

**CENTRAL ELECTRICITY REGULATORY COMMISSION**

**NEW DELHI**

**Petition No. 203/TT/2016**

**Coram:**

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

**Date of Order : 5.10.2017**

**In the matter of:**

Approval of Transmission Tariff from COD to 31.3.2019 for Asset-I:400 kV D/C Meja-Allahabad transmission line along with associated bays at Allahabad under "Transmission System Associated With Meja TPS' 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-122001  
Haryana

**....Petitioner**

**Vs**

1. Rajasthan Rajya Vidyut Prasaran 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) 134 109
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 - 226 001
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 Delhi Distribution Ltd.,  
33 kV Substation, 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. Meja Urja Nigam Private Limited



NTPC Bhavan Scope complex 7,  
Institutional area, Lodhi road  
New Delhi -110003

19. Uttar Pradesh Power Transmission Corporation Ltd.  
Shakti Bhavan, 14, Ashok Marg,  
Lucknow – 226001

20. UPRVUNL  
Shakti Bhavan, 14, Ashok Marg,  
Lucknow – 226001

....Respondents

**For Petitioner** : Shri S.K. Venkatesan, PGCIL  
Shri S. S. Raju, PGCIL

**For Respondents** : Sh. R. B. Sharma, Advocate, BRPL  
Ms. Swapna Seshadri, Advocate, MUNPL  
Shri Rajeev Srivastava, Advocate, UPPCL  
Ms. Gargi Srivastava, Advocate, UPPCL  
Shri Sanjay Srivastava, MUNPL  
Ms. Saloni Saeheti, MUPNL

### **ORDER**

The present petition has been filed by Power Grid Corporation of India Ltd. (“PGCIL”) seeking approval of transmission tariff for 400 kV D/C Meja-Allahabad transmission line alongwith associated bays at Allahabad (hereinafter referred to as “transmission assets”) under “Transmission System Associated With Meja TPS’ in Northern Region for 2014-19 tariff period under Central Electricity Regulation Commission (Terms and Conditions of Tariff) Regulations, 2014 (hereinafter referred to as “the 2014 Tariff Regulations”).

2. The Investment Approval (IA) and expenditure sanction for the transmission system was accorded by the Board of Directors of the petitioner vide letter dated 11.3.2013 at an estimated cost of ₹5573 lakh including an IDC of ₹341 lakh (based on December, 2012 price level). The instant transmission system was



scheduled to be commissioned within 28 months from the date of IA. Therefore, the scheduled date of commissioning of the instant transmission system was 7.7.2015.

3. The approval of Revised Cost Estimate (RCE) for the transmission system has not been submitted by the petitioner.

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

**Transmission Line**

- Meja-Allahabad (POWERGRID) 400 kV D/C line

**Sub-station**

- (i) Extension of 400/220kV Allahabad (POWERGRID) – 2 no. of 400 kV line bays.

Note: 2 no. of 400 kV bays at Meja will be developed by the generating Agency.

5. The capital cost claimed by the petitioner as per auditor's certificate dated 27.5.2017 is as below:

(₹ in lakh)				
Particulars	Capital cost	IEDC	IDC	Total
Expenditure upto 31.3.2016	5027.94	327.93	262.12	5617.99
Expenditure from 1.4.2016 to 10.11.2016	149.47	17.70	289.22	456.39
Expenditure form 11.11.2016 to 31.3.2017	213.11	0	0	213.11
Estimated expenditure during 2017-18	507.75	0	0	507.75
Estimated expenditure during 2018-19	485.75	0	0	485.75
<b>Total</b>	<b>6384.02</b>	<b>345.63</b>	<b>551.34</b>	<b>7280.99</b>
Initial spares included in above				35.36

6. The details of the transmission charges claimed by the petitioner vide submission dated 30-5-2017, are as under:-

(₹ in lakh)			
Particulars	2016-17 (pro-rata)	2017-18	2018-19
Depreciation	124.73	339.94	367.40
Interest on Loan	144.91	373.75	374.20
Return on Equity	140.87	383.55	414.05



Interest on working capital	12.03	32.06	33.60
O & M Expenses	58.98	155.58	160.73
<b>Total</b>	<b>481.52</b>	<b>1,284.88</b>	<b>1,349.98</b>

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

(₹ in lakh)

Particulars	2016-17 (pro-rata)	2017-18	2018-19
Maintenance Spares	12.55	12.97	13.39
O & M Expenses	22.59	23.34	24.11
Receivables	204.90	214.15	225.00
<b>Total</b>	<b>240.04</b>	<b>250.46</b>	<b>262.50</b>
Rate of Interest	12.80%	12.80%	12.80%
<b>Interest</b>	<b>30.73</b>	<b>32.06</b>	<b>33.60</b>

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. Meja Urja Nigam Private Limited, Respondent No. 18 and BSES Rajdhani Power Limited (BRPL), Respondent No. 12 have filed reply vide affidavit dated 1.2.2017 and 2.12.2016, respectively. BRPL has raised issue of time over-run, cost variation, effective tax rate, reimbursement of expenditure towards filing fee etc. The petitioner has filed rejoinder dated 2.1.2017 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**

9. The petitioner has claimed COD as under:

Sr. No.	Assets	Scheduled COD as per IA	Actual COD	Delay in Months
1	Asset-I: 400 kV D/C Meja-Allahabad transmission line alongwith associated bays at Allahabad	7.7.2015	10.11.2016	16 Months & 03 days



10. The petitioner vide affidavit dated 2.1.2017 has submitted as under:-
- a) RLDC vide letter dated 5.12.2016 certified the Anti-theft charging of the instant transmission line on 5.5.2016. Further, NRLDC vide letter dated 8.12.2016, certified successful trial operation of one circuit of 400 kV Allahabad-Meja D/C carried out on 8.11.2016;
  - b) Further the second bay of Meja TPS is not ready till now because of which NRLDC is not issuing trial operation certificate for second Ckt. The petitioner has completed its scope of work of Allahabad-Meja transmission line and made ready for successful trial operation/ date of commercial operation in April/ May 2016.
  - c) Due to non-readiness of bays by Meja in the scope of Meja TPS the same could not be put under commercial operation. It is submitted that since it is a double circuit transmission line with both circuits completed simultaneously and both the circuits are strung on the same tower and one circuit has successfully completed its trial operation on 9.11.2016 therefore it is prayed to approve the COD of both the circuits w.e.f. 10.11.2016.
  - d) The petitioner has claimed that both the circuits attained COD on 10.11.2016 and one of the circuit is prevented from regular service due to non-readiness of bay at Meja end for reasons not attributed to the transmission licensee or its supplier or its contractor but is on account of delay in commissioning of Meja generating stations which is being constructed by Meja Urja Nigam Pvt. Ltd. Therefore, COD w.e.f. 10.11.2016 be considered under proviso (ii) of Regulation 4(3) of 2014 Tariff Regulations for second circuits.



