

## Pro-forma for furnishing Actual annual performance/operational expenses for the Transmission Systems for the 5-year

Name of Transmission Company:		Power Grid Corporation of India Limited					
Name of Transmission Region:		Southern Region					
Table-1 - Region wise information (average for the year, but otherwise total for the region) for AC system							
Sl. No.	Particulars	Units	2017-18	2018-19	2019-20	2020-21	2021-22
1.	Number of AC Substation in	No.					
	(1) 765 kV		7	8.5	9	9	9
	(2) 400 kV		41	42	42	43	44
	(3) 220 kV		0	0	0	0	0
	(4) 132 kV		0	0	0	0	0
(Nomenclature are as per highest available voltage level)		Note : (a) Average is calculated based on data as on 1st April and data as on 31 march for that FY.					
2.	Transformation capacity of AC	No.					
	(1) 765 kV		16500	21000	27000	27000	27000
	(2) 400 kV		29427.5	34362.5	38270	39335	39835
	(3) 220 kV		0	0	0	0	0
	(4) 132 kV		0	0	0	0	0
(Nomenclature are as per highest available voltage level)		"In earlier submitted data for 2017-18, classification of MVA considered was based on highest voltage level available in a particular substation. Presently, MVA has been classified based on highest voltage level of each Transformer.  Further, earlier submitted data for 2017-18 included MVA corresponding to SVC/ STATCOM Coupling transformers and same has been removed."□					
3.	Number of bays in each AC	No.					
	(1) 765 kV		45	57.5	71	76	76
	(2) 400 kV		409	465.5	509	530	551
	(3) 220 kV		164.5	180.5	190	193	197
	(4) 132 kV		0	0	0	0	0
(Nomenclature are as per highest available voltage level)		Note : (a) Average is calculated based on data as on 1st April and data as on 31 march for that FY. (b) Yearwise data is the cumulative figure of that year.					
4.	Ckt-km of AC lines in operation	No.					
	(1) 765 kV		1294.23	2569.87	3020.46	3020.46	3020.46
	(2) 765 kV charged at 400 KV		1827.30	1717.29	1362.28	1362.28	1362.28
	(3) 400 kV		19244.64	19829.26	20457.96	21307.47	22344.79
	(4) 400 kV Charged at 220 KV		163.80	163.80	163.80	163.80	163.80
	(5) 220 kV		811.47	906.36	1001.25	1001.25	1001.25
	(6) 132 kV		0	0	0	0	0
(Nomenclature are as per highest available voltage level)		Note : (a) Average is calculated based on data as on 1st April and data as on 31 march for that FY. (b) Yearwise data is the cumulative figure of that year.					
5.	Total number of employees*						
	(1) 765 kV		729	130	164	157	156

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Sl. No.	Particulars		Units	2017-18	2018-19	2019-20	2020-21	2021-22	
	(2)	400 kV	No.		515	540	556	569	
	(3)	220 kV		0	0	0	0	0	
	(4)	132 kV		0	0	0	0	0	
	(1)	765 kV	Cost (Rs. Lakhs)	12950.5	2324.2	2932.0	2806.9	2789.0	
	(2)	400 kV			9207.3	9654.2	9940.3	10172.7	
	(3)	220 kV			0	0	0	0	0
	(4)	132 kV			0	0	0	0	0
	(Nomenclature are as per highest available voltage level)								
6.	Total number of employees*								
	(1)	765 kV	No.	367	68	88	101	118	
	(2)	400 kV			300	318	320	373	
	(3)	220 kV			0	0	0	0	0
	(4)	132 kV			0	0	0	0	0
	(1)	765 kV	Cost (Rs. Lakhs)	6519.7	1215.7	1573.3	1805.7	2109.6	
	(2)	400 kV			5363.5	5685.3	5721.0	6668.6	
	(3)	220 kV			0	0	0	0	0
	(4)	132 kV			0	0	0	0	0
	(Nomenclature are as per highest available voltage level)								
7.	Auxiliary Power Consumption		MU						
	(1)	765 kV		6.48	10.12	10.13	9.03	8.75	
	(2)	400 kV		23.76	23.50	26.49	27.61	29.30	
	(3)	220 kV		0	0	0	0	0	
	(4)	132 kV		0	0	0	0	0	
	(Nomenclature are as per highest available voltage level)								
8.	Colony Power Consumption		MU						
	(1)	765 kV		1.55	0.40	0.37	0.46	0.50	
	(2)	400 kV		4.40	3.03	3.36	2.98	2.86	
	(3)	220 kV		0.0	0.0	0.0	0.0	0.0	
	(4)	132 kV		0.0	0.0	0.0	0.0	0.0	
	(Nomenclature are as per highest available voltage level)								
9.	Spare ICTs/Reactors								
	(1)	765/400kV 500MVA ICT	No.	0	1	0	0	0	
			Cost (Rs. Lakhs)	0	959.55	0	0	0	
	(2)	400/220kV							

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Table-1 - Region wise information (average for the year, but otherwise total for the region) for AC system

Sl. No.	Particulars	Units	2017-18	2018-19	2019-20	2020-21	2021-22
	(3) 220 kV						
	(4) 132 kV						
	(Nomenclature are as per highest available voltage level)		Asset capitalised in the concerned FY is considered.				
10.	Spare Smoothing Reactors						
	(1) 765 kV	No.	0	0	0	0	0
	(2) 400 kV						
	(3) 220 kV	Cost (Rs. Lakhs)	0	0	0	0	0
	(4) 132 kV						
	(Nomenclature are as per highest available voltage level)						
11.	ICTs						
	(1) 765 kV	No.	11	14	18	18	18
		Cost (Rs. Lakhs)	Data seperately not available/ maintained				
	(2) 400 kV	No.	80.5	90	98	100.5	101.5
		Cost (Rs. Lakhs)	Data seperately not available/ maintained				
	(3) 220 kV	No.	0	0	0	0	0
		Cost (Rs. Lakhs)	0	0	0	0	0
	(4) 132 kV	No.	0	0	0	0	0
		Cost (Rs. Lakhs)	0	0	0	0	0
	(Nomenclature are as per highest available voltage level)		Note : (a) Average is calculated based on data as on 1st April and data as on 31 march for that FY. (b) Yearwise data is the cumulative figure of that year.				
12.	Reactors						
	(1) 765 kV	No.	26.5	34.5	41	44	44
		Cost (Rs. Lakhs)	Data seperately not available/ maintained				
	(2) 400 kV	No.	124.5	130.5	140.5	144.5	150
		Cost (Rs. Lakhs)	Data seperately not available/ maintained				
	(3) 220 kV	No.	0	0	0	0	0
		Cost (Rs. Lakhs)	0	0	0	0	0
	(4) 132 kV	No.	0	0	0	0	0
		Cost (Rs. Lakhs)	0	0	0	0	0
	(Nomenclature are as per highest available voltage level)						

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Name of Transmission Region:		Southern Region						
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Sl. No.	Particulars	Units	2017-18	2018-19	2019-20	2020-21	2021-22	
13.	(+)/(-)100 MVAR STATCOM	No.	1	0	0	0	0	
		Cost (Rs. Lakhs)	10266	0	0	0	0	
	(+) /(-)300 MVAR STATCOM	No.	0	0	3	0	0	
		Cost (Rs. Lakhs)	0	0	48196	0	0	
Asset capitalised in the concerned FY is considered.								
14.	Average outage duration for		Hours/year					
	A.	Transmission Lines						
	(1)	765 kV		10.88	12.60	13.97	18.19	17.26
	(2)	400 kV		4.29	5.70	8.59	9.74	23.43
	(3)	220 kV		1.81	1.59	14.72	24.58	15.57
	(4)	132 kV		0	0	0	0	0
	B.	Transformers						
	(1)	765 kV		21.45	9.79	12.57	11.32	10.37
	(2)	400 kV		18.13	9.03	14.23	24.22	19.53
	(3)	220 kV		0	0	0	0	0
	(4)	132 kV		0	0	0	0	0
	C.	Reactors						
	(1)	765 kV		11.69	4.49	5.19	3.79	0.52
	(2)	400 kV		1.99	1.26	2.45	4.16	1.65
	(3)	220 kV		0	0	0	0	0
	(4)	132 kV		0	0	0	0	0
(Nomenclature are as per highest available voltage level)								
15.	Cost of Initial spares (for S/S)		(Rs. In Lakhs)					
	A.	Capitalized						
	(1)	765 kV						
	(2)	400 kV		6936.30	5046.47	4637.77	827.00	1034.00
	(3)	220 kV						
	(4)	132 kV						
	B.	In Stock						
	(1)	765 kV		Data seperately not available/ maintained				
	(2)	400 kV		Data seperately not available/ maintained				
	(3)	220 kV		Data seperately not available/ maintained				
	(4)	132 kV		Data seperately not available/ maintained				
	C.	Cost of initial spares consumed						
(1)	765 kV	Data seperately not available/ maintained						
(2)	400 kV	Data seperately not available/ maintained						
(3)	220 kV	Data seperately not available/ maintained						
(4)	132 kV	Data seperately not available/ maintained						
16.	Cost of O&M spares Consumed	(Rs. In						

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Table-1 - Region wise information (average for the year, but otherwise total for the region) for AC system

Sl. No.	Particulars	Units	2017-18	2018-19	2019-20	2020-21	2021-22
	(1) 765 kV	Lakhs)	3275.31	1439	719	915	1,074
	(2) 400 kV						
	(3) 220 kV						
	(4) 132 kV						
	(Nomenclature are as per highest available voltage level)						
17.	Cost of Initial spares (for Lines)	(Rs. In Lakhs)					
	A. Capitalized						
	(1) 765 kV		2629.83	1318.81	631.90	1239.00	871.99
	(2) 400 kV						
	(3) 220 kV						
	(4) 132 kV						
	B. In Stock						
	(1) 765 kV		Data seperately not available/ maintained <input type="checkbox"/>				
	(2) 400 kV						
	(3) 220 kV						
	(4) 132 kV						
	C. Cost of initial spares consumed						
	(1) 765 kV		Data seperately not available/ maintained <input type="checkbox"/>				
	(2) 400 kV						
	(3) 220 kV						
	(4) 132 kV						
18.	Cost of O&M spares Consumed	(Rs. In Lakhs)					
	(1) 765 kV		1595.61	890	629	619	493
	(2) 400 kV						
	(3) 220 kV						
	(4) 132 kV						
	(Nomenclature are as per highest available voltage level)						

