

**Pro-forma for furnishing Actual annual performance/operational expenses  
for the Transmission Systems for FY 2022-23**

Name of Transmission Company:			Power Grid Corporation of India	
Name of Transmission Region:			Northern Region	
Sl. No.	Particulars		Units	2022-23
1	Number of AC Substation in operation		No.	
	(1)	765 kV		20
	(2)	400 kV		50.5
	(3)	220 kV		7.5
	(4)	132 kV		0
	(Nomenclature are as per highest available voltage level)			
2	Transformation capacity of AC Substation in operation		MVA*	
	(1)	765 kV		68200
	(2)	400 kV		69052.5
	(3)	220 kV		1460
	(4)	132 kV		0
	(Nomenclature are as per highest available voltage level)			
3	Number of bays in each AC Substation in operation		No.	
	(1)	765 kV		214
	(2)	400 kV		899.5
	(3)	220 kV		526
	(4)	132 kV		39
	(Nomenclature are as per highest available voltage level)			
4	Ckt-km of AC lines in operation		No.	
	(1)	765 kV		8920.65
	(2)	765 kV charged at 400 KV		606.55
	(3)	400 kV		30200.21
	(4)	400 kV Charged at 220 KV		471.51
	(5)	400 kV Charged at 132 KV		
	(6)	220 kV		5295.39
	(7)	132 kV		357.01
	(Nomenclature are as per highest available voltage level)			
5	Total number of employees* engaged in O&M of Sub-station			
	(1)	765 kV	No	380
	(2)	400 kV		724
	(3)	220 kV		65
	(4)	132 kV		0
	(1)	765 kV	Cost (Rs. Lakhs)	11174.84
	(2)	400 kV		21291.01
	(3)	220 kV		1911.49

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Sl. No.	Particulars		Units	2022-23
	(4)	132 kV		0.00
	(Nomenclature are as per highest available voltage			

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<b>Sl. No.</b>	<b>Particulars</b>	<b>Units</b>	<b>2022-23</b>
6	Total number of employees* engaged in O&M of Transmission Lines		
	(1) 765 kV	No	204
	(2) 400 kV		363
	(3) 220 kV		25
	(4) 132 kV		0
	(1) 765 kV	Cost (Rs. Lakhs)	5999.12
	(2) 400 kV		10674.91
	(3) 220 kV		735.19
	(4) 132 kV		0.00
	(Nomenclature are as per highest available voltage		
7	Auxiliary Power Consumption (excluding colony	MU	
	(1) 765 kV		19.050
	(2) 400 kV		37.931
	(3) 220 kV		2.730
	(4) 132 kV		
	(Nomenclature are as per highest available voltage		
8	Colony Power Consumption	MU	
	(1) 765 kV		0.63
	(2) 400 kV		5.54
	(3) 220 kV		0.87
	(4) 132 kV		
	(Nomenclature are as per highest available voltage		
9	Spare ICTs/Reactors		
	(1) 765 kV ICT	No.	0
	(2) 400 kV ICT		4
	(2) 400 kV Reactor		0
	(3) 220 kV ICT		2
	(4) 132 kV ICT		0
	(1) 765 kV ICT	Cost (Rs. Lakhs)	0
	(2) 400 kV ICT		8261.38
	(2) 400 kV Reactor		0
	(3) 220 kV ICT		2523.71
	(4) 132 kV ICT		0
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Name of Transmission Company:			Power Grid Corporation of India	
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Sl. No.	Particulars		Units	2022-23
10	Spare Smoothing Reactors			
	(1)	765 kV	No.	NA
	(2)	400 kV		
	(3)	220 kV		
	(4)	132 kV		
	(1)	765 kV	Cost (Rs. Lakhs)	
	(2)	400 kV		
	(3)	220 kV		
	(4)	132 kV		
	(Nomenclature are as per highest available voltage			
11	ICTs			
	(1)	765 kV	No.	49
	(2)	400 kV		177
	(3)	220 kV		15
	(4)	132 kV		0
	(1)	765 kV	Cost (Rs. Lakhs)	Data separately not available/maintained
	(2)	400 kV		
	(3)	220 kV		
	(4)	132 kV		
	(Nomenclature are as per highest available voltage			
12	Reactors			
	(1)	765 kV	No.	100
	(2)	400 kV		214
	(3)	220 kV		9
	(4)	132 kV		0
	(1)	765 kV	Cost (Rs. Lakhs)	Data separately not available/maintained
	(2)	400 kV		
	(3)	220 kV		
	(4)	132 kV		
	(Nomenclature are as per highest available voltage			
13.	STATCOM		No. &	NIL

**Pro-forma for furnishing Actual annual performance/operational expenses  
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Name of Transmission Company:			Power Grid Corporation of India	
Name of Transmission Region:			Northern Region	
Sl. No.	Particulars		Units	2022-23
14	Average outage duration for		Hours/ year	
	A.	Transmission Lines		
	(1)	765 kV		83.56
	(2)	400 kV		22.29
	(3)	220 kV		16.39
	(4)	132 kV		24.71
	B.	Transformers		
	(1)	765 kV		36.08
	(2)	400 kV		22.38
	(3)	220 kV		10.75
	(4)	132 kV		NA
	C.	Reactors		
	(1)	765 kV		8.77
	(2)	400 kV		5.5
	(3)	220 kV		5.12
	(4)	132 kV		NA
	(Nomenclature are as per highest available voltage			
	15	Cost of Initial spares (for S/S)		(Rs. in Lakhs)
A.		Capitalized		
(1)		765 kV	582.25	
(2)		400 kV		
(3)		220 kV		
(4)		132 kV		
B.		In Stock	Data separately not available/maintained	
(1)		765 kV		
(2)		400 kV		
(3)		220 kV		
(4)		132 kV		
C.		Cost of initial spares consumed	Data separately not available/maintained	
(1)		765 kV		
(2)		400 kV		
(3)		220 kV		
(4)	132 kV			
16	Cost of O&M spares Consumed (for S/s)		(Rs. In Lakhs)	
	(1)	765 kV		2411.23
	(2)	400 kV		
	(3)	220 kV		
	(4)	132 kV		

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Name of Transmission Region:		Northern Region	
Sl. No.	Particulars	Units	2022-23
	(Nomenclature are as per highest available voltage		

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<b>Name of Transmission Company:</b>		<b>Power Grid Corporation of India</b>	
<b>Name of Transmission Region:</b>		<b>Northern Region</b>	
<b>Sl. No.</b>	<b>Particulars</b>	<b>Units</b>	<b>2022-23</b>
17	Cost of Initial spares (for Lines)	(Rs. In Lakhs)	
	A. Capitalized		
	(1) 765 kV		161.22
	(2) 400 kV		
	(3) 220 kV		
	(4) 132 kV		
	B. In Stock		Data separately not available/maintained
	(1) 765 kV		
	(2) 400 kV		
	(3) 220 kV		
	(4) 132 kV		
	C. Cost of initial spares consumed		Data separately not available/maintained
	(1) 765 kV		
	(2) 400 kV		
	(3) 220 kV		
	(4) 132 kV		
18	Cost of O&M spares Consumed (for Lines)	(Rs. In Lakhs)	
	(1) 765 kV		861.50
	(2) 400 kV		
	(3) 220 kV		
	(4) 132 kV		
	(Nomenclature are as per highest available voltage		