- e) The fixed charges from 10.11.2016 to commissioning of 1<sup>st</sup> unit of Meja Generating station were agreed to be paid by UPPCL in the meeting dated 2.8.2016 held in CEA for which consent was to be given by UPPCL. However, UPPCL has not given consent to the petitioner. Therefore, the charges are to be borne by Meja Urja till commissioning of 1<sup>st</sup> unit of generation. Thereafter, the charges shall be included in POC.
- f) The respondent No 18, Meja Urja Nigam Private Ltd. vide affidavit dated 1.2.2017 has submitted that as per 2014 Tariff Regulations and Grid Code, unless and until the communication channel from sending end to receiving end is commissioned the transmission asset cannot be said to be commissioned. The PLCC commissioning of the 400 kV Meja-Allahabad D/C line was completed only on 29.8.2016 which was in the scope of the petitioner. Therefore, the anti- theft charging on 5.4.2016 has no bearing on declaration of commercial operation since the communication equipment was available only on 2.8.2016. In response, the petitioner vide rejoinder dated 30.3.2017 has submitted that PGCIL has completed all the work in its scope except PLCC work due to non-readiness of work at Meja TPS end which was in the scope of work of the MUNL. For installation and commissioning of PLCC, apart from the fact that the transmission line should be ready, it is also necessary that all the terminal equipment i.e. CVT should be connected with transmission line at both the ends. PLCC panels are installed in switchyard panel room (KIOSK) and for that cable trenching for laying HF cable from CVT to PLCC panel in Kiosk should also be ready. The petitioner has also submitted that the petitioner was not able to charge line due to non-readiness of bays at Meja TPS.



g) Further, NTPC has requested to charge the circuit -1 of 400 kV Allahabad (PG)-Meja (NTPC) transmission line due to requirement of start- up power. The petitioner has charged 400 kV Allahabad (PG)-Meja (NTPC) transmission line along with associated bays at Allahabad on 8.11.2016. Further, 400 kV Allahabad (PG)-Meja (NTPC) circuit –II transmission line could not be commissioned due to non-completion of bays at Meja TPS which is under the scope of work of Meja TPS. Meja TPS completed its scope of work in the month of February, 2017 and therefore PGCIL has completed trial run operation on 9.2.2017. Therefore the petitioner has prayed for approval of COD of the Meja-Allahabad transmission line from 10.11.2016.

**Analysis & Views:**

11. We have considered the submissions of the petitioner and respondent. The petitioner has claimed date of commercial operation of instant asset as 10.11.2016.

12. Now we deal with the commercial operation date (COD). Though the COD of the asset has been claimed as 10.11.2016, the petitioner has submitted that the line was anti-theft charged on 5.5.2016. The petitioner vide affidavit dated 30.3.2016 submitted that all works in its scope was completed except PLCC work on bays coming under the scope of MUVNL. It is observed that the petitioner has not raised any claim of IDC & IEDC on MUVNL. The petitioner has claimed COD from 10.11.2016. We are of the view that the IDC & IEDC of 5.5.2016 to 10.11.2016 for both the circuits should not be capitalized but should be recovered from MUVNL.





13. In support of Commercial operation, the petitioner has submitted RLDC charging certificate dated 8.12.2016. The petitioner also submitted CEA clearance certificate & self-declaration COD certificate. From the RLDC certificate, it is observed that Energisation has been completed on 9.11.2016 in the 400 kV Allahabad-Meja line-1 along with associated bay. Therefore, COD of the 400 kV Allahabad-Meja line-1 along with 1 no 400 kV Allahabad bay has been considered as 10.11.2016. The power flow in the line is not started due to non-commissioning of Meja generating station. This is also evidenced from the RLDC certificate. Since the asset is not utilized for intended purpose due to non-commissioning of the Meja power station and is utilized for the purpose of startup power, the transmission charges of circuit-I shall be borne by the Meja Urja Nigam Private Ltd. till commissioning of Meja generating station.

14. With regard to the 400 kV Allahabad-Meja line-II along with one no 400 kV Allahabad bay, the same was ready for commissioning as on 10.11.2016. However due to non-commissioning of the associated bays under the scope of Meja TPS by that time, we are not inclined to grant COD on 10.11.2016 under proviso (i) of 4(3) of the Tariff Regulation as the asset is put to use on 10.2.2017. Therefore, the COD of the 400 kV Allahabad-Meja line-II along with one no 400 kV Allahabad bay has been considered as 10.2.2017. However, the Meja TPS has to bear IDC and IEDC charges from 10.11.2016 to 9.2.2017.

15. Accordingly, COD of the assets has been considered as under:

<b>Asset</b>	<b>Actual COD</b>
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Asset-I 400 kV Allahabad-Meja line-1 alongwith 1 no 400 kV Allahabad bay ( <b>Asset 1(a)</b> )	10.11.2016
400 kV Allahabad-Meja line-II alongwith 1 no 400 kV Allahabad bay ( <b>Asset 1(b)</b> )	10.02.2017

### **Capital cost**

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

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

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

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

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

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

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

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

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

17. The details of approved apportioned cost, capital cost as on COD and projected additional capital expenditure claimed by the petitioner vide affidavit dated 30.05.2017, are summarized below:-

**(₹ in lakh)**



Name of the element	approved apportioned cost	Exp. Up to COD	Proposed Expenditure in 2016-2017	Proposed Expenditure		Estimated completion Cost
				2017- 18	2018-19	
400 kV D/C Meja-Allahabad T/L along with associated bays at Allahabad	5573.36	6074.38	261.16	551.19	485.75	7280.99

Against the apportioned approved cost of ₹5573.36 lakh, the estimated completion cost is ₹7280.99 lakh and therefore there is cost over-run in commissioning of the asset.

18. The respondent, BRPL vide affidavit dated 02.12.2016 has submitted that there is cost over-run of more than 25%. The perusal of Form 5 furnishing 'Element wise Break-up of Project Cost for Transmission System' would show that almost all elements have substantial cost over-run and the reasons mentioned for the variations are very casual reasons and the cost variation may not be allowed.

