

**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'2009 for determination of Transmission Tariff for (i) Aurangabad– Aurangabad (MSETCL) 400 kV D/C (Quad) Line and Shifting of 400 kV D/C Akola - Aurangabad (MSETCL) line to Aurangabad alongwith associated bays at both ends, (ii) 400/220 kV 315 MVA ICT-I alongwith associated bays at Aurangabad S/S & (iii) 400/220 kV 315 MVA ICT-II alongwith associated bays at Aurangabad S/S under Transmission system associated with MUNDRA UMPP in Western Region for the period from DOCO to 31.3.2014.

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 for approval of transmission tariff for the above said assets under Mundra UMPP in Western Region for tariff block 2009-14 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 & Northern 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

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.**

5TH FLOOR, PRAKASHGAD,
BANDRA(EAST), MUMBAI - 400 051
REPRESENTED BY ITS CHIEF ENGINEER (POWER PURCHASE CELL)

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,
NER 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
9. PUNJAB STATE ELECTRICITY BOARD
220 KV SUB STATION, ABLOWAL,
PATIALA - 147 001
10. HARYANA POWER PURCHASE CENTRE, IIND FLOOR,
SHAKTI BHAWAN, SECTOR-6,
PANCHKULA – 134 109
11. RAJASTHAN POWER PROCUREMENT CENTRE.
VIDYUT BHAWAN, JANPATH, JAIPUR

12. AJMER VIDYUT VITRAN NIGAM LTD
400 KV GSS BUILDING
AJMER ROAD, HEERAPURA, JAIPUR
13. JODHPUR VIDYUT VITRAN NIGAM LTD
400 KV GSS BUILDING, AJMER ROAD, HEERAPURA, JAIPUR
14. JAIPUR VIDYUT VITRAN NIGAM LTD
400 KV GSS BUILDING
AJMER ROAD, HEERAPURA, JAIPUR
15. COSTAL GUJARAT POWER LIMITED
(A TATA POWER COMPANY)
TATA POWER BACKBAY RECEIVING STATION,
148, LT. GEN J BHONSLE MARG,
NARIMAN POINT, MUMBAI - 400 021
REPRESENTED BY ITS O&M HEAD, MUNDRA UMPP

Kindly acknowledge the receipt.

PETITIONER
POWER GRID CORPORATION OF INDIA LTD.
REPRESENTED BY


S. S. Raju

GURGAON
DATED: 30.10.2013

Dy. GENERAL MANAGER (COMMERCIAL)

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

**PETITION FOR
APPROVAL OF TRANSMISSION TARIFF**

FOR

Approval under regulation-86 for transmission tariff for (i) Aurangabad–Aurangabad (MSETCL) 400 kV D/C (Quad) Line and Shifting of 400 kV D/C Akola - Aurangabad (MSETCL) line to Aurangabad alongwith associated bays at both ends, (ii) 400/220 kV 315 MVA ICT-I alongwith associated bays at Aurangabad S/S & (iii) 400/220 kV 315 MVA ICT-II alongwith associated bays at Aurangabad S/S under Transmission system associated with MUNDRA UMPP in Western Region for the period from DOCO to 31.3.2014.

PETITION NO. :

TARIFF BLOCK : 2009 - 2014

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**

12/11/14

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

PETITION NO.:

IN THE MATTER OF: Approval under regulation-86 for transmission tariff for (i) Aurangabad- Aurangabad (MSETCL) 400 kV D/C (Quad) Line and Shifting of 400 kV D/C Akola - Aurangabad (MSETCL) line to Aurangabad alongwith associated bays at both ends, (ii) 400/220 kV 315 MVA ICT-I alongwith associated bays at Aurangabad S/S & (iii) 400/220 kV 315 MVA ICT-II alongwith associated bays at Aurangabad S/S under Transmission system associated with MUNDRA UMPP in Western Region for the period from DOCO to 31.3.2014.

Power Grid Corporation of India Ltd.
(Govt. of India undertaking)
Registered office: B-9, Qutab Institutional Area,
Katwaria Sarai, New Delhi 110 016 and
Corporate office: "Saudamini", Plot no.2,
Sector-29, Gurgaon -122 001. (Haryana)-
Maharashtra State Electricity Distribution Co. Ltd.

--- PETITIONER

5th Floor, Prakashgad,
Bandra(East), Mumbai - 400 051
Represented By Its Chief Engineer (Power Purchase Cell)
And others

---RESPONDENTS

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


S. S. RAJU

Dy. GENERAL MANAGER (COMMERCIAL)

**GURGAON
DATED 21.10.2013**

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

PETITION NO.:

IN THE MATTER OF: Approval under regulation-86 for transmission tariff for (i) Aurangabad– Aurangabad (MSETCL) 400 kV.D/C (Quad) Line and Shifting of 400 kV D/C Akola - Aurangabad (MSETCL) line to Aurangabad alongwith associated bays at both ends, (ii) 400/220 kV 315 MVA ICT-I alongwith associated bays at Aurangabad S/S & (iii) 400/220 kV 315 MVA ICT-II alongwith associated bays at Aurangabad S/S under Transmission system associated with MUNDRA UMPP in Western Region for the period from DOCO to 31.3.2014.

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

--- 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).

Maharashtra State Electricity Distribution Co. Ltd.
5th Floor,Prakashgad,
Bandra(East), Mumbai - 400 051
Represented By Its Chief Engineer (Power Purchase Cell)
And others
To
The Secretary
Central Electricity Regulatory Commission
New Delhi

---RESPONDENTS

Sir,

The application filed under Regulation 86 of CERC (Conduct of Business) Regulation, 1999 and CERC (Terms and Conditions of Tariff) Regulations'2009 for determination of Transmission tariff from 01.04.2009 to 31.03.2014 may please be registered.

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


S. S. RAJU

Dy. GENERAL MANAGER (COMMERCIAL)

**GURGAON
DATED: 29.10.2013**

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

PETITION NO.: 4/2014

IN THE MATTER OF: Approval under regulation-86 for transmission tariff for (i) Aurangabad– Aurangabad (MSETCL) 400 kV D/C (Quad) Line and Shifting of 400 kV D/C Akola - Aurangabad (MSETCL) line to Aurangabad alongwith associated bays at both ends, (ii) 400/220 kV 315 MVA ICT-I alongwith associated bays at Aurangabad S/S & (iii) 400/220 kV 315 MVA ICT-II alongwith associated bays at Aurangabad S/S under Transmission system associated with MUNDRA UMPP in Western Region for the period from DOCO to 31.3.2014.

Power Grid Corporation of India Ltd.

--- PETITIONER

(Govt. of India undertaking)

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).

Maharashtra State Electricity Distribution Co. Ltd.

---RESPONDENTS

5th Floor, Prakashgad,

Bandra(East), Mumbai - 400 051

Represented By Its Chief Engineer (Power Purchase Cell)

And others

MEMO OF PARTIES

POWER GRID CORPORATION OF INDIA LTD.

---PETITIONER

VERSUS

1. MADHYA PRADESH POWER TRADING COMPANY LTD.

SHAKTI BHAWAN, RAMPUR

JABALPUR - 482 008

REPRESENTED BY ITS MD

2. MAHARASHTRA STATE ELECTRICITY DISTRIBUTION CO. LTD.

5TH FLOOR, PRAKASHGAD,

BANDRA(EAST), MUMBAI - 400 051

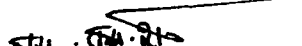
REPRESENTED BY ITS CHIEF ENGINEER (POWER PURCHASE CELL)

3. GUJARAT URJA VIKAS NIGAM LTD.
SARDAR PATEL VIDYUT BHAWAN,
RACE COURSE ROAD
VADODARA - 390 007
REPRESENTED BY ITS CHAIRMAN
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GOVT. OF GOA
VIDYUT BHAWAN, PANAJI,
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REPRESENTED BY ITS SECRETARY (FIN.)
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U.T., SILVASSA - 396 230
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P.O.SUNDER NAGAR, DANGANIA, RAIPUR
CHHATISGAARH-492013
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VIKAS NIGAM (INDORE) LTD.
3/54, PRESS COMPLEX, AGRA-BOMBAY ROAD,
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(A TATA POWER COMPANY)
TATA POWER BACKBAY RECEIVING STATION,
148, LT. GEN J BHONSLE MARG,
NARIMAN POINT, MUMBAI - 400 021
REPRESENTED BY ITS O&M HEAD, MUNDRA UMPP
10. RAJASTHAN RAJYA VIDYUT PRASARAN NIGAM LIMITED
VIDYUT BHAWAN, VIDYUT MARG, JAIPUR - 302 005
REPRESENTED BY ITS CHAIRMAN & OTHERS
11. PUNJAB STATE POWER CORPORATION LTD.
THE DEPUTY CHIEF ENGINEER (ISB)
220kV SUB-STATION, AKOLWAL NEAR PATIALA
PUNJAB- 147 001

12. HARYANA POWER PURCHASE CENTRE
SHAKTI BHAWAN, SECTOR-6
PANCHKULA (HARYANA) 134 109
REPRESENTED BY ITS S.E. / C & R-1

RESPONDENTS

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


S. S. RAJU

Dy. GENERAL MANAGER (COMMERCIAL)

**GURGAON
DATED: 29.10.2013**



हरियाणा HARYANA

BEFORE

30AA 425207

THE CENTRAL ELECTRICITY REGULATORY COMMISSION

NEW DELHI

PETITION NO.:

IN THE MATTER OF: Approval under regulation-86 for transmission tariff for (i) Aurangabad- Aurangabad (MSETCL) 400 kV D/C (Quad) Line and Shifting of 400 kV D/C Akola - Aurangabad (MSETCL) line to Aurangabad alongwith associated bays at both ends, (ii) 400/220 kV 315 MVA ICT-I alongwith associated bays at Aurangabad S/S & (iii) 400/220 kV 315 MVA ICT-II alongwith associated bays at Aurangabad S/S under Transmission system associated with MUNDRA UMPP in Western Region for the period from DOCO to 31.3.2014.

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

--- 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).

Maharashtra State Electricity Distribution Co. Ltd.

---RESPONDENTS

5th Floor, Prakashgad,

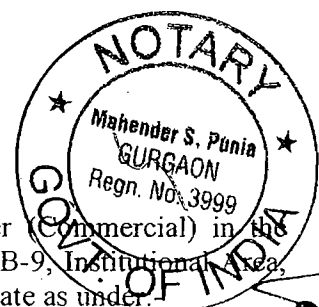
Bandra(East), Mumbai - 400 051

Represented By Its Chief Engineer (Power Purchase Cell)

And others

Affidavit verifying the Petition

I, S S Raju, S/O Sh S B Raju, working as Dy. General Manager (Commercial) in the Powergrid 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.



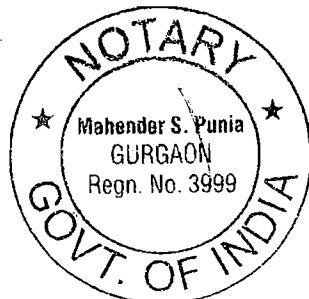
1. I am the Dy. General Manager (Commercial) of Power Grid Corporation of India Ltd., the representative of the Petitioner in the above matter, and am duly authorised to make this affidavit.
2. I submit that the enclosed petition is being filed for determination of tariff for (i) Aurangabad- Aurangabad (MSETCL) 400 kV D/C (Quad) Line and Shifting of 400 kV D/C Akola - Aurangabad (MSETCL) line to Aurangabad alongwith associated bays at both ends, (ii) 400/220 kV 315 MVA ICT-I alongwith associated bays at Aurangabad S/S & (iii) 400/220 kV 315 MVA ICT-II alongwith associated bays at Aurangabad S/S under Transmission system associated with MUNDRA UMPP in Western Region for the period from DOCO to 31.3.2014.
3. I submit that no other petition except this petition has been filed directly or indirectly for (i) Aurangabad- Aurangabad (MSETCL) 400 kV D/C (Quad) Line and Shifting of 400 kV D/C Akola - Aurangabad (MSETCL) line to Aurangabad alongwith associated bays at both ends, (ii) 400/220 kV 315 MVA ICT-I alongwith associated bays at Aurangabad S/S & (iii) 400/220 kV 315 MVA ICT-II alongwith associated bays at Aurangabad S/S under Transmission system associated with MUNDRA UMPP in Western Region for the period from DOCO to 31.3.2014.
4. The statements made in the 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...29th...day of Oct.'13 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.


(DEPONENT)



ATTESTED

MAHENDER S. PUNIA
ADVOCATE & NOTARY
DIST GURGAON (Haryana) India
29 OCT 2013

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

PETITION NO.:

IN THE MATTER OF: Approval under regulation-86 for transmission tariff for (i) Aurangabad– Aurangabad (MSETCL) 400 kV D/C (Quad) Line and Shifting of 400 kV D/C Akola - Aurangabad (MSETCL) line to Aurangabad alongwith associated bays at both ends, (ii) 400/220 kV 315 MVA ICT-I alongwith associated bays at Aurangabad S/S & (iii) 400/220 kV 315 MVA ICT-II alongwith associated bays at Aurangabad S/S under Transmission system associated with MUNDRA UMPP in Western Region for the period from DOCB to 31.3.2014.

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

---PETITIONER

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

Corporate office: "Saudamini", Plot no.2,
Sector-29, Gurgaon -122 001. (Haryana)
Maharashtra State Electricity Distribution Co. Ltd.
5th Floor, Prakashgad,
Bandra(East), Mumbai - 400 051

---RESPONDENTS

Represented By Its Chief Engineer (Power Purchase Cell)
And others

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) The Petitioner herein, Power Grid Corporation of India Ltd. is a Government Company within the meaning of Companies Act, 1956. The Petitioner is also discharging the statutory functions under various applicable provisions, including in particular section 28 and 38 of the Electricity Act, 2003. 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.
- 2) That, Hon'ble Commission have notified CERC (Terms and Conditions of Tariff) Regulations, 2009, in accordance with which tariff based on capital cost of the transmission projects shall be determined. These Regulations have come in to force on 1.4.2009 and shall remain in force for a period of 5 years, unless reviewed earlier or extended by the Hon'ble Commission.

(14.12.21)

3) Approval of the Scheme

That the petitioner has been entrusted with the implementation of Associated Transmission System (ATS) for Mundra (4000MW) UMPP. Investment approval for this transmission scheme was accorded by POWERGRID Board vide their letter dated 15.10.2008 at an estimated cost of Rs. 4824.12 Crs including IDC of Rs. 446.86 crs. (based on 1st Quarter, 2008 price level), a copy whereof investment approval is attached hereto as **Encl.-1, page...2.9...to...2.5...** RCE is under approval.

As per signed BPTA, Transmission charges for Part A above shall be shared only by beneficiaries of Mundra UMPP namely Gujarat, Maharashtra, Punjab, Rajasthan and Haryana whereas for part B Transmission charges shall be shared by all the constituents of WR and those beneficiaries in NR having share in Mundra UMPP, a copy whereof is attached hereto **Encl.- 2, (Page.2.6...to...2.9...)**.

The scope of work covered under the scheme is as follows:

Part (A): Transmission System of Mundra (4000 MW) UMPP

Transmission Lines

- i) Mundra – Limdi 400kV D/C (Triple snowbird) : 301 km
- ii) Mundra - Bachchau- Ranchodpura 400kV D/C(Triple snowbird) : 388 km
- iii) Mundra – Jetpur 400kV D/C (Triple snowbird) : 328 km

Part (B): Regional System Strengthening in WR for Mundra UMPP

Transmission Lines

- i) Gandhar – Navsari 400kV D/C : 134 km
- ii) Navsari –Mumbai (New location) 400 kV D/C : 204 km
- iii) LILO of both circuits of Kawas-Navsari 220 kV D/C at Navsari : 50 km
- iv) Wardha–Aurangabad 400kV D/C (Quad) along with 40% Fixed Series Compensation with provision to upgrade the line to 1200kV S/C at a later date : 400 km
- v) Aurangabad -Aurangabad(MSETCL) 400 kV D/C (quad) line : 30 km

Substations

- i) Establishment of new 400/220kV, 2x315MVA substations at Bachehau
- ii) Establishment of new 400/220kV, 2x315MVA GIS substations at Navsari
- iii) Establishment of new 400kV GIS switching station at Mumbai (New location)
- iv) Establishment of 765/400kV, 3x1500 MVA substation at Wardha
- v) 765kV line bays for operation of Seoni- Wardha 2xS/C lines at 765kV level.
- vi) Establishment of 400/220 kV, 2x315 MVA, substation at Aurangabad.

Schematic diagram of the same is attached hereto as **Encl. - 3, (page 3.9.)**.

22. 12. 20

4) Implementation Schedule

As per the approval, the transmission scheme was scheduled to be commissioned in 48 months from the date of investment approval. The date of Investment Approval is 15.10.2008. Hence, the commissioning schedule comes to 14.10.2012 and DOCO as 01.11.2012 against which the subject asset is anticipated to be commissioned and put under commercial operation as detailed below:

S.No	Name of Assets	Anticipated DOCO
1	Aurangabad – Aurangabad (MSETCL) 400 kV D/C Quad Line and Shifting of Akola - Aurangabad (MSETCL) line to Aurangabad (PG) with bays - Asset I	01.01.2014
2	400/220 kV 315 MVA ICT-I at Aurangabad with Bays- Asset II	01.01.2014
3	400/220 kV 315 MVA ICT-II at Aurangabad with Bays- Asset III	01.01.2014

The reasons for delay in commissioning of the assets are given below:

As per the 31st Meeting of Standing Committee on Power System Planning in Western Region held on 27th December 2010. Due to non –availability of space at Aurangabad (MSETCL), termination of Akola- Aurangabad (MSETCL) 400kV D/C line at Aurangabad (PG) instead of at Aurangabad (MSETCL) was agreed. The bays available at Aurangabad (MSETCL) due to this change in termination were to be used for Aurangabad (PG) – Aurangabad (MSETCL) 400kV D/C (quad) line.

In order to reduce ROW, multi-circuit tower was agreed to carry both Akola-Aurangabad (PG) 400kV D/C Twin Moose line and Aurangabad (PG) – Aurangabad (MSETCL) 400kV Quad D/C line.

In spite of all the best efforts being made to complete the 400 kV M/C Aurangabad (MSETCL) – Aurangabad (PG) transmission line within scheduled time, the TL is getting delayed due to FOLLOWING numerous factors:

- The major factor is intensive right of way problems. More than 14 locations are under severe ROW problems which though have been taken up with the District Magistrate but are in the hearing stage.
- There is one court case (civil suit) for location no. 18/0 by M/s Salasar Housing.
- There is one writ petition at Aurangabad bench of Mumbai High Court for location no. 27/4 against the order of Collector, Aurangabad.
- Severe drought from January to May 2013 at Aurangabad caused considerable delay for construction of work. There was almost ban from District Authorities for usage of water for construction works for deficiency of drinking water for public.
- There is severe ROW problems from the farmers due to good crop after a gap of 2-3 years.

It is submitted that the reasons for delay in commissioning of the assets were beyond the control of the Petitioner, therefore, Hon'ble Commission may kindly condone the delay and approve full cost and tariff as claimed in the instant Petition.

Details of Petitions under Mundra UMPP transmission System already filed is mentioned as below:

S.N	Asset	Anticipated DOCO as filed in petition	Actual DOCO	Pet. No.
1.	400kv D/C Mundra-Bachchau (Triple Snowbird) Transmission line along with associated Bays at Bachchau Substation	01.06.2011	01.10.2011	105/2011 Hearing

	(Extension)			Held. Order dtd. 02.05.13
2.	New 400/220kV Bachchau Substation (Gujarat) and 1*63 MVAR Bus Reactor at Bachchau Substation (New) along with associated bays (Ant. DOCO: 01.06.2011)	01.06.2011	01.10.2011	
3.	400/220kV ICT-1 at Bachchau Substation along with associated 400kV and 220kV lines bays (Ant. DOCO: 01.06.2011)	01.06.2011	01.10.2011	
4.	Combined asset of 400/220kV ICT-1 at Bachchau Substation along with associated 400kV and 220kV bays (Ant. DOCO : 01.06.2011) & 400/220kV ICT-2 at Bachchau Substation along with associated 400kV and 220kV bays (Anticipated DOCO : 01.07.2011) (Notional DOCO:01.07.2011)	01.07.2011	01.10.2011	
5	Combined assets of 400 kV D/C Bachao - Ranchodpura TL with associated bays at Bachau and Ranchodpura S/S (Ant. DOCO: 01.01.2012), 400 kV D/C Mundra - Limbdi TL (Triple Snowbird) with associated bays at Limbdi S/S (Ant. DOCO: 01.01.2012) and 400kv D/C Mundra-Bachchau (Triple Snowbird) Transmission line along with associated Bays at Bachchau Substation (Extension) (Ant. DOCO: 01.06.2011)	01.01.2011	Mundra-Limbdi part TL yet to be commissioned	Hearing held on 2/4/13 order pending.
6	Combined asset of 400kV D/C Mundra-Bachchau (Triple Snowbird) Transmission line along with associated Bays at Bachchau Substation (Extension) (Ant. DOCO: 01.06.2011), 400 kV D/C Bachao - Ranchodpura TL with associated bays at Bachau and Ranchodpura S/S (Ant. DOCO 01.01.2012), 400 kV D/C Mundra - Limbdi TL (Triple Snowbird) with associated bays at Limbdi S/S (Ant. DOCO 01.01.2012) & 400 kV D/C Mundra-Jetpur line with associated bays at Jetpur S/S (GETCO) (Ant. DOCO: 01.03.2012)	01.03.12	01.01.2013 (Notional)	
7	Combined asset of New 400/220kV Bachchau Substation (Gujarat) and 1*63 MVAR Bus Reactor at Bachchau Substation (New) along with associated bays (Ant. DOCO: 01.06.2011), 400 kV Gandhar (NTPC) - Navsari line along with associated bays at Gandhar (NTPC) and Navsari (GIS) S/S, Navsari GIS S/S (New) (Ant. DOCO: 01.03.2012) – Asset III	01.03.12	01.08.2012 (Notional)	64/TT/2012 Hearing Pending
8	Combined asset of 400/220kV ICT-1 at Bachchau Substation along with associated 400kV and 220kV bays (Ant. DOCO : 01.06.2011), 400/220kV ICT-2 at Bachchau Substation along with associated 400kV and 220kV bays (Ant. DOCO : 01.07.2011), LILO of 220 kV D/C Kawas-Navsari line at Navsari GIS S/S & 400/220 kV ICT I and ICT II alongwith associated bays at Navsari GIS S/S (Ant.DOCO: 01.03.2012)	01.03.12	01.11.2012 (Notional)	
9	Establishment of 765/400 kV Wardha	01.03.12	01.03.12	72/TT/2012

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	SS with 1500 MVA ICT1, 240 MVAR Bus Reactor and Switchable 240 MVAR Line Reactor at Seoni, Bays for Seoni-Wardha Ckt-2 at Wardha SS & Seoni SS			
10	765/400 kV 1500 MVA ICT 3 at Wardha SS with bays	01.03.12	01.03.12	Hearing Pending
11	Bay Extension at 765 kV Seoni SS & Wardha SS-for 765 Seoni-Wardha Ckt-1 alongwith switchable Line Reactor at Seoni	01.04.12	01.06.12	
12	765/400 kV 1500 MVA ICT 2 at Wardha SS with bays	01.04.12	01.04.12	
13	400kV D/C Navsari- New Mumbai (Boisar) {cut off point of WRTS-II Portion only} {Part of 400kV Navsari-Boisar TL} along with respective bays at Navsari GIS SS associated with Regional System of MUNDRA UMPP (Interconnection with Vapi-Navi Mumbai line along with associated bays at Vapi SS under interim contingency arrangement	01.02.13	01.04.13	Hearing pending

5) Completion Cost

That the application for determination of tariff is filed in line with provision 5 (1) & (2) of tariff Regulation 2009 applicable for 2009-14 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 31.03.2015 in respect of the subject assets as per detail given below. That the capital cost incurred upto DOCO and projected to be incurred during 2013-14 & 2014-15 is duly certified by auditors in auditor certificate; copy whereof in respect of the assets covered in this petition is enclosed herewith as Encl-4 (page 31.. to 36).

