

Form I						
Summary Sheet						
Name of the Transmission Licensee: Power Grid Corporation of India Limited						
Name of the Region: NORTH EASTERN REGION						
Name of the Project: Transmission system associated with Palatana Gas Based Power Project and Bongaigaon Thermal Power station						
Name of the Transmission Element or Communication System: 1X200 MVA, 400/132 kV, ICT-II at Sishar S/S along with associated HV & LV side bays						
Date of Commercial operation : 01-Jul-2012						
Particulars	Revised 2008-09	2009-10	2010-11	2011-12	2012-13	2013-14
Depreciation	0	0	0	0	81.41	112.53
Interest on Loan	0	0	0	0	98.17	126.7
Return on Equity	0	0	0	0	89.63	125.38
Int. on Working Capital	0	0	0	0	10.04	13.82
Op. and Maintenance	0	0	0	0	69.66	98.19
Total			0	0	348.91	476.62
(Petitioner)						



Calculation of Return on Equity

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

Name of the Region: NORTH EASTERN REGION

Name of the Project: Transmission system associated with Pallatana Gas Based Power Project and Bongaigaon Thermal Power station

Name of the Transmission Element or Communication System: 1X200 MVA, 400/132 KV, ICT-II at Silchar S/S along with associated HV & LV

Date of Commercial operation: 01-Jul-2012

Particulars	Rs. in Lacs					
	Revised 2008-09	2009-10	2010-11	2011-12	2012-13	2013-14
Opening Equity	0	0	0	0	598.63	634.87
Notional Equity on Add Cap	0	0	0	0	36.24	9.04
Total Equity	0	0	0	0	634.87	643.91
Average Equity	0	0	0	0	616.75	639.39
Rate of Return on Equity (%)	0	0	0	0	19.377	19.61
Return on Equity	0	0	0	0	119.51	125.38
Pro rata Return on Equity	0	0	0	0	89.63	125.38
Calculation of Grossed up Rate of ROE						
Rate of ROE	0	0	0	0	15.5	15.5
Time Line Incentive	0	0	0	0	0	0
Effective Rate of ROE	0	0	0	0	15.5	15.5
MAT Rate	0	0	0	0	20.01	20.96
Grossed up Rate of ROE	0	0	0	0	19.377	19.61

(Petitioner)



Details of Transmission Lines and Substations, Communication System

Name of the Petitioner: Power Grid Corporation of India Limited											
Name of the Region: NORTH EASTERN REGION											
Name of the Project: Transmission system associated with Palatana Gas Based Power Project and Bongaigaon Thermal Power station											
Name of the Transmission element or Communication system: 1X200 MVA, 400/132 kV, ICT-II at Silchar S/S along with associated HV & Date of Commercial Operation: 01-Jul-2012											
Substations:											
Sl. No.	Name of Sub-station	Type of Substation	Voltage level KV	No. of Transformers / Reactors/ SVC etc.	No. of Bays			Date of Commercial operation	Covered in the present petition		
					765 KV	400 KV	220 KV		132 KV & below	Yes/No	If No, petition No.
1	SILCHAR-ICT II BAY (HV SIDE)		400		1					Y	
2	SILCHAR-ICT II BAY (LV SIDE)		132				1			Y	
	Total				1		1				
Communication System:											
Sl. No.	Name of Communication System	Type of Communication System	Technical Particulars	Number / length	Date of Commercial operation	Covered in the present petition					
						Yes/No	If No, petition No.				
(Petitioner)											



Normative parameters considered for tariff computations										Form 3
Name of the Petitioner: Power Grid Corporation of India Limited										
Name of the Region: NORTH EASTERN REGION										
Name of the Project: Transmission system associated with Palatana Gas Based Power Project and Bongaigaon Thermal Power station										
Name of the Transmission Element or Communication System: 1X200 MVA, 400/132 KV, ICT-II at Silchar S/S along with associated HV & LV side bays										
Date of Commercial Operation: 01-Jul-2012										
Particulars	Unit	Existing 2013-14	2014-15	2015-16	2016-17	2017-18	2018-19			
Base Rate of Return of Equity	%	15.50%	15.50%	15.50%	15.50%	15.50%	15.50%	15.50%	15.50%	
Tax Rate	%	11.33%	20.96%	20.96%	20.96%	20.96%	20.96%	20.96%	20.96%	
Effective tax rate	%									
Grossed up Rate of ROE	%	17.48%	19.61%	19.61%	19.61%	19.61%	19.61%	19.61%	19.61%	
Target availability - AC System	%		98%	98%	98%	98%	98%	98%	98%	
Target availability - HVDC System	%		96%	96%	96%	96%	96%	96%	96%	
Normative O&M per KM	Rs. Lakh									
Double Circuit (Bundle conductor with four sub-conductors)	Rs. Lakh	1.174	1.062	1.097	1.133	1.171	1.171	1.171	1.21	
Double Circuit (Single Conductor)	Rs. Lakh	0.336	0.303	0.313	0.324	0.334	0.334	0.334	0.346	
Double Circuit (Two and Three Conductor)	Rs. Lakh	0.783	0.707	0.731	0.755	0.78	0.78	0.78	0.806	
Multicircuit with four or more conductors	Rs. Lakh		1.863	1.925	1.989	2.055	2.055	2.055	2.123	
Multicircuit with two or three conductors	Rs. Lakh		1.24	1.282	1.324	1.368	1.368	1.368	1.413	
Single Circuit (Bundled conductor with four sub-conductors)	Rs. Lakh	0.671	0.606	0.627	0.647	0.669	0.669	0.669	0.691	
Single Circuit (Single Conductor)	Rs. Lakh	0.224	0.202	0.209	0.216	0.223	0.223	0.223	0.23	
Single Circuit (Six conductor)	Rs. Lakh	0.671	0.707	0.731	0.755	0.78	0.78	0.78	0.806	
Single Circuit (Twin and Three conductor)	Rs. Lakh	0.447	0.404	0.418	0.432	0.446	0.446	0.446	0.461	
Normative O&M per bay										
132KV Sub-station and below	Rs. Lakh	32.73	30.15	31.15	32.18	33.25	33.25	33.25	34.36	
220KV Sub-station	Rs. Lakh	45.82	42.21	43.61	45.06	46.55	46.55	46.55	48.1	
400 KV GIS Substation	Rs. Lakh		51.54	53.25	55.02	56.84	56.84	56.84	58.73	
400KV Sub-station	Rs. Lakh	65.46	60.3	62.3	64.37	66.51	66.51	66.51	68.71	
765KV Sub-station	Rs. Lakh	91.64	84.42	87.22	90.12	93.11	93.11	93.11	96.2	
Balia-Bhiwadi HVDC Bipole Scheme	Rs. Lakh	1326.25	1537	1666	1805	1955	1955	1955	2119	
HVDC Back-to-Back Stations	Rs. Lakh	553	578	627	679	736	736	736	797	
Rihand-Dadi HVDC Bipole Scheme	Rs. Lakh	1811	1511	1637	1774	1922	1922	1922	2062	
Taicher-Kolar HVDC Bipole Scheme	Rs. Lakh	2122	1173	1271	1378	1493	1493	1493	1617	
Spare for WC as % of O&M	%	15	15	15	15	15	15	15	15	
Recoveries in Months for WC	Months	2	2	2	2	2	2	2	2	
Bank Rate as on 1st April, 2014	%	13.2	13.5	13.5	13.5	13.5	13.5	13.5	13.5	



(Petitioner)

DETAILS OF ELEMENT WISE COST OF THE PROJECT

Name of the Transmission Licensee: Power Grid Corporation of India Limited
Name of the Region: NORTH EASTERN REGION
Name of the Project: Transmission system associated with Palatana Gas Based Power Project and Bongaigaon Thermal Power station
Name of the Transmission Element or Communication System: 1X200 MVA, 400/132 kV, ICT-II at Silchar S/S along with associated HV & LV side bays
Date of Commercial operation : 01-Nov-2012

Transmission Lines:

(Rs in Lakh)

Sl. No.	Name of Line	Apportioned approved Cost	Completed Cost	Covered in the present petition	
				Yes / No	If No, Petition No.
1	400kV D/C Bongaigaon TPS-Bongaigaon line alongwith associated bays	2413.42	1894.45	Yes	184/TT/2011
2	132 kV D/C Silchar-Badarpur line alongwith associated bays	2300.26	1721.90	Yes	
3	132 kV D/C Silchar-Srikona line alongwith associated bays	3512.15	3354.38	Yes	
4	132 kV Silchar – Hailakandi (AEGCL) line alongwith associated bays	1758.12	2013.69	No	98/TT/2012
5	400 kV D/C Pallatana-Surajmaninagar line (charged at 132 kV) alongwith associated bays	8128.6	10187.44	No	
6	LILO of 220kV Misa – Kathalguri Transmission Line at Mariani alongwith Mariani Switching Station	3095.64	1697.39	No	44/TT/2013
7	1 No 50MVA ICT-II along with associatd bays at Imphal Substation	4069.11	374.07	No	
	1 No 50MVA ICT-I along with associatd bays at Imphal Substation		342.26	No	
	132/33kV Loop-In line and associated bay at Imphal Substation		434.19	No	
	Loop-Out Line of 132kV S/C Ningthoukhong – Yurembam line along with associated bays at Imphal			No	
	1X 20 MVAR Bus reactor at Imphal		463.43	No	
8	400kV, D/C Silchar-Purba Kanchan Bari Transmission Line	26009.13	33715.91	No	98/TT/2012
9	132kV, D/C Mokokchung (POWERGRID) - Mokokchung (Nagaland) Transmission Line	189.21	409.12	No	Submitted for petition filing
10	400kV, D/C Palatana - Surajmaninagar T/L (Charged at 132kV) along with associated bays at Surajmaninagar SS	8128.60	9484.01	Yes	98/TT/2012
11	132kV, D/C Silchar - Hailakandi (AEGCL) line (upto LILO point of 132 kV D/C Panchagram-Dullobchera T/L at Silchar) with associated bay at Silchar Substation	1758.12	2050.16	Yes	98/TT/2012



Substations.

(Rs in Lakh)

Sl. No.	Name of Line	Apportioned approved Cost	Completed Cost	Covered in the present petition	
				Yes / No	If No, Petition No.
1	200 MVA, 400/132kV ICT I at Silchar S/S alongwith associated bays	7598.80	2604.93	Yes	184/TT/2011
2	2x50 MVAR, 420 kV Switchable line reactors alongwith associated bays		3233.67	Yes	
3	2x63 MVAR Bus Reactor at Silchar S/S alongwith associated bays			1784.14	
4	200 MVA, 400/132kV, ICT-II at Silchar alongwith associated bays	2429.64	2200.00	No	98/TT/2012
5	80 MVAR, 420 kV Bus Reactor at Bongaigaon alongwith associated bay.	740.90	1057.61	No	
6	4x6.67 MVAR, 132kV, 1-Ph Bus Reactor at 132kV Ziro Substation	772.89	503.78	No	44/TT/2013
7	20MVAR Bus Reactor at 220kV Mariani Switching Station	545.56	693.37	No	
8	2 nos of 132kV bays associated with the transmission line at Silchar S/S & Purbakanchan Bari (TSECL) S/S each	808.94	512.09	No	98/TT/2012
9	2 Nos of 132kV bays associated with 132kV D/C Mok - Mok T/L, 7 X 10 MVA, 132/33kV ICT-I & II and 245 kV & 145 kV GIS bays at Mokokchung (POWERGRID) SS	10447.79	4976.41	No	Submitted for petition filing
10	1 No. 400kV line bay at Silchar SS 400kV D/C Silchar-Bongaigaon line of NETC alongwith 1 No. 63MVAR switchable line reactor at Silchar SS	4555.17	1221.75	No	216/TT/2012
	1 No. 400kV line bay at Silchar SS 400kV D/C Silchar-Bongaigaon line of NETC alongwith 1 No. 63MVAR switchable line reactor at Silchar SS		1003.49		
	2 No. 400kV line bays at Bongaigaon SS for 400kV D/C Silchar-Bongaigaon line of NETC alongwith 2 nos of switchable line reactors at Bongaigaon SS.		1893.48		
11	1X80MVAR, 420kV, 3-Ph Bus Reactor at Bongaigaon Substation	740.90	1019.66	Yes	98/TT/2012
12	1X200MVA, 400/132 kV ICT-II at Silchar Substation along with associated HV & LV side bays	2429.64	2146.38	Yes	98/TT/2012



