-rata)	2013-14 (pro-rata)
Gross Normative Loan	44187.63	666.30	565.65	522.09
Cumulative Repayment up to previous year	0.00	0.00	0.00	0.00
Net-Loan opening	44187.63	666.30	565.65	522.09
Addition due to Additional Capitalisation	2425.94	13.80	52.61	24.81
Repayment during the year	2244.36	32.89	26.05	23.48
Net Loan-Closing	44369.20	647.21	592.22	523.41
Average Loan	44278.41	656.76	578.93	522.75
Weighted Average Rate of Interest on Loan	9.0236%	9.0619%	9.0485%	9.0060%
<b>Interest</b>	<b>2660.03</b>	<b>39.62</b>	<b>30.56</b>	<b>27.34</b>

### **Return on Equity (ROE)**

63. Clauses (3), (4) and (5) of Regulation 15 of the 2009 Tariff Regulations provides as under:-



“(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:

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

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 maybe, 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 year during the tariff period shall be trued up in accordance with Regulation 6 of these regulations.”

64. We have considered actual MAT rates of 2013-14 period for working ROE for 2009-14 tariff period. Accordingly, ROE as trued up in accordance with the 2009 Tariff Regulations is as under: -

Particulars	(₹ in lakh)			
	Asset-1 2013-14 (pro-rata)	Asset-2 2013-14 (pro-rata)	Asset-3 2013-14 (pro-rata)	Asset-4 2013-14 (pro-rata)
Opening Equity	18937.55	285.56	242.42	223.75
Addition due to Add Cap	1039.69	5.92	22.55	10.63
Closing Equity	19977.24	291.47	264.97	234.39
Average Equity	19457.39	288.52	253.70	229.07
Return on Equity (Base Rate)	15.50%	<b>15.50%</b>	<b>15.50%</b>	<b>15.50%</b>
Tax rate	20.96%	20.96%	20.96%	20.96%
Rate of Return on Equity (Pre-Tax)	19.610%	19.610%	19.610%	19.610%
<b>Return on Equity (Pre-Tax)</b>	<b>2540.25</b>	<b>37.67</b>	<b>29.02</b>	<b>26.09</b>

### **Depreciation**

65. Clause (42) of Regulation 3 of the 2009 Tariff Regulations defines useful life as follows: -



**“useful life”** in relation to a unit of a generating station and transmission system from the COD shall mean the following, namely:-

.....		
(c)	AC and DC sub-station	25 years
(d)	Hydro generating station	35 years
(e)	Transmission line	35 years”

66. Clause (4) of Regulation 17 of the 2009 Tariff Regulations provides as follows: -

**"17. Depreciation:**

...  
(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.”*

67. Depreciation as worked out in order dated 26.5.2015 in Petition No. 91/TT/2012 for Asset-1 and Asset-2 is in accordance with Regulation 17 of the 2009 Tariff Regulations. The weighted average useful life of the transmission asset has been considered as per Regulations 3(42) and 17(4) of the 2009 Tariff Regulations. For the purpose of calculation, the weighted average useful life of the transmission lines and sub-station has been considered as 35 years and 25 years respectively for the subject assets. The depreciation for the tariff period 2009-14 has been worked out in accordance with Regulation 17 of the 2009 Tariff Regulations based on admitted capital expenditure as under:-

Particulars	(₹ in lakh)			
	Asset-1	Asset-2	Asset-3	Asset-4
	2013-14 (pro-rata)	2013-14 (pro-rata)	2013-14 (pro-rata)	2013-14 (pro-rata)
Opening Gross block	63125.17	951.86	808.07	745.84
Additional Capitalization	3465.63	19.72	75.16	35.44
Gross block at the end of the year	66590.80	971.58	883.23	781.28
Average gross block	64857.99	961.72	845.65	763.56
Rate of Depreciation (%)	5.1978%	5.1374%	5.2800%	5.2952%



Depreciable Value	57615.72	865.55	761.09	687.21
Remaining Depreciable Value	57615.72	865.55	761.09	687.21
<b>Depreciation</b>	<b>2244.36</b>	<b>32.89</b>	<b>26.05</b>	<b>23.48</b>

### **Operation & Maintenance Expenses (O&M Expenses)**

68. The O&M Expenses claimed by the Petitioner for the instant assets for 2009-14 period are as under:-

(₹ in lakh)

<b>Assets</b>	<b>2013-14 (Pro-rata)</b>
Asset-1	305.34
Asset-2	43.64
Asset-3	0.90
Asset-4	38.59

(a) Asset-1 is a D/C transmission line along with associated bays. The line length of the said line is multiplied with the norms of a D/C (Twin Moose). Further, Asset-1 has 2 nos. GIS 400 kV bays at Banala P.S and 2 nos. 400 kV bays at Amritsar end. The O&M Expenses of Asset-1 have accordingly been worked out.

(b) Asset-2 is 80 MVAr 400 kV Bus Reactor. The O&M Expenses of Asset-2 has been worked out considering the norms of 400 kV bays.

(c) Asset-3 and Asset-4 whose COD is 1.9.2013 are Loop Out part of LILO at Parbati-III and Loop In part of LILO at Banala Pooling Station respectively. Both these assets have a D/C line common with other assets i.e. Asset-3 (c-d portion) is having a D/C line common with the portion (b-c) whose COD is 3.11.2015 and Asset-4 portion (e-f) is having a D/C line common with portion (f-g) whose COD is 22.3.2015 and their tariff has been claimed in Petition No. 136/TT/2017.



69. The COD of Asset-3 being 1.9.2013, O&M Expenses are required to be paid to it for S/C line of the D/C portion for the reason that only one circuit (portion c-d) has been put into commercial operation and other circuit has been put into commercial operation on 3.11.2015. Therefore, we have applied S/C norms for this asset from 1.9.2013 to 2.11.2015. From 3.11.2015, when the other S/C circuit of the same D/C line was put into commercial operation, portions of the assets b-c and c-d combined are required to be paid O & M Expenses on the norm of D/C line. Hence from 3.11.2015, the O&M Expenses for Asset-3 shall be taken as half of the norm prescribed for D/C line.

70. We have, therefore, considered O&M Expenses of Asset-3 considering a portion of S/C line as per S/C line norms and for D/C portion, we have considered half of O&M Expenses norms for D/C line after 3.11.2015. From 1.9.2013 to 2.11.2015, O&M Expenses of S/C norms are allowed. Similarly, for Asset-4, we have considered the O&M Expenses after considering a portion of S/C line as per S/C line norms and for D/C portion, we have considered half of O&M Expenses norms for D/C line from 22.3.2015, and from 1.9.2013 to 21.3.2015, S/C norms have been applied for the O&M Expenses.

71. Accordingly, the following O&M Expenses are allowed for the instant assets for 2009-14 period:- (₹ in lakh)

Elements	2013-14 (Pro-rata)
<b>Asset-1</b>	
250.53 km, 400 kV D/C Twin Moose T/L	130.60
400 kV Bays (4 nos.)	174.32
<b>TOTAL</b>	<b>304.92</b>
<b>Asset-2</b>	





400 kV Bays (1 no.)	43.58
<b>Asset-3</b>	
Total S/C on a D/C tower line	0.89
<b>Asset-4</b>	
Total S/C on a D/C tower line	0.41
400 kV Bays (1 no.)	38.02
<b>TOTAL</b>	<b>38.43</b>

### **Interest on Working Capital (“IWC”)**

72. Sub-clause (c) of clause (1) of Regulation 18 of the 2009 Tariff Regulations provides the components of the working capital for the transmission system and clause (3) of Regulation 18 of the 2009 Tariff Regulations provides for the rate of interest of working capital.

73. The Petitioner has submitted the rate of interest on working capital as 13.50% for Assets-1 to 4 for the period from COD to 31.3.2014 as per Clause (3) of Regulation 18 of the 2009 Tariff Regulations and the components of working capital are also considered in accordance with Sub-clause (c) of clause (1) of Regulation 18 of the 2009 Tariff Regulations.

#### **(i) Maintenance Expenses**

Maintenance spares have been worked out based on 15% of Operation and Maintenance expenses specified in Regulation 19.

#### **(ii) O & M Expenses**

O&M expenses have been considered for one month.

#### **(iii) Receivables**

The receivables have been worked out on the basis of 2 months' of annual transmission charges as worked out above.



#### (iv) Rate of Interest on Working Capital

The Rate of Interest on working capital is considered on normative basis in accordance with clause (3) of Regulation 18 of the 2009 Tariff Regulations. SBI Base Rate (9.70%) as on 1.4.2012 Plus 350 Bps i.e. 13.20% has been considered as the rate of interest on working capital.