Note:\* Executive &amp; Non-Executive / contract labour

**Pro-forma for furnishing Actual annual performance/operational expenses for the Transmission Systems for the 5-year period from 2017-18 to 2021-22**

<b>Name of Transmission Company:</b>		<b>Power Grid Corporation of India Limited</b>
<b>Name of Transmission Region:</b>		<b>Southern Region</b>
<b>Table-2- Station wise information (average for the year) for HVDC systems</b>		

**1) Gazuwaka/Vizag HVDC**

Sl. No.	Particulars	Units	2017-18	2018-19	2019-20	2020-21	2021-22
1	Total number of employees* engaged in sub-station O&M	No.	17	24	23	24	24
		Cost (Rs. In lakh)	302	838.54	845.09	903.59	1,086.07
2	Total number of employees* engaged in O&M of Transmission Lines	No.	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).□				
		Cost (Rs. In lakh)					
3	Auxiliary power consumption (excluding colony power)	(MU)	6.625	6.112	6.123	6.014	6.312
4	Colony power consumption	(MU)	0.378	0.300	0.388	0.316	0.280
5	Outage duration	Pole-days	2.41	0.37	1.50	1.03	0.36
6	Load curtailment	MW - days	N/A				
7	Cost of initial spares	(Rs. in lakh)	N/A				
	a) Capitalized		231.11	0	0	0	0
	b) In Stock		Data seperately not available/ maintained□				
	c) Consumed						
8	Cost of O&M spares consumed	(Rs. in lakh)	404.4	655.0	232.5	91.0	162.0

Note:\* Executive & Non-Executive / contract labour

**2) Kolar HVDC**

Sl. No.	Particulars	Units	2017-18	2018-19	2019-20	2020-21	2021-22
1	Total number of employees* engaged in sub-station O&M	No.	13	17	19	15	16
		Cost (Rs. In lakh)	230.94	396.34	487.07	523.75	611.84
2	Total number of employees* engaged in O&M of Transmission Lines	No.	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).□				
		Cost (Rs. In lakh)					
3	Auxiliary power consumption (excluding colony power)	(MU)	8.325	9.626	7.260	7.039	7.338
4	Colony power consumption	(MU)	0.152	0.145	0.141	0.163	0.170
5	Outage duration	Pole-days	1.68	0.71	0.74	10.63	4.11
6	Load curtailment	MW - days	N/A				
7	Cost of initial spares	(Rs. in lakh)	N/A				
	a) Capitalized		0	0	0	0	0
	b) In Stock		Data seperately not available/ maintained□				

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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>Southern Region</b>					
<b>Table-2- Station wise information (average for the year) for HVDC systems</b>							
	c) Consumed						
8	Cost of O&M spares consumed	(Rs. in lakh)	293.34	104	137	111	107

Note:\* Executive & Non-Executive / contract labour

**3) Trichur HVDC**

Sl. No.	Particulars	Units	2017-18	2018-19	2019-20	2020-21	2021-22
1	Total number of employees* engaged in sub-station O&M	No.	0	0	0	24	27
		Cost (Rs. In lakh)	0	0	0	13.91	522.62
2	Total number of employees* engaged in O&M of Transmission Lines	No.	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).□				
		Cost (Rs. In lakh)					
3	Auxiliary power consumption (excluding colony power)	(MU)	0	0	0	0.166	6.008
4	Colony power consumption	(MU)	0	0	0	0	0.016
5	Outage duration	Pole-days	0	0	0	0.00	3.10
6	Load curtailment	MW - days	N/A				
7	Cost of initial spares	(Rs. in lakh)					
	a) Capitalized		0	0	0	4220	2445.7
	b) In Stock		Data separately not available/ maintained□				
	c) Consumed						
8	Cost of O&M spares consumed	(Rs. in lakh)	0	0	0	0	1.9

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

**4) Pugalur HVDC**

Sl. No.	Particulars	Units	2017-18	2018-19	2019-20	2020-21	2021-22
1	Total number of employees* engaged in sub-station O&M	No.	0	0	0	19	42
		Cost (Rs. In lakh)	0	0	0	102.90	1062.50
2	Total number of employees* engaged in O&M of Transmission Lines	No.	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).□				
		Cost (Rs. In lakh)					
3	Auxiliary power consumption (excluding colony power)	(MU)	0	0	0	5.796	18.786
4	Colony power consumption	(MU)	0	0	0	0	0.076
5	Outage duration of Raigarh Pugalur HVDC system	Pole-days	0	0	0	0.28	3.25
	Outage duration of Pugalur Trichur HVDC system	Pole-days	0	0	0	0	3.10

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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>Southern Region</b>				
<b>Table-2- Station wise information (average for the year) for HVDC systems</b>							
6	Load curtailment	MW - days	N/A				
7	Cost of initial spares	(Rs. in lakh)					
	a) Capitalized		0	0	0	12778	5189
	b) In Stock		Data seperately not available/ maintained□				
	c) Consumed						
8	Cost of O&M spares consumed	(Rs. in lakh)	0	0	0	0.17	0.26
<b>Note: *Executive &amp; non-executive/ contract labour</b>							



**Pro-forma for furnishing Actual annual performance/operational data for the communication system for the 5-year period from 2017-18 to 2021-22**

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

**Table- 3 Region wise information (average for the year, but otherwise total for the region) for Communication system**

Sl. No.	Particulars	Units	2017-18	2018-19	2019-20	2020-21	2021-22
1.	Number of Wideband Communication Nodes in operation	(No.)	86	92.5	99	101	112
2.	Average length of OPGW links in operation	(in Kms.)	8814.89	9595.20	10375.52	10557.42	11358.88
3.	Number of Remote Terminal Units(RTUs)	(No.)	27	26	25	25	25
4.	Number of PLCC links	(No.)	0	0	0	0	0
5.	Number of OPGW links	(No.)	111.5	121.25	131	133	141
6.	Number of Auxiliary Power Supply(DC) Nodes	(No.)	35.5	34.75	34	34	34
7.	Number of employees engaged in O&M of RTU and Communication System	(No.)					
	1) Executive		2	3	4	4	4
	2) Non executive		0	0	0	0	0
	3) outsourced		0	1	2	3	4
8.	Average outage duration for	(hours/year)			0	0	0
	a) Wideband Communication Links	Hours/Year	200.00	146.75	111.13	78.81	54.16
	b) RTUs		10.00	11.46	10.73	10.70	9.75
	c) PLCC		0	0	0	0	0
	d) Auxiliary Power Supply System		140	0	0	0	0
9.	Cost of Initial spares	(Rs.in lakh)					
	a) Capitalized		345.04	164.33	0.00	72.96	61.63
	b) In Stock		345.04	345.04	480.87	445.27	486.13
	c) Consumed		0	39.5	55.6	42.1	30.2
10.	Cost of O&M spares Consumed	(Rs.in lakh)	2.79	91.99	91.99	91.99	97.40
11.	Number of PMU installed in the region	(No.)	255	255	255	255	255
12.	O & M expenses of PMU incurred in the region	(Rs.in lakh)	0	0	62.33	174.11	265.75

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

1	Upon surrendering microwave links by Dec' 2011, the Microwave repeater at Kumbalgode is decommissioned. Hindupur repeater node, which was initially under Central sector, transferred to AP after upgradation during 2010 and thereby 02 wideband node are reduced
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2	The no. of RTUs in SR was 30 including 05 no. in CGS (Kaiga, Kalpakkam, Neyveli TS-II, Neyveli TS-I Exp. & NTPC, Ramagundam). SR-I - 08, SR-II - 17 & CGS - 05
3	The 07 PLCC links are Neyveli-Sripermbadur, MAPS-SP Koil (2 no), Kayamkulam-Pallom, Kayamkulam-Edamon, Raichur-Munirabad & Raichur-Thallapally. Upon commissioning of Fibre links and shifting of data channels from PLCC to Fibre network, the PLCC links were gradually dispensed.
4	Under Auxiliary supply nodes, one additional was procured & installed at Neyveli TS-I Exp for RTU & EPABX during 2010

## Annexure VI- (B-1)

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

Name of Transmission Company:		POWER GRID TRANSMISSION OF INDIA LIMITED□				
Name of Transmission Region:		Southern Region				
(Rs. In Lakhs)						
Sr.No	ITEM	2017-18	2018-19	2019-20	2020-21	2021-22
1	2	3	4	5	6	7
<b>1.0</b>	<b>Repairs and Maintenance Expenses :</b>					
1)	Repairs of Plant & Machinery	2,586.00	5,233.25	4,575.97	4,897.71	6,120.29
2)	Consumption of Stores (not capitalized)	5,318.69	5,946.75	3,866.85	3,849.85	4,060.63
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)	4,590.19	4,882.97	5,485.31	5,842.88	6,191.33
6)	Expenses of Diesel Generating sets	102.09	106.48	93.25	76.42	114.93
7)	Provisions	0	0	0	0	0
8)	Prior Period Adjustment , if any	0	0	0	0	0
9)	Other expenses, if any (please provide details)	0	0	0	0	0
	<b>Sub-total (R&amp;M Expenses)</b>	<b>12,596.97</b>	<b>16,169.45</b>	<b>14,021.38</b>	<b>14,666.86</b>	<b>16,487.18</b>
<b>2.0</b>	<b>Administrative &amp; General Expenses:</b>					
1)	Insurance	1,127.95	1,384.49	1,177.97	1,648.65	4,325.44
2)	Security (General other than special)	3,232.48	3,792.42	4,153.02	4,464.94	4,756.77
3)	Rent	34.87	269.06	321.43	350.41	403.08
4)	Electricity Charges					
5)	Traveling and conveyance	1,109.79	1,416.30	1,522.39	1,194.53	1,550.14
6)	Communication expenses	131.55	209.54	309.08	291.18	373.64
7)	Advertisement and publicity	283.99	317.86	340.29	142.00	180.12
8)	Foundation laying and inauguration	5.94	0	0	0	0
9)	Books Periodicals and Journals	7.16	34.49	25.81	17.69	25.81
10)	Research expenses	0.03	941.68	249.17	74.16	7.08
11)	Cost Audit Fees	41.63	34.06	29.53	33.11	30.58
12)	Horticulture Expenses	546.49	452.00	440.59	490.39	608.48
13)	Bandwidth charges dark fibre lease charges (Telecom) etc	908.45	924.52	929.98	987.58	1,359.87
14)	Donations expenses	0	0	0	0	0
15)	Entertainment expenses	17.04	32.90	37.68	50.78	63.65
16)	Filing Fees	922.44	1,113.19	1,251.67	1,280.48	1,915.33
17)	Legal Expenses	84.15	209.68	267.46	238.19	298.76
18)	Consultancy Expenses	4.27	5.44	7.77	7.97	2.68
19)	Professional charges (not covered under employee expenses)	58.64	163.30	199.18	177.09	293.20
20)	Printing and Stationary	69.56	104.04	123.97	89.42	77.10
21)	Hiring of Vehicle (excluding construction & Corporate exp)	1,558.12	1,683.79	1,687.33	1,707.19	1,939.01
22)	Training and Recruitment expenses	163.95	539.93	688.90	360.61	495.29
23)	Rates and taxes	235.86	598.38	663.71	539.99	563.23
24)	Rebate to Customers	3,347.54	3,154.18	1,994.07	18,698.75	2,581.86
25)	Self Insurance Reserve	3,456.33	3,911.43	4,287.03	5,144.43	5,420.49