Financial Package upto COD (Block Year- 2009-2014)

Name of the Transmission Licensee: Power Grid Corporation of India Limited
Name of the Region: NORTH EASTERN REGION
Name of the Project: Transmission system associated with Palatana Gas Based Power Project and Bongaigaon Thermal Power station
Name of the Transmission Element or Communication Element: 1X200 MVA, 400/132 kV, ICT-II at Silchar S/S along with associated HV & LV side bays
Date of commercial Operation: 01-Jul-2012

Particulars	Financial Package as Approved		Financial Package as on COD		As Admitted by COD / 31.03.2014	
	Currency	Amount	Currency	Amount	Currency	Amount
Loans						
Loans-Domestic	INR	0	INR	1396.82		
Loans-Foreign	INR		INR	0		
Total Loans	INR	0	INR	1396.82	INR	
Equity						
Foreign						
Domestic	INR		INR	598.63		
Notional						
Total Equity	INR	0	INR	598.63	INR	
Debt Equity Ratio				70:30:00		
Total Cost	INR	0	INR	1995.45	INR	
Add Cap for 2012-2013	Debt		Equity		Total	
Add Cap for 2013-2014					120.81	
					30.12	
Add Cap for 2012-2013	Actual		Normative			
Debt		84.57				
Equity		36.24				
Total		120.81				
Add Cap for 2013-2014	Actual		Normative			
Debt		21.08				
Equity		9.04				
Total		30.12				
Total Capital cost with Addcap		2146.38				

(Petitioner)

Statement of Additional Capitalisation after COD

Name of the Petitioner: Power Grid Corporation of India Limited						
Name of the Region: NORTH EASTERN REGION						
Name of the Project: Transmission system associated with Palatana Gas Based Power Project and Bongaigaon Thermal Power station						
Name of the Transmission Element or Communication system: 1X200 MVA, 400/132 kV, ICT-II at Silchar S/S along with associated HV & LV side bays						
Date of Commercial Operation: 01-Jul-2012						
Sl. No.	Year	Work / Equipment proposed to be added after COD upto cut off date/beyond cut off date	Amount capitalised and proposed to be capitalised	Justification	Regulation under which covered	Admitted Cost
1	2012-2013	SUB STATION	120.81	Balance and retention payments		
	2012-2013	Total	120.81			
2	2013-2014	SUB STATION	30.12	Balance and retention payments		
	2013-2014	Total	30.12			
(Petitioner)						



Statement of Capital Cost

Name of the Transmission Licensee: Power Grid Corporation of India Limited						
Name of the Region: NORTH EASTERN REGION						
Name of the Project: Transmission system associated with Palatana Gas Based Power Project and Bongaigaon Thermal Power						
Name of the Transmission Element: '200 MVA ICT-II at 400/132 kv Silcher S/s associated with Pallatana GBPP & Bongaigaon						
Date of Commercial Operation: 01-Jul-2012						

Particulars	Revised	2009-10	2010-11	2011-12	2012-13	Rs. in Lacs
	2008-09					2013-14
A. a) Opening Gross Block Amount as per books						2116.26
b) Amount of capital liabilities in A(a) above					1995.45	
c) Amount of IDC, FC, FERV and Hedging cost included in A(a) above						
d) Amount of IEDC (excluding IDC, FC, FERV and Hedging cost) included in A(a) above						
B. a) Addition in Gross Block Amount during the period					120.81	30.12
b) Amount of capital liabilities in B(a) above						
c) Amount of IDC, FC, FERV and Hedging cost included in B(a) above						
d) Amount of IEDC (excluding IDC, FC, FERV and Hedging cost) included in B(a) above						
C. a) Closing Gross Block Amount as per Books					2116.26	2146.38
b) Amount of capital liabilities in C(a) above						
c) Amount of IDC, FC, FERV and Hedging cost included in C(a) above						
d) Amount of IEDC (excluding IDC, FC, FERV and Hedging cost) included in C(a) above						

(Petitioner)



Calculation of Depreciation Rate

Name of the Transmission Licensee: Power Grid Corporation of India Limited								
Name of the Region: NORTH EASTERN REGION								
Name of the Project: Transmission system associated with Palatana Gas Based Power Project and Bongaigaon Thermal Power station								
Name of the Transmission Element or Communication System: 1X200 MVA, 400/132 kV, ICT-II at Silchar S/S along with associated HV & LV side bays								
Date of Commercial Operation: 01-Jul-2012								
Sl. No.	Particulars	Gross block at the beginning of the year	Add Cap during the year	Gross block at the end of the year	Average Gross Block	Dep. Rate	Rs. in Laacs Amount	
2012-2013								
1	FREEHOLD LAND	0	0	0	0	0	0	
2	BUILDING	0	0	0	0	3.34	0	
3	TR LINE	0	0	0	0	5.28	0	
4	SUB STATION	1995.45	120.81	2116.26	2055.86	5.28	108.55	
5	PLCC	0	0	0	0	6.33	0	
6	LEASEHOLD LAND	0	0	0	0	3.34	0	
Total		1995.45	120.81	2116.26	2055.86		108.55	
Weighted Average Rate of Depreciation								5.28
Lapsed life								1
2013-2014								
1	FREEHOLD LAND	0	0	0	0	0	0	
2	BUILDING	0	0	0	0	3.34	0	
3	TR LINE	0	0	0	0	5.28	0	
4	SUB STATION	2116.26	30.12	2146.38	2131.32	5.28	112.53	
5	PLCC	0	0	0	0	6.33	0	
6	LEASEHOLD LAND	0	0	0	0	3.34	0	
Total		2116.26	30.12	2146.38	2131.32		112.53	
Weighted Average Rate of Depreciation								5.28
Lapsed life								2
The Calculation of Total Life of Asset								
Sl. No.	Name of the Assets (1)	Gross Block (2)	Life As per CERC Norms (3)	Weighted Life (4)=Col.2 x Col.3				
1	FREEHOLD LAND	0	0	0				
2	BUILDING	0	25	0				
3	TR LINE	0	35	0				
4	SUB STATION	1995.45	25	49886.25				
5	PLCC	0	25	0				
6	LEASEHOLD LAND	0	25	0				
Total		1995.45		49886.25				
Total Life of Asset		49886.25/1995.45		25				

(Petitioner)



Statement of Depreciation

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

Name of the Region: NORTH EASTERN REGION

Name of the Project: Transmission system associated with Palatana Gas Based Power Project and Bongaigaon Thermal Power station

Name of the Transmission Element or Communication System: 1X200 MVA, 400/132 kV, ICT-II at Silchar S/S along with associated HV &

Date of Commercial Operation: 01-Jul-2012

Particulars	Revised 2008-	2009-10	2010-11	2011-12	2012-13	2013-14	Rs. in Lacs
	09						
Opening Capital Cost	0	0	0	0	1995.45	2116.26	
Add Cap Cost	0	0	0	0	120.81	30.12	
Closing Capital Cost	0	0	0	0	2116.26	2146.38	
Average Capital Cost	0	0	0	0	2055.86	2131.32	
Freehold Land (Av. Cost)	0	0	0	0	0	0	
Rate of Depreciation	0	0	0	0	5.28	5.28	
Depreciable Value	0	0	0	0	1850.27	1918.19	
Balance useful life of the asset (at the beginning of year)	0	0	0	0	25	24	
Elapsed life of the asset (at the beginning of the year)	0	0	0	0	0	1	
Remaining Depreciable Value	0	0	0	0	1850.27	1836.78	
Depreciation during the year	0	0	0	0	81.41	112.53	
Depreciation upto previous year	0	0	0	0	0	81.41	
Cumulative depreciation (incl. of AAD)	0	0	0	0	81.41	193.94	

(Petitioner)



Calculation of Weighted Average Rate of Interest on Actual Loans

Particulars	Revised	2009-10	2010-11	2011-12	2012-13	2013-14
	2008-09					
Name of the Transmission Licensee: Power Grid Corporation of India Limited						
Name of the Region: NORTH EASTERN REGION						
Name of the Project: Transmission system associated with Pallatana Gas Based Power Project and Bongaigaon Thermal Power station						
Name of the Transmission Element or Communication System: 1X200 MVA, 400/132 kV, ICT-II at Silchar S/S along with associated HV						
Date of Commercial Operation: 01-Jul-2012						
BOND XXXI-DOCO DRAWL ON 01-JUL-2012-						
Gross Opening Loan	0	0	0	0	150	150
Cumulative Repayments of Loans upto Previous Year	0	0	0	0	0	0
Net Loans Opening	0	0	0	0	150	150
Add: Drawl(s) during the year	0	0	0	0	0	0
Less: Repayment(s) of Loan during the year	0	0	0	0	0	12.5
Net Closing Loan	0	0	0	0	150	137.5
Average Net Loan	0	0	0	0	150	143.75
Rate of Interest on Loan	0	0	0	0	8.9	8.9
Interest on Loan	0	0	0	0	13.35	12.79
BOND XXXIII-DOCO DRAWL ON 01-JUL-2012-						
Gross Opening Loan	0	0	0	0	50	50
Cumulative Repayments of Loans upto Previous Year	0	0	0	0	0	0
Net Loans Opening	0	0	0	0	50	50
Add: Drawl(s) during the year	0	0	0	0	0	0
Less: Repayment(s) of Loan during the year	0	0	0	0	0	0
Net Closing Loan	0	0	0	0	50	50
Average Net Loan	0	0	0	0	50	50
Rate of Interest on Loan	0	0	0	0	8.64	8.64
Interest on Loan	0	0	0	0	4.32	4.32
BOND-XXXIV-DOCO Funding-						
Gross Opening Loan	0	0	0	0	106.82	106.82
Cumulative Repayments of Loans upto Previous Year	0	0	0	0	0	0
Net Loans Opening	0	0	0	0	106.82	106.82
Add: Drawl(s) during the year	0	0	0	0	0	0

Particulars	Revised 2008-09	2009-10	2010-11	2011-12	2012-13	2013-14
Less: Repayment(s) of Loan during the year	0	0	0	0	0	0
Net Closing Loan	0	0	0	0	106.82	106.82
Average Net Loan	0	0	0	0	106.82	106.82
Rate of Interest on Loan	0	0	0	0	8.84	8.84
Interest on Loan	0	0	0	0	9.44	9.44
BOND-XXXV-DOCO Funding-						
Gross Opening Loan	0	0	0	0	600	600
Cumulative Repayments of Loans upto Previous Year	0	0	0	0	0	0
Net Loans Opening	0	0	0	0	600	600
Add: Drawl(s) during the year	0	0	0	0	0	0
Less: Repayment(s) of Loan during the year	0	0	0	0	0	0
Net Closing Loan	0	0	0	0	600	600
Average Net Loan	0	0	0	0	600	600
Rate of Interest on Loan	0	0	0	0	9.64	9.64
Interest on Loan	0	0	0	0	57.84	57.84
BOND XXXVI-DOCO Funding-						
Gross Opening Loan	0	0	0	0	490	490
Cumulative Repayments of Loans upto Previous Year	0	0	0	0	0	0
Net Loans Opening	0	0	0	0	490	490
Add: Drawl(s) during the year	0	0	0	0	0	0
Less: Repayment(s) of Loan during the year	0	0	0	0	0	0
Net Closing Loan	0	0	0	0	490	490
Average Net Loan	0	0	0	0	490	490
Rate of Interest on Loan	0	0	0	0	9.35	9.35
Interest on Loan	0	0	0	0	45.82	45.82
BOND XL-ADDCAP FOR 2012-2013						
Gross Opening Loan	0	0	0	0	0	84.57
Cumulative Repayments of Loans upto Previous Year	0	0	0	0	0	0
Net Loans Opening	0	0	0	0	0	84.57
Add: Drawl(s) during the year	0	0	0	0	84.57	0
Less: Repayment(s) of Loan during the year	0	0	0	0	0	0
Net Closing Loan	0	0	0	0	84.57	84.57