74. The IWC trued up is as under:-

Particulars	(₹ in lakh)			
	Asset-1 2013-14 (pro-rata)	Asset-2 2013-14 (pro-rata)	Asset-3 2013-14 (pro-rata)	Asset-4 2013-14 (pro-rata)
Maintenance Spares	68.70	9.82	0.23	9.92
O & M expenses	38.17	5.45	0.13	5.51
Receivables	1986.09	39.70	25.28	34.19
Total	2092.96	54.98	25.64	49.63
<b>Interest</b>	<b>183.93</b>	<b>4.83</b>	<b>1.97</b>	<b>3.81</b>

#### Annual Fixed Charges for the 2009-14 Tariff Period

75. The detailed computation of the various components of the trued up annual fixed charges for the assets for the tariff period 2009-14 is summarized below:-

Particulars	(₹ in lakh)			
	Asset-1 (pro-rata)	Asset-2 (pro-rata)	Asset-3 (pro-rata)	Asset-4 (pro-rata)
Depreciation	2244.36	32.89	26.05	23.48
Interest on Loan	2660.03	39.62	30.56	27.34
Return on Equity	2540.25	37.67	29.02	26.09
Interest on Working Capital	183.93	4.83	1.97	3.81
O & M Expenses	304.92	43.58	0.89	38.43
<b>Total</b>	<b>7933.49</b>	<b>158.59</b>	<b>88.49</b>	<b>119.15</b>

#### Determination of Annual Transmission Charges for 2014-19

76. The tariff for the instant transmission assets for 2009-14 tariff period has been trued-up based on the actual COD of individual elements. To avoid multiplicity of petitions and granting multiple tariffs for the assets covered under the single project/



transmission system for 2014-19 tariff period, the Commission, vide Regulation 6 of the 2014 Tariff Regulations, has brought in the concept of a single consolidated petition wherein a single petition is required to be filed in case of all the assets which have been put under commercial operation prior to 31.3.2014 so that a single tariff can be granted for all the assets covered under such a single project/ transmission system. To determine a single transmission tariff for different assets after combining them as per the 2014 Tariff Regulations, the concept of effective date of commercial operation and weighted average life has also been introduced in Regulation 27 of the 2014 Tariff Regulations. The relevant portions of Regulation 6 and Regulation 27 of the 2014 Tariff Regulations are as follows:-

**“6. Tariff determination**

(1) Xxxxxxxx

*Provided that:*

*(i) where all the generating units of a stage of a generating station or all elements of a transmission system have been declared under commercial operation prior to 1.4.2014, the generating company or the transmission licensee, as the case may be, shall file consolidated petition in respect of the entire generating station or transmissions system for the purpose of determination of tariff for the period 2014-15 to 2018-19:*

Xxxxxxxx

Xxxxxxxx

**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.

Xxxxxxxx  
Xxxxxxxx”

**Effective Date of Commercial Operation(E-COD)**

77. The Effective Date of Commercial Operation (E-COD) for the Combined Asset has been worked out based on the admitted capital cost of individual assets as on 31.3.2014 and the actual COD of individual assets. Accordingly, E-COD of the Combined Asset has been worked out as 1.8.2013 as shown below: -

Computation of Effective COD								
Project Name	Asset No.	Asset Description	Actual COD	Admitted Capital Cost as on 31.3.2014	Weight of the cost	No. of days from last COD	Weighted days	Effective COD (Latest COD - Total Weighted days)
Transmission system associated with Parbati-III HEP	Asset-1	400 kV D/C Parbati Pooling Point –Amritsar line along with associates bays	1.8.2013	66590.80	96.19%	31	29.82	1.8.2013
	Asset-2	80 MVAR bus reactor at Parbati Pooling Point along with associated bays,	1.8.2013	971.58	1.40%	31	0.44	
	Asset-3	LILO of 2nd ckt of Parbati-II-Koldam T/L at Pooling station and LILO at Parbati-III (Portion c-d)	1.9.2013	883.23	1.28%	0	0.00	
	Asset-4	LILO of 2nd ckt of Parbati-II-Koldam T/L at Pooling Station along with associated bays and LILO of Parbati-III (Portion e-f)	1.9.2013	781.28	1.13%	0	0.00	
	<b>Total</b>			<b>69226.90</b>	100.00%		30.25	

E-COD has been used to determine the elapsed life (i.e. the no. of completed years)



of the Combined Asset as on 1.4.2014 as 0 year.

**Weighted Average Life (WAL)**

78. The life as defined under Regulation 27 of the 2014 Tariff Regulations has been considered for determination of Weighted Average Life. The project as a whole has multiple elements (i.e. land, building, transmission line, sub-station and PLCC) and each element may have different span of life. Accordingly, useful life of the project as a whole is considered as per the 2014 Tariff Regulations.

79. The Weighted Average Life (WAL) has been determined based on the admitted capital cost of individual elements as on 31.3.2014 and their respective life as provided under the 2014 Tariff Regulations. The element wise life as defined in Tariff Regulations prevailing at the time of actual COD of individual assets has been ignored for this purpose. The life as defined in the 2014 Tariff Regulations has been considered for determination of WAL. Accordingly, WAL of the all the assets executed during 2009-14 tariff period have been worked out as 33 years and the same is as follows:-

<b>Determination of Weighted Average Life of the Project</b>							
<b>Particulars</b>	<b>Admitted Capital Cost as on 31.3.2014</b>				<b>Combined Cost (a)</b>	<b>Life as per 2014 Tariff Regulations (b)</b>	<b>Weight (a) x (b)</b>
	<b>Asset-1</b>	<b>Asset-2</b>	<b>Asset-3</b>	<b>Asset-4</b>			
Freehold Land	840.52	0.00	0.00	0.00	840.52	0	0.00
Leasehold Land	0.00	0.00	0.00	0.00	0.00	25	0.00
Building & Other Civil Works	878.25	71.41	0.00	14.83	964.49	25	24112.17
Transmission Line	55432.48	0.00	883.23	363.00	56678.71	35	1983754.98



Sub-Station Equipment	9132.60	900.17	0.00	362.83	10395.59	25	259889.83
PLCC	306.96	0.00	0.00	40.63	347.59	15	5213.80
<b>Total</b>	<b>66590.80</b>	<b>971.58</b>	<b>883.23</b>	<b>781.28</b>	<b>69226.90</b>	<b>33</b>	<b>2272970.79</b>
<b>Weighted Average life</b>						33 Years	

80. WAL has been used for determining the remaining useful life as on 31.3.2014 to be 33 years.

81. The Petitioner has claimed the transmission charges for Combined Asset for 2014-19 period as under:-

(₹ in lakh)					
Combined Asset	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	3669.17	3730.18	3769.82	3790.66	3790.66
Interest on Loan	4094.85	3840.59	3555.75	3240.61	2897.31
Return on equity	4149.34	4214.04	4261.19	4286.18	4286.18
Interest on Working Capital	302.17	300.11	296.45	291.24	284.36
O & M Expenses	505.90	522.27	538.52	556.36	574.84
<b>Total</b>	<b>12721.43</b>	<b>12607.19</b>	<b>12421.73</b>	<b>12165.05</b>	<b>11833.35</b>

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

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Maintenance Spares	75.89	78.34	80.78	83.45	86.23
O & M expenses	42.16	43.52	44.88	46.36	47.90
Receivables	2120.24	2101.20	2070.29	2027.51	1972.23
<b>Total</b>	<b>2238.29</b>	<b>2223.06</b>	<b>2195.95</b>	<b>2157.32</b>	<b>2106.36</b>
Rate of Interest	13.50%	13.50%	13.50%	13.50%	13.50%

### **Capital Cost**

83. Clauses (1) & (3) of Regulation 9 of the 2014 Tariff Regulations specify as follows:-

**“9 Capital Cost (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.”

“(3) The Capital cost of an existing project shall include the following:

- (a) the capital cost admitted by the Commission prior to 1.4.2014 duly trued up by excluding liability, if any, as on 1.4.2014;
- (b) additional capitalization and de-capitalization for the respective year of tariff as determined in accordance with Regulation 14; and
- (c) expenditure on account of renovation and modernisation as admitted by this Commission in accordance with Regulation 15.”

84. The element-wise capital cost which includes the costs of land, building, transmission line, sub-station and PLCC as on 31.3.2014 as worked out and shown above in respect of all the assets (Assets-1 to 4) is clubbed together. The total of element-wise capital cost of Combined Asset as on 31.3.2014 is ₹69226.90 lakh which has been considered as opening gross block of capital cost as on 1.4.2014 for period 2014-19. The total estimated completion cost of the combined asset as on 31.3.2019 works out to be ₹72569.58 lakh. The total completion cost of the Combined Asset is within its combined revised approved apportioned cost and there is no cost-over-run.