#### **Analysis and view:**

19. We have considered the submissions of the petitioner and respondent with respect to the capital cost. There is cost over-run in commissioning of the assets. After adjusting the cost of bays, the capital cost of the 400 kV D/C line works out to ₹1.95 Cr per kilometer. It also appears that per km cost of the 400 kV transmission line is on higher side. The capital cost claimed by the petitioner is restricted as of now to the apportioned approved cost.

#### **Time Over-run**

20. As per the Investment Approval, the schedule completion was within 28 months from the date of approval of Board of Directors of POWERGRID. The



date of approval of Board of Directors of POWERGRID is 8.3.2013 and accordingly the schedule of completion date works out to 7.7.2015 against which the asset was put under commercial operation w.e.f. 10.11.2016 and 10.2.2017. Hence, there is a total delay of 16 months and 3 days in commissioning of Asset 1(a) and 19 months and 1 day in commissioning of Asset 1(b). The petitioner has submitted that the delay in commissioning of above asset is mainly due to the delay in RoW issues in Village Mai Khurd in Tehsil of Meja and Village Mai kala in Tehsil Karchhana, delay in commissioning of units of Meja Generating Station.

### **Delay due to ROW Problem**

21. Investment Approval for the instant Project was accorded on 8.3.2013 and petitioner has immediately started the work after award of all the related work from April 2013 to July 2013. On the verge of completion of the instant project, the petitioner faced severe ROW problem at multiple locations during the construction of transmission line. The petitioner has made all possible efforts to resolve the ROW issues, which included settlement with affected parties and in case of need, approached various levels of concerned district administrative hierarchy including DM, SSP and concerned ministry. Construction activities were taken up at war footing whenever and wherever the ROW issues were resolved. The last ROW problem occurred in February, 2016 which was resolved in March, 2016. Subsequently, CEA Inspection was carried out on 4.4.2016 and the line was test charged on 5.4.2016.

22. The Chronology of events pertaining to delay due to ROW issues is as follows:-

#### **a) Villages of Mai Khurd in Tehsil of Meja District Allahabad**



Date/Month	Incident Description	Efforts/Actions taken by POWERGRID
2.1.2015	Villagers did not allow foundation work at Location 1/0,1/2,1/3 & 2/0 in Mai Khurd village of Meja Tehsil, Distt. Allahabad.	Matter was reported to DM Allahabad for providing help vide letter dated 2.1.2015
6.1.2015	DM, Allahabad, wrote a letter to SSP, Allahabad for extending help	POWERGRID met SSP Allahabad.
19.3.2015	Above matter was again reported to SDM, Meja for providing help on 19.3.2015	SDM, Meja assured to extend help
19.5.2015	Despite all effort, villagers did not allow the work, DSP, Allahabad-UP was informed on 19.5.2015	Meeting with DSP, Allahabad for police help.
15.6.2015	The district administration was unable to resolve the RoW issue	Letter dated 15.6.2015 to Advisor, Energy, Bapu Bhawan, Lucknow for his intervention
27.7.2015	Matter was reported once again to SSP, Allahabad for providing police help.	SSP, Allahabad directed concerned SHO for extending help.
29.9.2015	The police went to the location but could not resolve the issue	Matter was reported to DM, Allahabad

**b) Village Mai kala in tehsil Karchhana District Allahabad.**

3.2.2016	Villagers of Mai kala resisted the tower erection work in Tehsil Karchhana	ROW problem reported to SDM, Karchhana.
11.2.2016	Matter was again reported to SDM, Karchhana	SDM, Karchhana directed his staff to support
13.2.2016	The RoW issue of Gantry towers was again reported to SDM, Meja	SDM, Meja directed concerned Police staff to resolve the issue
16.3.2016	Villagers stopped tower erection and stringing in village Mai kala.	Matter reported to SDM, Meja
31.3.2016	The Line was completed on 31.3.2016	charging permission to be obtained from CEA
3.4.2016	Application was given to CEA for inspection of line before charging permission	-
3.4.2016	NTPC was intimated regarding completion of the line vide mail dated 3.4.2016	-
5.4.2016	CEA accorded the permission to charge the line	-

**Delay Due to delay in commissioning of units of Meja Generating Station:**



23. The instant asset could not be commissioned as the associated generation being constructed by Meja Urja Nigam Private Limited was not ready and scheduled to be commissioned by April, 2017. However, as per agreement with Meja Urja Nigam Private Limited dated 17.4.2013, the commissioning schedule was December, 2015. Further, UPPTCL proposed for early utilization of 400 kV D/C Meja-Allahabad Transmission Line to evacuate the Power from Bara Generating Station consequently a meeting was convened on 2.8.2016 in CEA office. As per the proposal UPPCL was to pay the fixed charges till the commissioning of 1<sup>st</sup> Unit of Meja Generating Station. The asset was charged from Allahabad end on 5.4.2016 and Meja generation is scheduled to be commissioned in April, 2017.

24. BRPL vide affidavit dated 2.12.2016 has submitted that the actual time over-run cannot be determined in the absence of the PERT chart/Bar chart along with CPM analysis and also the time over-run may not be allowed as the delay and the reasons for delay falls under controllable factors as per 2014 Tariff Regulations. In response, the petitioner vide affidavit dated 12.1.2017 has submitted detailed justification for time over-run and the petitioner vide affidavit dated 30.5.2017 also submitted PERT chart and CPM analysis for the assets covered in the instant petition.

### **Analysis & Views**

25. The asset 400 kV D/C Meja-Allahabad transmission line alongwith associated bays at Allahabad associated with Meja TPS was scheduled to be commissioned on 7.7.2015 as per Investment Approval. The asset has been charged (anti-theft) on 5.5.2016 and commissioned on 10.11.2016. Thus, there is 16 months and 3 days delay in commissioning of asset. We have considered the



submissions of the petitioner and respondents. The main reason for delay in commissioning of the instant asset was due to ROW problem and delay in commissioning of the associated bays under the scope of Meja Generating station.

26. As per submission, the petitioner has faced severe RoW problem at various locations from local land owners. The petitioner has approached concerned district and local administration including DM and SSP of the concerned districts to resolve the issue. The RoW problem started on 2.1.2015 and continued upto 16.3.2016 even after continuous efforts made by the petitioner by approaching the local administration and police. Thus the time taken in RoW issue is 14 months 14 days (2.1.2015 to 5.4.2016) which is beyond the control of the petitioner and the same has been condoned.