Particulars	Revised 2008-09	2009-10	2010-11	2011-12	2012-13	2013-14
Average Net Loan	0	0	0	0	42.29	84.57
Rate of Interest on Loan	0	0	0	0	9.3	9.3
Interest on Loan	0	0	0	0	3.93	7.87
BOND - XLIV-ADDCAP FOR 2013-2014						
Gross Opening Loan	0	0	0	0	0	0
Cumulative Repayments of Loans upto Previous Year	0	0	0	0	0	0
Net Loans Opening	0	0	0	0	0	0
Add: Drawl(s) during the year	0	0	0	0	0	21.08
Less: Repayment(s) of Loan during the year	0	0	0	0	0	0
Net Closing Loan	0	0	0	0	0	21.08
Average Net Loan	0	0	0	0	0	10.54
Rate of Interest on Loan	0	0	0	0	0	8.7
Interest on Loan	0	0	0	0	0	0.92
Summary						
Gross Opening Loan	0	0	0	0	1396.82	1481.39
Cumulative Repayments of Loans upto Previous Year	0	0	0	0	0	0
Net Loans Opening	0	0	0	0	1396.82	1481.39
Add: Drawl(s) during the year	0	0	0	0	84.57	21.08
Less: Repayment(s) of Loan during the year	0	0	0	0	0	12.5
Net Closing Loan	0	0	0	0	1481.39	1489.97
Average Net Loan	0	0	0	0	1439.11	1485.68
Rate of Interest on Loan	0	0	0	0	9.36	9.36
Interest on Loan	0	0	0	0	134.7	138.99
						(Petitioner)

Calculation of Interest on Normative Loan

Particulars	Revised	2009-10	2010-11	2011-12	2012-13	2013-14	Rs. in Lacs
	2008-09						
Gross Normative Loan Opening	0	0	0	0	1396.82	1481.39	
Cumulative Repayments of Normative Loans upto Previous Year	0	0	0	0	0	81.41	
Net Normative Loans Opening	0	0	0	0	1396.82	1399.98	
Increase/Decrease due to ACE during the year	0	0	0	0	84.57	21.08	
Less: Repayment(s) of Normative Loan during the year	0	0	0	0	81.41	112.53	
Net Closing Normative Loan	0	0	0	0	1399.98	1308.53	
Average Net Normative Loan	0	0	0	0	1398.4	1354.26	
Rate of Interest on Loan	0	0	0	0	9.36	9.36	
Interest on Normative Loan	0	0	0	0	130.89	126.7	
Pro rata Interest on Normative Loan	0	0	0	0	98.17	126.7	
							(Petitioner)

Calculation of Interest on Working Capital

Particulars	Revised 2008-	2009-10	2010-11	2011-12	2012-13	2013-14	Rs. in Lacs
	09						
Op. and Maintenance	0	0	0	0	7.74	8.18	
Maintenance Spares	0	0	0	0	13.93	14.73	
Receivables	0	0	0	0	77.54	79.44	
Total working capital	0	0	0	0	99.21	102.35	
Rate of Interest	0	0	0	0	13.5	13.5	
Interest on working capital	0	0	0	0	13.39	13.82	
Pro rata Interest on working capital	0	0	0	0	10.04	13.82	
							(Petitioner)



Summary Sheet							Form I
Name of the Transmission Licensee: Power Grid Corporation of India Limited							
Name of the Region: NORTH EASTERN REGION							
Name of the Project: Transmission system associated with Pallatana Gas Based Power Project and Bongaigaon Thermal Power station							
Name of the Transmission Element or Communication System: 400 KV D/C Pallatana-Surajmaniagar (Charged at 132 kv) transmission line along with associated bays at Surajmaninagar under T/S associated with Pallatana GBPP & Bongaigaon TPS							
Date of Commercial operation : 01-Jul-2012							
Particulars	Revised 2008-09		2009-10	2010-11	2011-12	2012-13	2013-14
Depreciation-(Form No. 11)	0	0	0	0	0	344.13	489.91
Interest on Loan-(Form No. 12.01)	0	0	0	0	0	416.55	553.85
Return on Equity-(Form No. 14)	0	0	0	0	0	378.82	545.81
Int. on Working Capital-(Form No. 12.02)	0	0	0	0	0	29.45	41.12
Op. and Maintenance-(Form No. 31)	0	0	0	0	0	58.24	82.09
Total			0	0	0	1227.19	1712.78
							(Petitioner)



Calculation of Return on Equity

Particulars	2009-10		2010-11	2011-12	2012-13	2013-14
	Revised 2008-09					
Opening Equity	0	0	0	0	2491.81	2721.48
Notional Equity on Add Cap	0	0	0	0	229.67	123.72
Total Equity	0	0	0	0	2721.48	2845.2
Average Equity	0	0	0	0	2606.65	2783.34
Rate of Return on Equity (%)	0	0	0	0	19.377	19.61
Return on Equity	0	0	0	0	505.09	545.81
Pro rata Return on Equity	0	0	0	0	378.82	545.81
Calculation of Grossed up Rate of ROE						
Rate of ROE	0	0	0	0	15.5	15.5
Time Line Incentive	0	0	0	0	0	0
Effective Rate of ROE	0	0	0	0	15.5	15.5
MAT Rate	0	0	0	0	20.01	20.96
Grossed up Rate of ROE	0	0	0	0	19.377	19.61
(Petitioner)						



Form-2	
Details of Transmission Lines and Substations, Communication System	
Name of the Petitioner: Power Grid Corporation of India Limited	
Name of the Region: NORTH EASTERN REGION	
Name of the Project: Transmission system associated with Pallatana Gas Based Power Project and Bongaigaon Thermal Power station	
Name of the Transmission element or Communication system: 400 KV D/C Pallatana-Surajmanigar (Charged at 132 kv) transmission line along with associated bays at Surajmanigar under T/S associated with Pallatana GBPP & Bongaigaon TPS	
Date of Commercial Operation: 01-Jul-2012	

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 Ckt. KM	Line length	Date of Commercial operation	Covered in the present petition	
									Yes/No	If No, petition No.
1	400KV D/C PALATANA-SURAJMANINAGAR T/L	AC	SC	2	132 KV and below	37.2	37.2	1-Jul-12	Y	

Substations:

Sl. No.	Name of Sub-station	Type of Substation	Voltage level KV	No. of Transformers / Reactors/ SVC etc.	No. of Bays			Date of Commercial operation	Covered in the present petition	
					765 KV	400 KV 220 KV	132 KV & below		Yes/No	If No, petition No.
1	-132KV PALATANA - I BAY AT SURAJMANINAGAR SS		132			2		1-Jul-12	Y	
	Total					2				



(Petitioner)

Normative parameters considered for tariff computations

Name of the Petitioner : Power Grid Corporation of India Limited	
Name of the Region : NORTH EASTERN REGION	
Name of the Project : Transmission system associated with Pallatana Gas Based Power Project, and Bongaigaon Thermal Power station	
Name of the Transmission Element or Communication System : 400 KV D/C Pallatana-Surajmaniagar (Charged at 132 kv) transmission line along with associated bays at Surajmaninagar under T/S associated with Pallatana GBPP & Bongaigaon TPS	
Date of Commercial Operation: 01-Jul-2012	

Particulars	Unit	Existing 2013-14	2014-15	2015-16	2016-17	2017-18	2018-19
Base Rate of Return of Equity	%	15.50%	15.50%	15.50%	15.50%	15.50%	15.50%
Tax Rate	%	11.33%	20.96%	20.96%	20.96%	20.96%	20.96%
Effective tax rate	%						
Grossed up Rate of ROE	%	17.48%	19.61%	19.61%	19.61%	19.61%	19.61%
Target availability - AC System	%		98%	98%	98%	98%	98%
Target availability - HVDC System	%		96%	96%	96%	96%	96%
Normative O&M per KM	Rs. Lakh						
Double Circuit (Bundle conductor with four sub-conductors)	Rs. Lakh	1.174	1.062	1.097	1.133	1.171	1.21
Double Circuit (Single Conductor)	Rs. Lakh	0.336	0.303	0.313	0.324	0.334	0.346
Double Circuit (Two and Three Conductor)	Rs. Lakh	0.783	0.707	0.731	0.755	0.78	0.806
Multicircuit with four or more conductors	Rs. Lakh		1.863	1.925	1.989	2.055	2.123
Multicircuit with two or three conductors	Rs. Lakh		1.24	1.282	1.324	1.368	1.413
Single Circuit (Bundled conductor with four sub-conductors)	Rs. Lakh	0.671	0.606	0.627	0.647	0.669	0.691
Single Circuit (Single Conductor)	Rs. Lakh	0.224	0.202	0.209	0.216	0.223	0.23
Single Circuit (Six conductor)	Rs. Lakh	0.671	0.707	0.731	0.755	0.78	0.806
Single Circuit (Twin and Three conductor)	Rs. Lakh	0.447	0.404	0.418	0.432	0.446	0.461
Normative O&M per bay							
132KV Sub-station and below	Rs. Lakh	32.73	30.15	31.15	32.18	33.25	34.36
220KV Sub-station	Rs. Lakh	45.82	42.21	43.61	45.06	46.55	48.1
400 KV GIS Substation	Rs. Lakh		51.54	53.25	55.02	56.84	58.73
400KV Sub-station	Rs. Lakh	65.46	60.3	62.3	64.37	66.51	68.71
765KV Sub-station	Rs. Lakh	91.64	84.42	87.22	90.12	93.11	96.2
Balia-Bhiwadi HVDC Bipole Scheme	Rs. Lakh	1326.25	1537	1656	1805	1955	2119
HVDC Back-to Back Stations	Rs. Lakh	553	578	627	679	736	797
Rihand-Dadri HVDC Bipole Scheme	Rs. Lakh	1811	1511	1637	1774	1922	2082
Talcher-Kolar HVDC Bipole Scheme	Rs. Lakh	2122	1173	1271	1378	1493	1617
Spare for WC as % of O&M	%	15	15	15	15	15	15
Receivables in Months for WC	Months	2	2	2	2	2	2
Bank Rate as on 1st April, 2014	%	13.2	13.5	13.5	13.5	13.5	13.5



DETAILS OF ELEMENT WISE COST OF THE PROJECT

Name of the Transmission Licensee: Power Grid Corporation of India Limited
Name of the Region: NORTH EASTERN REGION
Name of the Project: Transmission system associated with Palatana Gas Based Power Project and Bongaigaon Thermal Power station
Name of the Transmission Element or Communication System: 400 KV D/C Palatana-Surajmaninagar Transmission Line (Charged at 132 kV) along with associated bays at Surajmaninagar Substation
Date of Commercial operation : 01-Nov-2012

Transmission Lines:

(Rs in Lakh)

Sl. No.	Name of Line	Apportioned approved Cost	Completed Cost	Covered in the present petition	
				Yes / No.	If No, Petition No.
1	400kV D/C Bongaigaon TPS-Bongaigaon line alongwith associated bays	2413.42	1894.45	Yes	184/TT/2011
2	132 kV D/C Silchar-Badarpur line alongwith associated bays	2300.26	1721.90	Yes	
3	132 kV D/C Silchar-Srikona line alongwith associated bays	3512.15	3354.38	Yes	
4	132 kV Silchar – Hailakandi (AEGCL) line alongwith associated bays	1758.12	2013.69	No	98/TT/2012
5	400 kV D/C Pallatana-Surajmaninagar line (charged at 132 kV) alongwith associated bays	8128.6	10187.44	No	
6	LILO of 220kV Misa – Kathalguri Transmission Line at Mariani alongwith Mariani Switching Station	3095.64	1697.39	No	44/TT/2013
7	1 No 50MVA ICT-II along with associatd bays at Imphal Substation	4069.11	374.07	No	
	1 No 50MVA ICT-I along with associatd bays at Imphal Substation		342.26	No	
	132/33kV Loop-In line and associated bay at Imphal Substation		434.19	No	
	Loop-Out Line of 132kV S/C Ningthoukhong – Yurembam line along with associated bays at Imphal			No	
	1X 20 MVAR Bus reactor at Imphal		463.43	No	
8	400kV, D/C Silchar-Purba Kanchan Bari Transmission Line	26009.13	33715.91	No	98/TT/2012
9	132kV, D/C Mokokchung (POWERGRID) - Mokokchung (Nagaland) Transmission Line	189.21	409.12	No	Submitted for petition filing
10	400kV, D/C Palatana - Surajmaninagar T/L. (Charged at 132kV) along with associated bays at Surajmaninagar SS	8128.60	9484.01	Yes	98/TT/2012
11	132kV, D/C Silchar - Hailakandi (AEGCL) line (upto LILO point of 132 kV D/C Panchagram-Dullobchera T/L at Silchar) with associated bay at Silchar Substation	1758.12	2050.16	Yes	98/TT/2012



Substations.