## Annexure VI- (B-1)

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

Name of Transmission Company:		POWER GRID TRANSMISSION OF INDIA LIMITED□				
Name of Transmission Region:		Southern Region				
(Rs. In Lakhs)						
Sr.No	ITEM	2017-18	2018-19	2019-20	2020-21	2021-22
1	2	3	4	5	6	7
26)	Provisions (Provide details)	0	0	0	0	0
27)	Prior Period Adjustment , if any	0	0	0	0	0
28)	Any other A&G expenses (Provide details)	1,796.10	7,052.01	28,986.88	3,740.88	2,629.38
	<b>Sub-total(A&amp;G Expenses)</b>	<b>19,144.33</b>	<b>28,344.69</b>	<b>49,694.91</b>	<b>41,730.42</b>	<b>29,900.99</b>
<b>3.0</b>	<b>Employee Expenses</b>					
1)	Salaries, wages and allowances	14,822.26	10,192.17	14,423.09	15,791.31	19,836.37
2)	Staff welfare expenses	0	1,349.66	1,746.53	1,088.87	2,033.16
	a) Contribution to Provident and other funds	809.81	2,933.02	2,360.65	5,047.09	4,429.50
	b) Gratuity	(869.29)	(25.16)	70.33	54.08	54.46
	c) Pension	787.76	156.78	169.34	156.99	186.51
	d) Employee Medical Expenses	1,044.65	1,292.81	903.27	1,045.44	1,359.70
	e) Liveries and Uniforms	74.76	406.67	973.65	456.55	485.00
	f) Safety & Appliances expenses	24.62	62.20	59.77	24.00	143.42
	g) Others	912.26	0	0	0	0
3)	Productivity linked incentive	0	0	0	0	0
4)	Expenditure on VRS	0	0	0	0	0
5)	Ex-gratia	0	0	0	0	0
6)	Performance related pay (PRP)	2,520.65	5,375.56	5,644.01	6,135.63	6,685.49
7)	Any other expenses	0	0	0	0	0
8)	Provisions (furnish details separately)	0	0	0	0	0
9)	Prior Period Adjustment , if any (furnish details separately)	0	0	0	0	0
10)	VII Pay Arrears Paid Pertaining to period prior to 20	0	0	0	0	0
	<b>Sub-total( Employee Expenses)</b>	<b>20,127.48</b>	<b>21,743.71</b>	<b>26,350.64</b>	<b>29,799.96</b>	<b>35,213.61</b>
4.0	Additional /Specific Security it any on the advise of Govt. Agency/ Statutory Authority/ any other reasons	0	0	0	0	0
5.0	Loss of store/Disposal/Write off	0	0	0	0	0
6.0	Provisions (other than above)	0	0	0	0	0
7.0	Prior Period Adjustment , if any (not covered above)	0	0	0	0	0
8.0	Corporate office expenses allocation					
	(i) Transmission O&M Service	6,651.63	4,925.35	4,658.48	4,847.10	6,262.23
	(ii) Projects under construction	0	0	0	0	0
	(iii) ULDC -Communication	0	0	0	0	0
	(iv) Consultancy services, if any	0	0	0	0	0
	(v) Other business (Telecom)	0	0	0	0	0
	(vi) Other business (if any)	0	0	0	0	0
9.0	Corporate Social Responsibility expenses	1,289.07	3,160.90	5,843.87	3,713.47	4,057.08

## Annexure VI- (B-1)

**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 TRANSMISSION OF INDIA LIMITED</b> □
<b>Name of Transmission Region:</b>	<b>Southern Region</b>

(Rs. In Lakhs)

Sr.No	ITEM	2017-18	2018-19	2019-20	2020-21	2021-22
1	2	3	4	5	6	7
10.0	- Others (Specify items not included above)					
	<b>Sub Total (1 to 10)</b>	<b>59,809.48</b>	<b>74,344.10</b>	<b>1,00,569.28</b>	<b>94,757.81</b>	<b>91,921.09</b>
11	Other Income, Revenue and Recoveries, if any	0	0	0	0	0
a)	Short term open access (other than transmission service)	0	0	0	0	0
b)	System & Market operation charges	0	0	0	0	0
c)	Interest on differential tariff recovered	0	0	0	0	0
d)	Consultancy Services	0	0	0	0	0
e)	Interest against Loans and advances	0	0	0	0	0
f)	Interest from advanced to contractors/suppliers	0	0	0	0	0
g)	Income from lease of assets	0	0	0	0	0
h)	Disposal of scrap/stores (not covered under capitalized assets)	0	0	0	0	0
i)	Interest on Government securities	0	0	0	0	0
j)	Miscellaneous income from operations	0	0	0	0	0
k)	Revenue/ Recoveries, if any	0	0	0	0	0
12	Net Expenses	<b>59,809.48</b>	<b>74,344.10</b>	<b>1,00,569.28</b>	<b>94,757.81</b>	<b>91,921.09</b>
13	Capital spares consumed <b>not included in (A) (1) above and not claimed/allowed by Commission for capitalization</b>	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)	514.57	To be claimed separately			
14	Total Expenses (12) + (13A)	<b>60,324.05</b>	<b>74,344.10</b>	<b>1,00,569.28</b>	<b>94,757.81</b>	<b>91,921.09</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					
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	2017-18	2018-19	2019-20	2020-21	2021-22
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## Annexure VI- (B-1)

**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 TRANSMISSION OF INDIA LIMITED</b> □
<b>Name of Transmission Region:</b>	<b>Southern Region</b>

(Rs. In Lakhs)

<b>Sr.No</b>	<b>ITEM</b>	<b>2017-18</b>	<b>2018-19</b>	<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
1	Tax and Statutory Audit Fees	32.92	68.93	109.64	62.27	68.85
2	EDP Expenses	55.83	396.91	262.15	253.86	243.66
3	Miscellaneous Expenses	660.33	(459.41)	952.67	(38.38)	1,537.57
4	Bad Debts Expenses	0	8,121.80	0.76	14.45	(32.06)
5	FERV Expense	1,047.02	(1,076.21)	27,661.65	3,448.68	811.36
	<b>Total</b>	<b>1,796.10</b>	<b>7,052.02</b>	<b>28,986.87</b>	<b>3,740.88</b>	<b>2,629.38</b>

### Reason for Year on Year Variation

Name of Transmission Company:	POWER GRID TRANSMISSION OF INDIA LIMITED	
Name of Transmission Region:	Southern Region	
Head	Year	Reason
Repairs of Plant & Machinery	2018-19	a) Addition of 04nos Substation in 2017-18 and 01 no in 2018-19 b)Overhauling of imported CBs at Vizag c) Strengthening of earthing of various Old Transmission lines has been done. d) Replacement of Insulators in problematic stretches e) Repair/ renovations of drain, buildings, residential/non-residential buliding at old substations
Consumption of Stores(Not Capitalized)	2018-19	a) Replacement of Insulators in problematic location & crossings b) Material consumption for Renovation/repair works of residential and non residential building, road repair, gravel spreading,etc at 25 years old substations c) Repair works of Somanhally Reactor and Puducherry Reactor
Insurance	2018-19	Increase in insurance cost of HVDC substations
Security (General other than special)	2018-19	Increase in transmission assets
Rent	2018-19	Increase in transmission assets
Traveling and conveyance	2018-19	Increase in conveyance reimbursement and asset increase
Advertisement and publicity	2018-19	Higher Advertisement expenditure due to new projects
Cost Audit Fees	2018-19	Due to change of fees paid in other capacity for certification work
Professional charges (not covered under employee expenses)	2018-19	Increase in transmission assets under O&M Stage
Printing and Stationary	2018-19	Increase in transmission assets under O&M Stage
Rates and taxes	2018-19	Increase due to GST on RHQ Allocation
Heads	Year	Reason
Power Charges (electricity consumed for repairing activity)	2019-20	Increase as per actual usage and increase in unit prices and commissioning of new elements.
Insurance	2019-20	Decrease in insurance cost of HVDC substations
Rent	2019-20	Creation of Short term lease as per IND AS 116 for hiring of Vehicle
Electricity Charges	2019-20	Increase as per actual usage and increase in unit prices and commissioning of new elements.
Communication Expenses	2019-20	Increase due to revision in employee entitlements.
Cost Audit Fees	2019-20	Due to change of fees paid in other capacity for certification work
Entertainment expenses	2019-20	Increase in transmission assets under O&M Stage
Legal Expenses	2019-20	Legal cost due to arbitration cases and court cases
Consultancy Expenses	2019-20	Increase due to raining consultant expenses
Printing and Stationary	2019-20	Increase in transmission assets under O&M Stage
Rebate to Customers	2019-20	Reduction in rebate due to change of rate from 2% to 1.5% in new tariff block
Any other A&G expenses (Provide details)	2019-20	increase in FERV
Heads	Year	Reason
Insurance	2020-21	Increase on Commissioning of Raigargh Pugalur HVDC asset increase for part Year
Traveling and conveyance	2020-21	Decrease mainly due to Covid-19 impact
Advertisement and publicity	2020-21	Due to reduction in advertisement cost for tender notices due to shift to online mode
Entertainment expenses	2020-21	Increase in transmission assets under O&M Stage
Consultancy Expenses	2020-21	Increase due to raining consultant expenses
Rebate to Customers	2020-21	Increase in rebate due to special covid rebate
Printing and Stationary	2020-21	General reduction in stationery procurement
Heads	Year	Reason
Repairs of Plant & Machinery	2021-22	"a) Retrofitting & overhauling of old CBs/ Isolators and Isolators done at Tirunelveli, Hassan, Karaikudi, POWERGRID bays at Neelamangal & Hoody, etc
Expenses of Diesel Generating sets	2021-22	"Overhauling of old DG set at Kolar Increase of transmission asset majorly HVDC Pugalur & Trishur"
Insurance	2021-22	Increase on Commissioning of Raigargh Pugalur HVDC asset
Rent	2021-22	Increase in transmission assets
Traveling and conveyance	2021-22	Increase in travel due to relaxation of covid norms
Communication Expenses	2021-22	Increase due to employee entitlements.
Advertisement and publicity	2021-22	Higher Advertisement expenditure due to new projects
Horticulture Expenses	2021-22	Increase due to transmission assets
(Telecom) etc	2021-22	Increase due to transmission assets
Legal Expenses	2021-22	Legal cost due to arbitration cases and court cases
expenses)	2021-22	Increase in transmission assets under O&M Stage
Printing and Stationary	2021-22	General reduction in stationery procurement
Corporate exp)	2021-22	Increase in transmission assets under O&M Stage
Rebate to Customers	2021-22	Decrease in rebate due to special covid rebate given in FY 2020-21.