**Note:** \*Executive & non-executive/~~contract labour~~

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<b>Name of Transmission Company:</b>	<b>Power Grid Corporation of India Limited</b>
<b>Name of Transmission Region:</b>	<b>Northern Region</b>

**i) Rihand**

Sl.No.	Particulars	Units	2022-23
1	Total number of employees* engaged in sub-station O&M	Nos. □	18
		Cost (Rs in Lacs)	463.99
2	Total number of employees* engaged in O&M of Transmission	(No. & cost)	Data for manpower for HVDC TL O&M is not available separately as the same set of employees are maintaining both type of lines (AC & HVDC)
3	Auxiliary power consumption (excluding colony	(MU)	5.159
4	Colony power consumption	(MU)	Employees residing in NTPC Colony
5	Outage duration for Rihand - Dadri HVDC System	Pole-days	5.10
6	Load curtailment	MW - days	Data separately not available/maintained
7	Cost of initial spares		
	a) Capitalized	(Rs. in lakh)	0
	b) In Stock		Data separately not available/maintained
	c) Consumed		
8	Cost of O&M spares consumed	(Rs. in lakh)	252.54

**ii) Dadri**

Sl.No.	Particulars	Units	2022-23
1	Total number of employees* engaged in sub-station O&M	Nos. □	22
		Cost (Rs in Lacs)	536.80
2	Total number of employees* engaged in O&M of Transmission	(No. & cost)	Data for manpower for HVDC TL O&M is not available separately as the same set of employees are maintaining both type of lines (AC & HVDC)
3	Auxiliary power consumption (excluding colony	(MU)	5.906
4	Colony power consumption	(MU)	Employees residing in NTPC Colony
5	Outage duration for Rihand - Dadri HVDC System	Pole-days	5.10
6	Load curtailment	MW - days	Data separately not available/maintained
7	Cost of initial spares	(Rs. in lakh)	
	a) Capitalized		0
	b) In Stock		Data separately not available/maintained
	c) Consumed		
8	Cost of O&M spares consumed	(Rs. in lakh)	263.60

**iii) Bhiwadi**

Sl.No.	Particulars	Units	2022-23
1	Total number of employees engaged in sub-station	Nos. □	20
		Cost (Rs in Lacs)	402.77
2	Total number of employees engaged in O&M of Transmission	(No. & cost)	Data for manpower for HVDC TL O&M is not available separately as the same set of employees are maintaining both type of lines (AC & HVDC)
3	Auxiliary power consumption (excluding colony	(MU)	5.477
4	Colony power consumption	(MU)	0.271
5	Outage duration for Balia - Bhiwadi HVDC System	Pole-days	15.38
6	Load curtailment	MW - days	Data separately not available/maintained
7	Cost of initial spares		
	a) Capitalized	(Rs. in lakh)	0
	b) In Stock		Data separately not available/maintained



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	c) Consumed		
8	Cost of O&M spares consumed	(Rs. in lakh)	151.31

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Name of Transmission Company:		Power Grid Corporation of India Limited	
Name of Transmission Region:		Northern Region	
iv) Ballia			
Sl.No.	Particulars	Units	2022-23
1		Nos.□	23
		Cost (Rs in Lacs)	140.98
2	Total number of employees engaged in O&M of Transmission	(No. & cost)	Data for manpower for HVDC TL O&M is not available separately as the same set of employees are maintaining both type of lines (AC & HVDC)
3	Auxiliary power consumption (excluding colony	(MU)	7.126
4	Colony power consumption	(MU)	0.442
5	Outage duration for Balia - Bhiwadi HVDC System	Pole-days	15.38
6	Load curtailment	MW – days	Data separately not available/maintained
7	Cost of initial spares		
	a) Capitalized	(Rs. in lakh)	
	b) In Stock		Data separately not available/maintained
	c) Consumed		
8	Cost of O&M spares consumed	(Rs. in lakh)	87.40
v) Vindhyachal			
Sl. No.	Particulars	Units	2022-23
1	Total number of employees engaged in sub-station	Nos.□	18
		Cost (Rs in Lacs)	495.57
2	Total number of employees engaged in O&M of Transmission	(No. & cost)	Data for manpower for HVDC TL O&M is not available separately as the same set of employees are maintaining both type of lines (AC & HVDC)
3	Auxiliary power consumption (excluding colony	(MU)	4.844
4	Colony power consumption	(MU)	Employees residing in NTPC Colony
5	Outage duration	Pole-days	3.21
6	Load curtailment	MW – days	Data separately not available/maintained
7	Cost of initial spares		
	a) Capitalized	(Rs. in lakh)	0
	b) In Stock		Data separately not available/maintained
	c) Consumed		
8	Cost of O&M spares consumed	(Rs. in lakh)	198.92
vi) Agra			
Sl. No.	Particulars	Units	2022-23
1	Total number of employees engaged in sub-station O&M	Nos.	26
		Cost (Rs in Lacs)	1176.44
2	Total number of employees* engaged in O&M of Transmission	Nos. & Cost	Data for manpower for HVDC TL O&M is not available separately as the same set of employees are maintaining both type of lines (AC & HVDC)
3	Auxiliary power consumption (excluding colony	(MU)	15.107
4	Colony power consumption	(MU)	0.301
5	Outage duration for Biswanath Chairali - Agra HVDC	Pole-days	2.27
	Outage duration for Alipurduar - Agra HVDC	Pole-days	1.88
6	Load curtailment	MW – days	Data separately not available/maintained
7	Cost of initial spares	(Rs. in lakh)	
	a) Capitalized		
	b) In Stock		
	c) Consumed		
	a) Capitalized		
	b) In Stock		Data separately not available/maintained

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	c) Consumed		
8	Cost of O&M spares consumed	(Rs. in lakh)	58.85

**Pro-forma for furnishing Actual annual performance/operational expenses  
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Name of Transmission Company:		Power Grid Corporation of India Limited	
Name of Transmission Region:		Northern Region	
vii) Kurukshetra			
Sl. No.	Particulars	Units	2022-23
1	Total number of employees engaged in sub-station O&M	Nos.□	34
		Cost (Rs in Lacs)	811.17
2	Total number of employees* engaged in O&M of Transmission	Nos. & Cost	Data for manpower for HVDC TL O&M is not available separately as the same set of employees are maintaining both type of lines (AC & HVDC)
3	Auxiliary power consumption (excluding colony	(MU)	14.738
4	Colony power consumption	(MU)	0.166
5	Outage duration for Champa- Kurukshetra HVDC*	Pole-days	11.64
6	Load curtailment	MW – days	Data separately not available/maintained
7	Cost of initial spares	(Rs. in lakh)	
	a) Capitalized		
	b) In Stock		Data separately not available/maintained
	c) Consumed		
8	Cost of O&M spares consumed	(Rs. in lakh)	5.03
*Pole 1 Champa-Kurukshetra HVDC commissioned during 2016-17. Pole 2 Commissioned in 2017-18 and Pole 3 & 4 Commissioned during 2019-20.			

\*Pole 1 Champa-Kurukshetra HVDC commissioned during 2016-17. Pole 2 Commissioned in 2017-18 and Pole 3 & 4 Commissioned during 2019-20.