(Rs in Lakh)

Sl. No.	Name of Line	Apportioned approved Cost	Completed Cost	Covered in the present petition	
				Yes / No	If No, Petition No.
1	200 MVA, 400/132kV ICT I at Silchar S/S alongwith associated bays	7598.80	2604.93	Yes	184/TT/2011
2	2x50 MVAR, 420 kV Switchable line reactors alongwith associated bays		3233.67	Yes	
3	2x63 MVAR Bus Reactor at Silchar S/S alongwith associated bays			1784.14	
4	200 MVA, 400/132kV, ICT-II at Silchar alongwith associated bays	2429.64	2200.00	No	98/TT/2012
5	80 MVAR, 420 kV Bus Reactor at Bongaigaon alongwith associated bay.	740.90	1057.61	No	
6	4x6.67 MVAR, 132kV, 1-Ph Bus Reactor at 132kV Ziro Substation	772.89	503.78	No	44/TT/2013
7	20MVAR Bus Reactor at 220kV Mariani Switching Station	545.56	693.37	No	
8	2 nos of 132kV bays associated with the transmission line at Silchar S/S & Purbakanchan Bari (TSECL) S/S each	808.94	512.09	No	98/TT/2012
9	2 Nos of 132kV bays associated with 132kV D/C Mok - Mok T/L, 7 X 10 MVA, 132/33kV ICT-I & II and 245 kV & 145 kV GIS bays at Mokochung (POWERGRID) SS	10447.79	4976.41	No	Submitted for petition filing
10	1 No. 400kV line bay at Silchar SS 400kV D/C Silchar-Bongaigaon line of NETC alongwith 1 No. 63MVAR switchable line reactor at Silchar SS	4555.17	1221.75	No	216/TT/2012
	1 No. 400kV line bay at Silchar SS 400kV D/C Silchar-Bongaigaon line of NETC alongwith 1 No. 63MVAR switchable line reactor at Silchar SS		1003.49		
	2 No. 400kV line bays at Bongaigaon SS for 400kV D/C Silchar-Bongaigaon line of NETC alongwith 2 nos of switchable line reactors at Bongaigaon SS.		1893.48		
11	1X80MVAR, 420kV, 3-Ph Bus Reactor at Bongaigaon Substation	740.90	1019.66	Yes	98/TT/2012
12	1X200MVA, 400/132 kV ICT-II at Silchar Substation along with associated HV & LV side bays	2429.64	2146.38	Yes	98/TT/2012



Financial Package upto COD (Block Year- 2009-2014)

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

Name of the Region: NORTH EASTERN REGION

Name of the Project: Transmission system associated with Pallatana Gas Based Power Project and Bongaigaon Thermal Power station

Name of the Transmission Element or Communication Element: 400 KV D/C Pallatana-Surajmanigar (Charged at 132 kv) transmission line along with associated bays at Surajmanigar under T/S associated with Pallatana GBPP & Bongaigaon TPS

Date of commercial Operation: 01-Juli-2012

Particulars	Financial Package as Approved		Financial Package as on COD		As Admitted by COD / 31.03.2014	
	Currency and Amount		Currency and Amount		Currency and Amount	
Loans:						
Loans-Domestic	INR	0 INR	0 INR	5814.23		
Loans-Foreign			INR	0		
Total Loans	INR	0 INR	0 INR	5814.23 INR		
Equity						
Foreign						
Domestic	INR	0 INR	0 INR	2491.81		
Notional						
Total Equity	INR	0 INR	0 INR	2491.81 INR		
Debt Equity Ratio						
Total Cost	INR	0 INR	0 INR	70.30:00		
				8306.04 INR		
	Debt		Equity	Total		
Add Cap for 2012-2013				765.57		
Add Cap for 2013-2014				412.4		
Add Cap for 2012-2013	Actual	Normative				
Debt		535.9				
Equity		229.67				
Total		765.57				
Add Cap for 2013-2014	Actual	Normative				
Debt		288.68				
Equity		123.72				
Total		412.4				
Total Capital cost with Addcap				9484.01		

(Petitioner)



Statement of Additional Capitalisation after COD

Name of the Petitioner: Power Grid Corporation of India Limited

Name of the Region: NORTH EASTERN REGION

Name of the Project: Transmission system associated with Pallatana Gas Based Power Project and Bongaigaon Thermal Power station

Name of the Transmission Element or Communication system: '400 KV D/C Pallatana-Surajmanigar (Charged at 132 kv) transmission line along with associated bays at Surajmanigar under T/S associated with Pallatana GBPP & Bongaigaon TPS

Date of Commercial Operation: 01-Jul-2012

Sl. No.	Year	Work / Equipment proposed to be added after COD upto cut off date/beyond cut off date	Amount capitalised and proposed to be capitalised	Justification	Regulation under which covered	Admitted Cost
1	2012-2013	TR LINE	713.1	Balance & Retention Payment		
2	2012-2013	SUB STATION	50.78	Balance and retention payment		
3	2012-2013	PLCC	1.69	Balance and retention payment		
	2012-2013	Total	765.57			
4	2013-2014	BUILDING	3.1	Balance and Retention Payment		
5	2013-2014	TR LINE	396.48	Balance & retention payment		
6	2013-2014	SUB STATION	12.82	Balance and retention payment		
	2013-2014	Total	412.4			
(Petitioner)						



Statement of Capital Cost							Form 9A
Name of the Transmission Licensee: Power Grid Corporation of India Limited							
Name of the Region: NORTH EASTERN REGION							
Name of the Project: Transmission system associated with Pallatana Gas Based Power Project and Bongaigaon Thermal Power station							
Name of the Transmission Element: 400 KV D/C Pallatana-Surajmaniagar (Charged at 132 kv) transmission line along with associated bays at Surajmaniagar under T/S associated with Pallatana GBPP & Bongaigaon TPS							
Date of Commercial Operation: 01-Jul-2012							
Particulars	Revised 2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	
						Rs. in Lacs	
A. a) Opening Gross Block Amount as per books							
b) Amount of capital liabilities in A(a) above					8306.04	9071.61	
c) Amount of IDC, FC, FERV and Hedging cost included in A(a) above							
d) Amount of IEDC (excluding IDC, FC, FERV and Hedging cost) included in A(a) above							
B. a) Addition in Gross Block Amount during the period					765.57	412.4	
b) Amount of capital liabilities in B(a) above							
c) Amount of IDC, FC, FERV and Hedging cost included in B(a) above							
d) Amount of IEDC (excluding IDC, FC, FERV and Hedging cost) included in B(a) above							
C. a) Closing Gross Block Amount as per Books					9071.61	9484.01	
b) Amount of capital liabilities in C(a) above							
c) Amount of IDC, FC, FERV and Hedging cost included in C(a) above							
d) Amount of IEDC (excluding IDC, FC, FERV and Hedging cost) included in C(a) above							
(Petitioner)							

Form 11										
Calculation of Depreciation Rate										
Name of the Transmission Licensee: Power Grid Corporation of India Limited										
Name of the Region: NORTHEASTERN REGION										
Name of the Project: Transmission system associated with Pallatana Gas Based Power Project and Bongagan Thermal Power station										
Name of the Transmission Element or Communication System: 400 kV D/C Palatana-Surajmanigar (Charged at 132 kv) transmission line along with associated bays at Surajmanigar under T/S associated with Pallatana GBPP & Bongagan TPS										
Date of Commercial Operation: 01-Jul-2012										
Sl. No.	Particulars	Gross block at the beginning of the year	Add Cap during the year	Gross block at the end of the year	Average Gross Block	Dep. rate	Rs. in Lacs Amount			
2012-2013										
1	FREEHOLD LAND	0	0	0	0	0	0			
2	BUILDING	0	0	0	0	3.34	0			
3	TR LINE	8196.75	713.1	8909.85	8553.3	5.28	451.61			
4	SUB STATION	504.55	50.78	555.33	127.94	5.28	6.86			
5	PLCC	4.74	1.69	6.43	5.59	6.13	0.35			
6	LEASEHOLD LAND	0	0	0	0	3.34	0			
	Total	8506.04	765.57	9071.61	8688.83		458.82			
	Weighted Average Rate of Depreciation									5.28
	Lapsed life									1
2013-2014										
1	FREEHOLD LAND	0	0	0	0	0	0			
2	BUILDING	0	3.1	3.1	1.55	3.34	0.05			
3	TR LINE	8909.85	396.48	9306.33	9128.09	5.28	480.91			
4	SUB STATION	355.33	12.82	368.15	161.74	5.28	8.54			
5	PLCC	6.43	0	6.43	6.43	6.31	0.41			
6	LEASEHOLD LAND	0	0	0	0	3.34	0			
	Total	9071.61	412.4	9484.01	9277.81		489.91			
	Weighted Average Rate of Depreciation									5.28
	Lapsed life									2
The Calculation of Total Life of Asset										
Sl. No.	Name of the Assets	Gross Block	Life As per CERCL Norms	Weighted Life						
(A) = Col.2 x Col.3										
1	FREEHOLD LAND	0	0	0						
2	BUILDING	0	25	0						
3	TR LINE	8196.75	35	286886.25						
4	SUB STATION	104.55	25	2613.75						
5	PLCC	4.74	25	118.5						
6	LEASEHOLD LAND	0	25	0						
	Total	8306.04		289618.5						
	Total Life of Asset	289618.5/8306.04		35						
(Petitioner)										



Statement of Depreciation

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

Name of the Region: NORTH EASTERN REGION

Name of the Project: Transmission system associated with Pallatana Gas Based Power Project and Bongaigaon Thermal Power station

Name of the Transmission Element or Communication System: 400 KV D/C Pallatana-Surajmaniagar (Charged at 132 kv) transmission line along with associated bays at Surajmaniagar under T/S associated with Pallatana GBPP & Bongaigaon TPS

Date of Commercial Operation: 01-Jul-2012

Particulars	Revised 2008-09	2009-10	2010-11	2011-12	2012-13	2013-14
						Rs. in Lacs
Opening Capital Cost	0	0	0	0	8306.04	9071.61
AddCap Cost	0	0	0	0	765.57	412.4
Closing Capital Cost	0	0	0	0	9071.61	9484.01
Average Capital Cost	0	0	0	0	8688.83	9277.81
Freehold Land (Av. Cost)	0	0	0	0	0	0
Rate of Depreciation	0	0	0	0	5.28	5.28
Depreciable Value	0	0	0	0	7819.95	8350.04
Balance useful life of the asset (at the beginning of year)	0	0	0	0	35	34
Elapsed life of the asset (at the beginning of the year)	0	0	0	0	0	1
Remaining Depreciable Value	0	0	0	0	7819.95	8005.91
Depreciation during the year	0	0	0	0	344.13	489.91
Depreciation upto previous year	0	0	0	0	0	344.13
Cumulative depreciation (incl. of AAD)	0	0	0	0	344.13	834.04