## Annexure VI-B(II)

**DETAILS OF OPERATION AND MAINTENANCE EXPENSES OF COMMUNICATION SYSTEM (OTHER**

Name of Transmission Company:		POWER GRID TRANSMISSION OF INDIA				
Name of Transmission Region:		Southern Region				
(Rs. In Lakhs)						
Sr.No	ITEM	2017-18	2018-19	2019-20	2020-21	2021-22
1	2	3.00	4.00	5.00	6.00	7.00
<b>1.0</b>	<b>Repairs and Maintenance Expenses :</b>					
1)	Repairs of Plant & Machinery	40.62	105.19	189.28	99.20	576.40
2)	Consumption of Stores (not capitalized)	0.12	0	51.68		0.08
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)	0.29	0.32	0.23	0	0
6)	Expenses of Diesel Generating sets	0	0.15	0	0	0
6)	Provisions	0	0	0	0	0
7)	Prior Period Adjustment , if any	0	0	0	0	0
8)	Other expenses, if any (please provide details)	0	0	0	0	0
	<b>Sub-total( R&amp;M Expenses)</b>	<b>41.03</b>	<b>105.66</b>	<b>241.19</b>	<b>99.20</b>	<b>576.48</b>
<b>2.0</b>	<b>Administrative &amp; General Expenses:</b>					
1)	Insurance	0	0.37	0	0	0
2)	Security (General other than special)	0.10	0.26	0.49	0.75	1.02
3)	Rent	0	0	0	0.31	0.30
4)	Electricity Charges	0	0	0	0	0
5)	Traveling and conveyance	2.11	0.72	1.79	2.60	5.39
6)	Communication expenses	0.18	0.00	0.05	0.38	1.73
7)	Advertisement and publicity		7.05	11.84	-0.16	2.43
8)	Foundation laying and inauguration	0	0	0	0	0
9)	Books Periodicals and Journals	0	0	0	0	0
10)	Research expenses	0	0	0	0	0
11)	Cost Audit Fees	0	0.13	0	0	0
12)	Horticulture Expenses	0	0	0	0	0
13)	Bandwidth charges dark fibre lease charges (Telecom) etc	110.14	77.77	128.83	112.46	51.94
14)	Donations expenses	0	0	0	0	0
15)	Entertainment expenses	0.05	0	0.04	0.05	0.83
16)	Filing Fees	5.86	0	16.84	14.42	17.26
17)	Legal Expenses	0	0	0	0	0
18)	Consultancy Expenses	0	0	0	0	0
19)	Professional charges (not covered under employee expenses)	0.78	0	0.26	0	0



## Annexure VI-B(II)

**DETAILS OF OPERATION AND MAINTENANCE EXPENSES OF COMMUNICATION SYSTEM (OTHER**

Name of Transmission Company:		POWER GRID TRANSMISSION OF INDIA				
Name of Transmission Region:		Southern Region				
(Rs. In Lakhs)						
Sr.No	ITEM	2017-18	2018-19	2019-20	2020-21	2021-22
1	2	3.00	4.00	5.00	6.00	7.00
20)	Printing and Stationary	0.10	0.02	0.03	0.07	0.01
21)	Hiring of Vehicle (excluding construction & Corporate exp)	6.65	8.61	6.96	5.60	8.00
22)	Training and Recruitment expenses	0.53	0.68	0.02	0.18	0.03
23)	Rates and taxes	0	0.29	0	0	0
24)	Rebate to Customers	0	0.53	13.69	101.06	33.18
25)	Self Insurance Reserve	0	35.76	40.43	41.56	45.78
26)	Provisions (Provide details)	0	0	0	0	0
27)	Prior Period Adjustment , if any	0	0	0	0	0
28)	Any other A&G expenses (Provide details)	749.75	448.59	349.99	-109.60	7.79
	<b>Sub-total(A&amp;G Expenses)</b>	<b>876.25</b>	<b>580.78</b>	<b>571.26</b>	<b>169.68</b>	<b>175.69</b>
<b>3.0</b>	<b>Employee Expenses</b>					
1)	Salaries, wages and allowances	79.93	32.83	59.07	70.94	338.17
2)	Staff welfare expenses		0.24	0.49	1.63	3.35
	a) Contribution to Provident and other funds	4.06	0	8.37	9.98	25.59
	b) Gratuity	-4.61	0	0	0	0.06
	c) Pension	6.40	0	0.06	0.30	0.85
	d) Employee Medical Expenses	5.55	0.23	-0.16	0.07	1.28
	e) Liveries and Uniforms	0.39	0.36	0.72	0.90	4.03
	f) Safety & Appliances expenses	0.19	0	0	0	0
	g) Others	4.61	0	0	0	0
3)	Productivity linked incentive	0	0	0	0	0
4)	Expenditure on VRS	0	0	0	0	0
5)	Ex-gratia	0	0	0	0	0
6)	Performance related pay (PRP)	12.17	0.00	10.02	26.46	24.10
7)	Any other expenses	0	0	0	0	0
8)	Provisions (furnish details separately)	0	0	0	0	0
9)	Prior Period Adjustment , if any (furnish details separately)	0	0	0	0	0
10)	VII Pay Arrears Paid Pertaining to period prior to 2017-18	0	0	0	0	0
	<b>Sub-Total( Employee Expenses)</b>	<b>108.70</b>	<b>33.66</b>	<b>78.58</b>	<b>110.28</b>	<b>397.45</b>
<b>4.0</b>	Additional /Specific Security it any on the advise of Govt. Agency/ Statutory Authority/ any other reasons	0	0	0	0	0

## Annexure VI-B(II)

**DETAILS OF OPERATION AND MAINTENANCE EXPENSES OF COMMUNICATION SYSTEM (OTHER**

Name of Transmission Company:		POWER GRID TRANSMISSION OF INDIA				
Name of Transmission Region:		Southern Region				
(Rs. In Lakhs)						
Sr.No	ITEM	2017-18	2018-19	2019-20	2020-21	2021-22
1	2	3.00	4.00	5.00	6.00	7.00
5.0	Loss of store/Disposal/Write off	0	0	0	0	0
6.0	Provisions (other than above)	0	0	0	0	0
7.0	Prior Period Adjustment , if any (not covered above)	0	0	0	0	0
8.0	Corporate office expenses allocation	0	0	0	0	0
	(i) Transmission O&M Service	0	0	0	0	0
	(ii) Projects under construction	0	0	0	0	0
	(iii) ULDC -Communication	0	49.44	79.36	0	17.47
	(iv) Consultancy services, if any	0	0	0	0	0
	(v) Other business (Telecom)	0	0	0	0	0
	(vi) Other business (if any)	0	0	0	0	0
9.0	Corporate Social Responsibility expenses	0	0	0	0	0
10.0	- Others (Specify items not included above)	0	0	0	0	0
	<b>Sub Total (1 to 10)</b>	<b>1025.98</b>	<b>769.54</b>	<b>970.39</b>	<b>379.16</b>	<b>1167.09</b>
11	Other Income, Revenue and Recoveries, if any	0	0	0	0	0
a)	Short term open access (other than transmission service charges)	0	0	0	0	0
b)	System & Market operation charges	0	0	0	0	0
c)	Interest on differential tariff recovered	0	0	0	0	0
d)	Consultancy Services	0	0	0	0	0
e)	Interest against Loans and advances	0	0	0	0	0
f)	Interest from advanced to contractors/suppliers	0	0	0	0	0
g)	Income from lease of assets	0	0	0	0	0
h)	Disposal of scrap/stores (not covered under capitalized assets)	0	0	0	0	0
i)	Interest on Government securities	0	0	0	0	0
j)	Miscellaneous income from operations	0	0	0	0	0
k)	Revenue/ Recoveries, if any	0	0	0	0	0
12	Net Expenses	<b>1025.98</b>	<b>769.54</b>	<b>970.39</b>	<b>379.16</b>	<b>1167.09</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				

**Annexure VI-B(II)**

**DETAILS OF OPERATION AND MAINTENANCE EXPENSES OF COMMUNICATION SYSTEM (OTHER**

<b>Name of Transmission Company:</b>	<b>POWER GRID TRANSMISSION OF INDIA</b>
<b>Name of Transmission Region:</b>	<b>Southern Region</b>

(Rs. In Lakhs)