Name of asset	Apportioned apprvd. cost	Est. Exp. upto DOCO	Est. exp. From 01.01.2014 to 31.03.2014	Est. exp. From 01.04.2014 to 31.03.2014	Total Estimated Exp.
Asset I	15217.39	20535.69	3320.8	11125.69	34982.18
Asset II	3521.82	1478.38	546.16	370.73	2395.27
Asset III	2321.27	979.7	281.95	280.78	1542.43
Total	21060.48	22993.77	4148.91	11777.2	38919.88

It is submitted that the estimated completion cost of the elements under the instant Petition is Rs 38919.88 lakh against the apportioned approved cost of Rs 21060.48 lakh, and there is cost over run. The detailed reasons for item wise cost variation between approved cost (FR) and actual cost as on DOCO are explained in detail in Form-5B.

It is submitted that initially one 400kV D/C Quad Aurangabd to Aurangabad (MSETCL) was proposed. However, as per 31st standing committee, it was decided that 400 kv Akola- Aurangabd (MSETCL) shall be shifted to Aurangabad and 2 bays of Akola- Aurangabad shall be utilized for 400kV D/C Quad Aurangabad to Aurangabad (MSETCL) TL. Due to severe ROW problem, shifting of 400 Akola- Aurangabad (MSETCL) and 400 kV Aurangabad - Aurangabad (MSETCL) has been constructed on Multi ckt tower with top twin D/C and bottom Quad D/C configuration. Conductor quantity has increased due to inclusion of twin ckt of Akola - Aurangabad TL for the required shifting. Further, quantity has increased due to incorporation of Akola # 1 & 2 bays in 400 KV Aurangabad S/S, which was not envisaged in the FR. This modification is being implemented as per the 31st SCM, wherein, scheme for the interconnection between Aurangabad & Aurangabad (MSETCL) was modified due to non-availability of space in Aurangabad (MSETCL).

Variation is due to shifting of the existing 2 nos. of 50MVAR shunt Reactor from Aurangabad (MSETCL) to Aurangabad (POWERGRID) for 400 KV Aurangabad - Akola D/C line as per the decision taken in 31st SCM.

A copy of 31st SCM in respect of the asset covered in this petition is enclosed herewith as Encl-5 (page 3.1 to 4.1).

It is further submitted that, the cost incurred in execution was not specifically included in original FR. Hence the cost is increased compared to FR. Further, it is submitted that the comparison of actual cost with approved cost of the project is to be seen for the project as a whole and not separately for each element. The approved cost of the entire project is Rs 482412 lakhs against which the estimated completion cost of the assets covered under the instant petition comes to Rs. 38919.88 lakhs.

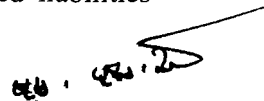
That the petitioner as per clause 6 (1) of tariff Regulations'2009 may in its discretion make an application before the Hon'ble commission one more time prior to 2013-14 for revision of tariff.

The details of underlying assumptions for additional capitalization are summarized as follows:

The admissibility of additional capital expenditure (Add. Cap.) incurred after DOCO is to be dealt in accordance with the provisions of Regulation 9 (1), the extract of clause 9 of the regulations, 2009 is reproduced as under:

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

- (i) Undischarged liabilities;
- (ii) Works deferred for execution
- (iii) Procurement of initial capital spares within the original scope of work, subject to the provisions of regulation 8;
- (iv) Liabilities to meet award of arbitration or for compliance of the order or decree of a court; and
- (v) Change in Law: Provided that the details of works included in the original scope of work along with estimates of expenditure, undischarged liabilities



and the works deferred for execution shall be submitted along with the application for determination of tariff.

The additional Capitalisation incurred in the contextual assets is 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 are as below:

Asset I

(Rs in lakhs)

Year	Work/Equipment proposed to be added after COD up to cut off date / beyond cut off date	Amount capitalized and proposed to be capitalized	Justification as per purpose
2013-14	Building & other civil works	354.51	Balance & retention payment
	Transmission Line	2187.39	Balance & retention payment
	Sub station	712.45	Balance & retention payment
	PLCC	66.44	Balance & retention payment
	Sub-total	3320.79	
2014-15	Building & other civil works	1071.97	Balance & retention payment
	Transmission Line	9000.00	Balance & retention payment
	Sub station	1038.85	Balance & retention payment
	PLCC	14.87	Balance & retention payment
	Sub-total	11125.69	

Asset II

(Rs in lakhs)

Year	Work/Equipment proposed to be added after COD up to cut off date / beyond cut off date	Amount capitalized and proposed to be capitalized	Justification as per purpose
2013-14	Building & other civil works	47.16	Balance & retention payment
	Sub station	491.76	Balance & retention payment
	PLCC	7.23	Balance & retention payment
	Sub-total	546.15	
2014-15	Building & other civil works	50.00	Balance & retention payment
	Sub station	319.72	Balance & retention payment
	PLCC	1.01	Balance & retention payment
	Sub-total	370.73	

Asset III

(Rs in lakhs)

Year	Work/Equipment proposed to be added after COD up to cut off date / beyond cut off date	Amount capitalized and proposed to be capitalized	Justification as per purpose
2013-14	Building & other civil works	108.21	Balance & retention payment
	Sub station	166.51	Balance & retention payment
	PLCC	7.23	Balance & retention payment
	Sub-total	281.95	

26.06.20

2014-15	Building & other civil works	21.97	Balance & retention payment
	Sub station	257.80	Balance & retention payment
	PLCC	1.01	Balance & retention payment
	Sub-total	280.78	

6.0 TRANSMISSION TARIFF

- 6.1 The tariff for block 2009-2014 has been worked out as per CERC (Terms and Conditions of Tariff) Regulations, 2009, issued vide notification dated. 19.01.2009. In the present petition the transmission tariff has been calculated taking anticipated expenditure upto DOCO and projected additional capitalization from DOCO to 31.03.2015. Calculations for working out the tariff along with supporting documentation are attached hereto as Encl.-6, (page 4-2 to 10.2..). The annual transmission tariff for the tariff period 2009-14 is summarized as below:

(Rs in Lakhs)

S. No.	Name of the asset	2009-10	2010-11	2011-12	2012-13	2013-14*
1.	Asset I	-	-	-	-	681.41
2.	Asset II	-	-	-	-	105.30
3.	Asset III	-	-	-	-	86.38

* Tariff for 2013-14 is pro-rata for 03 months (01.01.2014 to 31.03.2014)

- 6.2 That Aurangabad – Aurangabad (MSETCL) 400 kV D/C Quad Line and Shifting of Akola - Aurangabad (MSETCL) line to Aurangabad (PG) with bays line consists of two parts namely D/C portion of (1.438 KM with twin conductors and 2.916 KM with quad conductors) and Multi Circuit portion of (49.716 KM with twin conductors and 49.716 KM with quad conductors on the same tower)The multi circuit portion consists of two D/C lines. Since in CERC Regulation 2009, no norms of O&M expenditure are indicated for Multi Circuit Lines (lines more than two circuits), two no. of D/C lines (one D/C with twin and one D/C with quad conductors) of 49.716 KM each have been considered for Multi Circuit Portion of this asset for calculation of O&M charges.
- 6.3 That, it is submitted in the Tariff indicated at 6.1 above, the ROE has been calculated @ 17.481 % based on the rate notified by the Hon'ble Commission as per illustration under regulation 15 (4) (i) of the CERC (Terms and Conditions of Tariff) Regulations, 2009. It is further submitted that the above rate of 17.481 % is based on the MAT rate of 11.33 % being applicable for the year 2008-09.

That further in line with the amendment dated 21.06.2011 to Regulation 15 of the Principal Tariff Regulation dated 19.01.2009, the petitioner shall be allowed to recover the shortfall or refund the excess Annual Fixed Charges, on account of rate 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. Further, Annual Fixed charges with respect to Tax rates applicable shall be trued up in accordance with Regulation 6 of the Principal Regulations

44. 04. 20

- 6.4 The transmission charges at para 6.1 above is inclusive of O&M expenses for the project derived based on the norms for O&M expenditure as specified under regulation 19(g) of the tariff regulations for block 2009-14. 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 2003-04, 2004-05, 2005-06, 2006-07, 2007-08, (ii) the base norms so arrived is escalated at 5.72% per annum to arrive at norms for years of tariff period 2009-14, (iii) and also wage hike of 50% on account of pay revision of the employees of Public Sector Undertakings. It is submitted that the wage revision of the employees of the petitioner company has already been done. The petitioner shall approach the Commission for additional manpower cost on account of wage revision (if, any) during the tariff block 2009-14 for claiming in the tariff.

Petitioner submits that the License fee has been a new component of cost to the Transmission license under O&M stage of the project and has become incidental to the petitioner / CTU only from 2008-09.

It is therefore submitted that License fee shall be recovered separately from the respondents as per CERC (Terms and Conditions on Tariff) (Third Amendment), Regulations, 2012 issued vide date 31.12.2012, para 13 "Addition of New Regulation to the Principal Regulations 42A. (1) (b)."

- 6.5 The Transmission Charges and other related Charges indicated at para 6 above, is exclusive of incentive, late payment surcharge, FERV, any statutory taxes, levies, duties, cess, filing fees, license fee 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/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.
- 6.6 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 6.1 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.
- 6.7 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 as was being followed during the tariff block 2004-09.
- 6.8 The Transmission Charges and other related Charges indicated at para 8.2 above, is exclusive of incentive, late payment surcharge, FERV, any statutory taxes, levies, duties, cess, filing fees, license fee 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/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.

7.0 **Sharing of Transmission Charges**

Tariff for Transmission of Electricity (Annual Fixed Cost) as per para 6.1 of petition 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.

- 8.0 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 in para-11 above. **The Petitioner submits that the Encl.-1 to Encl.-6 may please be treated as integral part of this petition.**

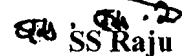
PRAYER

- 1) Approve the Transmission Tariff for the assets covered under this petition, as per para -6 above. The billing shall be done from the actual date of commercial operation.
- 2) Approve the Additional Capitalisation incurred / projected to be incurred.
- 3) 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.
- 4) Approve the reimbursement of expenditure by the beneficiaries towards petition filing fee, and publishing of notices in newspapers in terms of Regulation 42 CERC (Terms and Conditions of Tariff) Regulations, 2009, and other expenditure (if any) in relation to the filing of petition.
- 5) 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 2009-14 period, if any, from the respondent.
- 6) 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.
- 7) Allow the petitioner to bill and recover Licensee fee separately from the respondents as per CERC (Terms and Conditions on Tariff) (Third Amendment), Regulations, 2012 issued vide date 31.12.2012, para 13 "Addition of New Regulation to the Principal Regulations 42A. (1) (b)."
- 8) Allow provisional tariff in accordance with clause (3) of Regulation 5 Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2009 (First and Second Amendment).

- 9) It is prayed that the initial spares as claimed in the instant petition may be allowed and a final view on admissibility of spares as per ceiling norms can be considered at a later date after completion of the overall project.
- 10) Allow provisional tariff in accordance with clause (3) of Regulation 5 Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2009 (First and Second Amendment).
- 11) Allow the petitioner to bill Tariff from actual DOCO.
- 12) The variation between the approved cost and the anticipated completion cost may kindly be looked into at project level when the entire scope of the project is commissioned and tariff may be allowed as claimed in the current petition.
- 13) Condone the delay in commissioning of the assets covered under current petition.

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**


SS Raju

Dy. GENERAL MANAGER (COMMERCIAL)

**GURGAON:
DATED: 29.10.2013**

पावर ग्रिड कारपोरेशन ऑफ इंडिया लिमिटेड
(भारत सरकार का उद्यम)
POWER GRID CORPORATION OF INDIA LIMITED
(A Government of India Enterprise)



कंपनी का पता: "सौदामिनी" प्लॉट नं. 2, सेक्टर-29, गुरुगँव-122 001, हरियाणा
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Tel : 2571700-719, Fax : 2571760, 2571761 Gram : "NATGRID"

संदर्भ संख्या/Ref. Number C/CP/ Mundra

October 15, 2008

MEMORANDUM

Sub: Transmission System associated with Mundra Ultra Mega Power Project.

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 "**Transmission System associated with Mundra Ultra Mega Power Project (UMPP)**", in its 213th meeting held on September 17, 2008, as per details given below:

1. Scope of Project

Scope of works to be carried out under the scheme is attached at **Annexure-I**.

2. Project Cost and Funding

The estimated cost of the project based on 1st Quarter 2008 price level works out to **Rs. 4824.12 Crore** (including IDC of **Rs. 446.86 Crore**). The abstract cost estimate is enclosed at **Annexure-II**. Project is proposed to be funded through Domestic borrowings and internal resources of POWERGRID with a Debt: Equity ratio of 70:30.

3. Implementation Schedule

The commissioning schedule of the project is 48 months from the date of investment approval.

This is issued in pursuance of the minutes of 213th meeting of Board of Directors of POWERGRID held on September 17, 2008.


(Sunil Agrawal)
Addl. General Manager (CP)



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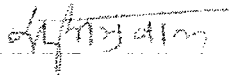
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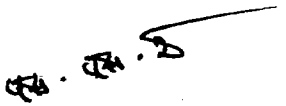
Company Secretary

For kind information to:

Director (Projects) / Director (Finance)

CVO


(Sunil Agrawal)
Addl. General Manager (CP)




Copy for kind information please:

1. PS to Secretary (Power)
2. Chairman, CERC, Core-3, 6th floor, SCOPE complex, New Delhi – 110 003
3. Chairperson, CEA, R. K. Puram, New Delhi – 110 066
4. Chairman, Maharashtra State Electricity Board, Hongkong Bank Bldg, 4th floor, MG Road, Fort, Mumbai – 400 051
5. Chairman, Madhya Pradesh State Electricity Board, Shakti Bhawan, PB No. 34, Rampur, Jabalpur – 482 008
6. Chairman, Gujarat Electricity Board, Vidyut Bhawan, Race Course, Baroda, Gujarat
7. Secretary (Power), Govt. of Goa, Vidyut Bhawan, Near Mandvi Hotel, Panaji, Goa – 403 001
8. Chairman, Chhattisgarh State Electricity Board, PO – Sundarnagar, Dangania, Raipur, Chhattisgarh – 492 013
9. Member Secretary, NRPC, 18/A, Shaheed Jeet Singh Sansanwai Marg, Katwaria Sarai, New Delhi-110 016
10. Chairman, Punjab State Electricity Board, The Mall, Patiala-147001
11. CMD, Rajasthan State Electricity Board, Vidyut Bhawan, Vidyut Marg, Jaipur-302005.
12. CMD, Haryana Vidyut Prasaran Nigam Ltd., Shakti Bhawan, Sector-6, Panchkula (Haryana) – 134109
13. Secretary (Power), Electricity Department, Administration of Dadra Nagar Haveli, U.T. Silvassa – 396 230
14. Secretary (Power), Electricity Department, Administration of Daman and Diu, U.T. Daman – 396 210
15. Member Secretary, WRPC, MIDC Area, Marol, Andheri East, Mumbai – 400 094
16. CEO, Coastal Gujarat Power Limited, Tata Power Backbay Receiving Station, 148, Lt. Gen. J. Bhonsle Marg, Nariman Point, Mumbai- 400021
17. Advisor, PAMD, Planning Commission, Yojana Bhawan, New Delhi – 110 001
18. Member Secretary, Planning Commission, Yojana Bhawan, New Delhi – 110 001
19. Member (Power Systems), CEA, R.K.Puram, New Delhi – 110 066
20. Secretary, CEA, Sewa Bhawan, R.K.Puram, New Delhi – 110 066 (3 Copies)
21. Addl. Secretary (Trans.), MOP, Shram Shakti Bhawan, New Delhi – 110 001
22. Joint Secretary & Financial Advisor, MOP, Shram Shakti Bhawan, New Delhi – 110 001.
23. Director (Trans.), MOP, Shram Shakti Bhawan, New Delhi – 110 001
24. Joint Secretary (Plan Finance Div.-II), Ministry of Finance, North Block, New Delhi – 110 001

13. 13.2

25. Director, Ministry of Finance (Plan Finance-II Div.), North Block, New Delhi – 110 001
26. Joint Secretary, Ministry of Statistics & Programme Implementation, Sardar Patel Bhawan, New Delhi – 110 001
27. Deputy Secretary, Cabinet Secretariat, Rashtrapati Bhawan, New Delhi – 110 001
28. Under Secretary, Finance & Budget Section, MOP, New Delhi – 110 001


(Sunil Agrawal)
Addl. General Manager (CP)

Transmission System associated with Mundra Ultra Mega Power Project

SCOPE OF WORKS

Scope of work covered under the project broadly includes construction of following transmission lines and sub-stations:

Part (A): Transmission System of Mundra (4000 MW) UMPP

Transmission Lines

- i) Mundra – Limdi 400kV D/C (Triple snowbird) : 301 km
- ii) Mundra – Bachchau- Ranchodpura 400kV D/C (Triple snowbird) : 388 km
- iii) Mundra – Jetpur 400kV D/C (Triple snowbird) : 328 km

Part (B): Regional System Strengthening in WR for Mundra UMPP

Transmission Lines

- i) Gandhar – Navsari 400kV D/C : 134 km
- ii) Navsari –Mumbai (New location) 400 kV D/C : 204 km
- iii) LILO of both circuits of Kawas-Navsari 220 kV D/C at Navsari : 50 km
- iv) Wardha–Aurangabad 400kV D/C (Quad) along with 40% Fixed Series Compensation with provision to upgrade the line to 1200kV S/C at a later date : 400 km
- v) Aurangabad -Aurangabad(MSETCL) 400 kV D/C (quad) line : 30 km

Substations

- i) Establishment of new 400/220kV, 2x315MVA substations at Bachchau
- ii) Establishment of new 400/220kV, 2x315MVA GIS substations at Navsari
- iii) Establishment of new 400kV GIS switching station at Mumbai (New location)
- iv) Establishment of 765/400kV, 3x1500 MVA substation at Wardha
- v) 765kV line bays for operation of Seoni- Wardha 2xS/C lines at 765kV level.
- vi) Establishment of 400/220 kV, 2x315 MVA, substation at Aurangabad.

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ABSTRACT COST ESTIMATE
(BASE COST)
ATS FOR MUNDRA (4000 MW) UMPP

(Cost updated to 1st Qtr. 2008 price level)

Sr. No.	DESCRIPTION	AMOUNT (Rs. in Crs.)
A	Preliminary Survey & Soil Investigation	3.16
B	Land acquisition for S/Stn and R&R Compensation	0.00
C	Cost of compensation for Trans. Lines	
	i) Compensation towards Crop & PTCC	40.55
	ii) Compensation towards forest & Wild life sanctuary	5.90
D	Civil Works	
	i) Infrastructure for substations	0.40
	ii) Non Residential Buildings	0.00
	iii) Colony for Trans. Lines and S/stn	2.22
E	<u>Equipment (Supply & Erection) Cost</u>	
	a) Trans. Lines	1400.60
	b) Sub-Stations	62.97
F	Sub Total A to E	1515.81
G	Maintenance during construction	
H	Engg. & Administration	@ 5% of [F - C(ii)]
I	Losses on Stock	
J	Contingencies @ 3% of [F - C(ii)]	45.30
K	Centages & Contingencies @ 8% on 27.60 Ha Compensatory Afforestation (considering Rs.45,000 per Ha for	0.01
L	Overhead payable to GEB	4.76
	Sub Total (A to L)	1641.36
M	Interest During Construction(IDC)	182.02
	GRAND TOTAL	1823.38

Note: 1. Loan has been assumed to be available from Domestic sources.
2. Interest rate on Loan has been considered @ 10.0% for Domestic Loan subject to actuals.
3. Debt:Equity ratio has been considered as 70:30.



महाराष्ट्र MAHARASHTRA

BD 097053

24 JUL 2008

क्र. ६४३२ दि. २९/७/०८ वि. वार. अदमन, स्टॅम्प केस
 पावर ग्रिड कारपोरेशन मुह. न. नागपुर. ला. नं. १/१९
 ऑफ इंडिया १०१२२३

AGREEMENT BETWEEN
 POWER GRID CORPORATION OF INDIA LIMITED
 AND
 GUJARAT URJA VIKAS NIGAM LIMITED

This Agreement entered into on the Thirty first day of July, 2008 between Power Grid Corporation of India Ltd. a company incorporated under the Companies Act 1956 having its registered office at B-9, Qutab Institutional Area, Katwaria Sarai, New Delhi-110016 (herein after called POWERGRID which expression shall unless repugnant to the context or meaning thereof include its successors and assigns) as party of the first part and Gujarat Urja Vikas Nigam Limited having its office at Sardar Patel Vidyut Bhavan, Race Course, Vadodara 390007 (herein after called GUVNL or Bulk Power Beneficiaries which expression shall unless repugnant to the context or meaning thereof include its successors and assigns) as party of the second part.

Contd... 2

[Signature] *[Signature]*

30

ATTESTED TRUE COPY
[Signature]
 Authorised Signatory
 Power Grid Corporation of India Ltd.
 Plot No. 1, Sector 1, Gurgaon-122001 (HARYANA)

WHERE AS POWERGRID and Bulk Power Beneficiaries in Western Region have already entered into a Bulk Power Transmission Agreement on 31.3.1999 for the payment of transmission charges of the assets owned, operated and maintained by POWERGRID.

