

**BEFORE
THE CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

IN THE MATTER OF: Approval under regulation-86 of CERC (Conduct of Business) Regulations, 1999 and CERC (Terms and Conditions of Tariff) Regulations, 2014 for determination of Transmission Tariff from DOCO to 31.03.2019 for (A) 765kV, 240MVAR Switchable Line Reactor of 765kV D/C Aurangabad-Padghe Line Ckt-I to be charged as Bus Reactor at Aurangabad substation(Ant. DOCO 1.7.14) and (B) 765kV, 240MVAR Switchable Line Reactor of 765kV D/C Aurangabad-Padghe Line Ckt-II to be charged as Bus Reactor at Aurangabad substation (Ant. DOCO – 1.7.14)under “System Strengthening in North/West part of WR for IPP Projects in Chhattisgarh(IPP-E)” in Western Region

PETITIONER

Power Grid Corporation of India Ltd. (Govt. of India undertaking)

Registered office: B-9, Qutab Institutional Area, Katwaria Sarai, New Delhi- 110 016

Corporate office: “Saudamini”, Plot no.2, Sector-29, Gurgaon -122 001. (Haryana)

Power Grid Corporation of India Ltd., the petitioner in the matter, is filing petition under Regulation-86 of CERC (Conduct of Business) Regulations, 1999 for approval of transmission tariff for the above said assets under Integration of Pooling stations in Chhattisgarh with central part of WR for IPP generation projects in Chhattisgarh (IPP C) for tariff block 2014-19 period.

In terms of Regulation 3(2) of the Central Electricity Regulatory Commission (Procedure for making of application for determination of tariff, publication of the application and other related matters) Regulations, 2004, copy of complete tariff application is hereby served to the respondents (beneficiaries of **Western Region**), for information and necessary action in the matter.

The tariff application is hereby served through the nodal officers of the respondents for CERC matters, on the addresses as mentioned below:

ADDRESSES OF NODAL OFFICERS

1. MADHYA PRADESH POWER MANAGEMENT COMPANY LTD.
SHAKTI BHAWAN, RAMPUR
JABALPUR - 482 008
REPRESENTED BY ITS MD

2. MAHARASHTRA STATE ELECTRICITY DISTRIBUTION CO. LTD.
PRAKASHGAD, 4TH FLOOR
ANDHERI (EAST), MUMBAI - 400 052
REPRESENTED BY ITS MD

3. GUJARAT URJA VIKAS NIGAM LTD.
SARDAR PATEL VIDYUT BHAWAN,
RACE COURSE ROAD
VADODARA - 390 007
REPRESENTED BY ITS CHAIRMAN
4. ELECTRICITY DEPARTMENT
GOVT. OF GOA
VIDYUT BHAWAN, PANAJI,
NEAR MANDVI HOTEL, GOA - 403 001
REPRESENTED BY ITS CHIEF ENGINEER (ELECTRICAL)
5. ELECTRICITY DEPARTMENT
ADMINISTRATION OF DAMAN & DIU
DAMAN - 396 210
REPRESENTED BY ITS SECRETARY (FIN.)
6. ELECTRICITY DEPARTMENT
ADMINISTRATION OF DADRA NAGAR HAVELI
U.T., SILVASSA - 396 230
REPRESENTED BY ITS SECRETARY (FIN.)
7. CHHATTISGARH STATE ELECTRICITY BOARD
P.O.SUNDER NAGAR, DANGANIA, RAIPUR
CHHATISGAARH-492013
REPRESENTED BY ITS CHAIRMAN
8. MADHYAPRADESH AUDYOGIK KENDRA
VIKAS NIGAM (INDORE) LTD.
3/54, PRESS COMPLEX, AGRA-BOMBAY ROAD,
INDORE-452 008

Kindly acknowledge the receipt.

**PETITIONER
POWER GRID CORPORATION OF INDIA LTD.
REPRESENTED BY**


S. S. Raju

Dy. GENERAL MANAGER (COMMERCIAL)

GURGAON

DATED: 09.06.2014

BEFORE
THE CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI

PETITION FOR

APPROVAL OF TRANSMISSION TARIFF

for

Asset 1: 765kV, 240MVAR Switchable Line Reactor of 765kV D/C Aurangabad-Padghe Line Ckt-I to be charged as Bus Reactor at Aurangabad substation
Asset 2: 765kV, 240MVAR Switchable Line Reactor of 765kV D/C Aurangabad Padghe Line Ckt-II to be charged as Bus Reactor at Aurangabad substation

under
“System Strengthening in North/West part of WR for IPP Projects in Chhattisgarh”
in
Western Region.

PETITION NO. :

TARIFF BLOCK: 2014 - 2019

POWER GRID CORPORATION OF INDIA LTD.

REGISTERED OFFICE
B- 9, QUTAB INSTITUTIONAL AREA, KATWARIA SARAI,
NEW DELHI – 110 016

CORPORATE CENTRE
“SAUDAMINI”, PLOT NO.- 2, SECTOR- 29,
GURGAON - 122 001 (HARYANA)
EPABX: 0124- 2571 700 TO 719, FAX: 0124- 2571989

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**BEFORE
THE CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

PETITION NO.:

IN THE MATTER OF: Approval under regulation-86 of CERC (Conduct of Business) Regulations, 1999 and CERC (Terms and Conditions of Tariff) Regulations, 2014 for determination of Transmission Tariff from DOCO to 31.03.2019 for (A) **765kV, 240MVAR Switchable Line Reactor of 765kV D/C Aurangabad-Padghe Line Ckt-I to be charged as Bus Reactor at Aurangabad substation(Ant.DOCO 1.7.14)** and (B) **765kV, 240MVAR Switchable Line Reactor of 765kV D/C Aurangabad-Padghe Line Ckt-II to be charged as Bus Reactor at Aurangabad substation (Ant.DOCO – 1.7.14)under “System Strengthening in North/West part of WR for IPP Projects in Chhattisgarh(IPP-E)” in Western Region**

Power Grid Corporation of India Ltd.

--- PETITIONER

Registered office: B- 9, Qutab Institutional Area,
Katwaria Sarai, New Delhi- 110 016.
Corporate Centre : 'SAUDAMINI', Plot No- 2,
Sector- 29, Gurgaon- 122 001 (Haryana).

Madhya Pradesh Power Management Company Ltd.
Shakti Bhawan, Rampur
Jabalpur - 482 008
Represented By Its MD
And Others

--- RESPONDENT

SI. No.	Description	Enclosure No.	Page No.
1	Index	-	
2	Letter for registration	-	
3	Memo of Parties	-	
4	Affidavit	-	
5	Application for determination of Tariff	-	
6	Copy of Investment approval	Encl. - 1	17-23
7	Extract from MOM of 29 th SCM dated 10 th September 2009	Encl. - 2	24-25
8	Extract from MOM of 11 th WRPC dt. 25 th September 2009	Encl. - 3	26-27
9	Extract from MOM of 24 th WRPC dt. 9 th October 2013	Encl. - 3A	28-32
10	Copy of Management Certificates	Encl. - 4	33-36
11	Tariff Filing Formats	Encl. - 5	37-88

FILED BY

POWER GRID CORPORATION OF INDIA LTD.

REPRESENTED BY

GURGAON

DATED: 05.06.2014

S. S. RAJU

Dy. General Manager (Commercial)



**BEFORE
THE CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

PETITION NO.:

IN THE MATTER OF: Approval under regulation-86 of CERC (Conduct of Business) Regulations, 1999 and CERC (Terms and Conditions of Tariff) Regulations, 2014 for determination of Transmission Tariff from DOCO to 31.03.2019 for (A) 765kV, 240MVAR Switchable Line Reactor of 765kV D/C Aurangabad-Padghe Line Ckt-I to be charged as Bus Reactor at Aurangabad substation(Ant. DOCO 1.7.14) and (B) 765kV, 240MVAR Switchable Line Reactor of 765kV D/C Aurangabad-Padghe Line Ckt-II to be charged as Bus Reactor at Aurangabad substation (Ant. DOCO – 1.7.14)under "System Strengthening in North/West part of WR for IPP Projects in Chhattisgarh(IPP-E)" in Western Region

Power Grid Corporation of India Ltd.

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Madhya Pradesh Power Management Company Ltd.
Shakti Bhawan, Rampur
Jabalpur - 482 008
Represented By Its MD
And Others

--- RESPONDENT

To,
The Secretary
Central Electricity Regulatory Commission
New Delhi- 110001

Sir,

The application filed under Regulation- 86 of CERC (Conduct of Business) Regulation' 1999 and CERC (Terms and Conditions of Tariff) Regulations' 2014 for determination of Transmission tariff from DOCO to 31.03.2019 may please be registered.

GURGAON
DATED: 05.06.2014

**FILED BY
POWER GRID CORPORATION OF INDIA LTD.
REPRESENTED BY**


S. S. RAJU

Dy. General Manager (Commercial)



**BEFORE
THE CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

PETITION NO.:

IN THE MATTER OF: Approval under regulation-86 of CERC (Conduct of Business) Regulations, 1999 and CERC (Terms and Conditions of Tariff) Regulations, 2014 for determination of Transmission Tariff from DOCO to 31.03.2019 for (A) 765kV, 240MVAR Switchable Line Reactor of 765kV D/C Aurangabad-Padghe Line Ckt-I to be charged as Bus Reactor at Aurangabad substation(Ant. DOCO 1.7.14) and (B) 765kV, 240MVAR Switchable Line Reactor of 765kV D/C Aurangabad-Padghe Line Ckt-II to be charged as Bus Reactor at Aurangabad substation (Ant. DOCO – 1.7.14)under "System Strengthening in North/West part of WR for IPP Projects in Chhattisgarh(IPP-E)" in Western Region.

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Madhya Pradesh Power Management Company Ltd.

--- RESPONDENT

Shakti Bhawan, Rampur
Jabalpur - 482 008
Represented By Its MD
And Others

MEMO OF PARTIES

Power Grid Corporation of India Ltd.

--- PETITIONER

VERSUS

1. MADHYA PRADESH POWER MANAGEMENT COMPANY LTD.
SHAKTI BHAWAN, RAMPUR
JABALPUR - 482 008
REPRESENTED BY ITS MD
2. MAHARASHTRA STATE ELECTRICITY DISTRIBUTION CO. LTD.
PRAKASHGAD, 4TH FLOOR
ANDHERI (EAST), MUMBAI - 400 052
REPRESENTED BY ITS MD
3. GUJARAT URJA VIKAS NIGAM LTD.
SARDAR PATEL VIDYUT BHAWAN,
RACE COURSE ROAD
VADODARA - 390 007
REPRESENTED BY ITS CHAIRMAN

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4. ELECTRICITY DEPARTMENT
GOVT. OF GOA
VIDYUT BHAWAN, PANAJI,
NEAR MANDVI HOTEL, GOA - 403 001
REPRESENTED BY ITS CHIEF ENGINEER (ELECTRICAL)
5. ELECTRICITY DEPARTMENT
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DAMAN - 396 210
REPRESENTED BY ITS SECRETARY (FIN.)
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ADMINISTRATION OF DADRA NAGAR HAVELI U.T.,
SILVASSA - 396 230
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3/54, PRESS COMPLEX, AGRA-BOMBAY ROAD,
INDORE-452 008
REPRESENTED BY ITS CHAIRMAN

--- RESPONDENTS

GURGAON
DATED: 05.06.2014

PETITIONER
POWER GRID CORPORATION OF INDIA LTD.
REPRESENTED BY


S. S. RAJU

Dy. General Manager (Commercial)





हरियाणा HARYANA

BEFORE

THE CENTRAL ELECTRICITY REGULATORY COMMISSION 29AA 128553

NEW DELHI

PETITION NO.:

IN THE MATTER OF: Approval under regulation-86 of CERC (Conduct of Business) Regulations, 1999 and CERC (Terms and Conditions of Tariff) Regulations, 2014 for determination of Transmission Tariff from DOCO to 31.03.2019 for Asset 1: 765kV, 240MVAR Switchable Line Reactor of 765kV D/C Aurangabad-Padghe Line Ckt-I to be charged as Bus Reactor at Aurangabad substation and Asset 2: 765kV, 240MVAR Switchable Line Reactor of 765kV D/C Aurangabad-Padghe Line Ckt-II to be charged as Bus Reactor at Aurangabad substation under "System Strengthening in North/West part of WR for IPP Projects in Chhattisgarh(IPP-E)" in Western Region.

Power Grid Corporation of India Ltd.

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Registered office: B- 9, Qutab Institutional Area,

Ka/waria Sarai, New Delhi- 110 016.

Corporate Centre : 'SAUDAMINI', Plot No- 2,

Sector- 29, Gurgaon- 122 001 (Haryana).

Madhya Pradesh Power Management Company GURGAON

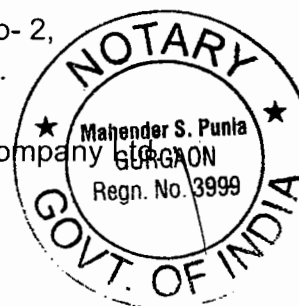
Shakti Bhawan, Rampur

Jabalpur - 482 008

Represented By Its MD

And Others

--- RESPONDENT



Affidavit verifying the Petition

I, S S Raju, S/O Sh S B Raju, working as Deputy General Manager (Commercial) in

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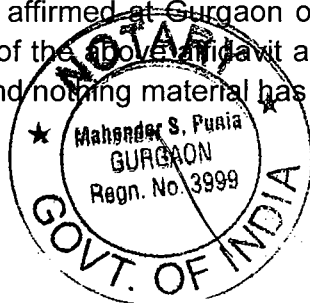
the Power Grid Corporation of India Ltd., having its registered Office at B-9, Institutional Area, Katwaria Sarai, New Delhi- 110 016, do hereby solemnly affirm and state as under:-


1. I am the Dy. General Manager of Power Grid Corporation of India Ltd., the representative of the Petitioner in the above matter, and am duly authorised to make this affidavit.
2. I submit that the enclosed tariff Petition is being filed for determination of Transmission Tariff for 2014-19 Block for Asset 1: 765kV, 240MVAR Switchable Line Reactor of 765kV D/C Aurangabad-Padghe Line Ckt-I to be charged as Bus Reactor at Aurangabad substation and Asset 2: 765kV, 240MVAR Switchable Line Reactor of 765kV D/C Aurangabad-Padghe Line Ckt-II to be charged as Bus Reactor at Aurangabad substation under "System Strengthening in North/West part of WR for IPP Projects in Chhattisgarh(IPP-E)" in Western Region.
3. I submit that no other tariff Petition except this Petition has been filed directly or indirectly for approval of Transmission Tariff for 2014- 19 Block for Asset 1: 765kV, 240MVAR Switchable Line Reactor of 765kV D/C Aurangabad-Padghe Line Ckt-I to be charged as Bus Reactor at Aurangabad substation and Asset 2: 765kV, 240MVAR Switchable Line Reactor of 765kV D/C Aurangabad-Padghe Line Ckt-II to be charged as Bus Reactor at Aurangabad substation under "System Strengthening in North/West part of WR for IPP Projects in Chhattisgarh(IPP-E)" in Western Region.
4. The statements made in the tariff Petition herein are based on petitioner company's official records maintained in the ordinary course of business and I believe them to be true and correct.
5. The documents attached with the petition are legible copies and duly attested by me.


(DEPONENT)

VERIFICATION

Solemnly affirmed at Gurgaon on this^{5th}..... day of June, 2014 that the contents of the above affidavit are true to my knowledge and belief and no part of it is false and nothing material has been concealed there from.



ATTESTED

MAHENDER S. PUNIA
ADVOCATE & NOTARY
DISTT. GURGAON (Haryana) India


(DEPONENT)

7 **10 5 JUN 2014**



**BEFORE
THE CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

PETITION NO.:

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Registered office: B- 9, Qutab Institutional Area,
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Madhya Pradesh Power Management Company Ltd.
Shakti Bhawan, Rampur
Jabalpur - 482 008
Represented By Its MD
And Others

--- RESPONDENT

To,

The Hon'ble Chairman and
his Companion Members of The Hon'ble CERC
The humble application filed by the Petitioner

MOST RESPECTFULLY SHOWETH

- 1.0 That, Hon'ble Commission have made CERC (Terms and Conditions of Tariff) Regulations, 2014 and issued vide notification dated 21.02.2014. These regulations shall remain in force for a period of 5 years w.e.f. 01.04.2014, unless reviewed earlier or extended by the Hon'ble Commission.
- 2.0 The Petitioner herein, Power Grid Corporation of India Ltd. is a Government Company within the meaning of Companies Act, 1956. In exercise of powers under sub-section (1) of section 38(1) the Electricity Act 2003, the Government of India has declared the Petitioner herein as the Central Transmission Utility (CTU). The petitioner being CTU is deemed to be a transmission licensee under section 14 of the Electricity Act' 2003.

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3.0 That the instant petition covers approval of transmission tariff for (A) 765kV, 240MVAR Switchable Line Reactor of 765kV D/C Aurangabad-Padghe Line Ckt-I to be charged as Bus Reactor at Aurangabad substation(Ant. DOCO 1.7.14) and (B) 765kV, 240MVAR Switchable Line Reactor of 765kV D/C Aurangabad-Padghe Line Ckt-II to be charged as Bus Reactor at Aurangabad substation (Ant. DOCO – 1.7.14)under “System Strengthening in North/West part of WR for IPP Projects in Chhattisgarh(IPP-E)” in Western Region for 2014-19 block, which has been anticipated to be put under commercial operation w.e.f. 01.07.2014.

4.0 The tariff for the said transmission systems shall be determined by the Hon'ble Commission in accordance with the CERC (Terms and Conditions of Tariff) Regulations, 2014

5.0 **Approval of the Scheme:**

That the petitioner has been entrusted with the implementation of “System Strengthening in North/West part of WR for IPP Projects in Chhattisgarh (IPP-E)”. The investment approval of the project was accorded by Board of Directors of POWERGRID vide the Memorandum No. **C/CP/Chhattisgarh dated 27.12.2011 with an estimated cost of Rs. 1746.65 Crore including Interest During Construction of Rs. 111.43 Crore based on Sept' 2011 price level**; a copy whereof is attached hereto as **Encl.- 1, page 17. to 23...** . That the scheme was approved in the 29th Standing Committee meeting of Western Region held on 10th September, 2009, extract of the MOM is enclosed herewith as **Encl.- 2 page 24 to 25..** . The Transmission System was later discussed and agreed for implementation in the 11th WRPC meeting held in Raipur on 25th September, 2009, extract of the MOM is enclosed herewith as **Encl.- 3 page 26 to 27.**

5.1 The scope of work covered under for System Strengthening in North/West part of WR for IPP Projects in Chhattisgarh (IPP-E) is as follows:

Transmission Line:

- (a) Auranagabd(POWERGRID)-Padghe(POWERGRID) 765kV D/C Line
- (b) Padghe(POWERGRID)-Padghe/Kudus(MSETCL)400kV D/C(Quad) Line
- (c) Vadodara-Asoj 400kV D/C(Quad) Line

Substation:

- (d) Establishment of 765/400kV, 2*1500MVA Padghe GIS Substation
- (e) Bay Extension at 765/400kV Aurangabad(POWERGRID), Vadodara(POWERGRID) and Asoj (GETCO) Substations
- (f) Bay Extensions at 400kV Padghe (MSETCL) Substation

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The details of different assets covered in the project in various petitions is as follows:

Scope as Approved in Investment Approval	Actual/ Anticipated Commissioning Status	Actual/ Anticipated DOCO	Petition No.	Filing Date	Hearing Status	Order Date
400 kV D/C (Quad) Vadodara-Asoj Transmission Line along with associated bays at Asoj (GETCO S/S)	Commissioned	01.04.14	287/TT/2013	Petition: 29.10.13 Affidavit: 17.05.14	Hearing Held on 20.05.14	-
765kV, 240MVAR Switchable Line Reactor of 765kV D/C Aurangabad-Padghe Line Ckt-I to be charged as Bus Reactor at Aurangabad substation(Ant. DOCO 1.7.14) (Asset-1)	To be Commissioned	01.07.14 (Ant.)	Petition for this asset is being filed under the instant Petition			
765kV, 240MVAR Switchable Line Reactor of 765kV D/C Aurangabad-Padghe Line Ckt-II to be charged as Bus Reactor at Aurangabad substation (Ant. DOCO – 1.7.14) (Asset-2)	To be Commissioned	01.07.14 (Ant.)				

6.0 Implementation Schedule:

As per the investment approval, the schedule completion is within 32 months from the date of investment approval. The date of Investment Approval is 27.12.2011. Hence, the commissioning schedule comes to 27.08.2014 against which the subject assets are anticipated to be commissioned and put under commercial operation w.e.f. 01.07.2014. Hence, there is no time overrun in commissioning of the subject assets. The balance assets of the project are

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under various stages of implementation. The tariff petition for the same shall be filed progressively.