Sr.No	ITEM	2017-18	2018-19	2019-20	2020-21	2021-22
1	2	3.00	4.00	5.00	6.00	7.00
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)					
14	Total Expenses (12) + (13A)	<b>1025.98</b>	<b>769.54</b>	<b>970.39</b>	<b>379.16</b>	<b>1167.09</b>

<b>Notes:</b>					
	I. The details of Corporate Expenses and the methodology of allocation of corporate expenses to various functional activities and				
	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				
	IX. Details of capital spares consumed each year which were not claimed/allowed in the tariff should be furnished giving item				

**Expenses (indicated at 2(28) above)**

Sr. No	Item	2017-18	2018-19	2019-20	2020-21	2021-22
1	Tax and Statutory Audit Fees	0	0	0	0	0
2	EDP Expenses	0	0.18	0.01	0	0.20
3	Miscellaneous Expenses	541.79	115.27	81.40	80.87	0.00
4	Bad Debts Expenses	0	0	0	0	0
5	FERV Expense	207.96	333.15	268.58	-190.46	7.59
	Total	<b>749.75</b>	<b>448.60</b>	<b>349.99</b>	<b>-109.59</b>	<b>7.79</b>

**Additional Region-wise Information required from Transmission Licensees**

<b>Name of Transmission Company:</b>		<b>Power Grid Corporation of India Limited</b>				
<b>Name of Transmission Region:</b>		<b>Southern Region</b>				
<b>Table-1- Length (km) of Transmission Lines in Commercial Operation</b>						
<b>Status as on</b>						
		<b>1.4.2018</b>	<b>1.4.2019</b>	<b>1.4.2020</b>	<b>1.4.2021</b>	<b>1.4.2022</b>
1	HVDC					
	a) S/C	65.11	65.11	65.11	65.11	65.11
	b) D/C	1369.16	1369.16	1369.16	3299.48	3299.48
2	765 kV					
	a) S/C	446.57	446.57	446.57	446.57	446.57
	b) D/C	545.36	1286.95	1286.95	1286.95	1286.95
3	765 kV Charged at 400 KV					
	a) S/C	0.00	245.00	245.00	245.00	245.00
	b) D/C	913.65	558.64	558.64	558.64	558.64
4	400 kV					
	a) S/C	5422.90	5422.90	5422.90	5422.90	5422.90
	b) D/C	6946.90	7286.80	7589.50	8136.30	8626.81
	c) Multi	39.69	39.69	39.69	39.69	39.69
5	400 kV Charged at 220 KV					
	a) D/c on M/C	79.29	79.29	79.29	79.29	79.29
	b) D/C	2.61	2.61	2.61	2.61	2.61
6	220 kV					
	a) S/C	115.73	115.73	115.73	115.73	115.73
	b) D/C	347.87	442.76	442.76	442.76	442.76
7	Up to 132 kV					
	a) S/C					
	b) D/C					
		<b>16294.84</b>	<b>17361.20</b>	<b>17663.90</b>	<b>20141.03</b>	<b>20631.54</b>

**Table-2-Ckt km by Conductor Configuration**

		Type of Conductor	Status as on				
			1.4.2018	1.4.2019	1.4.2020	1.4.2021	1.4.2022
1	Hexagonal	Zebra D/C	2180.34	2953.49	2953.49	2953.49	2953.49
		Lapwing D/C	NA	NA	NA	3806.30	3806.30
		320kV DC Cable	NA	NA	NA	54.34	54.34
2	Quad	Bersimis D/C	3578.13	3578.13	3578.13	3578.13	3578.13
		Bersimis S/C	446.57	691.57	691.57	691.57	691.57
		Moose D/C	4188.43	4401.72	4860.30	5392.62	6373.92
		Moose S/C	65.11	65.11	65.11	65.11	65.11
3	Twin	Moose S/C	5227.90	5227.90	5227.90	5227.90	5227.90
		Moose D/C	9105.81	9572.33	9719.15	10280.44	10280.44
		Moose D/C on M/C	158.58	158.58	158.58	158.58	158.58
		Moose M/C	140.76	140.76	140.76	140.76	140.76
		AAAC D/C	658.62	658.62	658.62	658.62	658.62
		AAAC S/C	195.00	195.00	195.00	195.00	195.00
4	Single	AAAC Zebra D/C	445.74	445.74	445.74	445.74	445.74
		ACSR Zebra D/C	94.00	283.77	283.77	283.77	283.77
		ACSR Zebra S/C	52.50	52.50	52.50	52.50	52.50
		Kundah S/C	63.23	63.23	63.23	63.23	63.23

Additional Region-wise Information required from Transmission Licensees

Name of Transmission Company:	Power Grid Corporation of India Limited					
Name of Transmission Region:	Southern Region					
	Grand Total	26618.74	28506.47	29111.88	34066.13	35047.43

**Additional Region-wise Information required from Transmission Licensees**

<b>Name of Transmission Company:</b>		<b>Power Grid Corporation of India Limited</b>				
<b>Name of Transmission Region:</b>		<b>Southern Region</b>				
<b>Table-3- Number of AC Substations in Commercial Operation</b>						
<b>Status as on</b>						
		<b>1.4.2018</b>	<b>1.4.2019</b>	<b>1.4.2020</b>	<b>1.4.2021</b>	<b>1.4.2022</b>
1	765 kV	8	9	9	9	9
2	400 kV	42	42	42	44	44
3	220 kV	0	0	0	0	0
4	Up to 132 kV	0	0	0	0	0

<b>Table-4- Number of Sub-station bays in Commercial Operation</b>						
<b>Status as on</b>						
		<b>1.4.2018</b>	<b>1.4.2019</b>	<b>1.4.2020</b>	<b>1.4.2021</b>	<b>1.4.2022</b>
1	HVDC	89	89	89	116	144
2	765 kV	49	66	76	76	76
3	400 kV	430	501	517	543	563
4	220 kV	172	189	191	195	199
5	Up to 132 kV	0	0	0	0	0

<b>Table-5- Cost of Outsourcing of Services (Rs. lakh)</b>						
		<b>2017-18</b>	<b>2018-19</b>	<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>
	Substation O&M	3,374.99	5,354.64	4,198.43	4,260.97	5,107.63
	Lines O&M	478.12	777.61	1,445.82	651.34	878.54
	Security	3,238.15	3,757.20	4,105.74	4,420.65	4,636.14
	Others - Hiring of Vehicles	2,223.00	2,339.33	2,330.13	2,832.35	5,890.06
	Others/Horticulture Exp	9,314.26	0	0	0	0
	<b>Grand Total</b>	<b>18,628.52</b>	<b>12,228.78</b>	<b>12,080.12</b>	<b>12,165.30</b>	<b>16,512.37</b>

<b>Table-6- Total O&amp;M Expenditure Including RHQ, but Excluding HVDC Stations (Rs lakh)</b>						
		<b>2017-18</b>	<b>2018-19</b>	<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>
	O&M	55,426.20	69,616.50	95,881.10	89,585.08	81,540.09
	<b>Total</b>	<b>55,426.20</b>	<b>69,616.50</b>	<b>95,881.10</b>	<b>89,585.08</b>	<b>81,540.09</b>

## Annexure X

Name of Transmission Company:		Power Grid Corporation of India Limited			
Name of Transmission Region:		Southern Region			
<b>Station wise O&amp;M Expenditure at HVDC Station (Rs. lakh)</b>					
Particulars	2017-18	2018-19	2019-20	2020-21	2021-22
Name of HVDC Station:	<b>GAZUWAKA</b>				
i) No of Employees	17.00	24.00	23.00	24.00	24.00
ii) A&G Expenses	764.07	669.95	586.71	555.76	543.15
iii) Repairs & Maintenance	1,769.14	1,189.21	902.60	761.26	624.99
iv) Employee Expenses*	302.00	838.54	845.09	903.59	1,086.07
v) Corporate expenses allocated*	Included in Annexure VI-BI				
vi) Other income	-	-	-	-	-
vii) Any other income	-	-	-	-	-
<b>Total Expenditure</b>	<b>2,835.21</b>	<b>2,697.70</b>	<b>2,334.40</b>	<b>2,220.61</b>	<b>2,254.21</b>

\* Excluding VII Pay arrear paid for period prior to FY 2017-18

Particulars	2017-18	2018-19	2019-20	2020-21	2021-22
Name of HVDC Station:	<b>KOLAR</b>				
i) No of Employees	14.00	13.00	17.00	19.00	15.00
ii) A&G Expenses	1,443.90	956.24	834.45	801.27	821.21
iii) Repairs & Maintenance	387.80	677.32	1,032.26	874.86	504.08
iv) Employee Expenses*	230.94	396.34	487.07	523.75	611.84
v) Corporate expenses allocated*	Included in Annexure VI-BI				
vi) Other income	-	-	-	-	-
vii) Any other income	-	-	-	-	-
<b>Total Expenditure</b>	<b>2,062.64</b>	<b>2,029.90</b>	<b>2,353.78</b>	<b>2,199.88</b>	<b>1,937.13</b>

\* Excluding VII Pay arrear paid for period prior to FY 2017-18

Particulars	2017-18	2018-19	2019-20	2020-21	2021-22
Name of HVDC Station:	<b>PUGALUR</b>				
i) No of Employees	-	-	-	19.00	42.00
ii) A&G Expenses	-	-	-	435.74	2,414.50
iii) Repairs & Maintenance	-	-	-	184.73	947.07
iv) Employee Expenses*	-	-	-	102.90	1,062.50
v) Corporate expenses allocated*	Included in Annexure VI-BI				
vi) Other income	-	-	-	-	-
vii) Any other income	-	-	-	-	-
<b>Total Expenditure</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>723.37</b>	<b>4,424.07</b>

\* Excluding VII Pay arrear paid for period prior to FY 2017-18

<b>Name of Transmission Company:</b>	<b>Power Grid Corporation of India Limited</b>
<b>Name of Transmission Region:</b>	<b>Southern Region</b>
<b>Station wise O&amp;M Expenditure at HVDC Station (Rs. lakh)</b>	