**Note:** \*Executive & non-executive/~~contract labour~~

**Pro-forma for furnishing Actual annual performance/operational data  
for the communication system for FY 2022-23**

Name of Transmission Company:		Power Grid Corporation of India Limited	
Name of Transmission Region:		Northern Region	
Table-3 - Region wise information (average for the year, but otherwise total for the region) for Communication system			
Sl. No.	Particulars	Units	2022-23
1	Number of Communication Nodes in operation	(No.)	270
2	Average length of OPGW links in operation	(in Kms.)	13941
3	Number of Remote Terminal Units(RTUs)	(No.)	15
4	Number of PLCC links	(No.)	2
5	Number of OPGW links	(No.)	177
6	Number of Auxiliary Power Supply(DC) Nodes	(No.)	66
7	Number of employees engaged in O&M of RTU and Communication System	(No.)	
	1) Executive		6
	2) Non executive		4
	3) Outsourced		45
8	Average outage duration for	(hours/ year)	0
	a) Wideband Communication Links		165.51
	b) RTUs		125.92
	c) PLCC		0
	d) Auxiliary Power Supply System		0
9	Cost of Initial spare	( INR in lakh)	0
	a) Capitalized		322.43
	b) In Stock		1009.77
	c) Consumed		254
10	Cost of O&M spares a) Consumed	( INR in lakh)	82
11	Number of PMU installed in the region	(No.)	418
12	O & M expenses of PMU incurred in the region	( INR in lakh)	626.72

(Note: separate note on utilization of PMU is to be given along with benefit availed during the year)

**Details of Operation & Maintenance Expenses of Transmission O&M service**  
**(To be filled for each of the Transmission Region)**

<b>Name of Transmission Company:</b>		<b>Power Grid Corporation of India Limited</b>
<b>Name of Transmission Region:</b>		<b>Northern Region</b>
		(Rs. In Lakhs)
<b>Sr.No.</b>	<b>ITEM</b>	<b>2022-23</b>
<b>1.0</b>	<b>Repairs and Maintenance Expenses :</b>	
1)	Repairs of Plant & Machinery	12340.88
2)	Consumption of Stores (not capitalized)	11810.96
3)	Consumption of Spares (not capitalized )	0.00
4)	Patrolling expenses	0.00
5)	Power Charges (electricity consumed for repairing activity)	9894.85
6)	Expenses of Diesel Generating sets	90.06
7)	Provisions	0.00
8)	Prior Period Adjustment , if any	0.00
9)	Other expenses, if any (please provide details)	0.00
	<b>Sub-total (R&amp;M Expenses)</b>	<b>34136.76</b>
<b>2.0</b>	<b>Administrative &amp; General Expenses:</b>	
1)	Insurance	5450.61
2)	Security (General other than special)	8719.43
3)	Rent	1659.66
4)	Electricity Charges	0.00
5)	Traveling and conveyance	2929.03
6)	Communication expenses	551.69
7)	Advertisement and publicity	451.80
8)	Foundation laying and inauguration	0.00
9)	Books Periodicals and Journals	73.90
10)	Research expenses	416.81
11)	Cost Audit Fees	34.78
12)	Horticulture Expenses	1769.41
13)	Bandwidth charges dark fibre lease charges (Telecom) etc	1744.32
14)	Donations expenses	0.00
15)	Entertainment expenses	117.92
16)	Filing Fees	2435.91
17)	Legal Expenses	427.14
18)	Consultancy Expenses	2.60
19)	Professional charges (not covered under employee expenses)	482.26
20)	Printing and Stationary	132.94
21)	Hiring of Vehicle (excluding construction & Corporate exp)	3093.93
22)	Training and Recruitment expenses	1423.87
23)	Rates and taxes	1115.72
24)	Rebate to Customers	6377.99
25)	Self Insurance Reserve	8712.34
26)	Provisions (Provide details)	0.00
27)	Prior Period Adjustment , if any	0.00
28)	Any other A&G expenses (Provide details)	12642.02
	<b>Sub-total(A&amp;G Expenses)</b>	<b>60766.06</b>
<b>3.0</b>	<b>Employee Expenses</b>	
1)	Salaries, wages and allowances	30802.61

**Details of Operation & Maintenance Expenses of Transmission O&M service**  
**(To be filled for each of the Transmission Region)**

<b>Name of Transmission Company:</b>		<b>Power Grid Corporation of India Limited</b>
<b>Name of Transmission Region:</b>		<b>Northern Region</b>
2)	Staff welfare expenses	3442.74
	a) Contribution to Provident and other funds	0.00
	b) Gratuity	87.42
	c) Pension	289.55
	d) Employee Medical Expenses	1763.69
	e) Liveries and Uniforms	1091.88
	f) Safety & Appliances expenses	159.08
	g) Others	8502.76
3)	Productivity linked incentive	0.00
4)	Expenditure on VRS	0.00
5)	Ex-gratia	0.00
6)	Performance related pay (PRP)	9674.53
7)	Any other expenses	0.00
8)	Provisions (furnish details separately)	0.00
9)	Prior Period Adjustment , if any (furnish details separately)	0.00
10)	VII Pay Arrears Paid Pertaining to period prior to 2017-18	0.00
	<b>Sub-total( Employee Expenses)</b>	<b>55814.26</b>
4.0	Additional /Specific Security it any on the advise of Govt. Agency/ Statutory Authority/ any other reasons	5140.01
5.0	Loss of store/Disposal/Write off	0.00
6.0	Provisions (other than above)	0.00
7.0	Prior Period Adjustment , if any (not covered above)	0.00
8.0	Corporate office expenses allocation	0.00
	(i) Transmission O&M Service	11270.32
	(ii) Projects under construction	0.00
	(iii) ULDC –Communication	0.00
	(iv) Consultancy services, if any	0.00
	(v) Other business (Telecom)	0.00
	(vi) Other business (if any)	0.00
9.0	Corporate Social Responsibility expenses	8279.52
10.0	- Others (Specify items not included above)	0.00
	<b>Sub Total (1 to 10)</b>	<b>175406.93</b>
11	Other Income, Revenue and Recoveries, if any	0.00
a)	Short term open access (other than transmission service	0.00
b)	System & Market operation charges	0.00
c)	Interest on differential tariff recovered	0.00
d)	Consultancy Services	0.00
e)	Interest against Loans and advances	0.00
f)	Interest from advanced to contractors/suppliers	0.00
g)	Income from lease of assets	0.00
h)	Disposal of scrap/stores (not covered under capitalized assets)	0.00
i)	Interest on Government securities	0.00
j)	Miscellaneous income from operations	0.00
k)	Revenue/ Recoveries, if any	0.00
12	Net Expenses	<b>175406.93</b>
13	Capital spares consumed <b>not included in (A) (1) above and not claimed /allowed by Commission</b> for capitalization	Capital Spares not claimed/allowed by CERC have been consumed as O&M Spares
13A	Expenses against Capital expenditure incurred for Operation and Maintenance of Transmission System (not included in Capital Cost/Repair & Maintenance expenditure indicated 1.0(1) above)	0.00
14	Total Expenses (12) + (13A)	<b>175406.93</b>

**Details of Operation & Maintenance Expenses of Transmission O&M service**  
**(To be filled for each of the Transmission Region)**