### **Initial Spares**

85. The Petitioner has claimed Initial Spares for Assets-1, 3 and 4 only. Vide affidavits dated 24.8.2017 and 18.3.2020, the Petitioner has indicated the year wise payment made against the initial spares for Assets-1 and the same is as under:-

		(₹ in lakh)				
Particulars		As on COD	2013-14	2014-15	2015-16	Total
Asset-1	T/L	251.87	0.00	54.23	27.98	334.08
	S/S	348.32	71.18	8.19	11.71	439.40



86. As we have observed earlier in this order that the Petitioner has not submitted discharge details of Initial Spares separately of Asset-3 and Asset-4, we have considered the Initial Spares claimed in respect of Asset-3 and Asset-4 to be discharged as on COD.

87. The excess Initial Spares worked out up to 31.3.2016 for each of the instant assets were deducted from the capital cost as on COD and their adjustment is not required to be done during 2014-19 tariff period. Only the discharge of Initial Spares as mentioned below under additional capitalization is required to be included in the additional capital expenditure of the respective year of discharge.

#### **Additional Capital Expenditure**

88. The Petitioner has proposed combined additional capitalization for subject assets for 2014-15, 2015-16 and 2016-17 respectively, towards balance and retention payments and un-discharged liabilities under Clause 1 of Regulation 14 and therefore the same is allowed.

89. Clause 1, sub-clause (i) of Regulation 14 of the 2014 Tariff Regulations provides as follows:-

*“(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) Un-discharged liabilities recognized to be payable at a future date;*

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Clause 3, sub-clause (v) Regulation 14 of the 2014 Tariff Regulations provides as follows:





*“Any liability for works executed prior to the cut-off date, after prudence check of the details of such undischarged liability, total estimated cost of package, reasons for such withholding of payment and release of such payments etc.”*

90. UPPCL has submitted that the Petitioner has claimed additional capitalization of ₹1703.31 in 2014-15, ₹676.41 in 2016-17 and ₹84.42 lakh for 2016-17 without submission of any details thereof.

91. In response, the Petitioner clarified that additional capitalization beyond cut-off date is towards balance and retention payment for TATA and Siemens in relation to contract packages.

92. We have considered the submissions of the Petitioner and Respondent. The Petitioner has claimed add-cap for 2014-15 and 2015-16 under clause 1(i) of Regulation 14 of the 2014 Tariff Regulations and add-cap for 2016-17 is beyond cut-off date claimed under clause 3(v) of Regulation 14 of the 2014 Tariff Regulations.

The allowable add-cap from 1.4.2014 to 31.3.2017 is as follows:-

(₹ in lakh)

Asset	2014-15			
	Claimed Add Cap	Add: Discharged Initial Spares	Add: Balance IDC as on COD	Add Cap Allowed
Asset-1	1538.85	62.42	33.25	1634.52
Asset-2	77.15	0.00	0.00	77.15
Asset-3	0.00	0.00	0.00	0.00
Asset-4	54.06	0.00	0.00	54.06
<b>TOTAL</b>	<b>1670.06</b>	<b>62.42</b>	<b>33.25</b>	<b>1765.73</b>

(₹ in lakh)

Asset	2015-16			2016-17			
	Claimed Add Cap	Add: Discharged Initial Spares	Add: Balance IDC as on COD	Add Cap Allowed	Claimed Add Cap	Add: Discharged Initial Spares	Add cap Allowed
Asset-1	632.84	39.69	11.27	683.80	772.66	0.00	772.66



<b>Asset-2</b>	0.00	0.00	0.15	0.15	0.00	0.00	0.00
<b>Asset-3</b>	37.04	0.00	0.00	37.15	48.29	0.00	48.29
<b>Asset-4</b>	6.54	0.00	0.00	6.64	28.47	0.00	28.47
<b>TOTAL</b>	<b>676.42</b>	<b>39.69</b>	<b>11.42</b>	<b>727.53</b>	<b>849.42</b>	<b>0.00</b>	<b>849.42</b>

93. Accordingly, the combined allowable additional capitalization from 1.4.2014 to 31.3.2017 with completion cost as on 31.3.2017 as worked out is as under:-

(₹ in lakh)				
<b>Combined Admitted Capital Cost as on 1.4.2014</b>	<b>Add Cap during 2014-15</b>	<b>Add Cap During 2015-16</b>	<b>Add Cap during 2016-17</b>	<b>Total Completion Cost up to 31.3.2017/ 31.3.2019</b>
69226.90	1765.73	727.53	849.42	72569.58

94. The allowable additional capital expenditure during the 2014-19 period as mentioned above is shall be reviewed at the time of truing up on submission of audited additional capitalization.

### **Debt:Equity Ratio**

95. Clause 3 of Regulation 19 of the 2014 Tariff Regulations specifies as under:-

*“(3) In case of the generating station and the transmission system declared under commercial operation prior to 1.4.2014, debt-equity ratio allowed by the Commission for determination of tariff for the period ending 31.3.2014 shall be considered.”*

96. The Petitioner has considered debt: equity ratio for all the assets for 2009-14 period 70:30 as on 31.3.2014. The admitted debt: equity ratio of 70:30 after true-up of the tariff period ending on 31.3.2014 has been considered as opening debt: equity ratio as on 1.4.2014. Therefore, the debt-equity ratio for the combined asset as on 1.4.2014 has been allowed as 70:30. The add cap claimed by the Petitioner for combined asset for 2014-19 period is also 70:30 and the same is allowed as under:-

<b>Combined Asset</b>	(₹ in lakh)			
	<b>As on 1.4.2014</b>		<b>As on 31.3.2019</b>	
	<b>Amount</b>	<b>%</b>	<b>Amount</b>	<b>%</b>



Debt	48458.84	70.00	50798.71	70.00
Equity	20768.07	30.00	21770.87	30.00
Total	<b>69226.90</b>	100.00	<b>72569.58</b>	100.00

### **Interest on Loan (IOL)**

97. Clauses (5) and (6) of Regulation 26 of the 2014 Tariff Regulations are reproduced as under:-

*“(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.”*

98. We have considered the weighted average rate of IOL on the basis of rate prevailing as on 1.4.2014. IOL has been worked out in accordance with Regulation 26 of the 2014 Tariff Regulations. The normative loan as on 1.4.2014 for the combined asset has been worked out by deducting the cumulative repayment of individual asset as admitted by the Commission up to 31.3.2014 from the gross normative loan of individual assets. The details of weighted average rate of interest are placed at **Annexure-VI** and the IOL has been worked out and allowed as follows:-

Particulars	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Gross loan opening	48458.84	49694.85	50204.12	50798.71	50798.71
Cumulative Repayment upto COD/previous year	2326.79	5968.37	9673.96	13418.55	17183.98
Net Loan-Opening	46132.05	43726.47	40530.16	37380.16	33614.73
Additions during the year	1236.01	509.27	594.59	0.00	0.00



Repayment during the year	3641.59	3705.59	3744.59	3765.43	3765.43
Net Loan-Closing	43726.47	40530.16	37380.16	33614.73	29849.30
Average Loan	44929.26	42128.31	38955.16	35497.45	31732.01
Rate of Interest	9.04%	9.05%	9.06%	9.06%	9.06%
<b>Interest</b>	<b>4062.47</b>	<b>3811.70</b>	<b>3528.26</b>	<b>3215.41</b>	<b>2874.39</b>

### **Return on Equity (ROE)**

99. Clauses (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”

**“25. Tax on Return on Equity:**

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

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

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

100. The Petitioner has submitted ROE at the rate of 19.610% after grossing up the ROE of 15.50% with MAT rate as per the above regulation. 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.

101. BRPL has submitted that the Petitioner is claiming MAT even for Asset-3 and Asset-4 which were executed during 2014-19 period. The Petitioner is required to



supply information since when the Petitioner intends to avail benefits of tax holidays under Section 80IA of the Income Tax Act, 1961 in respect of this new transmission project.

102. In response, the Petitioner has submitted that tax benefits under Section 80 IA of Income Tax Act, 1961 are availed by them for computing normal income tax. The Petitioner under Section 115JB of Income Tax Act, 1961 is liable for payment of Minimum Alternate Tax (MAT) @18.5 plus surcharge and cess. The Petitioner has submitted that under Regulation 25(3) of 2014 Tariff Regulations any over/under recovery of grossed up rate on RoE is adjusted at the time of truing up based on actual tax paid including interest and additional demand by IT authorities.

