

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 116/TT/2017

Coram:

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

Date of Order : 20.07.2018

In the matter of:

Determination of transmission tariff for Asset-I: 400 kV Lucknow-Kanpur (New) D/C transmission line alongwith associated bays at both end; Asset-II: Augmentation of transformation capacity at 400/220kV Ballabgarh Sub-station by installing 500 MVA ICT-III; Asset-III: Augmentation of transformation capacity at 400/220 kV Ballabgarh Sub-station by installing 500 MVA ICT-IV; Asset-IV: Augmentation of transformation capacity by 500 MVA ICT(3rd) at 400/220 kV GIS Gurgaon; Asset - V: Extension of GIS Parbati Pooling Station with 7X105 MVA ICT along with associated bays and 2 Nos. 220 kV bays under NRSS - XXXII in Northern Region under Regulation 86 of Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999 and Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014.

And in the matter of:

Power Grid Corporation of India Limited
"Saudamini", Plot No.2,
Sector-29, Gurgaon -122 001

.....Petitioner

Vs

1. Rajasthan Rajya Vidyut Prasan Nigam Limited
Vidyut Bhawan, Vidyut Marg,
Jaipur - 302005
2. Ajmer Vidyut Vitran Nigam Limited
400 kV GSS Building (Ground Floor),
Ajmer Road, Heerapura, Jaipur
3. Jaipur Vidyut Vitran Nigam Limited
400 kV GSS Building (Ground Floor),
Ajmer Road, Heerapura, Jaipur.
4. Jodhpur Vidyut Vitran Nigam Limited
400 kV GSS Building (Ground Floor),
Ajmer Road, Heerapura, Jaipur
5. Himachal Pradesh State Electricity Board
Vidyut Bhawan



- Kumar House Complex Building II
Shimla-171004
6. Punjab State Electricity Board
The Mall, Patiala-147001
 7. Haryana Power Purchase Centre
Shakti Bhawan, Sector-6
Panchkula (Haryana) 134109
 8. Power Development Department
Government of Jammu & Kashmir
Mini Secretariat, Jammu
 9. Uttar Pradesh Power Corporation Limited
(Formerly Uttar Pradesh State Electricity Board)
Shakti Bhawan, 14, Ashok Marg
Lucknow - 226001
 10. Delhi Transco Ltd.
Shakti Sadan, Kotla Road,
New Delhi-110002
 11. BSES Yamuna Power Ltd.
BSES Bhawan, Nehru Place,
New Delhi.
 12. BSES Rajdhani Power Ltd.
BSES Bhawan, Nehru Place,
New Delhi
 13. Tata Power Distribution Ltd.
33 kV Sub-station, Building
Hudson Lane, Kingsway Camp
New Delhi-110 009.
 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. Himachal Pradesh Power Transmission Corporation Limited
HIMFED Bhawan, Panjari,
Shimla - 171005

....Respondents



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

For Respondents : Shri R. B. Sharma, Advocate, BRPL

ORDER

The present petition has been filed by the petitioner, Power Grid Corporation of India Ltd. ("PGCIL") seeking approval of transmission tariff for Asset-I: 400 kV Lucknow-Kanpur(New) D/C transmission line alongwith associated bays at both end; Asset-II: Augmentation of transformation capacity at 400/220 kV Ballabgarh Sub-station by installing 500 MVA ICT-III; Asset-III: Augmentation of transformation capacity at 400/220 kV Ballabgarh Sub-station by installing 500 MVA ICT-IV; Asset-IV: Augmentation of transformation capacity by 500 MVA ICT(3rd) at 400/220 kV GIS Gurgaon; Asset - V: Extension of GIS Parbati Pooling Station with 7X105 MVA ICT along with associated bays and 2 Nos. 220 kV bays (hereinafter referred to as "transmission assets") under NRSS-XXXII (hereinafter referred to as ("transmission system") in Northern Region under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 (hereinafter referred to as "the 2014 Tariff Regulations").

2. The petitioner has made the following prayers:

- (a) Approve the Transmission Tariff for the tariff block 2014-19 block for the assets covered under this petition.
- (b) Admit the capital cost as claimed in the Petition and approve the Additional Capitalization incurred / projected to be incurred.
- (c) 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.



- (d) Allow tariff upto 90% of the Annual Fixed Charges in accordance with clause 7 (i) of Regulation 7 CERC (Terms and Conditions of tariff) Regulations,2014 for purpose of inclusion in the PoC charges
- (e) 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.
- (f) Allow the petitioner to bill and recover Licensee fee and RLDC fees and charges, separately from the respondents in terms of Regulation 52 Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014.
- (g) Allow the petitioner to bill and adjust impact on Interest on Loan due to change in Interest rate on account of floating rate of interest applicable during 2014-19 period, if any, from the respondents.
- (h) 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.
- (i) Allow provisional tariff in accordance with clause 7 (i) of Regulation 7 Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014.
- (j) Allow reimbursement of tax if any on account of the proposed implementation of GST.
- (k) Allow to approach the Hon'ble Commission for suitable revision in the norms for O&M expenditure for claiming the impact of wage hike from 01.01.2017 onwards.
- (l) Allow the initial spare as procured in the current petition in full as given in para-6.1 under Regulation 54 and Regulation 55 of the CERC (Terms and Condition of Tariff) Regulation,2014, "Power to Relax" and "Power to remove difficulty".
- (m) Condone the delay in completion of subject assets on merit of the same being out of the control of Petitioner in line with CERC Regulations'2014 12(2)(i) "uncontrollable factors"
- (n) Allow the petitioner to bill Tariff from actual DOCO and also the petitioner may be allowed to submit revised Management Certificate and tariff Forms (as per the Relevant Regulation) based on actual DOCO,

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

3. The Investment Approval (IA) and expenditure sanction to the transmission project was accorded by Board of Directors of the petitioner's company, vide Memorandum dated 14.2.2014 at an estimated cost of ₹90808 lakh including



an IDC of ₹5276 lakh based on December, 2013 price level. The scope of the scheme was discussed and agreed in 31st Standing Committee Meeting dated 2.1.2013 and in 28th meeting of NRPC and 25th meeting of TCC dated 1.6.2013.

4. The scope of work covered under the “Northern Region System Strengthening Scheme –XXXII is as follows:-

Transmission Line

- (i) 400 kV Panchkula – Patiala D/C line (with 10 km on multi-circuits towers in forest area near Panchkula for accommodating 220 kV D/C line for power supply to Chandigarh).
- (ii) 400 kV Lucknow – Kanpur (new) D/C Line
- (iii) LILO of 400 kV D/C Dadri – Malerkotla line at Kaithal S/S
- (iv) LILO of both circuits of RAPP – Kankroli 400 kV D/C line at Chittorgarh 400/220 kV sub-station of RRVPNL.

Sub-station

- (i) Augmentation of transformation capacity at 400/220 kV Ballabgarh Substation by replacing existing 4X315 MVA ICTs with 4X500 MVA ICTs (Existing 4X315 MVA ICTs shall be kept as regional spares/ used elsewhere after refurbishment)
- (ii) Augmentation of transformation capacity at 400/220 kV Mandola Sub-station by replacing 4X315 MVA ICTs with 4X500 MVA ICTs. (Existing 4X315 MVA ICTs shall be maintained as regional spares/ used elsewhere after refurbishment)
- (iii) Provision of 7X105 MVA, 400/220 kV ICT at Parbati Pooling Station along with associated bays and two nos. of 220 kV line bays.



- (iv) Augmentation of transformation capacity by 500 MVA ICT (4th) at 400/220 kV Gurgaon Sub-station.

Reactive Compensation

| Srl. No. | Transmission Line | From Bus Reactor (MVAR) | To Bus Reactor (MVAR) |
|----------|--|-------------------------|---|
| 1 | 400 kV D/C Panchkula – Patiala | - | - |
| 2 | 400 kV D/C Lucknow (PG) – Kanpur (New) (PG) | - | - |
| 3 | LILO Dadri – Malerkotla line at Kaithal S/S (PG) | | |
| | Existing | | |
| | Dadri Malerkotla 400 kV S/C | - | 63 (to be gainfully used elsewhere) |
| | After LILO | | |
| | Dadri – Kaithal 400 kV S/C line | - | 50 MVAR (New) |
| | Kaithal – Malerkotla 400 kV S/C line | - | - |
| 4 | LILO of both circuits of RAPP – Kankroli 400 kV D/C line at Chandigarh | | |
| | Existing | | |
| | RAPP – Kankroli 400 kV D/C line | - | 50 MVAR (to be used at Kanpur end of Allahabad – Kanpur under NRSS-XXX) |
| | RAPP – Chithorgarh 400 kV D/C Line | - | - |
| | Chithorgarh - Kankroli | - | - |

Implementation Schedule

5. As per the IA dated 14.2.2014, the schedule completion is within 28 months from the date of IA. Accordingly, the schedule of completion works out to 13.6.2016 against which the COD of Assets I, II, III and IV was 1.6.2017, 5.6.2017, 3.7.2017 and 3.8.2017 respectively. As per management certificate dated 06.02.2018, Asset – V was anticipated to be put under commercial operation on 30.12.2017 .
6. The details of the transmission charges claimed by the petitioner are as under:-

| Asset-I | ₹ in lakh) | |
|-----------------------------|----------------|----------------|
| | 2017-18 | 2018-19 |
| Depreciation | 1260.04 | 1655.89 |
| Interest on Loan | 1312.80 | 1610.26 |
| Return on Equity | 1402.13 | 1842.66 |
| Interest on Working Capital | 102.83 | 131.43 |
| O&M Expenses | 309.33 | 383.53 |
| Total | 4387.13 | 5623.77 |



(₹ in lakh)

| Asset-II | 2017-18 | 2018-19 |
|-----------------------------|---------------|-----------------|
| Depreciation | 53.99 | 72.95 |
| Interest on Loan | 53.30 | 67.39 |
| Return on Equity | 60.16 | 81028.00 |
| Interest on Working Capital | 3.65 | 4.83 |
| O&M Expenses | 0.00 | 0.00 |
| Total | 171.10 | 81173.17 |

(₹ in lakh)

| Asset-III | 2017-18 | 2018-19 |
|-----------------------------|---------------|---------------|
| Depreciation | 46.32 | 74.18 |
| Interest on Loan | 47.89 | 72.22 |
| Return on Equity | 51.61 | 82.65 |
| Interest on Working Capital | 3.18 | 4.99 |
| O&M Expenses | 0.00 | 0.00 |
| Total | 149.00 | 234.04 |

(₹ in lakh)

| Asset-IV | 2017-18 | 2018-19 |
|-----------------------------|---------------|----------------|
| Depreciation | 162.99 | 283.12 |
| Interest on Loan | 170.03 | 278.27 |
| Return on Equity | 181.60 | 315.46 |
| Interest on Working Capital | 14.79 | 24.70 |
| O&M Expenses | 68.37 | 106.83 |
| Total | 597.78 | 1008.38 |

(₹ in lakh)

| Asset-V | 2017-18 | 2018-19 |
|-----------------------------|---------------|----------------|
| Depreciation | 196.46 | 824.12 |
| Interest on Loan | 209.20 | 836.74 |
| Return on Equity | 218.79 | 917.79 |
| Interest on Working Capital | 17.62 | 72.42 |
| O&M Expenses | 76.58 | 309.86 |
| Total | 718.65 | 2960.93 |

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

(₹ in lakh)

| Asset-I | 2017-18 | 2018-19 |
|--------------------|---------------|----------------|
| Maintenance Spares | 55.68 | 57.53 |
| O&M expenses | 30.93 | 31.96 |
| Receivables | 877.43 | 937.29 |
| Total | 964.04 | 1026.78 |
| Interest | 102.83 | 131.43 |
| Rate of Interest | 12.80% | 12.80% |

(₹ in lakh)

| Asset-II | 2017-18 | 2018-19 |
|--------------------|--------------|--------------|
| Maintenance Spares | 0.00 | 0.00 |
| O&M expenses | 0.00 | 0.00 |
| Receivables | 34.68 | 37.74 |
| Total | 34.68 | 37.74 |



| | | |
|------------------|--------|--------|
| Interest | 3.65 | 4.83 |
| Rate of Interest | 12.80% | 12.80% |

(₹ in lakh)

| Asset-III | 2017-18 | 2018-19 |
|--------------------|----------------|----------------|
| Maintenance Spares | 0.00 | 0.00 |
| O&M expenses | 0.00 | 0.00 |
| Receivables | 33.35 | 39.01 |
| Total | 33.35 | 39.01 |
| Interest | 3.18 | 4.99 |
| Rate of Interest | 12.80% | 12.80% |

(₹ in lakh)

| Asset-IV | 2017-18 | 2018-19 |
|--------------------|----------------|----------------|
| Maintenance Spares | 15.51 | 16.02 |
| O&M expenses | 8.62 | 8.90 |
| Receivables | 150.66 | 168.06 |
| Total | 174.79 | 192.98 |
| Interest | 14.77 | 24.70 |
| Rate of Interest | 12.80% | 12.80% |

(₹ in lakh)

| Asset-V | 2017-18 | 2018-19 |
|--------------------|----------------|----------------|
| Maintenance Spares | 44.98 | 46.48 |
| O&M expenses | 24.99 | 25.82 |
| Receivables | 469.01 | 493.49 |
| Total | 538.98 | 565.79 |
| Interest | 17.62 | 72.42 |
| Rate of Interest | 12.80% | 12.80% |

8. No comments or suggestions have been received from the general public in response to the notices published by the petitioner under Section 64 of the Electricity Act. UPPCL and BRPL have filed reply vide affidavit dated 19.6.2017 and 17.1.2018 respectively. The petitioner has filed rejoinder dated 5.7.2017 to the reply of UPPCL and rejoinder dated 14.3.2018 to the reply of BRPL. The objections raised by the respondents and the clarifications given by the petitioner are addressed in the relevant paragraphs of this order.