**Delay in commissioning of the associated bays under the scope of Meja TPS:**

27. The petitioner has submitted that the transmission line was ready and obtained CEA Clearance Certificate on 31.3.2016 and also communicated letter to CEA on 3.4.2016 with regard to inspection of transmission line. The petitioner vide letter dated 3.4.2016 intimated NTPC about the completion of the line. On 5.4.2016, CEA accorded the approval for energisation of charging of the line and antitheft charging was done from Allahabad end on 5.5.2016. One bay of Meja TPS at Meja was ready and successful trial operation was completed on 9.11.2016 and asset was declared commissioned on 10.11.2016 by charging from Allahabad end. However, this arrangement was not adequate as it did not provide intended use of the transmissions system. Therefore, the time taken from



5.4.2016 to 10.11.2016 is attributable to the Meja TPS. Accordingly, the IDC and IEDC is to be borne by the Meja Urja Nigam Private Ltd. for the following period:

IDC and IEDC from 5.4.2016 to 10.11.2016 for both the circuits shall be borne by the Meja Urja Nigam Power Ltd; Further, IDC and IEDC from 10.11.2016 to 9.2.2017 of Circuit II shall be borne by the Meja Urja Nigam Pvt. Ltd;

### **Treatment of IDC**

28. The petitioner has submitted the IDC discharged up to COD and 'IDC to be discharged' after COD i.e. during 2016-17 and 2017-18 vide affidavit dated 30.5.2017, which are as follows:-

(₹ in lakh)

<b>Interest During Construction (IDC)</b>			
Claimed as on COD as per the Auditor's Certificate 27.5.2017	Discharged up to COD (as claimed)	Balance Accrued IDC as on COD to be discharged during 2016-17	Balance Accrued IDC as on COD to be discharged during 2017-18
551.34	459.85	48.04	43.45

29. The IDC claimed by the petitioner has been verified based on the available information i.e. loan details in Form-9C and statement of calculation of IDC submitted vide affidavit 30.5.2017. It is observed that the claim of the petitioner with respect to IDC of ₹551.34 as on COD is on higher side as compared to the IDC of ₹341 lakh as per Investment Approval dated 11.3.2013. As we have discussed at para 17 of this order, the petitioner has not submitted approved RCE for the assets covered in the instant petition which implies that the Board of the petitioner company is yet to examine the cost variation. Since the cost variation is yet to be considered by Board of the POWERGRID and in the absence of RCE, the claim of the petitioner with respect to IDC is restricted upto





₹341 lakh as per the Investment Approval. The same shall be reviewed on submission of the approved RCE by the petitioner at the time of truing up subject to our observation regarding time over-run as mentioned at para 27 of this order.

### **Treatment of IEDC**

30. The petitioner has claimed ₹345.63 lakh towards IEDC. Usually, while granting transmission tariff, the IEDC limit mentioned in the 'Abstract Cost Estimate' is considered for allowing the IEDC. In the instant case, the "IEDC limit" has been mentioned in the 'Abstract Cost Estimate' as ₹493.00 lakh. Thus, the IEDC claimed by the petitioner as on COD is lower than that mentioned in the 'Abstract Cost Estimate'. Though, the capital cost to be allowed for tariff is being restricted to the Investment Approval, we are not inclined to allow the IEDC as per the 'Abstract Cost Estimate' as the actual claim of the petitioner is on a lower side. Accordingly, the IEDC claimed is allowed to be capitalized in the present case.

### **Initial Spares**

31. The Initial spares claimed by the petitioner are as under:

(₹ in lakh)

Sl. No.	Element	Plant and machinery cost as per claim	Cost of initial spares	percentage
1	Transmission line	4992.09	-	-
2	Sub-station	1151.94	35.36	3.17%

The initial spares claimed by the petitioner are within specified limits as per Regulation 13 of Tariff Regulations, 2014 based on the capital cost claimed as well as considering the capital cost restricted upto the Investment Approval. As



such, the same has been allowed, subject to review based on the trued up completion cost on submission of approved RCE.

### **Capital cost for tariff**

32. As it has been discussed at para 19 above, there is cost over-run in commissioning of the assets. The capital cost claimed by the petitioner is restricted to the apportioned approved cost while the IEDC has been allowed as per the claim.

Accordingly, the following capital cost as per Investment Approval, except IEDC, has been considered for tariff as under:

	Approved apportioned Cost	(₹ in lakh) Allowed cost	
		Cap cost of asset 1(a) upto 10.11.2016 #	Combined Cap. Cost (1a+1b) upto 10.2.2017
400 kV D/C Meja-Allahabad T/L alongwith associated bays at Allahabad			
Hard cost	4602.00	2301.00	4602.00
IEDC (restricted to claim)	493.00	172.82	345.63
Contingencies	138.00	69.00	138.00
IDC (As per Investment approval)	341.00	170.50	341.00
<b>Total</b>	<b>5574.00</b>	<b>2713.315</b>	<b>5426.63</b>

(#Capital cost of Circuit I has been considered as 50% of approved cost. This may be reviewed at the time of true up based on actual cost)

### **Additional capital expenditure**

33. 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.”

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

“cut-off date” means 31<sup>st</sup> 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 31<sup>st</sup> March of the year closing after three years of the year of commercial operation”.

35. The cut-off date in the case of instant transmission asset is 31.3.2019.

36. The petitioner has submitted that the additional capitalization incurred/projected to be incurred in the contextual asset is mainly on account of Balance/Retention Payments for all assets covered under present petition and is within the cut-off date and hence, covered under Regulation 14(1)(i). The details of additional capitalization for asset covered in the petition are given below:

(₹ in lakh)			
Add Cap from COD (10.11.2016) to 31.3.2017	Add Cap in 2017-18	Add Cap in 2018-19	Total estimated Add Cap
261.16	551.19	485.75	1298.10

37. We have considered the submission of the petitioner and respondents. We have restricted the capital cost as claimed by the petitioner to the apportioned



approved cost as discussed at para 32 above. Therefore, the additional capital expenditure incurred/ projected to be incurred has not been allowed at this stage.

### **Debt-Equity Ratio**

38. Clause 1 and 5 of Regulation 19 of the 2014 Tariff Regulations specifies as follows:-

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

Provided that:

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

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

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

39. The petitioner has claimed debt:equity ratio of 70:30 as on the date of commercial operation. Debt:equity ratio of 70:30 is considered as provided in Regulation 19 of the 2014 Tariff Regulations. The details of debt:equity ratio in respect of the instant assets as on the date of commercial operation and as on 31.3.2019 are as under:-



(₹ in lakh)

Particulars	Capital cost as on tariff COD		Capital cost as on 31.3.2019	
	Amount	%	Amount	%
Debt	1899.32	70.00	3798.64	70.00
Equity	813.99	30.00	1627.99	30.00
<b>Total</b>		<b>100.00</b>		<b>100.00</b>

### Return on Equity

40. Clause (1) and (2) of Regulation 24 and Clause (2) of Regulation 25 of the 2014 Tariff Regulations specify as under:-

**“24. Return on Equity:** (1) Return on equity shall be computed in rupee terms, on the equity base determined in accordance with regulation 19.