As discussed in 24th WRPC meeting, it was insisted for commissioning of Bus Reactors as early as possible considering the voltage profile prevailing in the Grid. A copy of the extract from Minutes of the Meeting of 24th WRPC is enclosed at **Encl.-3A(Page 28 to 32)**

7.0 Completion Cost:

7.1 That the application for determination of tariff is filed in line with provision 7 (2) of Tariff Regulation' 2014 applicable for 2014- 19 period. Further, that the present petition covers approval of tariff based on actual/ estimated expenditure incurred up to DOCO and additional capitalization projected to be incurred from DOCO to 31.03.2016 in respect of the subject asset as per detail given below. That the capital cost incurred upto DOCO and projected to be incurred during 2014-15 and 2015-16 is duly certified in Management certificate; copy whereof in respect of the assets covered in this petition is enclosed herewith as **Encl.- 4 (page 33 to 36)**.

(Rs. in Lakhs)

Name of the Element	Approved Cost (Apportioned)	Exp. Up to DOCO	Projected Exp. for FY 2014-15	Projected Exp. for FY 2015-16	Estimated Completion Cost
Asset- I	4183.62	2425.94	838.57	280.39	3544.90
Asset- II	4067.17	2411.33	874.39	281.85	3567.57
TOTAL	8250.78	4837.27	1712.96	562.24	7112.47

Against the total apportioned approved cost of Rs 8250.78 lakhs, the anticipated completed cost as on DOCO is Rs. 4837.27 lakhs and the anticipated completed cost is Rs 7112.47 lakhs, hence, there is no cost overrun in comparison to FR cost. The reasons for item wise cost variation between approved cost (FR) and actual cost as on DOCO are explained in detail in Form- 5. It is submitted that most of the assets covered under the project are yet to be commissioned. The comparison of actual cost with the approved cost of the project is to be seen in totality for the project as whole and not separately for each element. Therefore, the Hon'ble Commission may kindly approve the capital cost of the elements covered under instant petition & allow following tariff as claimed.

Further, it is humbly prayed that tariff may be allowed on the estimated completion cost. The completion cost for the assets covered under instant Petition works out to Rs 7112.47 Lakhs.

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Further, On actual completion of the project, the revised expenditure based on actual DOCO shall be revised and filed before the commission and projected expenditure beyond 31.03.2014 shall get trued up. Based on the actual expenditure, the revised cost (RCE) for the project shall be prepared and filed before Hon'ble Commission in due course of time.

- 7.2 The details of underlying assumptions for additional capitalization for these assets is summarized below:

The admissibility of additional capital expenditure (Add. Cap.) incurred after DOCO is to be dealt in accordance with the provisions of Regulation: 14, the extract of Regulation: 14 of the Regulations, 2014 is reproduced as follows:

“Additional Capitalization”

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

- (i) Undischarged liabilities recognized 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 of law; 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.

- 7.3 The Additional Capitalisation incurred/ projected to be incurred in the contextual asset is mainly on account of Balance/ Retention Payments and hence the same may be allowed by Hon'ble Commission. The details of underlying reasons for additional capitalization for (A) 765kV, 240MVAR Switchable Line Reactor of 765kV D/C Aurangabad-Padghe Line Ckt-I to be charged as Bus Reactor at Aurangabad substation(Ant. DOCO 1.7.14) and (B) 765kV, 240MVAR Switchable Line Reactor of 765kV D/C Aurangabad-Padghe Line Ckt-II to be charged as Bus Reactor at Aurangabad substation (Ant. DOCO – 1.7.14)under “System Strengthening in North/West part of WR for IPP Projects in Chhattisgarh(IPP-E)” in Western Region, are given in Form- 7.

16-03-14



That the petition for determination of tariff is being filed in line with Regulation-7 under Chapter: 3 of Tariff Regulation, 2014 applicable for 2014- 19 period.

8.0 Additional ROE @ 0.5% has been claimed in the instant petition in line with Tariff Regulations, 2014 as per attached Form 8B.

9.0 **TRANSMISSION TARIFF for 2014 - 19 BLOCK:**

9.1 The tariff for block 2014 - 2019 has been worked out as per CERC (Terms and Conditions of Tariff) Regulations, 2014. In the present petition the transmission tariff has been calculated taking actual expenditure/ estimated Expenditure upto DOCO/ Anticipated DOCO and estimated expenditure from DOCO/ Anticipated DOCO to 31.03.2016. Calculations for working out the tariff along with supporting documentation are attached hereto as **Encl.- 5 (Page 37.. - 38.)**.

9.2 The annual transmission tariff for the tariff period 2014- 2019 is summarized as below:

Rupees in lakhs [#]						
Sr. No.	Name of the asset	2014- 15	2015- 16	2016- 17	2017- 18	2018- 19
1.	Asset- 1	452.46*	693.47	704.68	690.13	676.30
2.	Asset- 2	452.91*	697.57	708.76	694.08	680.12

**The asset was anticipated to be commissioned on 01.06.2014 and the management certificate and the tariff calculations were done accordingly. Even after best effort, the asset could not be commissioned on 01.06.2014 and it is now anticipated to be commissioned and put under commercial operation from 01.07.2014. Accordingly, for 2014-15, pro-rata tariff calculated with DOCO as 01.07.2014 is indicated.*

- While calculating Annual fixed charges, rates as specified in the Tariff Regulation, 2014 have been considered. However, the petitioner is approaching the Hon'ble Commission through review petition for revision. Thus the Annual Fixed Cost is subject to the outcome of the said review petition.

9.3 That, it is submitted that the petitioner being liable to pay income tax at MAT rate, the ROE has been calculated @ 20.243 % after grossing up the ROE with MAT rate of 20.961% based on the rate prescribed by the Hon'ble Commission as per illustration under Regulation: 25 (2) (i) of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014. That as per clause: 25 (3) of the above regulation, the grossed up rate of ROE at the end of every 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 tariff period 2014- 15 to 2018- 19 on actual gross income of any financial year. Any under-recovery or over-recovery of grossed up rate on ROE after truing up shall be recovered or refunded to beneficiaries on year to year basis. It is further submitted that

37. 54 - 2



adjustment due to any additional tax demand including interest duly adjusted for any refund of tax including interest received from IT authorities shall be recoverable/ adjustable during/ after completion of income tax assessment of the financial year.

- 9.4 That as provided in clause: 49 of the Tariff Regulations 2014, the deferred tax liability before 01.04.2009 shall be recovered from the beneficiaries or the long term customers/ DICs as and when the same gets materialized.
- 9.5 Service tax on transmission has been put in the negative list w.e.f. 01.04.2012 and accordingly the Transmission Charges indicated at Para: 9.2 above, is exclusive of Service Tax and the same shall be borne and additionally paid by the respondent(s) to the petitioner and the same shall be charged, billed separately by the petitioner if at any time the transmission charges is withdrawn from the negative list. Further, any additional taxes are to be paid by the petitioner on account of demand from Govt./ Statutory authorities, the same may be allowed to be recovered from the beneficiaries.
- 9.6 That Interest on Loan has been calculated on the basis of rate prevailing as on DOCO. The change in Interest rate due to floating rate of interest applicable, if any, for the project needs to be claimed/ adjusted over the tariff block of 05 years directly from/ with the beneficiaries.
- 9.7 The transmission charges at Para: 9.2 above is inclusive of O&M expenses for the project derived based on the norms for O&M expenditure for Transmission System as specified under Regulation: 29 (3) (a) of the tariff regulations for block 2014-19. It is the understanding of the petitioner that these norms for O&M expenditure been arrived by the Hon'ble Commission after considering (i) normalized actual O&M expenses of the petitioner on its various projects in various regions during the year 2008- 09, 2009- 10, 2010- 11, 2011- 12 and 2012- 13. It is submitted that the wage revision of the employees of the petitioner company is due w.e.f. 01.01.2017 and actual impact of wage hike which will be effective from a future date has also not been factored in fixation of the normative O&M rates prescribed for the tariff block 2014- 19. The scheme of wage revision applicable to CPSUs being binding on the petitioner, the petitioner reserves the right 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.
- 9.8 The application filing fee, expenses incurred on publication of Notices in News papers and License fee may be allowed to be recovered separately from the respondents in terms of Regulation: 52 Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014. The fees and charges to be paid by the petitioner as ISTS licensee (deemed ISTS licensee) under CERC (Fees and Charges of RLDC and other matters) Regulations as amended from time to time shall also be recoverable from the DICs as provided under clause: 52 (2) (a).
- 9.9 The Transmission Charges and other related Charges indicated at Para: 9.2 above, is exclusive of incentive, late payment surcharge, any statutory taxes, levies, duties, cess, filing fees, license fee, RLDC fees and charges or any other kind of imposition(s) and/ or other surcharges etc., whatsoever imposed/ charged by any Government (Central/ State) and/ or any other local bodies/

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authorities/ regulatory authorities in relation to transmission of electricity, environmental protection, and/ or in respect of any of its installation associated with the Transmission System and the same shall be borne and additionally paid by the respondent(s) to the petitioner and the same shall be charged, billed separately by the petitioner on the respondents.

10.0 Sharing of Transmission Charges:

The Tariff for Transmission of Electricity (Annual Fixed Cost) as per Para: 9.2 of petition shall be shared as per Regulation: 43 of CERC (Terms and Conditions of Tariff) Regulations, 2014. These charges shall be recovered on monthly basis and the billing collection and disbursement of Transmission Charges shall be governed by provision of CERC (sharing of interstate Transmission Charges and Losses) Regulations, 2010.

In the circumstances mentioned above it will be just and proper that the transmission tariff for the assets covered under this petition be allowed to be charged from the Respondents on the basis set out above. **The Petitioner submits that the Encl.- 1 to Encl.- 5 may please be treated as integral part of this petition.**

PRAYER

It is respectfully prayed that the Hon'ble Commission may be pleased to

- 1) Approve the Transmission Tariff for the tariff block 2014-19 block for the assets covered under this petition, as per para –9 above.
- 2) Admit the capital cost as claimed in the Petition and approve the Additional Capitalisation incurred / projected to be incurred.
- 3) Tariff may be allowed on the estimated completion cost, since few elements of the project are yet to be completed, the completion cost for the assets covered under instant Petition are within the overall project cost.
- 4) Allow the Petitioner to approach Hon'ble Commission for suitable revision in the norms for O&M expenditure for claiming the impact of wage hike, if any, during period 2014-19.
- 5) Approve the Additional ROE as claimed in the Petition.
- 6) 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.

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- 7) 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.
- 8) 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.
- 9) 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.
- 10) 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.
- 11) Allow 90% of the Annual Fixed Charges as tariff in accordance with clause 7 (i) of Regulation 7 Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 for purpose of inclusion in the PoC charges.
- 12) Allow the petitioner to bill Tariff from actual DOCO and also the petitioner may be allowed to submit revised 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

**FILED BY
POWER GRID CORPORATION OF INDIA LTD.**


REPRESENTED BY S.S. RAJU
DY. GENERAL MANAGER (COMMERCIAL)

**GURGAON
DATED: 05.06.2014**



पावर ग्रिड कारपोरेशन ऑफ इंडिया लिमिटेड

(भारत सरकार का उद्यम)

POWER GRID CORPORATION OF INDIA LIMITED

(A Government of India Enterprise)



केन्द्रीय कार्यालय : "सौदामिनी" प्लॉट सं. 2, सेक्टर-29, गुडगाँव-122 001, हरियाणा
फोन : 2571700 - 719, फैक्स : 2571760, 2571761 तार 'नेटग्रिड',
Corporate Office : "Saudamini" Plot No. 2, Sector-29, Gurgaon-122 001, Haryana
Tel. : 2571700 - 719, Fax : 2571760, 2571761 Gram : 'NATGRID'

संदर्भ संख्या/Ref. Number

C/CP/Chhattisgarh-IPP

Date: 27th December, 2011

MEMORANDUM

Sub: Investment approval for "System Strengthening in North/ West part of WR for IPP Projects in Chhattisgarh".

The Board of Directors of POWERGRID, in exercise of powers delegated to it by the Department of Public Enterprises (DPE), Ministry of Heavy Industries and Public Enterprises, Government of India through its Office Memorandum No. 26(3)/2005-GM-GL-92 dated 1st May, 2008 and Office Memorandum No. DPE/11(2)/97-Fin. dated 22nd July, 1997 (modified subsequently through Office Memorandum No. 18(24)/2003-GM-GL.64 dated 5th August, 2005), have accorded investment approval for "System Strengthening in North/ West part of WR for IPP Projects in Chhattisgarh" in its 265th meeting held on 27th December, 2011, as per details given below:

1. Scope of Project

Broad scope of the project is given below:

Transmission line

- (i) Aurangabad (POWERGRID) – Padghe (POWERGRID) 765kV D/C line
- (ii) Padghe (POWERGRID) – Padghe/ Kudus (MSETCL) 400kV D/C (Quad) line
- (iii) Vadodara – Asoj 400kV D/C (Quad) line

Substation

- (i) Establishment of 765/400kV, 2x1500MVA Padghe GIS Substation
- (ii) Bay extensions at 765/400kV Aurangabad (POWERGRID), Vadodara (POWERGRID) and Asoj (GETCO) Substations
- (iii) Bay extensions at 400kV Padghe (MSETCL) Substation

2. Project Cost and Funding

Estimated cost of the project at 2nd quarter 2011 price level is ₹ 1746.65 Crore (including IDC of ₹ 111.43 Crore). The abstract cost estimate is attached at Annexure-I.

The project is proposed to be implemented through domestic borrowings/ bonds and Internal Resources of POWERGRID with Debt : Equity ratio of 70:30.

सा. सं-2

पंजीकृत कार्यालय : बी-9, कुतब इंस्टीट्यूशनल एरिया, कटवारिया सराय, नई दिल्ली-110016 दूरभाष : 26560121 फैक्स : 011-26560039 तार 'नेटग्रिड'
Registered Office : B-9, Qutab Institutional Area, Katwaria Sarai, New Delhi-110016 Tel. : 26560121 Fax : 011-26560039 Gram : 'NATGRID'

स्वहित एवं राष्ट्रहित में ऊर्जा बचाएं

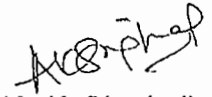
Save Energy for Benefit of Self and Nation



3. Implementation Schedule

The project is scheduled to be commissioned within 32 months progressively from the date of investment approval.

This is issued in pursuance of 265th meeting of Board of Directors of POWERGRID held on 27th December, 2011.



(A. K. Singhal)
Additional General Manager (CP)

26-12-2



Copy for kind information please:

1. PS to Secretary (Power)
2. Chairman, Central Electricity Regulatory Commission 3rd & 4th Floor, Chanderlok Building, 36, Janpath, New Delhi- 110001
3. Chairperson, CEA, R. K. Puram, New Delhi – 110 066
4. Chairman, Bharat Aluminium Co. Ltd., Core-6, Scope Office Complex, Lodhi Road, New Delhi – 11003.
5. Chairman, Athena Chhattisgarh Power Pvt. Ltd., 7-1-24 B block, 5th Floor, Roxana Towers, Greenlands, Begumpet, Hyderabad – 500016.
6. CMD, Vandana Vidhyut Ltd., Vandana Bhawan, M.G. Road, Raipur, Chhattisgarh.
7. Managing Director, R.K.M. Powergen Pvt. Ltd., 147, Gitanjali Nagar, Avanti Vihar, Sector-I, Raipur (Chhattisgarh) – 492004.
8. Managing Director, Jindal Power Ltd., Post Box No. 16, Kharsia Road, Raigarh (Chhattisgarh) – 496001.
9. Managing Director, SKS Power Generation (Chhattisgarh) Ltd., 501 B, Elegant Business Park, Andheri Kurla Road, J.B. Nagar, Andheri (E), Mumbai – 400059.
10. Managing Director, Korba West Power Co. Ltd., 2nd Floor Centrum Plaza, Golf Course Road, Sector-53, Gurgaon – 122002.
11. Managing Director, DB Power Ltd., C/o India United Textile Mills, Dr. Ambedkar Road, Opp. ITC Grand Central Parel, Mumbai – 400012.
12. Executive Director, KSK Mahanadi Power Company Ltd., 8-2/29382/A/431/A, Road No. 22, Jubilee Hills, Hyderabad – 50033.
13. CEO & Director, Lanco Amarkantak Power Ltd., Lanco House, Plot No. 4, Software Units Layout, Hitech City, Madhapur, Hyderabad -- 500081.
14. Managing Director, Visa Power Ltd., HUL Building, 2nd floor, 9 Shakespeare Sarani, Kolkata – 700071.
15. Managing Director, TRN Energy Pvt. Ltd., 4735/22, Ground Floor, Prakashdeep Building, Ansari Road, Daryaganj, New Delhi – 110 002
16. Managing Director, GMR Chhattisgarh Energy Pvt. Ltd. IBC Knowledge Park, Phase-2, D-Block, 9th Floor, 4/1, Bannerghatta Road, Bangaluru (Karnataka) - 560029
17. Managing Director, Chhattisgarh Steel & Power Ltd., 142, Saheed Smarak Complex, G.E. Road, Raipur, Chhattisgarh.
18. Managing Director, Chhattisgarh State Power Trading Co. Ltd., 2nd Floor, Vidyut Sewa Bhawan, Danganiya, Raipur (Chhattisgarh) – 492013.
19. Chairman, Maharashtra State Electricity Board, Commercial Section, 5th Floor, 'PRAKASHGAD', Bandra (East), MUMBAI- 400 051.
20. Chairman, Head Office Madhya Pradesh State Electricity Board, Shakti Bhawan, Jabalpur-482-008 (MP)
21. Chairman, Gujarat Electricity Board, Vidyut Bhawan, Race Course, Baroda, Gujarat
22. Chairman, Govt. of Goa, Vidhyut Bhavan, Opp. Police Station, Panjim, Goa- 403001

At. J. 2



23. Chairman, Chhattisgarh State Electricity Board, PO – Sundarnagar, Dangania, Raipur, Chhattisgarh – 492 013
24. Secretary (Power), Electricity Department, Administration of Dadra Nagar Haveli, U.T. Silvassa – 396 230
25. Secretary (Power), Electricity Department, Administration of Daman and Diu, U.T. Daman – 396 210
26. Commissioner, Power Development Deptt., Govt. of Jammu & Kashmir, Mini Secretariat, Jammu
27. CMD, Himachal Pradesh Power Transmission Corporation Ltd., Barowalia House, Khalini, Shimla-171002
28. Chairman, Punjab State Electricity Board, The Mall, Patiala-147001
29. CMD, Haryana Vidyut Prasaran Nigam Ltd., Shakti Bhawan, sector-6, Panchkula (Haryana) – 134109
30. CMD, Rajasthan State Electricity Board, Vidyut Bhawan, Vidyut Marg, Jaipur-302005.
31. CMD, UPPCL, Shakti Bhawan, 14, Ashok Marg, Lucknow – 226001
32. CMD, Uttarakhand Power Corporation Ltd., Kaulagarh Power House, FRI complex, Dehradun-248006.
33. CMD, Delhi Transco Limited (DTL), Shakti Sadan, Kotla Road, New Delhi-02
34. Chief Engineer, Electricity Deptt., Chandigarh Administration, Mini Secretariat (U.T.), Sector-9, Chandigarh.
35. Advisor, PAMD, Planning Commission, Yojana Bhawan, New Delhi – 110 001
36. Member Secretary, Planning Commission, Yojana Bhawan, New Delhi-110 001
37. Member Secretary, WRPC, MIDC Area, Marol, Andheri East, Mumbai- 400 094
38. Member Secretary, NRPC, 18/A, Shaheed Jeet Singh Sansanwal Marg, Katwaria Sarai, New Delhi-110 016
39. Member (Power Systems), CEA, R.K.Puram, New Delhi –66
40. Secretary, CEA, Sewa Bhawan, R.K.Puram, New Delhi -66 – 03 copies
41. Joint Secretary, Ministry of Statistics & Programme Implementation, Sardar Patel Bhawan, New Delhi.
42. Joint Secretary & Financial Advisor, MoP, Shram Shakti Bhawan, New Delhi
43. Joint Secretary (Transmission), MoP, Shram Shakti Bhawan, New Delhi
44. Joint Secretary (Plan Finance Div.-II), Ministry of Finance, North Block, New Delhi
45. Director (Transmission), MoP, Shram Shakti Bhawan, New Delhi
46. Director, Ministry of Finance (Plan Finance Div.), North Block, New Delhi
47. Deputy Secretary, Cabinet Secretariat, Rashtrapati Bhawan, New Delhi
48. Under Secretary, Finance & Budget Section, MoP

A. K. Singhal

(A. K. Singhal)

Additional General Manager (CP)

CP. 10. 1



Distribution: The Board has desired to adhere to the milestones for forest clearance and land acquisition, as per attachment (Annex-II).

ED: CMG/ Engg.-SEF, CE & IT/ Commercial / CS & MM/ Smart Grid/ HR/ Law/ Finance / HVDC & QA&I/ Telecom / LD&C/ OS/ Eggg.-TL&SS / WRTS-I / WRTS-II

CEO, POSOCO

GM: Cost Engg. / ESMD

Company Secretary

For kind information of:

Director (Finance) / Director (Personnel) / Director (Projects)/ CVO

Handwritten notes:
D.G. (Engg. E.L.I.) 3/1/12
G. Sharma
As. scan & send to all concerned. 27/1/12

Handwritten signature:
A.K. Singhal

(A. K. Singhal)
Additional General Manager (CP)

Handwritten note:
CP - 2

केन्द्रीय प्रेषण
Central Despatch
03 JAN 2012
पावरग्रिड, POWERGRID,
नागपुर-26. NAGRUR-26.