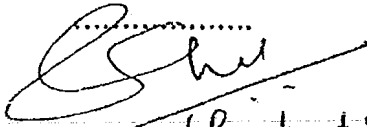
WHERE AS it has been agreed by and between the parties that POWERGRID shall install, own, operate and maintain the transmission system mentioned in Enclosure.1 to this Agreement

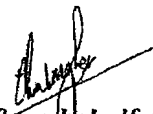
In consideration of the above, the parties hereto agrees as under:

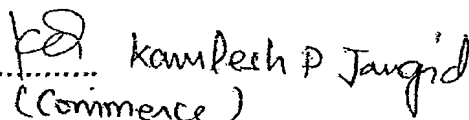
1. The transmission charges for these assets shall be shared by the Bulk Power Beneficiaries as per the mechanism indicated in Enclosure.1.
2. All other terms and conditions mentioned in the BPTA dated 31.3.1999 already signed by Bulk Power Beneficiaries of Western Region with POWERGRID shall mutatis mutandis applicable for these assets also.


IN WITNESS WHERE OF the parties have executed these presents through their duly Authorized Representatives.

WITNESS


(Prashant Sharma)
Addl GM Commercial


For & on behalf of
Power Grid Corporation of India Ltd.
(C.M. VERGHESE)
Addl. G.M. (Commercial)


CFM (Commerce)
GUVNL Baroda


For & on behalf of
Gujarat Urja Vikas Nigam Limited
(S. B. KHYALIA)
General Manager (Comm)
GUVNL, BARODA.





**LIST OF ASSETS OF TRANSMISSION SYSTEM INCLUDED AS PART OF
BPTA ALREADY EXECUTED BY WR CONSTITUENTS/NR CONSTITUENTS**

1. **Mundra UMPP (4000 MW) Transmission System**
(Transmission charges to be shared only by beneficiaries of Mundra UMPP i.e. Gujarat, Maharashtra, Punjab, Rajasthan and Haryana in ratio of their allocated power from Mundra UMPP)
 - i. Mundra-Limbdi 400kV D/c (Triple Snowbird)
 - ii. Mundra-Bhachau-Ranchhodpura 400kV D/c (Triple Snowbird)
 - iii. Mundra-Jetpur 400kV D/c (Triple Snowbird)

2. **Sasan UMPP (4000 MW) Transmission System**
(Transmission charges to be shared only by beneficiaries of Sasan UMPP i.e. Madhya Pradesh, Delhi, U.P., Uttarakhand, Punjab, Rajasthan and Haryana in ratio of their allocated power from Sasan UMPP)
 - i. Sasan-Satna 765kV 2xS/c
 - ii. Satna 765/400kV, 2x1000 MVA S/S
 - iii. Satna-Bina (PG) 765 kV 2xS/c
 - iv. Bina(PG)-Bina(MP) 400kV D/c (2nd line)
 - v. LILO of both circuits of one of the Vindhyachal-Jabalpur 400kV D/c line at Sasan
 - vi. Line bays for 765kV operation of Agra-Gwalior-Bina-Seoni lines
 - vii. Sasaram-Fatehpur 765kV S/c
 - viii. Fatehpur-Agra 765kV S/c

3. **Regional System of WR (Sasan and Mundra)**
(Transmission charges to be apportioned in the Western Regional system with additional 4200 MW share of WR from Sasan and Mundra UMPP and 1300 MW of NR share in Mundra. to be included in the total ISGS installed capacity of WR for the purpose of sharing of these transmission charges by all the constituents of WR and those beneficiaries in NR having share in Mundra UMPP.)
 - (a) **Regional System for WR -(Mundra)**
 - (i) Bhachau 400/220kV 2x315 MVA S/S
 - (ii) Gandhar-Navsari 400kV D/c
 - (iii) Navsari (GIS) 400/220kV S/s 2x315 MVA
 - (iv) LILO of both ckts. Of Kawas-Navsari 220kV D/c line at Navsari
 - (v) Navsari-New location near Mumbai (PG) 400kV D/c
 - (vi) Wardha 765/400kV S/s, 3x1500 MVA
 - (vii) 765KV operation of Seoni-Wardha 2xS/c lines
 - (viii) Wardha-Aurangabad 400 kV D/C(quad) with 40% fixed series capacitor with towers design such that the line could be upgradable as a 1200kV S/C line.
 - (ix) 400/220kV Switching station (GIS) near Mumbai
 - (x) Aurangabad-Aurangabad 400kV D/c quad
 - (xi) Aurangabad 400/220kV 2x315 MVA S/stn.

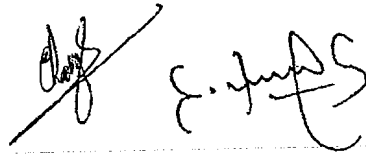
 - (b) **Regional System for WR (Sasan)**
 - i) Bina(PG)-Indore 765 kV S/c
 - ii) New 765kV substation at Indore, 2x1500 MVA 765/400KV
 - iii) Indore(PG)-Indore 400kV Quad D/c
 - iv) Upgrading Bina & Gwalior S/s to 765 kV 2x1000MVA at Bina and 2x1500MVA at Gwalior

NOTE:

Western Region constituents would utilize specific system of Sasan for their share of power from Sasan UMPP and specific system of Mundra for their power from Mundra UMPP. They would also utilize the pooled system of WR for the delivery of power from both the projects. Accordingly, WR beneficiaries of Sasan and Mundra UMPPs would share the transmission charges for the specific system of the respective project and all constituent of WR including beneficiaries of Mundra in NR would share the transmission charges for WR pooled system.

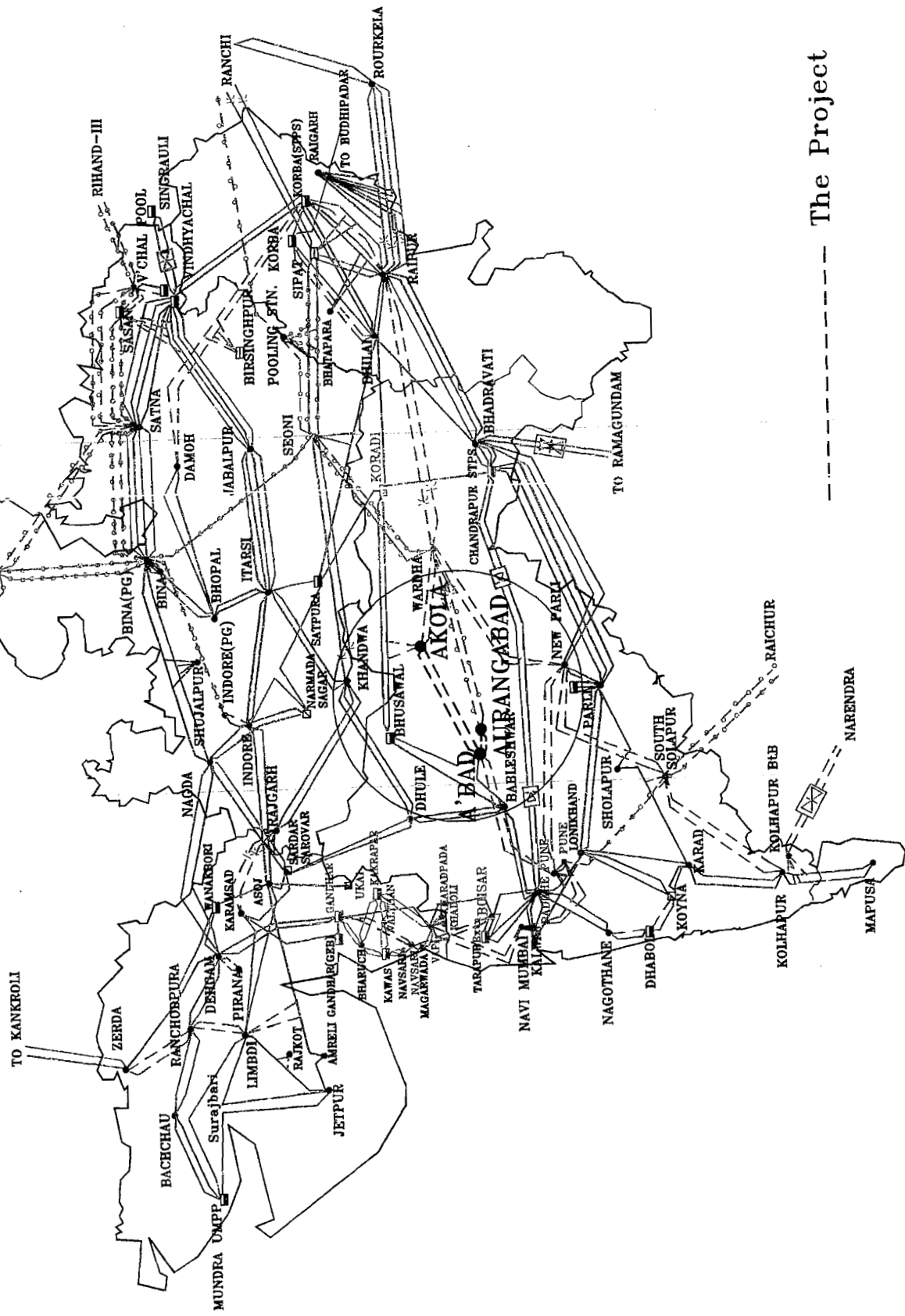
For the Northern Region beneficiaries Sasan power would get delivered to Northern directly and therefore, NR beneficiaries would utilize specific transmission system of Sasan and NR region pooled system. NR beneficiaries would be utilizing specific system of Mundra plus WR regional pooled system plus NR regional pooled system. Accordingly, for Sasan, NR beneficiaries would share the transmission charges for the specific system and pooled charges of NR but no charges for WR. However, for Mundra, NR beneficiaries would share the transmission charges for the specific system and pooled charges of NR as well as pooled charges of WR.

Further, NR constituents not having share in Mundra and Sasan UMPPs would share transmission charges for the pooled system of NR only. Similarly, WR constituents not having share in Mundra and Sasan UMPPs would share transmission charges for the pooled system of WR.



ATTESTED TRUE COPY
27.2.13
Authorised Signatory
Power Grid Corporation of India Ltd.
Plot No. 2, Sector-29, Gurgaon-122001 (HARYANA)

The Project



Encl-4

K. G. GOYAL & ASSOCIATES

COST ACCOUNTANTS

289, Mahaveer Nagar II
Maharani Farms
Durgapura
JAIPUR - 302018
Mobile 98293 73503
raleshgoyaljaipur@yahoo.co.in

CERTIFICATE OF CAPITAL COST

Project Name: Transmission System associated with MUNDRA UMPP

Name of Element: Aurangabad (MSETCL)-Aurangabad(PG) 400kV D/C (Quad) Line AND Shifting of 400kV D/C Akola-Aurangabad (MSETCL) line to Aurangabad (PG) alongwith associated bays at both ends under Transmission System associated with MUNDRA UMPP

Anticipated DOCO

01-01-2014

(RS./ LAKHS)

PARTICULARS	CAPITAL COST	IDC	IEDC	TOTAL
Expenditure Upto 31.03.2013	13,507.58	2,047.98	743.75	16,299.31
Expenditure from 01.04.2013 to 31.05.2013	2,156.93	53.20	19.54	2,229.67
Estimated Expenditure from 01.06.2013 to 31.12.2013	1,825.00	132.95	48.76	2,006.71
Estimated Expenditure from 01.01.2014 to 31.03.2014	3,320.80	-	-	3,320.80
Estimated Expenditure from 01.04.2014 to 31.03.2015	11,125.69	-	-	11,125.69
Total	31,936.01	2,234.13	812.05	34,982.18

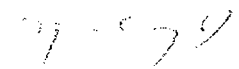
Initial Spares Included in Above - Transmission Line

- Sub-Station

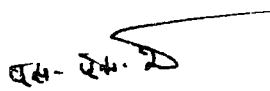
153.76

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-1, Nagpur up to 31.03.2013. The expenditure from 01.04.2013 to 31.05.2013 have been verified from the books of accounts of the Project. The estimated expenditure is based on the details furnished by the management.

For K.G. Goyal & Associates
Cost Accountants


Rajesh Goyal
(Partner)
M-10884

Place : Nagpur
Date : 18-07-2013


18-07-2013

K. G. GOYAL & ASSOCIATES

COST ACCOUNTANTS

289, Mahaveer Nager II
Maharani Farms
Durgapura
JAIPUR - 302018
Mobile 98293 73503
rajeshgoyaljaipur@yahoo.co.in

CERTIFICATE OF CAPITAL COST

Project Name:

Transmission System associated with MUNDRA UMPP

Name of Element:

Aurangabad (MSETCL)-Aurangabad(PG) 400kV D/C (Quad) Line AND Shifting of 400kV D/C Akola-Aurangabad (MSETCL) line to Aurangabad (PG) alongwith associated bays at both ends under Transmission System associated with MUNDRA

Anticipated DOCO

01-01-2014

(RS./ LAKHS)

PARTICULARS	Expenditure upto 31.03.2013	Expenditure From 01.04.2013 to 31.05.2013	Estimated Expenditure From 01.06.2013 to 31.12.2013	Estimated Expenditure From 01.01.2014 to 31.03.2014	Estimated Expenditure From 01.04.2014 to 31.03.2015	Total Expenditure
LAND	5,621.51	-	-	-	-	5,521.51
BUILDING, CIVIL WORKS & COLONY	645.87	65.22	196.20	354.51	1,071.97	2,333.78
TRANSMISSION LINE	9,185.96	1,824.57	1,503.03	2,187.39	9,000.00	23,700.95
SUB-STATION	829.65	306.33	286.57	712.45	1,038.85	3,173.87
PLCC	16.31	33.56	20.90	66.44	14.87	152.08
	16,299.31	2,229.67	2,006.71	3,320.80	11,125.69	34,982.18

Initial Spares included in the above :

Transmission Line

Sub Station

153.76

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For K.G. Goyal & Associates
Cost Accountants

Rajesh Goyal
(Partner)
M-10884

Place : Nagpur

Date : 18-07-2013

K. G. GOYAL & ASSOCIATES

COST ACCOUNTANTS

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Durgapura
JAIPUR - 302018
Mobile 98293 73503
raieshgoyaljaipur@yahoo.co.in

CERTIFICATE OF CAPITAL COST

Project Name: Transmission System associated with MUNDRA UMPP

Name of Element: 400/220kV ICT 1 alongwith associated bays at Aurangabad (PG) New SS under Transmission System associated with MUNDRA UMPP

Anticipated DOCO 01-01-2014

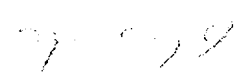
(RS./ LAKHS)				
PARTICULARS	CAPITAL COST	IDC	IEDC	TOTAL
Expenditure Upto 31.03.2013	471.20	31.16	11.22	513.59
Expenditure from 01.04.2013 to 31.05.2013	174.71	2.17	0.82	177.70
Estimated Expenditure from 01.06.2013 to 31.12.2013	750.00	27.72	9.36	787.09
Estimated Expenditure from 01.01.2014 to 31.03.2014	546.16	-	-	546.16
Estimated Expenditure from 01.04.2014 to 31.03.2015	370.73	-	-	370.73
Total	2,312.79	61.06	21.41	2,395.26

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

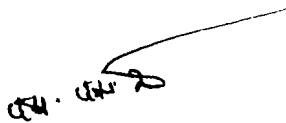
20.37

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For K.G. Goyal & Associates
Cost Accountants


Rajesh Goyal
(Partner)
M-10884

Place : Nagpur
Date : 18-07-2013



K. G. GOYAL & ASSOCIATES

COST ACCOUNTANTS

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Maharani Farms
Durgapura
JAIPUR - 302018
Mobile 98293 73503
rajeshgoyaljaipur@yahoo.co.in

CERTIFICATE OF CAPITAL COST

Project Name: Transmission System associated with MUNDRA UMPP

Name of Element: 400/220kV ICT 1 alongwith associated bays at Aurangabad (PG) New SS under Transmission System associated with MUNDRA UMPP

Anticipated DOCO 01-01-2014

(RS./ LAKHS)

PARTICULARS	Expenditure upto 31.03.2013	Expenditure From 01.04.2013 to 31.05.2013	Estimated Expenditure From 01.06.2013 to 31.12.2013	Estimated Expenditure From 01.01.2014 to 31.03.2014	Estimated Expenditure From 01.04.2014 to 31.03.2015	Total Expenditure
LAND	-	-	-	-	-	-
BUILDING, CIVIL WORKS & COLONY	65.53	13.30	53.00	47.16	50.00	228.99
TRANSMISSION LINE	-	-	-	-	-	-
SUB-STATION	445.86	164.40	734.09	491.76	319.72	2,155.83
PLCC	2.20	-	-	7.23	1.01	10.44
	513.59	177.70	787.09	546.16	370.73	2,395.26

Initial Spares included in the above :

Transmission Line
Sub Station 20.37

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-1, Nagpur up to 31.03.2013. The expenditure from 01.04.2013 to 31.05.2013 have been verified from the books of accounts of the Project. The estimated expenditure is based on the details furnished by the management.

For K.G. Goyal & Associates
Cost Accountants

77 578
Rajesh Goyal
(Partner)
M-10884

Place : Nagpur
Date : 18-07-2013

रज. ग. गो. अ.

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CERTIFICATE OF CAPITAL COST

Project Name: Transmission System associated with MUNDRA UMPP

Name of Element: 400/220kV ICT 2 alongwith associated bays at Aurangabad (PG) New SS under
Transmission system associated with MUNDRA UMPP

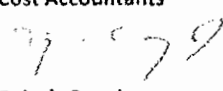
Anticipated DOCO 01-01-2014

				(RS./ LAKHS)
PARTICULARS	CAPITAL COST	IDC	IEDC	TOTAL
Expenditure Upto 31.03.2013	307.44	19.08	6.70	333.22
Expenditure from 01.04.2013 to 31.05.2013	114.96	1.43	0.54	116.93
Estimated Expenditure from 01.06.2013 to 31.12.2013	505.00	18.40	6.15	529.55
Estimated Expenditure from 01.01.2014 to 31.03.2014	281.95	-	-	281.95
Estimated Expenditure from 01.04.2014 to 31.03.2015	280.78	-	-	280.78
Total	1,490.14	38.91	13.38	1,542.43

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-1, Nagpur up to 31.03.2013. The expenditure from 01.04.2013 to 31.05.2013 have been verified from the books of accounts of the Project. The estimated expenditure is based on the details furnished by the management.

For K.G. Goyal & Associates
Cost Accountants


Rajesh Goyal
(Partner)
M-10884

Place : Nagpur
Date : 18-07-2013

एस. एस. के.

K. G. GOYAL & ASSOCIATES

COST ACCOUNTANTS

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Maharani Farms
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Mobile 98293 73503
rajeshgoyaljaipur@yahoo.co.in

CERTIFICATE OF CAPITAL COST

Project Name: Transmission System associated with MUNDRA UMPP

Name of Element: 400/220kV ICT 2 alongwith associated bays at Aurangabad (PG) New SS under Transmission system associated with MUNDRA UMPP

Anticipated DOCO 01-01-2014

(RS./ LAKHS)

PARTICULARS	Expenditure upto 31.03.2013	Expenditure From 01.04.2013 to 31.05.2013	Estimated Expenditure From 01.06.2013 to 31.12.2013	Estimated Expenditure From 01.01.2014 to 31.03.2014	Estimated Expenditure From 01.04.2014 to 31.03.2015	Total Expenditure
LAND	-	-	-	-	-	-
BUILDING, CIVIL WORKS & COLONY	35.14	7.75	53.00	108.21	21.97	226.07
TRANSMISSION LINE	-	-	-	-	-	-
SUB-STATION	295.88	109.18	476.55	166.51	257.80	1,305.92
PLCC	2.20	-	-	7.23	1.01	10.44
	333.22	116.93	529.55	281.95	280.78	1,542.43

Initial Spares included in the 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-1, Nagpur up to 31.03.2013. The expenditure from 01.04.2013 to 31.05.2013 have been verified from the books of accounts of the Project. The estimated expenditure is based on the details furnished by the management.

For K.G. Goyal & Associates
Cost Accountants

Rajesh Goyal
(Partner)
M-10884

Place : Nagpur
Date : 18-07-2013

प्र. प्र. ४

भारत सरकार
केन्द्रीय विद्युत प्राधिकरण
प्रणाली योजना एवं परियोजना मूल्यांकन प्रभाग
सेवा भवन, रामकृष्णपुरम्, नई दिल्ली 110066

क. सं. : 26/10/2011-प्र. यो. प. मू. 46-59

दिनांक: 20.01.2011

- | | | | |
|---|---|----|--|
| 1 | सदस्य (विद्युत प्रणाली),
केन्द्रीय विद्युत प्राधिकरण,
सेवा भवन, आर के पुरम्,
नई दिल्ली-110066 | 8 | श्री एम एल जाधव, मुख्य अभियंता (पारेषण),
न्यूक्लीयर पावर कॉरपोरेशन ऑफ इंडिया लि,
9एस30, वीएस भवन, अणुशक्ति नगर,
मुम्बई-400094 फैक्स सं. 022-25993570 |
| 2 | सदस्य सचिव,
पश्चिमी क्षेत्रीय विद्युत समिति, एम. आई. डी. सी क्षेत्र,
मेरोल, अंधेरी पूर्व, मुम्बई-400094
फैक्स सं. 022-28370193 | 9 | कार्यपालक निदेशक (अभियंत्रिकी),
नेशनल थर्मल पावर कॉरपोरेशन लि,
इंजीनियरिंग ऑफिस कॉम्प्लेक्स, ए-8, सैक्टर-24,
नोएडा-201301 फैक्स सं. 0124-2410201 |
| 3 | निदेशक (परियोजना),
पावरग्रिड कॉरपोरेशन ऑफ इंडिया लि.,
सौदागिनी, प्लॉट सं. 2, सैक्टर-29, गुडगाँव-122001
फैक्स सं. 95124-2571760 | 10 | मुख्य अभियंता,
विद्युत विभाग, गोवा सरकार, पणजी
फैक्स सं. 0832-2222354 |
| 4 | अध्यक्ष एवं प्रबन्ध निदेशक,
एम.पी.पी.टी.सी.एल. शक्ति भवन,
रामपुर, जबलपुर-482008
फैक्स सं. 0761-2665593 | 11 | कार्यपालक इंजीनियर (परियोजनाएं),
दादरा एवं नागर हवेली संघ शासित क्षेत्र,
विद्युत विभाग, सिलदारम,
फोन नं. 0260-2642787 |
| 5 | सदस्य (पारेषण एवं वितरण)
छत्तीसगढ़ रा. वि. बोर्ड,
दानगनिया, रायपुर (छत्तीसगढ़) -492013
फैक्स सं. 0771-4066566 | 12 | कार्यपालक इंजीनियर,
विद्युत विभाग, दमन एवं दीव संघशासित क्षेत्र प्रशासन,
मोती दमन, पिन-396220
फोन नं. 0260-2250889, 2254745 |
| 6 | प्रबन्ध निदेशक,
जी.ई.ट्रां.नि.लि. सरदार पटेल विद्युत भवन,
रेस कोर्स, बड़ोदा-390007
फैक्स सं. 0265-2338152 | 13 | कार्यपालक निदेशक, (विशेष आमंत्रित),
डब्ल्यू आर एल डी सी, प्लॉट संख्या-एफ 3,
एम आई डी सी एरिया, मेरोल,
अंधेरी पूर्व, मुम्बई-400093,
फैक्स संख्या-022-28235434 |
| 7 | निदेशक (प्रचालन),
महाद्रांसको, प्रकाशगड, प्लॉट संख्या-जी 9,
बांद्रा-पूर्व, मुम्बई-400051
फैक्स 022-26390383/26595258 | 14 | कार्यपालक निदेशक, एनएलडीसी
बी-9, कुतुब इन्स्टीट्यूशनल एरिया,
कटवारिया सराय, नई दिल्ली-110016
फैक्स 011-28052046 |

विषय :- पश्चिमी क्षेत्र की विद्युत प्रणाली योजना पर 27 दिसम्बर 2010 को पावरग्रिड कॉरपोरेशन ऑफ इंडिया लि. गुडगाँव में आयोजित की गयी की स्थाई समिति की 31वीं बैठक का कार्यवृत्त।

महोदय,

पश्चिमी क्षेत्र की विद्युत प्रणाली योजना पर 27 दिसम्बर 2010 को पावरग्रिड कॉरपोरेशन ऑफ इंडिया लि. गुडगाँव में आयोजित की गयी की स्थाई समिति की 31वीं बैठक का कार्यवृत्त केन्द्रीय विद्युत प्राधिकरण की वेबसाइट www.cea.nic.in पर लिंक Home page - Power Systems-Standing Committee on Power System Planning-Western Region) पर उपलब्ध है।

संलग्न - उपरोक्त

20.01.2011
(पी. के. पाहवा)
निदेशक

Govt. of India
Central Electricity Authority
System Planning & Project Appraisal Division
Sewa Bhawan, R.K. Puram, New Delhi – 110066.