<b>Name of Transmission Company:</b>		<b>Power Grid Corporation of India Limited</b>
<b>Name of Transmission Region:</b>		<b>Northern Region</b>
Notes:		
	I. The details of Corporate Expenses and the methodology of allocation of corporate expenses to various functional activities and allocation of Corporate expenses pertaining to power generation/ transmission system to each operating stations/ transmission region/system and stations/ transmission region/system under construction should be clearly specified in ANNEXURE-VIII as provided here separately	
	II. An annual increase in O&M expenses under a given head in excess of 10% percent should be explained	
	III. The data should be based on audited balance sheets, duly reconciled and certified	
	IV. Employee cost should be excluding arrears paid for pay hike/prior period adjustment /payment	
	IV. Details of arrears, if any, pertaining to period prior to the year 2017-18 should be mentioned separately	
	V. No. of employees opting for VRS during each year should be indicated	
	VI. Details of abnormal expenses, if any, shall be furnished separately	
	VII. Break-up of staff welfare expenses should be furnished	
	VIII. Details of Consumptive Water requirement, contracted quantum and actual water consumed with source, rate, etc. should be furnished year-wise	
	IX. Details of capital spares consumed each year which were not claimed/allowed in the tariff should be furnished giving item wise unit price and quantity consumed	
<b>Break Up of other A &amp; G Expenses (Indicated at 2 (28) above)</b>		
<b>Sr. No.</b>	<b>Item</b>	<b>2022-23</b>
1	Tax and Statutory Audit Fees	113.48
2	EDP Expenses	417.86
3	Miscellaneous Expenses	5836.28
4	Bad Debts Expenses	0.00
5	FERV Expense	6274.40
	<b>Total</b>	<b>12642.02</b>



<b>Name of Transmission Company:</b>	<b>Power Grid Corporation of India Limited</b>	
<b>Name of Transmission Region:</b>	<b>Northern Region</b>	
<b>Particulars</b>	<b>Year</b>	<b>Reasons of Variance</b>
Travelling and conveyance	2022-23	Increase in Employee movement due to relaxation of Covid Norms
Advertisement and publicity	2022-23	Higher advertisement expenditure due to new projects
Books Periodicals and Journals	2022-23	Nominal amount
Research expenses	2022-23	Increase in research work
Cost Audit Fees	2022-23	Due to change of fees paid in other capacity for certification work
Legal Expenses	2022-23	Legal cost due to arbitration cases
Training and Recruitment expenses	2022-23	Increase in offline trainings due to relaxation of Covid Norms
Rebate to Customers	2022-23	Rebate allowed on timely basis by DICs as per actuals.
Any other A&G expenses (Provide details)	2022-23	Increase due to increase in misc expenses and charging thereof
Additional /Specific Security it any on the advise of Govt. Agency/ Statutory Authority/ any other reasons	2022-23	Expenditure as per DGR rate revisions time to time, on the basis of terms and conditions of contract & requirement of no. of guards

**DETAILS OF OPERATION AND MAINTENANCE EXPENSES OF COMMUNICATION SYSTEM**  
**(OTHER THAN TELECOM OR OTHER BUSINESS)**

Name of Transmission Company:		Power Grid Corporation of India Limited
Name of Transmission Region:		Northern Region
		(Rs. In Lakhs)
Sr.No.	ITEM	2022-23
<b>1.0</b>	<b>Repairs and Maintenance Expenses :</b>	
1)	Repairs of Plant & Machinery	661.30
2)	Consumption of Stores (not capitalized)	-7.76
3)	Consumption of Spares (not capitalized )	Included in 1.0 (1)
4)	Patrolling expenses	Included in natural heads of expenditure
5)	Power Charges (electricity consumed for repairing activity)	-
6)	Expenses of Diesel Generating sets	0.01
7)	Provisions	-
8)	Prior Period Adjustment , if any	-
9)	Other expenses, if any (please provide details)	-
	<b>Sub-total (R&amp;M Expenses)</b>	<b>653.55</b>
<b>2.0</b>	<b>Administrative &amp; General Expenses:</b>	
1)	Insurance	0.00
2)	Security (General other than special)	0.00
3)	Rent	0.26
4)	Electricity Charges	0.00
5)	Traveling and conveyance	2.06
6)	Communication expenses	0.50
7)	Advertisement and publicity	3.80
8)	Foundation laying and inauguration	0.00
9)	Books Periodicals and Journals	0.00
10)	Research expenses	0.00
11)	Cost Audit Fees	0.00
12)	Horticulture Expenses	0.00
13)	Bandwidth charges dark fibre lease charges (Telecom) etc	129.65
14)	Donations expenses	0.00
15)	Entertainment expenses	0.10
16)	Filing Fees	22.54
17)	Legal Expenses	0.00
18)	Consultancy Expenses	0.49
19)	Professional charges (not covered under employee expenses)	3.12
20)	Printing and Stationary	0.11
21)	Hiring of Vehicle (excluding construction & Corporate exp)	0.67
22)	Training and Recruitment expenses	-2.63
23)	Rates and taxes	0.00
24)	Rebate to Customers	63.64
25)	Self Insurance Reserve	115.76
26)	Provisions (Provide details)	0.00
27)	Prior Period Adjustment , if any	0.00
28)	Any other A&G expenses (Provide details)	209.09
	<b>Sub-total(A&amp;G Expenses)</b>	<b>549.18</b>

**DETAILS OF OPERATION AND MAINTENANCE EXPENSES OF COMMUNICATION SYSTEM**  
**(OTHER THAN TELECOM OR OTHER BUSINESS)**

<b>3.0</b>	<b>Employee Expenses</b>	
1)	Salaries, wages and allowances	31.36
2)	Staff welfare expenses	1.76
	a) Contribution to Provident and other funds	4.72
	b) Gratuity	0.00
	c) Pension	0.21
	d) Employee Medical Expenses	-0.37
	e) Liveries and Uniforms	0.81
	f) Safety & Appliances expenses	0.08
	g) Others	0.00
3)	Productivity linked incentive	0.00
4)	Expenditure on VRS	0.00
5)	Ex-gratia	0.00
6)	Performance related pay (PRP)	8.50
7)	Any other expenses	0.00
8)	Provisions (furnish details separately)	0.00
9)	Prior Period Adjustment , if any (furnish details separately)	0.00
10)	VII Pay Arrears Paid Pertaining to period prior to 2017-18	0.00
	<b>Sub-total( Employee Expenses)</b>	<b>47.06</b>
4.0	Additional /Specific Security it any on the advise of Govt. Agency/ Statutory Authority/ any other reasons	0.00
5.0	Loss of store/Disposal/Write off	0.00
6.0	Provisions (other than above)	0.00
7.0	Prior Period Adjustment , if any (not covered above)	0.00
8.0	Corporate office expenses allocation	0.00
	(i) Transmission O&M Service	0.00
	(ii) Projects under construction	0.00
	(iii) ULDC -Communication	702.46
	(iv) Consultancy services, if any	0.00
	(v) Other business (Telecom)	0.00
	(vi) Other business (if any)	0.00
9.0	Corporate Social Responsibility expenses	0.00
10.0	- Others (Specify items not included above)	0.00
	<b>Sub Total (1 to 10)</b>	<b>1952.24</b>
11	Other Income, Revenue and Recoveries, if any	0.00
a)	Short term open access (other than transmission service)	0.00
b)	System & Market operation charges	0.00
c)	Interest on differential tariff recovered	0.00
d)	Consultancy Services	0.00
e)	Interest against Loans and advances	0.00
f)	Interest from advanced to contractors/suppliers	0.00
g)	Income from lease of assets	0.00
h)	Disposal of scrap/stores (not covered under capitalized assets)	0.00
i)	Interest on Government securities	0.00
j)	Miscellaneous income from operations	0.00
k)	Revenue/ Recoveries, if any	0.00
12	Net Expenses	<b>1952.24</b>