103. We have considered the submissions made by the Petitioner and Respondent. The gross normative equity as on 31.3.2014 of individual asset as admitted has been considered as gross normative equity of the Combined Asset as on 1.4.2014. 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 base rate of return on equity as allowed i.e. 15.50% has been grossed up with the applicable MAT rate of 20.961% during 2013-14 and considered for the purpose of return on equity, which shall be trued up with actual tax rate in



accordance with Regulation 25(3) of the 2014 Tariff Regulations. Accordingly, the ROE allowed is as under:-

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Equity	20768.07	21297.78	21516.04	21770.87	21770.87
Addition due to Additional	529.72	218.26	254.83	0.00	0.00
Closing Equity	21297.78	21516.04	21770.87	21770.87	21770.87
Average Equity	21032.92	21406.91	21643.46	21770.87	21770.87
Return on Equity (Base Rate) (%)	15.50%	15.50%	15.50%	15.50%	15.50%
Tax rate for the respective years	20.961%	20.961%	20.961%	20.961%	20.961%
Rate of Return on Equity (Pre Tax)	19.610%	19.610%	19.610%	19.610%	19.610%
<b>Return on Equity (Pre Tax)</b>	<b>4124.56</b>	<b>4197.90</b>	<b>4244.28</b>	<b>4269.27</b>	<b>4269.27</b>

### **Depreciation**

104. Clauses (2), (5) and (6) of Regulation 27 of the 2014 Tariff Regulations provide as follows:-

**"27. Depreciation:**

*(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"*

*"(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."*

105. The effective date of commercial operation of Combined Asset is 1.8.2013 and



weighted average useful life of 33 years has been considered in accordance with Regulation 26 of the 2014 Tariff Regulations considering actual COD and capital cost of all the elements of the transmission system for working out the depreciation for Combined Asset.

106. We have considered the submissions of the Petitioner. We have considered the cumulative depreciation for the combined asset as whole and the same as on 1.4.2014 is as under:-

(₹ in lakh)					
Asset	1	2	3	4	Total
Cumulative Depreciation	2244.36	32.89	26.05	23.48	<b>2326.79</b>

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

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Gross block	69226.90	70992.63	71720.16	72569.58	72569.58
Additional Capitalization	1765.73	727.53	849.42	0.00	0.00
Gross block at the end of the year	70992.63	71720.16	72569.58	72569.58	72569.58
Average gross block	70109.77	71356.40	72144.87	72569.58	72569.58
Rate of Depreciation (%)	5.1941%	5.1931%	5.1904%	5.1887%	5.1887%
Depreciable Value	62342.32	63464.29	64173.92	64556.15	64556.15
Remaining Depreciable Value	60015.53	57495.91	54499.95	51137.60	47372.17
<b>Depreciation</b>	<b>3641.59</b>	<b>3705.59</b>	<b>3744.59</b>	<b>3765.43</b>	<b>3765.43</b>

### **Operation & Maintenance Expenses (O&M Expenses)**

108. The Petitioner has computed normative O&M Expenses as per sub-clause of clause (3) of Regulation 29 of the 2014 Tariff Regulations. In the truing up portion of O & M Expenses of this order we have explained as to how we have worked out the O&M Expenses for the assets in the present petition. In terms of Regulation 29(4)(a)



of the 2014 Tariff Regulation the normative operation and maintenance expenses are as under:-

(₹ in lakh/ km/ bay)					
Particular	2014-15	2015-16	2016-17	2017-18	2018-19
400 kV D/C Twin Moose	0.707	0.731	0.755	0.78	0.806
400 kV D/C Quad Moose	1.062	1.097	1.133	1.171	1.21
400 kV Bay	60.30	62.30	64.37	66.51	68.71
400 kV GIS Bay	51.54	53.25	55.02	56.84	58.73

109. The O&M Expenses for 2014-19 tariff period have been worked on the analogy as discussed in truing up portion. Accordingly, the O&M Expenses allowed for the instant assets are as under:-

(₹ in lakh)					
Particular	2014-15	2015-16	2016-17	2017-18	2018-19
<b>Asset-1</b>					
400 kV D/C (Twin Moose)	177.12	183.14	189.15	195.41	201.93
400 kV Bays (2 nos. GIS & 2 nos. Conventional)	223.68	231.10	238.78	246.70	254.88
<b>Total</b>	<b>400.80</b>	<b>414.24</b>	<b>427.93</b>	<b>442.11</b>	<b>456.81</b>
<b>Asset-2</b>					
400 kV Bays	51.54	53.25	55.02	56.84	58.73
<b>Asset-3</b>					
Total S/C from 1.9.2013 to 2.11.2015	1.39	0.85	0.00	0.00	0.00
S/C on a D/C tower (D/C / 2) from 3.11.2015	0.00	0.48	1.21	1.26	1.30
S/C from 3.11.2015	0.00	0.04	0.10	0.10	0.10
<b>Total</b>	<b>1.39</b>	<b>1.37</b>	<b>1.31</b>	<b>1.35</b>	<b>1.40</b>
<b>Asset-4</b>					
Total S/C from 1.9.2013 to 21.3.2015	0.61	0.00	0.00	0.00	0.00
S/C on a D/C	0.01	0.22	0.23	0.23	0.24





tower (D/C / 2) from 22.3.2015					
S/C from 22.3.2015	0.01	0.40	0.41	0.43	0.44
400 kV Bays	51.54	53.25	55.02	56.84	58.73
<b>Total</b>	<b>52.17</b>	<b>53.87</b>	<b>55.66</b>	<b>57.50</b>	<b>59.41</b>
<b>Total O&amp;M Expenses for Combined Asset (Assets-I, II, III and IV).</b>	<b>505.90</b>	<b>522.73</b>	<b>539.92</b>	<b>557.81</b>	<b>576.35</b>

110. The Petitioner has submitted that norms for O&M Expenses for the tariff period 2014-19 have been arrived on the basis of normalized actual O&M Expenses during the period 2008-13. The Petitioner has further submitted that the wage revision of the employees of the Petitioner is due during the 2014-19 tariff period and actual impact of wage hike, which will be effective at a future date, has not been factored in fixation of the normative O&M rate specified for the tariff period 2014-19. The Petitioner has prayed for suitable revision in the norms of O&M Expenses for claiming the impact of such increase.

### **Interest on Working Capital (“IWC”)**

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

**“28. Interest on Working Capital**

(c)(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”*

*“(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;”

112. The Petitioner has submitted that it has computed IWC for the tariff period 2014-19 considering the SBI Base Rate as on 1.4.2014 plus 350 basis points. The rate of IWC considered is 13.50%.

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

Particulars	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Maintenance Spares	75.89	78.41	80.99	83.67	86.42
O & M Expenses	42.16	43.56	44.99	46.48	48.01
Receivables	2105.79	2089.41	2058.66	2016.28	1961.36
Total	2223.83	2211.38	2184.64	2146.44	2095.80
Interest	300.22	298.54	294.93	289.77	282.93

### **Annual Transmission Charges**

114. The detailed computation of various components of the annual fixed charges for the combined transmission asset considering effective COD 1.8.2013 for the tariff period 2014-19 is summarized below:-

Particulars	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	3641.59	3705.59	3744.59	3765.43	3765.43
Interest on Loan	4062.47	3811.70	3528.26	3215.41	2874.39
Return on Equity	4124.56	4197.90	4244.28	4269.27	4269.27
Interest on Working Capital	300.22	298.54	294.93	289.77	282.93
O & M Expenses	505.90	522.73	539.92	557.81	576.15
<b>Total</b>	<b>12634.73</b>	<b>12536.45</b>	<b>12351.98</b>	<b>12097.69</b>	<b>11768.17</b>

### **Filing Fee and Publication Expenses**

115. 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 is 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.

### **License Fee and RLDC Fees and Charges**

116. The Petitioner has requested to allow it to bill and recover license fee and RLDC fees and charges, separately from the Respondents. The Petitioner shall be entitled for reimbursement of licence fee and RLDC fees and charges in accordance with clause (2)(b) and (2)(a), respectively, of Regulation 52 of the 2014 Tariff Regulations.

### **Service Tax**

117. The Petitioner has sought to recover Service Tax on transmission charges separately from the respondents, if at any time service tax on transmission is withdrawn from negative list in future. We are of the view that the Petitioner's prayer is premature.

### **Sharing of Transmission Charges**

118. The Transmission charges for the instant Asset-1 and Asset-2 from 1.8.2013 to 23.3.2014, i.e. 400 kV D/C Amritsar – Banala PS line alongwith its associated bays and 400 kV, 80 MVar Bus Reactor at Banala PS respectively, shall be paid by NHPC in terms of Regulation 8(6) of Central Electricity Regulatory Commission (Sharing of Inter-state Transmission Charges and Losses) Regulations, 2010. The



transmission charges from 24.3.2014 onwards in respect of the said Asset-1 and Asset-2 would be included in POC charges. The above arrangement of sharing is based on the Commission's order dated 26.5.2015 in Petition No. 91/TT/2012.

119. Further, in terms of Commission's order dated 7.9.2016 in Review Petition No. 19/RP/2015 in Petition No. 91/TT/2012 , the transmission charges of instant Asset-3 and Asset-IV, i.e. LILO of 400 kV Parbati-II-Koldam line Ckt-II at Parbati-III alongwith associated bays (c-d portion) and LILO of 400 kV Parbati-III-Koldam at Parbati Pooling Point alongwith associated bays (e-f portion) respectively whose COD is 1.9.2013, shall be paid by NHPC w.e.f. 1.9.2013 to the COD of Parbati-III HEP. Thereafter, the transmission charges would be included in POC charges and shall be recovered on monthly basis in accordance with Regulation 43 of Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 and shall be shared by the beneficiaries and long term transmission customers in Central Electricity Regulatory Commission (Sharing of Inter State Transmission Charges and Losses) Regulations, 2010.