No. 26/10/2011-SP&PA/

Date: 20th January, 2011

To


- | | |
|---|---|
| <p>1 The Member (PS),
Central Electricity Authority,
Sewa Bhawan, R. K. Puram,
New Delhi-110066</p> <p>2 The Member Secretary,
Western Regional Power Committee,
MIDC Area, Marol, Andheri East, Mumbai
Fax 022 28370193</p> <p>3 The Director (Projects),
Power Grid Corp. of India Ltd., "Saudamini",
Plot No. 2, Sector-29, Gurgaon-122001
Fax 0124-2571760/2571932</p> <p>4 Chairman and Managing Director,
MPPTCL, Shakti Bhawan,
Rampur, Jabalpur-482008
Fax 0761 2664141</p> <p>5 The Managing Director,
CSPTCL, Dangania,
Raipur (CG)-492013
Fax 0771 2574246/ 4066566</p> <p>6 The Managing Director,
GETCO, Sardar Patel Vidyut Bhawan,
Race Course, Baroda-390007
Fax 0265-2338164</p> <p>7. Director (Operation),
MAHATRANSCO, 'Prakashgad', Plot No.G-9,
Bandra-East, Mumbai-400051
Fax 022-26390383/26595258</p> | <p>8 Shri M.L Jadhav, Chief Engineer (Trans),
Nuclear Power Corp. of India Ltd.,
9S30, VS Bhavan, Anushakti Nagar,
Mumbai-400094
Fax 022-25993570</p> <p>9 The Executive Director (Engg.),
NTPC Ltd., Engg. Office Complex,
A-8, Sector-24, NOIDA 201301
Fax 0120-2410201/2410211</p> <p>10 The Chief Engineer,
Electricity Department,
The Government of Goa, Panaji
Fax 0832 2222354</p> <p>11 Executive Engineer (Projects)
UT of Dadra & Nagar Haveli,
Department of Electricity, Silvassa
Ph. 0260-2642338/2230771</p> <p>12 Executive Engineer
Administration of Daman & Diu (U.T.)
Department of Electricity
Moti Daman-396220
Ph. 0260-2250889, 2254745</p> <p>13 ED, WRLDC (invitee)
Plot no F-3, MIDC Area, Msarol,
Andheri(East) Mumbai-400093
Fax no 022-28235434</p> <p>14 Executive Director, NLDC (invitee)
B-9, Qutab Institutional Area, Katwaria Sarai
New Delhi-110016
Fax 011-26852747</p> |
|---|---|

Sub: Minutes of the 31st meeting of the Standing Committee on Power System Planning in Western Region held on 27th December 2010 at PGCIL, Gurgaon.

Sir,

The minutes of the 31st meeting of the Standing Committee on Power System Planning in Western Region held on 27th December 2010 at PGCIL, Gurgaon 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)
Director, SP&PA

Minutes of the 31st Meeting of Standing Committee on Power System Planning of Western Region held on 27th December 2010.

1.0 The 31st meeting of the Standing Committee on Power System Planning of Western Region was held on Monday the 27th December, 2010 at " Saudamini", PGCIL, Sector – 29, Gurgaon. The list of participants is at Annex – 1.

1.1 Member (Power System); CEA welcomed the participants to the meeting and stated that based on interaction with various power utilities it had emerged that about 1,31,000 MW capacity was under various stages of construction / implementation. Even if 80 % of the projects materialize, transmission capacity for about 100,000 MW of capacity additions would be required during the next six to seven years. It needs to be assessed whether the already planned high capacity transmission corridors would be adequate or additional corridors would be required for this quantum of capacity addition. The transmission system needs to be planned with adequate margins well in advance so that sufficient time was available for implementation. The gas based projects and solar plants were short gestation period projects and if adequate margins are available then power from such short gestation projects could be absorbed in the existing grid. The Standing Committee on transmission planning needs to consider these aspects while planning the transmission system.

1.2 Director (Projects), PGCIL stated that acquisition of land for building substations and Right of Way for laying of transmission line was a challenge in building transmission system. He informed that acquisition of land was yet to take place for the proposed pooling stations at Raigarh, Raipur, Champa and Aurangabad 765/400 kV substations. Irrespective of the delays in acquiring land for substations and the RoW constraints for transmission lines, the commissioning schedule for the generation was more or less fixed. This reduced the time available for implementing the transmission system. He requested constituents to support in overcoming ROW problems by adopting technological options like GIS technology, high capacity transmission corridors etc. He further stated that the RoW problems were more severe in urban areas, therefore the transmission lines should be terminated on the periphery of the urban areas and in principle approval should be there for use of underground cables for stretches where RoW was an issue.

1.3 CE (SP&PA), CEA stated that a large number of applications were being made for connectivity and the present grid was not adequate to accommodate such large number of connectivity requests. The Connectivity and LTA has to be granted based on the ground progress of the generation project with respect to the land availability, fuel linkage, Environmental Clearance etc. The agenda items were thereafter taken up.

2.0 Confirmation of the minutes of 30th meeting of the Standing Committee on Power System Planning in Western Region held on 8th July 2010 at New Delhi.

2.1 Director (SP&PA) stated that the minutes of the 30th SCM were issued vide CEA letter No.26/10/2009-SP&PA/146-159 dated 09th August 2010. Subsequently, GETCO vide their letter no. SE (CP&SS)/System/517-520/42 dated 01.09.2010 had sent their comments / observations on para 9.5 and 11.5 of the minutes.

2.2 With regard to para 9.5 GETCO had pointed out that this para of minutes states that PGCIL and GETCO would jointly survey and sort out the issue of acquisition of suitable land for setting up 765/400 kV substation at Vadora. They had observed that responsibility of acquisition of land was that of PGCIL and GETCO would only assist PGCIL in identifying land. Accordingly, they had proposed modification of this para.

QA. QA. 2

- 12.3 Members agreed the above proposal. The Indore (PG) – Pithampur (MPPTCL) 400 kV D/C line would be under scope of MPPTCL and the two no. 400 kV bays at Indore (PG) 765/400 kV substation would be covered under regional system Strengthening Scheme.

13.0 Termination of Aurangabad – Khargar 400 kV line at Boisar in place of Khargar

- 13.1 Director (SP&PA), CEA stated that in the last meeting, it was decided that the issue of termination of Aurangabad – Khargar 400 kV D/C (quad) line (covered under Transmission system within WR associated with new IPP projects in Chattishgarh) at Khargar or at any other location would be further discussed and decided between CEA, PGCIL and MSETCL. PGCIL was also to examine the possibility of establishing a 400 kV GIS bays in the available space in view of the limited space availability at Boisar for future expansion. Subsequent to the last meeting deliberations were held on the issue and Aurangabad – Khargar 400 kV D/C (quad) was now proposed to be terminated at Boisar (PG) instead of Khargar.
- 13.2 SE, MSETCL informed that for drawal of power from Boisar to their load centers, Boisar – Ghodbunder 400 kV D/C line and Boisar to Vikroli 400 kV D/c line were planned. For this they required 4 nos. of bays at 400 kV and 6 nos. of bays at 220 kV Boisar.
- 13.3 Executive Director, WRTS-I, PGCIL stated that there were only six bays available at 400 kV for future expansion against which five no bays (2 nos. for Aurangabad- Boisar, 2 no. for Navsari- Boisar and one no. for ICT at Boisar) were already been planned. As such bays were not available for terminating the 400 kV lines proposed by MSETCL.
- 13.4 Director (Operation), MSETCL stated that in case of bays constraints they may be allowed LILO of their proposed 400 kV lines with ISTS lines.
- 13.5 The termination of Aurangabad- Khargar 400 kV D/c line at Boisar instead earlier proposed at Khargar was noted. Regarding the interconnection of lines proposed by MSETCL at Boisar, it was decided that same would be further discussed between PGCIL and MSETCL.

14.0 Interconnection between Aurangabad(PG) – Aurangabad (MSETCL) 400 kV D/C (quad) line under System Strengthening in WR for Mundra UMPP

- 14.1 The Aurangabad (PG) –Aurangabad (MSETCL) 400 kV D/C (quad) was agreed as Regional System strengthening scheme in WR under Mundra UMPP Transmission system. Due to non availability of space at Aurangabad (MSETCL), termination of Akola – Aurangabad (MSETCL) 400 kV D/C line at Aurangabad (PG) instead of at Aurangabad (MSETCL) was agreed in the special SCM of WR. The bays available at Aurangabad (MSETCL) due to this change in termination were to be used for Aurangabad (PG) –Aurangabad (MSETCL) 400 kV D/C (quad) line.
- 14.2 During the last meeting PGCIL had proposed LILO of 400 kV Akola - Aurangabad (MSETCL) at Aurangabad (PG) instead of termination of Akola-Aurangabad (MSETCL) 400 kV D/C line at Aurangabad (PG). Since the LILO of 400 kV Akola-Aurangabad (MSETCL) at Aurangabad (PG) was resulting into interconnection between Aurangabad (MSETCL) and Aurangabad (PG) through a 400 kV D/C twin moose line instead of quad line as agreed earlier, therefore it was decided that the issue could be further deliberated.
- 14.3 The issue of interconnection between Aurangabad (MSETCL) and Aurangabad (PG) was deliberated amongst MSETCL, CEA and PGCIL and it was decided to implement the interconnections already agreed in the Special meeting of Standing Committee held on 18.04.2009 at Mumbai, as given under:
- Aurangabad (PG) – Aurangabad (MSETCL) 400 kV Quad D/C line.
 - Akola – Aurangabad (MSETCL) 400 kV D/C line would be diverted to Aurangabad (PG).

- 14.4 PGCIL informed that above shifting of line (along with line reactors) would increase the length of Akola – Aurangabad from 240km to about 300km. Further, to address the RoW problem for termination of line between Aurangabad (PG) and Aurangabad (MSETCL), multi-circuit towers (for about 55km stretch) would be required in this corridor. The multicircuit tower would carry Akola- Aurangabad (PG) 400 kV D/C Twin Moose line and Aurangabad (PG) – Aurangabad (MSETCL) 400 kV Quad D/C line.

Members took note of the above.

15.0 Implementation of 400 kV bays at Bhopal (MPPTCL) 400 kV substation by MPPTCL and Dhule (MSETCL) 400 kV substation by MSETCL for termination of 400 kV D/C quad line from Bhopal 765/400 kV and Dhule (IPTC) 765/400 kV substation respectively.

- 15.1 Director(SP&PA), CEA stated that 765/400 kV substations at Bhopal(IPTC) and Dhule (IPTC) substation covered under System Strengthening in WR associated with IPPs in Orissa and Chattishgarh respectively were being implemented through the competitive bidding route. Their interconnection with the existing grid was through Bhopal (IPTC)- Bhopal(MPPTCL) 400 kV D/C quad line and Dhule(IPTC)- Dhule (MSETCL) 400 kV quad line. The construction of 400 kV line bays at Bhopal 400 kV (MPPTCL) and Dhule 400 kV (MSETCL) substations would be by the respective STUs. MPPTCL and MSETCL had agreed for construction of line bays. The tariff for the 2 no 400 kV lines bays at Bhopal 400 kV(MPPTCL) and for 2 no 400 kV line bays at Dhule 400 kV(MSETCL) substation would form a part of national pool for interstate transmission charges.

- 15.2 CE (PS), MPPTCL stated that the gantry structure in their substation at Bhopal was for twin moose conductor. Therefore termination of quad lines at their substation would be difficult.

- 15.3 It was clarified that the stretch between the last tower and bays could be strung with HTLS conductor.

Members took note of the above.

16.0 Establishment of 765/400kV GIS substation at Vadodra.

- 16.1 Director(SP&A) stated that establishment of 765/400kV substation at Vadodra was agreed as a part of WR System Strengthening for IPP projects in Madhya Pradesh and Chhattisgarh (being pooled at Bilaspur Polling station). In the last meeting, due to difficulty in getting land PGCIL had proposed Vadodra 765/400 kV with GIS technology instead of AIS and it was decided that GETCO would assist PGCIL in getting the required land for AIS substation. Subsequently, PGCIL had interacted with GETCO and they had agreed to 765/400kV substation at Vadodara with GIS technology.

Members agreed to the above.

17.0 Long Term Open Access for Rupin HEP (45 MW) in Northern Region

PGCIL informed that M/s Shri Bajrang Power & Ispat Ltd. had applied for LTOA in ISTS for transfer 45 MW of power to Punjab/ Rajasthan (22.5 MW) in NR and to Maharashtra (22.5 MW) in WR from the proposed Rupin HEP (45MW), Himachal Pradesh. The commissioning schedule for generation project is indicated as June 2014 and Long Term Open Access was desired from June 2014 for 40 years. The application was discussed during the Long term Open Access Meeting with Northern Region Constituents held on 23/02/2010 at NRPC, New Delhi, wherein LTOA to M/s Shri Bajrang Power & Ispat Ltd. was agreed to be granted. The transfer of 22.5 MW power to Maharashtra shall be through displacement for which ISTS network was found adequate.

Summary Sheet

Name of the Transmission Licensee:

POWERGRID CORPORATION OF INDIA LTD.

Name of Region:

WESTERN REGION

Name of the Project:

MUNDRA UMPP

Name of the Transmission Element:

Aurangabad (MSETCL) - Aurangabad (PG) 400 kV D/C (Quad) Line and Shifting of 400 kV D/C Akola - Aurangabad Line to Aurangabad (PG) alongwith associated bays at both ends. Ant. :DOCO :01-JAN-2014

SLNo.	Particulars	Form No.	Existing 2008-2009	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014 (Pro Rata)	(Rs in Lacs)
1	2	3	4	5	6	7	8	9	
1	Depreciation	FORM-12	0.00						213.80
2	Interest on Loan	FORM-13A	0.00						67.89
3	Return on Equity	FORM-01A	0.00						291.01
4	Interest On Working Capital	FORM-13B	0.00						17.79
5*	O & M Expenses		0.00						90.92
6	Total		0.00						681.41

[Signature]
Petitioner

Encl-6

Calculation Of Return On Equity

Name of the Transmission Licensee:

POWERGRID CORPORATION OF INDIA LTD.

Name of Region:

WESTERN REGION

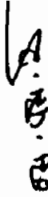
Name of the Project:

MUNDRA UMPP

Name of the Transmission Element:

Aurangabad (MSETCL) - Aurangabad (PG) 400 kV D/C (Quad) Line and Shifting of 400 kV D/C Akola - Aurangabad Line to Aurangabad (PG) alongwith associated bays at both ends. Ant. :DOCO :01-JAN-2014

Particulars		(Rs in Lacs)					
	Existing 2008-2009	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014	
1	2	3	4	5	6	7	
Equity as DOCO						6,160.70	
Notional Equity for Add Cap						996.24	
Total Equity						7,156.93	
Return on Equity @ 17.481%						291.01	


Petitioner

Details of Transmission Lines And Substations

Name of the Transmission Licensee: POWERGRID CORPORATION OF INDIA LTD.
Name of Region: WESTERN REGION
Name of the Project: MUNDRA UMPP
Name of the Transmission Element: Aurangabad (MSETCL) - Aurangabad (PG) 400 kV D/C (Quad) Line and Shifting of 400 kV D/C Akola - Aurangabad Line to Aurangabad (PG) alongwith associated bays at both ends. Ant. :DOCO :01-JAN-2014

Transmission Lines									
Sl.No.	Name of Line	Type of Line AC/HVDC	S/C or D/C	No. of Sub-Conductors	Voltage level kV	Line Length (Km.)	Date of Commercial operation	Covered in the present petition	If No, petition No.
1	Aurangabad (MSETCL) - Aurangabad (POWERGRID) Line and Shifting of Akola - Aurangabad Line	AC	D/C	2	400	1.438	01-JAN-2014	Yes	
2	Aurangabad (MSETCL) - Aurangabad (POWERGRID) Line and Shifting of Akola - Aurangabad Line	AC	D/C	4	400	2.916	01-JAN-2014	Yes	
3	Aurangabad (MSETCL) - Aurangabad (POWERGRID) Line and Shifting of Akola - Aurangabad Line	AC	D/C*	2	400	49.716	01-JAN-2014	Yes	
4	Aurangabad (MSETCL) - Aurangabad (POWERGRID) Line and Shifting of Akola - Aurangabad Line	AC	D/C*	4	400	49.716	01-JAN-2014	Yes	
Substations									
Sl.No.	Name of Sub-Station	Type of Substation Conventional /GIS/ HVDC Terminal/ HVDC Back to Back	Voltage level kV	No. of Transformers / Reactors/ SVC etc (with Capacity)	No. of Bays	No. of Bays	Date of Commercial operation	Covered in the present petition	If No, petition No.
1	Aurangabad (POWERGRID) New	Conventional	400/220 kV		765 KV	400 KV	220 KV	132 KV & below	
	Akola Bay 1		400			1		01-JAN-2014	Yes
	Akola Bay 2		400			1		01-JAN-2014	Yes
	Aurangabad (MSETCL) Bay 1		400			1		01-JAN-2014	Yes
	Aurangabad (MSETCL) Bay 2		400			1		01-JAN-2014	Yes

574.84.2

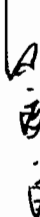
Details of Transmission Lines And Substations

Name of the Transmission Licensee: **POWERGRID CORPORATION OF INDIA LTD.**
 Name of Region: **WESTERN REGION**
 Name of the Project: **MUNDRA UMPP**
 Name of the Transmission Element: **Aurangabad (MSETCL) - Aurangabad (PG) 400 kV D/C (Quad) Line and Shifting of 400 kV D/C Akola - Aurangabad Line to Aurangabad (PG) alongwith associated bays at both ends. Ant. :DOCO :01-JAN-2014**

5	Aurangabad (MSETCL)	Conventional	400/220 kV						
	Aurangabad (POWERGRID) Bay 1		400			0 #		01-JAN-2014	Yes
	Aurangabad (POWERGRID) Bay 2		400			0 #		01-JAN-2014	Yes
Total						4			

* This is Multi-Circuit portion of line, which will carry two double circuit on same tower.

These 2 nos. of 400 kV bays are existing bays for Akola-I & II at Aurangabad(MSETCL) S/S, same are being utilised for Aurangabad(PG)-Aurangabad(MSETCL) due to non-availability of land at Aurangabad(MSETCL), the Akola-Aurangabad(MSETCL) line has been re-routed at Aurangabad(PG). O & M charges of these bays is not being claimed here.


Petitioner

Normative Parameters considered For tariff calculations

Name of the Transmission Licensee:

POWERGRID CORPORATION OF INDIA LTD.

Name of Region:

WESTERN REGION

Name of the Project:

MUNDRA UMPP

Name of the Transmission Element:

Aurangabad (MSETCL) - Aurangabad (PG) 400 kV D/C (Quad) Line and Shifting of 400 kV D/C Akola - Aurangabad Line to Aurangabad (PG) alongwith associated bays at both ends. Ant. :DOCO :01-JAN-2014

Year Ending March

Particulars	Unit	Existing 2008-2009	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014
1	2	3	4	5	6	7	8
Base Rate of Return on Equity	%						17.481
Tax Rate	%						11.33
Target Availability	%						98.00
Normative O&M per Km.	Rs. lacs			Given Below			
Normative O&M per bay	Rs. lacs			Given Below			
Spares for WC as % of O&M	%						15.00
Receivables in Months for WC	months						2.00
Prime lending Rate of SBI as on 01-APR-2009	%						13.20

Norms for O&M expenditure for Transmission System

	2009-10	2010-11	2011-12	2012-13	2013-14
Norms for sub-station (Rs Lakh per bay)					
765 KV	73.36	77.56	81.99	86.68	91.64
400 KV	52.40	55.40	58.57	61.92	65.46
220 KV	36.68	38.78	41.00	43.34	45.82
132 KV and below	26.20	27.70	29.28	30.96	32.73
Norms for AC and HVDC Lines (Rs Lakhs per km)					
Single Circuit (Bundled conductor with four or more sub-conductors)	0.537	0.568	0.600	0.635	0.671
Single Circuit (Twin & Triple Conductor)	0.358	0.378	0.400	0.423	0.447
Single Circuit (Single Conductor)	0.179	0.189	0.200	0.212	0.224
Double Circuit (Bundled conductor with four or more sub-conductors)	0.940	0.994	1.051	1.111	1.174
Double Circuit (Twin & Triple Conductor)	0.627	0.663	0.701	0.741	0.783
Double Circuit (Single Conductor)	0.269	0.284	0.301	0.318	0.336
Norm for HVDC Stations					
HVDC Back-to-back stations (Rs lakh per 500 MW)	443.00	468.00	495.00	523.00	553.00
Rihand-Dadri HVDC bipole scheme (Rs Lakh)	1450.00	1533.00	1621.00	1713.00	1811.00
Talcher-Kolar HVDC bipole scheme (Rs Lakh)	1699.00	1796.00	1899.00	2008.00	2122.00

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 :**

ATS for MUNDRA - Regional System for WR under Transmission System Associated with MUNDRA UMPP

Name of Element:

1) Aurangabad (MSETCL) - Aurangabad(PG) - 400KV D/C (Quad) Line and shifting of 400kV D/C Akola-Aurangabad line to Aurangabad (PG) along with associated bays

Capital Cost Estimates

Board of Director/ Agency approving the Capital cost estimates:	Board of Directors 213 meeting	
Date of approval of the Capital cost estimates:	17-Sep-08	
	Present Day Cost	Completed Cost
Price level of approved estimates	As of End of 1st Qtr. Of the year 2008	As on Scheduled COD of the System
Foreign Exchange rate considered for the Capital cost estimates		
Capital Cost excluding IDC & FC		
Foreign Component, if any (In Million US \$ or the relevant Currency)		
Domestic Component (Rs. Cr.)		
Capital cost excluding IDC & FC (Rs. Cr)	138.89	163.89
IDC & FC		
Foreign Component, if any (In Million US \$ or the relevant Currency)		
Domestic Component (Rs. Cr.)		
Total IDC & FC (Rs.Cr.)	13.28	15.67
Rate of taxes & duties considered		
Capital cost Including IDC & FC		
Foreign Component, if any (In Million US \$ or the relevant Currency)		
Domestic Component (Rs. Cr.)		
Total Capital cost Including IDC & FC (Rs. Cr)	152.17	179.56
Schedule of Commissioning		
(Scheduled DOCO elementwise)		
COD of Unit-1/Block-1	17-Sep-12	-
COD of Unit-1/Block-2		
COD of Unit-1/Block-3		
COD of Unit-1/Block-4		

Note:

1. Copy of approval letter should be enclosed.
2. Details of Capital cost are to be furnished as per FORM-5B or 5C as applicable.
3. Details of IDC & Financing Charges are to be furnished as per FORM-16.