Date of Commercial Operation (COD)

9. The petitioner, in the petition, had sought transmission tariff for the period from anticipated COD of the assets based on the Management Certificates for expenditure incurred as on COD and up to 31.3.2016 and estimated additional



capitalization projected to be incurred during 2016-19. The petitioner, vide affidavit dated 10.1.2018, has submitted the revised COD as under:-

| Name of the Assets | COD |
|---------------------------|--|
| Asset-I | 1.6.2017 |
| Asset-II | 5.6.2017 |
| Asset-III | 3.7.2017 |
| Asset-IV: | 3.8.2017 |
| Asset-V | 30.12.2017 (Anticipated) (as per management certificate) |

10. The Commission, vide order dated 22.8.2017, had approved AFC for Assets-I, II, III and IV under Regulation 7(7) of the 2014 Tariff Regulations for inclusion in the PoC computation. AFC was not granted to Asset-V as the petitioner did not make HPPTCL as a party which is responsible for COD of the downstream system linked to Asset-V. Later, the petitioner vide affidavit dated 10.1.2018 had filed the revised memo of parties and made HPPTCL a respondent.

11. The petitioner has further submitted that delay in COD of Asset-V was mainly due to matching with the upcoming downstream system of HPPTCL i.e. 220 kV D/C Charore-Banala transmission line. Correspondence was made with HPPTCL regarding the downstream assets under its scope. HPPTCL vide letter dated 29.7.2017 confirmed that 220 kV Charore-Banala line shall be completed by 31.12.2017 and accordingly, Asset-V was charged on 29.12.2017 and HPPTCL was informed regarding connectivity of downstream line vide letter dated 29.12.2017. The petitioner has submitted that as per telephonic communication from HPPTCL the downstream line is anticipated to be put into commercial operation by 1.4.2018. The petitioner has requested to approve the date of commercial operation of Asset-V in



accordance with proviso (ii) of Regulation 4(3) of the 2014 Tariff Regulations as the delay was beyond the control of the petitioner and also requested to condone the time over-run in completion of assets in terms of the provisions of Regulations 12(2)(i) of the 2014 Tariff Regulations.

12. The petitioner has submitted that it was not able to put to regular use Asset-V as the downstream assets under the scope of HPPTLC were not put into commercial operation. The petitioner has prayed for approval of date of commercial operation of Asset-V in accordance with the proviso (ii) of Regulation 4(3) of the 2014 Tariff Regulations. The petitioner has submitted the CEA Energisation certificate 17.7.2017 and the RLDC certificate dated 2.2.2018, as required under Regulation 5(2) of the 2014 Tariff Regulations and the CMD certificate vide affidavit dated 28.3.2018.

13. Proviso (ii) of Regulation 4(3) of the 2014 Tariff Regulations provides as under:-

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

14. As per the said provision, if a transmission asset is prevented from being put into regular service for reasons not attributable to a transmission licensee, but due to delay in COD of upstream or downstream assets, the transmission licensee can approach the Commission for approval of COD of the transmission asset. In the instant case, the petitioner has submitted that it was ready with Asset-V on 31.12.2017 and in support has submitted the Energisation Certificate dated 17.7.2017 issued by CEA under Regulation 43 of the CEA (Measures relating to safety and Electric Supply) Regulations,

2010. The petitioner has further submitted the letter dated 2.2.2018 of NRLDC regarding the first time charging of Extension of GIS Parbati Pooling Station with 7x105 MVA ICT alongwith associated bays and 2 Nos. 220 kV bays. The petitioner has also submitted the certificate from its CMD certifying that the asset conforms to the relevant Grid Standard and Grid Code and are capable of operation to their full capacity with effect from 31.12.2017 as required under Central Electricity Regulatory Commission (Indian Electricity Grid Code) Regulations, 2010. The petitioner has submitted that it is ready with Asset-V but is prevented from being put into regular use as the downstream assets under the scope of HPPTCL were not ready. Accordingly, the petitioner has approached the Commission under proviso (ii) of Regulation 4(3) of the 2014 Tariff Regulations for approval of COD of the Asset-V. Taking into consideration energisation certificate issued by CEA, the RLDC certificate and its CMD certificate we approve the COD of Asset-V as 31.12.2017 under proviso (ii) of Regulation 4(3) of the 2014 Tariff Regulations as the petitioner was ready but was prevented from putting into use regular use as HPPTCL was not ready with the downstream assets under its scope. Accordingly, the transmission charges from the COD of Asset-V, i.e. 31.12.2017 to the COD of the downstream assets of HPPTCL shall be borne by HPPTCL. Thereafter it will be included in the PoC charges. We further direct that it shall be responsibility of the petitioner to ensure safety and insurance of the transmission assets.

Capital Cost

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

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



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

(a) the expenditure incurred or projected to be incurred up to the date of commercial operation of the project;

(b) Interest during construction and financing charges, on the loans (i) being equal to 70% of the funds deployed, in the event of the actual equity in excess of 30% of the funds deployed, by treating the excess equity as normative loan, or (ii) being equal to the actual amount of loan in the event of the actual equity less than 30% of the funds deployed;

(c) Increase in cost in contract packages as approved by the Commission;

(d) Interest during construction and incidental expenditure during construction as computed in accordance with Regulation 11 of these regulations;

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

(f) expenditure on account of additional capitalization and de-capitalisation determined in accordance with Regulation 14 of these regulations; 39

(g) adjustment of revenue due to sale of infirm power in excess of fuel cost prior to the COD as specified under Regulation 18 of these regulations; and

(h) adjustment of any revenue earned by the transmission licensee by using the assets before COD.”

16. The petitioner, vide affidavit dated 10.1.2018 and 12.1.2018, has submitted Auditor’s certificates dated 6.1.2018 and 22.11.2017 for Assets – II, III and IV and Assets-I, and vide Management Certificate dated 6.2.2018 for Asset-V. The details of apportioned approved cost, re-apportioned RCE, cost as on COD/ anticipated COD and additional capitalization incurred/ projected to be incurred for the assets are as under:-

| Assets | Apportioned approved cost as per FR | Apportioned approved cost as per RCE* | Expenditure as on COD | Expenditure in 2017-18 | Expenditure in 2018-19 | Expenditure in 2019-20 | (₹ in lakh) |
|--------|-------------------------------------|---------------------------------------|-----------------------|------------------------|------------------------|------------------------|---------------------------------|
| | | | | | | | Total estimated completion cost |
| I | 32724.54 | 36516.00 | 27885.34 | 2388.10 | 2099.15 | 1049.56 | 33422.15 |
| II | 2195.34 | 1566.14 | 1173.19 | 167.48 | 83.91 | 0.00 | 1424.58 |
| III | 2195.34 | 1581.14 | 1009.63 | 348.65 | 94.02 | 0.00 | 1452.30 |
| IV | 5579.55 | 5783.91 | 4293.03 | 830.52 | 510.60 | 0.00 | 5634.15 |
| V | 8085.60 | 16715.46 | 14355.16 | 415.16 | 1660.65 | 0.00 | 16430.97 |

17. In case of Asset-V, petitioner has submitted that 6x105 ICTs out of 7x105 ICTs are anticipated to be commissioned on 30.12.2017 (as per auditor’s



certificate). Hence, we are considering the pro-rata capital cost of Asset-V (Extension of GIS Parbati Pooling Station with **6X105 MVA ICT** along with associated bays and 2 Nos. 220 kV bays).

18. The capital cost up to COD of Asset-I, Asset-II, Asset-III, Asset-IV and Asset-V have been considered, as per proviso of Regulation 9(2) of the 2014 Tariff Regulations, as under:-

| (₹ in lakh) | | |
|-------------|---|-----------------------------|
| Assets | Capital cost considered for the purpose of tariff before adjustment of IEDC, IDC and Initial spares as on COD | Applicable period of tariff |
| Asset-I | 27885.34 | 1.6.2017 to 31.3.2019 |
| Asset-II | 1173.19 | 5.6.2017 to 31.3.2019 |
| Asset-III | 1009.63 | 3.7.2017 to 31.3.2019 |
| Asset-IV | 4293.03 | 3.8.2017 to 31.3.2019 |
| Asset-V | 12304.42 | 30.12.2017 to 31.3.2019 |

19. The petitioner vide affidavit dated 10.1.2018, has submitted the reasons for cost variation in case of Asset-I, II and III.

| Assets | FR cost | Estimated completion cost | Reasons |
|-----------|----------|---------------------------|--|
| Asset-I | 32724.54 | 33422.15 | The major reason for cost increase is due to:- <ul style="list-style-type: none"> • Actual amount paid for crop, forest and PTCC compensation. • Price variation based on open competitive bidding and variation in indices of major raw materials. • Quantity variation based on actual site requirement and changes in detailed survey from FR. |
| Asset-II | 2195.34 | 1434.69 | The major reason for cost decrease is due to:- <ul style="list-style-type: none"> • Price variation based on open competitive bidding and variation in indices of major raw materials. • Provision of Refurbishment of existing transformer (₹415.02 lakh) was kept in FR but the same was not carried out in present project. |
| Asset-III | 2195.34 | 1452.30 | |

There is no cost over-run in case of instant assets as per the revised approved apportioned cost.

Time over-run

20. As per the IA, the scheduled COD of the assets was 13.6.2016. Asset-I, II



III, IV and V were put into commercial operation on 1.6.2017, 5.6.2017, 3.7.2017, 3.8.2017 and 30.12.2017 respectively. Thus, there is a time over-run of 354, 358, 386, 417 and 566 days respectively.

21. As regard the time over-run in case of Asset-I, the petitioner has submitted that during the foundation work at various locations (14/0, 15/0, 13/1, 13/2, 13/3, 98/0, 65/0, 66/0, 74/0, 76/2, 76/4, 82/0 in major districts like Barabanki, Lucknow, Sitapur, Hardoi, etc. there was lot of stiff resistance from the land owners which hampered the work. The petitioner has submitted that the following ROW issues caused the time over-run:-

“(i) At location number 59/1, 65/0, 66/0,67/0 Gram Maddipurwa (Umran) village near Rania Kanpur, the land owners have posed a stiff resistance against PGCIL since April 2016. The land owners threatened the team and even in the presence of small police force, the foundation work could not be started. Later in the month of September-October 2016, the land owner started putting pressure on changing the route through district administration and later filed a court case against PGCIL to get the ruling from the Court for this change. The matter is pending in the court. The work got hampered since April 2016 till March, 2017 which caused a delay of more than 11 months.

(ii) Further stiff resistance was faced at location number 14/0, 15/0 in Gram Chaugawan and location number 13/1, 13/2 and 13/3 in Gram Akbarpur from March, 2016 onwards. At location number 13/3 and 15/0 land owners allowed to do the work after the interference of local administration but at location no 13/1, 13/2 and 14/0, matter is still not resolved despite continuous effort by the District Administration. The work got hampered from March, 2016 to March, 2017 which caused a delay of more than 12 months.

(iii) Further stiff resistance was also faced at location no. 98/0 in Gram Tanda Meeta, Tehsil Safipur, District Unnao, from May, 2016 onwards despite many efforts and co-ordination with administration, the work could not be started. Further, the land owner filed a case against the petitioner to stop the foundation work and change the T/L route from their land. On 8.9.2016, the court granted a Stay Order and fixed the next date of hearing as 15.10.2016. The Court fixed the next date of hearing for 14.2.2017. Meanwhile, the petitioner has been able to persuade the land owner and the work started from 15.2.2017. The work could not be performed from May 2016 to February 2017 which caused a delay of more than 9 months.

(iv) The work at location number 66/0, 74/0, 76/2, 76/4, 82/3 in Gram Begamganj, Tehsil Sandila, District Hardoi, got disrupted due to stiff resistance faced from the land owners since March 2016. With the help of administration work was started in location 66/0, 74/0, 76/2, 76/4, 82/3 in the month of November, 2016 and finished in December, 2016. The stringing work was held up at location number 76/0 and 77/0 due to stiff resistance from land owner. The work got hampered since March, 2016 till March, 2017 which caused a delay of more than 12 months.



(v) ROW at location 14/0, 15/0, 13/1, 2, 3 continued till 18.4.2017 and foundation erection and stringing at these locations took 2 to 3 months and thereafter the lines was put under commercial operation on 1.6.2017.

(vi) During July to October 2016, there was heavy rainfall. Due to the incessant rains, the fields were inundated with water thus hampering the work. The total delay due to rainfall comes out to be around 3 months (August, September and October).”