ABSTRACT COST ESTIMATE
(BASE COST)

**SYSTEM STRENGTHENING IN NORTH/WEST PART OF WR FOR IPP PROJECTS IN
PROJECTS IN CHATTISGARH**

(Cost updated to 2nd Quarter 2011 price level)

Sl. No.	DESCRIPTION	AMOUNT (Rs. in Crore)
A	Preliminary Survey & Soil Investigation	0.42
B	Land Acquisition for Substation and R & R Compensation	12.50
C	Cost of Compensation for Transmission Lines	
	i) Compensation towards Crop, Tree & PTCC	4.21
	ii) Compensation towards Forest	40.91
D	<u>Civil Works</u>	
	i) Infrastructure for substations	13.50
	ii) Non Residential Buildings	3.75
	iii) Colony for Transmission Lines & Substations	7.01
E	<u>Equipment Cost</u>	
	a) Transmission Lines	877.42
	b) Sub-Stations	506.22
F	Sub Total A TO E	1465.93
G	Special Tools & Plants	2.04
H	Incidental Expenditure During Construction @ 5% of [F - C(ii)]	71.25
I	Contingencies @ 3% of [F - C(ii)]	42.75
J	Centlages & Contingencies @ 8% on Compensatory Afforestation (considering Rs.45,000 per Ha) 361.05 Ha	0.130
K	Customs Duty @ 20.941% (plus 2% handling charges)	51.80
L	Overheads payable to SEBs	1.32
	Sub Total (A to L)	1635.22
M	Interest During Construction(IDC)	111.43
	GRAND TOTAL	1746.65

Note: 1. Loan has been assumed to be available from Domestic sources.
2. Interest rate on Loan has been considered @ 10.5% for Domestic Loan subject to actuals.
3. Debt:Equity ratio has been considered as 70:30.

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Milestones and timelines for forest clearance

I. Aurangabad – Padghe 765kv D/C line : 279 km

S. No.	Major Activities/ Milestones	Schedule/ Target
1.	Award of detailed survey	Awarded on 03.11.2011
2.	Completion of survey in forest area	March, 2012
3.	Submission of forest proposal (with digitized map, land scheduling, etc.) to Nodal officer	March, 2012
4.	Formulation of forest proposal by DFO involving following activities: <ul style="list-style-type: none"> ✓ Joint inspection & tree enumeration ✓ Identification of CA land ✓ Preparation of CA scheme ✓ Cost Benefit Analysis ✓ FRA Compliance 	April – October, 2012
5.	Internal Recommendations of CF, CCF, NO, PCCF and State Govt.	November, 2012
6.	Forwarding of proposal by Secretary to MoEF	Nov/ Dec, 2012
7.	Inspection by concerned RMoEF (Bhopal) and submission of inspection report to MoEF	Jan/ Feb, 2013
8.	Recommendation of Forest Advisory Committee (FAC)	Feb/ March, 2013
9.	Minister approval and Stage-I clearance	March/ April, 2013

II. Padghe – Padghe (MSETCL) 400kV D/C (Quad) line: 25 km

- Minister approval and Stage-I clearance – by December, 2012

III. Vadodara – Asoj 400kV D/C (Quad) line: 15

- Minister approval and Stage-I clearance – by December, 2012

Padghe Substation Land:

Land identified for the 765/400kV Padghe (GIS) Substation in village Karanjoti, Distt. Thane, Maharashtra is not acquired through Land Acquisition Act, 1894, rather it is being acquired through tripartite negotiation involving District Administration, Land Owners and POWERGRID. Possession of land is planned by April/ May, 2012.

EFK. 2



Central Electricity Authority
System Planning & Project Appraisal Division
Sewa Bhawan, R.K. Puram, New Delhi - 110066.

No. 26/10/2009-SP&PA/

Date: 17th Sep., 2009

To

- | | | | |
|----|--|----|--|
| 1 | The Member (PS),
Central Electricity Authority,
Sewa Bhawan, R. K. Puram,
New Delhi-110066 | 8 | Shri M.L Jadhav, Chief Engineer (Trans),
Nuclear Power Corp. of India Ltd.,
9S30, VS Bhavan, Anushakti Nagar,
Mumbai-400094
Fax 022-25993570 |
| 2 | The Member Secretary,
Western Regional Power Committee,
MIDC Area, Marol, Andheri East, Mumbai
Fax 022 28370193 | 9 | The Executive Director (Engg.),
NTPC Ltd., Engg. Office Complex,
A-8, Sector-24, NOIDA 201301
Fax 0124-2410201 |
| 3 | The Director (Projects),
Power Grid Corp. of India Ltd.,
"Saudamini", Plot No. 2, Sector-29,
Gurgaon-122001
Fax 95124-2571760 | 10 | The Chief Engineer,
Electricity Department,
The Government of Goa, Panaji
Fax 0832 2222354 |
| 4 | Chairman and Managing Director,
MPPTCL, Shakti Bhawan,
Rampur, Jabalpur-482008
Fax 0761 2665593 | 11 | Executive Engineer (Projects)
UT of Dadra & Nagar Haveli,
Department of Electricity , Silvassa
Ph. 0260-2642787 |
| 5 | Member (Transmission & Distribution),
Chhatisgarh State Electricity Board,
Dangania, Raipur (CG)-492013
Fax 0771 4066566 | 12 | Executive Engineer
Administration of Daman & Diu (U.T.)
Department of Electricity
Moti Daman-396220
Ph. 0260-2250889, 2254745 |
| 6 | The Managing Director,
GETCO, Sardar Patel Vidyut Bhawan,
Race Course, Baroda-390007
Fax 0265-2338152 | 13 | ED, WRLDC (Special invitee)
Plot no F-3, MIDC Area, Msarol,
Andheri(East) Mumbai-400093
Fax no 022-28235434 |
| 7. | Director (Operation),
MAHATRANSCO, 'Prakashgad', Plot
No.G-9, Bandra-East, Mumbai-400051
Fax 022-26390383/26595258 | | |

Sub: Minutes of the 29th meeting of the Standing Committee on Power System Planning in Western Region held on 10th Sept 2009 at Ahmedabad

Sir,

The minutes of the 29th meeting of the Standing Committee on Power System Planning of Western Region held on 10th Sept 2009 at Ahmedabad are available on CEA website (www.cea.nic.in) at the following link: Home page-Power Systems-Standing Committee on Power System Planning-Western Region).

Yours faithfully,

P.K. Pahwa
(P. K. Pahwa)
Director, SP&PA



- 3.14 The representative from D&D and DNH also agreed to the proposed transmission network.
- 3.15 GM, NTPC stated that as an interim arrangement for connectivity a number of LILOs at 400 kV from lines emanating from Korba were proposed. This would increase the fault level and desired a study to ensure that fault levels at 400 kV Korba bus do not exceed the permissible limit. This was agreed and it was decided that POWERGRID would carry out a study to assess the fault levels.
- 3.16 After discussions the following network was agreed:

A. New IPP projects in Chattishgarh and the associated transmission system

➤ **Transmission System within WR associated with New IPP projects in Chattishgarh**

- (i) Raipur Pooling station- Wardha 765 kV 2x D/C (initially 1st D/c line to be operated at 400 kV)
- (ii) Wardha- Aurangabad(PG) 765 kV 2X D/C (initially 1st D/c line to be operated at 400 kV)
- (iii) Aurangabad- Padge(PG) 765 kV D/C
- (iv) Aurangabad- Dhule (New) (PG) 765 kV S/C (Implementation by private sector through tariff based competitive bidding route)
- (v) Dhule (New) – Vadodara (PG) 765 kV S/C (Implementation by private sector through tariff based competitive bidding route)
- (vi) Establishment of 765/400 kV 2x1500 MVA substations at Dhule (New) (Implementation by private sector through tariff based competitive bidding route)
- (vii) Dhule (New) – Dhule (MSETCL) 400 kV D/C (quad) (Implementation by private sector through tariff based competitive bidding route)
- (viii) Establishment of 765/400 kV 2x1500 MVA substations at Aurangabad and Padghe (GIS)
- (ix) Aurangabad(PG)-Khargar 400 kV D/C (quad)
- (x) Padghe(PG)- Padghe 400 kV D/C (Quad)
- (xi) Vadodra- Asoj (GETCO) 400 kV D/C (Quad)
- (xii) Dhule (New) – Nasik (MSETCL) 400 kV D/C (quad)
- (xiii) Dhule (New) – Malegaon (MSETCL) 400 kV D/C (quad)
- (xiv) ± 600 kV 4000 MW HVDC bipole between Raigarh pooling station (Kotra) – Dhule
- (xv) 4000 MW , 600 kV HVDC bipole terminal each at Raigarh pooling station (Kotra) and Dhule

➤ **Transmission System in NR associated with New IPP projects in Chattishgarh**

- (i) ± 800 kV 6000 MW HVDC bipole between Champa Pooling Station – Near Kurushetra (NR) in Harayana (initially to be operated at 3000 MW)
- (ii) 3000 MW , 800 kV HVDC bipole terminal each at Champa pooling station and near Kurushetra in Haryan with provision to upgrade the terminals to 6000 MW
- (iii) Kurushetra- Jalandhar 400 kV D/C (Quad) (one ckt via Nakodar S/S)
- (iv) LILO of Abdullapur- Sonapat 400 kV D/C (triple) at Kurushetra
- (v) Establishment of 400/220 kV , 2x500 MVA substation at Kurushetra

➤ **Pooling Stations along with their interconnections for New IPP projects in Chattishgarh**

- (i) Raigarh Pooling Station (Kotra)- Raipur Pooling station 765 kV D/C (initially to be operated at 400 kV)
- (ii) Raigarh Pooling Station (Kotra)- Champa Pooling station 765 kV S/C





भारत सरकार
Government of India
केन्द्रीय विद्युत प्राधिकरण
Central Electricity Authority
पश्चिम क्षेत्रीय विद्युत समिति
Western Regional Power Committee

एफ - 3, एमआयडीसी क्षेत्र, अंधेरी (पूर्वी), मुंबई - 400 093
F-3, MIDC Area, Andheri (East), Mumbai - 400 093
दूरभाष Phone: 022- 28221636; 28200194/95/96; फैक्स Fax : 022 - 28370193
Website : www.wrpc.gov.in E-mail : ms-wrpc@nic.in

स्पीड पोस्ट SPEED POST



आई एस ओ : 9001-2000
ISO : 9001-2000

सं.: पक्षेविस/11 वीं पक्षेविस बैठक /सहा.सचिव/2009/
No. WRPC/11th WRPC Mtg./AS/2009/

11277

दिनांक:
Date:

28 अक्टूबर 2009

सेवा में / To,

(संलग्न सूची के अनुसार)
(As per enclosed list)

विषय: 25 सितंबर 2009 को रायपुर में आयोजित पश्चिम क्षेत्रीय विद्युत समिति की 11 वीं बैठक का कार्यवृत्त।
Sub.: Minutes of the 11th meeting of Western Regional Power Committee held on 25th September 2009 at Raipur.

महोदय / Sir,

इस पत्र के साथ दिनांक 25 सितंबर 2009 को रायपुर में आयोजित की गई पश्चिम क्षेत्रीय विद्युत समिति की 11 वीं बैठक का कार्यवृत्त संलग्न है।

Please find enclosed herewith the minutes of 11th meeting of Western Regional Power Committee held at Raipur on 25th September 2009.

भवदीय / Yours faithfully,

संलग्न /Encl.: उपरोक्तानुसार / As Above

(मनजीत सिंह / Manjit Singh)
सदस्य सचिव / Member Secretary

एफ. विस. 11



A. New IPP projects in Chattishgarh and the associated transmission system

➤ Transmission System within WR associated with New IPP projects in Chattishgarh

- (i) Raipur Pooling station- Wardha 765 kV 2x D/C (initially 1st D/c line to be operated at 400 kV)
- (ii) Wardha- Aurangabad (PG) 765 kV 2X D/C (initially 1st D/c to be operated at 400 kV)
- (iii) Aurangabad- Padge(PG) 765 kV D/C
- (iv) Aurangabad- Dhule (New) (PG) 765 kV S/C (*Implementation by private sector through tariff based competitive bidding route*)
- (v) Dhule (New) – Vadodara (PG) 765 kV S/C (*Implementation by private sector through tariff based competitive bidding route*)
- (vi) Establishment of 765/400 kV 2x1500 MVA substations at Dhule (New) (*Implementation by private sector through tariff based competitive bidding route*)
- (vii) Dhule (New) – Dhule (MSETCL) 400 kV D/C (quad) (*Implementation by private sector through tariff based competitive bidding route*)
- (viii) Establishment of 765/400 kV 2x1500 MVA substations at Aurangabad and Padghe (GIS)
- (ix) Aurangabad(PG)-Khargar 400 kV D/C (quad)
- (x) Padghe(PG)- Padghe 400 kV D/C (Quad)
- (xi) Vadodra-Asoj (GETCO) 400 kV D/C (Quad)
- (xii) Dhule (New) – Nasik (MSETCL) 400 kV D/C (quad) (*Implemented by private sector through tariff based competitive bidding route*).
- (xiii) Dhule (New) – Malegaon (MSETCL) 400 kV D/C (quad) (*Implemented by private sector through tariff based competitive bidding route*)
- (xiv) ± 600 kV 4000 MW HVDC bipole between Raigarh pooling station (Kotra) – Dhule
- (xv) 4000 MW , 600 kV HVDC bipole terminal each at Raigarh pooling station (Kotra) and Dhule

➤ Transmission System proposed for NR associated with New IPP projects in Chattishgarh

- (i) ± 800 kV 6000 MW HVDC bipole between Champa Pooling Station – Around Kurushetra (NR) (initially to be operated at 3000 MW)
- (ii) 3000 MW , 800 kV HVDC bipole terminal at Champa pooling station and Around Kurushetra with provision to upgrade the terminals to 6000 MW
- (iii) Kurushetra- Jalandhar 400 kV D/C (Quad) (one ckt via Nakodar S/S)
- (iv) L ILO of Abdullapur- Sonapat 400 kV D/C (triple) at Kurushetra
- (v) Establishment of 400/220 kV , 2x500 MVA substation at Kurushetra

➤ Pooling Stations along with their interconnections for New IPP projects in Chattishgarh

- (i) Raigarh Pooling Station (Kotra)- Raipur Pooling station 765 kV D/C (initially to be operated at 400 kV)
- (ii) Raigarh Pooling Station (Kotra)- Champa Pooling station 765 kV S/C





भारत सरकार
Government of India
केन्द्रीय विद्युत प्राधिकरण
Central Electricity Authority
पश्चिम क्षेत्रीय विद्युत समिति



आई एस ओ : 9001-2008
ISO : 9001-2008

Western Regional Power Committee

एफ -3, एमआयडीसी क्षेत्र, अंधेरी (पूर्व), मुंबई - 400 093
F-3, MIDC Area, Andheri (East), Mumbai - 400 093

दूरभाष Phone: 022- 28221636; 28200194/95/96; फैक्स Fax : 022 - 28370193
Website : www.wrpc.gov.in E-mail : ms-wrpc@nic.in

सं : पक्षेविस /24वीं पक्षेविस बैठक/ सहा सचिव/ 2013-

No. WRPC/24th WRPC Mtg./AS/2013/ 11027 Date : 04.11.2013
सेवा में, /To,

(संलग्न सूची के अनुसार)

(As per enclosed list)

विषय : पश्चिम क्षेत्रीय विद्युत समिति की चौबीसवीं बैठक की कार्यवृत्त

Sub.: Minutes of the 24th meeting of Western Regional Power Committee

महोदय/Sir,

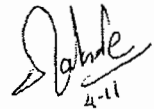
इस पत्र के साथ 9th अक्टोबर 2013 (बुधवार), 10:30 बजे को गोवा में आयोजित पश्चिम क्षेत्रीय विद्युत समिति की चौबीसवीं बैठक एवं इससे पहले 8th अक्टोबर 2013 (मंगलवार), 10:30 बजे को आयोजित तकनीकी समन्वयन समिति की बैठक की कार्यवृत्त संलग्न है।

Please find enclosed herewith the Minutes of the 24th meeting of Western Regional Power Committee held on 9TH October 2013 (Wednesday) at 10:30 hrs preceded by TCC meeting on 8TH October 2013 (Tuesday) at 10:30 hrs at Goa for your needful

भवदीय/Yours faithfully,

संलग्न : उपरोक्तानुसार

Encl: As Above


4-11

(सु द टाकसान्डे/ S D Taksande)

सदस्य सचिव(प्र)/Member Secretary(I/c)

क्र. 2



The TCC discussed the matter and it was decided that the above units would trip at 51.5Hz with a time delay of 30sec. It was clarified during the discussions, that the generating units would sense the frequency locally at their ends and initiate necessary tripping.

WRP Committee noted.

ITEM NO. 16. OVER VOLTAGE PROBLEMS & INSTALLATION OF

REACTORS:

A STATUS OF INSTALLATION OF BUS REACTORS

In order to control incidences of high voltages during low load periods, installation of reactors at following locations as planned by various utilities is in the process as per following schedule:

S. No.	400 kV Sub/stn.	Size (MVAR)	Implementing agency	Expected commissioning date
1	Jabalpur	125 MVAR	PGCIL	June 2014
2	Khandwa	125 MVAR	PGCIL	June 2014
3	Shujalpur	125 MVAR	PGCIL	June 2014
4	Bhatapara	125 MVAR	PGCIL	June 2014
5	Raigarh	125 MVAR	PGCIL	June 2014
6	Aurangabad	125 MVAR	PGCIL	June 2014
7	Ranchodpura	125 MVAR	GETCO	8 th July 2013
8	Varsana	125 MVAR	GETCO	25 th July 2013
9	Rajkot	125 MVAR	GETCO	5 th August 2013
10	Amreli	125 MVAR	GETCO	Commissioned on 12.07.2013
11	Tamnar Raigarh	1x125	JPL	Commissioned on 04.12.2012

Minutes of 24th meeting of TCC/WRPC held on 9.10.2013 at Goa



Further, 17 nos. of additional bus reactors were approved in the 34th Standing Committee Meeting held on 9th May 2012.

S. No.	400 kV Sub/stn.	Size (MVAR)	Implementing agency	Expected commissioning date
1	Nanded	125 MVAR	MSETCL	2014
2	Sholapur	125 MVAR	MSETCL	2014
3	Kolhapur	125 MVAR	MSETCL	2014
4	Akola	125 MVAR	MSETCL	2014
5	Jetpur	63 MVAR	GETCO	Commissioned on 11.07.2013
6	Zerda	125 MVAR	GETCO	October 2013
7	Limbdi (Chornia)	125 MVAR	GETCO	25 th July 2013
8	Nagda	125 MVAR	MPPTCL	September 2014
9	Bhopal	80 MVAR	MPPTCL	March 2014
10	Damoh	125 MVAR	PGCIL	August 2014
11	Bachau	125 MVAR	PGCIL	August 2014
12	Pirana	125 MVAR	PGCIL	August 2014
13	Itarsi	2X125 MVAR	PGCIL	August 2014
14	Seoni	125 MVAR	PGCIL	August 2014
15	Parli	125 MVAR	PGCIL	August 2014
16	Raipur	125 MVAR	PGCIL	August 2014
17	Gwalior	125 MVAR	PGCIL	August 2014

The priority of reactors required by WRLDC(Attached at **ANNEXURE-16**) and discussed in 22nd WRPC Meeting.

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Further it was noted that in the 36th Standing Committee on power system planning of WR, it has been agreed in principle to install line/bus reactor at Dhule end of SSP-Dhule line, Rajgarh end of SSP-Rajgarh line and RGPPL S/S to overcome the high voltage problems at these nodes.

TCC / WRP Committee noted the status.

B. NGR BYPASS SCHEME OF LINE REACTOR TO CONVERT IT AS BUS REACTOR IN STATE OWNED TRANSMISSION LINES.

Shri S.D.Taksande, Member Secretary, WRPC informed that PCM discussed the possibility of converting line reactors as bus reactors to curtail high voltage problems. In this regard PGCIL has commissioned the NGR bypass scheme to convert the line reactor as bus reactor for most of the lines in WR-I and WR-II. Other constituents were also requested to examine the possibility of using the line reactor as bus reactor wherever such line reactors are available. This will help in controlling the high voltage scenario in Western region.

The TCC discussed the matter.

TCC Discussions:

1. WRLDC intimated that around 30 line reactors are available which can be converted to Bus reactors. This would require bypassing NGR. This can be an immediate solution to deal with high voltage problems.
2. PGCIL shared their experience of using NGR bypass to convert line reactor to Bus reactor in view of TRV problems associated with the breaker. They informed that this practice was followed worldwide by utilities to avoid failure of CBs. The NGR bypass scheme requires hard ware modifications.