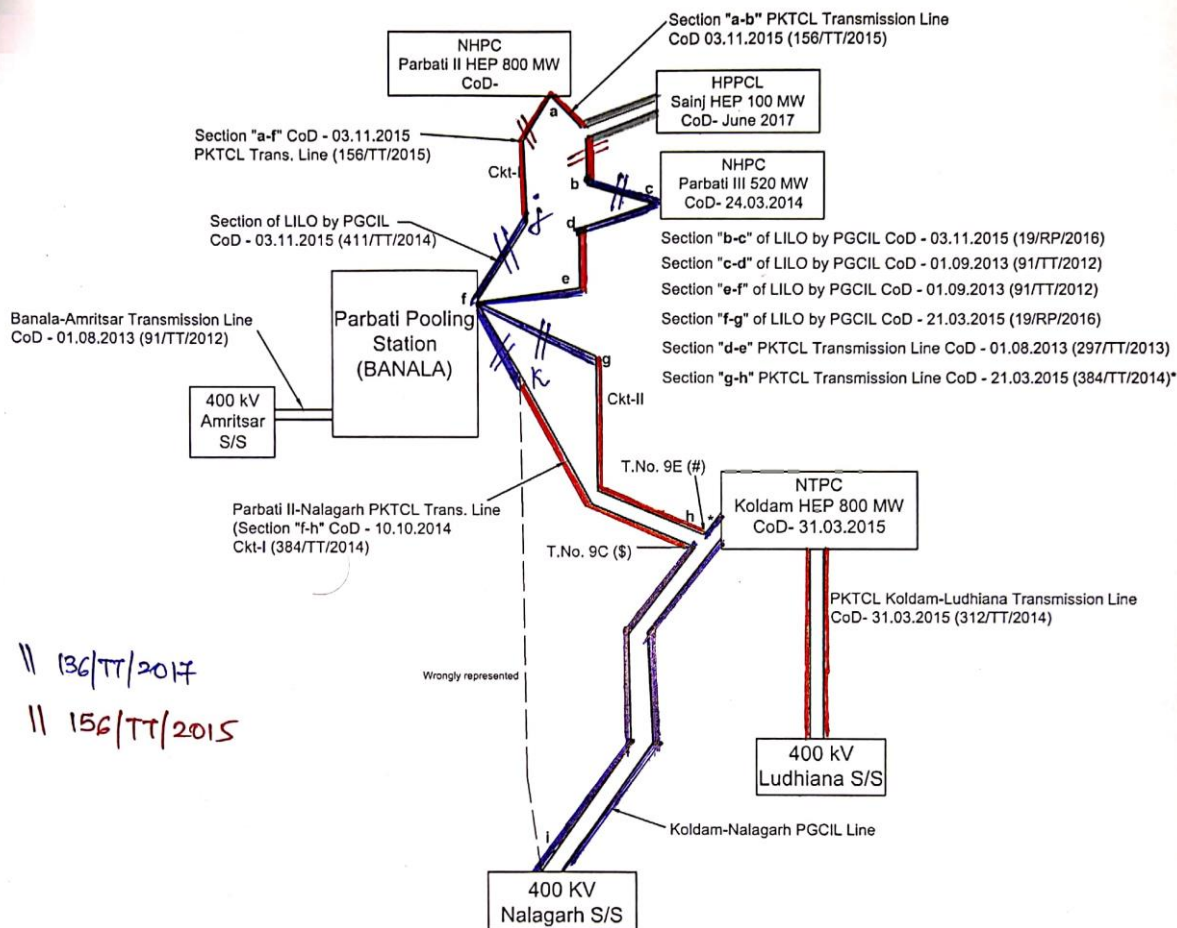
120. This order disposes of Petition No. 107/TT/2017.

sd/-  
**(I. S. Jha)**  
**Member**

sd/-  
**(P. K. Pujari)**  
**Chairperson**



**The Schematic diagram describing transmission system constructed by PKTCL**



**Power Evacuation System for Koldam-Parbati II and Parbati III HEP**

**LEGEND:**

- PGCIL Lines
- PKTCL Lines
- HPPCL Lines
- Wrongly represented

\* Section of Koldam-Nalagarh Line of PGCIL CoD 01.04.2011 (2/TT/2011)

\$ Ckt-I "f-h" connected at Tower 9C of Koldam-Nalagarh Line of PGCIL forming Banala-Nalagarh section.

# Ckt-II "g-h" connected at Tower 9E of Koldam-Nalagarh Line of PGCIL forming Banala-Koldam section.



**Annexure-II**

<b>CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN</b>		
		<b>(₹ in lakh)</b>
	<b>Details of Loan</b>	<b>2013-14</b>
<b>1</b>	<b>Bond XLV - COD</b>	
	Gross loan opening	1086.00
	Cumulative Repayment upto COD/previous year	0.00
	Net Loan-Opening	1086.00
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	1086.00
	Average Loan	1086.00
	Rate of Interest	9.65%
	Interest	<b>104.80</b>
	Rep Schedule	12 annual instalments from 28.2.2018
<b>2</b>	<b>Bond XXX</b>	
	Gross loan opening	9057.00
	Cumulative Repayment upto COD/previous year	0.00
	Net Loan-Opening	9057.00
	Additions during the year	0.00
	Repayment during the year	754.75
	Net Loan-Closing	8302.25
	Average Loan	8679.63
	Rate of Interest	8.80%
	Interest	763.81
	Rep Schedule	12 annual instalments from 29.9.2013
<b>3</b>	<b>Bond XXXI</b>	
	Gross loan opening	4483.00
	Cumulative Repayment upto COD/previous year	0.00
	Net Loan-Opening	4483.00
	Additions during the year	0.00
	Repayment during the year	373.58
	Net Loan-Closing	4109.42
	Average Loan	4296.21
	Rate of Interest	8.90%
	Interest	382.36
	Rep Schedule	12 annual instalments from 25.2.2014
<b>4</b>	<b>Bond XLV - Add Cap (2013-14)</b>	
	Gross loan opening	0.00
	Cumulative Repayment upto COD/previous year	0.00
	Net Loan-Opening	0.00



	Additions during the year	1918.59
	Repayment during the year	0.00
	Net Loan-Closing	1918.59
	Average Loan	959.30
	Rate of Interest	9.65%
	Interest	92.57
	Rep Schedule	12 annual instalments from 28.2.2018
<b>5</b>	<b>Bond XXXIII</b>	
	Gross loan opening	5600.00
	Cumulative Repayment upto COD/previous year	0.00
	Net Loan-Opening	5600.00
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	5600.00
	Average Loan	5600.00
	Rate of Interest	8.64%
	Interest	483.84
	Rep Schedule	12 annual instalments from 8.7.2014
<b>6</b>	<b>Bond XXXIV</b>	
	Gross loan opening	2540.00
	Cumulative Repayment upto COD/previous year	0.00
	Net Loan-Opening	2540.00
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	2540.00
	Average Loan	2540.00
	Rate of Interest	8.84%
	Interest	224.54
	Rep Schedule	12 annual instalments from 21.10.2014
<b>7</b>	<b>Bond XXXV</b>	
	Gross loan opening	1050.00
	Cumulative Repayment upto COD/previous year	0.00
	Net Loan-Opening	1050.00
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	1050.00
	Average Loan	1050.00
	Rate of Interest	9.64%
	Interest	101.22
	Rep Schedule	12 annual instalments from 31.5.2015.
<b>8</b>	<b>Bond XXXVI</b>	
	Gross loan opening	5050.00



	Cumulative Repayment upto COD/previous year	0.00
	Net Loan-Opening	5050.00
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	5050.00
	Average Loan	5050.00
	Rate of Interest	9.35%
	Interest	472.18
	Rep Schedule	15 annual instalments from 29.08.2016.
<b>9</b>	<b>Bond XXXVII</b>	
	Gross loan opening	<b>1996.00</b>
	Cumulative Repayment upto COD/previous year	<b>0.00</b>
	Net Loan-Opening	1996.00
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	1996.00
	Average Loan	1996.00
	Rate of Interest	9.25%
	Interest	184.63
	Rep Schedule	12 annual instalments from 26.12.2015.
<b>10</b>	<b>Bond XL</b>	
	Gross loan opening	1516.71
	Cumulative Repayment upto COD/previous year	0.00
	Net Loan-Opening	1516.71
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	1516.71
	Average Loan	1516.71
	Rate of Interest	9.30%
	Interest	141.05
	Rep Schedule	12 annual instalments from 28.6.2016
<b>11</b>	<b>Bond XLII</b>	
	Gross loan opening	2089.09
	Cumulative Repayment upto COD/previous year	0.00
	Net Loan-Opening	2089.09
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	2089.09
	Average Loan	2089.09
	Rate of Interest	8.80%
	Interest	183.84
	Rep Schedule	Bullet Payment as on 13.3.2023
<b>12</b>	<b>Bond XLIII</b>	