**DETAILS OF OPERATION AND MAINTENANCE EXPENSES OF COMMUNICATION SYSTEM**  
**(OTHER THAN TELECOM OR OTHER BUSINESS)**

13	Capital spares consumed <b>not included in (A) (1) above and not claimed/allowed by Commission</b> for capitalization	Capital Spares not claimed/allowed by CERC have been consumed as O&M Spares
13A	Expenses against Capital expenditure incurred for Operation and Maintenance of Transmission System (not included in Capital Cost/Repair & Maintenance expenditure indicated 1.0(1) above)	0.00
14	Total Expenses (12) + (13A)	<b>1952.24</b>

Notes:	
	I. The details of Corporate Expenses and the methodology of allocation of corporate expenses to various functional activities and allocation of Corporate expenses pertaining to power generation/ transmission system to each operating stations/ transmission region/system and stations/ transmission region/system under construction should be clearly specified in ANNEXURE-VIII as provided here separately
	II. An annual increase in O&M expenses under a given head in excess of 10% percent should be explained
	III. The data should be based on audited balance sheets, duly reconciled and certified
	IV. Employee cost should be excluding arrears paid for pay hike/prior period adjustment /payment
	IV. Details of arrears, if any, pertaining to period prior to the year 2017-18 should be mentioned separately
	V. No. of employees opting for VRS during each year should be indicated
	VI. Details of abnormal expenses, if any, shall be furnished separately
	VII. Break-up of staff welfare expenses should be furnished
	VIII. Details of Consumptive Water requirement, contracted quantum and actual water consumed with source, rate, etc. should be furnished year-wise
	IX. Details of capital spares consumed each year which were not claimed/allowed in the tariff should be furnished giving item wise unit price and quantity consumed.

**Break Up of other A & G Expenses (Indicated at 2 (28) above)**

Sr. No.	Item	2022-23
1	Tax and Statutory Audit Fees	0.00
2	EDP Expenses	0.00
3	Miscellaneous Expenses	6.62
4	Bad Debts Expenses	0.00
5	FERV Expense	202.47
	Total	<b>209.09</b>

## Additional Region-wise Information required from Transmission Licensees

Name of Transmission Company:

Power Grid Corporation of India Limited

Name of Transmission Region:

Northern Region

Table-1- Length (km) of Transmission Lines in Commercial Operation

Status as on

			1.4.2023
1	HVDC		
	a) S/C		279.25
	b) D/C		4667.75
2	765 kV		
	a) S/C		4862.77
	b) D/C		2028.94
3	765 kV Charged at 400 KV		
	a) S/C		606.55
4	400 kV		
	a) S/C		5723.71
	b) D/C		12157.56
	c) M/C		57.86
5	400 kV Charged at 220 KV		
	a) D/C		235.76
5	400 kV Charged at 132 KV		
	a) D/C		0.00
6	220 kV		
	a) S/C		955.27
	b) D/C		2194.71
7	Up to 132 kV		
	a) S/C		58.00
	b) D/C		149.51

Table-2-Ckt km by Conductor Configuration

		Type of Conductor	Status as on
			1.4.2023
1	Hexa	Lapwing D/C	6125.93
		Zebra D/C	3370.32
		Zebra S/C	0.00
		Bersimis S/C	5285.42
		Bersimis D/C	765.57
2	Quad	Moose D/C	3387.37

## Additional Region-wise Information required from Transmission Licensees

Name of Transmission Company:

Power Grid Corporation of India Limited

Name of Transmission Region:

Northern Region

2	Quad	Moose S/C	297.70
		Lapwing D/C	1579.57
		Bersimis D/C	2703.62

## Additional Region-wise Information required from Transmission Licensees

Name of Transmission Company:

Power Grid Corporation of India Limited

Name of Transmission Region:

Northern Region

3	Triple	Snowbird D/C	2198.77
		Snowbird S/C	15.85
4	Twin	Moose D/C	17538.61
		Moose S/C	5707.86
		Bersimis S/C	52.00
		Zebra S/C	113.45
		Enviro Moose D/C	61.70
		ACAR D/C	481.88
		HTLS D/C	17.43
		HTLS M/C	231.04
5	Single	ACSR Zebra D/C	3781.97
		ACSR Zebra S/C	237.06
		Moose D/C	232.51
		ACKC D/C	66.76
		AAAC Zebra S/C	317.30
		AAAC Zebra D/C	257.67
		Deer S/C	332.40
		Moose S/C	62.42
		Panther S/C	58.00
		Panther D/C	299.01
220kV Cable	6.10		
	Grand Total		55585.27

Table-3- Number of AC Substations in Commercial Operation

Status as on			1.4.2023
1	765 kV		20.00
2	400 kV		51.00
3	220 kV		8.00
4	Up to 132 kV		0.00

Table-4- Number of Sub-station bays in Commercial Operation

Status as on			1.4.2023
1	HVDC		215.00
2	765 kV		215.00
3	400 kV		916.00
4	220 kV		548.00
5	Up to 132 kV		40.00

Table-5- Cost of Outsourcing of Services (Rs. lakh)

Status as on			2022-23
1	Substation O&M		16063.50

## Additional Region-wise Information required from Transmission Licensees

Name of Transmission Company:

Power Grid Corporation of India Limited

Name of Transmission Region:

Northern Region

2	Lines O&M	4530.82
3	Security	13537.12
4	Others	39742.38
	<b>Grand Total</b>	<b>73873.83</b>

## Table-6- Total O&amp;M Expenditure Including RHQ, but Excluding HVDC Stations (Rs lakh)

Status as on		2022-23
1	O&M	`
	<b>Total</b>	<b>158590.54</b>



Annexure-X	
<b>Name of Transmission Company:</b>	<b>Power Grid Corporation of India Limited</b>
<b>Name of Transmission Region:</b>	<b>Northern Region</b>
<b><u>Station wise O&amp;M Expenditure at HVDC Station (Rs. lakh)</u></b>	
<b>Particulars</b>	<b>2022-23</b>
Name of HVDC Station:	<b>BHIWADI</b>
i) No of Employees	20
ii) A&G Expenses	757.51
iii) Repairs & Maintenance	957.79
iv) Employee Expenses	402.77
v) Corporate expenses	
vi) Other income	0.00
vii) Any other income	0.00
<b>Total Expenditure</b>	<b>2118.07</b>
<b>Particulars</b>	<b>2022-23</b>
Name of HVDC Station:	<b>BALIA</b>
i) No of Employees	23
ii) A&G Expenses	476.66
iii) Repairs & Maintenance	640.88
iv) Employee Expenses	140.98
v) Corporate expenses	
vi) Other income	
vii) Any other income	
<b>Total Expenditure</b>	<b>1258.51</b>
<b>Particulars</b>	<b>2022-23</b>
Name of HVDC Station:	<b>HVDC DADRI</b>
i) No of Employees	22
ii) A&G Expenses	684.80
iii) Repairs & Maintenance	985.29
iv) Employee Expenses	536.80
v) Corporate expenses	
vi) Other income	
vii) Any other income	
<b>Total Expenditure</b>	<b>2206.89</b>
<b>Particulars</b>	<b>2022-23</b>
Name of HVDC Station:	<b>RIHAND</b>
i) No of Employees	18
ii) A&G Expenses	642.78
iii) Repairs & Maintenance	763.25
iv) Employee Expenses	463.99
v) Corporate expenses	
vi) Other income	
vii) Any other income	
<b>Total Expenditure</b>	<b>1870.01</b>