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3. GETCO intimated that they are using line reactors as Bus reactors without bypassing the NGR. They felt that they would also require to study the problem and revert back.

4. TCC agreed to the idea of using line reactors as bus reactors, so that even if line is not available, reactor will be available to control voltage. TCC recommended that utilities may identify on case to case basis, which line reactors could be converted to bus reactors and necessity of NGR or otherwise and take up the matter further.

WRP Committee noted.

**ITEM NO. 17. DECLARATION OF TRANSMISSION ELEMENTS INTO
COMMERCIAL OPERATION BY PGCIL.**

**The following transmission elements commercial operation was noted by
WRPC.**

17.1: PGCIL vide letter No. WR-II/VDR/COML/715 dtd. 01.05.2013 have intimated that 765kV S/C Sasan-Satna Ckt#2, have been charged successfully on 30.04.2013 and put into regular operation in WR, and the same is under commercial operation w.e.f. 01st May 2013. Accordingly, the monthly transmission charges for above element will be payable from 01st May 2013 by concerned DICs as per CERC (sharing of inter state transmission charges and losses) Regulation 2010.

17.2 : PGCIL vide letter No. CGP/EDO/RPR/CD/7066 dtd. 01.05.2013 have intimated that 400kV d/c Raigarh (Existing S/S)- Raigarh Pooling station (Kotra) transmission line along with associated bays under "Transmission System associated with IPPs Generation in Chattisgarh (Set-A), have successfully commissioned on 29.04.2013 and put under commercial operation in Western Region w.e.f. 01.05.2013. Accordingly, the monthly



CERTIFICATE OF CAPITAL COST

Project Name:

System Strengthening in North/West Part of WR for IPP
Projects in Chhatisgarh (IPP-E)

Name of Element:

765kV 240 MVAR Switchable Line Reactor of 765kV D/C
Aurangabad-Padghe Line Ckt#1 to be charged as Bus
Reactor at Aurangabad S/s

Date of Commercial Operation:

Anticipated 01-06-2014

(RS./LAKHS)

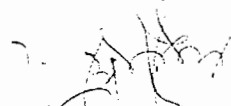
PARTICULARS	CAPITAL COST	IDC	IEDC	TOTAL
Expenditure Upto 31.03.2014	1,530.38	74.89	(29.56)	1,575.71
Expenditure 01.04.2014 to 30.04.2014	9.54	7.59	(0.02)	17.11
Estimated Expenditure 01.05.2014 to 31.05.2014 (DOCO)	825.00	9.65	(1.53)	833.12
Estimated Expenditure 01.06.2014 to 31.03.2015	838.57	-	-	838.57
Estimated Expenditure 01.04.2015 to 31.03.2016	280.39	-	-	280.39
	3,483.88	92.13	(31.11)	3,544.90

Initial Spares Included in Above - Transmission Line
- Sub-Station

236.00

This is to certify that the above summary has been prepared on the basis of the information drawn from the Audited Statement of Accounts of Power Grid Corporation of India Ltd., Western Region, Nagpur up to 31.03.2014. The expenditure from 01.04.2014 to 30.04.2014 have been verified from the books of account of the project. The balance expenditure is based on the estimates.

Place : NAGPUR
Date : 09-05-2014


(M. TAJ MUKARRUM)
AGM (F&A)

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CERTIFICATE OF CAPITAL COST

Project Name: System Strengthening in North/West Part of WR for IPP Projects in Chhatisgarh (IPP-E)

Name of Element: 765kV 240 MVAR Switchable Line Reactor of 765kV D/C Aurangabad-Padghe Line
Ckt#1 to be charged as Bus Reactor at Aurangabad S/s

Date of Commercial Operation: Anticipated 01-06-2014


(RS./ LAKHS)

PARTICULARS	Expenditure Upto 31.03.2014	Expenditure 01.04.2014 to 30.04.2014	Estimated Expenditure 01.05.2014 to 31.05.2014 (DOCO)	Estimated Expenditure 01.06.2014 to 31.03.2015	Estimated Expenditure 01.04.2015 to 31.03.2016	Total Expenditure
LAND	-	-	-	-	-	-
BUILDING, CIVIL WORKS & COLONY	55.64	0.28	125.35	122.93	36.27	340.47
TRANSMISSION LINE	-	-	-	-	-	-
SUB-STATION	1,520.07	16.83	707.77	715.64	244.12	3,204.43
PLCC	-	-	-	-	-	-
	1,575.71	17.11	833.12	838.57	280.39	3,544.90

Particulars	TL	Sub-Station
Total Cost (Plant and Machinery cost excluding IDC, IEDC, Land cost and cost of Civil works for the purpose of Initial Spares)	-	3,144.10
Initial Spares included above	-	236.00

This is to certify that the above summary has been prepared on the basis of the information drawn from the Audited Statement of Accounts of Power Grid Corporation of India Ltd., Western Region-I, Nagpur up to 31.03.2014. The expenditure from 01.04.2014 to 30.04.2014 have been verified from the books of account of the project. The balance expenditure is based on the estimates.

Place : NAGPUR
Date : 09-05-2014


(M. TAJ MURARRUM)
AGM (F&A)

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CERTIFICATE OF CAPITAL COST

Project Name:

System Strengthening in North/West Part of WR for IPP
Projects in Chhatisgarh (IPP-E)

Name of Element:

765kV 240 MVAR Switchable Line Reactor of 765kV D/C
Aurangabad-Padghe Line Ckt#2 to be charged as Bus
Reactor at Aurangabad 5/s

Date of Commercial Operation:

Anticipated 01-06-2014

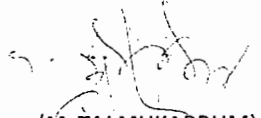
(RS./ LAKHS)

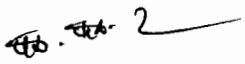
PARTICULARS	CAPITAL COST	IDC	IEDC	TOTAL
Expenditure Upto 31.03.2014	1,517.80	72.70	(28.69)	1,561.81
Expenditure 01.04.2014 to 30.04.2014	8.96	7.53	(0.02)	16.47
Estimated Expenditure 01.05.2014 to 31.05.2014 (DOCO)	825.00	9.58	(1.53)	833.05
Estimated Expenditure 01.06.2014 to 31.03.2015	874.39	-	-	874.39
Estimated Expenditure 01.04.2015 to 31.03.2016	281.85	-	-	281.85
	3,508.00	89.81	(30.24)	3,567.57

Initial Spares Included in Above - Transmission Line -
- Sub-Station

This is to certify that the above summary has been prepared on the basis of the information drawn from the Audited Statement of Accounts of Power Grid Corporation of India Ltd., Western Region, Nagpur up to 31.03.2014. The expenditure from 01.04.2014 to 30.04.2014 have been verified from the books of account of the project. The balance expenditure is based on the estimates.

Place : NAGPUR
Date : 08-05-2014


(M. TAJ MUKARRUM)
AGM (F&A)





CERTIFICATE OF CAPITAL COST

Project Name: System Strengthening in North/West Part of WR for IPP Projects in Chhatisgarh (IPP-E)

Name of Element: 765kV 240 MVAR Switchable Line Reactor of 765kV D/C Aurangabad-Padghe Line
Ckt#2 to be charged as Bus Reactor at Aurangabad S/s

Date of Commercial Operation: Anticipated 01-06-2014

(RS./ LAKHS)

PARTICULARS	Expenditure Upto 31.03.2014	Expenditure 01.04.2014 to 30.04.2014	Estimated Expenditure 01.05.2014 to 31.05.2014 (DOCO)	Estimated Expenditure 01.06.2014 to 31.03.2015	Estimated Expenditure 01.04.2015 to 31.03.2016	Total Expenditure
LAND	-	-	-	-	-	-
BUILDING, CIVIL WORKS & COLONY	67.78	0.33	125.41	105.01	42.06	340.59
TRANSMISSION LINE	-	-	-	-	-	-
SUB-STATION	1,494.03	16.14	707.64	769.38	239.79	3,226.98
PLCC	-	-	-	-	-	-
	1,561.81	16.47	833.05	874.39	281.85	3,567.57

Particulars	TL	Sub-Station
Total Cost (Plant and Machinery cost excluding IDC, IEDC, Land cost and cost of Civil works for the purpose of Initial Spares included above)	-	3,168.22
	-	-

This is to certify that the above summary has been prepared on the basis of the information drawn from the Audited Statement of Accounts of Power Grid Corporation of India Ltd., Western Region-I, Nagpur up to 31.03.2014. The expenditure from 01.04.2014 to 30.04.2014 have been verified from the books of account of the project. The balance expenditure is based on the estimates.

Place : NAGPUR
Date : 08-05-2014

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(M. TAJ MUKARRUM)
AGM (F&A)



Summary Sheet

Name of the Transmission Licensee: Power Grid Corporation of India Limited

Name of the Region: WESTERN REGION

Name of the Project: System Strengthening in North/West part of WR for IPP Projects in Chattisgarh(IPP-E)

Name of the Transmission Element or Communication System: 765 kV 240 MVAR Switchable Line Reactor of 765 kV D/C Aurangabad PAdhge TL Ckt I to be charged as Bus Reactor at Aurangabad SS

Date of Commercial operation : 01-Jun-2014 (Anticipated)

Particulars	Rs. in Lacs				
	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation-(Form No. 10A)	121.27	173.52	180.56	180.56	180.56
Interest on Loan-(Form No. 9E)	153.59	207.62	200.03	182.72	166.01
Return on Equity-(Form No. 8)	143.99	206.76	215.28	215.28	215.28
Int. on Working Capital-(Form NO. 11)	13.53	18.35	18.69	18.46	18.25
Op. and Maintenance-(Form No. 2)	70.35	87.22	90.12	93.11	96.2
Total	502.73*	693.47	704.68	690.13	676.3

*The asset was anticipated to be commissioned on 01.06.2014 and the management certificate and the tariff forms were prepared accordingly. Even after best effort, the asset could not be commissioned on 01.06.2014 and it is now anticipated to be commissioned and put under commercial operation from 01.07.2014. The tariff for 2014-15 (pro-rata from 01.07.2014) works out to Rs 452.46 lakhs

Pr. 48-2
(Petitioner)



Details of Transmission Lines and Substations, Communication System

Name of the Petitioner: Power Grid Corporation of India Limited

Name of the Region: WESTERN REGION

Name of the Project: System Strengthening in North/West part of WR for IPP Projects in Chattisgarh(IPP-E)

Name of the Transmission element or Communication system: 765 KV 240 MVAR Switchable Line Reactor of 765 KV D/C Aurangabad PADhge TL Ckt I to be charged as Bus Reactor at Aurangabad SS

Date of Commercial Operation: 01-Jun-2014

Substations:

Sl. No.	Name of Sub-station	Type of Substation	Voltage level KV	No. of Transformers / Reactors/ SVC etc.	No. of Bays			Date of Commercial operation (A.K.A.)	Covered in the present petition	
					765 KV	400 KV	220 KV & below		Yes/No	If No, petition No.
1	AURANGABAD-3x80 MVAR Switchable Line reactor - 1 Bay		765	1			01-Jun-2014	Y		
	Total			1						

Communication System:

Sl. No.	Name of Communication System	Type of Communication System	Technical Particulars	Number / length	Date of Commercial operation	Covered in the present petition Yes/No	If No, petition No.

(Signature)
(Petitioner)



Normative parameters considered for tariff computations

Name of the Petitioner :: Power Grid Corporation of India Limited

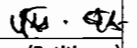
Name of the Region :: WESTERN REGION

Name of the Project :: System Strengthening in North/West part of WR for IPP Projects in Chattisgarh(IPP-E)

Name of the Transmission Element or Communication System :: 765 kV 240 MVAR Switchable Line Reactor of 765 kV D/C Aurangabad PADhge TL Ckt I to be charged as Bus Reactor at Aurangabad SS

Date of Commercial Operation: 01-Jun-2014

Particulars	Unit	Existing 2013-14	2014-15	2015-16	2016-17	2017-18	2018-19
Base Rate of Return of Equity	%	15.50%	15.50%	15.50%	15.50%	15.50%	15.50%
Tax Rate	%	11.33%	20.96%	20.96%	20.96%	20.96%	20.96%
Effective tax rate	%						
Grossed up Rate of ROE	%	17.481%	19.610%	19.610%	19.610%	19.610%	19.610%
Target availability - AC System	%		98%	98%	98%	98%	98%
Target availability - HVDC System	%		96%	96%	96%	96%	96%
Normative O&M per KM	Rs. Lakh						
Double Circuit (Bundle conductor with four sub-conductors)	Rs. Lakh	1.174	1.062	1.097	1.133	1.171	1.21
Double Circuit (Single Conductor)	Rs. Lakh	0.336	0.303	0.313	0.324	0.334	0.346
Double Circuit (Two and Three Conductor)	Rs. Lakh	0.783	0.707	0.731	0.755	0.78	0.806
Multicircuit with four or more conductors	Rs. Lakh		1.863	1.925	1.989	2.055	2.123
Multicircuit with two or three conductors	Rs. Lakh		1.24	1.282	1.324	1.368	1.413
Single Circuit (Bundled conductor with four sub-conductors)	Rs. Lakh	0.671	0.606	0.627	0.647	0.669	0.691
Single Circuit (Single Conductor)	Rs. Lakh	0.224	0.202	0.209	0.216	0.223	0.23
Single Circuit (Six conductor)	Rs. Lakh	0.671	0.707	0.731	0.755	0.78	0.806
Single Circuit (Twin and Three conductor)	Rs. Lakh	0.447	0.404	0.418	0.432	0.446	0.461
Normative O&M per bay							
132KV Sub-station and below	Rs. Lakh	32.73	30.15	31.15	32.18	33.25	34.36
220KV Sub-station	Rs. Lakh	45.82	42.21	43.61	45.06	46.55	48.1
400 KV GIS Substation	Rs. Lakh		51.54	53.25	55.02	56.84	58.73
400KV Sub-station	Rs. Lakh	65.46	60.3	62.3	64.37	66.51	68.71
765KV Sub-station	Rs. Lakh	91.64	84.42	87.22	90.12	93.11	96.2
Balia-Bhiwadi HVDC Bipole Scheme	Rs. Lakh	1326.25	1537	1666	1805	1955	2119
HVDC Back-to Back Stations	Rs. Lakh	553	578	627	679	736	797
Rihand-Dadri HVDC Bipole Scheme	Rs. Lakh	1811	1511	1637	1774	1922	2082
Talcher-Kolar HVDC Bipole Scheme	Rs. Lakh	2122	1173	1271	1378	1493	1617
Spares for WC as % of O&M	%	15.00	15.00	15.00	15.00	15.00	15.00
Receivables in Months for WC	Months	2	2	2	2	2	2
Bank Rate as on 1st April, 2014	%	13.20	13.50	13.50	13.50	13.50	13.50


 (Petitioner)



Statement of Capital Cost

Name of the Transmission Licensee: Power Grid Corporation of India Limited

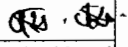
Name of the Region: WESTERN REGION

Name of the Project: System Strengthening in North/West part of WR for IPP Projects in Chattisgarh(IPP-E)

Name of the Transmission Element: 765 kV 240 MVAR Switchable Line Reactor of 765 kV D/C Aurangabad PADhge TL Ckt I to be charged as Bus Reactor at Aurangabad SS

Date of Commercial Operation: 01-Jun-2014

Particulars	Rs. in Lacs					
	Existing 2013-14	2014-15	2015-16	2016-17	2017-18	2018-19
A. a) Opening Gross Block Amount as per books		2425.94	3264.51	3544.90	3544.90	3544.90
b) Amount of capital liabilities in A(a) above						
c) Amount of IDC,FC,FERV and Hedging cost included in A(a) above		92.13	92.13	92.13	92.13	92.13
d) Amount of IEDC (excluding IDC,FC,FERV and Hedging cost) included in A(a) above		-31.11	-31.11	-31.11	-31.11	-31.11
B. a) Addition in Gross Block Amount during the period		838.57	280.39			
b) Amount of capital liabilities in B(a) above						
c) Amount of IDC,FC,FERV and Hedging cost included in B(a) above						
d) Amount of IEDC (excluding IDC,FC,FERV and Hedging cost) included in B(a) above						
C. a) Closing Gross Block Amount as per Books		3264.51	3544.90	3544.90	3544.90	3544.90
b) Amount of capital liabilities in C(a) above						
c) Amount of IDC,FC,FERV and Hedging cost included in C(a) above		92.13	92.13	92.13	92.13	92.13
d) Amount of IEDC (excluding IDC,FC,FERV and Hedging cost) included in C(a) above		-31.11	-31.11	-31.11	-31.11	-31.11


 (Petitioner)



Abstract of Capital Cost Estimates and Schedule of Commissioning for the New projects

Name of the Transmission Licensee : POWER GRID CORPORATION OF INDIA
Name of Region: WESTERN REGION
Name of the Project : System Strengthening in North/West Part of WR for IPP Projects in Chhatisgarh (IPP-E)
Name of Element: 765kV 240 MVAR Switchable Line Reactor of 765kV D/C Aurangabad-Padghe Line Ckt#1 to be charged as Bus Reactor at Aurangabad S/s

Capital Cost Estimates

Board of Director/ Agency approving the Capital cost estimates:	Board of Director 265th meeting	
Date of approval of the Capital cost estimates:	27.12.2011	
	Present Day Cost	Completed Cost
Price level of approved estimates	As of End of 2nd Quarter 2011	As on Scheduled COD of the transmission system/transmission element/ Communication
Foreign Exchange rate considered for the Capital cost estimates		
Capital Cost excluding IDC, IEDC & FC		
Foreign Component, if any (In Million US \$ or the relevant Currency)		
Domestic Component (Rs. Lakhs)		
Capital cost excluding IDC, FC, FERV & Hedging Cost (Rs. Lakhs)	4004.90	4473.16
IDC, IEDC, FC, FERV & Hedging Cost		
Foreign Component, if any (In Million US \$ or the relevant Currency)		
Domestic Component (Rs Lakh)		
Total IDC, FC, FERV & Hedging Cost (Rs Lakh)	289.97	323.87
Rate of taxes & duties considered		
Capital cost Including IDC, IEDC, FC, FERV & Hedging Cost		
Foreign Component, if any (In Million US \$ or the relevant Currency)		
Domestic Component (Rs. Lakhs.)		
Capital cost Including IDC, IEDC& FC (Rs Lakh)	4294.87	4797.03
Schedule of Commissioning		
(Scheduled DOCO elementwise)		
COD of transmission system 1 /transmission element 1/Communication System 1	26-Aug-14	1-Jun-14 (An.)
COD of transmission system 1/ transmission element 2/ Communication System 2		
COD of transmission system 1/ transmission element 3/ Communication System 3		
COD of last transmission system /transmission element / Communication System		

Note:

1. Copy of approval letter by the Board duly certified by the Company secretary should be enclosed
2. Details of Capital Cost are to be furnished as per FORM-5 or 5A as applicable
3. Details of IDC & Financing Charges are to be furnished as per FORM-12(B).