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

Provided that:

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

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

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

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

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

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



**“25. Tax on Return on Equity:**

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

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

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

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

41. 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. BRPL has submitted that effective tax rate should be allowed as per Regulation 25 of the 2014 Tariff Regulations and the petitioner should submit the details of working of effective tax rate.

42. We have considered the submissions made by the petitioner and BRPL. 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:-

Particulars	(₹ in lakh)			
	2016-17 (10.11.2016 to 9.2.2017)	2016-17 (10.2.2017 to 31.3.2017)	2017-18	2018-19
Opening Equity	813.99	1627.99	1627.99	1627.99
Addition due to Additional Capitalisation	0.00	0.00	0.00	0.00
Closing Equity	813.99	1627.99	1627.99	1627.99
Average Equity	813.99	1627.99	1627.99	1627.99
Return on Equity (Base Rate)	15.50%	15.50%	15.50%	15.50%
Tax rate for the year 2013-14 (MAT)	20.960%	20.960%	20.960%	20.960%
Rate of Return on Equity (Pre-tax)	19.610%	19.610%	19.610%	19.610%
<b>Return on Equity (Pre-tax)</b>	<b>40.23</b>	<b>43.73</b>	<b>319.25</b>	<b>319.25</b>

### **Interest on Loan (IoL)**

43. 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.”

44. In these calculations, interest on loan has been worked out as hereinafter:-

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

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





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

45. Detailed calculation of the weighted average rate of interest has been given in **Annexure** to this order.

46. Based on above, details of Interest on Loan calculated are as follows:-

Particulars	(₹ in lakh)			
	2016-17 (10.11.2016 to 9.2.2017)	2016-17 (10.2.2017 to 31.3.2017)	2017-18	2018-19
Gross Normative Loan	1899.32	3798.64	3798.64	3798.64
Cumulative Repayment upto Previous Year	0.00	35.52	74.13	356.75
Net Loan-Opening	1899.32	3763.12	3724.51	3441.89
Addition due to Additional Capitalisation	0.00	0.00	0.00	0.00
Repayment during the year	35.52	38.61	282.62	282.62
Net Loan-Closing	1863.80	3724.51	3441.89	3159.26
Average Loan	1881.56	3743.82	3583.20	3300.58
Weighted Average Rate of Interest on Loan	8.77%	8.77%	8.76%	8.75%
<b>Interest</b>	<b>41.61</b>	<b>44.99</b>	<b>313.78</b>	<b>288.83</b>

### **Depreciation**

47. 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.”

48. Depreciation has been allowed in accordance with Regulation 27 of the 2014 Tariff Regulations. The instant assets were put under commercial operation during 2016-17. Accordingly, it will complete 12 years after 2018-19. As such,



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

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

Particulars	(₹ in lakh)			
	2016-17 (10.11.2016 to 9.2.2017)	2016-17 (10.2.2017 to 31.3.2017)	2017-18	2018-19
Opening Gross Block	2713.32	5426.63	5426.63	5426.63
Additional Capital expenditure	0.00	0.00	0.00	0.00
Closing Gross Block	2713.32	5426.63	5426.63	5426.63
Average Gross Block	2713.32	5426.63	5426.63	5426.63
Rate of Depreciation	5.19%	5.19%	5.21%	5.21%
Depreciable Value	2441.98	4883.97	4883.97	4883.97
Remaining Depreciable Value	2441.98	4883.97	4883.97	4848.45
<b>Depreciation</b>	35.52	38.61	282.62	282.62

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

50. As per Regulation 29(4) of 2014 Regulation, the normative O&M expenses for the asset covered in the petition is as under:

S.No	Element	2014-15	2015-16	2016-17	2017-18	2018-19
1	D/C twin conductor T/L (₹ lakh/KM)	0.707	0.731	0.755	0.780	0.806
2	S/C twin conductor T/L (₹ lakh/KM)	0.404	0.418	0.432	0.446	0.461
3	400 kV bays (₹ lakh/bay)	60.30	62.30	64.37	66.51	68.71

51. As per Regulation 29(4) allowable O&M expenses for the asset covered in the petition is as under:

Element	2016-17 Asset 1(a) (Pro-rata) (10.11.2016- 9.2.2017)	2016-17 Combined (Pro-rata) (10.2.2017- 31.3.2017)	2017-18	2018-19
28.92 km D/C twin conductor T/L	-	2.99	22.56	23.31

28.92 km S/C twin conductor T/L	3.14	-	-	-
2 Nos. 400 kV bays	16.22	17.63	133.02	137.42
<b>Total</b>	<b>19.36</b>	<b>20.62</b>	<b>155.58</b>	<b>160.73</b>

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

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

#### **“28. Interest on Working Capital**

(1) The working capital shall cover:

(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;”

53. The petitioner is entitled to claim interest on working capital as per the 2014 Tariff Regulations. The components of the working capital and the petitioner’s entitlement to interest thereon are discussed hereunder:-

#### **(i) 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.



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

Operation and maintenance expenses have been considered for one month as a component of working capital. The petitioner has claimed O&M expenses for 1 month of the respective year as claimed in the petition. This has been considered in the working capital.

## **(iii) Receivables**

Receivables as a component of working capital will be equivalent to two months fixed cost. The petitioner has claimed the receivables on the basis of 2 months' annual transmission charges. In the tariff being allowed, receivables have been worked out on the basis of 2 months' transmission charges.

## **(iv) Rate of interest on working capital**

As per Regulation 28 (3) of tariff regulation' 2014, SBI Base rate 9.30% as on 1.4.2016 plus 350 Bps i.e. 12.80% has been considered for the asset, as the rate of interest on working capital.