<b>Name of Transmission Company:</b>	<b>Power Grid Corporation of India Limited</b>				
<b>Name of Transmission Region:</b>	<b>Southern Region</b>				
<b>Station wise O&amp;M Expenditure at HVDC Station (Rs. lakh)</b>					
<b>Particulars</b>	<b>2017-18</b>	<b>2018-19</b>	<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>
Name of HVDC Station:	TRICHUR				
i) No of Employees	-	-	-	24.00	27.00
ii) A&G Expenses	-	-	-	7.42	764.38
iii) Repairs & Maintenance	-	-	-	7.54	478.59
Iv) Employee Expenses*	-	-	-	13.91	522.62
v) Corporate expenses allocated*	Included in Annexure VI-BI				
vi) Other income	-	-	-	-	-
vii) Any other income	-	-	-	-	-
<b>Total Expenditure</b>	-	-	-	28.87	1,765.59

\* Excluding VII Pay arrear paid for period prior to FY 2017-18

## Annexure-XI

## 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>Southern Region</b>				
<b>Table-1- Details of Communication system in Commercial Operation</b>					
Particulars	Status as on				
	1.04.2018	1.04.2019	1.04.2020	1.04.2021	1.04.2022
OPGW Communication Links in operation(in	10375.52	10375.52	10375.52	10739.4	11978.518
Number of wideband Communication nodes in	99	99	99	103	121
Number of RTUs in operation	25	25	25	25	25
Number of PLCC links in operation	0	0	0	0	0
Number of PMUs in Operation	0	255	255	255	255
Number of Auxiliary Power Supply Nodes in	34	34	34	34	34
<b>Table-2- Cost of Services</b>					
Particulars	2017-18	2018-19	2019-20	2020-21	2021-22
Communication system O&M	85.88	127.25	127.46	114.84	148.53
PLCC O&M	0	0	0	0	0
RTU O&M	0	0	0	0	0
Auxiliary Power Supply O&M	0	0	0	0	0
Hiring charges of Bandwidth	0	0	0	0	0
Security	0	0	19.76	52.66	52.66
Others	0	0	62.33	174.11	265.75
<b>Total</b>	<b>85.88</b>	<b>127.25</b>	<b>209.54</b>	<b>341.61</b>	<b>466.94</b>

## Annexure-XII (C)

Name of Transmission Company:	Power Grid Corporation of India Limited
Name of Transmission Region:	Southern 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	Cost (Rs) in Lakhs	
1.	OPGW and Approach cable & accessories	SET (191KM)	115.08	LS Cable package (120KM both Sr-1 & SR-2)+ Reliable spares 71KM(SR-2)
2.	Communication Equipment and auxiliary power supply spares			Tejas ( both Sr-1 & SR-2 included)
a	SDH Equipment: STM-16	17 SET	211.10	Tejas Pkg=13, Reliable Pkg 4
b	SDH Equipment: STM-4	3 SET		Tejas-2, Reliable -1
c	PDH/DACS	11 SET		Tejas-11
d	DCPS Sapres	7 SET		Tejas Pkg=7
3.	WAMS system under URTDSM Project	2 LOT	358.66	URTDSM control center spares 194.33 plus PMU Spares 164.33 ( both Sr-1 & SR-2 included)

## Standard list of O&amp;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)	
1.	TRANSDUCERS for RTU	105	8.20	For SR-1 & SR-2
2.	RTU upgradation spares	8 Set	89.21	Both SR-1 & SR-2 (2018-19)

SL No	Standard List of OPGW Spare
1	OPGW FIBR OPTIC CABLE
2	SUSPENSION CLAMP ASSY-24 FIBRE OPGW
3	TENSION ASSEMBLY DEAD END 24F OPGW
4	TENSION ASSEMBLY SPLICING-24F OPGW
5	TENSION ASSEMBLY PASS THROUGH 24F OPGW
6	TENSION ASSEMBLY ON SUSPENSION-24F OPGW
7	VIBRATION DAMPER-24 FIBRE OPGW
8	DOWN LEAD CLAMP ASSY-24 FIBRE OPGW
9	JOINT BOX-24 FIBRE OPGW
10	Approach Cable

SL No	Standard List of Communication Equipment Spare
1	SDH Equipment (STM-16 MADM, upto 3 MSP protected direction)
2	Common cards, Cross-connect/control cards, Optical base card, Power supply cards, power
3	Optical Interface/SFP <sup>##</sup> for:
4	S4.1
5	L4.1
6	L4.2
7	S16..1
8	L16.1
9	L16.2
10	V16.2
11	Optical Line Interface card (to support minimum 150 km) for STM-16*
12	Optical Line Interface card (to support minimum 225 km) for STM-16*
13	(1) To support minimum 175 km
14	(2) To support minimum 200 km
15	(3) to support minimum 225 km
16	Optical Line Interface card (to support minimum 150 km) for STM-4*
17	Optical Line Interface card (to support minimum 250 km) for STM-4*
18	(1) to support minimum 175 km
19	(2) to support minimum 200 km

Name of Transmission Company:	Power Grid Corporation of India Limited
Name of Transmission Region:	Southern Region

## Standard list of Capital Spare for Communication system needs to be submitted

20	(3) to support minimum 225 km
21	(4) to support minimum 250 km
22	Tributary Cards
23	E1 Interfaces (Minimum 63 nos.)
24	Ethernet interfaces 10/100 Mbps with Layer-2 switching (Minimum 16 nos.)
25	Gigabit Ethernet interface <sup>#</sup> SFP with Layer-2 switching (Minimum 2 nos.)
26	SDH-STM4
27	SDH Equipment (STM-4 MADM, upto 3 MSP protected direction)
28	Common cards, Cross-connect/control cards, Optical base card, Power supply cards, power
29	Optical Interface/SFP <sup>®</sup> for:
30	S4.1
31	L4.1
32	L4.2
33	V4.2
34	S1.1
35	L1.1
36	L1.2
37	Optical Line Interface card (to support minimum 150 kms)*
38	Optical Line Interface card (to support upto 250 kms)*
39	(1) to support minimum 175 km
40	(2) to support minimum 200 km
41	(3) to support minimum 225 km
42	(4) to support minimum 250 km
43	Tributary Cards
44	E1 Interfaces (Minimum 63 nos.)
45	Ethernet interfaces 10/100 Mbps with Layer-2 switching (Minimum 16 nos.)
46	Pre Connectorized Optical Fiber Patch Cords (10 Mtrs) - Pack of six Patch cords
47	Termination Equipment (PDH)
48	Drop & Insert Multiplexer
49	Subscriber Line Interface Cards
50	2 wire (sub/sub) voice channel cards (min 8 channels per card)
51	2 wire (sub/Exch) voice channel cards (min 8 channels per card)
52	4 wire (E&M) voice channel cards (min 8 channels per card)
53	Asynchronous Sub Channels data cards (V.24/V.28), minimum 4 channels per card
54	Synchronous data card (N*64 kbps)
55	Digital Access Cross Connect Switch (DACs)
56	DCPS Spares
57	DC Modules
58	MCCB/MCB-2P/ Contactor/ Timer/ Relay of each type & rating (as applicable)
59	Single Pole MCBs (for outgoing DC Feeders)
60	Module, DC Power Supply Controller, various interface cards etc.)

## Standard List of D400 RTU spares

1	CPU card
2	D20 Analog I/P module
3	D20 S Status I/P Module

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

Name of Transmission Company:	Power Grid Corporation of India Limited
Name of Transmission Region:	Southern Region

Sr. No.	Voltage	Name of Sub-Station	2017-18		2018-19		2019-20		2020-21		2021-22		2022-23	
			MU	%	MU	%	MU	%	MU	%	MU	%	MU	%
1.	400	Hyderabad	0.730	-	0.844	-	1.760	-	1.901	-	2.086	-	2.184	-
2.	400	N'sagar	0.730	-	0.769	-	0.826	-	0.793	-	0.681	-	0.608	-
3.	765	Kadapa	0.730	-	1.416	-	1.441	-	1.098	-	1.059	-	1.166	-
4.	400	Munirabad	0.730	-	0.431	-	0.412	-	0.409	-	0.345	-	0.404	-
5.	400	Gooty	0.730	-	0.831	-	0.854	-	0.693	-	0.576	-	0.578	-
6.	400	Khammam	0.592	-	0.398	-	0.493	-	0.556	-	0.492	-	0.512	-
7.	400	Vijayawada	0.862	-	1.091	-	1.109	-	1.068	-	1.039	-	1.041	-
8.	400	Nellore	0.730	-	0.700	-	0.724	-	0.662	-	0.676	-	0.984	-
9.	HVDC	Vizag	6.625	-	6.112	-	6.123	-	6.014	-	6.312	-	6.123	-
10.	765	Warangal	0.730	-	0.476	-	0.584	-	0.529	-	0.492	-	0.536	-
11.	765	Nellore PS	0.730	-	1.004	-	1.028	-	0.969	-	0.808	-	0.887	-
12.	765	Raichur	0.730	-	0.714	-	0.704	-	0.653	-	0.615	-	0.613	-
13.	765	Kurnool	0.715	-	0.733	-	0.722	-	0.714	-	0.897	-	0.871	-
14.	765	Vemagiri	0.352	-	0.882	-	0.661	-	0.605	-	0.535	-	0.519	-
15.	765	Srikakulam	0.730	-	0.691	-	0.710	-	0.727	-	0.682	-	0.657	-
16.	765	Maheshwaram	0.730	-	0.919	-	0.899	-	0.875	-	0.709	-	0.570	-
17.	765	Nizamabad	1.715	-	1.102	-	1.077	-	0.822	-	0.720	-	0.823	-
18.	765	Npkunta	0.580	-	1.501	-	1.421	-	1.360	-	1.432	-	1.360	-
19.	400	Vizag	0.730	-	0.496	-	0.510	-	0.627	-	0.597	-	0.570	-
20.	400	Somanahalli	0.773	-	0.870	-	0.905	-	0.893	-	0.885	-	0.877	-
21.	400	Salem	0.455	-	0.510	-	0.524	-	0.452	-	0.458	-	0.463	-
22.	400	Udumalpet	0.640	-	0.568	-	1.210	-	2.068	-	2.280	-	2.290	-
23.	400	Thrissur	0.418	-	0.423	-	0.443	-	0.355	-	0.391	-	0.393	-
24.	400	Sriperumpadur	0.492	-	0.696	-	0.792	-	0.725	-	0.853	-	0.896	-
25.	400	Madurai	0.843	-	0.796	-	0.820	-	0.790	-	0.777	-	0.680	-
26.	400	Trichy	0.722	-	0.740	-	1.540	-	2.140	-	2.060	-	1.920	-
27.	400	Kolar	0.517	-	0.627	-	0.555	-	0.501	-	0.571	-	0.599	-
28.	400	Hosur	0.531	-	0.660	-	0.683	-	0.656	-	0.616	-	0.454	-
29.	400	Mysore	0.581	-	0.616	-	0.615	-	0.569	-	0.569	-	0.546	-
30.	400	Hiriyur	0.487	-	0.577	-	0.565	-	0.561	-	0.594	-	0.510	-
31.	400	Narendra	0.586	-	0.543	-	0.554	-	0.546	-	0.508	-	0.480	-
32.	400	Trivandrum	0.561	-	0.675	-	0.678	-	0.602	-	0.590	-	0.631	-
33.	400	Kalivanthapattu	0.655	-	0.572	-	0.590	-	0.619	-	0.617	-	0.529	-
34.	400	Tirunelveli	0.599	-	0.638	-	0.713	-	0.564	-	0.583	-	0.507	-
35.	400	Karur	0.556	-	0.575	-	0.606	-	0.554	-	0.500	-	0.516	-
36.	400	Karaikudi	0.467	-	0.509	-	0.550	-	0.507	-	0.599	-	0.606	-
37.	400	Hassan	0.442	-	0.404	-	0.392	-	0.365	-	0.385	-	0.337	-
38.	400	Arasur	0.510	-	0.454	-	0.487	-	0.510	-	0.551	-	0.516	-
39.	400	Pondichery	0.404	-	0.418	-	0.373	-	0.385	-	0.377	-	0.363	-
40.	400	Kochi	0.368	-	0.451	-	0.405	-	0.377	-	0.376	-	0.415	-
41.	400	Palakkad	0.285	-	0.401	-	0.430	-	0.418	-	0.414	-	0.326	-
42.	400	Bidadi	0.335	-	0.337	-	0.404	-	0.357	-	0.300	-	0.299	-
43.	765	Thiruvalam	0.780	-	0.680	-	0.880	-	0.680	-	0.800	-	0.866	-
44.	400	Nagapattinam	0.502	-	0.545	-	0.436	-	0.385	-	0.389	-	0.338	-
45.	400	KUDGI	0.389	-	0.296	-	0.316	-	0.310	-	0.344	-	0.305	-
46.	400	Tumkur	1.482	-	0.609	-	0.732	-	0.652	-	0.633	-	0.694	-
47.	400	Dharmapuri	0.378	-	0.526	-	0.532	-	0.382	-	0.413	-	0.403	-
48.	400	Tuticorin PS	0.375	-	0.661	-	0.660	-	0.586	-	0.614	-	0.548	-