43.54.2
(Petitioner)



Element wise Break-up of Project Cost for Transmission System

PART-III
Form 5

Name of the Transmission Licensee :
 Name of Region: Western Region-I
 Name of the Project: System Strengthening in North/West Part of WR for IPP Projects in Chhatishgarh (IPP-E)
 Name of the Element: 765KV 240 MVAR Switchable Line Reactor of 765KV DIC Aurangabad-Padghe Line Ckt#1 to be charged as Bus Reactor at Aurangabad S/s
 Anticipated DOCO: 01.06.2014

Rs in Lakhs

Sl.No.	Particulars	As per Original Estimate			As on COD			Liabilities / Provision	Variation	Reasons for Variation	Admitted Cost
		Quantity	Rate	Estimated Amount	Quantity	Rate	Estimated Amount				
1				3			4	5	7	8	
A	TRANSMISSION LINE			Agb LR1							
1.0	Preliminary works										
1.1	Design & Engineering										
1.2	Preliminary Investigation, Right of way, forest clearance, PTCC, general civil works, compensation etc.							0.00			
1.3	Total Preliminary works			0.00			0.00	0.00			
2.0	Transmission Lines material										
2.1	Towers Steel							0.00			
2.2	Conductor							0.00			
2.3	Earth Wire							0.00			
2.4	Insulators							0.00			
2.5	Hardware Fittings							0.00			
2.6	Conductor & Earthwire accessories							0.00			
2.7	Spares							0.00			
2.8	Erection, Stringing & Civil works including foundation							0.00			
2.9	Total Transmission Lines material			0.00			0.00	0.00			
3.0	Taxes and Duties										
3.1	Custom Duty							0.00			
3.2	Other Taxes & Duties							0.00			
	Total Taxes & Duties			0.00			0.00	0.00			
	Total - Transmission lines			0.00			0.00	0.00			

B. SUBSTATIONS		As per Original Estimate			As on COD			Liabilities / Provision	Variation	Reasons for Variation	Admitted Cost
Sl.No.	Particulars	Quantity	Rate	Estimated Amount	Quantity	Rate	Estimated Amount				
4.0	Preliminary works & land			Agb LR1							
4.1	Design & Engineering			0.00			0.00	0.00			
4.2	Land			0.00			0.00	0.00			
4.3	Site preparation			0.00			0.00	0.00			
	Total Preliminary works & land			0.00			0.00	0.00			
5.0	Civil Works										
5.1	Control Room & Office Building including HVAC						0.00	0.00			



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1 Rs in lakh

Sl.No.	Particulars	As per Original Estimate			As on COD			Liabilities / Provision	Variation	Reasons for Variation	Admitted Cost
		Quantity	Rate	Estimated Amount	Quantity	Rate	Estimated Amount				
1	2			3			4	5	6=3-4-5	7	8
5.2	Township & Colony						0.00	0.00			
5.3	Roads and Drainage	1 (LS)	5.00	5.00	1 (LS)	3.60	1.91	1.68	1.40	As per actual execution and site condition.	
5.4	Foundation for structures	1 (LS)	442.89	442.89	1 (LS)	336.19	178.67	157.52	106.70	As per actual execution and site condition.	
5.5	Misc. civil works			0.00			0.00	0.00			
	Total Civil Works			447.89			180.58	159.20	108.11		
6.0	Substation Equipments										
6.1	Switchgear (CT,PT, Circuit Breaker, Isolator etc)	18	31.61	569.00	18.00	41.52	559.39	187.97	-176.36	Increase in award cost	
6.2	Transformers			0.00			0.00	0.00			
6.3	Compensating Equipment(Reactor, SVCs etc	3	468.76	1406.29	3.00	688.99	1378.12	688.84	-660.67	Increase in award cost	
6.4	Control , Relay & Protection Panel	3	11.74	35.21	3.00	12.69	28.50	9.58	-2.88	Minor variation	
6.5	PLCC			0.00			0.00	0.00			
6.6	HVDC package			0.00			0.00	0.00			
6.7	Bus Bars/ conductors/insulators	1 (LS)	353.19	353.19	1 (LS)	47.97	35.90	12.06	305.22	Decrease in award cost	
6.8	outdoor lighting	1 (LS)	199.00	199.00	1 (LS)	3.72	2.78	0.94	195.28	Decrease in award cost	
6.9	Emergency DG set	0	0.00	0.00	0	0.00	0.00	0.00			
6.10	Grounding System	0	0.00	0.00	0	0.00	0.00	0.00			
6.11	Structure for Switch yard	1 (LS)	556.21	556.21	1 (LS)	167.79	125.59	42.20	388.42	Decrease in award cost	
6.12	Auxiliary System	1 (LS)	141.46	141.46	1 (LS)	72.22	54.05	18.16	69.24	Increase in award cost	
	Total Substation Equipments			3260.35			2184.33	959.76	116.26		
7.0	Spare (incl.in eqpt. cost)						0.00	0.00			
8.0	Taxes and Duties						0.00	0.00			
8.1	Custom Duty						0.00	0.00			
8.2	Other Taxes & Duties						0.00	0.00			
8.3	Total Taxes & Duties			0.00			0.00	0.00			
	Total (Sub-station)			3708.24			2364.91	1118.96	224.37		
9.0	Communication System										
9.1	Preliminary Works										
9.2	Communication System equipment's										
9.3	Taxes and Duties										
	Total (Communication System)										
10.0	Construction and pre-commissioning expenses										
10.1	Site supervision & site admn.etc.			0.00			0.00	0.00	0.00		
10.2	Tools and Plants			0.00			0.00	0.00	0.00		
10.3	construction insurance			0.00			0.00	0.00	0.00		
	Total Construction and pre commissioning expenses			0.00			0.00	0.00	0.00		
11.0	Overheads										
11.1	Establishment			296.66			-31.11	0.00	327.77		
11.2	Audit & Accounts			0.00			0.00	0.00	0.00		
11.3	Contingency			0.00			0.00	0.00	0.00		
	Total Overheads			296.66			-31.11	0.00	327.77		

94.8452



Sl.No.	Particulars	As per Original Estimate			As on COD			Liabilities / Provision	Variation	Reasons for Variation	Admitted Cost
		Quantity	Rate	Estimated Amount	Quantity	Rate	Estimated Amount				
1	2			3		4	5	6=3-4-5	7	8	
12.0	Cost of Plant & Machinery			4004.90		2333.80	1118.96	552.14			
13.0	Capital Cost including Plant & Machinery										
13.1	Interest During Construction (IDC)			289.97		92.13	0.00	197.84			
13.2	Financing Charges (FC)			0.00		0.00	0.00	0.00			
13.3	Foreign Exchange Rate Variation (FERV)			0.00		0.00	0.00	0.00			
13.4	Hedging Cost			0.00		0.00	0.00	0.00			
14.0	Capital cost including IDC, FC, FERV & Hedging Cost			4294.87		2425.94	1118.96	749.97			

(Petitioner)



Break-up of Construction / Supply / Service packages

Name of the Petitioner: Power Grid Corporation of India Ltd.

Name of the Region : Western Region-I

Name of the Project : System Strengthening in North/West Part of WR for IPP Projects in Chhatisgarh (IPP-E)

Name of the Element: 765KV 240 MVAR Switchable Line Reactor of 765KV D/C Aurangabad-Padghe Line Ckt#1 to be charged as Bus Reactor at Aurangabad S/s

Communication system

Anticipated DCCO: 01.06.2014

Sl	Name/No. of Construction/supply/service package		Scope of works1 (in line with head of cost break-ups as applicable)	Whether awarded through ICB/DCB/ Departmental	No of bids received	Date of award	Date of Start of work	Date of Completion of Work	Awarded value INR		Firm or with escalation in prices	Expenditure excluding Taxes & Duties as on COD	Taxes & duties and IEEDC	IDC, FC, FERV & Recipng cost	Sub-total
	2	9							10	11					
1	Extension of 765 KV Aurangabad Substation - SUPPLY	ALSTOM T&D	765KV S/s-supply	DCB	4	29.02.12	29.02.12	31.05.14	EUR0=328163 USD=59196	35,895,205	with escalation	584.41	-11.55	38.67	621.53
2	Extension of 765 KV Aurangabad Substation - SUPPLY	ALSTOM T&D	765KV S/s-erection	DCB	4	29.02.12	29.02.12	31.05.14		16,974,656	with escalation	90.03	-0.09	0.82	90.76
3	765 KV Reactor Package (P250-R-01) : Supply, Erection, Testing & Commissioning of 3x 80 MVAR reactor at Aurangabad Substation - Supply (Diverted from Bus S/s)	Xian XD Transformer Co. Ltd.	765KV 240 MVAR reactor supply	ICB	8	31.01.12	31.01.12	31.05.14	USD=2440188		with escalation	1010.85	350.73	51.90	1413.47
4	765 KV Reactor Package (P250-R-01) : Supply, Erection, Testing & Commissioning of 3x 80 MVAR reactor at Aurangabad Substation - Erection (Diverted from Bus S/s)	Xian XD Transformer Co. Ltd.	765KV 240 MVAR reactor erection	ICB	8	31.01.12	31.01.12	31.05.14		27,445,774	with escalation	100.00	-0.19	0.25	100.06
5	Supply of Circuit Breaker	ABB	Supply of CB	DCB	4	27.09.13	27.09.13	31.05.14		24,866,287	with escalation	170.15	29.47	0.49	200.12
												1955.43	368.37	92.13	2425.94
															(Petitioner)

66. 2



DETAILS OF ELEMENTWISE COST

Name of the Petitioner : POWER GRID CORPORATION OF INDIA LTD.

Name of Region: WESTERN REGION-I

Name of the Project : System Strengthening in North/West Part of WR for IPP Projects in Chhatisgarh (IPP-E)

Transmission lines

S.NO.	Name of line	Apportioned approved	Revised cost estimates, if	Completed Cost (Rs.	Covered in the present	
		Cost (Rs. Lacs) (Rs. Lakh)	applicable (Rs. Lakh)	Lacs) (Rs. Lakh)	yes/no	if no, petition no.
1	400kV D/C Vadodara-Asoj (Quad)	3089.98		3961.95	no	
2	400kV D/C Padghe- Padghe (Quad)	7582.94			no	
3	765kV D/C Aqbad-Padghe	95577.54			no	
	Total Transmission line cost	106250.46	0.00	3961.95		

Substations

S.NO.	Name of Substation	Apportioned approved	Revised cost estimates, if	Completed Cost	Covered in the present	
		Cost (Rs. Lakh)	applicable (Rs. Lakh)	(Rs. Lakh)	yes/no	if no, petition no.
1	765kV Aurangabad (PG) Substation (Extn.) for line bays	2311.86			no	
2	Aqbd-Padghe LR1 at Aqbd	4294.87		3544.90	yes	
3	Aqbd-Padghe LR2 at Aqbd	4175.32		3567.57	yes	
4	765/400kV GIS at Padghe	55144.17			no	
5	400kV Padghe Substation(MSETCL) (Extn.)	853.05			no	
6	400kV Vadodara (PG) Substation (Extn.)	782.49			no	
7	400kV Asoj Substation (GETCO) (Extn.)	853.05		1401.15	no	
	Total Substation cost	68414.81	0.00	8513.62		

Communication System

S.NO.	Name of Substation	Apportioned approved	Revised cost estimates, if	Completed Cost	Covered in the present	
		Cost (Rs. Lakh)	applicable (Rs. Lakh)	(Rs. Lakh)	yes/no	if no, petition no.
1						
2						
3						
	Total communication system cost	0.00	0.00	0.00		

Total Project cost	174665.26	0.00	12475.57
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(Petitioner) *Handwritten signature*

Financial Package upto COD (Block Year- 2014-2019)

Name of the Transmission Licensee: Power Grid Corporation of India Limited

Name of the Region: WESTERN REGION

Name of the Project: System Strengthening In North/West part of WR for IPP Projects in Chattisgarh(IPP-E)

Name of the Transmission Element or Communication Element: 765 kV 240 MVAr Switchable Line Reactor of 765 kV D/C Aurangabad PADhge TL Ckt I to be charged as Bus Reactor at Aurangabad SS

Date of commercial Operation: 01-Jun-2014

Rs. In Lakhs

Particulars	Financial Package as Approved		Financial Package as on COD		As Admitted by COD / 31.03.2014	
	Currency	Amount	Currency	Amount	Currency	Amount
Loans						
Loans-Domestic	INR	3006.41	INR	1698.16		
Loans-Foreign			INR	0		
Total Loans	INR	3006.41	INR	1698.16	INR	
Equity						
Foreign						
Domestic	INR	1288.46	INR	727.78		
Notional						
Total Equity	INR	1288.46	INR	727.78	INR	
Debt Equity Ratio				70:30		
Total Cost	INR	4294.87	INR	2425.94	INR	
	Debt	Equity	Total			
Add Cap for 2014-2015			838.57			
Add Cap for 2015-2016			280.39			
Add Cap for 2014-2015	Actual	Normative				
Debt		587				
Equity		251.57				
Total		838.57				
Add Cap for 2015-2016	Actual	Normative				
Debt		196.27				
Equity		84.12				
Total		280.39				
Total Capital cost with Addcap		3544.9				


 (Petitioner)



Statement of Additional Capitalisation after COD

Name of the Petitioner: Power Grid Corporation of India Limited

Name of the Region: WESTERN REGION

Name of the Project: System Strengthening in North/West part of WR for IPP Projects in Chattisgarh(IPP-E)

Name of the Transmission Element or Communication system: 765 KV 240 MVAR Switchable Line Reactor of 765 KV D/C Aurangabad PADhge TL Ckt I to be charged as Bus Reactor at Aurangabad SS

Date of Commercial Operation: 01-Jun-2014

(Rs in lakh)

Sl. No.	Year	Work / Equipment proposed to be added after COD upto cut off date/beyond cut off date	Amount capitalised and proposed to be capitalised	Justification	Regulation under which covered	Admitted Cost
1	2014-2015	BUILDING	122.93	Balance&Retention Payment	14(1)	
2	2014-2015	SUB STATION	715.64	Balance&Retention Payment	14(1)	
	2014-2015	Total	838.57			
3	2015-2016	BUILDING	36.27	Balance&Retention Payment	14(1)	
4	2015-2016	SUB STATION	244.12	Balance&Retention Payment	14(1)	
	2015-2016	Total	280.39			

67-84.2

(Petitioner)



Financing of Additional Capitalisation

Name of the Petitioner: Power Grid Corporation of India Limited

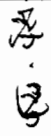
Name of the Region: WESTERN REGION

Name of the Project: System Strengthening in North/West part of WR for IPP Projects in Chattisgarh(IPP-E)

Name of the Transmission Element or Communication System: 765 kV 240 MVAR Switchable Line Reactor of 765 kV D/C Aurangabad Padhge TL Ckt I to be charged as Bus Reactor at Aurangabad SS

Date of Commercial Operation: 01-Jun-2014

Financial Year	Actual/Projected				Admitted		Amount in Lakhs
	2014-15	2015-16	2016-17	2017-18	2018-19		
Amount Capitalised in Work/Equipment							
Financing Details							
Loan	587.00	196.27	0.00	0.00	0.00		
Total Loan	587.00	196.27	0.00	0.00	0.00		
Equity	251.57	84.12	0.00	0.00	0.00		
Total	838.57	280.39	0.00	0.00	0.00		


 (Petitioner)



Calculation of Return on Equity

Particulars	Existing 2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	Rs. in Laos
Opening Equity	0.00	727.78	979.35	1063.47	1063.47	1063.47	1063.47
Notional Equity on Add Cap	0.00	251.57	84.12	0.00	0.00	0.00	0.00
Total Equity	0.00	979.35	1063.47	1063.47	1063.47	1063.47	1063.47
Average Equity	0.00	853.57	1021.41	1063.47	1063.47	1063.47	1063.47
Rate of Return on Equity (%)	0	20.243	20.243	20.243	20.243	20.243	20.243
Return on Equity	0.00	172.79	206.76	215.28	215.28	215.28	215.28
Pro rata Return on Equity	0.00	143.99	206.76	215.28	215.28	215.28	215.28
Calculation of Grossed up Rate of ROE							
Rate of ROE	0.00	15.50	15.50	15.50	15.50	15.50	15.50
Time Line Incentive	0.00	0.50	0.50	0.50	0.50	0.50	0.50
Communication Dis-incentive	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Effective Rate of ROE	0.00	16.00	16.00	16.00	16.00	16.00	16.00
IMAT Rate	0.00	20.96	20.96	20.96	20.96	20.96	20.96
Grossed up Rate of ROE	0	20.243	20.243	20.243	20.243	20.243	20.243

(Petitioner)



PART-III
FORM- 8B

Details of additional RoE

Name of the Petitioner: Power Grid Corporation of India Ltd
 Name of the Region: Western Region-I
 Name of the Project: System Strengthening in North/West Part of WR for IPP Projects in Chhatisgarh (IPP-E)
 Name of the Transmission Element or Communication system

Project/ Element	Completion Time as per Investment approval			Actual Completion time			Qualifying time schedule(as per regulation) (in months)
	Start Date	Scheduled COD (Date)	Months	Start Date	Actual COD (Date)	Months	
765kV 240 MVAR Switchable Line Reactor of 765kV D/C Aurangabad-Padghe Line Ckt#1 to be charged as Bus Reactor at Aurangabad S/s	27.12.2011	26.08.2014	32 Months	29.02.2012	31.05.2014	27 Months	36 months
765kV 240 MVAR Switchable Line Reactor of 765kV D/C Aurangabad-Padghe Line Ckt#2 to be charged as Bus Reactor at Aurangabad S/s				29.02.2012	31.05.2014	27 Months	36 months

(Signature)
(Petitioner)



Calculation of Weighted Average Rate of Interest on Actual Loans

Name of the Transmission Licensee: Power Grid Corporation of India Limited

Name of the Region: WESTERN REGION

Name of the Project: System Strengthening in North/West part of WR for IPP Projects in Chattisgarh(IPP-E)

Name of the Transmission Element or Communication System: 765 kV 240 MVAR Switchable Line Reactor of 765 kV D/C Aurangabad PADhge TL Ckt I to be charged as Bus Reactor at Aurangabad SS

Date of Commercial Operation: 01-Jun-2014

					Rs. in Lacs
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
BOND XXXIX-Loan1-					
Gross Opening Loan	133	133	133	133	133
Cumulative Repayments of Loans upto Previous Year	0	0	0	0	0
Net Loans Opening	133	133	133	133	133
Add: Drawl(s) during the year	0	0	0	0	0
Less: Repayment(s) of Loan during the year	0	0	0	0	0
Net Closing Loan	133	133	133	133	133
Average Net Loan	133	133	133	133	133
Rate of Interest on Loan	9.4	9.4	9.4	9.4	9.4
Interest on Loan	12.5	12.5	12.5	12.5	12.5
SBI (21.03.2012)-Loan6-					
Gross Opening Loan	153	153	153	153	153
Cumulative Repayments of Loans upto Previous Year	0	0	0	13.91	27.82
Net Loans Opening	153	153	153	139.09	125.18
Add: Drawl(s) during the year	0	0	0	0	0
Less: Repayment(s) of Loan during the year	0	0	13.91	13.91	13.91
Net Closing Loan	153	153	139.09	125.18	111.27
Average Net Loan	153	153	146.05	132.14	118.23
Rate of Interest on Loan	10.25	10.25	10.25	10.25	10.25
Interest on Loan	15.68	15.68	14.97	13.54	12.12
BOND - XLI-Loan2-					
Gross Opening Loan	24	24	24	24	24
Cumulative Repayments of Loans upto Previous Year	0	0	0	2	4
Net Loans Opening	24	24	24	22	20
Add: Drawl(s) during the year	0	0	0	0	0
Less: Repayment(s) of Loan during the year	0	0	2	2	2
Net Closing Loan	24	24	22	20	18
Average Net Loan	24	24	23	21	19
Rate of Interest on Loan	8.85	8.85	8.85	8.85	8.85
Interest on Loan	2.12	2.12	2.04	1.86	1.68
BOND - XLII-Loan3-					
Gross Opening Loan	62	62	62	62	62
Cumulative Repayments of Loans upto Previous Year	0	0	0	0	0
Net Loans Opening	62	62	62	62	62



Calculation of Weighted Average Rate of Interest on Actual Loans

Name of the Transmission Licensee: Power Grid Corporation of India Limited

Name of the Region: WESTERN REGION

Name of the Project: System Strengthening in North/West part of WR for IPP Projects in Chattisgarh(IPP-E)

Name of the Transmission Element or Communication System: 765 kV 240 MVAr Switchable Line Reactor of 765 kV D/C Aurangabad PADhge TL Ckt I to be charged as Bus Reactor at Aurangabad SS

Date of Commercial Operation: 01-Jun-2014

					Rs. in Lacs
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Add: Drawl(s) during the year	0	0	0	0	0
Less: Repayment(s) of Loan during the year	0	0	0	0	0
Net Closing Loan	62	62	62	62	62
Average Net Loan	62	62	62	62	62
Rate of Interest on Loan	8.8	8.8	8.8	8.8	8.8
Interest on Loan	5.46	5.46	5.46	5.46	5.46
BOND - XLIII-Loan4-					
Gross Opening Loan	34	34	34	34	34
Cumulative Repayments of Loans upto Previous Year	0	0	0	0	2.83
Net Loans Opening	34	34	34	34	31.17
Add: Drawl(s) during the year	0	0	0	0	0
Less: Repayment(s) of Loan during the year	0	0	0	2.83	2.83
Net Closing Loan	34	34	34	31.17	28.34
Average Net Loan	34	34	34	32.59	29.76
Rate of Interest on Loan	7.93	7.93	7.93	7.93	7.93
Interest on Loan	2.7	2.7	2.7	2.58	2.36
BOND - XLIV-Loan5-					
Gross Opening Loan	489	489	489	489	489
Cumulative Repayments of Loans upto Previous Year	0	0	0	0	0
Net Loans Opening	489	489	489	489	489
Add: Drawl(s) during the year	0	0	0	0	0
Less: Repayment(s) of Loan during the year	0	0	0	0	163
Net Closing Loan	489	489	489	489	326
Average Net Loan	489	489	489	489	407.5
Rate of Interest on Loan	8.7	8.7	8.7	8.7	8.7
Interest on Loan	42.54	42.54	42.54	42.54	35.45
BOND - XLV-Loan7-					
Gross Opening Loan	208	208	208	208	208
Cumulative Repayments of Loans upto Previous Year	0	0	0	0	17.33
Net Loans Opening	208	208	208	208	190.67
Add: Drawl(s) during the year	0	0	0	0	0
Less: Repayment(s) of Loan during the year	0	0	0	17.33	17.33
Net Closing Loan	208	208	208	190.67	173.34
Average Net Loan	208	208	208	199.34	182.01



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Calculation of Weighted Average Rate of Interest on Actual Loans

Name of the Transmission Licensee: Power Grid Corporation of India Limited

Name of the Region: WESTERN REGION

Name of the Project: System Strengthening in North/West part of WR for IPP Projects in Chattisgarh(IPP-E)