94. 94. 2

Element wise Break-up of Project Cost for Transmission System

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

Name of Region: Western Region -I

Name of the Project : Mundra UMPP

Name of the Element: Aurangabad (MSETCL) - Aurangabad (PG) 400KV D/C (Quad) Line and Shifting of 400KV D/C Akola-Aurangabad (MSETCL) line to Aurangabad (PG) along with associated bays at both ends

DOCO: 01.01.2014

Sl.No.	Break Down	As per Original Estimate	As on COD	Liabilities / Provision	Variation	Reasons for Variation
1	2	3	4	5	6=3-4-5	7
A	TRANSMISSION LINE					
1.0	Preliminary works					
1.1	Design & Engineering					Initially one 400kV D/C Quad Aurangabad (PG) to Aurangabad (MSETCL) was proposed. However, as per 31 st standing committee, it was decided that 400 kv akola- Aurangabad (MSETCL) shall be shifted to Aurangabad (PG) and 2 bay s of Akola- Aurangabad shall be utilised for 400kV D/C Quad Aurangabad (PG) to Aurangabad (MSETCL) TL. Due to severe ROW problem, shifting of 400 Akola- Aurangabad (MSETCL) and New 400 kV Aurangabad (PG) - Aurangabad (MSETCL) has been conducted on Multi ckt tower with top twin D/C and bottom Quad D/C configuration.
1.2	Preliminary investigation, Right of way, forest clearance, PTCC, general civil works, compensation etc.	95.45	250.45	361.65	-516.65	Amount towards Tree / Crop Compensation etc is as per estimated assessment.
1.3	Total Preliminary works	95.45	250.45	361.65	-516.65	
2.0	Transmission Lines material					
2.1	Towers Steel	1673.89	3427.82	6023.93	-7777.86	Tower weights increased due to use of M/C Towers.
2.2	Conductor	2463.70	4706.98	344.80	-2588.08	Variation is on account of increased awarded cost and increase in quantity due to increase in line length. Further, conductor quantity has increased due to inclusion of twin ckt of Akola -Aurangabad TL for the required shifting as mentioned above.
2.3	Earth Wire	27.28	29.14	51.20	-53.06	Variation is on account of increased awarded cost and increase in quantity due to increase in line length.
2.4	Insulators	439.42	364.76	28.49	46.18	Variation is on account of increased awarded cost: Further, quantity has increased due to inclusion of twin ckt of Akola - Aurangabad TL for the required shifting as mentioned above.
2.5	Hardware Fittings	405.17	321.99	565.85	-482.67	--do--
2.6	Conductor & Earthwire accessories	189.53	165.88	291.52	-267.87	--do--
2.7	Spares	0.00	0.00	0.00	0.00	
2.8	Erection, Stringing & Civil works including foundation	980.84	721.73	3519.95	-3260.84	--do--
2.9	Total Transmission Lines material	6179.84	9738.29	10825.74	-14384.20	
3.0	Taxes and Duties					
3.1	Custom Duty	0.00	0.00	0.00	0.00	
3.2	Other Taxes & Duties	0.00	0.00	0.00	0.00	
	Total Taxes & Duties	0.00	0.00	0.00	0.00	
	Total -Transmission lines	6275.29	9988.74	11187.39	-14900.85	
2.0						
B.	SUBSTATIONS					
4.0	Preliminary works & land					
4.1	Design & Engineering	0.00	0.00	0.00	0.00	
4.2	Land	2075.00	5264.76	0.00	-3189.76	as per actual
4.3	Site preparation	10.00	15.11	0.00	-5.11	
	Total Preliminary works & land	2085.00	5279.87	0.00	-3194.87	
5.0	Civil Works					
5.1	Control Room & Office Building including HVAC	180.00	131.22	226.88	-178.10	
5.2	Township & Colony	498.00	316.02	546.40	-364.42	
5.3	Roads and Drainage	135.00	59.78	103.35	-28.13	
5.4	Foundation for structures	287.00	238.70	412.71	-364.41	
5.5	Misc. civil works	240.00	79.32	137.14	-23.54	
	Total Civil Works	1340.00	825.03	1426.48	-911.52	
6.0	Substation Equipments					
6.1	Switchgear (CT,PT, Circuit Breaker, Isolator etc)	901.19	430.53	567.93	-97.26	Variation is due to decrease in award cost and change in quantity of the substation equipments Additional S/S equipments were required due to incorporation of Akola # 1 & 2 bays in 400 KV Aurangabad S/s, which was not envisaged in the FR. This modification is being implemented as per the 31 st SCM, wherein, scheme for the interconnection between Aurangabad(PG) & Aurangabad (MSETCL) was modified due to non-availability of space in Aurangabad (MSETCL).
6.2	Transformers	0.00	0.00	0.00	0.00	
6.3	Compensating Equipment(Reactor, SVCs etc)	0.00	6.90	9.10	-16.00	Variation is due to shifting of the existing 2 nos. of 50MVAR shunt Reactor from Aurangabad (MSETCL) to Aurangabad(PG) for 400 KV Aurangabad - Akola D/C line as per the decision taken in 31 st SCM.
6.4	Control, Relay & Protection Panel	756.57	149.49	197.20	409.89	Variation is due to decrease in award cost and change in quantity
6.5	PLCC	164.98	68.26	81.31	15.42	Variation is due to decrease in the awarded cost as compared to FR.
6.6	HVDC package	0.00	0.00	0.00	0.00	

Sl.No.	Break Down	As per Original Estimate	As on COD	Liabilities / Provision	Variation	Reasons for Variation
6.9	Emergency DG set	27.10	26.08	34.41	-33.39	Variation is due to increase in the awarded cost on account of change in rating of DG set from 250 KVA to 500 KVA, in order to cater to the load of upcoming/future 765KV switchyard.
6.10	Grounding System	0.00	0.00	0.00	0.00	
6.1	Structure for Switch yard	509.02	181.15	238.96	88.91	Variation due to increase in awarded cost and consideration of common structures of 400KV Yard along with these elements.
6.12	Auxiliary System	493.05	228.13	300.93	-36.01	Variation is due to decrease in the awarded cost as compared to original estimate.
	Total Substation Equipments	3166.91	1395.87	1832.62	-61.58	
7.0	Spares (incl.in eqpt. cost)	0.00			0.00	
8.0	Taxes and Duties	0.00	0.00	0.00	0.00	
8.1	Custom Duty	0.00	0.00	0.00	0.00	
8.2	Other Taxes & Duties	0.00	0.00	0.00	0.00	
8.3	Total Taxes & Duties	0.00	0.00	0.00	0.00	
	Total (Sub-station)	6591.91	7500.77	3259.10	-4167.96	
9.0	Construction and pre-commissioning expenses					
9.1	Site supervision & site admn.etc.	0.00	0.00	0.00	0.00	
9.2	Tools and Plants	0.00	0.00	0.00	0.00	
9.3	construction Insurance	0.00	0.00	0.00	0.00	
	Total Construction and pre commissioning expenses	0.00	0.00	0.00	0.00	
10.0	Overheads					
10.1	Establishment	954.81	812.05	0.00	142.76	
10.2	Audit & Accounts	0.00	0.00	0.00	0.00	
10.3	Contingency	67.60	0.00	0.00	67.60	
	Total Overheads	1022.41	812.05	0.00	210.36	
11.0	Project cost without IDC, FC, FERV & Hedging cost	13889.60	18301.56	14446.49	-18858.46	
12.0	Total Cost (Plant & Equipment)					
12.1	Interest During Construction (IDC)	1327.79	2234.13	0.00	-906.34	
12.2	Financing Charges (FC)		0.00	0.00	0.00	
12.3	Foreign Exchange Rate Variation (FERV)		0.00	0.00	0.00	
12.4	Hedging Cost		0.00	0.00	0.00	
13.0	Project cost including IDC, FC, FERV & Hedging cost	15217.39	20535.69	14446.49	-19764.80	

TH. 14.21

Sl	Package / Scope of works	LOA NO / Date	Date of award	Start date of work	No of bids received	Whether awarded through Limited / single/ Deposit work	Duration / completion date	Awarded value INR	Amended Value INR	Firm or with escalation in prices	Expenditure excluding taxes & Duties	Taxes & duties & IEDC	IOC, FC, FERV & Hedging cost	Sub-total
								US \$ - 10	INR - 11	US \$ - 12	INR - 13			
1	2	4	5	6	7	8	9					15	16	17
1	Crop & Tree Compensation													18
1	400KV/DIC Aurangabad (PG) - Aurangabad (MSETCL) - Supply	CC-CS/125-WR1/TW-9823/G6/CA-I/4241	24.03.2012	24.03.2012	11	DCB	22.09.2013				FIRM	250.45	4.35	267.42
2	400KV/DIC Aurangabad (PG) - Aurangabad (MSETCL) - Erection	CC-CS/125-WR1/TW-9823/G6/CA-I/4242	24.03.2012	24.03.2012	11	DCB	22.09.2013				With Escalation	3,918.66	135.51	4,122.96
3	Conductor Pkg E2	C-341/13-I/175-I/G6/CA/3486	04.11.2010	04.11.2010	4	ICB	04.03.2013				With Escalation	747.90	6.35	770.48
4	Insulator Pkg F1	C-341/13-I/179-I/G6/CA/10524 & 1525	07.12.2010	07.12.2010	6	ICB	07.11.2012				With Escalation	174.23	94.43	624.58
5	400/220KV Aurangabad (PG) (New) SS - Supply	CC-CS/125-WR1/SS-4271/1/G6/NOA-I/4044	26.12.2011	26.12.2011	17	ICB	25.11.2013	378,359,455	370,009,515	With Escalation	1,187.52	29.73	106.71	1,323.97
6	400/220KV Aurangabad (PG) (New) SS - Erection	CC-CS/125-WR1/SS-4271/1/G6/NOA-I/4045	26.12.2011	26.12.2011	17	ICB	25.11.2013	183,395,591	183,378,641	With Escalation	646.53	14.88	39.53	700.94
7	Site Awarded Packages							182,193,045	182,193,302	FIRM	5,555.23	97.44	283.69	5,897.23
8								724,248,092	724,670,458		15,657.68	1,343.93	3,463.22	20,535.69

DETAILS OF ELEMENTWISE COST

Name of the Transmission Licensee : POWER GRID CORPORATION OF INDIA LTD.

Name of Region: WESTERN

Name of the Project : Transmission System Associated with MUNDRA TS

Transmission lines

S.NO.	Name of line	Apportioned approved Cost (Rs. Lacs)	Completed Cost (Rs. Lacs)	Covered in the present petition	
				yes/no	if no, petition no.
1	400kV Aurangabad-Aurangabad D/C	15217.39	34982.18	YES	
			- 8		

Substations

S.NO.	Name of Substation	Apportioned approved Cost (Rs. Lacs)	Completed Cost (Rs. Lacs)	Covered in the present petition	
				yes/no	if no, petition no.
1	ICT 1 at Aurangabad s/s	3521.82	2395.26	yes	
2	ICT 2 at Aurangabad s/s	2321.27	1542.43	yes	
-	Total Bay cost	5843.09	3937.69		
-					
	Total Project cost	21060.48	38919.87		

Petitioner

Financial package upto COD

Name of the Transmission Licensee: **POWERGRID CORPORATION OF INDIA LTD.**

Name of Region: **WESTERN REGION**

Name of the Project: **MUNDRA UMPP**

Name of the Transmission Element: **Aurangabad (MSETCL) - Aurangabad (PG) 400 kV D/C (Quad) Line and Shifting of 400 kV D/C Akola - Aurangabad Line to Aurangabad (PG) alongwith associated bays at both-ends. Ant. :DOCO :01-JAN-2014**

Project Cost as on COD/31.03.2009: **20535.68 (Rs. in Lakhs)**

Date of Commercial Operation of the Transmission element: **01-JAN-2014** (ank.)

(Rs in Lacs)

Transmission Lines						
	Financial Package as apportioned/ Approved		Financial Package as on COD		As Admitted on COD	
	Currency and Amount		Currency and Amount		Currency and Amount	
Loans						
Loans - Domestic	INR	10652.17	INR	0.00		
Loans - Foreign			INR	14374.98		
Total Loans		10652.17		14374.98		
Equity						
Foreign						
Domestic	INR	4565.22	INR	6160.70		
Notional				0.00		
Total Equity		4565.22		6160.70		
Debt Equity Ratio		70.00:30.00		70.00:30.00		
Total Cost		15217.39		20535.68		
	Debt	Equity	Total			
Add Cap For 2013-2014			3320.79			
Add Cap For 2013-2014	Actual	Normative				
Debt		2324.55				
Equity		996.24				
Total		3320.79				
Total Capital Cost with ADDCAP upto 01.04.2014			23856.47			

RA. RA. 2
Petitioner

Statement of Additional Capitalisation after COD

Name of the Transmission Licensee:

Name of Region:

Name of the Project:

Name of the Transmission Element:

POWERGRID CORPORATION OF INDIA LTD.

WESTERN REGION

MUNDRA UMPP

Aurangabad (MSETCL) - Aurangabad (PG) 400 kV D/C (Quad) Line and Shifting of 400 kV D/C Akola - Aurangabad Line to Aurangabad (PG) alongwith associated bays at both ends. Ant. :DOCO :01-JAN-2014
01-JAN-2014

COD:

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 as per propose	Regulation under which covered	Admitted Cost
1	2	3	4	5	6	7
1.	2013-2014	BUILDING	354.51	Balance & Retention Payments	9(i)	
		TR LINE	2187.39	Balance & Retention Payments	9(i)	
		SUB STATION	712.45	Balance & Retention Payments	9(i)	
		PLCC	66.44	Balance & Retention Payments	9(i)	
	Total		3320.79			
2.	2014-2015	BUILDING	1071.97	Balance & Retention Payments	9(i)	
		TR LINE	9000.00	Balance & Retention Payments	9(i)	
		SUB STATION	1038.85	Balance & Retention Payments	9(i)	
		PLCC	14.87	Balance & Retention Payments	9(i)	
	Total		11125.69			

Statement of Capital Cost

Name of the Transmission Licensee:

POWERGRID CORPORATION OF INDIA LTD.

Name of Region:

WESTERN REGION

Name of the Project:

MUNDRA UMPP

Name of the Transmission Element:

Aurangabad (MSETCL) - Aurangabad (PG) 400 kV D/C (Quad) Line and Shifting of 400 kV D/C Akola - Aurangabad Line to Aurangabad (PG) alongwith associated bays at both ends. Ant. :DOCO :01-JAN-2014

Statement of Capital Cost

(To be given for relevant dates and year wise)

		01-APR-2009- 31-Mar-2010	01-APR-2010- 31-Mar-2011	01-APR-2011- 31-Mar-2012	01-APR-2012- 31-Mar-2013	01-JAN-2014- 31-Mar-2014
A	a) Opening Gross Block Amount as per books					205.36
	b) Amount of capital liabilities in A(a) above					
	c) Amount of IDC, FC, FERV & Hedging cost included in A(a) above					22.34
	d) Amount of IEDC (excluding IDC, FC, FERV & Hedging cost) included in A(a) a					8.12
B	a) Addition in Gross Block Amount during the period					33.21
	b) Amount of capital liabilities in B(a) above					
	c) Amount of IDC, FC, FERV & Hedging cost included in B(a) above					
	d) Amount of IEDC (excluding IDC, FC, FERV & Hedging cost) included in B(a) a					
C	a) Closing Gross Block Amount as per books					238.57
	b) Amount of capital liabilities in C(a) above					
	c) Amount of IDC, FC, FERV & Hedging cost included in C(a) above					22.34
	d) Amount of IEDC (excluding IDC, FC, FERV & Hedging cost) included in C(a) a					8.12

(Rs. in Crores)

Financing of Additional Capitalisation

Name of the Transmission Licensee:

POWERGRID CORPORATION OF INDIA LTD.

Name of Region:

WESTERN REGION

Name of the Project:

MUNDRA UMPP

Name of the Transmission Element:

Aurangabad (MSETCL) - Aurangabad (PG) 400 kV D/C (Quad) Line and Shifting of 400 kV D/C Akola - Aurangabad Line to Aurangabad (PG) alongwith associated bays at both ends. Ant. :DOCO :01-JAN-2014

Financial Year (Starting from COD)	From COD to 31- Mar-2014	Projected/Actual			Admitted					(Rs in Lacs)
		Year2	Year3	Year4	Year5& So on	Year1	Year2	Year3	Year4	Year5 & so on
1	2	3	4	5	6	7	8	9	10	11
Amount capitalised in Work/Equipment	3320.79									
Financing Details										
Loan-1										
Loan-2										
Loan-3 and so on										
Total Loan	2324.55									
Equity	996.24									
Internal Resources										
Others										
Total	3320.79									

Calculation of Depreciation Rate

Name of the Transmission
Licensee:

POWERGRID CORPORATION OF INDIA LTD.

Name of Region:

WESTERN REGION

Name of the Project:

MUNDRA UMPP

Name of the Transmission
Element:Aurangabad (MSETCL) - Aurangabad (PG) 400 kV D/C (Quad) Line and Shifting
of 400 kV D/C Akola - Aurangabad Line to Aurangabad (PG) alongwith associated
bays at both ends. Ant. :DOCO :01-JAN-2014

(Rs in Lacs)

Sl.No.	Name of the Assets	Gross Block as on 31.03.2013 or as on COD, whichever is later	Addcap during the year	Gross Block as on 31.03.2014 or as on COD, whichever is later	Depreciation Rates as per CERC's Depreciation Rate Schedule	Depreciation Amount up to 31.03.2014
	1	2	3	4	5	6=Col.4 X Col.5
2013-2014						
1	FREEHOLD LAND	5621.51	0.00	5621.51	0.00%	0.00
2	BUILDING	907.29	354.51	1261.80	3.34%	9.06
3	TR LINE	12513.56	2187.39	14700.95	5.28%	179.62
4	SUB STATION	1422.55	712.45	2135.00	5.28%	23.48
5	PLCC	70.77	66.44	137.21	6.33%	1.65
6	LEASEHOLD LAND	0.00	0.00	0.00	3.34%	0.00
	Total	20535.68	3320.79	23856.47		213.80
Weighted Average Rate of Depreciation (%)						0.96
Elapsed Life						0


 Petitioner

Statement of Depreciation

Name of the Transmission Licensee: POWERGRID CORPORATION OF INDIA LTD.

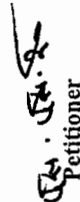
Name of Region: WESTERN REGION

Name of the Project: MUNDRA UMPP

Name of the Transmission Element: Aurangabad (MSETCL) - Aurangabad (PG) 400 kV D/C (Quad) Line and Shifting of 400 kV D/C Akola - Aurangabad Line to Aurangabad (PG) alongwith associated bays at both ends. Ant. : DOCO :01-JAN-2014

Financial Year	Upto 2000-2001	2001-2002	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Depreciation on Capital Cost														192.65
Depreciation on Additional Capitalisation														
Amount of Additional Capitalisation														
Depreciation Amount														3,320.79
Details of FERV														21.14
Amount of FERV on which depreciation charged														
Depreciation Amount														
Depreciation Recovered during the year														213.80
Advance against Depreciation recovered during the year														
Depreciation and Advance against Depreciation recovered during the year														213.80
Cumulative Depreciation And Advance against Depreciation recovered upto the year														213.80

(Rs in Lacs)


Petitioner

Calculation of Weighted Average Rate of Interest on Actual Loans

Name of the Transmission Licensee: **POWERGRID CORPORATION OF INDIA LTD.**
Name of Region: **WESTERN REGION**
Name of the Project: **MUNDRA UMPP**
Name of the Transmission Element: **Aurangabad (MSETCL) - Aurangabad (PG) 400 kV D/C (Quad) Line and Shifting of 400 kV D/C Akola - Aurangabad Line to Aurangabad (PG) alongwith associated bays at both ends. Ant. :DOCO :01-JAN-2014**

(Rs in Lacs)

Particulars	Existing 2008-2009	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014
IBRD V						
Gross Loan Opening						14374.98
Cumulative Repayments of Loans upto Previous Year						
Net Loans Opening						14374.98
Add : Drawal(s) during the year						
Less : Repayments(s) of Loans during the year						
Net Loan Closing						14374.98
Average Net Loan						14374.98
Rate of Interest on Loan		0%	0%	0%	0%	1.76%
Interest on Loan						253.00
Total						
Gross Loan Opening						14374.98
Cumulative Repayments of Loans upto Previous Year						
Net Loans Opening						14374.98
Add : Drawal(s) during the year						
Less : Repayments(s) of Loans during the year						
Net Loan Closing						14374.98
Average Net Loan						14374.98
Interest on Loan						253.00
Weighted Average Rate of Interest on Loans						1.7600%


Petitioner

Calculation of Interest on Normative Loan

Name of the Transmission Licensee: POWERGRID CORPORATION OF INDIA LTD.
Name of Region: WESTERN REGION
Name of the Project: MUNDRA UMPP
Name of the Transmission Element: Aurangabad (MSETCL) - Aurangabad (PG) 400 kV D/C (Quad) Line and Shifting of 400 kV D/C Akola - Aurangabad Line to Aurangabad (PG) alongwith associated bays at both ends. Ant. :DOCO :01-JAN-2014

(Rs in Lacs)

Particulars	Existing 2008-2009	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014
1	2	3	4	5	6	7
Gross Normative Loan - Opening						14,374.98
Cumulative repayment of Normative Loan upto previous year						
Net Normative loan - Opening						14,374.98
Increase/Decrease due to ACE during the Year						2,324.55
Repayments of Normative Loan during the year						213.80
Net Normative loan - Closing						16,485.74
Average Normative Loan						15,430.36
Weighted average Rate of Interest on actual Loans						1.7600%
Interest on Normative loan						67.89


Petitioner

Loans in Foreign Currency

Name of the Transmission
Licensee:

POWERGRID CORPORATION OF INDIA LTD.