<b>Name of Transmission Company:</b>	<b>Power Grid Corporation of India Limited</b>
<b>Name of Transmission Region:</b>	<b>Northern Region</b>
<b>Particulars</b>	<b>2022-23</b>
Name of HVDC Station:	<b>KURUKSHETRA</b>
i) No of Employees	34
ii) A&G Expenses	1701.84
iii) Repairs & Maintenance	1140.41
iv) Employee Expenses	811.17
v) Corporate expenses	
vi) Other income	
vii) Any other income	
<b>Total Expenditure</b>	<b>3653.41</b>
<b>Particulars</b>	<b>2022-23</b>
Name of HVDC Station:	<b>AGRA</b>
i) No of Employees	26
ii) A&G Expenses	1773.55
iii) Repairs & Maintenance	1374.81
iv) Employee Expenses	1176.44
v) Corporate expenses	
vi) Other income	
vii) Any other income	
<b>Total Expenditure</b>	<b>4324.80</b>
<b>Particulars</b>	<b>2022-23</b>
Name of HVDC Station:	<b>VINDHYACHAL</b>
i) No of Employees	18
ii) A&G Expenses	351.87
iii) Repairs & Maintenance	537.26
iv) Employee Expenses	495.57
v) Corporate expenses	
vi) Other income	0.00
vii) Any other income	0.00
<b>Total Expenditure</b>	<b>1384.69</b>
<b>Total for region</b>	
i) No of Employees	161.00
ii) A&G Expenses	6389.00
iii) Repairs & Maintenance	6399.68
iv) Employee Expenses	4027.71
v) Corporate expenses	0.00
vi) Other income	0.00
vii) Any other income	0.00
<b>Total Expenditure</b>	<b>16816.39</b>

**Additional Region-wise Information required from Transmission Licensees (Communication System)**

<b>Name of Transmission Company:</b>	<b>Power Grid Corporation of India Limited</b>
<b>Name of Transmission Region:</b>	<b>Northern Region</b>
<b>Table-1- Details of Communication system in Commercial Operation</b>	
<b>Particulars</b>	<b>Status as on</b>
	<b>1.04.2022</b>
OPGW Communication Links in operation(in Kms)	13941.343
Number of wideband Communication nodes in operation	250
Number of RTUs in operation	15
Number of PLCC links in operation	2
Number of PMUs in Operation	418
Number of Auxiliary Power Supply Nodes in operation	63
<b>Table-2- Cost of Outsourcing of Services (INR in lakhs)</b>	
	<b>2022-23</b>
Communication system O&M	1346.65
PLCC O&M	
RTU O&M	
Auxiliary Power Supply O&M	
Hiring charges of Bandwidth	95.25
Security	-
Others	-
<b>Total</b>	<b>1441.90</b>

Annexure-XII (C)			
Name of Transmission Company:			Power Grid Corporation of India Limited
Name of Transmission Region:			Northern Region
Standard list of Capital Spare for Communication system needs to be submitted			
OPGW/SDH/MUX/PLCC/RTU cards/DC Modules			
S.No	Name of capital spare	Qty (Nos)	Cost (Rs in lakhs)
1	OPGW and hardware fittings	421 Km	998.88
2	SDH / PDH spares	22 set	364.09
3	WAMS Spare	10% of Spare card of Each equipment, PMUs	791.88
Standard list of O&M Spare for OPGW/SDH/MUX/PLCC /RTU cards/DC Modules needs to be submitted			
OPGW/SDH/MUX/PLCC/RTU cards/DC Modules			
S.No	Name of O&M spare	Qty (Nos)	Cost (Rs in lakhs)
1	OPGW & associated Hardware fittings	50 Kms	115.26
2	OFC & duct cable	20 Kms	18.26

**Auxiliary Consumption separately for 132kV, 220kV, 400kV & 765kV AC and HVDC Substation Separately**

Name of Transmission Company:			Power Grid Corporation of India Limited	
Name of Transmission Region:			Northern Region	
S.no	Voltage	Name of Substation	2022-23	
			MU	%
1	400	Bahadurgarh	0.517	-
2	400	Ballabhgarh	0.901	-
3	400	Bassi	1.050	-
4	400	Bhinmal	0.555	-
5	400	Bhiwadi	0.830	-
6	HVDC	Bhiwadi HVDC	5.477	-
7	765	Bhiwani	0.889	-
8	HVDC	Dadri HVDC	5.906	-
9	400	Gurgaon	0.652	-
10	400	Hisar	0.812	-
11	400	Jaipur South	0.348	-
12	765	Jhatikara	1.260	-
13	400	Jind	0.543	-
14	400	Kankroli	0.636	-
15	400	Kota	0.578	-
16	400	Kotputli	0.279	-
17	400	Koteswar	0.574	-
18	400	Maharanibagh	0.542	-
19	400	Mandola	0.849	-
20	400	Manesar	0.507	-
21	765	Meerut	1.042	-
22	400	Neemrana	0.715	-
23	400	Roorkee	0.542	-
24	400	Sikar	1.086	-
25	400	Sonapat	0.437	-
26	400	Baghpat	0.591	-
27	400	Dehradun	0.533	-
28	400	Saharanpur	1.032	-
29	400	Kurukshetra	0.652	-
30	HVDC	Kurukshetra HVDC	14.738	-
31	765	Ajmer	0.718	-
32	765	Bhadla	1.128	-
33	765	Bhadla-II	0.192	-
34	765	Bikaner	0.890	-
35	765	Chittorgarh	0.582	-
36	400	Dwarka	0.257	-
37	765	Fatehgarh-II	1.287	-
38	400	Tughlakabad	0.389	-
39	400	Abdullapur	0.640	-

**Auxiliary Consumption separately for 132kV, 220kV, 400kV & 765kV AC and HVDC Substation Separately**

<b>Name of Transmission Company:</b>			<b>Power Grid Corporation of India Limited</b>	
<b>Name of Transmission Region:</b>			<b>Northern Region</b>	
<b>S.no</b>	<b>Voltage</b>	<b>Name of Substation</b>	<b>2022-23</b>	
			<b>MU</b>	<b>%</b>
40	400	Amritsar	0.415	-
41	400	Banala	0.429	-
42	400	Chamba	0.316	-