Name of the Transmission Element or Communication System: 765 kV 240 MVA Switchable Line Reactor of 765 kV D/C Aurangabad PAdhge TL Ckt I to be charged as Bus Reactor at Aurangabad SS

Date of Commercial Operation: 01-Jun-2014

					Rs. in Lacs
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Rate of Interest on Loan	9.65	9.65	9.65	9.65	9.65
Interest on Loan	20.07	20.07	20.07	19.24	17.56
PROPOSED LOAN 2014-15 (10.25%)-Loan8-					
Gross Opening Loan	595.16	595.16	595.16	595.16	595.16
Cumulative Repayments of Loans upto Previous Year	0	0	0	0	0
Net Loans Opening	595.16	595.16	595.16	595.16	595.16
Add: Drawl(s) during the year	0	0	0	0	0
Less: Repayment(s) of Loan during the year	0	0	0	0	49.6
Net Closing Loan	595.16	595.16	595.16	595.16	545.56
Average Net Loan	595.16	595.16	595.16	595.16	570.36
Rate of Interest on Loan	10.25	10.25	10.25	10.25	10.25
Interest on Loan	61	61	61	61	58.46
Summary					
Gross Opening Loan	1698.16	1698.16	1698.16	1698.16	1698.16
Cumulative Repayments of Loans upto Previous Year	0	0	0	15.91	51.98
Net Loans Opening	1698.16	1698.16	1698.16	1682.25	1646.18
Add: Drawl(s) during the year	0	0	0	0	0
Less: Repayment(s) of Loan during the year	0	0	15.91	36.07	248.67
Net Closing Loan	1698.16	1698.16	1682.25	1646.18	1397.51
Average Net Loan	1698.16	1698.16	1690.21	1664.23	1521.86
Rate of Interest on Loan	9.54	9.54	9.54	9.54	9.57
Interest on Loan	162.08	162.08	161.28	158.73	145.6

(Petitioner)



Calculation of Interest on Normative Loan

Particulars	Existing 2013-14		2014-15	2015-16	2016-17	2017-18	2018-19	Rs. in Lacs
Gross Normative Loan Opening	0.00	0.00	1698.16	2285.16	2481.43	2481.43	2481.43	2481.43
Cumulative Repayments of Normative Loans upto Previous Year	0.00	0.00	0.00	121.27	294.79	475.35	655.91	655.91
Net Normative Loans Opening	0.00	0.00	1698.16	2163.89	2186.64	2006.08	1825.52	1825.52
Increase/Decrease due to ACE during the year	0.00	0.00	587.00	196.27	0.00	0.00	0.00	0.00
Less: Repayment(s) of Normative Loan during the year	0.00	0.00	121.27	173.52	180.56	180.56	180.56	180.56
Net Closing Normative Loan	0.00	0.00	2163.89	2186.64	2006.08	1825.52	1644.96	1644.96
Average Net Normative Loan	0.00	0.00	1931.03	2175.27	2096.36	1915.80	1735.24	1735.24
Rate of Interest on Loan	0.00	0.00	9.54	9.54	9.54	9.54	9.57	9.57
Interest on Normative Loan	0.00	0.00	184.31	207.62	200.03	182.72	166.01	166.01
Pro rata Interest on Normative Loan	0.00	0.00	153.59	207.62	200.03	182.72	166.01	166.01

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(Petitioner)



Calculation of Depreciation Rate

Name of the Transmission Licensee: Power Grid Corporation of India Limited

Name of the Region: WESTERN REGION

Name of the Project: System Strengthening in North/West part of WR for IPP Projects in Chattisgarh(IPP-E)

Name of the Transmission Element or Communication System: 765 kV 240 MVAr Switchable Line Reactor of 765 kV D/C Aurangabad PAdhge TL Ckt I to be charged as Bus Reactor at Aurangabad SS

Date of Commercial Operation: 01-Jun-2014

Sl. No.	Particulars	Gross block at the beginning of the year	Add Cap during the year	Gross block at the end of the year	Average Gross Block	Dep. Rate	Rs. in Lacs Amount
	2014-2015						
1	FREEHOLD LAND	0	0	0	0	0	0
2	BUILDING	181.27	122.93	304.2	242.74	3.34	8.11
3	TR LINE	0	0	0	0	5.28	0
4	SUB STATION	2244.67	715.64	2960.31	2602.49	5.28	137.41
5	PLCC	0	0	0	0	6.33	0
6	LEASEHOLD LAND	0	0	0	0	3.34	0
	Total	2425.94	838.57	3264.51	2845.23		145.52
	Weighted Average Rate of Depreciation						5.11
	Lapsed life						1
	2015-2016						
1	FREEHOLD LAND	0	0	0	0	0	0
2	BUILDING	304.2	36.27	340.47	322.34	3.34	10.77
3	TR LINE	0	0	0	0	5.28	0
4	SUB STATION	2960.31	244.12	3204.43	3082.37	5.28	162.75
5	PLCC	0	0	0	0	6.33	0
6	LEASEHOLD LAND	0	0	0	0	3.34	0
	Total	3264.51	280.39	3544.9	3404.71		173.52
	Weighted Average Rate of Depreciation						5.1
	Lapsed life						2
	2016-2017						
1	FREEHOLD LAND	0	0	0	0	0	0
2	BUILDING	340.47	0	340.47	340.47	3.34	11.37
3	TR LINE	0	0	0	0	5.28	0
4	SUB STATION	3204.43	0	3204.43	3204.43	5.28	169.19
5	PLCC	0	0	0	0	6.33	0
6	LEASEHOLD LAND	0	0	0	0	3.34	0
	Total	3544.9	0	3544.9	3544.9		180.56
	Weighted Average Rate of Depreciation						5.09
	Lapsed life						3



Calculation of Depreciation Rate

Name of the Transmission Licensee: Power Grid Corporation of India Limited

Name of the Region: WESTERN REGION

Name of the Project: System Strengthening in North/West part of WR for IPP Projects in Chattisgarh(IPP-E)

Name of the Transmission Element or Communication System: 765 kV 240 MVAr Switchable Line Reactor of 765 kV D/C Aurangabad PAdhge TL Ckt I to be charged as Bus Reactor at Aurangabad SS

Date of Commercial Operation: 01-Jun-2014

Sl. No.	Particulars	Gross block at the beginning of the year	Add Cap during the year	Gross block at the end of the year	Average Gross Block	Dep. Rate	Rs. in Lacs Amount
2017-2018							
1	FREEHOLD LAND	0	0	0	0	0	0
2	BUILDING	340.47	0	340.47	340.47	3.34	11.37
3	TR LINE	0	0	0	0	5.28	0
4	SUB STATION	3204.43	0	3204.43	3204.43	5.28	169.19
5	PLCC	0	0	0	0	6.33	0
6	LEASEHOLD LAND	0	0	0	0	3.34	0
	Total	3544.9	0	3544.9	3544.9		180.56
	Weighted Average Rate of Depreciation						5.09
	Lapsed life						4
2018-2019							
1	FREEHOLD LAND	0	0	0	0	0	0
2	BUILDING	340.47	0	340.47	340.47	3.34	11.37
3	TR LINE	0	0	0	0	5.28	0
4	SUB STATION	3204.43	0	3204.43	3204.43	5.28	169.19
5	PLCC	0	0	0	0	6.33	0
6	LEASEHOLD LAND	0	0	0	0	3.34	0
	Total	3544.9	0	3544.9	3544.9		180.56
	Weighted Average Rate of Depreciation						5.09
	Lapsed life						5

(Petitioner)



Statement of Depreciation

Name of the Transmission Licensee: Power Grid Corporation of India Limited
 Name of the Region: WESTERN REGION
 Name of the Project: System Strengthening in North/West part of WR for IPP Projects in Chattisgarh(IPP-E)
 Name of the Transmission Element or Communication System: 765 kV 240 MVAR Switchable Line Reactor of 765 kV D/C Aurangabad PADhge TL Ckt 1 to be charged as Bus Reactor at Aurangabad SS

Date of Commercial Operation: 01-Jun-2014

Particulars	Existing 2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	Rs. in Lacs
Opening Capital Cost	0.00	2425.94	3264.51	3544.90	3544.90	3544.90	3544.90
Closing Capital Cost	0.00	3264.51	3544.90	3544.90	3544.90	3544.90	3544.90
Average Capital Cost	0.00	2845.23	3404.71	3544.90	3544.90	3544.90	3544.90
Freehold Land (Av. Cost)	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rate of Depreciation	0.00	5.11	5.10	5.09	5.09	5.09	5.09
Depreciable Value	0.00	2560.71	3064.24	3190.41	3190.41	3190.41	3190.41
Balance useful life of the asset (at the beginning of year)	0.00	25.00	24.00	23.00	22.00	21.00	21.00
Elapsed life of the asset (at the beginning of the year)	0.00	0.00	1.00	2.00	3.00	4.00	4.00
Remaining Depreciable Value	0.00	2560.71	2942.97	2895.62	2715.06	2534.50	2534.50
Depreciation during the year	0.00	121.27	173.52	180.56	180.56	180.56	180.56
Depreciation upto previous year	0.00	0.00	121.27	294.79	475.35	655.91	655.91
Cumulative depreciation (incl. of AAD)	0.00	121.27	294.79	475.35	655.91	836.47	836.47

R. K.

(Petitioner)



Calculation of Interest on Working Capital

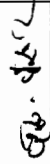
Name of the Transmission Licensee: Power Grid Corporation of India Limited

Name of the Region: WESTERN REGION

Name of the Project: System Strengthening in North/West part of WR for IPP Projects in Chattisgarh(IPP-E)

Name of the Transmission Element: 765 kV 240 MVAR Switchable Line Reactor of 765 kV D/C Aurangabad PADhge TL Ckt I to be charged as Bus Reactor at Aurangabad SS
Date of Commercial Operation: 01-Jun-2014

Particulars	Existing 2013-14		2014-15		2015-16		2016-17		2017-18		2018-19	
Op. and Maintenance	0.00	0.00	7.04	7.27	7.51	7.76	7.76	7.76	7.76	7.76	7.76	8.02
Maintenance Spares	0.00	0.00	12.66	13.08	13.52	13.97	13.97	13.97	13.97	13.97	13.97	14.43
Receivables	0.00	0.00	100.55	115.58	117.45	115.02	115.02	115.02	115.02	115.02	115.02	112.72
Total working capital	0.00	0.00	120.25	135.93	138.48	136.75	136.75	136.75	136.75	136.75	136.75	135.17
Rate of Interest	0.00	0.00	13.50	13.50	13.50	13.50	13.50	13.50	13.50	13.50	13.50	13.50
Interest on working capital	0.00	0.00	16.23	18.35	18.69	18.46	18.46	18.46	18.46	18.46	18.46	18.25
Pro rata Interest on working capital	0.00	0.00	13.53	18.35	18.69	18.46	18.46	18.46	18.46	18.46	18.46	18.25


 (Petitioner)

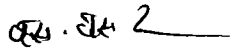


Details of time over run

Name of the Petitioner: POWER GRID CORPORATION OF INDIA
 Name of Region: WESTERN REGION 1
 Name of the Project : System Strengthening in North/West Part of WR for IPP Projects in Chhatisgarh (IPP-E)

S.No	Description of Activity/Works/Service	Original Schedule (As per Planning)		Actual Schedule (As per Actual)		Time Over-Run	Agency responsible and whether such time over run was beyond the control of the Transmission Licensee	Reasons for delay	Other Activity affected (Mention Sr No of activity affected)	
		Start Date	Completion Date	Start Date	Completion Date	Months				
1	400kV D/C Vadodara-Asoj (Quad)	27.12.2011	26.08.2014							
2	400kV D/C Padghe-Padghe (Quad)									
3	765kV D/C Agbad-Padghe									
4	765kV Aurangabad (PG) Substation (Extn.) for line bays									
5	Agbd-Padghe LR1 at Agbd			29.02.12	31.05.14			Alstom	NA	
6	Agbd-Padghe LR2 at Agbd			29.02.12	31.05.14			Alstom	NA	
7	765/400kV GIS at Padghe									
8	400kV Padghe Substation(MSETCL) (Extn.)									
9	400kV Vadodara (PG) Substation (Extn.)									
10	400kV Asoj Substation (GETCO) (Extn.)									

1. Delay on account of each reason in case of time overrun should be quantified and substantiated with necessary documents and supporting workin


 (Petitioner)



Incidental Expenditure during Construction

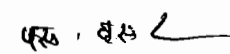
Name of the Petitioner: POWER GRID CORPORATION OF INDIA LTD.
Name of the Region: WESTERN REGION-I
Name of the Project: System Strengthening in North/West Part of WR for IPP Projects in Chhatisgarh (IPP-E)
Name of the Transmission Element or Communication system: 1)765kV 240 MVAR Switchable Line Reactor of 765kV D/C Aurangabad-Padghe Line Ckt#1 to be charged as Bus Reactor at Aurangabad S/s
2)765kV 240 MVAR Switchable Line Reactor of 765kV D/C Aurangabad-Padghe Line Ckt#2 to be charged as Bus Reactor at Aurangabad S/s

Date of Commercial Operation 01.06.2014 (Ant.)

(Amount in Rs. Lakh)

Sl. No.	Parameters	Year -1	Year-2	Year 3	Year-4
A	Expenses:	2011-12	2012-13	2013-14	2014-15
1	Employees' Remuneration & Benefits	0.00	9.27	19.38	1.37
2	Finance Costs	0.00	0.00	0.00	0.00
3	Water Charges	0.00	0.00	0.00	0.00
4	Communication Expenses	0.00	0.05	0.13	0.01
5	Power Charges	0.00	0.00	0.25	0.02
6	Other Office and Administrative Expenses	3.72	5.09	10.14	0.71
7	Others CC IEDC 537102	2.03	1.37	9.92	0.70
8	Other RO IEDC 537109	1.37	0.58	5.85	0.41
				
B	Total Expenses	7.12	16.36	45.67	3.22
	Less: Income from sale of tenders	0.00	0.00	0.00	0.00
	Less: Income from guest house	0.00	0.00	0.00	0.00
	Less: Income recovered from Contractors	2.92	34.83	89.65	6.32
	Less: Interest on Deposits	0.00	0.00	0.00	0.00
	4.20	-18.47	-43.98	-3.10

Note: IEDC should be duly reconciled with the corresponding figures of Auditor's Certificate.


(Petitioner)



Draw Down Schedule for Calculation of IDC & Financing Charges

Name of the Transmission Licensee: Power Grid Corporation of India Limited

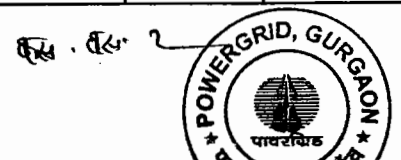
Name of the Region: WESTERN REGION

Name of the Project: System Strengthening in North/West part of WR for IPP Projects in Chattisgarh(IPP-E)

Name of the Transmission Element or Communication System: 765 kV 240 MVA Switchable Line Reactor of 765 kV D/C Aurangabad PAdhge TL Ckt I to be charged as Bus Reactor at Aurangabad SS

Rs. In Lakhs

Sl.No.	Drawn Down Particulars	Quarter 1		Quarter 2		Quarter n (COD)				
		Quantum in FC	Ex. Rate on Drawn Down Date Amount in Indian Rupee	Quantum in FC	Ex. Rate on Drawn Down Date Amount in Indian Rupee	Quantum in FC	Ex. Rate on Drawn Down Date	Amount in Indian Rupee		
	Loans									
	Foreign Loans									
	Total of Foreign Loans									
	Drawn Down Account									
	IDC									
	Financing Charges									
	Indian Loans									
	BOND XXXIX									
	Draw Down Account									133
	IDC									
	Financing Charges									
	SBI (21.03.2012)									
	Draw Down Account									153
	IDC									
	Financing Charges									
	BOND - XLI									
	Draw Down Account									24
	IDC									
	Financing Charges									
	BOND - XLII									
	Draw Down Account									62
	IDC									
	Financing Charges									
	BOND - XLIII									
	Draw Down Account									34
	IDC									
	Financing Charges									
	BOND - XLIV									
	Draw Down Account									489
	IDC									
	Financing Charges									
	BOND - XLV									



Draw Down Schedule for Calculation of IDC & Financing Charges

Name of the Transmission Licensee: Power Grid Corporation of India Limited

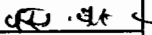
Name of the Region: WESTERN REGION

Name of the Project: System Strengthening in North/West part of WR for IPP Projects in Chattisgarh(IPP-E)

Name of the Transmission Element or Communication System: 765 kV 240 MVAR Switchable Line Reactor of 765 kV D/C Aurangabad PAdhge TL Ckt I to be charged as Bus Reactor at Aurangabad SS

Rs. In Lakhs

Sl.No.	Drawn Down	Quarter 1		Quarter 2		Quarter n (COD)					
		Particulars	Quantum in FC	Ex. Rate on Drawn Down Date	Amount in Indian Rupee	Quantum in FC	Ex. Rate on Drawn Down Date	Amount in Indian Rupee	Quantum in FC	Ex. Rate on Drawn Down Date	Amount in Indian Rupee
	Draw Down Account										208
	IDC										
	Financing Charges										
	PROPOSED LOAN 2014-15 (10.25%)										
	Draw Down Account										595.16
	IDC										
	Financing Charges										
	Total of Indian Loans										
	Drawn Down Account										1698.16
	IDC										
	Financing Charges										
	Total of Loan Drawn										
	Drawn Down Account										1698.16
	IDC										92.13
	Financing Charges										
	Equity										
	Foreign Equity Drawn										
	Indian Equity Drawn										979.35
	Total Equity Drawn										979.35


 (Petitioner)



**PART-III
FORM- 13**

Breakup of Initial Spares

Name of the Petitioner:

POWER GRID CORPORATION OF INDIA

Name of Region:

WESTERN REGION 1

Name of the Project :

System Strengthening in North/West Part of WR for IPP Projects in Chhatisgarh (IPP-E)

Name of the Transmission Element :

765KV 240 MVAR Switchable Line Reactor of 765KV D/C Aurangabad-Padghe Line Ckt#1 to be charged as Bus Reactor at Aurangabad S/s

Anticipated DOCO:

01.06.14

(Amount in Rs. Lakh)

Particulars	Plant & Machinery Cost (excluding IDC and IEDC) upto DOCO	IDC	IEDC	Year wise additional Capital expenditure up to cut off date		Total Cost	Initial spares claimed	
				From 01.06.14 to 31.03.15	2015-16		2016-17	Amount
Transmission Line	0.00							
Transmission Substation (Green Field/Brown Field)	2184.33	91.18	-30.84	715.64	244.12	3204.43	236	7.36
PLCC	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Series Compensation devices								
HVDC Station								
Gas Insulated Substation								
Communication System								

Note:

1. Details to be furnished as per Regulation 13.
2. Corresponding figures of initial spares included in each transmission system may be provided separately.

(Petitioner)



PART-III
FORM- 14

Other Income as on COD

Name of the Petitioner: **POWER GRID CORPORATION OF INDIA LTD.**
 Name of the Region: **WESTERN REGION-I**
 Name of the Project: **System Strengthening in North/West Part of WR for IPP Projects in Chhatisgarh (IPP-E)**
 Name of the Transmission Element or Communication system: **1)765KV 240 MVAR Switchable Line Reactor of 765KV D/C Aurangabad-Padghe Line Ckt#1 to be charged as Bus Reactor at Aurangabad S/s .
 2)765KV 240 MVAR Switchable Line Reactor of 765KV D/C Aurangabad-Padghe Line Ckt#2 to be charged as Bus Reactor at Aurangabad S/s .**

(Amount in Rs. Lakh)

Sl. No.	Parameters	Existing 2013-14	2014-15	2015-16	2016-17	2017-18	2018-19
1	Interest on Loans and advances	985.75					
2	Income from sale of scrap						
3	Misc. receipts (Please Specify Details)						
...	Recovery of Rent from Emp Res Buildings	0					
...	Electy Charges Recovered Frm Emp Res Bldgs	0					

(Petitioner)



Form I					
Summary Sheet					
Name of the Transmission Licensee: Power Grid Corporation of India Limited					
Name of the Region: WESTERN REGION					
Name of the Project: System Strengthening in North/West part of WR for IPP Projects in Chattisgarh(IPP-E)					
Name of the Transmission Element or Communication System: 765 kV 240 MVA Switchable Line Reactor of 765 kV D/C Aurangabad PAdhge TL Ckt II to be charged as Bus Reactor at Aurangabad					
Date of Commercial operation : 01-Jun-2014 (Anticipated)					
					Rs. in Lacs
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation-(Form No. 10A)	121.36	174.72	181.76	181.76	181.76
Interest on Loan-(Form No. 9E)	153.82	209.09	201.44	184.01	167.18
Return on Equity-(Form No. 8)	144.16	208.1	216.65	216.65	216.65
Int. on Working Capital-(Form NO. 11)	13.54	18.44	18.79	18.55	18.33
Op. and Maintenance-(Form No. 2)	70.35	87.22	90.12	93.11	96.2
Total	503.23*	697.57	708.76	694.08	680.12
*The asset was anticipated to be commissioned on 01.06.2014 and the management certificate and the tariff forms were prepared accordingly. Even after best effort, the asset could not be commissioned on 01.06.2014 and it is now anticipated to be commissioned and put under commercial operation from 01.07.2014. The tariff for 2014-15 (pro-rata from 01.07.2014) works out to Rs 452.91 lakhs					
					(Petitioner)



Details of Transmission Lines and Substations, Communication System

Name of the Petitioner: Power Grid Corporation of India Limited

Name of the Region: WESTERN REGION

Name of the Project: System Strengthening in North/West part of WR for IPP Projects in Chattisgarh(IPP-E)

Name of the Transmission element or Communication system: 765 kV 240 MVAR Switchable Line Reactor of 765 kV D/C Aurangabad PADhge TL Ckt II to be charged as Bus Reactor at Aurangabad SS(Anticipated)

Date of Commercial Operation: 01-Jun-2014

Substations:

Sl. No.	Name of Sub-station	Type of Substation	Voltage level KV	No. of Transformers / Reactors/ SVC etc.	No. of Bays			Date of Commercial operation	Covered in the present petition	
					765 KV	400 KV	132 KV & below		Yes/No	If No, petition No.
1	AURANGABAD-3x80 MVAR Switchable Line reactor#2-1 Bay		765	1			Anticipated	Y		
	Total			1						

Communication System:

Sl. No.	Name of Communication System	Type of Communication System	Technical Particulars	Number / length	Date of Commercial operation	Covered in the present petition Yes/No	If No, petition No.