Name of Region:

WESTERN REGION

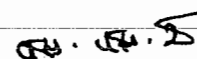
Name of the Project:

MUNDRA UMPP

Name of the Transmission
Element:

Aurangabad (MSETCL) - Aurangabad (PG) 400 kV D/C (Quad) Line and Shifting of 400 kV D/C Akola - Aurangabad Line to Aurangabad (PG) alongwith associated bays at both ends. Ant. :DOCO :01-JAN-2014

Particulars	Existing 2008-2009	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014
1	2	3	4	5	6	7
IBRD V (USD in LACs) EXCHANGE RATE : 59.86						
Gross Loan Opening						240.14
Cumulative Repayments of Loans upto Previous Year						
Net Loans Opening						240.14
Add : Drawal(s) during the year						
Less : Repayments(s) of Loans during the year						
Net Loan Closing						240.14
Average Net Loan						240.14
Rate of Interest on Loan						1.76%
Interest on Loan						4.23


Petitioner



IBRD-V

Page: 1

INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT
STATEMENT OF ACCOUNT

As of 31-MAR-2013

Loan No. 77870 Country India Product FSL

Borrower of Record	POWER GRID CORPORATION OF INDIA LIMITED	Currency of Commitment	USD
Guarantor	CONTROLLER OF AID ACCOUNTS & AUDIT	Original Principal	1,000,000,000.00
Commitment Rate	0.000000	Cancellations	0.00
Current Interest Rate	0.550000	Disbursed	310,853,100.34
Maturity Dates	15-Jan-2015, 15-Jan-2039	Recalled/Prepaid	0.00
Payment Dates	15-Jan, 15-Jul	Unwithdrawn Balance	689,146,899.66

	Currency	Amount	Current USD Eq
Principal			
Outstanding	USD	\$10,853,100.34	310,853,100.34
		<hr/>	<hr/>
		310,853,100.34	310,853,100.34
		<hr/>	<hr/>
Interest			
Accrued	USD	335,962.59	335,962.59
Deferred	USD	18,674.93	18,674.93
		<hr/>	<hr/>
		354,637.22	354,637.22
		<hr/>	<hr/>

(%)

Intl. Rate 0.56

(+/-) Guarantee fee 1.20

1.76

02.12.13

IBRD-V

International Bank for Reconstruction and Development
INTERNATIONAL DEVELOPMENT ASSOCIATION

New Delhi Office
70 Lodi Estate
New Delhi - 110 003
India

Telephone : 24617241/24619491
Cable Address: INTBAFRAD
Mailing Address : P.O. Box 416
Facsimile : 24619393

October 13, 2009

Mr. S. K. Chaturvedi
Chairman and Managing Director
Power Grid Corporation of India Limited
B-9, Qutab Institutional Area
Katwaria Sarai
New Delhi - 110016

INDIA: Loan No. 7787-IN
Fifth Power System Development Project

Dear Mr. Chaturvedi:

Enclosed are the following documents regarding above-mentioned Project, which are delivered to you as the authorized representative of Power Grid Corporation of India Limited:

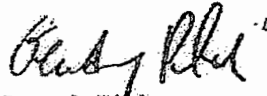
1. One signed original and one conformed copy of the Loan Agreement between Power Grid Corporation of India Limited and the International Bank for Reconstruction and Development (the Bank).
2. One conformed copy of the Guarantee Agreement between India and the Bank.
3. One signed original of the Performance Monitoring Indicators Letter.
4. One signed original of the Representations Letter.
5. One signed original of the Disbursement Letter.
6. One copy of the "International Bank for Reconstruction and Development General Conditions for Loans", dated July 1, 2005 (as amended through February 12, 2008).
7. One copy of the "Guidelines on Preventing and Combating Fraud and Corruption in Projects Financed by IBRD Loans and IDA Credits and Grants", dated October 15, 2006.
8. One copy of the "Guidelines: Procurement under IBRD Loans and IDA Credits" published by the Bank in May 2004, and revised in October 2006.

Handwritten signature/initials.

Pursuant to Section 5.01 of the Loan Agreement, January 11, 2010 is the terminal date for effectiveness of the Loan Agreement.

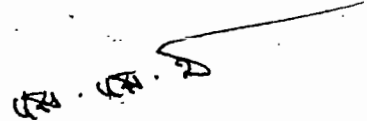
Please confirm, on behalf of Power Grid Corporation of India Limited receipt of the documents listed above by signing the enclosed copy of this letter.

Sincerely,



Gennady Pich
Senior Counsel
Legal Vice Presidency

Enclosures



SCHEDULE 3

Amortization Schedule

The following table sets forth the Principal Payment Dates of the Loan and the percentage of the total principal amount of the Loan payable on each Principal Payment Date ("Installment Share"). If the proceeds of the Loan have been fully withdrawn as of the first Principal Payment Date, the principal amount of the Loan repayable by the Borrower on each Principal Payment Date shall be determined by the Bank by multiplying: (a) Withdrawn Loan Balance as of the first Principal Payment Date; by (b) the Installment Share for each Principal Payment Date, such repayable amount to be adjusted, as necessary, to deduct any amounts referred to in paragraph 4 of this Schedule, to which a Currency Conversion applies.

Principal Payment Date	Installment Share (Expressed as a Percentage)
January 15, 2015	1.81%
July 15, 2015	1.82%
January 15, 2016	1.83%
July 15, 2016	1.84%
January 15, 2017	1.85%
July 15, 2017	1.86%
January 15, 2018	1.87%
July 15, 2018	1.87%
January 15, 2019	1.88%
July 15, 2019	1.89%
January 15, 2020	1.90%
July 15, 2020	1.91%
January 15, 2021	1.92%
July 15, 2021	1.93%
January 15, 2022	1.94%
July 15, 2022	1.95%
January 15, 2023	1.96%
July 15, 2023	1.97%
January 15, 2024	1.98%
July 15, 2024	1.99%
January 15, 2025	2.00%
July 15, 2025	2.01%
January 15, 2026	2.02%
July 15, 2026	2.03%
January 15, 2027	2.04%
July 15, 2027	2.05%
January 15, 2028	2.06%
July 15, 2028	2.07%

January 15, 2029	2.08%
July 15, 2029	2.09%
January 15, 2030	2.10%
July 15, 2030	2.11%
January 15, 2031	2.12%
July 15, 2031	2.13%
January 15, 2032	2.14%
July 15, 2032	2.16%
January 15, 2033	2.17%
July 15, 2033	2.18%
January 15, 2034	2.19%
July 15, 2034	2.20%
January 15, 2035	2.21%
July 15, 2035	2.22%
January 15, 2036	2.23%
July 15, 2036	2.24%
January 15, 2037	2.25%
July 15, 2037	2.27%
January 15, 2038	2.28%
July 15, 2038	2.29%
January 15, 2039	2.09%

2. If the proceeds of the Loan have not been fully withdrawn as of the first Principal Payment Date, the principal amount of the Loan repayable by the Borrower on each Principal Payment Date shall be determined as follows:
- To the extent that any proceeds of the Loan have been withdrawn as of the first Principal Payment Date, the Borrower shall repay the Withdrawn Loan Balance as of such date in accordance with paragraph 1 of this Schedule.
 - Any amount withdrawn after the first Principal Payment Date shall be repaid on each Principal Payment Date falling after the date of such withdrawal in amounts determined by the Bank by multiplying the amount of each such withdrawal by a fraction, the numerator of which is the original Installment Share specified in the table in paragraph 1 of this Schedule for said Principal Payment Date ("Original Installment Share") and the denominator of which is the sum of all remaining Original Installment Shares for Principal Payment Dates falling on or after such date, such amounts repayable to be adjusted, as necessary, to deduct any amounts referred to in paragraph 4 of this Schedule, to which a Currency Conversion applies.

44-6672

Calculation of Interest on Working Capital

Name of the Transmission Licensee:

POWERGRID CORPORATION OF INDIA LTD.

Name of Region:

WESTERN REGION

Name of the Project:

MUNDRA UMPP

Name of the Transmission Element:

Aurangabad (MSETCL) - Aurangabad (PG) 400 kV D/C (Quad) Line and Shifting of 400 kV D/C Akola - Aurangabad Line to Aurangabad (PG) alongwith associated bays at both ends, Ant. : DQCO :01-JAN-2014

(Rs in Lacs)

Sl.N o.	Particulars	Existing 2008-2009	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014
1	2	3	4	5	6	7	8
1	O and M Expenses						30.31
2	Maintenance Spares						54.55
3	Recievables						454.27
4	Total Working Capital						539.13
5	Rate of Interest						13.20
6	Interest on Working Capital						17.79

 Petitioner

Draw Down Schedule for Calculation of IDC & Financing Charges

Name of the Transmission Licensee: **POWERGRID CORPORATION OF INDIA LTD.**
Name of Region: **WESTERN REGION**
Name of the Project: **MUNDRA UMPP**
Name of the Transmission Element: **Aurangabad (MSETCL) - Aurangabad (PG) 400 kV D/C (Quad) Line and Shifting of 400 kV D/C Akola - Aurangabad Line to Aurangabad (PG) alongwith associated bays at both ends. Ant. :DQCO :01-JAN-2014**

(Rs in Lacs)

Draw Down Schedule for Calculation of IDC & Financing Charges										
Sl.No	Drawn Down	Quarter 1			Quarter 2			Quarter n(COD)		
Sl.No.	Particulars	Quantum In Foreign Currency	Exchange Rate on Draw Down Date	Amount In Indian Rupee	Quantum In Foreign Currency	Exchange Rate on Draw Down Date	Amount In Indian Rupee	Quantum In Foreign Currency	Exchange Rate on Draw Down Date	Amount In Indian Rupee
1.	Loans									
1.1	Foreign Loans									
1.2	Indian Loans									
1.2.1	IBRD V									
	Draw Down Amount									14374.98
	IDC									
	Financing Charges									
	Total Indian Loans									
	Draw Down Amount									14374.98
	IDC									0.00
	Financing Charges									0.00
	Total of Loans Drawn									
	Draw Down Amount									14374.98
	IDC									2234.13
	Financing Charges									0.00
2	Equity									
2.1	Foreign Equity Drawn									
2.2	Indian Equity Drawn									0
	Total Equity Deployed									0.00

The project has been funded through domestic loans allocated from the common pool based on the phasing of expenditure and IDC has been booked accordingly. As the loans are allocated from common pool, quarter wise drawl is not furnished.


Petitioner

Summary Sheet

Name of the Transmission Licensee: POWERGRID CORPORATION OF INDIA LTD.

Name of Region: WESTERN REGION

Name of the Project: MUNDRA UMPP

Name of the Transmission Element: 400/220 kV ICT-1 alongwith associated bays at Aurangabad (PG) New S/S. Ant. :DOCO :01-JAN-2014

Sl.No.	Particulars	Form No.	Existing 2008-2009	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014(Pro Rata)	(Rs in Lacs)
1	2	3	4	5	6	7	8	9	
1	Depreciation	FORM-12	0.00						22.38
2	Interest on Loan	FORM-13A	0.00						5.35
3	Return on Equity	FORM-01A	0.00						22.96
4	Interest On Working Capital	FORM-13B	0.00						3.88
5	O & M Expenses		0.00						50.73
6	Total		0.00						105.30

Calculation Of Return On Equity

Name of the Transmission Licensee:

POWERGRID CORPORATION OF INDIA LTD.

Name of Region:

WESTERN REGION


Name of the Project:

MUNDRA UMPP

Name of the Transmission Element:

400/220 kV ICT-1 alongwith associated bays at Aurangabad (PG) New S/S. Ant. :DOCO :01-JAN-2014

Particulars	Existing 2008-2009	2009-2010	2010-2011	2011-2012	2012-2013	(Rs in Lacs)	
						2013-2014	2014-2015
1	2	3	4	5	6	7	
Equity as DOCO						443.51	
Notional Equity for Add Cap						163.84	
Total Equity						607.36	
Return on Equity @ 17.481%						22.96	


Petitioner

Details of Transmission Lines And Substations

Name of the Transmission Licensee:

POWERGRID CORPORATION OF INDIA LTD.

Name of Region:

WESTERN REGION

Name of the Project:

MUNDRA UMPP

Name of the Transmission Element:

400/220 kV ICT-1 alongwith associated bays at Aurangabad (PG) New S/S. Ant. :DOCO :01-JAN-2014

Transmission Lines

Sl.No.	Name of Line	Type of Line AC/HVDC	S/C or D/C	No. of Sub- Conductors	Voltage level kV	Line Length (Km.)	Date of Commercial operation	Covered in the present petition	If No, petition No.
								Yes/No	

Substations

Sl.No.	Name of Sub-Station	Type of Substation Conventional /GIS/ HVDC Terminal/ HVDC Back to Back	Voltage level kV	No. of Transformers / Reactors/ SVC etc (with Capacity)	No. of Bays				Date of Commercial operation <i>(Conticipated)</i>	Covered in the present petition	
					765 KV	400 KV	220 KV	132 KV & below		Yes/No	If No, petition No.
1	Aurangabad (PG) New	Conventional	400/220 kV								
	1x315 MVA ICT - 1 Bay		400			1			01-JAN-2014	Yes	
	1x315 MVA ICT - 1 Bay		220				1		01-JAN-2014	Yes	
	Line Bay # 1		220				1		01-JAN-2014	Yes	
	Line Bay # 2		220				1		01-JAN-2014	Yes	
				Total		1	3				

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Petitioner

Normative Parameters considered For tariff calculations

Name of the Transmission Licensee:

POWERGRID CORPORATION OF INDIA LTD.

Name of Region:

WESTERN REGION

Name of the Project:

MUNDRA UMPP

Name of the Transmission Element:

400/220 kV ICT-1 alongwith associated bays at Aurangabad (PG) New S/S. Ant.:DOCO :01-JAN-2014

Particulars	Unit	Year Ending March					
		Existing 2008-2009	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014
1	2	3	4	5	6	7	8
Base Rate of Return on Equity	%						17.481
Tax Rate	%						11.33
Target Availability	%						98.00
Normative O&M per Km.	Rs. lacs			Given Below			
Normative O&M per bay	Rs. lacs			Given Below			
Spares for WC as % of O&M	%						15.00
Receivables in Months for WC	months						2.00
Prime lending Rate of SBI as on 01-APR-2009	%						13.20
Norms for O&M expenditure for Transmission System							
		2009-10	2010-11	2011-12	2012-13	2013-14	
Norms for sub-station (Rs Lakh per bay)							
765 KV		73.36	77.56	81.99	86.68	91.64	
400 KV		52.40	55.40	58.57	61.92	65.46	
220 KV		36.68	38.78	41.00	43.34	45.82	
132 KV and below		26.20	27.70	29.28	30.96	32.73	
Norms for AC and HVDC Lines (Rs Lakhs per km)							
Single Circuit (Bundled conductor with four or more sub-conductors)		0.537	0.568	0.600	0.635	0.671	
Single Circuit (Twin & Triple Conductor)		0.358	0.378	0.400	0.423	0.447	
Double Circuit (Single Conductor)		0.179	0.189	0.200	0.212	0.224	
Double Circuit (Bundled conductor with four or more sub-conductors)		0.940	0.994	1.051	1.111	1.174	
Double Circuit (Twin & Triple Conductor)		0.627	0.663	0.701	0.741	0.783	
Double Circuit (Single Conductor)		0.269	0.284	0.301	0.318	0.336	
Norm for HVDC Stations							
HVDC Back-to-back stations (Rs lakh per 500 MW)		443.00	468.00	495.00	523.00	553.00	
Rihand-Dadri HVDC bipole scheme (Rs Lakh)		1450.00	1533.00	1621.00	1713.00	1811.00	
Talcher-Kolar HVDC bipole scheme (Rs Lakh)		1699.00	1796.00	1899.00	2008.00	2122.00	

[Signature]
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 :**ATS for MUNDRA - Regional System for WR under
Transmission System Associated with MUNDRA UMPP**Name of Element:**

400/220kV 315MVA ICT-I at Aurangabad

Capital Cost Estimates

Board of Director/ Agency approving the Capital cost estimates:	Board of Directors 213 meeting	
Date of approval of the Capital cost estimates:	17-Sep-08	
	Present Day Cost	Completed Cost
Price level of approved estimates	As of End of 1st Qtr. Of the year 2008	As on Scheduled COD of the System
Foreign Exchange rate considered for the Capital cost estimates		
Capital Cost excluding IDC & FC		
Foreign Component, if any (In Million US \$ or the relevant Currency)		
Domestic Component (Rs. Cr.)		
Capital cost excluding IDC & FC (Rs. Cr)	32.13	37.91
IDC & FC		
Foreign Component, if any (In Million US \$ or the relevant Currency)		
Domestic Component (Rs. Cr.)		
Total IDC & FC (Rs.Cr.)	3.09	3.65
Rate of taxes & duties considered		
Capital cost Including IDC & FC		
Foreign Component, if any (In Million US \$ or the relevant Currency)		
Domestic Component (Rs. Cr.)		
Total Capital cost Including IDC & FC (Rs. Cr)	35.22	41.56
Schedule of Commissioning		
(Scheduled DOCO elementwise)		
COD of Unit-1/Block-1	17-Sep-12	-
COD of Unit-1/Block-2		
COD of Unit-1/Block-3		
COD of Unit-1/Block-4		

Note:

- Copy of approval letter should be enclosed.
- Details of Capital cost are to be furnished as per FORM-5B or 5C as applicable.
- Details of IDC & Financing Charges are to be furnished as per FORM-16.

Element wise Break-up of Project Cost for Transmission System
Name of the Transmission Licensee : Power Grid Corporation of India Ltd
Name of Region: Western Region -I
Name of the Project : Mundra UMPP
Name of the Element: 400/220kV 315 MVA ICT1 at Aurangabad SS
DOCO: 01.01.2014

(Rs in lakhs)

Sl.No.	Break Down	As per Original	As on COD	Liabilities / Provision	Variation	Reasons for Variation
1	2	3	4	5	6=3-4-5	7
A	TRANSMISSION LINE					
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	0.00	0.00	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	0.00	0.00	0.00	
2.2	Conductor	0.00	0.00	0.00	0.00	
2.3	Earth Wire	0.00	0.00	0.00	0.00	
2.4	Insulators	0.00	0.00	0.00	0.00	
2.5	Hardware Fittings	0.00	0.00	0.00	0.00	
2.6	Conductor & Earthwire accessories	0.00	0.00	0.00	0.00	
2.7	Spares	0.00	0.00	0.00	0.00	
2.8	Erection, Stringing & Civil works including foundation	0.00	0.00	0.00	0.00	
2.9	Total Transmission Lines material	0.00	0.00	0.00	0.00	
3.0	Taxes and Duties					
3.1	Custom Duty	0.00	0.00	0.00	0.00	
3.2	Other Taxes & Duties	0.00	0.00	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	
:: 2 ::						
B.	SUBSTATIONS					
4.0	Preliminary works & land					
4.1	Design & Engineering	0.00	0.00	0.00	0.00	
4.2	Land	0.00	0.00	0.00	0.00	
4.3	Site preparation	0.00	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	0.00	
5.2	Township & Colony	0.00	0.00	0.00	0.00	
5.3	Roads and Drainage	0.00	0.00	0.00	0.00	
5.4	Foundation for structures	71.70	122.50	97.16	-147.96	
5.5	Misc. civil works	0.00	0.00	0.00	0.00	
	Total Civil Works	71.70	122.50	97.16	-147.96	
6.0	Substation Equipments					
6.1	Switchgear (CT,PT, Circuit Breaker, Isolator etc)	558.62	201.18	148.45	208.99	Variation is due to decrease in the awarded cost as compared to FR.
6.2	Transformers	1743.85	709.69	396.99	637.17	Variation is due to decrease in the awarded cost as compared to FR.
6.3	Compensating Equipment(Reactor, SVCs etc)	0.00	0.00	0.00	0.00	
6.4	Control, Relay & Protection Panel	238.76	83.64	61.72	93.40	Variation is due to decrease in the awarded cost as compared to FR.
6.5	PLCC	48.50	2.00	8.25	38.25	Variation is due to decrease in the awarded cost as compared to FR.
6.6	HVDC package	0.00	0.00	0.00	0.00	
6.7	Bus Bars/ conductors/Insulators	68.00	107.22	79.12	-118.34	Variation is due to increase in awarded cost and consideration of 220KV Yard items along with ICT#1 as ICT#1 is planned to be charged before ICT#2.
6.8	outdoor lighting	0.00	0.00	0.00	0.00	
6.9	Emergency DG set	0.00	0.00	0.00	0.00	
6.10	Grounding System	0.00	0.00	0.00	0.00	
6.1	Structure for Switch yard	156.68	141.25	104.23	-88.79	There is no scope change and Variation is due to increase in awarded cost and consideration of 220KV Yard items along with ICT#1 as ICT#1 is planned to be charged before ICT#2.
6.12	Auxiliary System	103.74	28.43	20.98	54.34	Variation is due to decrease in the awarded cost as compared to FR.
	Total Substation Equipments	2918.15	1273.41	819.72	825.02	
7.0	Spares (incl.in eqpt. cost)	0.00			0.00	
8.0	Taxes and Duties					
8.1	Custom Duty	0.00	0.00	0.00	0.00	
8.2	Other Taxes & Duties	0.00	0.00	0.00	0.00	
8.3	Total Taxes & Duties	0.00	0.00	0.00	0.00	
	Total (Sub-station)	2989.85	1395.91	916.89	677.06	
9.0	Construction and pre-commissioning expenses					
9.1	Site supervision & site admn.etc.	0.00	0.00	0.00	0.00	
9.2	Tools and Plants	0.00	0.00	0.00	0.00	
9.3	construction Insurance	0.00	0.00	0.00	0.00	
	Total Construction and pre commissioning expenses	0.00	0.00	0.00	0.00	
10.0	Overheads					
10.1	Establishment	222.52	21.41	0.00	201.11	
10.2	Audit & Accounts	0.00	0.00	0.00	0.00	
10.3	Contingency	0.00	0.00	0.00	0.00	
	Total Overheads	222.52	21.41	0.00	201.11	
11.0	Project cost without IDC, FC, FERV & Hedging cost	3212.37	1417.32	916.89	878.17	
12.0	Total Cost (Plant & Equipment)					
12.1	Interest During Construction (IDC)	309.45	61.06	0.00	248.39	
12.2	Financing Charges (FC)	0.00	0.00	0.00	0.00	
12.3	Foreign Exchange Rate Variation (FERV)	0.00	0.00	0.00	0.00	
12.4	Hedging Cost	0.00	0.00	0.00	0.00	
13.0	Project cost Including IDC, FC, FERV & Hedging cost	3521.82	1478.38	916.89	1126.56	

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Break-up of Construction / Supply / Service packages

Name of the Transmission Licensee :

Name of the Region : WR - I

Name of the project : MUNDRA UMPP

Name of the Transmission Element : 400/220kV ICT 1 alongwith associated bays at Aurangabad (PG) New SS

Anticipated DOCO: 01.01.2014

SL	Package / Scope of works	LOA NO / Date	Date of award	Start date of work	No of bids received	Duration / completion date	Awarded value INR		Amended Value INR		Firm or with escalation in prices	Expenditure excluding taxes & Duties	Taxes & duties & IEDC	IDC, FC, FERV & Hedging cost	Sub-total
							US\$ - 10	INR - 11	US\$ - 12	INR - 13					
1	400/220kV Aurangabad (PG) (New) SS - Supply	CC-CS/125-WR1/SS-827/1/ G6/NOA-II/4044 dtd 26.12.11	26.12.2011	26.12.2011	17	25.11.2013		378,359,455		379,098,515	WITH ESCALATION	538.85	12.20	41.00	592.05
2	400/220kV Aurangabad (PG) (New) SS - Erection	CC-CS/125-WR1/SS-827/1/ G6/NOA-II/4045 dtd 26.12.11	26.12.2011	26.12.2011	17	25.11.2013		183,295,591		183,378,641	WITH ESCALATION	129.93	2.65	7.03	139.61
3	Auto-transformer Pkg A1 for Agbad SS- Supply	CC-CS/125WR1/TR-8607/G6/CA-II/3891 dated 31.10.2011	03.10.2011	03.10.2011	6	02.08.2013		173,909,000		173,909,000	WITH ESCALATION	687.37	24.07	35.28	746.72
4	Auto-transformer Pkg A1 for Agbad SS- Erection	CC-CS/125WR1/TR-8607/G6/CA-II/3892 dated 31.10.2011	03.10.2011	03.10.2011	6	02.08.2013		6,758,754		6,758,754	WITH ESCALATION	-	-	-	-
												1,356.14	38.91	83.32	1,478.38

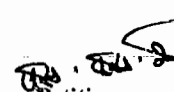
BPA. D.A.