**Auxiliary Consumption separately for 132kV, 220kV, 400kV & 765kV AC and HVDC Substation  
Separately**

Name of Transmission Company:			Power Grid Corporation of India Limited	
Name of Transmission Region:			Northern Region	
S.no	Voltage	Name of Substation	2022-23	
			MU	%
43	220	Chandigarh	0.300	-
44	400	Fatehabad	0.594	-
45	400	Hamirpur	0.464	-
46	400	Jalandhar	1.056	-
47	400	Kaithal	0.458	-
48	400	Kishenpur	1.225	-
49	400	Ludhiana	1.334	-
50	400	Malerkotla	0.556	-
51	765	Moga	1.227	-
52	400	Nallagarh	1.107	-
53	400	New Wanpoh	0.749	-
54	400	Panchkula	0.509	-
55	400	Patiala	0.515	-
56	400	Samba	0.373	-
57	400	Wagoora	2.010	-
58	220	Drass	0.257	-
59	220	Kargil	0.577	-
60	220	Khaltsi	0.224	-
61	220	Leh	0.208	-
62	765	Agra	1.443	-
63	HVDC	Agra HVDC	15.107	-
64	765	Aligarh	0.291	-
65	400	Allahabad	1.249	-
66	765	Ballia	1.705	-
67	HVDC	Ballia HVDC	7.126	-
68	400	Bareilly-400	1.026	-
69	765	Bareilly-765	0.663	-
70	400	Fatehpur	1.216	-
71	400	Gorakhpur	1.053	-
72	400	Jauljibi	0.003	-
73	400	Kanpur-400	1.374	-
74	765	Kanpur-GIS	1.157	-
75	400	Lucknow-400	0.905	-
76	765	Lucknow-765	2.400	-
77	400	Mainpuri	0.616	-
78	765	Orai	1.334	-
79	220	Pithoragarh	0.355	-
80	220	Raebareilly	0.428	-
81	HVDC	Rihand	5.159	-

**Auxiliary Consumption separately for 132kV, 220kV, 400kV & 765kV AC and HVDC Substation Separately**

<b>Name of Transmission Company:</b>			<b>Power Grid Corporation of India Limited</b>	
<b>Name of Transmission Region:</b>			<b>Northern Region</b>	
<b>S.no</b>	<b>Voltage</b>	<b>Name of Substation</b>	<b>2022-23</b>	
			<b>MU</b>	<b>%</b>
82	400	Shahjahanpur	0.493	-
83	220	Sitarganj	0.380	-
84	400	Sohawal	0.836	-
85	765	Varansi	0.842	-
86	HVDC	Vindhyahcal	4.844	-



**Annexure-XVI**

**Details of incidental Expenses During Construction (IEDC) including compensation, employee expenses and other expenses for assets achieving COD post 01.04.2017**

Sl. No.	Name of Scheme	Sub-station (S/s)/ Transmission Line (TL)	MVA/ Line Length (km)	Compensation (Forest, crop, Tree, PTCC)	Employee Expenses	Administrative & General Expenses	Any other expenses
1.	NTSS				32	17	-
2.	JAW2				302	58	-
3.	NS32				54	43	-
4.	Spare Ict				11	-	-
5.	NEBA				165	89	-
6.	NEBA				184	99	-
7.	NTSS				32	17	-
8.	NTSS				21	11	-
9.	NS34				21	1	-
10.	Aug Mainpuri				45	-23	-
11.	NS30				969	38	-
12.	IRSS				2,345	411	-
13.	Spare ICT				1	-	-
14.	Rae Bareli				8	-	-
15.	IRSS Part-B				777	125	-
16.	Mainpuri				51	-26	-
17.	Line bays asso with various RSS in NR				28	-	-
18.	NTSS				24	13	-
19.	NS34				179	-3	-
20.	NTSS				25	13	-
21.	NS40				60	-	-

22.	Aug Rae Bareli				12	-	-
23.	NRSS-XXX				906	210	-
24.	P492				18	-	-
25.	NRSS-XL				31	0	-
26.	P370				61	1,173	-
27.	NRSS-XL				61	1	-
28.	NRSS-XL				74	1	-
29.	P479				544	631	-
30.	P496				-	124	-
31.	Fault level at Kanpur				-	196	-
32.	Fault level at Kanpur				-	196	-
33.	Spare ICT				-	100	-
34.	Spare ICT				-	97	-
35.	NRSS-37				1,860	1,396	-
36.	Spare ICT				-	192	-
37.	Reliable Communication Scheme under Central sector for Northernern Region				-	78	-
38.	Reliable Communication Scheme under Central sector for Northernern Region				-	60	-
39.	Reliable Communication Scheme under Central sector for Northernern Region				-	98	-
40.	Reliable Communication Scheme under Central sector for Northernern Region				-	36	-
41.	Reliable Communication Scheme under Central sector for Northernern Region				-	2	-
42.	Reliable Communication Scheme under Central sector for Northernern Region				-	88	-
43.	NTAMC PROJECT				224	53	-

44.	NRSS XIX				418	-	-
45.	NRSS XV				-	252	-
46.	SYSTEM STRENGTHENING XXIV				606	323	-
47.	NRTSS				171	-	-
48.	NRSS-XVIII				72	-	-
49.	NRSS XXVI				61	-	-
50.	RAPP7&8-PARTA				98	-	-
51.	NRSS XXV				80	-	-
52.	NRSS - XXXII				100	-	-
53.	Establishment of Fibre Optic for Central Sector under NR expansion scheme				209	57	-
54.	Strengthening Scheme in NR				40	-	-
55.	Green Energy Corridors-ISTS-Part-A				1,004	948	-
56.	Inter-regional system strengthening scheme for WR & NR Part-B				0	-	-
57.	Creation of 400/220kV S/s in Delhi (Part -A)				2,752	456	-
58.	Tehri PSP Transmission System				661	-	-
59.	Creation of 400/220kV S/s in Delhi (Part -B)				398	419	-
60.	Aug. of Transformers in NR - Part B (Gurgaon)				6	23	-
61.	PHASE-I Unified Real Time Dynamic State Measurement (URTDSM) for all Regions Phase-I				198	278	-
62.	Trans. System with RAPP - 7 & 8 - Part B				410	254	-
63.	Bus reactor in Northernern Region Phase-II				50	-	-
64.	Provision of Series Reactor in NR				-	43	-
65.	Aug. Transf. Cap. at Mainpuri & Sikar				45	-	-
66.	Green Energy Corridors-ISTS-Part-D				647	4,808	-
67.	Green Energy Corridors -ISTS Part-B				1,390	1,899	-
68.	Establishment of FO Communication System in Northernern Region under Fibre Optic Expansion Project (Additional)				58	188	-
69.	ATS with NRSS XXXVIII				-	3	-
70.	Trans System for Bhadla SPP				439	2,077	-