22. In case of Assets-II and III pertaining to augmentation of ICTs at Ballabgarh from 315 MVA to 500 MVA, the petitioner has submitted that replacement of transformers required shut down of existing 315 MVA transformers, which required interruption of flow of power for a period of 10-15 days. As Ballabgarh caters to the power requirement of NCR Region, due to which obtaining shutdown for such a long period especially during the summer time was a challenge. Further, 4 Nos. ICT were to be replaced in Ballabgarh and Madola. These two sub-stations are very critical as they meet the load requirement of NCR region. Therefore, the reason of time over-run in case of both the assets was delay in grant of shutdown.
23. As regards Asset-IV, pertaining to 2 Nos. ICT installed in Gurgaon, under present project and another under “Augmentation of Transformers in Northern Region Part B”, the petitioner has submitted that the time over-run was due to simultaneous commissioning of both the ICT.
24. UPPCL has submitted that the petitioner has not submitted the technical justification in respect of Asset-I, Asset-IV and Asset-V, however, in the 31st meeting on power System Planning of northern region held on 2.1.2013 technical justification in respect of Asset-II and Asset-III were agreed by the members.
25. BRPL has submitted that the reasons given by the petitioner as regards the delay in execution of the transmission project is attributable to the petitioner.



BRPL has further submitted that the delay in commissioning of Asset-V is on account of non-matching of the upcoming downstream system of HPPTCL and the correspondence between the petitioner and HPPTCL indicate that the asset was to be expected to put under commercial operation during February, 2017. BRPL has also submitted that no details of time over-run in the case of Assets II, III and IV are furnished by the petitioner. Delay in relation to Assets I and V is attributable to ROW problems and non-completion of downstream system of HPPTCL respectively cannot be condoned in the absence of documentary proof including DPR, CPM analysis and PERT and Bar Charts. Accordingly, BRPL prayed that time over-run may not be allowed as the delay falls within the controllable factors in terms of the provisions of the Regulation 12 of the 2014 Tariff Regulations.

26. In response, the petitioner in its rejoinder to reply of UPPCL and BRPL submitted that the COD of Asset-I, II and III was 1.6.2017, 5.6.2017 and 3.7.2017 respectively and COD certificate and RLDC certificate for successful completion of trial operation for these assets were placed on record.

27. We have considered the submissions of the petitioner and respondents. As per the IA the instant assets were scheduled to be put under commercial operation on 13.6.2016. Thus, there is time over-run of 354, 358, 386, 417 and 566 days in case of Asset-I, II, II , IV and V respectively. The petitioner has attributed the time over-run of 354 days to ROW issues from April, 2016 at different location in districts like Barabanki, Lucknow, Sitapur and Hardoc. The petitioner has submitted that the land owners threatened the team and work could not be started even in the presence of police force. In September, 2016 and October, 2016 the land owners pressurized the district



administration to change the line route and later filed a court case to get order from the court in March, 2017. Due to stiff resistance at Akbarpur and Chaugawana work could not be performed despite continuous efforts of District Administration from March, 2016 to March, 2017. Stiff resistance was also faced in Tanda Meeta District, where work could not be started from May, 2016. The petitioner has submitted that in the meantime a land owner filed a case in the Court to stop the foundation work in her land and change the route of line. The Court granted stay till 14.2.2017 and the petitioner was able to start the work on 15.2.2017. Further from March, 2016 to March, 2017 the work could not be performed due to stiff resistance from the land owners in Gram Begam Ganj, Savdita Tehsil Hardoi District and it caused the delay of more than 12 months. The petitioner has further submitted that the work was hampered due to heavy rain during August to October, 2016. However, this period is subsumed in the period from March 2016 to March 2017. It is observed that the execution of Asset-I was affected by ROW issue at Tanda Meeta and the stay granted by the Court vide order dated 8.9.2016. The petitioner was unable to complete the work on time and reasons were beyond the control of the petitioner. Therefore, the time over-run of 354 days due to disruption in foundation and stringing work at Tanda, Meeta is condoned.

28. There is time over-run of 358 days and 386 days in case of Asset-II and Asset-III respectively. The petitioner has submitted that the time over-run was due to delay in getting the shutdown of existing 315 MVA transformer which would affect the flow of power requirement of NCR region. The four ICTs which were being replaced at Ballabgarh and Mandola were in a critical state as they meet the load requirement of NCR. However, the



petitioner has not submitted details of communications or correspondences with the RLDCs or the concerned authorities for shutdown and the period of delay caused due to non-availability of shut down. Further, the time over-run of 358 and 386 days cannot be attributed solely to the delay in obtaining shut-down, which in normal cases takes 3-4 months even during the summer season. Further, the timely application for shutdown and coordination are important for obtaining shutdown. We are of the view that 4 months is more than sufficient for obtaining the shut-down and carrying out the work. Accordingly, 123 days out of the total time over-run of 358 days and 386 days in case of Asset-II and Asset-III is condoned and the remaining time over-run of 235 days in case of Asset-II and 263 days in case of Asset-III is not condoned.

29. In case of Asset-IV, there is a time over-run of 417 days. The petitioner has submitted that two ICTs were being installed in Gurgaon, one under the present project and other one under "Augmentation of transformers in Northern Region Part-B". There was time over-run due to simultaneous COD of both the ICT. However, the details of delay and date of simultaneous commissioning is not submitted by the petitioner. The simultaneous COD of both the ICTs is not a new condition which could be overcome by deploying more manpower. We are of the view that the petitioner could have avoided the entire period of time over-run if suitable steps were taken at appropriate time. We are of the view that the time over-run of 417 days is attributable to the petitioner and accordingly it is not condoned.
30. In case of Asset-V, there is a time over-run of 566 days. The petitioner's justification regarding the time over-run of Asset-V is not adequate. Therefore, we are not inclined to condone the time over-run of 566 days.



Interest During Construction (IDC)

31. The petitioner has claimed IDC of ₹1507.32 lakh, ₹53.59 lakh, ₹33.61 lakh, ₹213.62 lakh and 1598.24 lakh in respect for Asset-I, Asset-II, Asset-III, Asset-IV and Asset-V respectively.

32. IDC up to the allowable date has been worked out based on the loans deployed for the assets as per Form-9C of the petition on cash basis assuming that the petitioner has not made any default in the payment of interest. Accordingly, the IDC has been worked out as under:-

| (₹ in lakh) | | | |
|-------------|----------------------------------|----------------|-------------|
| Assets | IDC allowed as on allowable date | IDC disallowed | IDC Claimed |
| Asset-I | 1507.32 | 0.00 | 1507.32 |
| Asset-II | 18.86 | 34.73 | 53.59 |
| Asset-III | 12.85 | 20.76 | 33.61 |
| Asset-IV | 27.42 | 186.20 | 213.62 |
| Asset-V | 413.14 | 1184.84 | 1598.24 |

33. The petitioner has further submitted that the statement showing un-discharged IDC liability as on COD and to be discharged of the same after COD. Accordingly, in addition to the IDC disallowed as mentioned in above table, in case of Asset-I, ₹955.67 lakh has been disallowed as on COD on account of un-discharged liability. Therefore, the IDC considered as on COD for tariff determination is as under:-

| (₹ in lakh) | | | | |
|-------------|-------------|---|--|-------------------------|
| Assets | IDC claimed | IDC disallowed (on account of time over-run not condoned) | IDC disallowed (Un-discharged Liability) | IDC allowed (As on COD) |
| Asset-I | 1507.32 | 0.00 | 955.67 | 551.65 |
| Asset-II | 53.59 | 34.73 | 0.00 | 18.56 |
| Asset-III | 33.61 | 20.76 | 0.00 | 12.85 |
| Asset-IV | 213.62 | 186.20 | 0.00 | 27.42 |
| Asset-V | 1598.24 | 1184.84 | 0.00 | 413.14 |



Incidental Expenditure During Construction (IEDC)

34. The petitioner has claimed ₹96.51 lakh, ₹17.93 lakh, ₹17.77 lakh, ₹64.41 lakh and ₹593.41 in respect of Asset-I, Asset-II, Asset-III, Asset-IV and Asset-V respectively. The petitioner has claimed IEDC as on COD, which is within the percentage on hard cost as indicated in the Abstract Cost Estimate. In the instant petition, 5% of hard cost is indicated as IEDC in the Abstract Cost Estimate. Accordingly, IEDC is restricted to 5% of the capital cost.

35. Accordingly, the amount of IEDC claimed, disallowed on account of time over-run not condoned and allowed is as under:-

| (₹ in lakh) | | | |
|---------------|---------------------|--|-------------------------------------|
| Assets | IEDC Claimed | IEDC disallowed (on account of time over- run not condoned) | IEDC Allowed (as on COD) |
| Asset-I | 96.51 | 0.00 | 96.51 |
| Asset-II | 17.93 | 3.49 | 14.44 |
| Asset-III | 17.77 | 3.78 | 13.99 |
| Asset-IV | 64.41 | 21.20 | 43.21 |
| Asset-V | 593.41 | 237.20 | 356.21 |

Initial spares

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

“13. Initial Spares

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

(d) Transmission system

- (i) Transmission line-1.00%
- (ii) Transmission Sub-station (Green Field)-4.00%
- (iii) Transmission Sub-station (Brown Field)-6.00%
- (iv) Series Compensation devices and HVDC Station-4.00%
- (v) Gas Insulated Sub-station (GIS)-5.00%
- (vi) Communication system-3.5%

Provided that:

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



(ii) xxx

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

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

37. The petitioner has submitted that Gas Insulated Substation (GIS) installation is highly specialized and costly imported equipment. GIS is a compact, multi-component assembly enclosed in a metallic housing with compressed sulphur hexafluoride (SF6) gas as the primary insulating medium. The bay equipment's are enclosed in these enclosures. The different parts of the GIS systems are modular and designed with respect to the location of the installation and the assembly of this modular section is done in manufacturer works only. Unlike convention AC system where bay equipment's are connected with conductor which is very flexible to connect but in case of GIS system the bay equipment's are through modular section housing all bay equipments and which is assembled in the factory. These modular sections are manufactured for fitting the same at a specific location so one single modular section as spare will serve any purpose as the same may not be fitted in case of replacement is required. Hence inter-changeability of the modular sections is limited resulting into higher initial spares for this system with respect to conventional AC system. One to one replacement of any component of this system is not possible from domestic source as these are imported equipment's. Further, generally the equipment's are different from one supplier to other supplier. In case of any replacement is needed, the element/equipment has to be replaced by similar design of same manufacturer only. In case sufficient spares are not kept, any failure of

equipment shall lead to longer outage as procurement of spare from offshore will require long duration which sometime may stretch to one and half years.

38. The petitioner has submitted that in case of Gurgaon Sub-station extension involves only one transformer (3 Ph. Unit) with two bays. The initial spares cost is ₹611 lakh against the Plant & Machinery cost of ₹53561 lakh. Since the scope of work in case of Gurgaon Sub-station extension work is only one transformer, the initial spares cost for this brown field project is high at 13.54%. Further, in GIS sub-station there is special type of Bushings (i.e. SF6 to Air Connection type) and similarly for transformer also there is special type of Bushings (i.e. SF6 to Oil connection type, oil to oil connection type RIP bushing). These bushing are not manufactured in India and worldwide only a few manufactures are supplying these bushings with lead time of procurement of around one year. The petitioner has submitted that to have a reliable system one set of each type and rating bushing are kept as spares. These bushing are very costly in comparison to the conventional bushing of same ratings. The petitioner has further submitted that operating a GIS sub-station without adequate spares shall render the system un-reliable and may call for long outages. In view of the special circumstances the initial spares as procured in the current project may be allowed in full. In view of above circumstances, it is submitted that the initial spare as procured in the current project may be allowed under Regulation 54 and Regulation 55 of the 2014 Tariff Regulation, 2014, "Power to Relax" and "Power to remove difficulty".
39. We have considered the submission of the petitioner. The petitioner has claimed higher initial spares for GIS Gurgaon Sub-station. The petitioner has submitted that higher spares has been claimed due to site conditions and has submitted that interchangeability of modular section is limited as the



model of different suppliers are different. Lack of sufficient spares may cause long outage which may stretch to one and half year and extension of Gurgaon GIS requires one transformer, therefore the cost of spares is higher when compared to cost of equipment. The cost of spares is about 13.54% as against 5% as specified in Regulation 13 of the 2014 Tariff Regulations. The ceiling norms prescribed under the 2014 Tariff Regulations has been specified after considering all relevant aspects of GIS and therefore we are of the view that there is no need for further relaxing norms. Accordingly, initial spares are restricted to the ceiling limits specified in the Regulation 13 of the 2014 Tariff Regulations.

40. The petitioner has claimed initial spares of ₹238.07 lakh for Asset-I corresponding to transmission line and ₹497.82 lakh, ₹18.68 lakh, ₹18.68 lakh, ₹610.62 lakh and ₹737.55 lakh in respect for Asset-I, Asset-II, Asset-III, Asset-IV and Asset-V respectively, corresponding to sub-station. Further, the petitioner has not submitted segregated initial spares for revised Asset-V (6x105 MVA ICT), accordingly corresponding pro-rata initial spares has been worked out as ₹632.19 lakh.