Financial package upto COD

Name of the Transmission Licensee: **POWERGRID CORPORATION OF INDIA LTD.**
Name of Region: **WESTERN REGION**
Name of the Project: **MUNDRA UMPP**
Name of the Transmission Element: **400/220 kV ICT-1 alongwith associated bays at Aurangabad (PG) New S/S. Ant. :DOCO :01-JAN-2014**
Project Cost as on COD/31.03.2009: **1478.38 (Rs. in Lakhs)**
Date of Commercial Operation of the Transmission element: **01-JAN-2014** (cont.)

(Rs in Lacs)

Transmission Lines						
	Financial Package as apportioned/ Approved		Financial Package as on COD		As Admitted on COD	
	Currency and Amount		Currency and Amount		Currency and Amount	
Loans						
Loans - Domestic	INR	2465.27	INR	0.00		
Loans - Foreign			INR	1034.87		
Total Loans		2465.27		1034.87		
Equity						
Foreign						
Domestic	INR	1056.55	INR	443.51		
Notional				0.00		
Total Equity		1056.55		443.51		
Debt Equity Ratio		70.00:30.00		70.00:30.00		
Total Cost		3521.82		1478.38		
	Debt	Equity	Total			
Add Cap For 2013-2014			546.15			
Add Cap For 2013-2014	Actual	Normative				
Debt		382.30				
Equity		163.84				
Total		546.15				
Total Capital Cost with ADDCAP upto 01.04.2009			2024.53			


Petitioner

Statement of Additional Capitalisation after COD

Name of the Transmission Licensee:

Name of Region:

Name of the Project:

Name of the Transmission Element:

COD:

POWERGRID CORPORATION OF INDIA LTD.

WESTERN REGION

MUNDRA UMPP

400/220 KV ICT-1 alongwith associated bays at Aurangabad (PG) New S/S. Ant. :DOCO :01-JAN-2014
01-JAN-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 as per propose	Regulation under which covered	Admitted Cost
1	2	3	4	5	6	7
1.	2013-2014	BUILDING	47.16	Balance Retention & Payments	9(i)	
		SUB STATION	491.76	Balance Retention & Payments	9(i)	
		PLCC	7.23	Balance Retention & Payments	9(i)	
	Total		546.15			
2.	2014-2015	BUILDING	50.00	Balance Retention & Payments	9(i)	
		SUB STATION	319.72	Balance Retention & Payments	9(i)	
		PLCC.	1.01	Balance Retention & Payments	9(i)	
	Total		370.73			

Statement of Capital Cost

POWERGRID CORPORATION OF INDIA LTD.

WESTERN REGION

MUNDRA UMPP

400/220 kV ICT-1 alongwith associated bays at Aurangabad (PG) New S/S. Ant. :DOCO :01-JAN-2014

Name of the Transmission Licensee:

Name of Region:

Name of the Project:

Name of the Transmission Element:

Statement of Capital Cost

(To be given for relevant dates and year wise)

		01-APR-2009- 31-Mar-2010	01-APR-2010- 31-Mar-2011	01-APR-2011- 31-Mar-2012	01-APR-2012- 31-Mar-2013	01-JAN-2014- 31-Mar-2014
A	a) Opening Gross Block Amount as per books					14.78
	b) Amount of capital liabilities in A(a) above					
	c) Amount of IDC, FC, FERV & Hedging cost included in A(a) above					0.61
	d) Amount of IEDC (excluding IDC, FC, FERV & Hedging cost) included in A(a) a					0.21
B	a) Addition in Gross Block Amount during the period					5.46
	b) Amount of capital liabilities in B(a) above					
	c) Amount of IDC, FC, FERV & Hedging cost included in B(a) above					
	d) Amount of IEDC (excluding IDC, FC, FERV & Hedging cost) included in B(a) a					
C	a) Closing Gross Block Amount as per books					20.24
	b) Amount of capital liabilities in C(a) above					
	c) Amount of IDC, FC, FERV & Hedging cost included in C(a) above					0.61
	d) Amount of IEDC (excluding IDC, FC, FERV & Hedging cost) included in C(a) a					0.21

Signature of Petitioner

Financing of Additional Capitalisation

Name of the Transmission Licensee:

POWERGRID CORPORATION OF INDIA LTD.

Name of Region:

WESTERN REGION

Name of the Project:

MUNDRA UMPP

Name of the Transmission Element:

400/220 kV ICT-1 alongwith associated bays at Aurangabad (PG) New S/S. Ant. :DOCO :01-JAN-2014

(Rs in Lacs)

Financial Year (Starting from COD)	From COD to31- Mar-2014	Projected/Actual				Admitted				
		Year2	Year3	Year4	Year5& So on	Year1	Year2	Year3	Year4	Year5 & so on
1	2	3	4	5	6	7	8	9	10	11
Amount capitalised in Work/Equipmen t	546.15									
Financing Details										
Loan-1										
Loan-2										
Loan-3 and so on										
Total Loan	382.30									
Equity	163.84									
Internal Resources										
Others										
Total	546.15									

[Signature]
Petitioner

Calculation of Depreciation Rate

Name of the Transmission
Licensee:

POWERGRID CORPORATION OF INDIA LTD.

Name of Region:

WESTERN REGION

Name of the Project:

MUNDRA UMPP

Name of the Transmission
Element:400/220 kV ICT-1 alongwith associated bays at Aurangabad (PG) New S/S. Ant.
:DOCO :01-JAN-2014

(Rs in Lacs)

Sl.No.	Name of the Assets	Gross Block as on 31.03.2013 or as on COD, whichever is later	Addcap during the year	Gross Block as on 31.03.2014 or as on COD, whichever is later	Depreciation Rates as per CERC's Depreciation Rate Schedule	Depreciation Amount up to 31.03.2014
1	2	3	4	5	6=Col.4 X Col.5	
2013-2014						
1	FREEHOLD LAND	0.00	0.00	0.00	0.00%	0.00
2	BUILDING	131.83	47.16	178.99	3.34%	1.30
3	TR LINE	0.00	0.00	0.00	5.28%	0.00
4	SUB STATION	1344.35	491.76	1836.11	5.28%	20.99
5	PLCC	2.20	7.23	9.43	6.33%	0.09
6	LEASEHOLD LAND	0.00	0.00	0.00	3.34%	0.00
Total		1478.38	546.15	2024.53		22.38
Weighted Average Rate of Depreciation (%)						1.28
Elapsed Life						0


 Petitioner

Statement of Depreciation

Name of the Transmission Licensee: POWERGRID CORPORATION OF INDIA LTD.

Name of Region: WESTERN REGION

Name of the Project: MUNDRA UMPP

Name of the Transmission Element: 400/220 kV ICT-1 alongwith associated bays at Aurangabad (PG) New S/S. Ant. :DOCO :01-JAN-2014

Financial Year	Upto 2000-2001	2001-2002	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Depreciation on Capital Cost														18.88
Depreciation on Additional Capitalisation														
Amount of Additional Capitalisation														
Depreciation Amount														
Details of FERV														
Amount of FERV on which depreciation charged														546.15
Depreciation Amount														3.50
Depreciation Recovered during the year														
Advance against Depreciation recovered during the year														22.38
Depreciation and Advance against Depreciation recovered during the year														
Cumulative Depreciation And Advance against Depreciation recovered upto the year														22.38

(Rs in Lacs)

Calculation of Weighted Average Rate of Interest on Actual Loans

Name of the Transmission Licensee: **POWERGRID CORPORATION OF INDIA LTD.**
Name of Region: **WESTERN REGION**
Name of the Project: **MUNDRA UMPP**
Name of the Transmission Element: **400/220 kV ICT-1 alongwith associated bays at Aurangabad (PG) New S/S. Ant. :DOCO :01-JAN-2014**

(Rs in Lacs)

Particulars	Existing 2008-2009	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014
IBRD V						
Gross Loan Opening						1034.87
Cumulative Repayments of Loans upto Previous Year						
Net Loans Opening						1034.87
Add : Drawal(s) during the year						
Less : Repayments(s) of Loans during the year						
Net Loan Closing						1034.87
Average Net Loan						1034.87
Rate of Interest on Loan		0%	0%	0%	0%	1.76%
Interest on Loan						18.21
Total						
Gross Loan Opening						1034.87
Cumulative Repayments of Loans upto Previous Year						
Net Loans Opening						1034.87
Add : Drawal(s) during the year						
Less : Repayments(s) of Loans during the year						
Net Loan Closing						1034.87
Average Net Loan						1034.87
Interest on Loan						18.21
Weighted Average Rate of Interest on Loans						1.7600%


Petitioner

Calculation of Interest on Normative Loan

Name of the Transmission
Licensee:

POWERGRID CORPORATION OF INDIA LTD.

Name of Region:

WESTERN REGION

Name of the Project:

MUNDRA UMPP

Name of the Transmission
Element:400/220 kV ICT-1 alongwith associated bays at Aurangabad (PG) New S/S. Ant.
:DOCO :01-JAN-2014

(Rs in Lacs)

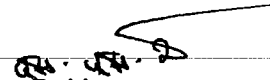
Particulars	Existing 2008-2009	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014
1	2	3	4	5	6	7
Gross Normative Loan - Opening						1,034.87
Cumulative repayment of Normative Loan upto previous year						
Net Normative loan - Opening						1,034.87
Increase/Decrease due to ACE during the Year						382.30
Repayments of Normative Loan during the year						22.38
Net Normative loan - Closing						1,394.79
Average Normative Loan						1,214.83
Weighted average Rate of Interest on actual Loans						1.7600%
Interest on Normative loan						5.35


 Petitioner

Loans in Foreign Currency

Name of the Transmission Licensee: **POWERGRID CORPORATION OF INDIA LTD.**
Name of Region: **WESTERN REGION**
Name of the Project: **MUNDRA UMPP**
Name of the Transmission Element: **400/220 kV ICT-1 alongwith associated bays at Aurangabad (PG) New S/S. Ant. :DOCO :01-JAN-2014**

Particulars	Existing 2008-2009	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014
1	2	3	4	5	6	7
IBRD V (USD in LACs) EXCHANGE RATE : 59.86						
Gross Loan Opening						17.29
Cumulative Repayments of Loans upto Previous Year						
Net Loans Opening						17.29
Add : Drawal(s) during the year						
Less : Repayments(s) of Loans during the year						
Net Loan Closing						17.29
Average Net Loan						17.29
Rate of Interest on Loan						1.76%
Interest on Loan						0.30


Petitioner

Calculation of Interest on Working Capital

Name of the Transmission
Licensee:

POWERGRID CORPORATION OF INDIA LTD.

Name of Region:

WESTERN REGION

Name of the Project:

MUNDRA UMPP

Name of the Transmission
Element:

400/220 kV ICT-1 alongwith associated bays at Aurangabad (PG) New S/S. Ant.
:DOCO :01-JAN-2014

(Rs in Lacs)

Sl.N o.	Particulars	Existing 2008-2009	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014
1	2	3	4	5	6	7	8
1	O and M Expenses						16.91
2	Maintenance Spares						30.44
3	Recievables						70.20
4	Total Working Capital						117.55
5	Rate of Interest						13.20
6	Interest on Working Capital						3.88


Petitioner

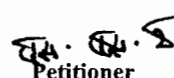
Draw Down Schedule for Calculation of IDC & Financing Charges

Name of the Transmission Licensee: **POWERGRID CORPORATION OF INDIA LTD.**
Name of Region: **WESTERN REGION**
Name of the Project: **MUNDRA UMPP**
Name of the Transmission Element: **400/220 kV ICT-1 alongwith associated bays at Aurangabad (PG) New S/S. Ant. :DOCO :01-JAN-2014**

(Rs in Lacs)

Draw Down Schedule for Calculation of IDC & Financing Charges										
Sl.No	Drawn Down	Quarter 1			Quarter 2			Quarter n(COD)		
Sl.No.	Particulars	Quantum In Foreign Currency	Exchange Rate on Draw Down Date	Amount In Indian Rupee	Quantum In Foreign Currency	Exchange Rate on Draw Down Date	Amount In Indian Rupee	Quantum In Foreign Currency	Exchange Rate on Draw Down Date	Amount In Indian Rupee
1.	Loans									
1.1	Foreign Loans									
1.2	Indian Loans									
1.2.1	IBRD V									
	Draw Down Amount									1034.87
	IDC									
	Financing Charges									
	Total Indian Loans									
	Draw Down Amount									1034.87
	IDC									0.00
	Financing Charges									0.00
	Total of Loans Drawn									
	Draw Down Amount									1034.87
	IDC									61.06
	Financing Charges									0.00
2	Equity									
2.1	Foreign Equity Drawn									
2.2	Indian Equity Drawn									0
	Total Equity Deployed									0.00

The project has been funded through domestic loans allocated from the common pool based on the phasing of expenditure and IDC has been booked accordingly. As the loans are allocated from common pool, quarter wise drawl is not furnished.


Petitioner

Summary Sheet

Name of the Transmission Licensee: POWERGRID CORPORATION OF INDIA LTD.
Name of Region: WESTERN REGION
Name of the Project: MUNDRA UMPP
Name of the Transmission Element: 400/220 kV ICT-2 alongwith associated bays at Aurangabad (PG) New S/S. Ant. :DOCO :01-JAN-2014

Sl.No.	Particulars	Form No.	Existing 2008-2009	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014(Pro Rata)
1	2	3	4	5	6	7	8	9
1	Depreciation	FORM-12	0.00					14.08
2	Interest on Loan	FORM-13A	0.00					3.42
3	Return on Equity	FORM-01A	0.00					14.69
4	Interest On Working Capital	FORM-13B	0.00					3.46
5	O & M Expenses		0.00					50.73
6	Total		0.00					86.38

Calculation Of Return On Equity

Name of the Transmission Licensee:

POWERGRID CORPORATION OF INDIA LTD.

Name of Region:

WESTERN REGION

Name of the Project:

MUNDRA UMPP

Name of the Transmission Element:

400/220 kV ICT-2 alongwith associated bays at Aurangabad (PG) New S/S. Ant. :DOCO :01-JAN-2014

Particulars	Existing 2008-2009	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014
1	2	3	4	5	6	7
Equity as DOCO						293.91
Notional Equity for Add Cap						84.58
Total Equity						378.49
Return on Equity @ 17.481%						14.69

(Rs in Lacs)

 Petitioner

Details of Transmission Lines And Substations

Name of the Transmission Licensee:

POWERGRID CORPORATION OF INDIA LTD.

Name of Region:

WESTERN REGION

Name of the Project:

MUNDRA UMPP

Name of the Transmission Element:


400/220 kV ICT-2 alongwith associated bays at Aurangabad (PG) New S/S. Ant.:DOCO:01-JAN-2014

Transmission Lines

Sl.No.	Name of Line	Type of Line AC/HVDC	S/C or D/C	No. of Sub- Conductors	Voltage level kV	Line Length (Km.)	Date of Commercial operation	Covered in the present petition	If No, petition No.
								Yes/No	

Substations

Sl.No.	Name of Sub-Station	Type of Substation Conventional /GIS/ HVDC Terminal/ HVDC Back to Back	Voltage level kV	No. of Transformers / Reactors/ SVC etc (with Capacity)	No. of Bays	Date of Commercial operation	Covered in the present petition	If No, petition No.
1	Aurangabad (PG) New	Conventional	400/220 kV					
	1x315 MVA ICT - 2 Bay		400					
	1x315 MVA ICT - 2 Bay		220		1			
	Line Bay # 3		220		1			
	Line Bay # 4		220		1			
Total					3			


Petitioner

Normative Parameters considered For tariff calculations

Name of the Transmission Licensee:

POWERGRID CORPORATION OF INDIA LTD.

Name of Region:

WESTERN REGION

Name of the Project:

MUNDRA UMPP

Name of the Transmission Element:

400/220 kV ICT-2 alongwith associated bays at Aurangabad (PG) New S/S. Ant.:DOCO:01-JAN-2014

Year Ending March

Particulars	Unit	Existing 2008-2009	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014
1	2	3	4	5	6	7	8
Base Rate of Return on Equity	%						17.481
Tax Rate	%						11.33
Target Availability	%						98.00
Normative O&M per Km.	Rs. lacs				Given Below		
Normative O&M per bay	Rs. lacs				Given Below		
Spares for WC as % of O&M	%						15.00
Receivables in Months for WC	months						2.00
Prime lending Rate of SBI as on 01-APR-2009	%						13.20

Norms for O&M expenditure for Transmission System

	2009-10	2010-11	2011-12	2012-13	2013-14
Norms for sub-station (Rs Lakh per bay)					
765 KV	73.36	77.56	81.99	86.68	91.64
400 KV	52.40	55.40	58.57	61.92	65.46
220 KV	36.68	38.78	41.00	43.34	45.82
132 KV and below	26.20	27.70	29.28	30.96	32.73
Norms for AC and HVDC Lines (Rs Lakhs per km)					
Single Circuit (Bundled conductor with four or more sub-conductors)	0.537	0.568	0.600	0.635	0.671
Single Circuit (Twin & Triple Conductor)	0.358	0.378	0.400	0.423	0.447
Single Circuit (Single Conductor)	0.179	0.189	0.200	0.212	0.224
Double Circuit (Bundled conductor with four or more sub-conductors)	0.940	0.994	1.051	1.111	1.174
Double Circuit (Twin & Triple Conductor)	0.627	0.663	0.701	0.741	0.783
Double Circuit (Single Conductor)	0.269	0.284	0.301	0.318	0.336
Norm for HVDC Stations					
HVDC Back-to-back stations (Rs lakh per 500 MW)	443.00	468.00	495.00	523.00	553.00
Ritand-Dadri HVDC bipole scheme (Rs Lakh)	1450.00	1533.00	1621.00	1713.00	1811.00
Talcher-Kolar HVDC bipole scheme (Rs Lakh)	1699.00	1796.00	1899.00	2008.00	2122.00

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 :**ATS for MUNDRA - Regional System for WR under
Transmission System Associated with MUNDRA UMPP**Name of Element:**

400/220kV 315MVA ICT-II at Aurangabad

Capital Cost Estimates

Board of Director/ Agency approving the Capital cost estimates:	Board of Directors 213 meeting	
Date of approval of the Capital cost estimates:	17-Sep-08	
	Present Day Cost	Completed Cost
Price level of approved estimates	As of End of 1st Qtr. Of the year 2008	As on Scheduled COD of the System
Foreign Exchange rate considered for the Capital cost estimates		
Capital Cost excluding IDC & FC		
Foreign Component, if any (In Million US \$ or the relevant Currency)		
Domestic Component (Rs. Cr.)		
Capital cost excluding IDC & FC (Rs. Cr)	21.16	24.97
IDC & FC		
Foreign Component, if any (In Million US \$ or the relevant Currency)		
Domestic Component (Rs. Cr.)		
Total IDC & FC (Rs.Cr.)	2.05	2.42
Rate of taxes & duties considered		
Capital cost Including IDC & FC		
Foreign Component, if any (In Million US \$ or the relevant Currency)		
Domestic Component (Rs. Cr.)		
Total Capital cost Including IDC & FC (Rs. Cr)	23.21	27.39
Schedule of Commissioning		
(Scheduled DOCO elementwise)		
COD of Unit-1/Block-1	17-Sep-12	-
COD of Unit-1/Block-2		
COD of Unit-1/Block-3		
COD of Unit-1/Block-4		

Note:

- Copy of approval letter should be enclosed.
- Details of Capital cost are to be furnished as per FORM-5B or 5C as applicable.
- Details of IDC & Financing Charges are to be furnished as per FORM-16.