(Petitioner)



Calculation of Weighted Average Rate of Interest on Actual Loans

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

Name of the Region: NORTH EASTERN REGION

Name of the Project: Transmission system associated with Pallatana Gas Based Power Project and Bongaigaon Thermal Power station

Name of the Transmission Element or Communication System: 400 KV D/C Pallatana-Surajmanigar (Charged at 132 kv) transmission line along with associated bays at Surajmanigar under T/S associated with Pallatana GBPP & Bongaigaon TPS

Date of Commercial Operation: 01-Jul-2012

Particulars	Rs. in Lacs					
	Revised 2008-09	2009-10	2010-11	2011-12	2012-13	2013-14
BOND XXXI-DOCO Funding-						
Gross Opening Loan	0	0	0	0	300	300
Cumulative Repayments of Loans upto Previous Year	0	0	0	0	0	0
Net Loans Opening	0	0	0	0	300	300
Add: Drawl(s) during the year	0	0	0	0	0	0
Less: Repayment(s) of Loan during the year	0	0	0	0	0	25
Net Closing Loan	0	0	0	0	300	275
Average Net Loan	0	0	0	0	300	287.5
Rate of Interest on Loan	0	0	0	0	8.9	8.9
Interest on Loan	0	0	0	0	26.7	25.59
BOND XXXIII-DOCO Funding-						
Gross Opening Loan	0	0	0	0	150	150
Cumulative Repayments of Loans upto Previous Year	0	0	0	0	0	0
Net Loans Opening	0	0	0	0	150	150
Add: Drawl(s) during the year	0	0	0	0	0	0
Less: Repayment(s) of Loan during the year	0	0	0	0	0	0
Net Closing Loan	0	0	0	0	150	150
Average Net Loan	0	0	0	0	150	150
Rate of Interest on Loan	0	0	0	0	8.64	8.64
Interest on Loan	0	0	0	0	12.96	12.96
BOND-XXXIV-DOCO Funding-						
Gross Opening Loan	0	0	0	0	125	125
Cumulative Repayments of Loans upto Previous Year	0	0	0	0	0	0
Net Loans Opening	0	0	0	0	125	125
Add: Drawl(s) during the year	0	0	0	0	0	0
Less: Repayment(s) of Loan during the year	0	0	0	0	0	0
Net Closing Loan	0	0	0	0	125	125
Average Net Loan	0	0	0	0	125	125
Rate of Interest on Loan	0	0	0	0	8.84	8.84
Interest on Loan	0	0	0	0	11.05	11.05

Particulars	Revised 2008-09	2009-10	2010-11	2011-12	2012-13	2013-14
BOND-XXXV-DOCO Funding-						
Gross Opening Loan	0	0	0	0	2000	2000
Cumulative Repayments of Loans upto Previous Year	0	0	0	0	0	0
Net Loans Opening	0	0	0	0	2000	2000
Add: Drawl(s) during the year	0	0	0	0	0	0
Less: Repayment(s) of Loan during the year	0	0	0	0	0	0
Net Closing Loan	0	0	0	0	2000	2000
Average Net Loan	0	0	0	0	2000	2000
Rate of Interest on Loan	0	0	0	0	9.64	9.64
Interest on Loan	0	0	0	0	192.8	192.8
BOND XXXVI-DOCO Funding-						
Gross Opening Loan	0	0	0	0	2140	2140
Cumulative Repayments of Loans upto Previous Year	0	0	0	0	0	0
Net Loans Opening	0	0	0	0	2140	2140
Add: Drawl(s) during the year	0	0	0	0	0	0
Less: Repayment(s) of Loan during the year	0	0	0	0	0	0
Net Closing Loan	0	0	0	0	2140	2140
Average Net Loan	0	0	0	0	2140	2140
Rate of Interest on Loan	0	0	0	0	9.35	9.35
Interest on Loan	0	0	0	0	200.09	200.09
BOND XXXVII-DOCO Funding-						
Gross Opening Loan	0	0	0	0	185	185
Cumulative Repayments of Loans upto Previous Year	0	0	0	0	0	0
Net Loans Opening	0	0	0	0	185	185
Add: Drawl(s) during the year	0	0	0	0	0	0
Less: Repayment(s) of Loan during the year	0	0	0	0	0	0
Net Closing Loan	0	0	0	0	185	185
Average Net Loan	0	0	0	0	185	185
Rate of Interest on Loan	0	0	0	0	9.25	9.25
Interest on Loan	0	0	0	0	17.11	17.11
BOND XXXIX-DOCO Funding-						
Gross Opening Loan	0	0	0	0	914.23	914.23
Cumulative Repayments of Loans upto Previous Year	0	0	0	0	0	0
Net Loans Opening	0	0	0	0	914.23	914.23
Add: Drawl(s) during the year	0	0	0	0	0	0
Less: Repayment(s) of Loan during the year	0	0	0	0	0	0
Net Closing Loan	0	0	0	0	914.23	914.23



Particulars	Revised 2008-09	2009-10	2010-11	2011-12	2012-13	2013-14
Average Net Loan	0	0	0	0	914.23	914.23
Rate of Interest on Loan	0	0	0	0	9.4	9.4
Interest on Loan	0	0	0	0	85.94	85.94
BOND XI-ADDCAP FOR 2012-2013 Add Cap Funding-						
Gross Opening Loan	0	0	0	0	0	535.9
Cumulative Repayments of Loans upto Previous Year	0	0	0	0	0	0
Net Loans Opening	0	0	0	0	0	535.9
Add: Drawl(s) during the year	0	0	0	0	535.9	0
Less: Repayment(s) of Loan during the year	0	0	0	0	0	0
Net Closing Loan	0	0	0	0	535.9	535.9
Average Net Loan	0	0	0	0	267.95	535.9
Rate of Interest on Loan	0	0	0	0	9.3	9.3
Interest on Loan	0	0	0	0	24.92	49.84
BOND - XLIV-ADDCAP FOR 2013-2014 Add Cap Funding-						
Gross Opening Loan	0	0	0	0	0	0
Cumulative Repayments of Loans upto Previous Year	0	0	0	0	0	0
Net Loans Opening	0	0	0	0	0	0
Add: Drawl(s) during the year	0	0	0	0	0	288.68
Less: Repayment(s) of Loan during the year	0	0	0	0	0	0
Net Closing Loan	0	0	0	0	0	288.68
Average Net Loan	0	0	0	0	0	144.34
Rate of Interest on Loan	0	0	0	0	0	8.7
Interest on Loan	0	0	0	0	0	12.56
Summary						
Gross Opening Loan	0	0	0	0	5814.23	6350.13
Cumulative Repayments of Loans upto Previous Year	0	0	0	0	0	0
Net Loans Opening	0	0	0	0	5814.23	6350.13
Add: Drawl(s) during the year	0	0	0	0	535.9	288.68
Less: Repayment(s) of Loan during the year	0	0	0	0	0	25
Net Closing Loan	0	0	0	0	6350.13	6613.81
Average Net Loan	0	0	0	0	6082.18	6481.97
Rate of Interest on Loan	0	0	0	0	9.4	9.38
Interest on Loan	0	0	0	0	571.57	607.93



(Petitioner)

Calculation of Interest on Normative Loan

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

Name of the Region: NORTH EASTERN REGION

Name of the Project: Transmission system associated with Pallatana Gas Based Power Project and Bongaigaon Thermal Power station

Name of the Transmission Element or Communication System: 400 KV D/C Pallatana-Surajmaniagar (Charged at 132 kv) transmission line along with associated bays at Surajmaninagar under T/S associated with Pallatana GBPP & Bongaigaon TPS

Date of Commercial Operation: 01-Jul-2012

Particulars	Rs. in Lacs					
	Revised 2008-09	2009-10	2010-11	2011-12	2012-13	2013-14
Gross Normative Loan Opening	0	0	0	0	5814.23	6350.13
Cumulative Repayments of Normative Loans upto Previous Year	0	0	0	0	0	344.13
Net Normative Loans Opening	0	0	0	0	5814.23	6006
Increase/Decrease due to ACE during the year	0	0	0	0	535.9	288.68
Less: Repayment(s) of Normative Loan during the year	0	0	0	0	344.13	489.91
Net Closing Normative Loan	0	0	0	0	6006	5804.77
Average Net Normative Loan	0	0	0	0	5910.12	5905.39
Rate of interest on Loan	0	0	0	0	9.4	9.38
Interest on Normative Loan	0	0	0	0	555.4	553.85
Pro rata interest on Normative Loan	0	0	0	0	416.55	553.85

(Petitioner)



Calculation of Interest on Working Capital

Name of the Transmission Licensee: Power Grid Corporation of India Limited
 Name of the Region: NORTH EASTERN REGION
 Name of the Project: Transmission system associated with Pallatana Gas Based Power Project and Bongaigaon Thermal Power station
 Name of the Transmission Element: 400 KV D/C Pallatana-Surajmaniagar (Charged at 132 kv) transmission line along with associated bays at Surajmaniagar under T/S associated with Pallatana GBPP & Bongaigaon TPS

Date of Commercial Operation: 01-Jul-2012

Particulars	Rs. in Lacs					
	Revised 2008-09	2009-10	2010-11	2011-12	2012-13	2013-14
Op. and Maintenance	0	0	0	0	6.47	6.84
Maintenance Spares	0	0	0	0	11.65	12.31
Receivables	0	0	0	0	272.71	285.46
Total working capital	0	0	0	0	290.83	304.61
Rate of Interest	0	0	0	0	13.5	13.5
Interest on working capital	0	0	0	0	39.26	41.12
Pro rata interest on working capital	0	0	0	0	29.45	41.12

(Petitioner)





Summary Sheet							Form I
Name of the Transmission Licensee: Power Grid Corporation of India Limited							
Name of the Region: NORTH EASTERN REGION							
Name of the Project: Transmission system associated with Palatana Gas Based Power Project and Bongaigaon Thermal Power station							
Name of the Transmission Element or Communication System: 1X80 MVAR 420 KV 3 Ph Bus Reactor at Bongaigaon Substation							
Date of Commercial operation : 01-Nov-2012							
Particulars	Revised 2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	Rs. in Lacs
Depreciation	0	0	0	0	18.84	50.27	
Interest on Loan	0	0	0	0	22.65	57.14	
Return on Equity	0	0	0	0	20.74	56.01	
Int. on Working Capital	0	0	0	0	2.86	7.38	
Op. and Maintenance	0	0	0	0	25.8	65.46	
Total					90.89	236.26	
							(Petitioner)

Calculation of Return on Equity

Name of the Transmission Licensee: Power Grid Corporation of India Limited
 Name of the Region: NORTH EASTERN REGION
 Name of the Project: Transmission system associated with Palatana Gas Based Power Project and Bongaigaon Thermal Power station
 Name of the Transmission Element or Communication System: 1X80 MVAR 420 KV 3 Ph Bus Reactor at Bongaigaon Substation
 Date of Commercial operation: 01-Nov-2012

Particulars	Revised 2008-09		2009-10		2010-11		2011-12		2012-13		2013-14	
Opening Equity	0	0	0	0	0	0	0	0	0	248.51	265.31	265.31
Notional Equity on Add Cap	0	0	0	0	0	0	0	0	0	16.8	40.58	40.58
Total Equity	0	0	0	0	0	0	0	0	0	265.31	305.89	305.89
Average Equity	0	0	0	0	0	0	0	0	0	256.91	285.6	285.6
Rate of Return on Equity (%)	0	0	0	0	0	0	0	0	0	19.377	19.61	19.61
Return on Equity	0	0	0	0	0	0	0	0	0	49.78	56.01	56.01
Pro rata Return on Equity	0	0	0	0	0	0	0	0	0	20.74	56.01	56.01
Calculation of Grossed up Rate of ROE												
Rate of ROE	0	0	0	0	0	0	0	0	0	15.5	15.5	15.5
Time Line Incentive	0	0	0	0	0	0	0	0	0	0	0	0
Effective Rate of ROE	0	0	0	0	0	0	0	0	0	15.5	15.5	15.5
MAT Rate	0	0	0	0	0	0	0	0	0	20.01	20.96	20.96
Grossed up Rate of ROE	0	0	0	0	0	0	0	0	0	19.377	19.61	19.61