54. The interest on working capital as determined is shown in the table given below:-

Particulars	(₹ in lakh)			
	2016-17 (10.11.2016 to 9.2.2017)	2016-17 (10.2.2017 to 31.3.2017)	2017-18	2018-19
Maintenance Spares	11.52	22.58	23.34	24.11
O & M expenses	6.40	12.54	12.97	13.39
Receivables	23.67	25.96	183.22	179.88
Total	41.60	61.09	219.52	217.38
<b>Interest</b>	<b>5.32</b>	<b>7.82</b>	<b>28.10</b>	<b>27.82</b>

## **Transmission charges**

55. The transmission charges being allowed for the instant assets are summarized hereunder:-



Particulars	(₹ in lakh)			
	2016-17 (10.11.2016 to 9.2.2017)	2016-17 (10.2.2017 to 31.3.2017)	2017-18	2018-19
Depreciation	35.52	38.61	282.62	282.62
Interest on Loan	41.61	44.99	313.78	288.83
Return on equity	40.23	43.73	319.25	319.25
Interest on Working Capital	5.32	7.82	28.10	27.82
O & M Expenses	19.36	20.62	155.58	160.73
<b>Total</b>	<b>142.05</b>	<b>155.77</b>	<b>1099.33</b>	<b>1079.26</b>

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

56. 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. BRPL has submitted that filing fee and other expenses may not be allowed. 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**

57. 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.

### **Sharing of Transmission Charges**

58. MUNPL, vide affidavit dated 31.01.2017 has submitted the following:

- a) The Meja-Allahabad 400 kV D/C line was conceived and developed not only for evacuation of power of the Meja generating station being developed by MUNPL, but also for integrating the transmission system being developed by the transmission company of UPPTCL and permitting the flow of power from other co-located generating stations.
- b) As per the 29th Standing Committee dated 29.12.2010 and 19th NRPC meeting dated 04.01.2011 is extracted is as follows:

*“3.0 Transmission system associated with Meja TPS*

*Executive Director, POWERGRID, explained that NTPC had been developing a 1320 MW power plant as a JV project with UPRVNL at Meja in UP. From Meja TPS, UP had share of about 900 MW and balance of about 400 MW power for other constituents. For evacuation of power from the generation projects like Meja, Bora, Karchanna etc., UPPTCL were developing an integrated transmission network In order to integrate the system being developed by the State with ISTS and for transfer of power from Meja to other constituents following transmission system was agreed during the 29<sup>th</sup> Standing Committee Meeting:*

*> Meja-Allahabad(POWERGRID)-400 kVD/C*

*Beyond Allahabad, available capacity in proposed Allahabad-Kanpur line would be utilized for transfer of power to the constituents.*

**Representative of UPPTCL enquired about the requirement of 400 kVD/C line from Rewa Road to Allahabad (PG) planned as a part of integrated network of UP. Chief Engineer, CEA stated that in view of the Meia-Allahabad 400 kVD/C line, Rewa Road-Allahabad (PG) 400 kVD/C line shall not be required. ”**

- c) Out of 1320 MW which is the capacity of the generating station, the state of UP has an allocation of 916 MW and after adjusting the auxiliary consumption, around 380 MW needs to be evacuated to the other beneficiaries in the Northern Region. For the evacuation of power of the 916 MW, the UPPTCL is establishing its own transmission lines. The instant line being short line of length approximately 29 KM, can carry power in excess of 1700 MW which is far more than the balance 380 MW of power share of other beneficiaries of the Meja Generating Station, to be evacuated through this line. However, during the Standing Committee Meetings, members agreed for Meja-Allahabad (PG) 400 kV (Twin) D/C line, which is having thermal capacity of approximately



2400 MW as per the CEA Manual on Transmission Planning Criteria assuming ambient temperature of 40 deg C and conductor temperature of 85 deg C. The asset in the instant petition was agreed to integrate the system being developed by the State with ISTS for evacuation of power from Bara, Meja and Karchana power plants and for transfer of power from Meja to other constituents. Therefore, it was envisaged at that very stage that some power from other generating stations such as Bara and Karchana would also flow from the Meja-Allahabad line and this has been clearly recorded in the 29th Standing Committee Meeting dated 29.12.2010 and the 19th NRPC Committee Meeting dated 04.01.2011. It is pertinent to mention here that U# of Bara TPS has already been commissioned.

d) As the generating station of MUNPL is delayed, the power from Bara generating units - 3 X 660 MW can flow on the Meja- Allahabad line. A meeting was held in the office of the Central Electricity Authority on 02.08.2016 to discuss the early utilization of the Meja-Allahabad line. In the said meeting, after detailed deliberations, the following was recorded –

*"Chief Engineer (PSP&PA-I), CEA welcomed all the participants to the meeting and stated that the meeting has been convened to discuss the UPPTCL 's proposal for early utilization of Meja-Allahabad PG 400 kV D/C ISTS line, in view of commissioning of 2<sup>nd</sup> unit of Bara (3x660 MW) generation project expected by 15th August 2016.*

*Chief Engineer, UPPTCL stated that a composite scheme for evacuation of power from Bara, Meja and Karchana Power Plants was approved in 26<sup>th</sup> and 29<sup>th</sup> meeting of SCSPNR, which inter-alia includes Bara-Mainpuri 765kv 2xS/C lines and the same would be available by Sep/Dec 2016. First unit Bara TPS (660 MW) is presently evacuated through Bara-Rewa Road 400hV D/C (Quad) Intrastate line (Routed through Meja TPS). The second unit of Bara (660 MW) generation has also been synchronised and its COD is expected by 15 August 2016. With commissioning of Bara 2<sup>n</sup> unit and non-availability of Bara-Mainpuri 765kv 2xS/C lines,*





there would be overloading of the Rewa-Road-Panki 400 kV S/C line and Rewa Road 400/220 ICTs along with 200 kV network. At present Meja-Allahabad 400 kV D/C ISTS lines is complete and charged from Allahabad (PG) 400 kV side which could be utilized for evacuation of the power from Bara (2x660 MW). The load flow studies have been carried out considering the following network elements and no constraints were observed:

- (i) Bara-Meja 400 kV D/C (Quad) Intrastate line.
- (ii) Meja TPS-Rewa Road 400 kV D/C (Quad) Intrastate line.
- (iii) Meja TPS-Allahabad PG 400 kV D/C ISTS line.
- (iv) Rewa Road 400/220 kV 2x315 MVA S/s.
- (v) LILo of Obra-Panki at Rewa Road 400 kV S/s.

NTPC representative informed that the 1<sup>st</sup> unit of Meja generation project is expected by April 2017. The generation switchyard inspection has already been done by CEA. All the balance works including the observation made by CEA during the inspection of the switchyard would be completed latest by the end of Aug. 2016. UPPTCL requested NTPC to complete the balance work by 15th August.

AGM, CTU stated that the Meja-Allahabad 400 kV D/C ISTS line is complete and charged from Allahabad PG 400 kV side. The line is not commissioned due to delay in Meja generation projects. The proposal made by UPPTCL is technically in order. However, if the line is utilized by UPPTCL, then UPPTCL have to pay the fixed charges of this line till the commissioning of 1<sup>st</sup> unit of Meja generation.