71.	400kV line bays at Bhinmal & Sikar				-	12	-
72.	Conversion of Fixed Line Reactors into Switchable Line Reactors				-	1	-
73.	Reliable Communication Sysstem in Northernern Region				-	343	-
74.	NRSS-XL				695	805	-
75.	Tr. Scheme for SEZs in Rajasthan				2,777	8,507	-
76.	SYSTR for REZ in Rajasthan				269	776	-
77.	NR-WR HVDC INTERCONNECTOR FOR IPP PROJECTS				2,032	-	-
78.	HVDC Bipole-2 (Champa-Kurukshetra)				2,737	4,010	-
79.	NR2-KUHV				2,032	-	-
80.	NR2-P412				2,737	4,010	-
81.	N216_T/S ASSOCIATED WITH NRSSXVI-NR2				2,269	251	-
82.	N224_NRSS-XXIV (400 KV D/C DULHASTI-KISHENPUR TL,KPUR EXT. & ABDULLAPUR				1,554	216	-
83.	N232_NRSS-32				623	123	-
84.	P366_SVC IN NR				375	125	-
85.	P367_Augmentation of transformers in NR-Part B (ATNB)				512	50	-
86.	P370_DYNAMIC COMPENSATION AT NALAGARH - STATCOM				524	142	-
87.	P371_Transmisssion System with Kishenganga-HEP				1,235	359	-
88.	P375_NR SYSTEM STRENGTHENING SCHEME-XXIX(29)				110	27	-
89.	P377_NR SYSTEM STRENGTH. SCHEME - XXXIV				63	14	-
90.	P380_Green Energy Corridor ISTS - Part D -NRSS 26				3,271	919	-

91.	P299_NR2-P428 Expn of FO -Addl				94	28	-
92.	P445_P445_315MVA, 400/220kV ICT at Fatehabad				11	1	-
93.	P453_ESTABLISHMENT OF FIBRE OPTIC COMMUNICATION SYSTEM IN NorthernERN REGION UNDER FIBER OPTIC EXPANSION PROJECT (ADDITIONAL REQUIREMENT)				289	86	-
94.	P492_Conv of Fixed LR to Switcachable LR//400 kV Abdullapur-S/s Extn				5	1	-
95.	P496_NR-II Reliable Communication System				1,615	294	-
96.	P502_NRSS-XL				1,560	309	-
97.	P532_Controlling High Sckt/Loading at Moga S/S				296	48	-
98.	P534_1x500 MVA 400/220 kV ICT at Amritsar				210	53	-
99.	P549_7 Nos. Spare ICTs in Northernern Region (1 at Panchkula and 1 at Moga out of 7 in NR)				170	50	-
100.	STSN_Strengthening Scheme in NR(LILO of Jal-Hamirpur,Ext.of Dehar BBMB SS)				160	18	-
101.	N216_T/S ASSOCIATED WITH NRSSXVI-NR2	S/s			2,269.15	251.17	-
		TL					-
102.	N224_NRSS-XXIV (400 KV D/C DULHASTI-KISHENPUR TL,KPUR EXT. & ABDULLAPUR	S/s			1,554	216	-
		TL					-
103.	N232_NRSS-32	S/s			623	123	-
		TL					-
104.	P366_SVC IN NR	S/s			375	125	-
		TL					-
105.	P367_Augmentation of transformers in NR-Part B (ATNB)	S/s			512	50	-
		TL					-
106.	P370_DYNAMIC COMPENSATION AT NALAGARH - STATCOM	S/s			524	142	-
		TL					-
107.	P371_Transmisssion System with Kishenganga-HEP	S/s					-
		TL			1,235	359	-
108.	P375_NR SYSTEM STRENGTHENING SCHEME-XXIX(29)	S/s			110	27	-
		TL					-

109.	P377_NR SYSTEM STRENGTH. SCHEME - XXXIV (34)	S/s			63	14	-
		TL					-
110.	P380_Green Energy Corridor ISTS - Part D -NRSS 26	S/s					-
		TL			3,271	919	-
111.	P299_NR2-P428 Expn of FO -Addl	S/s			94	28	-
		TL					-
112.	P445_P445_315MVA, 400/220kV ICT at Fatehabad	S/s			11	1	-
		TL					-
113.	P453_ESTABLISHMENT OF FIBRE OPTIC COMMUNICATION SYSTEM IN NorthernERN	S/s			289	86	-
		TL					-
114.	P492_Conv of Fixed LR to Switchable LR//400 kV Abdullapur-S/s Extn	S/s			5	1	-
		TL					-
115.	P496_NR-II Reliable Communication System	S/s			1,615	294	-
		TL					-
116.	P502_NRSS-XL	S/s			1,560	309	-
		TL					-
117.	P532_Controlling High Sckt/Loading at Moga S/S	S/s			296	48	-
		TL					-
118.	P534_1x500 MVA 400/220 kV ICT at Amritsar	S/s			210	53	-
		TL					-
119.	P549_7 Nos. Spare ICTs in Northernern Region (1 at Panchkula and 1 at Moga out of 7 in NR)	S/s			170	50	-
		TL					-
120.	STSN_Strengthening Scheme in NR(LILO of Jal-Hamirpur,Ext.of Dehar BBMB SS)	S/s			160	18	-
		TL					-
121.	Creation of 400/220kV S/s in Delhi (Part -A)				1,361.62	431.81	
122.	Tehri PSP Transmission System				178.64	-	
123.	NRSS-XL				614.09	45.66	
124.	Tr. Scheme for SEZs in Rajasthan				693.08	614.58	
125.	Scheme control Fault level in NR(Ph-II)				-	217.95	
126.	SYSTR for REZ in Rajasthan				1,628.11	167.58	
127.	Phase-II-PartB1				131.19	80.88	
128.	7 Nos. Spare ICTs				-	349.19	

129.	Bays for RE Gen:Bhadla-II & Fatehgarh-II				-	30.40	
130.	400/220kV 8th ICT at Bhadla PS				86.36	11.00	
131.	NRSS-XXXV				1,003.40	105.51	
132.	P496_NR-II Reliable Communication System	S/s			155.49	28.43	
		TL					
133.	P502_NRSS-XL	S/s			542.09	107.54	
		TL					
134.	P549_7 Nos. Spare ICTs in Northernern Region (1 at Panchkula and 1 at Moga out of 7 in NR)	S/s			56.16	13.47	
		TL					
135.	P363_ESTABLISHMENT OF 220/66KV , 2X160MVA, GIS AT CHANDIGARH ALONG	S/s			1,403.25	399.92	
		TL			1,938.99	552.60	
136.	P588_Aug Transf cap at 400/220kV Ludhiana S/S	S/s			32.37	3.04	
		TL					

Annexure-XVII							
Details of Capital Cost of Transmission Line							
Name of Transmission Company:			Power Grid Corporation of India Limited				
Name of Transmission Region:			Northern Region				
SI No.	Year	Configuration		Length (km)	Total Cost	Cost/km	Cost/ckt-
1	2022-23	HVDC			Data separately not available/maintained		
		a) S/C		0.00			
		b) D/C		0.00			
		765 kV					
		a) S/C		0.00			
		b) D/C		0.00			
		765 kV Charged at 400 KV					
		a) S/C		0.00			
		400 kV					
		a) S/C		0.00			
		b) D/C		70.06			
		c) M/C		0.00			
		400 kV Charged at 220 KV					
		a) D/C		0.00			
		400 kV Charged at 132 KV					
		a) D/C		0.00			
		220 kV					
		a) S/C		0.00			
		b) D/C		49.30			
		Up to 132 kV					
		a) S/C		0.00			
		b) D/C		0.00			



**Details of Capital Cost of Transmission Line****Name of Transmission Company:** Power Grid Corporation of India Limited**Name of Transmission Region:** Northern Region

SI No.	Year	Configuration	MVA Capacity	No. of Bays	Total Cost	Cost/MVA	Cost/bays
1	2022-23	765kV	3000	2	Data separately not available/maintained		
		400kV	5630	33			
		220kV	320	44			
		132kV	0	2			
		HVDC	0	0			