(Petitioner)



Details of Transmission Lines and Substations, Communication System

Name of the Petitioner: Power Grid Corporation of India Limited										
Name of the Region: NORTH EASTERN REGION										
Name of the Project: Transmission system associated with Palalana Gas Based Power Project and Bongaigaon Thermal Power station										
Name of the Transmission element or Communication system: 1X80 MVAR 420 KV 3 Ph Bus Reactor at Bongaigaon Substation										
Date of Commercial Operation: 01-Nov-2012										
Substations:										
Sl. No.	Name of Sub-station	Type of Substation	Voltage level KV	No of Transformers / Reactors/ SVC etc.	No. of Bays			Date of Commercial operation	Covered in the present petition	
					765 KV	400 KV	220 KV		132 KV & below	Yes/No
1	BONGAIGAON-BUS REACTOR		400		1			1-Nov-12	Y	
	Total				1					
Communication System:										
Sl. No.	Name of Communication System	Type of Communication System	Technical Particulars			Number / length		Date of Commercial operation	Covered in the present petition	
									Yes/No	If No, petition No.
(Petitioner)										



Normative parameters considered for tariff computations

Particulars	Unit	Existing 2013-14	2014-15	2015-16	2016-17	2017-18	2018-19
Name of the Petitioner :: Power Grid Corporation of India Limited							
Name of the Region :: NORTH EASTERN REGION							
Name of the Project :: Transmission system associated with Palatana Gas Based Power Project and Bongaigaon Thermal Power station							
Name of the Transmission Element or Communication System :: 1X380 MVAR 420 KV 3 Ph Bus Reactor at Bongaigaon Substation							
Date of Commercial Operation: 01-Nov-2012							
Base Rate of Return of Equity	%	15.50%	15.50%	15.50%	15.50%	15.50%	15.50%
Tax Rate	%	11.33%	20.96%	20.96%	20.96%	20.96%	20.96%
Effective tax rate	%						
Grossed up Rate of ROE	%	17.48%	19.61%	19.61%	19.61%	19.61%	19.61%
Target availability - AC System	%		98%	98%	98%	98%	98%
Target availability - HVDC System	%		96%	96%	96%	96%	96%
Normative O&M per KM	Rs. Lakh						
Double Circuit (Bundle conductor with four sub-conductors)	Rs. Lakh	1.174	1.062	1.097	1.133	1.171	1.21
Double Circuit (Single Conductor)	Rs. Lakh	0.336	0.303	0.313	0.324	0.334	0.346
Double Circuit (Two and Three Conductors)	Rs. Lakh	0.783	0.707	0.731	0.755	0.78	0.806
Multicircuit with four or more conductors	Rs. Lakh		1.863	1.925	1.989	2.055	2.123
Multicircuit with two or three conductors	Rs. Lakh		1.24	1.282	1.324	1.368	1.413
Single Circuit (Bundled conductor with four sub-conductors)	Rs. Lakh	0.671	0.606	0.627	0.647	0.669	0.691
Single Circuit (Single Conductor)	Rs. Lakh	0.224	0.202	0.209	0.216	0.223	0.23
Single Circuit (Six conductor)	Rs. Lakh	0.671	0.707	0.731	0.755	0.78	0.806
Single Circuit (Twin and Three conductor)	Rs. Lakh	0.447	0.404	0.418	0.432	0.446	0.461
Normative O&M per bay							
132KV Sub-station and below	Rs. Lakh	32.73	30.15	31.15	32.18	33.25	34.36
220KV Sub-station	Rs. Lakh	45.82	42.21	43.61	45.06	46.55	48.1
400 KV GIS Substation	Rs. Lakh		51.54	53.25	55.02	56.84	58.73
400KV Sub-station	Rs. Lakh	65.46	60.3	62.3	64.37	66.51	68.71
765KV Sub-station	Rs. Lakh	91.64	84.42	87.22	90.12	93.11	96.2
Balia-Bhiwadi HVDC Bipole Scheme	Rs. Lakh	1326.25	1537	1686	1805	1955	2119
HVDC Back-to Back Stations	Rs. Lakh	553	578	627	679	736	797
Rihand-Dadrn HVDC Bipole Scheme	Rs. Lakh	1811	1511	1637	1774	1922	2082
Talcher-Kolar HVDC Bipole Scheme	Rs. Lakh	2122	1173	1271	1378	1493	1617
Spare for WC as % of O&M	%	15	15	15	15	15	15
Receivables in Months for WC	Months	2	2	2	2	2	2
Bank Rate as on 1st April, 2014.	%	13.2	13.5	13.5	13.5	13.5	13.5

(Petitioner)



DETAILS OF ELEMENT WISE COST OF THE PROJECT

Name of the Transmission Licensee: Power Grid Corporation of India Limited
Name of the Region: NORTH EASTERN REGION
Name of the Project: Transmission system associated with Palatana Gas Based Power Project and Bongaigaon Thermal Power station
Name of the Transmission Element or Communication System: 1X80 MVAR 420 KV 3 Ph Bus Reactor at Bongaigaon Substation
Date of Commercial operation : 01-Nov-2012

Transmission Lines:

(Rs in Lakh)

Sl. No.	Name of Line	Apportioned approved Cost	Completed Cost	Covered in the present petition	
				Yes / No	If No, Petition No.
1	400kV D/C Bongaigaon TPS-Bongaigaon line alongwith associated bays	2413.42	1894.45	Yes	184/TT/2011
2	132 kV D/C Silchar-Badarpur line alongwith associated bays	2300.26	1721.90	Yes	
3	132 kV D/C Silchar-Srikona line alongwith associated bays	3512.15	3354.38	Yes	
4	132 kV Silchar – Halakandi (AEGCL) line alongwith associated bays	1758.12	2013.69	No	98/TT/2012
5	400 kV D/C Pallatana-Surajmaninagar line (charged at 132 kV) alongwith associated bays	8128.6	10187.44	No	
6	L.I.L.O of 220kV Misa – Kathalguri Transmission Line at Mariani alongwith Mariani Switching Station	3095.64	1697.39	No	44/TT/2013
7	1 No 50MVA ICT-II along with associated bays at Imphal Substation	4069.11	374.07	No	
	1 No 50MVA ICT-I along with associated bays at Imphal Substation		342.26	No	
	132/33kV Loop-In line and associated bay at Imphal Substation		434.19	No	
	Loop-Out Line of 132kV S/C Ningthoukhong – Yurembam line along with associated bays at Imphal			No	
	1X 20 MVAR Bus reactor at Imphal		463.43	No	
8	400kV, D/C Silchar-Purba Kanchan Bari Transmission Line	26009.13	33715.91	No	98/TT/2012
9	132kV, D/C Mokokchung (POWERGRID) - Mokokchung (Nagaland) Transmission Line	189.21	409.12	No	Submitted for petition filing
10	400kV, D/C Palatana - Surajmaninagar T/L (Charged at 132kV) along with associated bays at Surajmaninagar SS	8128.60	9484.01	Yes	98/TT/2012
11	132kV, D/C Silchar - Halakandi (AEGCL) line (upto L.I.L.O point of 132 kV D/C Panchagram-Dullobehera T/L at Silchar) with associated bay at Silchar Substation	1758.12	2050.16	Yes	98/TT/2012



Substations.

(Rs in Lakh)

Sl. No.	Name of Line	Apportioned approved Cost	Completed Cost	Covered in the present petition	
				Yes / No	If No, Petition No.
1	200 MVA, 400/132kV ICT I at Silchar S/S alongwith associated bays	7598.80	2604.93	Yes	184/TT/2011
2	2x50 MVAR,420 kV Switchable line reactors alongwith associated bays		3233.67	Yes	
3	2x63 MVAR Bus Reactor at Silchar S/S alongwith associated bays			1784.14	
4	200 MVA, 400/132kV, ICT-II at Silchar alongwith associated bays	2429.64	2200.00	No	98/TT/2012
5	80 MVAR, 420 kV Bus Reactor at Bongaigaon alongwith associated bay.	740.90	1057.61	No	
6	4x6.67 MVAR, 132kV, 1-Ph Bus Reactor at 132kV Ziro Substation	772.89	503.78	No	44/TT/2013
7	20MVAR Bus Reactor at 220kV Mariani Switching Station	545.56	693.37	No	
8	2 nos of 132kV bays associated with the transmission line at Silchar S/S & Purbakanchan Bari (TSECL) S/S each	808.94	512.09	No	98/TT/2012
9	2 Nos of 132kV bays associated with 132kV D/C Mok - Mok T/L, 7 X 10 MVA, 132/33kV ICT-I & II and 245 kV & 145 kV GIS bays at Mokokchung (POWERGRID) SS	10447.79	4976.41	No	Submitted for petition filing
10	1 No. 400kV line bay at Silchar SS 400kV D/C Silchar-Bongaigaon line of NETC alongwith 1 No. 63MVAR switchable line reactor at Silchar SS	4555.17	1221.75	No	216/TT/2012
	1 No. 400kV line bay at Silchar SS 400kV D/C Silchar-Bongaigaon line of NETC alongwith 1 No. 63MVAR switchable line reactor at Silchar SS		1003.49		
	2 No. 400kV line bays at Bongaigaon SS for 400kV D/C Silchar-Bongaigaon line of NETC alongwith 2 nos of switchable line reactors at Bongaigaon SS.		1893.48		
11	1X80MVAR, 420kV, 3-Ph Bus Reactor at Bongaigaon Substation	740.90	1019.66	Yes	98/TT/2012
12	1X200MVA, 400/132 kV ICT-II at Silchar Substation along with associated HV & LV side bays	2429.64	2146.38	Yes	98/TT/2012



Financial Package upto COD (Block Year- 2009-2014)				Form-6
Name of the Transmission Licensee: Power Grid Corporation of India Limited				
Name of the Region: NORTH EASTERN REGION				
Name of the Project: Transmission system associated with Palatalana Gas Based Power Project and Bongaigaon Thermal Power station				
Name of the Transmission Element or Communication Element: 1X80 MVAR 420 KV 3 Ph Bus Reactor at Bongaigaon Substation				
Date of commercial Operation: 01-Nov-2012				
Particulars	Financial Package as Approved		As Admitted by COD / 31.03.2014	
	Currency and Amount	Currency and Amount	Currency and Amount	Currency and Amount
Loans				
Loans-Domestic	INR	0 INR	579.87	
Loans-Foreign			0	
Total Loans	INR	0 INR	579.87 INR	
Equity				
Foreign				
Domestic	INR	0 INR	248.51	
Notional				
Total Equity	INR	0 INR	248.51 INR	
Debt Equity Ratio			70:30:00	
Total Cost	INR	0 INR	828.38 INR	
	Debt	Equity	Total	
Add Cap for 2012-2013			56.01	
Add Cap for 2013-2014			135.26	
Add Cap for 2012-2013	Actual	Normative		
Debt		39.21		
Equity		16.8		
Total		56.01		
Add Cap for 2013-2014	Actual	Normative		
Debt		94.55		
Equity		40.58		
Total		135.26		
Total Capital cost with Addcap		1019.65		

(Petitioner)

Statement of Additional Capitalisation after COD

Name of the Petitioner: Power Grid Corporation of India Limited

Name of the Region: NORTH EASTERN REGION

Name of the Project: Transmission system associated with Palatana Gas Based Power Project and Bongaigaon Thermal Power station

Name of the Transmission Element or Communication system: 1X80 MVAR 420 KV 3 Ph Bus Reactor at Bongaigaon Substation

Date of Commercial Operation: 01-Nov-2012.