	Gross loan opening	895.00
	Cumulative Repayment upto COD/previous year	0.00
	Net Loan-Opening	895.00
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	895.00
	Average Loan	895.00
	Rate of Interest	7.93%
	Interest	70.97
	Rep Schedule	12 annual instalments from 20.5.2017
<b>13</b>	<b>Bond XXVIII</b>	
	Gross loan opening	4400.00
	Cumulative Repayment upto COD/previous year	366.67
	Net Loan-Opening	4033.33
	Additions during the year	0.00
	Repayment during the year	366.67
	Net Loan-Closing	3666.67
	Average Loan	3850.00
	Rate of Interest	9.33%
	Interest	359.21
	Rep Schedule	12 annual instalments from 15.12.2012
<b>14</b>	<b>Bond XXIX</b>	
	Gross loan opening	4366.00
	Cumulative Repayment upto COD/previous year	363.83
	Net Loan-Opening	4002.17
	Additions during the year	0.00
	Repayment during the year	363.83
	Net Loan-Closing	3638.33
	Average Loan	3820.25
	Rate of Interest	9.20%
	Interest	351.46
	Rep Schedule	12 annual instalments from 12.3.2013
<b>15</b>	<b>Bond XLI</b>	
	Gross loan opening	224.60
	Cumulative Repayment upto COD/previous year	0.00
	Net Loan-Opening	224.60
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	224.60
	Average Loan	224.60
	Rate of Interest	8.85%
	Interest	19.88



	Rep Schedule	12 annual instalments from 19.10.2016
<b>16</b>	<b>SBI (21.03.2012) - Addcap</b>	
	Gross loan opening	0.00
	Cumulative Repayment upto COD/previous year	0.00
	Net Loan-Opening	0.00
	Additions during the year	457.53
	Repayment during the year	0.00
	Net Loan-Closing	457.53
	Average Loan	228.77
	Rate of Interest	10.21%
	Interest	23.36
	Rep Schedule	22 half yearly instalment from 31.8.2016
	<b>Total Loan</b>	
	Gross loan opening	44353.40
	Cumulative Repayment upto COD/previous year	730.50
	Net Loan-Opening	43622.90
	Additions during the year	2376.12
	Repayment during the year	1858.83
	Net Loan-Closing	44140.19
	Average Loan	43881.54
	Rate of Interest	<b>9.0236%</b>
	<b>Interest</b>	3959.71



**Annexure-III**

<b>CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN</b>		
		(₹ in lakh)
	<b>Details of Loan</b>	<b>2013-14</b>
<b>1</b>	<b>Bond XLV - COD</b>	
	Gross loan opening	0.00
	Cumulative Repayment upto COD/previous year	0.00
	Net Loan-Opening	0.00
	Additions during the year	1.96
	Repayment during the year	0.00
	Net Loan-Closing	1.96
	Average Loan	0.98
	Rate of Interest	9.65%
	Interest	<b>0.09</b>
	Rep Schedule	12 annual instalments from 28.2.2018
<b>2</b>	<b>Bond XLII</b>	
	Gross loan opening	216.41
	Cumulative Repayment upto COD/previous year	0.00
	Net Loan-Opening	216.41
	Additions during the year	7.23
	Repayment during the year	0.00
	Net Loan-Closing	223.64
	Average Loan	220.03
	Rate of Interest	8.80%
	Interest	19.36
	Rep Schedule	Bullet Payment as on 13.3.2023
<b>3</b>	<b>Bond XXIX</b>	
	Gross loan opening	450.00
	Cumulative Repayment upto COD/previous year	37.50
	Net Loan-Opening	412.50
	Additions during the year	0.00
	Repayment during the year	37.50
	Net Loan-Closing	375.00
	Average Loan	393.75
	Rate of Interest	9.20%
	Interest	36.23
	Rep Schedule	12 annual instalments from 12.3.2013
<b>4</b>	<b>SBI (21.3.2012) - Addcap</b>	
	Gross loan opening	0.00
	Cumulative Repayment upto COD/previous year	0.00
	Net Loan-Opening	0.00
	Additions during the year	4.60
	Repayment during the year	0.00



Net Loan-Closing	4.60
Average Loan	2.30
Rate of Interest	10.21%
Interest	0.23
Rep Schedule	22 half yearly instalment from 31.8.2016
<b>Total Loan</b>	
Gross loan opening	666.41
Cumulative Repayment upto COD/previous year	37.50
Net Loan-Opening	628.91
Additions during the year	13.79
Repayment during the year	37.50
Net Loan-Closing	605.20
Average Loan	617.06
Rate of Interest	<b>9.0619%</b>
<b>Interest</b>	55.92



**Annexure-IV**

<b>CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN</b>		
		(₹ in lakh)
	<b>Details of Loan</b>	<b>2013-14</b>
<b>1</b>	<b>Bond XLV</b>	
	Gross loan opening	0.00
	Cumulative Repayment upto COD/previous year	0.00
	Net Loan-Opening	0.00
	Additions during the year	52.61
	Repayment during the year	0.00
	Net Loan-Closing	52.61
	Average Loan	26.31
	Rate of Interest	9.65%
	Interest	<b>2.54</b>
	Rep Schedule	12 annual instalments from 28.2.2018
<b>2</b>	<b>Bond XLII</b>	
	Gross loan opening	271.00
	Cumulative Repayment upto COD/previous year	0.00
	Net Loan-Opening	271.00
	Additions during the year	3.99
	Repayment during the year	0.00
	Net Loan-Closing	274.99
	Average Loan	273.00
	Rate of Interest	8.80%
	Interest	24.02
	Rep Schedule	Bullet Payment as on 13.3.2023
<b>3</b>	<b>Bond XLIII</b>	
	Gross loan opening	0.00
	Cumulative Repayment upto COD/previous year	0.00
	Net Loan-Opening	0.00
	Additions during the year	13.65
	Repayment during the year	0.00
	Net Loan-Closing	13.65
	Average Loan	6.83
	Rate of Interest	7.93%
	Interest	0.54
	Rep Schedule	12 annual instalments from 20.5.2017
<b>4</b>	<b>Bond XXIX</b>	
	Gross loan opening	450.00
	Cumulative Repayment upto COD/previous year	37.50
	Net Loan-Opening	412.50
	Additions during the year	0.00
	Repayment during the year	37.50
	Net Loan-Closing	375.00



Average Loan	393.75
Rate of Interest	9.20%
Interest	36.23
Rep Schedule	12 annual instalments from 12.3.2013
<b>Total Loan</b>	
Gross loan opening	721.00
Cumulative Repayment upto COD/previous year	37.50
Net Loan-Opening	683.50
Additions during the year	70.25
Repayment during the year	37.50
Net Loan-Closing	716.25
Average Loan	699.88
Rate of Interest	<b>9.0485%</b>
<b>Interest</b>	63.33



**Annexure-V**

<b>CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN</b>		
		<b>(₹ in lakh)</b>
	<b>Details of Loan</b>	<b>2013-14</b>
<b>1</b>	<b>Bond XLV (Addcap)</b>	
	Gross loan opening	0.00
	Cumulative Repayment upto COD/previous year	0.00
	Net Loan-Opening	0.00
	Additions during the year	24.81
	Repayment during the year	0.00
	Net Loan-Closing	24.81
	Average Loan	12.41
	Rate of Interest	9.65%
	Interest	<b>1.20</b>
	Rep Schedule	12 annual instalments from 28.2.2018
<b>2</b>	<b>Bond XLII</b>	
	Gross loan opening	200.00
	Cumulative Repayment upto COD/previous year	0.00
	Net Loan-Opening	200.00
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	200.00
	Average Loan	200.00
	Rate of Interest	8.80%
	Interest	17.60
	Rep Schedule	Bullet Payment as on 13.3.2023
<b>3</b>	<b>Bond XLIII</b>	
	Gross loan opening	27.91
	Cumulative Repayment upto COD/previous year	0.00
	Net Loan-Opening	27.91
	Additions during the year	11.80
	Repayment during the year	0.00
	Net Loan-Closing	39.71
	Average Loan	33.81
	Rate of Interest	7.93%
	Interest	2.68
	Rep Schedule	12 annual instalments from 20.5.2017
<b>4</b>	<b>Bond XXIX</b>	
	Gross loan opening	410.00
	Cumulative Repayment upto COD/previous year	34.17
	Net Loan-Opening	375.83
	Additions during the year	0.00
	Repayment during the year	34.17