After deliberation, the following was agreed in the meeting held in CEA on 2.8.2016 regarding early utilization of Meja-Allahabad transmission line:

- (i) The proposal is technically in order and power of Bara (2x660 MW) generation can be evacuated with termination of Meja-Allahabad 400 kV D/C ISTS line at Meja and termination of Bara-Rewa Road 400 kV D/C quad line at Meja (Agreed scheme is Bara-Meja-Rewa road 400 kV D/C quad line which is presently bypassed at Meja), without any constraint UPPTCL have to pay the fixed charges of this line till the commissioning of the 1<sup>st</sup> unit of Meja generation. UPPTCL to give consent to Powergrid regarding payment of the charges.
- (ii) NTPC to complete the Meja generation switchyard work along with the bays by end of August 2016 to facilitate the evacuation of power from Bara generation. NTPC to make all efforts to advance the completion of work by one week, if the conditions permit.
- (iii) UPPTCL to coordinate with the officials of Meja switchyard to ensure proper communication system. "

e) During the above said meeting it was agreed that power of Bara (2x660 MW) generation can be evacuated with termination of Meja-Allahabad 400 kV D/C ISTS line at Meja and termination of Bara-Rewa Road 400 kV D/C quad line at Meja. It was deliberated that with the commissioning of 2<sup>nd</sup> unit of Bara and delay in commissioning of Bara-Mainpuri 765 kV 2xS/C lines, there would be overloading of downstream network system of UPPTCL at Rewa. However, no constraints were observed when load flow studies were carried out with Meja-Allahabad (PG) 400 kV D/C line.



- f) The Respondent has made available the bays on the switchyard of its generating station in order to enable UP to evacuate power of Bara generating station on the Meja-Allahabad transmission line.
- a. The Meja-Allahabad line was only to evacuate the power from the 1320 MW generating station but was in fact the system strengthening scheme which is to be integrated to the downstream system of UPPTCL and in order to facilitate transfer of power from other generating stations such as Bara, Karchana etc and to help in increasing the security and reliability of grid.
- b. The tariff has to be paid by UPPCL/ UPPTCL in accordance with the minutes dated 08/08/2016, the tariff determined has to form part of the PoC and be shared by all DICs from the date of commercial operation of the Meja-Allahabad line.
- c. The present case is one of system strengthening wherein the Meja-Allahabad transmission line will be used by not only the answering Respondent but by all the beneficiaries and is evident from the fact that the power from Bara generating station and any injection at Rewa Road Substation would get evacuated through the subject transmission line and therefore the charges need to be recovered through the POC mechanism from the date of commercial operation to be determined by the Hon'ble Commission.
- d. The Petitioner and the answering Respondent are concerned, the parties have entered into an Indemnification Agreement dated 17/04/2013 which provides as under -

## **2. INDEMNIFICATION**

a) *In the event of delay in commissioning of generating units vis-a-vis ATS or vice-versa, the delayed party shall pay to the other party, the Interest During Construction (IDC) including FERV and Govt. Guarantee fee if any, for the generation project or the ATS, calculated as the lower of the two, up to a period of six month from the zero date. In case of commissioning schedule of both the Generating units as well as Associated Transmission System (ATS) is expected to be delayed more than six month beyond the original zero date, the revised zero date shall be mutually fixed in the coordination meeting between "MUNPL" and POWERGRID. Such changes in zero date can be made upto one year prior to the previously agreed zero date.*

b) *In the event that actual commissioning of both the generating unit (s) and ATS occurs beyond the mutually agreed zero date, the actual date of commissioning of Generating unit (s) or ATS, whichever is commissioned earlier, shall be considered as the zero date for the purpose of this agreement.*



C) *The indemnification claim shall be raised and the defaulting party shall pay only in case of revenue loss or part thereof suffered by the other party due to delay in commissioning by the defaulting party.*

d) *Either party who was ready to commission and have notified the other party, shall obtain a certificate from Statutory Auditors at the end of financial year certifying the amount of IDC from zero date to actual date of commissioning or six month IDC whichever is less.*

#### **4. LIMITATION OF PAYMENT**

*No claim other than IDC including FERV and Govt. Guarantee fee if any referred to above i.e. any indirect loss due to delay in commissioning of Generating Unit/ATS shall be payable by either party to other party. "*

g) In response, the petitioner vide affidavit dated 30.03.2017 has submitted the reply and the same is as follows:

(a) The Meja- Allahabad (PG) 400 kV(twin) D/C line did not served as replacement of ay intrastate line. The intra state system was separately palned & implemented by UPPTCL for drawing intrastate power of 900 MW. Further, as power generation at Meja TPS was proposed at 400 kV level, Meja-Allahabad(PG) 400 kV (Twin) D/C was the minimum transmission system at 400 kV level that could be evolved considering N-1 reliability of power evacuation. Further as per 29<sup>th</sup> SCM of NR held on 29.12.2010, the said transmission system was evolved based upon the request of NTPC for evacuation of power to inter-state beneficiaries other than UP.

(b) An interim arrangement of early utilization of Meja-Allahabad 400 kV D/C was proposed by UPPTCL considering delay in Meja generation and delay in associated transmission system of Bara TPS. Considering stranded generation of UPPTCL, availability of associated transmission system for Meja TPS & delay in Meja TPS, a meeting was held in CEA on 2.08.2016 to discuss the UPPTCL request. The following was agreed till the commissioning of the first unit of Meja generation subject to UPPTCL confirmation to bear the transmission charges for the ISTS line.

*(i) The proposal is technically in order and power of Bara(2X660 MW) generation can be evacuated with termination of Meja-Allahabad D/C ISTS line at meja and termination of Bra-Rewa Road 400 kV D/C Quad line at Meja (agreed scheme is Bara-Meja-rewa Road 400 kV D/C quad line which is presently bypassed at Meja), without any constraint. UPPTCL have to pay fixed charges of this line till the commissioning of 1<sup>st</sup> unit of Meja generation. UPPTCL to give consent to Powergrid regarding payment of charges.*

However, UPPTCL did not give consent for bearing the transmission charges, Meja-Allahabad 400 kV D/C line has not been utilized for power evacuation of Bara generation.