41. The initial spares claimed by the petitioner in respect of Asset-I corresponding to transmission line, Asset-II and Asset-III corresponding to sub-station are within the ceiling specified in the 2014 Tariff Regulations. Hence, no adjustment of initial spares is required. However, excess initial spares claimed by the petitioner in respect of Asset-I, Asset-IV and Asset-V corresponding to sub-station are being adjusted as on COD while determining tariff of the instant assets is as under:-

(₹ in lakh)



| Particulars | Total Capital Cost (Plant and machinery cost excluding IDC, IEDC, Land cost and cost of Civil works) up to Cut-off date (a) | Initial Spares Claimed against Capital Cost Claimed (b) | Ceiling Limit as per Regulation, 2014 (c) | Initial Spares worked out (d) | Excess Initial Spares claimed (e) |
|----------------|---|---|---|-------------------------------|-----------------------------------|
| Asset-I {S/S} | 7962.06 | 497.82 | 6.00% | 476.44 | 21.38 |
| Asset-IV {S/S} | 5356.12 | 610.62 | 5.00% | 249.76 | 360.86 |
| Asset-V(S/S) | 12205.13* | 632.19* | 5.00% | 609.10 | 23.08 |

* Pro-rata

Decapitalization of the Assets

42. Regulation 9 sub-clause (3) of the 2014 Tariff Regulations provides as under:-

- (3) The Capital cost of an existing project shall include the following:
 (a)...
 (b) additional capitalization and de-capitalization for the respective year of tariff as determined in accordance with Regulation 14; and
 ...”

43. The petitioner was directed to submit the details of the assets which were replaced by Assets-II, III and IV in Form-10B (Statement of the De-capitalisation) and the petition numbers under which the tariff for the old ICTs’ are being claimed. In response, the petitioner vide affidavit dated 9.2.2018 has submitted as under:-

- “(i) Form-10B of Asset-II and Asset-III, it is submitted that Asset-IV i.e. “Augmentation of Transformation capacity by 500MVA ICT (3rd) at 400/220 kV GIS Gurgaon” is a new ICT and there is no replacement of asset in case of Asset-IV. Hence Form-10B for this asset is not applicable.
- (ii) The replaced ICTs with respect to Asset-II and Asset-III originally belong to the following petitions:-

| Assets | Original Project of 315MVA Replaced ICT | Petition No. |
|-----------|---|--------------|
| Asset-II | Rihand Transmission System | 133/TT/2015 |
| Asset-III | 315 MVA, 440/220 kV ICT-IV at Ballabgarh Substation with associated bay equipments in Northern Region | 189/TT/2014 |



44. The petitioner has further submitted that in case of Asset-II and Asset-III old 315 MVA ICT were replaced with new 500 MVA ICT's and old ICT's are to be decapitalized from the aforesaid original project and to be capitalized in the new project along with other cost (transportation, erection etc.). In the instant case, the old ICT's are to be used at Kaithal sub-station which is already diverted and put into commercial operation and covered in Petition No. 148/TT/2017 without considering the cost of the ICT and the other is to be diverted to Fatehabad Sub-station. The process of decapitalization and capitalization of replaced asset can be carried out at this stage or can be done at the time the time of truing-up. Accordingly, the petitioner has submitted that as the true-up tariff for decapitalized asset for the period 2009-14 and for the period 2014-19 (for combined assets) are already approved and the total tariff for old assets (to be capitalized and decapitalized) remains same for tariff period 2014-19, it is prudent to exercise the de-capitalization and capitalization at the time of truing-up of tariff for the period 2014-19. The petitioner has accordingly prayed to approve the tariff of the instant assets without giving effect of capitalization and de-capitalization.

45. The petitioner has submitted that since the tariff for 315 MVA ICT are being continued in Petition No. 133/TT/2015 and Petition No. 189/TT/2014 the same shall be trued-up at the end of 2014-19 tariff period or at the beginning of 2019-24 tariff period. The petitioner has also prayed to allow truing- up of replaced ICTs (315 MVA ICT-III & IV at Ballabgarh) on account of the de-capitalization from its original project and re-capitalization in the new projects at the end of tariff block 2014-19.

46. We have examined the matter. With regard to Asset-II and Asset-III, the 315 MVA ICT for which the tariff was granted in Petition No. 133/TT/2015 and



Petition No. 189/TT/2014 respectively, it would be ineffective from the date of de-capitalization, therefore, the same should be made effective in recovery of annual transmission charges. In view of the above, the tariff of Asset-II and Asset-III in the instant petition is allowed subjected to discontinuation of tariff for 315 MVA ICT for which the tariff was determined in Petition No. 133/TT/2015 and Petition No. 189/TT/2014 which shall not be later than COD of the assets in the instant petition.

De-capitalization as on COD

47. The petitioner, vide affidavit dated 9.2.2018, has submitted the Statement of de-capitalization for Asset-II and Asset-III and is allowed as under:-

| (₹ in lakh) | | | | |
|-------------|------------------------|---------------------------|---|--------------------------------|
| Assets | Year of Capitalization | Year of De-Capitalization | Original Book value of asset being de-capitalized | Justification |
| Asset-II | 1990-91 | 2017-18 | 181.50 | Diverted to Kaithal NRSS-XXXIV |
| Asset-III | 2002-03 | 2017-18 | 428.91 | Diverted to Fatehabad |

Capital cost allowed as on COD

48. In view of the above, the capital cost considered for the purpose of tariff after considering IDC, IEDC and de-capitalization as per the provisions of Regulation 9(2) and 9(5) of the 2014 Tariff Regulations, 2014, is as under:-

| (₹ in lakh) | | | | | | |
|-------------|---|------------------------------|-------------------------------|--|---------------------------------|---|
| Assets | Capital Cost considered for the purpose of tariff before adjustment of IEDC/IDC, initial spares and others, if any, as on COD (A) | IDC disallowed as on COD (B) | IEDC disallowed as on COD (C) | Excess initial spares disallowed as on COD (D) | De-capitalization as on COD (E) | Capital cost considered for the purpose of tariff after scrutiny of IEDC/IDC, initial spares and others as on COD (E)=(A)-(B+C+D+E) |
| | | | | | | |



| | | | | | | |
|-----------|----------|--------|-------|--------|--------|-----------------|
| Asset-I | 27885.34 | 955.67 | 0.00 | 21.38 | 0.00 | 26908.38 |
| Asset-II | 1173.19 | 34.73 | 3.49 | 0.00 | 181.50 | 953.47 |
| Asset-III | 1009.63 | 20.76 | 3.78 | 0.00 | 428.91 | 556.18 |
| Asset-IV | 4293.03 | 186.20 | 21.20 | 360.86 | 0.00 | 3724.77 |
| Asset-V | 12304.42 | 0.00 | 0.00 | 23.08 | 0.00 | 12281.34 |

Additional Capital Expenditure

49. Clause (1) of Regulation 14 of the 2014 Tariff Regulations provides as under:-

“(1) The capital expenditure in respect of the new project or an existing project incurred or projected to be incurred, on the following counts within the original scope of work, after the date of commercial operation and up to the cut-off date may be admitted by the Commission, subject to prudence check:

- (i) Undischarged liabilities recognised to be payable at a future date;
- (ii) Works deferred for execution;
- (iii) Procurement of initial capital spares within the original scope of work, in accordance with the provisions of Regulation 13;
- (iv) Liabilities to meet award of arbitration or for compliance of the order or decree of a court; and
- (v) Change in Law or compliance of any existing law:

Provided that the details of works asset wise/work wise included in the original scope of work along with estimates of expenditure, liabilities recognized to be payable at a future date and the works deferred for execution shall be submitted along with the application for determination of tariff.”

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

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

51. Accordingly, the cut-off date for Assets-I, II, III, IV and V is 31.3.2020.

52. The petitioner has claimed the following Additional Capital Expenditure for the period from COD to 31.3.2019 as under:-

(₹ in lakh)

| Assets | 2017-18 | 2018-19 |
|-----------|---------|----------|
| Asset-I | 2388.10 | 2099.15 |
| Asset-II | 167.48 | 83.91 |
| Asset-III | 348.65 | 94.02 |
| Asset-IV | 830.52 | 510.60 |
| Asset-V | *355.85 | *1425.13 |

* Pro-rata

53. The IDC of ₹955.67 lakh in respect of Asset-I claimed to be discharged as ₹953.26 lakh during 2017-18 and ₹2.41 lakh during 2018-19 which are being added to the additional capitalization claimed as per Auditor's Certificate during the concerned years. Therefore, the following additional Capital Expenditure has been considered as under:-

(₹ in lakh)

| Assets | 2017-18 | 2018-19 |
|-----------|---------|---------|
| Asset-I | 3341.36 | 2101.57 |
| Asset-II | 167.48 | 83.91 |
| Asset-III | 348.65 | 94.02 |
| Asset-IV | 830.52 | 510.60 |
| Asset-V | 355.85 | 1425.13 |

Capital Cost summary from COD to 31.3.2019

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

(₹ in lakh)

| Assets | Expenditure up to COD | 2017-18 | 2018-19 | Total estimated completion cost upto 31.3.2019 |
|-----------|-----------------------|---------|---------|--|
| Asset-I | 26908.38 | 3341.36 | 2101.57 | 32351.22 |
| Asset-II | 953.47 | 167.48 | 83.91 | 1204.86 |
| Asset-III | 556.18 | 348.65 | 94.02 | 998.85 |
| Asset-IV | 3724.77 | 830.52 | 510.60 | 5065.89 |
| Asset-V | 10859.31 | 355.85 | 1425.13 | 12640.29 |

Debt- Equity Ratio

55. Clause 1 and 5 of Regulation 19 of the 2014 Tariff Regulations provide as



under:-

“(1) For a project declared under commercial operation on or after 1.4.2014, the debt-equity ratio would be considered as 70:30 as on COD. If the equity actually deployed is more than 30% of the capital cost, equity in excess of 30% shall be treated as normative loan:

Provided that:

- i) where equity actually deployed is less than 30% of the capital cost, actual equity shall be considered for determination of tariff:
- ii) the equity invested in foreign currency shall be designated in Indian rupees on the date of each investment:
- iii) any grant obtained for the execution of the project shall not be considered as a part of capital structure for the purpose of debt : equity ratio.

Explanation.-The premium, if any, raised by the generating company or the transmission licensee, as the case may be, while issuing share capital and investment of internal resources created out of its free reserve, for the funding of the project, shall be reckoned as paid up capital for the purpose of computing return on equity, only if such premium amount and internal resources are actually utilised for meeting the capital expenditure of the generating station or the transmission system.ii

(5) Any expenditure incurred or projected to be incurred on or after 1.4.2014 as maybe admitted by the Commission as additional capital expenditure for determination of tariff, and renovation and modernisation expenditure for life extension shall be serviced in the manner specified in clause (1) of this regulation.”

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

(₹ in lakh)

| Asset-I | As on COD | | As on 31.3.2019 | |
|--------------|-----------------|---------------|-----------------|---------------|
| | Amount | % | Amount | % |
| Debt | 18835.80 | 70.00 | 22645.86 | 70.00 |
| Equity | 8072.49 | 30.00 | 9705.37 | 30.00 |
| Total | 26908.29 | 100.00 | 32351.22 | 100.00 |

(₹ in lakh)

| Asset-II | As on COD | | As on 31.3.2019 | |
|--------------|---------------|---------------|-----------------|---------------|
| | Amount | % | Amount | % |
| Debt | 667.43 | 70.00 | 843.41 | 70.00 |
| Equity | 286.04 | 30.00 | 361.45 | 30.00 |
| Total | 953.47 | 100.00 | 1204.86 | 100.00 |

(₹ in lakh)

| Asset-III | As on COD | | As on 31.3.2019 | |
|--------------|---------------|---------------|-----------------|---------------|
| | Amount | % | Amount | % |
| Debt | 389.32 | 70.00 | 699.19 | 70.00 |
| Equity | 166.85 | 30.00 | 299.65 | 30.00 |
| Total | 556.18 | 100.00 | 998.85 | 100.00 |

(₹ in lakh)

| Asset-IV | As on COD | | As on 31.3.2019 | |
|--------------|----------------|---------------|-----------------|---------------|
| | Amount | % | Amount | % |
| Debt | 2607.34 | 70.00 | 3546.13 | 70.00 |
| Equity | 1117.43 | 30.00 | 1519.76 | 30.00 |
| Total | 3724.77 | 100.00 | 5065.89 | 100.00 |

(₹ in lakh)

| Asset-V | As on COD | | As on 31.3.2019 | |
|--------------|-----------------|---------------|-----------------|---------------|
| | Amount | % | Amount | % |
| Debt | 7,601.52 | 70.00 | 8848.20 | 70.00 |
| Equity | 3,257.79 | 30.00 | 3792.09 | 30.00 |
| Total | 10859.31 | 100.00 | 12640.29 | 100.00 |

Return on Equity

57. Clause 2 of Regulation 24 and Clause (2) of Regulation 25 of the 2014 Tariff

Regulations specify as under:-

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

Provided that:

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

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

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

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



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

(vi) additional RoE shall not be admissible for transmission line having length of less than 50 kilometers.

“25. Tax on Return on Equity:

(1) The base rate of return on equity as allowed by the Commission under Regulation 24 shall be grossed up with the effective tax rate of the respective financial year. For this purpose, the effective tax rate shall be considered on the basis of actual tax paid in the respect of the financial year in line with the provisions of the relevant Finance Acts by the concerned generating company or the transmission licensee, as the case may be. The actual tax income on other income stream (i.e., income of non generation or non transmission business, as the case may be) shall not be considered for the calculation of “effective tax rate”.