Sl. No.	Year	Work / Equipment proposed to be added after COD upto cut off date/beyond cut off date	Amount capitalised and proposed to be capitalised	Justification	Regulation under which covered	Admitted Cost
1	2012-2013	SUB STATION	56.01	Balance and retention payments		
	2012-2013	Total	56.01			
2	2013-2014	SUB STATION	135.26	Balance and retention payments		
	2013-2014	Total	135.26			
(Petitioner)						



Statement of Capital Cost

Name of the Transmission Licensee: Power Grid Corporation of India Limited
 Name of the Region: NORTH EASTERN REGION
 Name of the Project: Transmission system associated with Palatana Gas Based Power Project and Bongaigaon Thermal Power station
 Name of the Transmission Element: 1X80 MVAR 420 KV 3 Ph Bus Reactor at Bongaigaon Substation
 Date of Commercial Operation: 01-Nov-2012

Particulars	Revised 2008	2009-10	2010-11	2011-12	2012-13	2013-14	Rs. in Lacs
	09						
A. a) Opening Gross Block Amount as per books						828.38	884.39
b) Amount of capital liabilities in A(a) above							
c) Amount of IDC, FC, FERV and Hedging cost included in A(a) above							
d) Amount of IEDC (excluding IDC, FC, FERV and Hedging cost) included in A(a) above							
B. a) Addition in Gross Block Amount during the period						56.01	135.26
b) Amount of capital liabilities in B(a) above							
c) Amount of IDC, FC, FERV and Hedging cost included in B(a) above							
d) Amount of IEDC (excluding IDC, FC, FERV and Hedging cost) included in B(a) above							
C. a) Closing Gross Block Amount as per Books						884.39	1019.65
b) Amount of capital liabilities in C(a) above							
c) Amount of IDC, FC, FERV and Hedging cost included in C(a) above							
d) Amount of IEDC (excluding IDC, FC, FERV and Hedging cost) included in C(a) above							

(Petitioner)

Financing of Additional Capitalisation

Name of the Petitioner: Power Grid Corporation of India Limited									
Name of the Region: NORTH EASTERN REGION									
Name of the Project: Transmission system associated with Palatana Gas Based Power Project and Bongaigaon Thermal Power station									
Name of the Transmission Element or Communication System: 1X80 MVAR 420 KV 3 Ph Bus Reactor at Bongaigaon Substation									
Date of Commercial Operation: 01-Nov-2012									

Financial Year	Actual/Projected					Admitted					Amount in Lakhs	
	2009-10	2010-11	2011-12	2012-13	2013-14							
Amount Capitalised in Work/Equipment												
Financing Details												
Loan	0	0	0	39.21	94.68							
Total Loan	0	0	0	39.21	94.68							
Equity	0	0	0	16.8	40.58							
Total	0	0	0	56.01	135.26							

(Petitioner)



Statement of Depreciation

Name of the Transmission Licensee: Power Grid Corporation of India Limited
 Name of the Region: NORTH EASTERN REGION
 Name of the Project: Transmission system associated with Palatana Gas Based Power Project and Bongaigaon Thermal Power station
 Name of the Transmission Element or Communication System: 1X80 MVAR 420 KV 3 Ph Bus Reactor at Bongaigaon Substation
 Date of Commercial Operation: 01-Nov-2012

Particulars	Revised 2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	Rs. in Lacs
	Opening Capital Cost	0	0	0	0	828.38	
AddCap Cost	0	0	0	0	56.01	135.26	
Closing Capital Cost	0	0	0	0	884.39	1019.65	
Average Capital Cost	0	0	0	0	856.39	952.02	
Freehold Land (Av. Cost)	0	0	0	0	0	0	
Rate of Depreciation	0	0	0	0	5.28	5.28	
Depreciable Value	0	0	0	0	770.75	856.82	
Balance useful life of the asset (at the beginning of year)	0	0	0	0	25	24	
Elapsed life of the asset (at the beginning of the year)	0	0	0	0	0	1	
Remaining Depreciable Value	0	0	0	0	770.75	837.98	
Depreciation during the year	0	0	0	0	18.84	50.27	
Depreciation upto previous year	0	0	0	0	0	18.84	
Cumulative depreciation (incl. of AAD)	0	0	0	0	18.84	69.11	

(Petitioner)



Calculation of Weighted Average Rate of Interest on Actual Loans

Particulars	Revised	2009-10	2010-11	2011-12	2012-13	2013-14
	2008-09					
Name of the Transmission Licensee: Power Grid Corporation of India Limited						
Name of the Region: NORTH EASTERN REGION						
Name of the Project: Transmission system associated with Palatana Gas Based Power Project and Bongaigaon Thermal Power station						
Name of the Transmission Element or Communication System: 1X80 MVAR 420 KV 3 Ph Bus Reactor at Bongaigaon Substation						
Date of Commercial Operation: 01-Nov-2012						
BOND XXXI-DOCO Funding-						
Gross Opening Loan	0	0	0	0	0	50
Cumulative Repayments of Loans upto Previous Year	0	0	0	0	0	0
Net Loans Opening	0	0	0	0	0	50
Add: Drawl(s) during the year	0	0	0	0	0	0
Less: Repayment(s) of Loan during the year	0	0	0	0	0	4.17
Net Closing Loan	0	0	0	0	0	45.83
Average Net Loan	0	0	0	0	0	47.92
Rate of Interest on Loan	0	0	0	0	0	8.9
Interest on Loan	0	0	0	0	0	4.26
BOND XXXIII-DOCO DRAWL ON 01-NOV-2012-						
Gross Opening Loan	0	0	0	0	0	25
Cumulative Repayments of Loans upto Previous Year	0	0	0	0	0	0
Net Loans Opening	0	0	0	0	0	25
Add: Drawl(s) during the year	0	0	0	0	0	0
Less: Repayment(s) of Loan during the year	0	0	0	0	0	0
Net Closing Loan	0	0	0	0	0	25
Average Net Loan	0	0	0	0	0	25
Rate of Interest on Loan	0	0	0	0	0	8.64
Interest on Loan	0	0	0	0	0	2.16
BOND XXXVI-DOCO Funding-						
Gross Opening Loan	0	0	0	0	0	100
Cumulative Repayments of Loans upto Previous Year	0	0	0	0	0	0
Net Loans Opening	0	0	0	0	0	100
Add: Drawl(s) during the year	0	0	0	0	0	0

Particulars	Revised 2008-09	2009-10	2010-11	2011-12	2012-13	2013-14
Less: Repayment(s) of Loan during the year	0	0	0	0	0	0
Net Closing Loan	0	0	0	0	100	100
Average Net Loan	0	0	0	0	100	100
Rate of Interest on Loan	0	0	0	0	9.35	9.35
Interest on Loan	0	0	0	0	9.35	9.35
BOND XXXVII-DOCO Funding-						
Gross Opening Loan	0	0	0	0	222	222
Cumulative Repayments of Loans upto Previous Year	0	0	0	0	0	0
Net Loans Opening	0	0	0	0	222	222
Add: Drawl(s) during the year	0	0	0	0	0	0
Less: Repayment(s) of Loan during the year	0	0	0	0	0	0
Net Closing Loan	0	0	0	0	222	222
Average Net Loan	0	0	0	0	222	222
Rate of Interest on Loan	0	0	0	0	9.25	9.25
Interest on Loan	0	0	0	0	20.54	20.54
BOND XXXVIII-DOCO Funding-						
Gross Opening Loan	0	0	0	0	182.87	182.87
Cumulative Repayments of Loans upto Previous Year	0	0	0	0	0	0
Net Loans Opening	0	0	0	0	182.87	182.87
Add: Drawl(s) during the year	0	0	0	0	0	0
Less: Repayment(s) of Loan during the year	0	0	0	0	0	0
Net Closing Loan	0	0	0	0	182.87	182.87
Average Net Loan	0	0	0	0	182.87	182.87
Rate of Interest on Loan	0	0	0	0	9.25	9.25
Interest on Loan	0	0	0	0	16.92	16.92
BOND XL-ADDCAP FOR 2012-2013 Add Cap Funding-						
Gross Opening Loan	0	0	0	0	0	39.21
Cumulative Repayments of Loans upto Previous Year	0	0	0	0	0	0
Net Loans Opening	0	0	0	0	0	39.21
Add: Drawl(s) during the year	0	0	0	0	39.21	0
Less: Repayment(s) of Loan during the year	0	0	0	0	0	0
Net Closing Loan	0	0	0	0	39.21	39.21



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Particulars	Revised 2008-09	2009-10	2010-11	2011-12	2012-13	2013-14
Average Net Loan	0	0	0	0	19.61	39.21
Rate of Interest on Loan	0	0	0	0	9.3	9.3
Interest on Loan	0	0	0	0	1.82	3.65
BOND - XLIV-ADDCAP FOR 2013-2014						
Gross Opening Loan	0	0	0	0	0	0
Cumulative Repayments of Loans upto Previous Year	0	0	0	0	0	0
Net Loans Opening	0	0	0	0	0	0
Add: Drawl(s) during the year	0	0	0	0	0	94.68
Less: Repayment(s) of Loan during the year	0	0	0	0	0	0
Net Closing Loan	0	0	0	0	0	94.68
Average Net Loan	0	0	0	0	0	47.34
Rate of Interest on Loan	0	0	0	0	0	8.7
Interest on Loan	0	0	0	0	0	4.12
Summary						
Gross Opening Loan	0	0	0	0	579.87	619.08
Cumulative Repayments of Loans upto Previous Year	0	0	0	0	0	0
Net Loans Opening	0	0	0	0	579.87	619.08
Add: Drawl(s) during the year	0	0	0	0	39.21	94.68
Less: Repayment(s) of Loan during the year	0	0	0	0	0	4.17
Net Closing Loan	0	0	0	0	619.08	709.59
Average Net Loan	0	0	0	0	599.48	664.34
Rate of Interest on Loan	0	0	0	0	9.21	9.18
Interest on Loan	0	0	0	0	55.23	60.99
(Petitioner)						



Calculation of Interest on Normative Loan

Name of the Transmission Licensee: Power Grid Corporation of India Limited
 Name of the Region: NORTH EASTERN REGION
 Name of the Project: Transmission system associated with Palatana Gas Based Power Project and Bongaigaon Thermal Power station
 Name of the Transmission Element or Communication System: 1X80 MVAR 420 KV 3 Ph Bus Reactor at Bongaigaon Substation
 Date of Commercial Operation: 01-Nov-2012

Particulars	Revised 2008-	2009-10	2010-11	2011-12	2012-13	2013-14	Rs. in Lacs
	09						
Gross Normative Loan Opening	0	0	0	0	579.87	619.08	
Cumulative Repayments of Normative Loans upto Previous Year	0	0	0	0	0	18.84	
Net Normative Loans Opening	0	0	0	0	579.87	600.24	
Increase/Decrease due to ACE during the year	0	0	0	0	39.21	94.68	
Less: Repayment(s) of Normative Loan during the year	0	0	0	0	18.84	50.27	
Net Closing Normative Loan	0	0	0	0	600.24	644.65	
Average Net Normative Loan	0	0	0	0	590.06	622.45	
Rate of Interest on Loan	0	0	0	0	9.21	9.18	
Interest on Normative Loan	0	0	0	0	54.37	57.14	
Pro rata Interest on Normative Loan	0	0	0	0	22.65	57.14	

(Petitioner)



Calculation of Interest on Working Capital

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

Name of the Region: NORTH EASTERN REGION

Name of the Project: Transmission system associated with Palatana Gas Based Power Project and Bongaigaon Thermal Power station

Name of the Transmission Element: 1X80 MVAR 420 KV 3 Ph Bus Reactor at Bongaigaon Substation