Net Loan-Closing		341.67
Average Loan		358.75
Rate of Interest		9.20%
Interest		33.01
Rep Schedule		12 annual instalments from 12.3.2013
<b>Total Loan</b>		
Gross loan opening		637.91
Cumulative Repayment upto COD/previous year		34.17
Net Loan-Opening		603.74
Additions during the year		36.61
Repayment during the year		34.17
Net Loan-Closing		606.19
Average Loan		604.97
Rate of Interest		<b>9.0060%</b>
<b>Interest</b>		54.48





**Annexure-VI**

<b>CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN</b>						
(₹ in lakh)						
	<b>Details of Loan</b>	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
<b>1</b>	<b>Bond XXVIII</b>					
	Gross loan opening	4400.00	<b>4400.00</b>	<b>4400.00</b>	<b>4400.00</b>	<b>4400.00</b>
	Cumulative Repayment upto COD/previous year	733.33	<b>1100.00</b>	<b>1466.67</b>	<b>1833.33</b>	<b>2200.00</b>
	Net Loan-Opening	3666.67	3300.00	2933.33	2566.67	2200.00
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	366.67	366.67	366.67	366.67	366.67
	Net Loan-Closing	3300.00	2933.33	2566.67	2200.00	1833.33
	Average Loan	3483.33	3116.67	2750.00	2383.33	2016.67
	Rate of Interest	9.33%	9.33%	9.33%	9.33%	9.33%
	Interest	325.00	290.79	256.58	222.37	188.16
	Rep Schedule	12 annual instalments from 15.12.2012				
<b>2</b>	<b>Bond XXIX</b>					
	Gross loan opening	5676.00	<b>5676.00</b>	<b>5676.00</b>	<b>5676.00</b>	<b>5676.00</b>
	Cumulative Repayment upto COD/previous year	946.00	<b>1419.00</b>	<b>1892.00</b>	<b>2365.00</b>	<b>2838.00</b>
	Net Loan-Opening	4730.00	4257.00	3784.00	3311.00	2838.00
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	473.00	473.00	473.00	473.00	473.00
	Net Loan-Closing	4257.00	3784.00	3311.00	2838.00	2365.00
	Average Loan	4493.50	4020.50	3547.50	3074.50	2601.50
	Rate of Interest	9.20%	9.20%	9.20%	9.20%	9.20%
	Interest	413.40	369.89	326.37	282.85	239.34
	Rep Schedule	12 annual instalments from 12.3.2013				
<b>3</b>	<b>Bond XXX</b>					
	Gross loan opening	9057.00	<b>9057.00</b>	<b>9057.00</b>	<b>9057.00</b>	<b>9057.00</b>
	Cumulative Repayment upto COD/previous year	754.75	<b>1509.50</b>	<b>2264.25</b>	<b>3019.00</b>	<b>3773.75</b>
	Net Loan-Opening	8302.25	7547.50	6792.75	6038.00	5283.25
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	754.75	754.75	754.75	754.75	754.75
	Net Loan-Closing	7547.50	6792.75	6038.00	5283.25	4528.50
	Average Loan	7924.88	7170.13	6415.38	5660.63	4905.88
	Rate of Interest	8.80%	8.80%	8.80%	8.80%	8.80%
	Interest	697.39	630.97	564.55	498.14	431.72
	Rep Schedule	12 annual instalments from 29.9.2013				
<b>4</b>	<b>Bond XXXI</b>					
	Gross loan opening	4483.00	<b>4483.00</b>	<b>4483.00</b>	<b>4483.00</b>	<b>4483.00</b>
	Cumulative Repayment upto COD/previous year	373.58	<b>747.17</b>	<b>1120.75</b>	<b>1494.33</b>	<b>1867.92</b>
	Net Loan-Opening	4109.42	3735.83	3362.25	2988.67	2615.08



	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	373.58	373.58	373.58	373.58	373.58
	Net Loan-Closing	3735.83	3362.25	2988.67	2615.08	2241.50
	Average Loan	3922.63	3549.04	3175.46	2801.88	2428.29
	Rate of Interest	8.90%	8.90%	8.90%	8.90%	8.90%
	Interest	349.11	315.86	282.62	249.37	216.12
	Rep Schedule	12 annual instalments from 25.2.2014				
<b>5</b>	<b>Bond XXXIII</b>					
	Gross loan opening	5600.00	<b>5600.00</b>	<b>5600.00</b>	<b>5600.00</b>	<b>5600.00</b>
	Cumulative Repayment upto COD/previous year	0.00	<b>466.67</b>	<b>933.33</b>	<b>1400.00</b>	<b>1866.67</b>
	Net Loan-Opening	5600.00	5133.33	4666.67	4200.00	3733.33
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	466.67	466.67	466.67	466.67	466.67
	Net Loan-Closing	5133.33	4666.67	4200.00	3733.33	3266.67
	Average Loan	5366.67	4900.00	4433.33	3966.67	3500.00
	Rate of Interest	8.64%	8.64%	8.64%	8.64%	8.64%
	Interest	463.68	423.36	383.04	342.72	302.40
	Rep Schedule	12 annual instalments from 8.7.2014				
<b>6</b>	<b>Bond XXXIV</b>					
	Gross loan opening	2540.00	<b>2540.00</b>	<b>2540.00</b>	<b>2540.00</b>	<b>2540.00</b>
	Cumulative Repayment upto COD/previous year	0.00	<b>211.67</b>	<b>423.33</b>	<b>635.00</b>	<b>846.67</b>
	Net Loan-Opening	2540.00	2328.33	2116.67	1905.00	1693.33
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	211.67	211.67	211.67	211.67	211.67
	Net Loan-Closing	2328.33	2116.67	1905.00	1693.33	1481.67
	Average Loan	2434.17	2222.50	2010.83	1799.17	1587.50
	Rate of Interest	8.84%	8.84%	8.84%	8.84%	8.84%
	Interest	215.18	196.47	177.76	159.05	140.34
	Rep Schedule	12 annual instalments from 21.10.2014				
<b>7</b>	<b>SBI (21.3.2012) - Addcap</b>					
	Gross loan opening	462.13	<b>485.40</b>	<b>485.40</b>	<b>485.40</b>	<b>485.40</b>
	Cumulative Repayment upto COD/previous year	0.00	<b>0.00</b>	<b>0.00</b>	<b>44.13</b>	<b>88.25</b>
	Net Loan-Opening	462.13	485.40	485.40	441.27	397.15
	Additions during the year	23.27	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	44.13	44.13	44.13
	Net Loan-Closing	485.40	485.40	441.27	397.15	353.02
	Average Loan	473.77	485.40	463.34	419.21	375.08
	Rate of Interest	10.25%	10.25%	10.25%	10.25%	10.25%
	Interest	48.56	49.75	47.49	42.97	38.45
	Rep Schedule	22 half yearly instalment from 31.8.2016				
<b>8</b>	<b>SBI (2014-15)</b>					
	Gross loan opening	0.00	<b>0.00</b>	<b>442.99</b>	<b>442.99</b>	<b>442.99</b>
	Cumulative Repayment upto COD/previous year	0.00	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
	Net Loan-Opening	0.00	0.00	442.99	442.99	442.99



	Additions during the year	0.00	442.99	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	0.00	0.00
	Net Loan-Closing	0.00	442.99	442.99	442.99	442.99
	Average Loan	0.00	221.50	442.99	442.99	442.99
	Rate of Interest	10.25%	10.25%	10.25%	10.25%	10.25%
	Interest	0.00	22.70	45.41	45.41	45.41
	Rep Schedule	20 half yearly instalment from 15.6.2019				
<b>9</b>	<b>Bond XXXV</b>					
	Gross loan opening	1050.00	<b>1050.00</b>	<b>1050.00</b>	<b>1050.00</b>	<b>1050.00</b>
	Cumulative Repayment upto COD/previous year	0.00	<b>0.00</b>	<b>87.50</b>	<b>175.00</b>	<b>262.50</b>
	Net Loan-Opening	1050.00	1050.00	962.50	875.00	787.50
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	87.50	87.50	87.50	87.50
	Net Loan-Closing	1050.00	962.50	875.00	787.50	700.00
	Average Loan	1050.00	1006.25	918.75	831.25	743.75
	Rate of Interest	9.64%	9.64%	9.64%	9.64%	9.64%
	Interest	101.22	97.00	88.57	80.13	71.70
	Rep Schedule	12 annual instalments from 31.5.2015.				
<b>10</b>	<b>Bond XLIII</b>					
	Gross loan opening	948.36	<b>948.36</b>	<b>948.36</b>	<b>948.36</b>	<b>948.36</b>
	Cumulative Repayment upto COD/previous year	0.00	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>79.03</b>
	Net Loan-Opening	948.36	948.36	948.36	948.36	869.33
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	79.03	79.03
	Net Loan-Closing	948.36	948.36	948.36	869.33	790.30
	Average Loan	948.36	948.36	948.36	908.85	829.82
	Rate of Interest	7.93%	7.93%	7.93%	7.93%	7.93%
	Interest	75.20	75.20	75.20	72.07	65.80
	Rep Schedule	12 annual instalments from 20.5.2017				
<b>11</b>	<b>Bond XLV</b>					
	Gross loan opening	3083.97	<b>3083.97</b>	<b>3083.97</b>	<b>3083.97</b>	<b>3083.97</b>
	Cumulative Repayment upto COD/previous year	0.00	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>257.00</b>
	Net Loan-Opening	3083.97	3083.97	3083.97	3083.97	2826.97
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	257.00	257.00
	Net Loan-Closing	3083.97	3083.97	3083.97	2826.97	2569.98
	Average Loan	3083.97	3083.97	3083.97	2955.47	2698.47
	Rate of Interest	9.65%	9.65%	9.65%	9.65%	9.65%
	Interest	297.60	297.60	297.60	285.20	260.40
	Rep Schedule	12 annual instalments from 28.2.2018				
<b>12</b>	<b>Bond XLVI</b>					
	Gross loan opening	0.00	<b>383.04</b>	<b>383.04</b>	<b>383.04</b>	<b>383.04</b>
	Cumulative Repayment upto COD/previous year	0.00	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>