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

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

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

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



of the tax including interest received from IT authorities shall be recoverable/adjustable after completion of income tax assessment of the financial year.

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

| (₹ in lakh) | | |
|---|-----------------------|----------------|
| Asset-I | 2017-18 (pro-rata) | 2018-19 |
| Opening Equity | 8072.49 | 9074.89 |
| Addition due to Additional Capitalization | 1002.41 | 630.47 |
| Closing Equity | 9074.89 | 9705.37 |
| Average Equity | 8573.69 | 9390.13 |
| Return on Equity (Base Rate) | 15.50% | 15.50% |
| MAT rate for the Financial year 2013-14 | 20.961% | 20.961% |
| Rate of Return on Equity (Pre-tax) | 19.610% | 19.610% |
| Return on Equity (Pre-tax) | 1400.32 | 1841.40 |

| (₹ in lakh) | | |
|---|-----------------------|--------------|
| Asset-II | 2017-18 (pro-rata) | 2018-19 |
| Opening Equity | 286.04 | 336.28 |
| Addition due to Additional Capitalization | 50.24 | 25.17 |
| Closing Equity | 336.28 | 361.45 |
| Average Equity | 311.16 | 348.87 |
| Return on Equity (Base Rate) | 15.50% | 15.50% |
| MAT rate for the Financial year 2013-14 | 20.961% | 20.961% |
| Rate of Return on Equity (Pre-tax) | 19.610% | 19.610% |
| Return on Equity (Pre-tax) | 50.15 | 68.41 |



(₹ in lakh)

| Asset-III | 2017-18 (pro-rata) | 2018-19 |
|---|-------------------------------|----------------|
| Opening Equity | 166.85 | 271.45 |
| Addition due to Additional Capitalization | 104.60 | 28.21 |
| Closing Equity | 271.45 | 299.65 |
| Average Equity | 219.15 | 285.55 |
| Return on Equity (Base Rate) | 15.50% | 15.50% |
| MAT rate for the Financial year 2013-14 | 20.961% | 20.961% |
| Rate of Return on Equity (Pre-tax) | 19.610% | 19.610% |
| Return on Equity (Pre-tax) | 32.03 | 56.00 |

(₹ in lakh)

| Asset-IV | 2017-18 (pro-rata) | 2018-19 |
|---|-------------------------------|----------------|
| Opening Equity | 1117.43 | 1366.58 |
| Addition due to Additional Capitalization | 249.16 | 153.18 |
| Closing Equity | 1366.58 | 1519.76 |
| Average Equity | 1242.01 | 1443.17 |
| Return on Equity (Base Rate) | 15.50% | 15.50% |
| MAT rate for the Financial year 2013-14 | 20.961% | 20.961% |
| Rate of Return on Equity (Pre-tax) | 19.610% | 19.610% |
| Return on Equity (Pre-tax) | 160.81 | 283.01 |

(₹ in lakh)

| Asset-V | 2017-18 (pro-rata) | 2018-19 |
|---|-------------------------------|----------------|
| Opening Equity | 3257.79 | 3364.55 |
| Addition due to Additional Capitalization | 106.76 | 427.54 |
| Closing Equity | 3364.55 | 3792.09 |
| Average Equity | 3311.17 | 3578.32 |
| Return on Equity (Base Rate) | 15.50% | 15.50% |
| MAT rate for the Financial year 2013-14 | 20.961% | 20.961% |
| Rate of Return on Equity (Pre-tax) | 19.610% | 19.610% |
| Return on Equity (Pre-tax) | 163.66 | 701.71 |

Interest on Loan (IOL)

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

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

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

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

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

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

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

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

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

61. In these calculations, interest on loan has been worked out as under:-

(i) Gross amount of loan, repayment of installments and rate of interest have been considered as per Form 9C given in the petition.

(ii) The normative repayment for the tariff period 2014-19 has been considered to be equal to the depreciation allowed for that period.

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

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

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

| Asset - I | (₹ in lakh) | |
|---|-------------------------------|----------------|
| | 2017-18 (pro-rata) | 2018-19 |
| Gross Normative Loan | 18835.80 | 21174.76 |
| Cumulative Repayment upto previous Year | 0.00 | 1258.41 |
| Net Loan-Opening | 18835.80 | 19916.34 |
| Addition due to Additional Capitalization | 2338.95 | 1471.10 |



| | | |
|---|----------|----------|
| Repayment during the year | 1258.41 | 1654.76 |
| Net Loan-Closing | 19916.34 | 19732.69 |
| Average Loan | 19376.07 | 19824.52 |
| Weighted Average Rate of Interest on Loan | 8.1245% | 8.1173% |
| Interest on Loan | 1311.12 | 1609.22 |

(₹ in lakh)

| Asset - II | 2017-18 (pro-rata) | 2018-19 |
|---|-------------------------------|----------------|
| Gross Normative Loan | 667.43 | 784.67 |
| Cumulative Repayment upto previous Year | 0.00 | 45.01 |
| Net Loan-Opening | 667.43 | 739.66 |
| Addition due to Additional Capitalization | 117.24 | 58.74 |
| Repayment during the year | 45.01 | 61.40 |
| Net Loan-Closing | 739.66 | 736.99 |
| Average Loan | 703.55 | 738.33 |
| Weighted Average Rate of Interest on Loan | 7.6845% | 7.6864% |
| Interest on Loan | 44.44 | 56.75 |

(₹ in lakh)

| Asset - III | 2017-18 (pro-rata) | 2018-19 |
|---|-------------------------------|----------------|
| Gross Normative Loan | 389.32 | 633.38 |
| Cumulative Repayment upto previous Year | 0.00 | 28.74 |
| Net Loan-Opening | 389.32 | 604.64 |
| Addition due to Additional Capitalization | 244.06 | 65.81 |
| Repayment during the year | 28.74 | 50.26 |
| Net Loan-Closing | 604.64 | 620.19 |
| Average Loan | 496.98 | 612.41 |
| Weighted Average Rate of Interest on Loan | 8.0242% | 8.0238% |
| Interest on Loan | 29.72 | 49.14 |

(₹ in lakh)

| Asset - IV | 2017-18 (pro-rata) | 2018-19 |
|---|-------------------------------|----------------|
| Gross Normative Loan | 2607.34 | 3188.71 |
| Cumulative Repayment upto previous Year | 0.00 | 144.33 |
| Net Loan-Opening | 2607.34 | 3044.37 |
| Addition due to Additional Capitalization | 581.36 | 357.42 |
| Repayment during the year | 144.33 | 254.00 |
| Net Loan-Closing | 3044.37 | 3147.79 |
| Average Loan | 2825.86 | 3096.08 |
| Weighted Average Rate of Interest on Loan | 8.0699% | 8.0684% |
| Interest on Loan | 150.57 | 249.80 |

(₹ in lakh)

| Asset - V | 2017-18 (pro-rata) | 2018-19 |
|---|-------------------------------|----------------|
| Gross Normative Loan | 7601.52 | 7850.61 |
| Cumulative Repayment upto previous Year | 0.00 | 146.97 |
| Net Loan-Opening | 7601.52 | 7703.64 |
| Addition due to Additional Capitalization | 249.10 | 997.59 |
| Repayment during the year | 146.97 | 630.13 |
| Net Loan-Closing | 7703.64 | 8071.10 |
| Average Loan | 7652.58 | 7887.37 |
| Weighted Average Rate of Interest on Loan | 8.1143% | 8.1143% |
| Interest on Loan | 156.51 | 640.00 |



Depreciation

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

"27. Depreciation:

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

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

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

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

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

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

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

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

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



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

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

65. The COD of the instant assets namely, Asset-I, Asset-II, Asset-III, Asset-IV and Asset-V is from 1.6.2017 to 30.12.2017, accordingly the said assets will complete 12 years beyond 2018-19 and thus depreciation has been calculated annually based on Straight Line Method and at rates specified in Appendix-II of the 2014 Tariff Regulations. Accordingly, the depreciation has been worked out on the basis of capital expenditure as on COD and additional capitalization incurred / projected to be incurred thereafter, wherein depreciation for the first year has been calculated on pro rata basis for the year / part of year.

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

| Asset - I | (₹ in lakh) | |
|--------------------------------|-------------------------------|----------------|
| | 2017-18 (pro-rata) | 2018-19 |
| Opening Gross Block | 26908.29 | 30249.65 |
| Additional Capital expenditure | 3341.36 | 2101.57 |
| Closing Gross Block | 30249.65 | 32351.22 |
| Average Gross Block | 28578.97 | 31300.44 |
| Rate of Depreciation | 5.2868% | 5.2867% |
| Depreciable Value | 25721.07 | 28170.39 |
| Remaining Depreciable Value | 25721.07 | 26911.98 |
| Depreciation | 1258.41 | 1654.76 |

| Asset - II | (₹ in lakh) | |
|--------------------------------|-------------------------------|----------------|
| | 2017-18 (pro-rata) | 2018-19 |
| Opening Gross Block | 953.47 | 1120.95 |
| Additional Capital expenditure | 167.48 | 83.91 |
| Closing Gross Block | 1120.95 | 1204.86 |
| Average Gross Block | 1037.21 | 1162.91 |
| Rate of Depreciation | 5.2800% | 5.2800% |
| Depreciable Value | 933.49 | 1046.62 |
| Remaining Depreciable Value | 933.49 | 1001.60 |
| Depreciation | 45.01 | 61.40 |

(₹ in lakh)

| Asset - III | 2017-18 (pro-rata) | 2018-19 |
|--------------------------------|-------------------------------|----------------|
| Opening Gross Block | 556.18 | 904.83 |
| Additional Capital expenditure | 348.65 | 94.02 |
| Closing Gross Block | 904.83 | 998.85 |
| Average Gross Block | 730.50 | 951.84 |
| Rate of Depreciation | 5.2800% | 5.2800% |
| Depreciable Value | 657.45 | 856.65 |
| Remaining Depreciable Value | 657.45 | 827.91 |
| Depreciation | 28.74 | 50.26 |

(₹ in lakh)

| Asset - IV | 2017-18 (pro-rata) | 2018-19 |
|--------------------------------|-------------------------------|----------------|
| Opening Gross Block | 3724.77 | 4555.29 |
| Additional Capital expenditure | 830.52 | 510.60 |
| Closing Gross Block | 4555.29 | 5065.89 |
| Average Gross Block | 4140.03 | 4810.59 |
| Rate of Depreciation | 5.2800% | 5.2800% |
| Depreciable Value | 3726.03 | 4329.53 |
| Remaining Depreciable Value | 3726.03 | 4185.20 |
| Depreciation | 144.33 | 254.00 |

(₹ in lakh)

| Asset - V | 2017-18 (pro-rata) | 2018-19 |
|--------------------------------|-------------------------------|----------------|
| Opening Gross Block | 10859.31 | 11215.16 |
| Additional Capital expenditure | 355.85 | 1425.13 |
| Closing Gross Block | 11215.16 | 12640.29 |
| Average Gross Block | 11037.23 | 11927.72 |
| Rate of Depreciation | 5.2830% | 5.2829% |
| Depreciable Value | 9933.51 | 10734.95 |
| Remaining Depreciable Value | 9933.51 | 10587.98 |
| Depreciation | 146.97 | 630.13 |

Operation and Maintenance Expenses (O&M Expenses)

67. The normative O&M transmission system is specified in Regulation 29(4) of the 2014 Tariff Regulations. The normative O&M asset covered in the petition is given as under:-

| Element | 2017-18 | 2018-19 |
|---|----------------|----------------|
| D/C twin Conductor transmission line (₹ lakh /Km) | 0.780 | 0.806 |
| 400 kV bay (₹ lakh/bay) | 66.51 | 68.71 |
| 220 kV bay (₹ lakh/bay) | 46.55 | 48.10 |
| 400 kV GIS bay (₹ lakh/bay) | 56.84 | 58.73 |

68. The normative O&M allowable as per Regulation 29(4) of the 2014 Tariff



Regulations and is worked out as under:-

| Element | 2017-18 | 2018-19 |
|--|--|---------------|
| Asset-I 159.61 km D/C twin conductor | 103.689 | 128.64 |
| 2 nos 400 kV bays | 11.0789 | 137.42 |
| 2 nos 400 kV GIS bays | 94.681 | 117.46 |
| Total | 309.159 | 383.52 |
| Asset-II and Asset-III | Being augmentation of ICT, the existing bays are being utilized. | |
| Asset-IV 1 no 400 kV GIS bay | 37.37 | 58.73 |
| 1 no 220 kV bay | 30.60 | 48.10 |
| Total | 67.97 | 106.83 |
| Asset-V 2 nos 400 kV bay | 25.87 | 117.46 |
| 4 nos 220 kV bay | 36.22 | 96.20 |
| Total | 65.09 | 213.66 |

Interest on Working Capital (IWC)

69. Clause 1(c) of Regulation 28 and Clause 5 of Regulation 3 of the 2014 Tariff

Regulations specify as follows:-

“28. Interest on Working Capital

(1) The working capital shall cover:

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

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

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

(iii) Operation and maintenance expenses for one month”

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

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

70. The petitioner is entitled to claim IWC as per the 2014 Tariff Regulations. The



components of the working capital and the petitioner's entitlement to interest thereon are discussed hereunder:-

Receivables

Receivables as a component of working capital will be equivalent to two months fixed cost. The petitioner has claimed the receivables on the basis of 2 months' annual transmission charges.