Date of Commercial Operation: 01-Nov-2012

Particulars	2009-10		2010-11	2011-12	2012-13	2013-14	Rs. in Lacs
	Revised 2008-09						
Op. and Maintenance	0	0	0	0	0	5.16	5.46
Maintenance Spares	0	0	0	0	0	9.29	9.82
Receivables	0	0	0	0	0	36.36	39.38
Total working capital	0	0	0	0	0	50.81	54.66
Rate of Interest	0	0	0	0	0	13.5	13.5
Interest on working capital	0	0	0	0	0	6.86	7.38
Pro rata interest on working capital	0	0	0	0	0	2.86	7.38

(Petitioner)



Form I									
Summary Sheet									
Name of the Transmission Licensee: Power Grid Corporation of India Limited									
Name of the Region: NORTH EASTERN REGION									
Name of the Project: Transmission system associated with Pallatana Gas Based Power Project and Bongaigaon Thermal Power station									
Name of the Transmission Element or Communication System: Combined assets of PGBPP and BTPS (pet no. 184/2011 and 216/2012) with effective DOCO									
Date of Commercial operation : 01-Aug-2012									
Particulars	Revised 2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	Rs. in Lacs		
Depreciation-(Form No. 10A)	1629.32	1679.84	1730.36	1730.36	1730.36	1730.36			
Interest on Loan-(Form No. 9E)	1858.73	1780.37	1688.13	1527.81	1367.68	1208.25			
Return on Equity-(Form No. 8)	1845.5	1904.51	1963.51	1963.51	1963.51	1963.51			
Int. on Working Capital-(Form No. 11)	218.41	211.56	214.88	214.21	213.65	213.2			
Op. and Maintenance-(Form No. 2)	1731.3	1594.29	1647.2	1701.88	1758.43	1816.76			
Total	7283.26	7170.57	7244.08	7137.77	7033.63	6932.08			
(Petitioner)									



Form-2	
Details of Transmission Lines and Substations, Communication System	
Name of the Petitioner: Power Grid Corporation of India Limited	
Name of the Region: NORTH EASTERN REGION	
Name of the Project: Transmission system associated with Pallatana Gas Based Power Project and Bongaigaon Thermal Power station	
Name of the Transmission Element or Communication System: Combined assets of PGBPP and BTPS (pet no. 216/2012, 184/2011 and 98/2012) with effective DOCC	
Date of Commercial Operation: 01-Aug-2012	

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 CKT. KM	Line length	Date of Commercial operation		Covered in the present petition	
								Yes/No	If No, petition No.	Yes/No	If No, petition No.
1	SILCHAR	AC	DC	1	132 KV	2.4	1.2	1-Aug-12	Y	Y	
2	132KV D/C SILCHAR-BADARPUR T/L	AC	DC	1	and	38.4	19.2	1-Aug-12	Y	Y	
3	132KV D/C SILCHAR-HAILAKANDI T/L	AC	SC	1	and below	15	15	1-Aug-12	Y	Y	
4	400KV D/C PALATANA-SURAJMANINAGAR T/L	AC	SC	2	132 KV and below	37.2	37.2	1-Aug-12	Y	Y	
5	400 KV D/C BTPS - Bongaigaon T/L	AC	DC	2	400 KV	6.374	3.187	1-Aug-12	Y	Y	

Substations:

Sl. No.	Name of Sub-station	Type of Substation	Voltage level KV	No. of Transformers / Reactors/ SVC etc.	No. of Bays			Date of Commercial operation		Covered in the present petition	
					765 KV	400 KV	220 KV	132 KV & below	Yes/No	If No, petition No.	Yes/No
1	BADARPUR-SILCHAR BAY-I		132				1	1-Aug-12	Y	Y	
2	BADARPUR-SILCHAR BAY-II		132				1	1-Aug-12	Y	Y	
3	BONGAIGAON-BUS REACTOR		400			1		1-Aug-12	Y	Y	
4	BONGAIGAON-BTBS BONGAIGAON		400			2		1-Aug-12	Y	Y	
5	BONGAIGAON-SILCHAR - I BAY		400			1		1-Aug-12	Y	Y	
6	BONGAIGAON-SILCHAR - II BAY		400			1		1-Aug-12	Y	Y	
7	BONGAIGAON-SWITCHABLE LINE REACTOR BAY - I FOR SILCHAR-I		400			1		1-Aug-12	Y	Y	
8	BONGAIGAON-SWITCHABLE LINE REACTOR BAY - II FOR SILCHAR-II		400			1		1-Aug-12	Y	Y	
9	SILCHAR-132 kv Srikona-I Bay		132				1	1-Aug-12	Y	Y	



Substations:

Sl. No.	Name of Sub-station	Type of Substation	Voltage level KV	No. of Transformers / Reactors/ SVC etc.	No. of Bays				Date of Commercial operation	Covered in the present petition	
					765 KV	400 KV	220 KV	132 KV & below		Yes/No	If No, petition No.
10	SILCHAR-132 kv Srikona-II Bay		132					1	1-Aug-12	Y	
11	SILCHAR-132 kv Silchar-I Bay		132					1	1-Aug-12	Y	
12	SILCHAR-132 kv Silchar-II Bay		132					1	1-Aug-12	Y	
13	SILCHAR-BADARPUR BAY-I		132					1	1-Aug-12	Y	
14	SILCHAR-BADARPUR BAY-II		132					1	1-Aug-12	Y	
15	SILCHAR-HAILAKADI		132					2	1-Aug-12	Y	
16	SILCHAR-ICT-I BAY		400			1			1-Aug-12	Y	
17	SILCHAR-ICT-I BAY		132					1	1-Aug-12	Y	
18	SILCHAR-ICT II BAY		400			1			1-Aug-12	Y	
19	SILCHAR-ICT II BAY		132					1	1-Aug-12	Y	
20	SILCHAR SILCHAR - 400 KV PALATANA BAY-I		400			1			1-Aug-12	Y	
21	SILCHAR SILCHAR - 400 KV PALATANA BAY-II		400			1			1-Aug-12	Y	
22	SILCHAR-SILCHAR - 400 KV PALATANA SLR BAY-I		400			1			1-Aug-12	Y	
23	SILCHAR-SILCHAR - 400 KV PALATANA SLR BAY-II		400			1			1-Aug-12	Y	
24	SILCHAR-SILCHAR - 400 KV BUS REACTOR-I BAY		400			1			1-Aug-12	Y	
25	SILCHAR-SILCHAR - 400 KV BUS REACTOR-II BAY		400			1			1-Aug-12	Y	
26	SILCHAR-Silchar-Bongaigaon-I bay at Silchar		400			1			1-Aug-12	Y	
27	SILCHAR-Silchar-SLR bay-I		400			1			1-Aug-12	Y	
28	SILCHAR-BONGAIGON		400			1			1-Aug-12	Y	
29	SILCHAR-SLR BAY		400			1			1-Aug-12	Y	
30	-132KV PALATANA - I BAY AT SURAJMANINAGAR SS		132					2	1-Aug-12	Y	
	Total					19		14			

(Petitioner)



Normative parameters considered for tariff computations

Name of the Petitioner :: Power Grid Corporation of India Limited
Name of the Region :: NORTH EASTERN REGION
Name of the Project :: Transmission system associated with Pallatana Gas Based Power Project and Bongaigaon Thermal Power station
Name of the Transmission Element or Communication System: Combined assets of PG&PP and BTPS (pet no. 216/2012, 184/2011 and 98/2012) with effective DOLC
Date of Commercial Operation: 01 Aug. 2012

Particulars	Unit	Existing 2013-14	2014-15	2015-16	2016-17	2017-18	2018-19
Base Rate of Return of Equity	%	15.50%	15.50%	15.50%	15.50%	15.50%	15.50%
Tax Rate	%	11.33%	20.96%	20.96%	20.96%	20.96%	20.96%
Effective tax rate:	%						
Grossed up Rate of ROE	%	17.48%	19.61%	19.61%	19.61%	19.61%	19.61%
Target availability - AC System	%	98%	98%	98%	98%	98%	98%
Target availability - HVDC System	%		96%	96%	96%	96%	96%
Normative O&M per KM	Rs. Lakh						
Double Circuit (Bundle conductor with four sub-conductors)	Rs. Lakh	1.174	1.062	1.097	1.133	1.171	1.21
Double Circuit (Single Conductor)	Rs. Lakh	0.336	0.303	0.313	0.324	0.334	0.346
Double Circuit (Two and Three Conductor)	Rs. Lakh	0.783	0.707	0.731	0.755	0.78	0.806
Multicircuit with four or more conductors	Rs. Lakh		1.863	1.925	1.989	2.055	2.123
Multicircuit with two or three conductors	Rs. Lakh		1.24	1.282	1.324	1.368	1.413
Single Circuit (Bundled conductor with four sub-conductors)	Rs. Lakh		0.671	0.606	0.627	0.647	0.669
Single Circuit (Single Conductor)	Rs. Lakh		0.224	0.202	0.209	0.216	0.23
Single Circuit (Six conductor)	Rs. Lakh		0.671	0.707	0.731	0.755	0.806
Single Circuit (Twin and Three conductor)	Rs. Lakh		0.447	0.404	0.418	0.432	0.461
Normative O&M per bay							
132KV Sub-station and below	Rs. Lakh	32.73	30.15	31.15	32.18	33.25	34.36
220KV Sub-station	Rs. Lakh	45.82	42.21	43.61	45.06	46.55	48.1
400 KV GIS Substation	Rs. Lakh		51.54	53.25	55.02	56.84	58.73
400KV Sub-station	Rs. Lakh	65.46	60.3	62.3	64.37	66.51	68.73
765KV Sub-station	Rs. Lakh	91.64	84.42	87.22	90.12	93.11	96.2
Balia-Bihwadi HVDC Bipole Scheme	Rs. Lakh	1326.25	1537	1666	1805	1955	2119
HVDC Back-to-Back Stations	Rs. Lakh	553	578	627	679	736	797
Rihand-Dadri HVDC Bipole Scheme	Rs. Lakh	1811	1511	1637	1774	1922	2082
Talcher-Kolar HVDC Bipole Scheme	Rs. Lakh	2122	1173	1271	1378	1493	1617
Spares for WC as % of O&M	%	15	15	15	15	15	15
Recoveries in Months for WC	Months	2	2	2	2	2	2
Bank Rate as on 1st April, 2014	%	13.2	13.5	13.5	13.5	13.5	13.5

Statement of Capital Cost										Form 4A
Name of the Transmission Licensee: Power Grid Corporation of India Limited										
Name of the Region: NORTH EASTERN REGION										
Name of the Project: Transmission system associated with Pallatana Gas Based Power Project and Bongaigaon Thermal Power station										
Name of the Transmission Element or Communication System: Combined assets of PGBPP and BTPS (pet no. 216/2012, 184/2011 and 98/2012) with effective DOCO										
Date of Commercial Operation: 01-Aug-2012										
Particulars	Revised 2013 14	2014-15	2015-16	2016-17	2017-18	2018-19	Rs. in Lacs			
A. a) Opening Gross Block Amount as per books		31370.01	33376.08	33376.08	33376.08	33376.08				
b) Amount of capital liabilities in A(a) above										
c) Amount of IDC, FC, FERV and Hedging cost included in A(a) above		838.58	838.58	838.58	838.58	838.58				838.58
d) Amount of IEDC (excluding IDC, FC, FERV and Hedging cost) included in A(a) above		1969.58	1969.58	1969.58	1969.58	1969.58				1969.58
B. a) Addition in Gross Block Amount during the period		2006.07								
b) Amount of capital liabilities in B(a) above										
c) Amount of IDC, FC, FERV and Hedging cost included in B(a) above										
d) Amount of IEDC (excluding IDC, FC, FERV and Hedging cost) included in B(a) above										
C. a) Closing Gross Block Amount as per Books		33376.08	33376.08	33376.08	33376.08	33376.08				33376.08
b) Amount of capital liabilities in C(a) above										
c) Amount of IDC, FC, FERV and Hedging cost included in C(a) above		838.58	838.58	838.58	838.58	838.58				838.58
d) Amount of IEDC (excluding IDC, FC, FERV and Hedging cost) included in C(a) above		1969.58	1969.58	1969.58	1969.58	1969.58				1969.58