(c) The representative of petitioner clarified that Meja-Allahabad transmission line is a purely an inter-State line, for evacuation and transfer of 900 MW power from Meja along with other generation projects like Bara, Karchanna etc. in Uttar Pradesh. UPPTCL had proposed a composite transmission scheme. Further, in 29th SCM of NR held on 29.12.2010, "NTPC requested to evolve associated transmission system for transfer of power from Meja TPS to the Northern region beneficiaries other than Uttar Pradesh". In order to transfer 400 MW power from Meja TPS to the other Northern region beneficiaries, Meja-Allahabad 400 kV D/C was planned. Further, when an inter-state transmission system is developed, it naturally integrates with the intra-State transmission connected to the grid. The instant transmission line was planned only because of Meja TPS. In absence of Meja TPS, there was no need of this line.

#### Analysis and views

59. We have considered the submissions of the petitioner and respondents. With regard to sharing of the transmission charges from 10.11.2016, MUNPL to bear the transmission charges till COD of 1st unit of Meja Generating station or date of start of LTA whichever is earlier. Therefore, the charges from 10.11.2016 to COD of 1<sup>st</sup> unit of Meja project or date of start of LTA whichever is earlier will be borne by Meja Urja Nigam Private Ltd. and thereafter the transmission charges shall be shared as per Regulation 43 of the 2014 Tariff Regulations. These charges shall be recovered on monthly basis and the billing collection and disbursement of transmission charges shall be governed by provision of Central Electricity Regulatory Commission (sharing of Interstate Transmission Charges and Losses) Regulations, 2010 amended from time to time.

60. This order disposes of Petition No. 203/TT/2016.

Sd/-  
**(M.K. Iyer)**  
Member

Sd/-  
**(A.S. Bakshi)**  
Member

Sd/-  
**(A.K. Singhal)**  
Member

Sd/-  
**(Gireesh B. Pradhan)**  
Chairperson



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

	Details of Loan	2016-17 (pro-rata)	2017-18	2018-19
<b>1</b>	Bond XLV			
	Gross loan opening	<b>350.00</b>	<b>350.00</b>	<b>350.00</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>	<b>0.00</b>	<b>29.17</b>
	Net Loan-Opening	350.00	350.00	320.83
	Additions during the year	0.00	0.00	0.00
	Repayment during the year	0.00	29.17	29.17
	Net Loan-Closing	350.00	320.83	291.66
	Average Loan	350.00	335.42	306.25
	Rate of Interest	9.65%	9.65%	9.65%
	Interest	33.78	32.37	29.55
<b>2</b>	Bond XLVI			
	Gross loan opening	<b>235.00</b>	<b>235.00</b>	<b>235.00</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
	Net Loan-Opening	235.00	235.00	235.00
	Additions during the year	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00
	Net Loan-Closing	235.00	235.00	235.00
	Average Loan	235.00	235.00	235.00
	Rate of Interest	9.30%	9.30%	9.30%
	Interest	21.86	21.86	21.86
<b>3</b>	Bond XLVII			
	Gross loan opening	<b>111.00</b>	<b>111.00</b>	<b>111.00</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
	Net Loan-Opening	111.00	111.00	111.00
	Additions during the year	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00
	Net Loan-Closing	111.00	111.00	111.00
	Average Loan	111.00	111.00	111.00
	Rate of Interest	8.93%	8.93%	8.93%
	Interest	9.91	9.91	9.91
<b>4</b>	Bond XLVIII			
	Gross loan opening	<b>333.00</b>	<b>333.00</b>	<b>333.00</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
	Net Loan-Opening	333.00	333.00	333.00
	Additions during the year	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00
	Net Loan-Closing	333.00	333.00	333.00
	Average Loan	333.00	333.00	333.00



	Rate of Interest	8.20%	8.20%	8.20%
	Interest	27.31	27.31	27.31
<b>5</b>	<b>SBI 10000 (1.5.2014)</b>			
	Gross loan opening	<b>1086.26</b>	<b>1086.26</b>	<b>1086.26</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
	Net Loan-Opening	1086.26	1086.26	1086.26
	Additions during the year	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00
	Net Loan-Closing	1086.26	1086.26	1086.26
	Average Loan	1086.26	1086.26	1086.26
	Rate of Interest	9.35%	9.35%	9.35%
	Interest	101.57	101.57	101.57
<b>6</b>	<b>Bond L</b>			
	Gross loan opening	<b>123.00</b>	<b>123.00</b>	<b>123.00</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
	Net Loan-Opening	123.00	123.00	123.00
	Additions during the year	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00
	Net Loan-Closing	123.00	123.00	123.00
	Average Loan	123.00	123.00	123.00
	Rate of Interest	8.40%	8.40%	8.40%
	Interest	10.33	10.33	10.33
<b>7</b>	<b>Bond LI</b>			
	Gross loan opening	<b>1762.21</b>	<b>1762.21</b>	<b>1762.21</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
	Net Loan-Opening	1762.21	1762.21	1762.21
	Additions during the year	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00
	Net Loan-Closing	1762.21	1762.21	1762.21
	Average Loan	1762.21	1762.21	1762.21
	Rate of Interest	8.40%	8.40%	8.40%
	Interest	148.03	148.03	148.03
<b>8</b>	<b>Bond LIII</b>			
	Gross loan opening	<b>187.55</b>	<b>187.55</b>	<b>187.55</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
	Net Loan-Opening	187.55	187.55	187.55
	Additions during the year	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00
	Net Loan-Closing	187.55	187.55	187.55
	Average Loan	187.55	187.55	187.55
	Rate of Interest	8.13%	8.13%	8.13%
	Interest	15.25	15.25	15.25



<b>9</b>	<b>Bond (LI) (Add-cap)-3</b>			
	Gross loan opening	<b>0.00</b>	<b>182.81</b>	<b>182.81</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
	Net Loan-Opening	0.00	182.81	182.81
	Additions during the year	182.81	0.00	0.00
	Repayment during the year	0.00	0.00	0.00
	Net Loan-Closing	182.81	182.81	182.81
	Average Loan	91.41	182.81	182.81
	Rate of Interest	8.13%	8.13%	8.13%
	Interest	7.43	14.86	14.86
<b>10</b>	<b>Total Loan</b>			
	Gross loan opening	4188.02	4370.83	4370.83
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	29.17
	Net Loan-Opening	4188.02	4370.83	4341.66
	Additions during the year	182.81	0.00	0.00
	Repayment during the year	0.00	29.17	29.17
	Net Loan-Closing	4370.83	4341.66	4312.49
	Average Loan	4279.43	4356.25	4327.08
	<b>Rate of Interest</b>	<b>8.77%</b>	<b>8.76%</b>	<b>8.75%</b>
	<b>Interest</b>	<b>375.45</b>	<b>381.47</b>	<b>378.66</b>