	Net Loan-Opening	0.00	383.04	383.04	383.04	383.04
	Additions during the year	383.04	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	0.00	0.00
	Net Loan-Closing	383.04	383.04	383.04	383.04	383.04
	Average Loan	191.52	383.04	383.04	383.04	383.04
	Rate of Interest	9.30%	9.30%	9.30%	9.30%	9.30%
	Interest	17.81	35.62	35.62	35.62	35.62
	Rep Schedule	Redeemable at par in 3 equal instalments on 4.9.2019, 4.9.2024 & 4.9.2029				
<b>13</b>	<b>Bond XLVII</b>					
	Gross loan opening	0.00	<b>66.00</b>	<b>66.00</b>	<b>66.00</b>	<b>66.00</b>
	Cumulative Repayment upto COD/previous year	0.00	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
	Net Loan-Opening	0.00	66.00	66.00	66.00	66.00
	Additions during the year	66.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	0.00	5.50
	Net Loan-Closing	66.00	66.00	66.00	66.00	60.50
	Average Loan	33.00	66.00	66.00	66.00	63.25
	Rate of Interest	8.93%	8.93%	8.93%	8.93%	8.93%
	Interest	2.95	5.89	5.89	5.89	5.65
	Rep Schedule	12 annual instalments from 20.10.2018.				
<b>14</b>	<b>Bond XLVIII</b>					
	Gross loan opening	0.00	<b>720.00</b>	<b>720.00</b>	<b>720.00</b>	<b>720.00</b>
	Cumulative Repayment upto COD/previous year	0.00	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
	Net Loan-Opening	0.00	720.00	720.00	720.00	720.00
	Additions during the year	720.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	0.00	0.00
	Net Loan-Closing	720.00	720.00	720.00	720.00	720.00
	Average Loan	360.00	720.00	720.00	720.00	720.00
	Rate of Interest	8.20%	8.20%	8.20%	8.20%	8.20%
	Interest	29.52	59.04	59.04	59.04	59.04
	Rep Schedule	Redeemable at par in 4 equal instalments on 23.1.2020, 23.1.2022, 23.1.2025 & 23.1.2030				
<b>15</b>	<b>Bond L</b>					
	Gross loan opening	0.00	<b>0.00</b>	<b>30.51</b>	<b>30.51</b>	<b>30.51</b>
	Cumulative Repayment upto COD/previous year	0.00	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
	Net Loan-Opening	0.00	0.00	30.51	30.51	30.51
	Additions during the year	0.00	30.51	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	0.00	0.00
	Net Loan-Closing	0.00	30.51	30.51	30.51	30.51
	Average Loan	0.00	15.26	30.51	30.51	30.51
	Rate of Interest	8.40%	8.40%	8.40%	8.40%	8.40%
	Interest	0.00	1.28	2.56	2.56	2.56
	Rep Schedule	12 Equal Annual instalments from 27.5.2019				
<b>16</b>	<b>Bond XLI</b>					
	Gross loan opening	224.60	<b>224.60</b>	<b>224.60</b>	<b>224.60</b>	<b>224.60</b>



	Cumulative Repayment upto COD/previous year	0.00	<b>0.00</b>	<b>0.00</b>	<b>18.72</b>	<b>37.43</b>
	Net Loan-Opening	224.60	224.60	224.60	205.88	187.17
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	18.72	18.72	18.72
	Net Loan-Closing	224.60	224.60	205.88	187.17	168.45
	Average Loan	224.60	224.60	215.24	196.53	177.81
	Rate of Interest	8.85%	8.85%	8.85%	8.85%	8.85%
	Interest	19.88	19.88	19.05	17.39	15.74
	Rep Schedule	12 annual instalments from 19.10.2016				
<b>17</b>	<b>Bond XLII</b>					
	Gross loan opening	2787.72	<b>2787.72</b>	<b>2787.72</b>	<b>2787.72</b>	<b>2787.72</b>
	Cumulative Repayment upto COD/previous year	0.00	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
	Net Loan-Opening	2787.72	2787.72	2787.72	2787.72	2787.72
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	0.00	0.00
	Net Loan-Closing	2787.72	2787.72	2787.72	2787.72	2787.72
	Average Loan	2787.72	2787.72	2787.72	2787.72	2787.72
	Rate of Interest	8.80%	8.80%	8.80%	8.80%	8.80%
	Interest	245.32	245.32	245.32	245.32	245.32
	Rep Schedule	Bullet Payment as on 13.3.2023				
<b>18</b>	<b>Bond XXXVI</b>					
	Gross loan opening	5050.00	<b>5050.00</b>	<b>5050.00</b>	<b>5050.00</b>	<b>5050.00</b>
	Cumulative Repayment upto COD/previous year	0.00	<b>0.00</b>	<b>0.00</b>	<b>336.67</b>	<b>673.33</b>
	Net Loan-Opening	5050.00	5050.00	5050.00	4713.33	4376.67
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	336.67	336.67	336.67
	Net Loan-Closing	5050.00	5050.00	4713.33	4376.67	4040.00
	Average Loan	5050.00	5050.00	4881.67	4545.00	4208.33
	Rate of Interest	9.35%	9.35%	9.35%	9.35%	9.35%
	Interest	472.18	472.18	456.44	424.96	393.48
	Rep Schedule	15 annual instalments from 29.8.2016.				
<b>19</b>	<b>Bond XXXVII</b>					
	Gross loan opening	1996.00	<b>1996.00</b>	<b>1996.00</b>	<b>1996.00</b>	<b>1996.00</b>
	Cumulative Repayment upto COD/previous year	0.00	<b>0.00</b>	<b>166.33</b>	<b>332.67</b>	<b>499.00</b>
	Net Loan-Opening	1996.00	1996.00	1829.67	1663.33	1497.00
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	166.33	166.33	166.33	166.33
	Net Loan-Closing	1996.00	1829.67	1663.33	1497.00	1330.67
	Average Loan	1996.00	1912.83	1746.50	1580.17	1413.83
	Rate of Interest	9.25%	9.25%	9.25%	9.25%	9.25%
	Interest	184.63	176.94	161.55	146.17	130.78
	Rep Schedule	12 annual instalments from 26.12.2015.				
<b>20</b>	<b>Bond XL</b>					
	Gross loan opening	1516.71	<b>1516.71</b>	<b>1516.71</b>	<b>1516.71</b>	<b>1516.71</b>



	Cumulative Repayment upto COD/previous year	0.00	<b>0.00</b>	<b>0.00</b>	<b>126.39</b>	<b>252.79</b>
	Net Loan-Opening	1516.71	1516.71	1516.71	1390.32	1263.93
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	126.39	126.39	126.39
	Net Loan-Closing	1516.71	1516.71	1390.32	1263.93	1137.53
	Average Loan	1516.71	1516.71	1453.51	1327.12	1200.73
	Rate of Interest	9.30%	9.30%	9.30%	9.30%	9.30%
	Interest	141.05	141.05	135.18	123.42	111.67
	Rep Schedule	12 annual instalments from 28.6.2016				
	<b>Total Loan</b>					
	Gross loan opening	48875.49	50067.80	50541.30	50541.30	50541.30
	Cumulative Repayment upto COD/previous year	2807.67	5454.00	8354.17	11780.24	15542.33
	Net Loan-Opening	46067.82	44613.80	42187.13	38761.06	34998.97
	Additions during the year	1192.31	473.50	0.00	0.00	0.00
	Repayment during the year	2646.33	2900.17	3426.07	3762.10	3767.60
	Net Loan-Closing	44613.80	42187.13	38761.06	34998.97	31231.37
	Average Loan	45340.81	43400.47	40474.10	36880.01	33115.17
	Rate of Interest	9.04%	9.05%	9.06%	9.06%	9.06%
	<b>Interest</b>	4099.68	3926.80	3665.84	3340.65	2999.68