TH. 24.2

Element wise Break-up of Project Cost for Transmission System
Name of the Transmission Licensee : Power Grid Corporation of India Ltd
Name of Region: Western Region -I
Name of the Project : Mundra UMPP
Name of the Element: 400/220kV 315 MVA ICT2 at Aurangabad SS
DOCO: 01.01.2014

(Rs in Lakhs)

Sl.No.	Break Down	As per Original Estimate	As on COD	Liabilities / Provision	Variation	Reasons for Variation
1	2	3	4	5	6=3-4-5	7
A	TRANSMISSION LINE					
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	0.00	0.00	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	0.00	0.00	0.00	
2.2	Conductor	0.00	0.00	0.00	0.00	
2.3	Earth Wire	0.00	0.00	0.00	0.00	
2.4	Insulators	0.00	0.00	0.00	0.00	
2.5	Hardware Fittings	0.00	0.00	0.00	0.00	
2.6	Conductor & Earthwire accessories	0.00	0.00	0.00	0.00	
2.7	Spares	0.00	0.00	0.00	0.00	
2.8	Erection, Stringing & Civil works including foundation	0.00	0.00	0.00	0.00	
2.9	Total Transmission Lines material	0.00	0.00	0.00	0.00	
3.0	Taxes and Duties					
3.1	Custom Duty	0.00	0.00	0.00	0.00	
3.2	Other Taxes & Duties	0.00	0.00	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	
2.0						
B.	SUBSTATIONS					
4.0	Preliminary works & land					
4.1	Design & Engineering	0.00	0.00	0.00	0.00	
4.2	Land	0.00	0.00	0.00	0.00	
4.3	Site preparation	0.00	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	0.00	
5.2	Township & Colony	0.00	0.00	0.00	0.00	
5.3	Roads and Drainage	0.00	0.00	0.00	0.00	
5.4	Foundation for structures	71.70	89.49	130.18	-147.96	
5.5	Misc. civil works	0.00	0.00	0.00	0.00	
	Total Civil Works	71.70	89.49	130.18	-147.96	
6.0	Substation Equipments					
6.1	Switchgear (CT, PT, Circuit Breaker, Isolator etc)	366.91	169.36	94.82	102.72	Variation is due to decrease in the awarded cost as compared to FR.
6.2	Transformers	1254.47	551.96	265.34	437.17	Variation is due to decrease in the awarded cost as compared to FR.
6.3	Compensating Equipment(Reactor, SVCs etc)	0.00	0.00	0.00	0.00	
6.4	Control, Relay & Protection Panel	96.98	61.69	34.54	0.76	
6.5	PLCC	39.08	2.00	8.25	28.83	Variation is due to decrease in the awarded cost as compared to FR.
6.6	HVDC package	0.00	0.00	0.00	0.00	
6.7	Bus Bars/ conductors/insulators	34.00	0.00	0.00	34.00	Variation is due to consideration of 220KV Yard items along with ICT#1 as ICT#1 is planned to be charged before ICT#2.
6.8	outdoor lighting	0.00	0.00	0.00	0.00	
6.9	Emergency DG set	0.00	0.00	0.00	0.00	
6.10	Grounding System	0.00	0.00	0.00	0.00	
6.1	Structure for Switch yard	78.34	26.20	14.67	37.47	There is no scope change and Variation is due to consideration of 220KV Yard items along with ICT#1 as ICT#1 is planned to be charged before ICT#2.
6.12	Auxiliary System	27.60	26.70	14.95	-14.05	Variation is due to decrease in the awarded cost as compared to FR.
	Total Substation Equipments	1897.38	837.91	432.56	626.91	
7.0	Spares (incl.in eqpt. cost)	0.00			0.00	
8.0	Taxes and Duties					
8.1	Custom Duty	0.00	0.00	0.00	0.00	
8.2	Other Taxes & Duties	0.00	0.00	0.00	0.00	
8.3	Total Taxes & Duties	0.00	0.00	0.00	0.00	
	Total (Sub-station)	1969.08	927.40	562.73	478.94	
9.0	Construction and pre-commissioning expenses					
9.1	Site supervision & site admn. etc.	0.00	0.00	0.00	0.00	
9.2	Tools and Plants	0.00	0.00	0.00	0.00	
9.3	construction Insurance	0.00	0.00	0.00	0.00	
	Total Construction and pre commissioning expenses	0.00	0.00	0.00	0.00	
10.0	Overheads					
10.1	Establishment	147.32	13.38	0.00	133.94	
10.2	Audit & Accounts	0.00	0.00	0.00	0.00	
10.3	Contingency	0.00	0.00	0.00	0.00	
	Total Overheads	147.32	13.38	0.00	133.94	
11.0	Project cost without IDC, FC, FERV & Hedging cost	2116.40	940.78	562.73	612.88	
12.0	Total Cost (Plant & Equipment)					
12.1	Interest During Construction (IDC)	204.87	38.91	0.00	165.96	
12.2	Financing Charges (FC)	0.00	0.00	0.00	0.00	
12.3	Foreign Exchange Rate Variation (FERV)	0.00	0.00	0.00	0.00	
12.4	Hedging Cost	0.00	0.00	0.00	0.00	
13.0	Project cost including IDC, FC, FERV & Hedging cost	2321.27	979.69	562.73	778.84	

17.06.14

Break-up of Construction / Supply / Service packages

Name of the Transmission Licensee :
 Name of the Region : WR - I
 Name of the project : MUNDRA UMPP
 Name of the Transmission Element : 400/220kV ICT 2 alongwith associated bays at Aurangabad (PG) New SS
 Anticipated DOCO: 01.01.2014

Package / Scope of works	Party	LOA NO / Date	Date of award	Start date of work	No of bids received	Duration / completion date	Awarded value INR		Amended Value INR		Firm or with escalation in prices	Expenditure excluding taxes & Duties	Taxes & duties & IEDC	IDC, FC, FERV & Hedging cost	Sub-total
							US \$ - 10	INR - 11	US \$ - 12	INR - 13					
2	3	4	5	6	7	9					14	15	16	17	18
400/220kV Aurangabad (PG) (New) SS - Supply	BHEL	CC-CS125-WR1/SS-827/1/ G6/NOA-II/4044	26.12.2011	26.12.2011	17	25.11.2013		378,359,455		379,098,515		260.85	6.06	26.52	283.43
400/220kV Aurangabad (PG) (New) SS - Erection	BHEL	CC-CS125-WR1/SS-827/1/ G6/NOA-II/4045	26.12.2011	26.12.2011	17	25.11.2013		183,295,591		183,378,641		97.83	1.88	4.99	104.70
Auto-transformer Pkg A1 for Agbad SS- Supply	ABB	CC-CS125WR1/IR-860/1/G6/CA-II/3891	03.10.2011	03.10.2011	6	02.08.2013		173,909,000		173,909,000		530.73	21.53	29.31	581.57
Auto-transformer Pkg A1 for Agbad SS- Erection	ABB	CC-CS125WR1/IR-860/1/G6/CA-II/3892	03.10.2011	03.10.2011	6	02.08.2013		6,758,754		6,758,754		-	-	-	-
												889.41	29.47	60.82	979.70

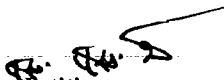
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Financial package upto COD

Name of the Transmission Licensee: POWERGRID CORPORATION OF INDIA LTD.
Name of Region: WESTERN REGION
Name of the Project: MUNDRA UMPP
Name of the Transmission Element: 400/220 kV ICT-2 alongwith associated bays at Aurangabad (PG) New S/S. Ant. :DOCO :01-JAN-2014
Project Cost as on COD/31.03.2009: 979.70 (Rs. in Lakhs)
Date of Commercial Operation of the Transmission element: 01-JAN-2014

(Rs in Lacs)

Transmission Lines						
	Financial Package as apportioned/ Approved		Financial Package as on COD		As Admitted on COD	
	Currency and Amount		Currency and Amount		Currency and Amount	
Loans						
Loans - Domestic	INR	1624.89	INR	0.00		
Loans - Foreign			INR	685.79		
Total Loans		1624.89		685.79		
Equity						
Foreign						
Domestic	INR	696.38	INR	293.91		
Notional				0.00		
Total Equity		696.38		293.91		
Debt Equity Ratio		70.00:30.00		70.00:30.00		
Total Cost		2321.27		979.70		
	Debt	Equity	Total			
Add Cap For 2013-2014			281.95			
Add Cap For 2013-2014	Actual	Normative				
Debt		197.36				
Equity		84.58				
Total		281.95				
Total Capital Cost with ADDCAP upto 01.04.2014			1261.65			


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Statement of Additional Capitalisation after COD

Name of the Transmission Licensee: POWERGRID CORPORATION OF INDIA LTD.
Name of Region: WESTERN REGION
Name of the Project: MUNDRA UMPP
Name of the Transmission Element: 400/220 KV ICT-2 alongwith associated bays at Aurangabad (PG) New S/S. Ant. :DOCO :01-JAN-2014
COD: 01-JAN-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 as per propose	Regulation under which covered	Admitted Cost
1	2	3	4	5	6	7
1.	2013-2014	BUILDING	108.21	Balance Retention & Payments	9(1)	
		SUB STATION	166.51	Balance Retention & Payments	9(1)	
		PLCC	7.23	Balance Retention & Payments	9(1)	
	Total		281.95			
2.	2014-2015	BUILDING	21.97	Balance Retention & Payments	9(1)	
		SUB STATION	257.80	Balance Retention & Payments	9(1)	
		PLCC	1.01	Balance Retention & Payments	9(1)	
	Total		280.78			

Statement of Capital Cost

Name of the Transmission Licensee: POWERGRID CORPORATION OF INDIA LTD.
Name of Region: WESTERN REGION
Name of the Project: MUNDRA UMPP
Name of the Transmission Element: 400/220 kV ICT-2 alongwith associated bays at Aurangabad (PG) New S/S. Ant. :DOCO :01-JAN-2014

Statement of Capital Cost

(To be given for relevant dates and year wise)

		01-APR-2009- 31-Mar-2010	01-APR-2010- 31-Mar-2011	01-APR-2011- 31-Mar-2012	01-APR-2012- 31-Mar-2013	01-JAN-2014- 31-Mar-2014
A	a) Opening Gross Block Amount as per books					9.8
	b) Amount of capital liabilities in A(a) above					
	c) Amount of IDC, FC, FERV & Hedging cost included in A(a) above					0.39
	d) Amount of IEDC (excluding IDC, FC, FERV & Hedging cost) included in A(a) a					0.13
B	a) Addition in Gross Block Amount during the period					2.82
	b) Amount of capital liabilities in B(a) above					
	c) Amount of IDC, FC, FERV & Hedging cost included in B(a) above					
	d) Amount of IEDC (excluding IDC, FC, FERV & Hedging cost) included in B(a) a					
C	a) Closing Gross Block Amount as per books					12.62
	b) Amount of capital liabilities in C(a) above					
	c) Amount of IDC, FC, FERV & Hedging cost included in C(a) above					0.39
	d) Amount of IEDC (excluding IDC, FC, FERV & Hedging cost) included in C(a) a					0.13

[Signature]
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Financing of Additional Capitalisation

Name of the Transmission Licensee: POWERGRID CORPORATION OF INDIA LTD.
 Name of Region: WESTERN REGION
 Name of the Project: MUNDRA UMPP
 Name of the Transmission Element: 400/220 kV ICT-2 alongwith associated bays at Aurangabad (PG) New S/S. Ant. :DOCO :01-JAN-2014

(Rs in Lacs)										
Financial Year (Starting from COD)	Projected/Actual			Admitted						
	From COD to31- Mar-2014	Year2	Year3	Year4	Year5& So on	Year1	Year2	Year3	Year4	Year5 & so on
1	2	3	4	5	6	7	8	9	10	11
Amount capitalised in Work/Equipmen t	281.95									
Financing Details										
Loan-1										
Loan-2										
Loan-3 and so on										
Total Loan	197.36									
Equity	84.58									
Internal Resources										
Others										
Total	281.95									

 Petitioner

Calculation of Depreciation Rate

Name of the Transmission
Licensee:

POWERGRID CORPORATION OF INDIA LTD.

Name of Region:

WESTERN REGION

Name of the Project:

MUNDRA UMPP

Name of the Transmission
Element:400/220 kV ICT-2 alongwith associated bays at Aurangabad (PG) New S/S. Ant.
:DOCO :01-JAN-2014

(Rs in Lacs)

Sl.No.	Name of the Assets	Gross Block as on 31.03.2013 or as on COD, whichever is later	Addcap during the year	Gross Block as on 31.03.2014 or as on COD, whichever is later	Depreciation Rates as per CERC's Depreciation Rate Schedule	Depreciation Amount up to 31.03.2014
1	2	3	4	5	6=Col.4 X Col.5	
2013-2014						
1	FREEHOLD LAND	0.00	0.00	0.00	0.00%	0.00
2	BUILDING	95.89	108.21	204.10	3.34%	1.25
3	TR LINE	0.00	0.00	0.00	5.28%	0.00
4	SUB STATION	881.61	166.51	1048.12	5.28%	12.74
5	PLCC	2.20	7.23	9.43	6.33%	0.09
6	LEASEHOLD LAND	0.00	0.00	0.00	3.34%	0.00
Total		979.70	281.95	1261.65		14.08
Weighted Average Rate of Depreciation (%)						1.26
Elapsed Life						0


 Petitioner

Statement of Depreciation

Name of the Transmission Licensee: POWERGRID CORPORATION OF INDIA LTD.

Name of Region: WESTERN REGION

Name of the Project: MUNDRA UMPP

Name of the Transmission Element: 400/220 kV ICT-2 alongwith associated bays at Aurangabad (PG) New S/S. Ant. :DOCO :01-JAN-2014

Financial Year	Upto 2000-2001	2001-2002	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014	(Rs in Lacs)
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	12.47
Depreciation on Capital Cost															
Depreciation on Additional Capitalisation															
Amount of Additional Capitalisation															281.95
Depreciation Amount															1.61
Details of FERV															
Amount of FERV on which depreciation charged															
Depreciation Amount															
Depreciation Recovered during the year															14.08
Advance against Depreciation recovered during the year															
Depreciation and Advance against Depreciation recovered during the year															14.08
Cumulative Depreciation And Advance against Depreciation recovered upto the year															14.08

Calculation of Weighted Average Rate of Interest on Actual Loans

Name of the Transmission Licensee: **POWERGRID CORPORATION OF INDIA LTD.**
Name of Region: **WESTERN REGION**
Name of the Project: **MUNDRA UMPP**
Name of the Transmission Element: **400/220 kV ICT-2 alongwith associated bays at Aurangabad (PG) New S/S. Ant. :DOCO :01-JAN-2014**

(Rs in Lacs)

Particulars	Existing 2008-2009	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014
IBRD V						
Gross Loan Opening						685.79
Cumulative Repayments of Loans upto Previous Year						
Net Loans Opening						685.79
Add : Drawal(s) during the year						
Less : Repayments(s) of Loans during the year						
Net Loan Closing						685.79
Average Net Loan						685.79
Rate of Interest on Loan		0%	0%	0%	0%	1.76%
Interest on Loan						12.07
Total						
Gross Loan Opening						685.79
Cumulative Repayments of Loans upto Previous Year						
Net Loans Opening						685.79
Add : Drawal(s) during the year						
Less : Repayments(s) of Loans during the year						
Net Loan Closing						685.79
Average Net Loan						685.79
Interest on Loan						12.07
Weighted Average Rate of Interest on Loans						1.7600%


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Calculation of Interest on Normative Loan

Name of the Transmission Licensee:

POWERGRID CORPORATION OF INDIA LTD.

Name of Region:

WESTERN REGION

Name of the Project:

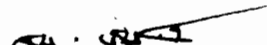
MUNDRA UMPP

Name of the Transmission Element:

400/220 kV ICT-2 alongwith associated bays at Aurangabad (PG) New S/S. Ant. :DOCO :01-JAN-2014

(Rs in Lacs)


Particulars	Existing 2008-2009	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014
1	2	3	4	5	6	7
Gross Normative Loan - Opening						685.79
Cumulative repayment of Normative Loan upto previous year						
Net Normative loan - Opening						685.79
Increase/Decrease due to ACE during the Year						197.36
Repayments of Normative Loan during the year						14.08
Net Normative loan - Closing						869.08
Average Normative Loan						777.43
Weighted average Rate of Interest on actual Loans						1.7600%
Interest on Normative loan						3.42


Petitioner

Loans in Foreign Currency

Name of the Transmission Licensee: **POWERGRID CORPORATION OF INDIA LTD.**
Name of Region: **WESTERN REGION**
Name of the Project: **MUNDRA UMPP**
Name of the Transmission Element: **400/220 kV ICT-2 alongwith associated bays at Aurangabad (PG) New S/S. Ant. :DOCO :01-JAN-2014**

Particulars	Existing 2008-2009	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014
1	2	3	4	5	6	7
IBRD V (USD in LACs) EXCHANGE RATE : 59.86						
Gross Loan Opening						11.46
Cumulative Repayments of Loans upto Previous Year						
Net Loans Opening						11.46
Add : Drawal(s) during the year						
Less : Repayments(s) of Loans during the year						
Net Loan Closing						11.46
Average Net Loan						11.46
Rate of Interest on Loan						1.76%
Interest on Loan						0.20


Petitioner

Calculation of Interest on Working Capital

Name of the Transmission Licensee: **POWERGRID CORPORATION OF INDIA LTD.**
Name of Region: **WESTERN REGION**
Name of the Project: **MUNDRA UMPP**
Name of the Transmission Element: **400/220 kV ICT-2 alongwith associated bays at Aurangabad (PG) New S/S. Ant. :DOCO :01-JAN-2014**

(Rs in Lacs)

Sl.N o.	Particulars	Existing 2008-2009	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014
1	2	3	4	5	6	7	8
1	O and M Expenses						16.91
2	Maintenance Spares						30.44
3	Recievables				-4		57.59
4	Total Working Capital						104.94
5	Rate of Interest						13.20
6	Interest on Working Capital						3.46


Petitioner

Draw Down Schedule for Calculation of IDC & Financing Charges

Name of the Transmission
Licensee:

POWERGRID CORPORATION OF INDIA LTD.

Name of Region:

WESTERN REGION


Name of the Project:

MUNDRA UMPP

Name of the Transmission
Element:400/220 kV ICT-2 alongwith associated bays at Aurangabad (PG) New S/S. Ant.
:DOCO :01-JAN-2014

(Rs in Lacs)

Draw Down Schedule for Calculation of IDC & Financing Charges										
Sl.No	Drawn Down	Quarter 1			Quarter 2			Quarter n(COD)		
Sl.No.	Particulars	Quantum In Foreign Currency	Exchange Rate on Draw Down Date	Amount In Indian Rupee	Quantum In Foreign Currency	Exchange Rate on Draw Down Date	Amount In Indian Rupee	Quantum In Foreign Currency	Exchange Rate on Draw Down Date	Amount In Indian Rupee
1.	Loans									
1.1	Foreign Loans									
1.2	Indian Loans									
1.2.1	IBRD V									
	Draw Down Amount									685.79
	IDC									
	Financing Charges									
	Total Indian Loans									
	Draw Down Amount									685.79
	IDC									0.00
	Financing Charges									0.00
	Total of Loans Drawn									
	Draw Down Amount									685.79
	IDC									38.91
	Financing Charges									0.00
2	Equity									
2.1	Foreign Equity Drawn									
2.2	Indian Equity Drawn									0
	Total Equity Deployed									0.00
The project has been funded through domestic loans allocated from the common pool based on the phasing of expenditure and IDC has been booked accordingly. As the loans are allocated from common pool, quarter wise drawl is not furnished.										


 Petitioner

INDEX

CHECK LIST
PART-III

Name of the Company

Power Grid Corporation of India Ltd.

Name of the Project :

Mundra UMPP

Name of the Transmission Element:

(i) Aurangabad- Aurangabad (MSETCL) 400 kV D/C (Quad) Line and Shifting of 400 kV D/C Akola - Aurangabad (MSETCL) line to Aurangabad alongwith associated bays at both ends, (ii) 400/220 kV 315 MVA ICT-I alongwith associated bays at Aurangabad S/S & (iii) 400/220 kV 315 MVA ICT-II alongwith associated bays at Aurangabad S/S under Transmission system associated with MUNDRA UMPP

Checklist of Forms and other information/ documents for tariff filing for Transmission System

Form No.	Tariff Filing Formats (Transmission)	Tick
FORM- 1	Summary Sheet	Yes
FORM-1A	Calculation of Return on Equity	Yes
FORM-2	Details of Transmission Lines and Substations	Yes
FORM-3	Normative Parameters considered for tariff calculations	Yes
FORM- 4	Details of Foreign loans	Not applicable and hence not enclosed
FORM-4A	Details of Foreign Equity	Not applicable and hence not enclosed
FORM-5	Abstract of Admitted Cost for the existing Projects	Not applicable and hence not enclosed
FORM-5A	Abstract of Project Cost Estimates and Schedule of Commissioning for the new Projects	Yes
FORM-5B	Element wise Break-up of Project Cost for Transmission System	Yes
FORM-5C	Break-up of Construction/Supply/Service packages	Yes
FORM-5D	Details of elementwise cost	Yes
FORM-6	Financial Package upto COD	Yes
FORM- 7	Details of Project Specific Loans	Not applicable and hence not enclosed
FORM- 8	Details of Allocation of corporate loans to various transmission elements	Not applicable and hence not enclosed
FORM-9	Statement of Additional Capitalisation after COD	Yes
FORM-9A	Statement of capital cost	Yes
FORM- 10	Financing of Additional Capitalisation	Yes
FORM- 11	Calculation of Depreciation Rate	Yes
FORM- 12	Statement of Depreciation	Yes
FORM- 13	Calculation of Weighted Average Rate of Interest on Actual Loans	Yes
FORM- 13A	Calculation of Interest on Normative Loans	Yes
FORM-13B	Calculation of Interest on Working Capital	Yes
FORM- 14	Draw down Schedule for Calculation of IDC & Financing Charges	Yes
FORM-14A	Actual Cash Expenditure	Not applicable and hence not enclosed

Other Information/ Documents		
Sl. No.	Information/Document	Tick
1	Certificate of incorporation, Certificate for Commencement of Business, Memorandum of Association, & Articles of Association (For New Station setup by a company making tariff application for the first time to CERC)	- Not Applicable -
2	Regionwise and Corporate audited Balance Sheet and Profit & Loss Accounts with all the Schedules & annexures for the new Transmission System & for the relevant years.	Consolidated Balancesheet of 'POWERGRID & Regional Balance Sheet of WR for FY 2012-13 shall be submitted shortly
3	Copies of relevant loan Agreements	
4	Copies of the approval of Competent Authority for the Capital Cost and	
5	Copies of the Equity participation agreements and necessary approval for the foreign equity.	Equity contribution by GOI (69.42%) and others(30.58%)
6	Copies of the BPTA/TSA with the beneficiaries, if any	Covered in petition
7	Detailed note giving reasons of time and cost over run, if applicable.	Covered in petition
8	Any other relevant information, (Please specify)	-Not Applicable -

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