## Auxiliary Consumption separately for 132kV, 220kV, 400kV &amp; 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>Southern Region</b>

Sr. No.	Voltage	Name of Sub-Station	2017-18		2018-19		2019-20		2020-21		2021-22		2022-23	
			MU	%	MU	%	MU	%	MU	%	MU	%	MU	%
49.	400	Kozhikode	0.410	-	0.561	-	0.563	-	0.570	-	0.531	-	0.547	-
50	400	Pavagada	0.117	-	0.644	-	0.645	-	0.847	-	0.745	-	0.773	-
51.	400	Tuticorin GIS	NA	-	0.453	-	0.433	-	0.466	-	0.512	-	0.544	-
52	400	Yelahanka	NA	-	0.586	-	0.653	-	0.665	-	0.623	-	0.618	-
53.	HVDC	HVDC Pugalur	NA	-	NA	-	NA	-	5.796	-	18.786	-	18.299	-
54	400	Pugalur	NA	-	NA	-	NA	-	0.504	-	1.634	-	1.591	-
55.	HVDC	HVDC Trichur	NA	-	NA	-	NA	-	0.166	-	6.008	-	5.824	-
56	400	Trichur	NA	-	NA	-	NA	-	0.014	-	0.522	-	0.506	-
57.	HVDC	Kolar HVDC	8.325	-	9.626	-	7.260	-	7.039	-	7.338	-	6.820	-

Details of incidental Expenses During Construction (IEDC) including compensation, employee expenses and other expenses for assets achieving COD post							
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.	"System Strengthening in Southern Region -XX"	S/s			97	-	-
2.	"Wardha- Hyderabad 765 KV Link"	S/s & TL			2,599	699	-
3.	TRANSMISSION SYSTEM FOR ULTRA MEGA SOLAR PARK IN ANANTPUR DISTRICT, ANDHRA PRADESH -PART - B	TL			8	3	-
4.	"Transmission system for Ultra Mega Solar Park in Anantapur Dist, Andhra Pradesh - Part- A (Phase-I)"	S/s			196	19	-
5.	"Wardha- Hyderabad 765 KV Link"	S/s & TL			2,402	-	-
6.	Sub-station works associated with Hyderabad (Maheshwaram) Pooling Station	S/s & TL			613	236	-
7.	Substation works associated with Hyderabad (Maheshwaram) Pooling Station	S/s & TL			250	103	-
8.	EASTERN REGION SYSTEM STRENGTHENING SCHEME - IX	S/s			132	6	-
9.	Provision of Line bays for the Scheme - Connectivity Lines for Maheshwaram (Hyderabad) 765/400 kV Pooling Station	S/s & TL			21	30	-
10.	Provision of Line bays for the Scheme - Connectivity Lines for Maheshwaram (Hyderabad) 765/400 kV Pooling Station	S/s & TL			18	31	-
11.	Removal of Constraints in 400kV bays extensions at 400kV Vemagiri S/S	S/s & TL			6	93	-
12.	Conversion of Fixed Line Reactors to Switchable Line Reactors in Southern Region	S/s			23	21	-
13.	System Strengthening in Southern Region- XX	S/s			294	-	-
14.	System Strengthening in Southern Region- XX	S/s			143	-	-
15.	Transmission system for Ultra Mega Solar Park in Anantapur District, Andhra Pradesh- Part C (Phase-III)	S/s			12	5	-
16.	Transmission system for Ultra Mega Solar Park in Anantapur District, Andhra Pradesh- Part C (Phase-III)	S/s			12	5	-
17.	TRANSMISSION SYSTEM FOR ULTRA MEGA SOLAR PARK IN ANANTPUR DISTRICT, ANDHRA PRADESH -PART - B	S/s & TL			136	53	-
18.	SS- XXIV	S/s & TL			209	266	-
19.	Common System associated with Srikakulam Area Part-C	S/s			417	88	-
20.	Sub-station works associated with Strengthening of Transmission System beyond Vemagiri	S/s & TL			0	26	-
21.	WAMS System for WR & SR Package-II under Unified Real Time Dynamic State Measurement (URTDSM) Project pertaining to SR1 & SR2	S/s			36	12	-
22.	Transmission system for Ultra Mega Solar Park in Anantapur District, Andhra Pradesh- Part C (Phase-III)	S/s			36	31	-
23.	System Strengthening in Southern Region- XX	S/s			227	-	-
24.	TRANSMISSION SYSTEM FOR ULTRA MEGA SOLAR PARK IN ANANTPUR DISTRICT, ANDHRA PRADESH -PART - B	S/s & TL			145	53	-
25.	System Strengthening in Southern Region- XXIV	S/s & TL			299	380	-
26.	System Strengthening in Southern Region- XXIV	S/s & TL			874	1,079	-
27.	Installation of Bus Reactors at Kadapa, Nellore, Kurnool, & Raichur	S/s			132	95	-
28.	SUBSTATION WORKS ASSOCIATED WITH STRENGTHENING OF TRANSMISSION SYSTEM BEYOND VEMAGIRI	S/s			17	337	-
29.	SYSTEM STRENGTHENING IN SOUTHERN REGION- XXIII	S/s			1	4	-
30.	SUBSTATION WORKS ASSOCIATED WITH STRENGTHENING OF TRANSMISSION SYSTEM BEYOND VEMAGIRI	S/s			7	126	-
31.	Substation works associated with additional inter-regional AC link for import of power into Southern Region i.e., Waroora-Warangal and Chilakaluripeta-Hyderabad - Kurnool 765kV Link	S/s			72	53	-
32.	System Strengthening in Southern Region- XXI	S/s			99	107	-

Details of incidental Expenses During Construction (IEDC) including compensation, employee expenses and other expenses for assets acieveing COD post							
Sl.N	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
33.	SUBSTATION WORKS ASSOCIATED WITH ADDITIONAL INTER-REGIONAL AC LINK FOR IMPORT OF POWER INTO SOUTHERN REGON i.e., WARORA- WARANGAL AND C/PETA- HYDERABAD- KURNOOL 765KV LINK	S/s			147	160	-
34.	SUBSTATION WORKS ASSOCIATED WITH STRENGTHENING OF TRANSMISSION SYSTEM BEYOND VEMAGIRI	S/s			14	304	-
35.	PROCUREMENT OF SPARE CONVERTER TRANSFORMER FOR VIZAG HVDC SYSTEM	S/s			-	77	-
36.	PROCUREMENT OF SPARE CONVERTER TRANSFORMER FOR VIZAG HVDC SYSTEM	S/s				103	-
37.	HVDC Bipole link between Western Region (Raigarh, Chhattisgarh) and Southern Region (Pugalur, Tamil Nadu) - North Trichur (Kerala) - Scheme#1: Raigarh-Pugalur 6000MW HVDC System	TL			2,768	7,175	-
38.	Transmission System for controlling High Loading of Nellore (PG)- Nellore PS 400kV (Quad) D/C line	S/s			28	34	-
39.	Reliable Communication scheme under Central Sector for Southern region	S/s				93	-
40.	Reliable Communication scheme under Central Sector for Southern region	S/s				3	-
41.	Reliable Communication scheme under Central Sector for Southern region	S/s			7	123	-
42.	Reliable Communication scheme under Central Sector for Southern region	S/s				168	-
43.	Faulty Work @ Thiruvalem & Kolar				25	-	-
44.	Green Energy Corridor				350	141	-
45.	RPT HVDC II				4,271	850	-
46.	RPT HVDC III				2,689	-	-
47.	RPT HVDC-I				7,689	-	-
48.	KDLM				1,577	653	-
49.	KU34				89	-	-
50.	LTOA				460	92	-
51.	MADHUGIRI BY & BR				76	-	-
52.	New NLC				66	-	-
53.	NNTPS				493	36	-
54.	S2X2				130	65	-
55.	S2X4				316	98	-
56.	SR ICT				137	-	-
57.	SR REACTOR TVLM				37	3	-
58.	SR SWICHABLE REACTORS				92	-	-
59.	SRSS-XXV				243	-	-
60.	SRSS-XXVI				172	-	-
61.	SS13				159	154	-
62.	SS20				36	-	-
63.	SS21_STATCOM				77	-	-
64.	SS23				68	135	-
65.	ULDC-Fibe Expansion				119	-	-
66.	ULDC-Reliable Comm System				81	-	-
67.	ULDC-WAMS				13	8	-
68.	UMSPP Ph I				528	69	-
69.	UMSPP Ph II(Part A)				1,072	276	-
70.	UMSPP Ph II(Part B)				466	250	-
71.	UMSPP-Ph II(Part C)				56	15	-