Maintenance spares

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

O&M Expenses

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

Rate of interest on working capital

As per proviso 3 of Regulation 28 of the 2014 Tariff Regulation, SBI Base rate of 9.10% as on 1.4.2014 plus 350 Bps i.e. 12.80% has been considered for the asset, as the rate of interest on working capital.

71. Accordingly, the IWC is summarized as under:-

| | (₹ in lakh) | |
|--------------------|-------------------------------|----------------|
| Asset - I | 2017-18 (pro-rata) | 2018-19 |
| Maintenance Spares | 55.68 | 57.53 |
| O & M expenses | 30.93 | 31.96 |
| Receivables | 876.50 | 936.36 |
| Total | 963.11 | 1025.85 |
| Interest | 101.07 | 129.26 |

| | (₹ in lakh) | |
|--------------------|-------------------------------|----------------|
| Asset - II | 2017-18 (pro-rata) | 2018-19 |
| Maintenance Spares | 0.00 | 0.00 |
| O & M expenses | 0.00 | 0.00 |
| Receivables | 28.92 | 31.76 |
| Total | 28.92 | 31.76 |
| Interest | 2.99 | 4.00 |



(₹ in lakh)

| Asset - III | 2017-18 (pro-rata) | 2018-19 |
|--------------------|-----------------------|-------------|
| Maintenance Spares | 0.00 | 0.00 |
| O & M expenses | 0.00 | 0.00 |
| Receivables | 20.67 | 26.45 |
| Total | 20.67 | 26.45 |
| Interest | 1.94 | 3.33 |

(₹ in lakh)

| Asset - IV | 2017-18 (pro-rata) | 2018-19 |
|--------------------|-----------------------|--------------|
| Maintenance Spares | 15.44 | 16.02 |
| O & M expenses | 8.58 | 8.90 |
| Receivables | 135.54 | 152.67 |
| Total | 159.56 | 177.60 |
| Interest | 13.27 | 22.38 |

(₹ in lakh)

| Asset - V | 2017-18 (pro-rata) | 2018-19 |
|--------------------|-----------------------|-------------|
| Maintenance Spares | 39.06 | 39.84 |
| O & M expenses | 21.70 | 22.13 |
| Receivables | 361.16 | 382.23 |
| Total | 421.92 | 444.21 |
| Interest | 3.40 | 5.97 |

Annual Transmission charges

72. The annual transmission tariff for the tariff period 2014-19 is summarized as below:-

(₹ in lakh)

| | Asset-I | | Asset-II | |
|-----------------------------|----------------|----------------|---------------|---------------|
| | 2017-18 | 2018-19 | 2017-18 | 2018-19 |
| Depreciation | 1258.41 | 1654.76 | 45.01 | 61.40 |
| Interest on Loan | 1311.12 | 1609.22 | 44.44 | 56.75 |
| Return on Equity | 1400.32 | 1841.40 | 50.15 | 68.41 |
| Interest on Working Capital | 101.07 | 129.26 | 2.99 | 4.00 |
| O & M Expenses | 309.16 | 383.52 | 0.00 | 0.00 |
| Total | 4380.08 | 5618.16 | 142.59 | 190.57 |

(₹ in lakh)

| | Asset-III | | Asset-IV | | Asset-V | |
|-----------------------------|--------------|---------------|---------------|---------------|---------------|----------------|
| | 2017-18 | 2018-19 | 2017-18 | 2018-19 | 2017-18 | 2018-19 |
| Depreciation | 28.74 | 50.26 | 144.33 | 254.00 | 146.97 | 630.13 |
| Interest on Loan | 29.72 | 49.14 | 150.57 | 249.80 | 156.51 | 640.00 |
| Return on Equity | 32.03 | 56.00 | 160.81 | 283.01 | 163.66 | 701.71 |
| Interest on Working Capital | 1.94 | 3.33 | 13.27 | 22.38 | 13.40 | 55.97 |
| O & M Expenses | 0.00 | 0.00 | 67.97 | 106.83 | 65.64 | 265.59 |
| Total | 92.43 | 158.73 | 536.96 | 916.02 | 546.19 | 2293.41 |



Filing Fee and Publication Expenses

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

Licence Fee and RLDC Fees and Charges

74. The petitioner has requested to allow the petitioner to bill and recover License fee and RLDC fees and charges, separately from the respondents. The petitioner shall be entitled for reimbursement of licence fee and RLDC fees and charges in accordance with Clause (2)(b) and (2)(a) respectively of Regulation 52 of the 2014 Tariff Regulations.

Service Tax

75. 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 have considered the submission of the petitioner. Service tax is not levied on transmission. Further, service tax is subsumed by GST and hence petitioner's prayer is infructuous.

Goods and Services Tax

76. The petitioner has prayed for reimbursement of tax, if any, on account of proposed implementation of GST. The petitioner has submitted that the Commission should allow to recover GST from the beneficiaries, if imposed on transmission charges under the proposed GST when implemented by Government of India. GST is not levied on transmission service at present



and we are of the view that petitioner's prayer is premature

Sharing of Transmission Charges

77. The transmission charges of Asset-I to V shall be recovered on monthly basis in accordance with Regulation 43 of the 2014 Tariff Regulations and shall be shared by the beneficiaries and long term transmission customers in Central Electricity Regulatory Commission (Sharing of Inter State Transmission Charges and Losses) Regulations, 2010 as amended from time to time. The transmission charges of Asset-V shall be recovered from HPPTCL for the period of its COD till the COD of the downstream asset.

78. This order disposes of Petition No. 116/TT/2017.

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

sd/-
(A. S. Bakshi)
Member

sd/-
(A. K. Singhal)
Member

sd/-
(P. K. Pujari)
Chairperson



| CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN OF ASSET-I | | | |
|---|---|--|-------------|
| | | | (₹ in lakh) |
| | Details of Loan | 2017-18 | 2018-19 |
| 1 | Bond LI | | |
| | Gross loan opening | 5761.40 | 5761.40 |
| | Cumulative Repayment upto COD/previous year | 0.00 | 0.00 |
| | Net Loan-Opening | 5761.40 | 5761.40 |
| | Additions during the year | 0.00 | 0.00 |
| | Repayment during the year | 0.00 | 0.00 |
| | Net Loan-Closing | 5761.40 | 5761.40 |
| | Average Loan | 5761.40 | 5761.40 |
| | Rate of Interest | 8.40% | 8.40% |
| | Interest | 483.96 | 483.96 |
| | Rep Schedule | Redeemable in 12 equal annual instalments from 14.9.2019 | |
| 2 | Bond LIII | | |
| | Gross loan opening | 291.91 | 291.91 |
| | Cumulative Repayment upto COD/previous year | 0.00 | 0.00 |
| | Net Loan-Opening | 291.91 | 291.91 |
| | Additions during the year | 0.00 | 0.00 |
| | Repayment during the year | 0.00 | 0.00 |
| | Net Loan-Closing | 291.91 | 291.91 |
| | Average Loan | 291.91 | 291.91 |
| | Rate of Interest | 8.13% | 8.13% |
| | Interest | 23.73 | 23.73 |
| | Rep Schedule | Redeemable in 12 equal annual instalments from 25.4.2020 | |
| 3 | Bond LVII | | |
| | Gross loan opening | 435.88 | 435.88 |
| | Cumulative Repayment upto COD/previous year | 0.00 | 0.00 |
| | Net Loan-Opening | 435.88 | 435.88 |
| | Additions during the year | 0.00 | 0.00 |
| | Repayment during the year | 0.00 | 0.00 |
| | Net Loan-Closing | 435.88 | 435.88 |
| | Average Loan | 435.88 | 435.88 |
| | Rate of Interest | 7.20% | 7.20% |
| | Interest | 31.38 | 31.38 |
| | Rep Schedule | Redeemable at par on 21.12.2021 | |
| 4 | Bond LIV | | |
| | Gross loan opening | 8055.92 | 8055.92 |
| | Cumulative Repayment upto COD/previous year | 0.00 | 0.00 |
| | Net Loan-Opening | 8055.92 | 8055.92 |
| | Additions during the year | 0.00 | 0.00 |
| | Repayment during the year | 0.00 | 0.00 |
| | Net Loan-Closing | 8055.92 | 8055.92 |



| | | | |
|----------|---|---|---------|
| | Average Loan | 8055.92 | 8055.92 |
| | Rate of Interest | 7.97% | 7.97% |
| | Interest | 642.06 | 642.06 |
| | Rep Schedule | Redeemable at par in three equal annual instalments on 15.7.2021, 15.7.2026 and 15.7.2031 | |
| | | | |
| 5 | Bond LVI | | |
| | Gross loan opening | 202.88 | 202.88 |
| | Cumulative Repayment upto COD/previous year | 0.00 | 0.00 |
| | Net Loan-Opening | 202.88 | 202.88 |
| | Additions during the year | 0.00 | 0.00 |
| | Repayment during the year | 0.00 | 0.00 |
| | Net Loan-Closing | 202.88 | 202.88 |
| | Average Loan | 202.88 | 202.88 |
| | Rate of Interest | 7.36% | 7.36% |
| | Interest | 14.93 | 14.93 |
| | Rep Schedule | Redeemable at par on 18.10.2026 | |
| | | | |
| 6 | Bond LVIII | | |
| | Gross loan opening | 1139.63 | 1139.63 |
| | Cumulative Repayment upto COD/previous year | 0.00 | 0.00 |
| | Net Loan-Opening | 1139.63 | 1139.63 |
| | Additions during the year | 0.00 | 0.00 |
| | Repayment during the year | 0.00 | 0.00 |
| | Net Loan-Closing | 1139.63 | 1139.63 |
| | Average Loan | 1139.63 | 1139.63 |
| | Rate of Interest | 7.89% | 7.89% |
| | Interest | 89.92 | 89.92 |
| | Rep Schedule | Redeemable at par on 9.3.2027 | |
| | | | |
| 7 | Bond LIX | | |
| | Gross loan opening | 0.00 | 202.27 |
| | Cumulative Repayment upto COD/previous year | 0.00 | 0.00 |
| | Net Loan-Opening | 0.00 | 202.27 |
| | Additions during the year | 202.27 | 0.00 |
| | Repayment during the year | 0.00 | 0.00 |
| | Net Loan-Closing | 202.27 | 202.27 |
| | Average Loan | 101.14 | 202.27 |
| | Rate of Interest | 7.30% | 7.30% |
| | Interest | 7.38 | 14.77 |
| | Rep Schedule | Redeemable at par on 19.6.2027 | |
| | | | |
| 8 | SBI (2016-17) (Q4) | | |
| | Gross loan opening | 1200.00 | 1200.00 |
| | Cumulative Repayment upto COD/previous year | 0.00 | 0.00 |
| | Net Loan-Opening | 1200.00 | 1200.00 |
| | Additions during the year | 0.00 | 0.00 |
| | Repayment during the year | 0.00 | 0.00 |
| | Net Loan-Closing | 1200.00 | 1200.00 |
| | Average Loan | 1200.00 | 1200.00 |



| | | | |
|-----------|---|---|----------|
| | Rate of Interest | 8.90% | 8.90% |
| | Interest | 106.80 | 106.80 |
| | Rep Schedule | 20 half yearly equal instalments from 15.6.2019 | |
| | | | |
| 9 | SBI (2017-18) (Q1) | | |
| | Gross loan opening | 1763.15 | 1763.15 |
| | Cumulative Repayment upto COD/previous year | 0.00 | 0.00 |
| | Net Loan-Opening | 1763.15 | 1763.15 |
| | Additions during the year | 0.00 | 0.00 |
| | Repayment during the year | 0.00 | 0.00 |
| | Net Loan-Closing | 1763.15 | 1763.15 |
| | Average Loan | 1763.15 | 1763.15 |
| | Rate of Interest | 7.95% | 7.95% |
| | Interest | 140.17 | 140.17 |
| | Rep Schedule | 20 half yearly equal instalments from 15.6.2019 | |
| | | | |
| 10 | SBI (2017-18) (Q1) | | |
| | Gross loan opening | 0.00 | 667.28 |
| | Cumulative Repayment upto COD/previous year | 0.00 | 0.00 |
| | Net Loan-Opening | 0.00 | 667.28 |
| | Additions during the year | 667.28 | 0.00 |
| | Repayment during the year | 0.00 | 0.00 |
| | Net Loan-Closing | 667.28 | 667.28 |
| | Average Loan | 333.64 | 667.28 |
| | Rate of Interest | 7.95% | 7.95% |
| | Interest | 26.52 | 53.05 |
| | Rep Schedule | 20 half yearly equal instalments from 15.6.2019 | |
| | | | |
| 11 | SBI (2017-18) (Q1) | | |
| | Gross loan opening | 0.00 | 0.00 |
| | Cumulative Repayment upto COD/previous year | 0.00 | 0.00 |
| | Net Loan-Opening | 0.00 | 0.00 |
| | Additions during the year | 0.00 | 1.68 |
| | Repayment during the year | 0.00 | 0.00 |
| | Net Loan-Closing | 0.00 | 1.68 |
| | Average Loan | 0.00 | 0.84 |
| | Rate of Interest | 7.95% | 7.95% |
| | Interest | 0.00 | 0.07 |
| | Rep Schedule | 20 half yearly equal instalments from 15.6.2019 | |
| | | | |
| | | | |
| | Total Loan | | |
| | Gross loan opening | 18850.77 | 19720.32 |
| | Cumulative Repayment upto COD/previous year | 0.00 | 0.00 |
| | Net Loan-Opening | 18850.77 | 19720.32 |
| | Additions during the year | 869.55 | 1.68 |
| | Repayment during the year | 0.00 | 0.00 |
| | Net Loan-Closing | 19720.32 | 19722.00 |
| | Average Loan | 19285.55 | 19721.16 |
| | Rate of Interest | 8.1245% | 8.1173% |
| | Interest | 1566.86 | 1600.83 |



| CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN OF ASSET-II | | | |
|--|---|--|---------|
| | | (₹ in lakh) | |
| | Details of Loan | 2017-18 | 2018-19 |
| 1 | Bond LI | | |
| | Gross loan opening | 3.50 | 3.50 |
| | Cumulative Repayment upto COD/previous year | 0.00 | 0.00 |
| | Net Loan-Opening | 3.50 | 3.50 |
| | Additions during the year | 0.00 | 0.00 |
| | Repayment during the year | 0.00 | 0.00 |
| | Net Loan-Closing | 3.50 | 3.50 |
| | Average Loan | 3.50 | 3.50 |
| | Rate of Interest | 8.40% | 8.40% |
| | Interest | 0.29 | 0.29 |
| | Rep Schedule | Redeemable in 12 equal annual instalments from 14.9.2019 | |
| 2 | Bond LII | | |
| | Gross loan opening | 149.87 | 149.87 |
| | Cumulative Repayment upto COD/previous year | 0.00 | 0.00 |
| | Net Loan-Opening | 149.87 | 149.87 |
| | Additions during the year | 0.00 | 0.00 |
| | Repayment during the year | 0.00 | 0.00 |
| | Net Loan-Closing | 149.87 | 149.87 |
| | Average Loan | 149.87 | 149.87 |
| | Rate of Interest | 8.32% | 8.32% |
| | Interest | 12.47 | 12.47 |
| | Rep Schedule | Redeemable at par in three equal annual instalments on 23.12.2020, 23.12.2025 and 23.12.2025 | |
| 3 | Bond LIII | | |
| | Gross loan opening | 200.00 | 200.00 |
| | Cumulative Repayment upto COD/previous year | 0.00 | 0.00 |
| | Net Loan-Opening | 200.00 | 200.00 |
| | Additions during the year | 0.00 | 0.00 |
| | Repayment during the year | 0.00 | 0.00 |
| | Net Loan-Closing | 200.00 | 200.00 |
| | Average Loan | 200.00 | 200.00 |
| | Rate of Interest | 8.13% | 8.13% |
| | Interest | 16.26 | 16.26 |
| | Rep Schedule | Redeemable in 12 equal annual instalments from 25.4.2020 | |
| 4 | Bond LVII | | |
| | Gross loan opening | 396.20 | 396.20 |
| | Cumulative Repayment upto COD/previous year | 0.00 | 0.00 |
| | Net Loan-Opening | 396.20 | 396.20 |



| | | | |
|----------|---|--|--------|
| | Additions during the year | 0.00 | 0.00 |
| | Repayment during the year | 0.00 | 0.00 |
| | Net Loan-Closing | 396.20 | 396.20 |
| | Average Loan | 396.20 | 396.20 |
| | Rate of Interest | 7.20% | 7.20% |
| | Interest | 28.53 | 28.53 |
| | Rep Schedule | Redeemable at par on 21.12.2021 | |
| | | | |
| 5 | Bond LVII | | |
| | Gross loan opening | 0.00 | 15.91 |
| | Cumulative Repayment upto COD/previous year | 0.00 | 0.00 |
| | Net Loan-Opening | 0.00 | 15.91 |
| | Additions during the year | 15.91 | 0.00 |
| | Repayment during the year | 0.00 | 0.00 |
| | Net Loan-Closing | 15.91 | 15.91 |
| | Average Loan | 7.96 | 15.91 |
| | Rate of Interest | 7.20% | 7.20% |
| | Interest | 0.57 | 1.15 |
| | Rep Schedule | Redeemable at par on 21.12.2021 | |
| | | | |
| 6 | Bond LVII | | |
| | Gross loan opening | 0.00 | 0.00 |
| | Cumulative Repayment upto COD/previous year | 0.00 | 0.00 |
| | Net Loan-Opening | 0.00 | 0.00 |
| | Additions during the year | 0.00 | 1.29 |
| | Repayment during the year | 0.00 | 0.00 |
| | Net Loan-Closing | 0.00 | 1.29 |
| | Average Loan | 0.00 | 0.65 |
| | Rate of Interest | 7.20% | 7.20% |
| | Interest | 0.00 | 0.05 |
| | Rep Schedule | Redeemable at par on 21.12.2021 | |
| | | | |
| 7 | Bond LIV | | |
| | Gross loan opening | 34.15 | 34.15 |
| | Cumulative Repayment upto COD/previous year | 0.00 | 0.00 |
| | Net Loan-Opening | 34.15 | 34.15 |
| | Additions during the year | 0.00 | 0.00 |
| | Repayment during the year | 0.00 | 0.00 |
| | Net Loan-Closing | 34.15 | 34.15 |
| | Average Loan | 34.15 | 34.15 |
| | Rate of Interest | 7.97% | 7.97% |
| | Interest | 2.72 | 2.72 |
| | Rep Schedule | Redeemable at par in three equal annual instalments on 15.07.2021, 15.7.2026 and 15.7.2031 | |
| | | | |
| 8 | Bond LVI | | |
| | Gross loan opening | 20.32 | 20.32 |
| | Cumulative Repayment upto COD/previous year | 0.00 | 0.00 |
| | Net Loan-Opening | 20.32 | 20.32 |
| | Additions during the year | 0.00 | 0.00 |



| | | | |
|----------|---|---|---------|
| | Repayment during the year | 0.00 | 0.00 |
| | Net Loan-Closing | 20.32 | 20.32 |
| | Average Loan | 20.32 | 20.32 |
| | Rate of Interest | 7.36% | 7.36% |
| | Interest | 1.50 | 1.50 |
| | Rep Schedule | Redeemable at par on 18.10.2026 | |
| | | | |
| 9 | HDFC (2017-18) (Q1) | | |
| | Gross loan opening | 0.00 | 43.85 |
| | Cumulative Repayment upto COD/previous year | 0.00 | 0.00 |
| | Net Loan-Opening | 0.00 | 43.85 |
| | Additions during the year | 43.85 | 0.00 |
| | Repayment during the year | 0.00 | 0.00 |
| | Net Loan-Closing | 43.85 | 43.85 |
| | Average Loan | 21.93 | 43.85 |
| | Rate of Interest | 7.95% | 7.95% |
| | Interest | 1.74 | 3.49 |
| | Rep Schedule | 20 half yearly equal instalments from 15.6.2019 | |
| | | | |
| | | | |
| | Total Loan | | |
| | Gross loan opening | 804.04 | 863.80 |
| | Cumulative Repayment upto COD/previous year | 0.00 | 0.00 |
| | Net Loan-Opening | 804.04 | 863.80 |
| | Additions during the year | 59.76 | 1.29 |
| | Repayment during the year | 0.00 | 0.00 |
| | Net Loan-Closing | 863.80 | 865.09 |
| | Average Loan | 833.92 | 864.45 |
| | Rate of Interest | 7.6845% | 7.6864% |
| | Interest | 64.08 | 66.44 |



| CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN OF ASSET-III | | | |
|---|---|--|---------|
| | | (₹ in lakh) | |
| | Details of Loan | 2017-18 | 2018-19 |
| 1 | Bond LI | | |
| | Gross loan opening | 3.50 | 3.50 |
| | Cumulative Repayment upto COD/previous year | 0.00 | 0.00 |
| | Net Loan-Opening | 3.50 | 3.50 |
| | Additions during the year | 0.00 | 0.00 |
| | Repayment during the year | 0.00 | 0.00 |
| | Net Loan-Closing | 3.50 | 3.50 |
| | Average Loan | 3.50 | 3.50 |
| | Rate of Interest | 8.40% | 8.40% |
| | Interest | 0.29 | 0.29 |
| | Rep Schedule | Redeemable in 12 equal annual instalments from 14.9.2019 | |
| 2 | Bond LII | | |
| | Gross loan opening | 149.88 | 149.88 |
| | Cumulative Repayment upto COD/previous year | 0.00 | 0.00 |
| | Net Loan-Opening | 149.88 | 149.88 |
| | Additions during the year | 0.00 | 0.00 |
| | Repayment during the year | 0.00 | 0.00 |
| | Net Loan-Closing | 149.88 | 149.88 |
| | Average Loan | 149.88 | 149.88 |
| | Rate of Interest | 8.32% | 8.32% |
| | Interest | 12.47 | 12.47 |
| | Rep Schedule | Redeemable at par in three equal annual instalments on 23.12.2020, 23.12.2025 and 23.12.2025 | |
| 3 | Bond LIII | | |
| | Gross loan opening | 48.00 | 48.00 |
| | Cumulative Repayment upto COD/previous year | 0.00 | 0.00 |
| | Net Loan-Opening | 48.00 | 48.00 |
| | Additions during the year | 0.00 | 0.00 |
| | Repayment during the year | 0.00 | 0.00 |
| | Net Loan-Closing | 48.00 | 48.00 |
| | Average Loan | 48.00 | 48.00 |
| | Rate of Interest | 8.13% | 8.13% |
| | Interest | 3.90 | 3.90 |
| | Rep Schedule | Redeemable in 12 equal annual instalments from 25.4.2020 | |
| 4 | Bond LIV | | |
| | Gross loan opening | 26.50 | 26.50 |
| | Cumulative Repayment upto COD/previous year | 0.00 | 0.00 |
| | Net Loan-Opening | 26.50 | 26.50 |
| | Additions during the year | 0.00 | 0.00 |



| | | | |
|----------|---|---|--------|
| | Repayment during the year | 0.00 | 0.00 |
| | Net Loan-Closing | 26.50 | 26.50 |
| | Average Loan | 26.50 | 26.50 |
| | Rate of Interest | 7.97% | 7.97% |
| | Interest | 2.11 | 2.11 |
| | Rep Schedule | Redeemable at par in three equal annual instalments on 15.7.2021, 15.7.2026 and 15.7.2031 | |
| | | | |
| 5 | Bond LVI | | |
| | Gross loan opening | 23.80 | 23.80 |
| | Cumulative Repayment upto COD/previous year | 0.00 | 0.00 |
| | Net Loan-Opening | 23.80 | 23.80 |
| | Additions during the year | 0.00 | 0.00 |
| | Repayment during the year | 0.00 | 0.00 |
| | Net Loan-Closing | 23.80 | 23.80 |
| | Average Loan | 23.80 | 23.80 |
| | Rate of Interest | 7.36% | 7.36% |
| | Interest | 1.75 | 1.75 |
| | Rep Schedule | Redeemable at par on 18.10.2026 | |
| | | | |
| 6 | SBI (2017-18) (Q1) | | |
| | Gross loan opening | 447.35 | 447.35 |
| | Cumulative Repayment upto COD/previous year | 0.00 | 0.00 |
| | Net Loan-Opening | 447.35 | 447.35 |
| | Additions during the year | 0.00 | 0.00 |
| | Repayment during the year | 0.00 | 0.00 |
| | Net Loan-Closing | 447.35 | 447.35 |
| | Average Loan | 447.35 | 447.35 |
| | Rate of Interest | 7.95% | 7.95% |
| | Interest | 35.56 | 35.56 |
| | Rep Schedule | 20 half yearly equal instalments from 15.6.2019 | |
| | | | |
| 7 | SBI (2017-18) (Q1) | | |
| | Gross loan opening | 0.00 | 0.34 |
| | Cumulative Repayment upto COD/previous year | 0.00 | 0.00 |
| | Net Loan-Opening | 0.00 | 0.34 |
| | Additions during the year | 0.34 | 0.00 |
| | Repayment during the year | 0.00 | 0.00 |
| | Net Loan-Closing | 0.34 | 0.34 |
| | Average Loan | 0.17 | 0.34 |
| | Rate of Interest | 7.95% | 7.95% |
| | Interest | 0.01 | 0.03 |
| | Rep Schedule | 20 half yearly equal instalments from 15.6.2019 | |
| | | | |
| 8 | HDFC (2017-18) (Q1) | | |
| | Gross loan opening | 0.00 | 6.85 |
| | Cumulative Repayment upto COD/previous year | 0.00 | 0.00 |
| | Net Loan-Opening | 0.00 | 6.85 |
| | Additions during the year | 6.85 | 0.00 |
| | Repayment during the year | 0.00 | 0.00 |