(Signature)
(Petitioner)



Statement of Capital Cost

Name of the Transmission Licensee: Power Grid Corporation of India Limited

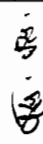
Name of the Region: WESTERN REGION

Name of the Project: System Strengthening in North/West part of WR for IPP Projects in Chattisgarh(IPP-E)

Name of the Transmission Element: 765 kV 240 MVAR Switchable Line Reactor of 765 kV D/C Aurangabad PADhge TL Ckt II to be charged as Bus Reactor at Aurangabad SS(Anticipated)

Date of Commercial Operation: 01-Jun-2014

Particulars	Existing 2013-14	2014-15	2015-16	2016-17	2017-18	Rs. in Lacs	
						2018-19	2018-19
A. a) Opening Gross Block Amount as per books		2411.33	3285.72	3567.57	3567.57		3567.57
b) Amount of capital liabilities in A(a) above							
c) Amount of IDC,FC,FERV and Hedging cost included in A(a) above		89.81	89.81	89.81	89.81	89.81	89.81
d) Amount of IEDC (excluding IDC,FC,FERV and Hedging cost) included in A(a) above		-30.24	-30.24	-30.24	-30.24	-30.24	-30.24
B. a) Addition in Gross Block Amount during the period		874.39	281.85				
b) Amount of capital liabilities in B(a) above							
c) Amount of IDC,FC,FERV and Hedging cost included in B(a) above							
d) Amount of IEDC (excluding IDC,FC,FERV and Hedging cost) included in B(a) above							
C. a) Closing Gross Block Amount as per Books		3285.72	3567.57	3567.57	3567.57	3567.57	3567.57
b) Amount of capital liabilities in C(a) above							
c) Amount of IDC,FC,FERV and Hedging cost included in C(a) above		89.81	89.81	89.81	89.81	89.81	89.81
d) Amount of IEDC (excluding IDC,FC,FERV and Hedging cost) included in C(a) above		-30.24	-30.24	-30.24	-30.24	-30.24	-30.24


 (Petitioner)


**PART-III
FORM-4C**

Abstract of Capital Cost Estimates and Schedule of Commissioning for the New projects

Name of the Transmission Licensee : POWER GRID CORPORATION OF INDIA
Name of Region: WESTERN REGION
Name of the Project : System Strengthening in North/West Part of WR for IPP Projects in Chhatisgarh (IPP-E)
Name of Element: 765kV 240 MVAR Switchable Line Reactor of 765kV D/C Aurangabad-Padghe Line Ckt.#2 to be charged as Bus Reactor at Aurangabad S/s

Capital Cost Estimates

Board of Director/ Agency approving the Capital cost estimates:	Board of Director 265th meeting	
Date of approval of the Capital cost estimates:	27.12.2011	
	Present Day Cost	Completed Cost
Price level of approved estimates	As of End of 2nd Quarter 2011	As on Scheduled COD of the transmission system/transmission element/ Communication
Foreign Exchange rate considered for the Capital cost estimates		
Capital Cost excluding IDC, IEDC & FC		
Foreign Component, if any (In Million US \$ or the relevant Currency)		
Domestic Component (Rs. Lakhs)		
Capital cost excluding IDC, FC, FERV & Hedging Cost (Rs. Lakhs)	3893.43	4348.65
IDC, IEDC, FC, FERV & Hedging Cost		
Foreign Component, if any (In Million US \$ or the relevant Currency)		
Domestic Component (Rs Lakh)		
Total IDC, FC, FERV & Hedging Cost (Rs Lakh)	281.89	314.85
Rate of taxes & duties considered		
Capital cost Including IDC, IEDC, FC, FERV & Hedging Cost		
Foreign Component, if any (In Million US \$ or the relevant Currency)		
Domestic Component (Rs. Lakhs.)		
Capital cost Including IDC, IEDC& FC (Rs Lakh)	4175.32	4663.50
Schedule of Commissioning		
(Scheduled DOCO elementwise)		
COD of transmission system 1 /transmission element 1/Communication System 1	26-Aug-14	1-Jun-14 (Aut)
COD of transmission system 1/ transmission element 2/ Communication System 2		
COD of transmission system 1/ transmission element 3/ Communication System 3		
COD of last transmission system /transmission element / Communication System		

Note:

1. Copy of approval letter by the Board duly certified by the Company secretary should be enclosed
2. Details of Capital Cost are to be furnished as per FORM-5 or 5A as applicable
3. Details of IDC & Financing Charges are to be furnished as per FORM-12(B).

(Petitioner)



Element wise Break-up of Project Cost for Transmission System

Name of the Transmission Licensee :
 Name of the Project : System Strengthening in NorthWest Part of WR for IPP Projects in Chhatisgarh (IPP-E)
 Name of the Project : 765KV 240 MVAR Switchable Line Reactor of 765KV DIC Aurangabad-Padgne Line Ckt#2 to be charged as Bus Reactor at Aurangabad S/s
 Name of the Element:
 Anticipated DOCO: 01.06.2014

Rs in Lakhs

Sl.No.	Particulars	As per Original Estimate			As on COD			Liabilities / Provision	Variation	Reasons for Variation	Admitted Cost
		Quantity	Rate	Estimated Amount	Quantity	Rate	Estimated Amount				
1	2			3		4	5	6-3-4-5	7	8	
A	TRANSMISSION LINE			Agb-LR2							
1.0	Preliminary works										
1.1	Design & Engineering										
1.2	Preliminary investigation, Right of way, forest clearance, PTCC, general civil works, compensation etc.						0.00				
1.3	Total Preliminary works			0.00		0.00	0.00	0.00			
2.0	Transmission Lines material										
2.1	Towers Steel						0.00				
2.2	Conductor						0.00				
2.3	Earth Wire						0.00				
2.4	Insulators						0.00				
2.5	Hardware Fittings						0.00				
2.6	Conductor & Earthwire accessories						0.00				
2.7	Spare						0.00				
2.8	Erection, Stringing & Civil works including foundation						0.00				
2.9	Total Transmission Lines			0.00		0.00	0.00	0.00			
3.0	Taxes and Duties										
3.1	Custom Duty						0.00	0.00			
3.2	Other Taxes & Duties						0.00	0.00			
	Total Taxes & Duties			0.00		0.00	0.00	0.00			
	Total -Transmission lines			0.00		0.00	0.00	0.00			
B.	SUBSTATIONS			Agb-LR2							
4.0	Preliminary works & land										
4.1	Design & Engineering			0.00			0.00	0.00			
4.2	Land			0.00			0.00	0.00			
4.3	Site preparation			0.00			0.00	0.00			
	Total Preliminary works & land			0.00		0.00	0.00	0.00			
5.0	Civil Works										
5.1	Control Room & Office Building including HVAC			0.00			0.00	0.00			
5.2	Township & Colony			0.00			0.00	0.00			
5.3	Roads and Drainage	1 (LS)	5.00	5.00	1 (LS)	3.69	2.09	1.60	1.31	As per actual execution and site condition	



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Sl.No.	Particulars	As per Original Estimate				As on COD				Liabilities / Provision	Variation	Reasons for Variation	Admitted Cost
		Quantity	Rate	Estimated Amount	Quantity	Rate	Estimated Amount	Quantity	Rate				
1	2												
5.4	Foundation for structures	1 (LS)	514.71	514.71	1 (LS)	336.10	336.10	145.48	178.61	As per actual execution and site condition			
5.5	Misc. civil works			0.00					0.00				
	Total Civil Works			519.71				147.08	179.93				
6.0	Substation Equipments												
6.1	Switchgear (CT,PT, Circuit Breaker, Iso	18	28.11	506.02	18.00	44.96	44.96	535.92	-303.17	Increase in award cost			
6.2	Transformers			0.00					0.00				
6.3	Compensating Equipment(Reactor, SV	3.00	430.04	1290.12	3.00	660.95	660.95	1373.99	-692.73	Increase in award cost			
6.4	Control , Relay & Protection Panel *	3	11.43	34.29	3.00	11.04	11.04	21.93	1.19	Minor variation			
6.5	PLCC			0.00					0.00				
6.6	HVDC package			0.00					0.00				
6.7	Bus Bars/ conductors/Insulators	1 (LS)	353.19	353.19	1 (LS)	96.42	96.42	63.86	32.56	Increase in award cost			
6.8	outdoor lighting	1 (LS)	199.00	199.00	1 (LS)	0.14	0.14	0.10	0.05	Increase in award cost			
6.9	Emergency DG set			0.00					0.00				
6.10	Grounding System			0.00					0.00				
6.11	Structure for Switch yard	1 (LS)	556.21	556.21	1 (LS)	172.48	172.48	114.23	58.25	Increase in award cost			
6.12	Auxiliary System	1 (LS)	146.48	146.48	1 (LS)	74.03	74.03	49.03	25.00	Increase in award cost			
	Total Substation Equipments			3085.31				2159.05	-82.91				
7.0	Spares (incl.in eqpt. cost)			0.00				0.00	0.00				
8.0	Taxes and Duties			0.00				0.00	0.00				
8.1	Custom Duty			0.00				0.00	0.00				
8.2	Other Taxes & Duties			0.00				0.00	0.00				
8.3	Total Taxes & Duties			0.00				0.00	0.00				
	Total (Sub-station)			3605.02				2351.76	97.02				
9.0	Communication System												
9.1	Preliminary Works			0.00				0.00	0.00				
9.2	Communication System equipment's			0.00				0.00	0.00				
9.3	Taxes and Duties			0.00				0.00	0.00				
	Total (Communication System)			0.00				0.00	0.00				
10.0	Construction and pre-commissioning expenses												
10.1	Site supervision & site admn.etc.			0.00				0.00	0.00				
10.2	Tools and Plants			0.00				0.00	0.00				
10.3	construction Insurance			0.00				0.00	0.00				
	Total Construction and pre commissioning expenses			0.00				0.00	0.00				
11.0	Overheads												
11.1	Establishment			288.41				-30.24	318.65				
11.2	Audit & Accounts			0.00				0.00	0.00				
11.3	Contingency			0.00				0.00	0.00				
	Total Overheads			288.41				-30.24	318.65				
12.0	Cost of Plant & Machinery			3893.43				2321.52	415.67				
13.0	Capital Cost including Plant & Machinery												
13.1	Interest During Construction (IDC)			281.89				89.81	192.08				
13.2	Financing Charges (FC)			0.00				0.00	0.00				
13.3	Foreign Exchange Rate Variation (FERV)			0.00				0.00	0.00				



82.42.2

Rs in Lakhs

Sl.No.	Particulars	As per Original Estimate			As on COD			Liabilities / Provision	Variation	Reasons for Variation	Admitted Cost
		Quantity	Rate	Estimated Amount	Quantity	Rate	Estimated Amount				
1	Hedging Cost			3		0.00		5	6=3-4-5	7	8
13.4	Capital cost including IDC, FC, FERV & Hedging Cost					4175.32			0.00		
14.0						2411.33		1156.24	607.75		

(Petitioner)



Break-up of Construction / Supply / Service packages

Name of the Petitioner: Power Grid Corporation of India Ltd.
 Name of the Region: Western Region-1
 Name of the Project: System Strengthening in North/West Part of WR for IPP Projects in Chhatisgarh (IPP-E)
 Name of the Project: 765KV 240 MVAR Switchable Line Reactor of 765KV DIC Aurangabad-Padghe Line Ckt#2 to be charged as Bus Reactor at Aurangabad S/S
 Communication system:
 Anticipated DDCD: 01.06.2014

Sl	Name/No. of Construction/supply/service package	Scope of works1 (in line with head of cost break-ups as applicable)	Whether awarded through ICB/DCB/ Departmental	No of bids received	Date of award	Date of start of work	Date of Completion of Work	Awarded value INR		Firm or with escalation in prices	Expenditure excluding Taxes & Duties as on COD	Taxes & duties and IEDC	IDC, FC, FERV & Hedging cost	Sub-total		
								8	9							
1	Extension of 765 KV Aurangabad Substation - SUPPLY	765KV S/A-supply	DCB	4	29.02.12	29.02.12	31.05.14	INR - 9	25,471,458	With escalation	553.04	6.76	36.38	596.17		
2	Extension of 765 KV Aurangabad Substation - SUPPLY	765KV S/A-erection	DCB	4	29.02.12	29.02.12	31.05.14		20,481,110	With escalation	104.86	-0.10	1.00	105.76		
3	765 KV Reactor Package (P250-R-01) : Supply, Erection, Testing & Commissioning of 3x 80 MVAR reactor at Aurangabad Substation - Supply (Bidding from Bina S/Co.)	765KV 240 MVAR reactor supply	ICB	8	31.01.12	31.01.12	31.05.14	USD-2312540		With escalation	1024.34	333.18	51.70	1409.22		
4	765 KV Reactor Package (P250-R-01) : Supply, Erection, Testing & Commissioning of 3x 80 MVAR reactor at Aurangabad Substation - Erection (Bidding from Bina S/Co.)	765KV 240 MVAR reactor erection	ICB	8	31.01.12	31.01.12	31.05.14		28,881,760	With escalation	100.00	-0.19	0.25	100.06		
5	Supply of Circuit Breaker	Supply of CB	DCB	4	27.09.13	27.09.13	31.05.14		32,786,180	With escalation	160.43	39.19	0.49	200.12		
Grand Total													1942.68	378.84	89.82	2411.33

(Petitioner)

PA. S.A. 2



Financial Package upto COD (Block Year- 2014-2019)

Name of the Transmission Licensee: Power Grid Corporation of India Limited

Name of the Region: WESTERN REGION

Name of the Project: System Strengthening in North/West part of WR for IPP Projects in Chattisgarh(IPP-E)

Name of the Transmission Element or Communication Element: 765 kV 240 MVAR Switchable Line Reactor of 765 kV/D/C Aurangabad PADhige TL Ckt II to be charged as Bus Reactor at Aurangabad SS(Anticipated)

Date of commercial Operation: 01-Jun-2014

Rs. In Lakhs

Particulars	Financial Package as Approved		Financial Package as on COD		As Admitted by COD / 31.03.2014	
	Currency	Amount	Currency	Amount	Currency	Amount
Loans						
Loans-Domestic	INR	2922.73	INR	1687.93		
Loans-Foreign			INR	0		
Total Loans	INR	2922.73	INR	1687.93	INR	
Equity						
Foreign						
Domestic	INR	1252.59	INR	723.4		
Notional						
Total Equity	INR	1252.59	INR	723.4	INR	
Debt Equity Ratio				70:30		
Total Cost	INR	4175.32	INR	2411.33	INR	
Add Cap for 2014-2015	Debt	Equity	Total			
			874.39			
Add Cap for 2015-2016			281.85			
Add Cap for 2014-2015	Actual	Normative				
Debt		612.07				
Equity		262.32				
Total		874.39				
Add Cap for 2015-2016	Actual	Normative				
Debt		197.3				
Equity		84.55				
Total		281.85				
Total Capital cost with Addcap		3567.57				

94.56-2
(Petitioner)

Statement of Additional Capitalisation after COD

Name of the Petitioner: Power Grid Corporation of India Limited
 Name of the Region: WESTERN REGION
 Name of the Project: System Strengthening in North/West part of WR for IPP Projects in Chattisgarh(IPP-E)
 Name of the Transmission Element or Communication system: 765 kV 240 MVAR Switchable Line Reactor of 765 kV D/C Aurangabad PAdhge TL Ckt II to be charged as Bus Reactor at Aurangabad SS(Anticipated)
 Date of Commercial Operation: 01-Jun-2014

Sl. No.	Year	Work / Equipment proposed to be added after COD upto cut off date/beyond cut off date	Amount capitalised and proposed to be capitalised	Justification	Regulation under which covered	Admitted Cost
1	2014-2015	BUILDING	105.01	Balance&Retention Payment	14(1)	
2	2014-2015	SUB STATION	769.38	Balance&Retention Payment	14(1)	
	2014-2015	Total	874.39			
3	2015-2016	BUILDING	42.06	Balance&Retention Payment	14(1)	
4	2015-2016	SUB STATION	239.79	Balance&Retention Payment	14(1)	
	2015-2016	Total	281.85			

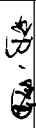
RA. J. 2
 (Petitioner)



Financing of Additional Capitalisation

Name of the Petitioner: Power Grid Corporation of India Limited
 Name of the Region: WESTERN REGION
 Name of the Project: System Strengthening in North/West part of WR for IPP Projects in Chattisgarh(IPP-E)
 Name of the Transmission Element or Communication System: 765 KV 240 MVA Switchable Line Reactor of 765 KV D/C Aurangabad PADhge TL Ckt II to be charged as Bus Reactor at Aurangabad SS(Anticipated)
 Date of Commercial Operation: 01-Jun-2014

Financial Year	Actual/Projected				Admitted		Amount in Lakhs
	2014-15	2015-16	2016-17	2017-18	2018-19		
Amount Capitalised in Work/Equipment							
Financing Details							
Loan	612.07	197.30	0.00	0.00	0.00		
Total Loan	612.07	197.30	0.00	0.00	0.00		
Equity	262.32	84.55	0.00	0.00	0.00		
Total	874.39	281.85	0.00	0.00	0.00		


 (Petitioner)



Calculation of Return on Equity

Name of the Transmission Licensee: Power Grid Corporation of India Limited

Name of the Region: WESTERN REGION

Name of the Project: System Strengthening in North/West part of WR for IPP Projects in Chattisgarh(IPP-E)

Name of the Transmission Element or Communication System: 765 kV 240 MVAR Switchable Line Reactor of 765 kV D/C Aurangabad PADhge TL Ckt II to be charged as Bus Reactor at Aurangabad SS(Anticipated)

Date of Commercial operation: 01-Jun-2014

Particulars	Existing 2013-14		2014-15		2015-16		2016-17		2017-18		2018-19	
												Rs. in Lacs
Opening Equity	0.00	723.40	985.72	1070.27	1070.27	1070.27	1070.27	1070.27	1070.27	1070.27	1070.27	1070.27
Notional Equity on Add Cap	0.00	262.32	84.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total Equity	0.00	985.72	1070.27	1070.27	1070.27	1070.27	1070.27	1070.27	1070.27	1070.27	1070.27	1070.27
Average Equity	0.00	854.56	1028.00	1070.27	1070.27	1070.27	1070.27	1070.27	1070.27	1070.27	1070.27	1070.27
Rate of Return on Equity (%)	0	20.243	20.243	20.243	20.243	20.243	20.243	20.243	20.243	20.243	20.243	20.243
Return on Equity	0.00	172.99	208.10	216.65	216.65	216.65	216.65	216.65	216.65	216.65	216.65	216.65
Pro rata Return on Equity	0.00	144.16	208.10	216.65	216.65	216.65	216.65	216.65	216.65	216.65	216.65	216.65
Calculation of Grossed up Rate of ROE												
Rate of ROE	0.00	15.50	15.50	15.50	15.50	15.50	15.50	15.50	15.50	15.50	15.50	15.50
Time Line Incentive	0.00	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
Communication Dis-incentive	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Effective Rate of ROE	0.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00
MAT Rate	0.00	20.96	20.96	20.96	20.96	20.96	20.96	20.96	20.96	20.96	20.96	20.96
Grossed up Rate of ROE	0	20.243	20.243	20.243	20.243	20.243	20.243	20.243	20.243	20.243	20.243	20.243



(Petitioner)


Calculation of Weighted Average Rate of Interest on Actual Loans

Name of the Transmission Licensee: Power Grid Corporation of India Limited

Name of the Region: WESTERN REGION

Name of the Project: System Strengthening in North/West part of WR for IPP Projects in Chattisgarh(IPP-E)