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

SI No.	Year	Configuration	Length (km)	Total Cost	Cost/km	Cost/ckt-km
1	2013-14	HVDC				
		a) S/C	0.00			
		b) D/C	0.00			
		765 kV				
		a) S/C	207.75			
		b) D/C	0.00			
		765 kV Charged at 400 KV				
		a) S/C	0.00			
		b) D/C	0.00			
		400 kV				
		a) S/C	0.00			
		b) D/C	140.59			
		c) M/C	0.00			
		400 kV Charged at 220 KV				
		a) D/c on M/C	0.00			
		b) D/C	0.00			
		220 kV				
		a) S/C	0.00			
		b) D/C	0.00			
		Up to 132 kV				
a) S/C	0.00					
b) D/C	0.00					
2	2014-15	HVDC				
		a) S/C	0.00			
		b) D/C	0.00			
		765 kV				
		a) S/C	118.33			
		b) D/C	302.30			
		765 kV Charged at 400 KV				
		a) S/C	0.00			
		b) D/C	355.01			
		400 kV				
		a) S/C	0.00			
		b) D/C	342.76			
		c) M/C	0.00			
		400 kV Charged at 220 KV				
		a) D/c on M/C	0.00			
		b) D/C	0.00			

<b>Details of Capital Cost of Transmission Line</b>			
<b>Name of Transmission Company:</b>		<b>Power Grid Corporation of India Limited</b>	
<b>Name of Transmission Region:</b>		<b>Southern Region</b>	
		<b>220 kV</b>	
		<b>a) S/C</b>	<b>0.00</b>
		<b>b) D/C</b>	<b>0.00</b>
		<b>Up to 132 kV</b>	
		<b>a) S/C</b>	<b>0.00</b>
		<b>b) D/C</b>	<b>0.00</b>

Details of Capital Cost of Transmission Line			
Name of Transmission Company:		Power Grid Corporation of India Limited	
Name of Transmission Region:		Southern Region	
3	2015-16	HVDC	
		a) S/C	0.00
		b) D/C	0.00
		765 kV	
		a) S/C	120.48
		b) D/C	0.00
		765 kV Charged at 400 KV	
		a) S/C	0.00
		b) D/C	189.80
		400 kV	
		a) S/C	0.00
		b) D/C	964.12
		c) M/C	0.00
		400 kV Charged at 220 KV	
		a) D/c on M/C	0.00
		b) D/C	0.00
		220 kV	
		a) S/C	0.00
		b) D/C	0.00
		Up to 132 kV	
a) S/C	0.00		
b) D/C	0.00		
4	2016-17	HVDC	
		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
		b) D/C	368.84
		400 kV	
		a) S/C	0.00
		b) D/C	155.05
		c) M/C	0.00
		400 kV Charged at 220 KV	
		a) D/c on M/C	0.00
		b) D/C	0.00
		220 kV	
		a) S/C	0.00
		b) D/C	0.00

<b>Details of Capital Cost of Transmission Line</b>			
<b>Name of Transmission Company:</b>		<b>Power Grid Corporation of India Limited</b>	
<b>Name of Transmission Region:</b>		<b>Southern Region</b>	
		<b>Up to 132 kV</b>	
		<b>a) S/C</b>	<b>0.00</b>
		<b>b) D/C</b>	<b>0.00</b>

Details of Capital Cost of Transmission Line				
Name of Transmission Company:		Power Grid Corporation of India Limited		
Name of Transmission Region:		Southern Region		
5	2017-18	HVDC		Data seperately not available/ maintained
		a) S/C	0.00	
		b) D/C	0.00	
		765 kV		
		a) S/C	0.00	
		b) D/C	243.06	
		765 kV Charged at 400 KV		
		a) S/C	0.00	
		b) D/C	0.00	
		400 kV		
		a) S/C	0.00	
		b) D/C	230.82	
		c) M/C	0.00	
		400 kV Charged at 220 KV		
		a) D/c on M/C	0.00	
		b) D/C	0.00	
		220 kV		
		a) S/C	0.00	
		b) D/C	0.00	
		Up to 132 kV		
a) S/C	0.00			
b) D/C	0.00			
6	2018-19	HVDC		Data seperately not available/ maintained
		a) S/C	0.00	
		b) D/C	0.00	
		765 kV		
		a) S/C	0.00	
		b) D/C	741.59	
		765 kV Charged at 400 KV		
		a) S/C	245.00	
		b) D/C	0.00	
		400 kV		
		a) S/C	0.00	
		b) D/C	339.90	
		c) M/C	0.00	
		400 kV Charged at 220 KV		
		a) D/c on M/C	0.00	
		b) D/C	0.00	
		220 kV		
		a) S/C	0.00	
		b) D/C	94.89	

<b>Details of Capital Cost of Transmission Line</b>			
<b>Name of Transmission Company:</b>		<b>Power Grid Corporation of India Limited</b>	
<b>Name of Transmission Region:</b>		<b>Southern Region</b>	
		<b>Up to 132 kV</b>	
		<b>a) S/C</b>	<b>0.00</b>
		<b>b) D/C</b>	<b>0.00</b>

Details of Capital Cost of Transmission Line			
Name of Transmission Company:		Power Grid Corporation of India Limited	
Name of Transmission Region:		Southern Region	
7	2019-20	HVDC	
		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
		b) D/C	0.00
		400 kV	
		a) S/C	0.00
		b) D/C	302.70
		c) M/C	0.00
		400 kV Charged at 220 KV	
		a) D/c on M/C	0.00
		b) D/C	0.00
		220 kV	
		a) S/C	0.00
		b) D/C	0.00
		Up to 132 kV	
a) S/C	0.00		
b) D/C	0.00		
8	2020-21	HVDC	
		a) S/C	0.00
		b) D/C	1930.32
		765 kV	
		a) S/C	0.00
		b) D/C	0.00
		765 kV Charged at 400 KV	
		a) S/C	0.00
		b) D/C	0.00
		400 kV	
		a) S/C	0.00
		b) D/C	546.81
		c) M/C	0.00
		400 kV Charged at 220 KV	
		a) D/c on M/C	0.00
		b) D/C	0.00
		220 kV	
		a) S/C	0.00
		b) D/C	0.00

<b>Details of Capital Cost of Transmission Line</b>			
<b>Name of Transmission Company:</b>		<b>Power Grid Corporation of India Limited</b>	
<b>Name of Transmission Region:</b>		<b>Southern Region</b>	
		<b>Up to 132 kV</b>	
		<b>a) S/C</b>	<b>0.00</b>
		<b>b) D/C</b>	<b>0.00</b>



<b>Details of Capital Cost of Transmission Line</b>			
<b>Name of Transmission Company:</b>		<b>Power Grid Corporation of India Limited</b>	
<b>Name of Transmission Region:</b>		<b>Southern Region</b>	
<b>9</b>	<b>2021-22</b>	<b>HVDC</b>	
		<b>a) S/C</b>	<b>0.00</b>
		<b>b) D/C</b>	<b>0.00</b>
		<b>765 kV</b>	
		<b>a) S/C</b>	<b>0.00</b>
		<b>b) D/C</b>	<b>0.00</b>
		<b>765 kV Charged at 400 KV</b>	
		<b>a) S/C</b>	<b>0.00</b>
		<b>b) D/C</b>	<b>0.00</b>
		<b>400 kV</b>	
		<b>a) S/C</b>	<b>0.00</b>
		<b>b) D/C</b>	<b>490.51</b>
		<b>c) M/C</b>	<b>0.00</b>
		<b>400 kV Charged at 220 KV</b>	
		<b>a) D/c on M/C</b>	<b>0.00</b>
		<b>b) D/C</b>	<b>0.00</b>
		<b>220 kV</b>	
		<b>a) S/C</b>	<b>0.00</b>
		<b>b) D/C</b>	<b>0.00</b>
		<b>Up to 132 kV</b>	
		<b>a) S/C</b>	<b>0.00</b>
		<b>b) D/C</b>	<b>0.00</b>

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

SI No.	Year	Configuration	MVA Capacity	No. of Bays	Total Cost	Cost/MV A	Cost/bays
1	2013-14	765kV	6000	14			
		400kV	315	24			
		220kV		3			
		132kV					
		HVDC		0			
2	2014-15	765kV	6000	11			
		400kV		19			
		220kV		0			
		132kV					
		HVDC		0			
3	2015-16	765kV		3			
		400kV	1630	28			
		220kV		4			
		132kV					
		HVDC		0			
4	2016-17	765kV	3000	13			
		400kV	5000	30			
		220kV		16			
		132kV					
		HVDC		0			
5	2017-18	765kV	6000	8			
		400kV	4000	42			
		220kV		15			
		132kV					
		HVDC		0			
6	2018-19	765kV	6000	17			
		400kV	6500	71			
		220kV		17			
		132kV					
		HVDC		0			
7	2019-20	765kV		10			
		400kV	1630	16			
		220kV		2			
		132kV					
		HVDC		0			
8	2020-21	765kV		0			
		400kV	500	26			
		220kV		4			
		132kV					

		HVDC		27
9	2021-22	765kV		0
		400kV	500	20
		220kV		4
		132kV		
		HVDC		28