| | | | |
|----------|---|---|---------|
| | Net Loan-Closing | 6.85 | 6.85 |
| | Average Loan | 3.43 | 6.85 |
| | Rate of Interest | 7.95% | 7.95% |
| | Interest | 0.27 | 0.54 |
| | Rep Schedule | 20 half yearly equal instalments from 15.6.2019 | |
| | | | |
| 9 | HDFC (2017-18) (Q1) | | |
| | Gross loan opening | 0.00 | 0.00 |
| | Cumulative Repayment upto COD/previous year | 0.00 | 0.00 |
| | Net Loan-Opening | 0.00 | 0.00 |
| | Additions during the year | 0.00 | 0.52 |
| | Repayment during the year | 0.00 | 0.00 |
| | Net Loan-Closing | 0.00 | 0.52 |
| | Average Loan | 0.00 | 0.26 |
| | Rate of Interest | 7.95% | 7.95% |
| | Interest | 0.00 | 0.02 |
| | Rep Schedule | 20 half yearly equal instalments from 15.6.2019 | |
| | | | |
| | | | |
| | Total Loan | | |
| | Gross loan opening | 699.03 | 706.22 |
| | Cumulative Repayment upto COD/previous year | 0.00 | 0.00 |
| | Net Loan-Opening | 699.03 | 706.22 |
| | Additions during the year | 7.19 | 0.52 |
| | Repayment during the year | 0.00 | 0.00 |
| | Net Loan-Closing | 706.22 | 706.74 |
| | Average Loan | 702.63 | 706.48 |
| | Rate of Interest | 8.0242% | 8.0238% |
| | Interest | 56.38 | 56.69 |



| CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN OF ASSET-IV | | |
|--|--|---------|
| (₹ in lakh) | | |
| | 2017-18 | 2018-19 |
| 1 Bond LI | | |
| Gross loan opening | 71.92 | 71.92 |
| Cumulative Repayment upto COD/previous year | 0.00 | 0.00 |
| Net Loan-Opening | 71.92 | 71.92 |
| Additions during the year | 0.00 | 0.00 |
| Repayment during the year | 0.00 | 0.00 |
| Net Loan-Closing | 71.92 | 71.92 |
| Average Loan | 71.92 | 71.92 |
| Rate of Interest | 8.40% | 8.40% |
| Interest | 6.04 | 6.04 |
| Rep Schedule | Redeemable in 12 equal annual instalments from 14.9.2019 | |
| 2 Bond LII | | |
| Gross loan opening | 156.07 | 156.07 |
| Cumulative Repayment upto COD/previous year | 0.00 | 0.00 |
| Net Loan-Opening | 156.07 | 156.07 |
| Additions during the year | 0.00 | 0.00 |
| Repayment during the year | 0.00 | 0.00 |
| Net Loan-Closing | 156.07 | 156.07 |
| Average Loan | 156.07 | 156.07 |
| Rate of Interest | 8.32% | 8.32% |
| Interest | 12.99 | 12.99 |
| Rep Schedule | Redeemable at par in three equal annual instalments on 23.12.2020, 23.12.2025 and 23.12.2025 | |
| 3 Bond LIII | | |
| Gross loan opening | 1498.63 | 1498.63 |
| Cumulative Repayment upto COD/previous year | 0.00 | 0.00 |
| Net Loan-Opening | 1498.63 | 1498.63 |
| Additions during the year | 0.00 | 0.00 |
| Repayment during the year | 0.00 | 0.00 |
| Net Loan-Closing | 1498.63 | 1498.63 |
| Average Loan | 1498.63 | 1498.63 |
| Rate of Interest | 8.13% | 8.13% |
| Interest | 121.84 | 121.84 |
| Rep Schedule | Redeemable in 12 equal annual instalments from 25.4.2020 | |
| 4 SBI (2017-18) (Q1) | | |
| Gross loan opening | 475.19 | 475.19 |
| Cumulative Repayment upto COD/previous year | 0.00 | 0.00 |
| Net Loan-Opening | 475.19 | 475.19 |
| Additions during the year | 0.00 | 0.00 |
| Repayment during the year | 0.00 | 0.00 |



| | | | |
|----------|---|---|---------|
| | Net Loan-Closing | 475.19 | 475.19 |
| | Average Loan | 475.19 | 475.19 |
| | Rate of Interest | 7.95% | 7.95% |
| | Interest | 37.78 | 37.78 |
| | Rep Schedule | 20 half yearly equal instalments from 15.6.2019 | |
| | | | |
| 5 | HDFC (2017-18) (Q1) | | |
| | Gross loan opening | 770.26 | 770.26 |
| | Cumulative Repayment upto COD/previous year | 0.00 | 0.00 |
| | Net Loan-Opening | 770.26 | 770.26 |
| | Additions during the year | 0.00 | 0.00 |
| | Repayment during the year | 0.00 | 0.00 |
| | Net Loan-Closing | 770.26 | 770.26 |
| | Average Loan | 770.26 | 770.26 |
| | Rate of Interest | 7.95% | 7.95% |
| | Interest | 61.24 | 61.24 |
| | Rep Schedule | 20 half yearly equal instalments from 15.6.2019 | |
| | | | |
| 6 | HDFC (2017-18) (Q1) | | |
| | Gross loan opening | 0.00 | 56.87 |
| | Cumulative Repayment upto COD/previous year | 0.00 | 0.00 |
| | Net Loan-Opening | 0.00 | 56.87 |
| | Additions during the year | 56.87 | 0.00 |
| | Repayment during the year | 0.00 | 0.00 |
| | Net Loan-Closing | 56.87 | 56.87 |
| | Average Loan | 28.44 | 56.87 |
| | Rate of Interest | 7.95% | 7.95% |
| | Interest | 2.26 | 4.52 |
| | Rep Schedule | 20 half yearly equal instalments from 15.6.2019 | |
| | | | |
| 7 | HDFC (2017-18) (Q1) | | |
| | Gross loan opening | 0.00 | 0.00 |
| | Cumulative Repayment upto COD/previous year | 0.00 | 0.00 |
| | Net Loan-Opening | 0.00 | 0.00 |
| | Additions during the year | 0.00 | 23.37 |
| | Repayment during the year | 0.00 | 0.00 |
| | Net Loan-Closing | 0.00 | 23.37 |
| | Average Loan | 0.00 | 11.69 |
| | Rate of Interest | 7.95% | 7.95% |
| | Interest | 0.00 | 0.93 |
| | Rep Schedule | 20 half yearly equal instalments from 15.6.2019 | |
| | | | |
| | | | |
| | Total Loan | | |
| | Gross loan opening | 2972.07 | 3028.94 |
| | Cumulative Repayment upto COD/previous year | 0.00 | 0.00 |
| | Net Loan-Opening | 2972.07 | 3028.94 |
| | Additions during the year | 56.87 | 23.37 |
| | Repayment during the year | 0.00 | 0.00 |
| | Net Loan-Closing | 3028.94 | 3052.31 |
| | Average Loan | 3000.51 | 3040.63 |



| | | | |
|--|------------------|---------|---------|
| | Rate of Interest | 8.0699% | 8.0684% |
| | Interest | 242.14 | 245.33 |



| CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN OF ASSET-V | | | |
|---|---|---|---------|
| | | (₹ in lakh) | |
| | Details of Loan | 2017-18 | 2018-19 |
| 1 | Bond XLVIII | | |
| | Gross loan opening | 1187.42 | 1187.42 |
| | Cumulative Repayment upto COD/previous year | 0.00 | 0.00 |
| | Net Loan-Opening | 1187.42 | 1187.42 |
| | Additions during the year | 0.00 | 0.00 |
| | Repayment during the year | 0.00 | 0.00 |
| | Net Loan-Closing | 1187.42 | 1187.42 |
| | Average Loan | 1187.42 | 1187.42 |
| | Rate of Interest | 8.20% | 8.20% |
| | Interest | 97.37 | 97.37 |
| | Rep Schedule | Redeemable in 4 equal instalments on 23.1.2020, 23.1.2022, 23.1.2025 and 23.1.2030. | |
| 2 | Bond L | | |
| | Gross loan opening | 1439.00 | 1439.00 |
| | Cumulative Repayment upto COD/previous year | 0.00 | 0.00 |
| | Net Loan-Opening | 1439.00 | 1439.00 |
| | Additions during the year | 0.00 | 0.00 |
| | Repayment during the year | 0.00 | 0.00 |
| | Net Loan-Closing | 1439.00 | 1439.00 |
| | Average Loan | 1439.00 | 1439.00 |
| | Rate of Interest | 8.40% | 8.40% |
| | Interest | 120.88 | 120.88 |
| | Rep Schedule | Redeemable in 12 equal annual instalments from 27.5.2019 | |
| 3 | Bond LI | | |
| | Gross loan opening | 2306.77 | 2306.77 |
| | Cumulative Repayment upto COD/previous year | 0.00 | 0.00 |
| | Net Loan-Opening | 2306.77 | 2306.77 |
| | Additions during the year | 0.00 | 0.00 |
| | Repayment during the year | 0.00 | 0.00 |
| | Net Loan-Closing | 2306.77 | 2306.77 |
| | Average Loan | 2306.77 | 2306.77 |
| | Rate of Interest | 8.40% | 8.40% |
| | Interest | 193.77 | 193.77 |
| | Rep Schedule | Redeemable in 12 equal annual instalments from 14.9.2019 | |
| 4 | Bond LIII | | |
| | Gross loan opening | 3743.39 | 3743.39 |
| | Cumulative Repayment upto COD/previous year | 0.00 | 0.00 |
| | Net Loan-Opening | 3743.39 | 3743.39 |
| | Additions during the year | 0.00 | 0.00 |
| | Repayment during the year | 0.00 | 0.00 |



| | | | |
|----------|---|---|---------|
| | Net Loan-Closing | 3743.39 | 3743.39 |
| | Average Loan | 3743.39 | 3743.39 |
| | Rate of Interest | 8.13% | 8.13% |
| | Interest | 304.34 | 304.34 |
| | Rep Schedule | Redeemable in 12 equal annual instalments from 25.4.2020 | |
| | | | |
| 5 | Bond LVII | | |
| | Gross loan opening | 25.30 | 25.30 |
| | Cumulative Repayment upto COD/previous year | 0.00 | 0.00 |
| | Net Loan-Opening | 25.30 | 25.30 |
| | Additions during the year | 0.00 | 0.00 |
| | Repayment during the year | 0.00 | 0.00 |
| | Net Loan-Closing | 25.30 | 25.30 |
| | Average Loan | 25.30 | 25.30 |
| | Rate of Interest | 7.20% | 7.20% |
| | Interest | 1.82 | 1.82 |
| | Rep Schedule | Redeemable at par on 21.12.2021 | |
| | | | |
| 6 | Bond LVII (Proposed Loan) | | |
| | Gross loan opening | 1316.11 | 1316.11 |
| | Cumulative Repayment upto COD/previous year | 0.00 | 0.00 |
| | Net Loan-Opening | 1316.11 | 1316.11 |
| | Additions during the year | 0.00 | 0.00 |
| | Repayment during the year | 0.00 | 0.00 |
| | Net Loan-Closing | 1316.11 | 1316.11 |
| | Average Loan | 1316.11 | 1316.11 |
| | Rate of Interest | 7.20% | 7.20% |
| | Interest | 94.76 | 94.76 |
| | Rep Schedule | Redeemable at par on 21.12.2021 | |
| | | | |
| 7 | Bond LIV | | |
| | Gross loan opening | 27.08 | 27.08 |
| | Cumulative Repayment upto COD/previous year | 0.00 | 0.00 |
| | Net Loan-Opening | 27.08 | 27.08 |
| | Additions during the year | 0.00 | 0.00 |
| | Repayment during the year | 0.00 | 0.00 |
| | Net Loan-Closing | 27.08 | 27.08 |
| | Average Loan | 27.08 | 27.08 |
| | Rate of Interest | 7.97% | 7.97% |
| | Interest | 2.16 | 2.16 |
| | Rep Schedule | Redeemable at par in three equal annual instalments on 15.7.2021, 15.7.2026 and 15.7.2031 | |
| | | | |
| 8 | HDFC (2017-18) (Q1) | | |
| | Gross loan opening | 3.54 | 3.54 |
| | Cumulative Repayment upto COD/previous year | 0.00 | 0.00 |
| | Net Loan-Opening | 3.54 | 3.54 |
| | Additions during the year | 0.00 | 0.00 |
| | Repayment during the year | 0.00 | 0.00 |



| | | | |
|--|--|--|----------|
| | Net Loan-Closing | 3.54 | 3.54 |
| | Average Loan | 3.54 | 3.54 |
| | Rate of Interest | 7.95% | 7.95% |
| | Interest | 0.28 | 0.28 |
| | Rep Schedule | 20 half yearly equal instalments from 15.6.2019 | |
| | | | |
| | | | |
| | Total Loan | | |
| | Gross loan opening | 10048.61 | 10048.61 |
| | Cumulative Repayment upto COD/previous year | 0.00 | 0.00 |
| | Net Loan-Opening | 10048.61 | 10048.61 |
| | Additions during the year | 0.00 | 0.00 |
| | Repayment during the year | 0.00 | 0.00 |
| | Net Loan-Closing | 10048.61 | 10048.61 |
| | Average Loan | 10048.61 | 10048.61 |
| | Rate of Interest | 8.1143% | 8.1143% |
| | Interest | 815.37 | 815.37 |