Name of the Transmission Element or Communication System: 765 kV 240 MVar Switchable Line Reactor of 765 kV D/C Aurangabad PADhge TL Ckt II to be charged as Bus Reactor at Aurangabad SS(Anticipated)

Date of Commercial Operation: 01-Jun-2014

Particulars	Rs. in Lacs				
	2014-15	2015-16	2016-17	2017-18	2018-19
BOND XXXIX-Loan1-					
Gross Opening Loan	132	132	132	132	132
Cumulative Repayments of Loans upto Previous Year	0	0	0	0	0
Net Loans Opening	132	132	132	132	132
Add: Drawl(s) during the year	0	0	0	0	0
Less: Repayment(s) of Loan during the year	0	0	0	0	0
Net Closing Loan	132	132	132	132	132
Average Net Loan	132	132	132	132	132
Rate of Interest on Loan	9.4	9.4	9.4	9.4	9.4
Interest on Loan	12.41	12.41	12.41	12.41	12.41
SBI (21.03.2012)-Loan6-					
Gross Opening Loan	152	152	152	152	152
Cumulative Repayments of Loans upto Previous Year	0	0	0	13.82	27.64
Net Loans Opening	152	152	152	138.18	124.36
Add: Drawl(s) during the year	0	0	0	0	0
Less: Repayment(s) of Loan during the year	0	0	13.82	13.82	13.82
Net Closing Loan	152	152	138.18	124.36	110.54
Average Net Loan	152	152	145.09	131.27	117.45
Rate of Interest on Loan	10.25	10.25	10.25	10.25	10.25
Interest on Loan	15.58	15.58	14.87	13.46	12.04
BOND - XLI-Loan2-					
Gross Opening Loan	24	24	24	24	24
Cumulative Repayments of Loans upto Previous Year	0	0	0	2	4
Net Loans Opening	24	24	24	22	20
Add: Drawl(s) during the year	0	0	0	0	0
Less: Repayment(s) of Loan during the year	0	0	2	2	2
Net Closing Loan	24	24	22	20	18
Average Net Loan	24	24	23	21	19
Rate of Interest on Loan	8.85	8.85	8.85	8.85	8.85
Interest on Loan	2.12	2.12	2.04	1.86	1.68
BOND - XLII-Loan3-					
Gross Opening Loan	61	61	61	61	61
Cumulative Repayments of Loans upto Previous Year	0	0	0	0	0
Net Loans Opening	61	61	61	61	61



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Calculation of Weighted Average Rate of Interest on Actual Loans

Name of the Transmission Licensee: Power Grid Corporation of India Limited

Name of the Region: WESTERN REGION

Name of the Project: System Strengthening in North/West part of WR for IPP Projects in Chattisgarh(IPP-E)

Name of the Transmission Element or Communication System: 765 kV 240 MVAr Switchable Line Reactor of 765 kV D/C Aurangabad PADhge TL Ckt II to be charged as Bus Reactor at Aurangabad SS(Anticipated)

Date of Commercial Operation: 01-Jun-2014

					Rs. in Lacs
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Add: Drawl(s) during the year	0	0	0	0	0
Less: Repayment(s) of Loan during the year	0	0	0	0	0
Net Closing Loan	61	61	61	61	61
Average Net Loan	61	61	61	61	61
Rate of Interest on Loan	8.8	8.8	8.8	8.8	8.8
Interest on Loan	5.37	5.37	5.37	5.37	5.37
BOND - XLIII-Loan4-					
Gross Opening Loan	33	33	33	33	33
Cumulative Repayments of Loans upto Previous Year	0	0	0	0	2.75
Net Loans Opening	33	33	33	33	30.25
Add: Drawl(s) during the year	0	0	0	0	0
Less: Repayment(s) of Loan during the year	0	0	0	2.75	2.75
Net Closing Loan	33	33	33	30.25	27.5
Average Net Loan	33	33	33	31.63	28.88
Rate of Interest on Loan	7.93	7.93	7.93	7.93	7.93
Interest on Loan	2.62	2.62	2.62	2.51	2.29
BOND - XLIV-Loan5-					
Gross Opening Loan	484	484	484	484	484
Cumulative Repayments of Loans upto Previous Year	0	0	0	0	0
Net Loans Opening	484	484	484	484	484
Add: Drawl(s) during the year	0	0	0	0	0
Less: Repayment(s) of Loan during the year	0	0	0	0	161.33
Net Closing Loan	484	484	484	484	322.67
Average Net Loan	484	484	484	484	403.34
Rate of Interest on Loan	8.7	8.7	8.7	8.7	8.7
Interest on Loan	42.11	42.11	42.11	42.11	35.09
BOND - XLV-Loan7-					
Gross Opening Loan	207	207	207	207	207
Cumulative Repayments of Loans upto Previous Year	0	0	0	0	17.25
Net Loans Opening	207	207	207	207	189.75
Add: Drawl(s) during the year	0	0	0	0	0
Less: Repayment(s) of Loan during the year	0	0	0	17.25	17.25
Net Closing Loan	207	207	207	189.75	172.5
Average Net Loan	207	207	207	198.38	181.13



Calculation of Weighted Average Rate of Interest on Actual Loans

Name of the Transmission Licensee: Power Grid Corporation of India Limited

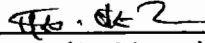
Name of the Region: WESTERN REGION

Name of the Project: System Strengthening in North/West part of WR for IPP Projects in Chattisgarh(IPP-E)

Name of the Transmission Element or Communication System: 765 kV 240 MVAR Switchable Line Reactor of 765 kV D/C Aurangabad PADhge TL Ckt II to be charged as Bus Reactor at Aurangabad SS(Anticipated)

Date of Commercial Operation: 01-Jun-2014

					Rs. in Lacs
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Rate of Interest on Loan	9.65	9.65	9.65	9.65	9.65
Interest on Loan	19.98	19.98	19.98	19.14	17.48
PROPOSED LOAN 2014-15 (10.25%)-Loan8-					
Gross Opening Loan	594.93	594.93	594.93	594.93	594.93
Cumulative Repayments of Loans upto Previous Year	0	0	0	0	0
Net Loans Opening	594.93	594.93	594.93	594.93	594.93
Add: Drawl(s) during the year	0	0	0	0	0
Less: Repayment(s) of Loan during the year	0	0	0	0	49.58
Net Closing Loan	594.93	594.93	594.93	594.93	545.35
Average Net Loan	594.93	594.93	594.93	594.93	570.14
Rate of Interest on Loan	10.25	10.25	10.25	10.25	10.25
Interest on Loan	60.98	60.98	60.98	60.98	58.44
Summary					
Gross Opening Loan	1687.93	1687.93	1687.93	1687.93	1687.93
Cumulative Repayments of Loans upto Previous Year	0	0	0	15.82	51.64
Net Loans Opening	1687.93	1687.93	1687.93	1672.11	1636.29
Add: Drawl(s) during the year	0	0	0	0	0
Less: Repayment(s) of Loan during the year	0	0	15.82	35.82	246.73
Net Closing Loan	1687.93	1687.93	1672.11	1636.29	1389.56
Average Net Loan	1687.93	1687.93	1680.02	1654.21	1512.94
Rate of Interest on Loan	9.55	9.55	9.55	9.54	9.57
Interest on Loan	161.16	161.16	160.36	157.83	144.8


 (Petitioner)



Calculation of Interest on Normative Loan

Name of the Transmission Licensee: Power Grid Corporation of India Limited

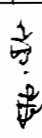
Name of the Region: WESTERN REGION

Name of the Project: System Strengthening in North/West part of WR for IPP Projects in Chattisgarh(IPP-E)

Name of the Transmission Element or Communication System: 765 kV 240 MVAR Switchable Line Reactor of 765 kV D/C Aurangabad PA Dhge TL Ckt II to be charged as Bus Reactor at Aurangabad SS(Anticipated)

Date of Commercial Operation: 01-Jun-2014

Particulars	Existing 2013-14		2014-15		2015-16		2016-17		2017-18		2018-19	
												Rs. in Lacs
Gross Normative Loan Opening	0.00	0.00	1687.93	2300.00	2497.30	2497.30	2497.30	2497.30	2497.30	2497.30	2497.30	2497.30
Cumulative Repayments of Normative Loans upto Previous Year	0.00	0.00	0.00	121.36	296.08	296.08	296.08	296.08	296.08	296.08	296.08	296.08
Net Normative Loans Opening	0.00	0.00	1687.93	2178.64	2178.64	2178.64	2178.64	2178.64	2178.64	2178.64	2178.64	2178.64
Increase/Decrease due to ACE during the year	0.00	0.00	612.07	197.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Less: Repayment(s) of Normative Loan during the year	0.00	0.00	121.36	174.72	181.76	181.76	181.76	181.76	181.76	181.76	181.76	181.76
Net Closing Normative Loan	0.00	0.00	2178.64	2201.22	2019.46	2019.46	2019.46	2019.46	2019.46	2019.46	2019.46	2019.46
Average Net Normative Loan	0.00	0.00	1933.29	2189.93	2110.34	2110.34	2110.34	2110.34	2110.34	2110.34	2110.34	2110.34
Rate of Interest on Loan	0.00	0.00	9.55	9.55	9.55	9.55	9.55	9.55	9.55	9.55	9.55	9.55
Interest on Normative Loan	0.00	0.00	184.59	209.09	201.44	201.44	201.44	201.44	201.44	201.44	201.44	201.44
Pro rata Interest on Normative Loan	0.00	0.00	153.82	209.09	201.44	201.44	201.44	201.44	201.44	201.44	201.44	201.44



(Petitioner)



Calculation of Depreciation Rate

Name of the Transmission Licensee: Power Grid Corporation of India Limited

Name of the Region: WESTERN REGION

Name of the Project: System Strengthening in North/West part of WR for IPP Projects in Chattisgarh(IPP-E)

Name of the Transmission Element or Communication System: 765 kV 240 MVAR Switchable Line Reactor of 765 kV D/C Aurangabad PAdhge TL Ckt II to be charged as Bus Reactor at Aurangabad SS(Anticipated)

Date of Commercial Operation: 01-Jun-2014

Sl. No.	Particulars	Gross block at the beginning of the year	Add Cap during the year	Gross block at the end of the year	Average Gross Block	Dep. Rate	Rs. in Lacs Amount
	2014-2015						
1	FREEHOLD LAND	0	0	0	0	0	0
2	BUILDING	193.52	105.01	298.53	246.03	3.34	8.22
3	TR LINE	0	0	0	0	5.28	0
4	SUB STATION	2217.81	769.38	2987.19	2602.5	5.28	137.41
5	PLCC	0	0	0	0	6.33	0
6	LEASEHOLD LAND	0	0	0	0	3.34	0
	Total	2411.33	874.39	3285.72	2848.53		145.63
	Weighted Average Rate of Depreciation						5.11
	Lapsed life						1
	2015-2016						
1	FREEHOLD LAND	0	0	0	0	0	0
2	BUILDING	298.53	42.06	340.59	319.56	3.34	10.67
3	TR LINE	0	0	0	0	5.28	0
4	SUB STATION	2987.19	239.79	3226.98	3107.09	5.28	164.05
5	PLCC	0	0	0	0	6.33	0
6	LEASEHOLD LAND	0	0	0	0	3.34	0
	Total	3285.72	281.85	3567.57	3426.65		174.72
	Weighted Average Rate of Depreciation						5.1
	Lapsed life						2
	2016-2017						
1	FREEHOLD LAND	0	0	0	0	0	0
2	BUILDING	340.59	0	340.59	340.59	3.34	11.38
3	TR LINE	0	0	0	0	5.28	0
4	SUB STATION	3226.98	0	3226.98	3226.98	5.28	170.38
5	PLCC	0	0	0	0	6.33	0
6	LEASEHOLD LAND	0	0	0	0	3.34	0
	Total	3567.57	0	3567.57	3567.57		181.76
	Weighted Average Rate of Depreciation						5.09
	Lapsed life						3

Calculation of Depreciation Rate

Name of the Transmission Licensee: Power Grid Corporation of India Limited

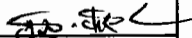
Name of the Region: WESTERN REGION

Name of the Project: System Strengthening in North/West part of WR for IPP Projects in Chattisgarh(IPP-E)

Name of the Transmission Element or Communication System: 765 kV 240 MVAr Switchable Line Reactor of 765 kV D/C Aurangabad PADhge TL Ckt II to be charged as Bus Reactor at Aurangabad SS(Anticipated)

Date of Commercial Operation: 01-Jun-2014

Sl. No.	Particulars	Gross block at the beginning of the year	Add Cap during the year	Gross block at the end of the year	Average Gross Block	Dep. Rate	Rs. in Lacs Amount
	2017-2018						
1	FREEHOLD LAND	0	0	0	0	0	0
2	BUILDING	340.59	0	340.59	340.59	3.34	11.38
3	TR LINE	0	0	0	0	5.28	0
4	SUB STATION	3226.98	0	3226.98	3226.98	5.28	170.38
5	PLCC	0	0	0	0	6.33	0
6	LEASEHOLD LAND	0	0	0	0	3.34	0
	Total	3567.57	0	3567.57	3567.57		181.76
	Weighted Average Rate of Depreciation						5.09
	Lapsed life						4
	2018-2019						
1	FREEHOLD LAND	0	0	0	0	0	0
2	BUILDING	340.59	0	340.59	340.59	3.34	11.38
3	TR LINE	0	0	0	0	5.28	0
4	SUB STATION	3226.98	0	3226.98	3226.98	5.28	170.38
5	PLCC	0	0	0	0	6.33	0
6	LEASEHOLD LAND	0	0	0	0	3.34	0
	Total	3567.57	0	3567.57	3567.57		181.76
	Weighted Average Rate of Depreciation						5.09
	Lapsed life						5


 (Petitioner)



Statement of Depreciation

Name of the Transmission Licensee: Power Grid Corporation of India Limited

Name of the Region: WESTERN REGION

Name of the Project: System Strengthening in North/West part of WR for IPP Projects in Chattisgarh(IPP-E)

Name of the Transmission Element or Communication System: 765 kV 240 MVAR Switchable Line Reactor of 765 kV D/C Aurangabad PADhge TL Ckt II to be charged as Bus Reactor at Aurangabad SS(Anticipated)

Date of Commercial Operation: 01-Jun-2014

Particulars	Existing 2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	Rs. in Laacs
Opening Capital Cost	0.00	2411.33	3285.72	3567.57	3567.57	3567.57	2018-19
Closing Capital Cost	0.00	3285.72	3567.57	3567.57	3567.57	3567.57	3567.57
Average Capital Cost	0.00	2848.53	3426.65	3567.57	3567.57	3567.57	3567.57
Freehold Land (Av. Cost)	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rate of Depreciation	0.00	5.11	5.10	5.09	5.09	5.09	5.09
Depreciable Value	0.00	2563.68	3083.98	3210.81	3210.81	3210.81	3210.81
Balance useful life of the asset (at the beginning of year)	0.00	25.00	24.00	23.00	22.00	21.00	21.00
Elapsed life of the asset (at the beginning of the year)	0.00	0.00	1.00	2.00	3.00	4.00	4.00
Remaining Depreciable Value	0.00	2563.68	2962.62	2914.73	2732.97	2551.21	2551.21
Depreciation during the year	0.00	121.36	174.72	181.76	181.76	181.76	181.76
Depreciation upto previous year	0.00	0.00	121.36	296.08	477.84	659.60	659.60
Cumulative depreciation (incl. of AAD)	0.00	121.36	296.08	477.84	659.60	841.36	841.36


 (Petitioner)



Calculation of Interest on Working Capital

Name of the Transmission Licensee: Power Grid Corporation of India Limited

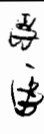
Name of the Region: WESTERN REGION

Name of the Project: System Strengthening in North/West part of WR for IPP Projects in Chattisgarh(IPP-E)

Name of the Transmission Element: 765 kV 240 MVAR Switchable Line Reactor of 765 kV D/C Aurangabad PADhge TL Ckt II to be charged as Bus Reactor at Aurangabad SS(Anticipated)

Date of Commercial Operation: 01-Jun-2014

Particulars	Existing 2013-14	2014-15	2015-16	2016-17	2017-18	Rs. in Lacs	
						2018-19	2018-19
Op. and Maintenance	0.00	7.04	7.27	7.51	7.76	8.02	8.02
Maintenance Spares	0.00	12.66	13.08	13.52	13.97	14.43	14.43
Receivables	0.00	100.65	116.26	118.13	115.68	113.35	113.35
Total working capital	0.00	120.35	136.61	139.16	137.41	135.80	135.80
Rate of Interest	0.00	13.50	13.50	13.50	13.50	13.50	13.50
Interest on working capital	0.00	16.25	18.44	18.79	18.55	18.33	18.33
Pro rata Interest on working capital	0.00	13.54	18.44	18.79	18.55	18.33	18.33


 (Petitioner)



Draw Down Schedule for Calculation of IDC & Financing Charges

Name of the Transmission Licensee: Power Grid Corporation of India Limited

Name of the Region: WESTERN REGION

Name of the Project: System Strengthening in North/West part of WR for IPP Projects in Chattisgarh(IPP-E)

Name of the Transmission Element or Communication System: 765 kV 240 MVA Switchable Line Reactor of 765 kV D/C Aurangabad PADhge TL Ckt II to be charged as Bus Reactor at Aurangabad SS(Anticipated)

Rs. In Lakhs

Sl.No.	Drawn Down	Quarter 1			Quarter 2			Quarter n (COD)		
		Particulars	Quantum in FC	Ex. Rate on Drawn Down Date	Amount in Indian Rupee	Quantum in FC	Ex. Rate on Drawn Down Date	Amount in Indian Rupee	Quantum in FC	Ex. Rate on Drawn Down Date
	Loans									
	Foreign Loans									
	Total of Foreign Loans									
	Drawn Down Account									
	IDC									
	Financing Charges									
	Indian Loans									
	BOND XXXIX									
	Draw Down Account									132
	IDC									
	Financing Charges									
	SBI (21.03.2012)									
	Draw Down Account									152
	IDC									
	Financing Charges									
	BOND - XLI									
	Draw Down Account									24
	IDC									
	Financing Charges									
	BOND - XLII									
	Draw Down Account									61
	IDC									
	Financing Charges									
	BOND - XLIII									
	Draw Down Account									33
	IDC									
	Financing Charges									
	BOND - XLIV									
	Draw Down Account									484
	IDC									
	Financing Charges									
	BOND - XLV									



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Draw Down Schedule for Calculation of IDC & Financing Charges

Name of the Transmission Licensee: Power Grid Corporation of India Limited

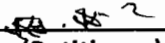
Name of the Region: WESTERN REGION

Name of the Project: System Strengthening in North/West part of WR for IPP Projects in Chattisgarh(IPP-E)

Name of the Transmission Element or Communication System: 765 kV 240 MVar Switchable Line Reactor of 765 kV D/C Aurangabad PADhge TL Ckt II to be charged as Bus Reactor at Aurangabad SS(Anticipated)

Rs. In Lakhs

Sl.No.	Drawn Down	Quarter 1		Quarter 2		Quarter n (COD)					
		Particulars	Quantum in FC	Ex. Rate on Drawn Down Date	Amount in Indian Rupee	Quantum in FC	Ex. Rate on Drawn Down Date	Amount in Indian Rupee	Quantum in FC	Ex. Rate on Drawn Down Date	Amount in Indian Rupee
	Draw Down Account										207
	IDC										
	Financing Charges										
	PROPOSED LOAN 2014-15 (10.25%)										
	Draw Down Account										594.93
	IDC										
	Financing Charges										
	Total of Indian Loans										
	Drawn Down Account										1687.93
	IDC										
	Financing Charges										
	Total of Loan Drawn										
	Drawn Down Account										1687.93
	IDC										89.81
	Financing Charges										
	Equity										
	Foreign Equity Drawn										
	Indian Equity Drawn										985.72
	Total Equity Drawn										985.72


 (Petitioner)



**PART-III
FORM- 13**

Breakup of Initial Spares

Name of the Petitioner: POWER GRID CORPORATION OF INDIA
Name of Region: WESTERN REGION 1
Name of the Project : System Strengthening in North/West Part of WR for IPP Projects in 765KV 240 MVAR Switchable Line Reactor of 765KV D/C Aurangabad-Padghe
Name of the Transmission Element : Line Ckt#2 to be charged as Bus Reactor at Aurangabad S/s
Anticipated DOCO: 01.06.14

(Amount in Rs. Lakh)

Particulars	Plant & Machinery Cost (excluding IDC and IEDC) upto DOCO	IDC	IEDC	Year wise additional Capital expenditure up to cut off date			Total Cost	Initial spares claimed	
				From 01.06.14 to 31.03.15	2015-16	2016-17		Amount	%
Transmission Line	0								
Transmission Substation (Green Field/Brown Field)	2159.05	88.71	-29.95	769.38	239.79	3226.98			0.00
PLCC	0								
Series Compensation devices									
HVDC Station									
Gas Insulated Substation									
Communication System									



Note: Details to be furnished as per Regulation 13.

2. Corresponding figures of initial spares included in each transmission system may be provided separately.

(Petitioner)