GTP for Bidders to Fill Up			
Lot 1: Lubricants			
Sl. No.	**Parameters**	**UoM**	**Bidders to fill up**
			Transformer Oil
1	Appearance		
2	Viscosity at 40°C	mm^2/s	
3	Viscosity at -30°C	mm^2/s	
4	Water content (Max)		
a.	New untreated Oil	ppm	
b.	After treatment	ppm	
5	Flash point (Min)	oC	
6	Pour point (Max)	oC	
7	Neutralization value (Total acidity) (Max)	mg KOH/gm	
8	Corrosive Sulphur (In terms of class of Cu Strip)		
9	Electric Strength (Breakdown voltage) (Min)		
a.	New Untreated Oil	kV (rms)	
b.	After Treatment	kV (rms)	
10	Dielectric dissipation factor (ten delta) at 90°C (Max)		
11	Sludge (Max)	%	
12	PCB Content	ppm	
13	PCA Content (Max)	%	

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GTP for Bidders to Fill Up		
LOT 1: Lubricants		
Sl. No.	Parameters	Bidders to Fill Up
		Govenor Oil
1	Characteristics	
2	Viscosity at 40°C (Max)	
3	Viscosity Index (Min)	
4	Flash point (Min)	
5	Pour Point (Max)	
6	Neutralisation No. mg KOH/gm	

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GTP for Bidders to Fill Up			
Lot 2: Paints			
Sl.No	Parameters	Bidders To Fill Up	
		Aluminium Paints mixed with Paste for ready use	Black Bituminious Paint
1	IS Standard		
2	Colour		
3	Finish		
4	Flash Point		
5	Mixing		
6	Dry film thickness		
7	Wet film thickness		
8	Drying time		
9	Storage life		

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GTP for Bidders to Fill up											
Lot 4 (Distribution Boxes)											
			Bidders to fill up								
SL. No	Parameters	Unit	1 P, 100 A LVDB, 3 ways, I/C 100 A MCCB, O/G 63 A HRC	1 P, 160 A LVDB, 3 ways, I/C 160 A MCCB, O/G 63 A HRC	3P, 63 A LVDB, 4 ways, I/C 63A MCCB, O/G 63 A HRC	3P, 100 A LVDB, 4 ways, I/C 100A MCCB, O/G 63 A HRC	3P, 250 A LVDB, 4 ways, I/C 250A MCCB, O/G 100 A HRC	3P, 400 A Distribution Pillar, 4 ways, I/C 400A HRC, O/G 400 A HRC	3P, 630 A Distribution Pillar, 6 ways, I/C 630 A HRC, O/G 500 A HRC	3P, 800 A Distribution Pillar, 6 ways, I/C 800A HRC, O/G 800 A HRC	Mini Feeder Pillar
1	Name of Manufacturer and country										
2	Applicable standards										
3	Rated short time withstand current										
4	Rated Voltage	V									
5	Rated Frequency	Hz									
6	No. of phases and rated frequency										
7	Clearances Phase to phase										
8	Clearances between live parts and earth										
9	Type and thickness of sheet steel (hot/ cold rolled) Frame/Doors/Covers										
10	HRC Cartridge fuse used										
11	Fuse rupturing capacity	kA									
12	Degree of protection of Enclosure										
13	Colour finish shade of Pillar										
	Interior										
	Exterior										
	Bus Bars										
1	Material										
2	Cross section										
3	Rated normal current of busbars	A									
4	Rated short time withstand current and time	kA									
5	Material of the support insulators	mm									
6	Painting and shade										
7	Earth bus bar size and material										
8	Impulse withstand voltage	kVp									
	Moulded Case Circuit Braeker										
1	Make										

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SL. No	Parameters	Unit	Bidders to fill up								
			1 P, 100 A LVDB, 3 ways, I/C 100 A MCCB, O/G 63 A HRC	1 P, 160 A LVDB, 3 ways, I/C 160 A MCCB, O/G 63 A HRC	3P, 63 A LVDB, 4 ways, I/C 63A MCCB, O/G 63 A HRC	3P, 100 A LVDB, 4 ways, I/C 100A MCCB, O/G 63 A HRC	3P, 250 A LVDB, 4 ways, I/C 250A MCCB, O/G 100 A HRC	3P, 400 A Distribution Pillar, 4 ways, I/C 400A HRC, O/G 400 A HRC	3P, 630 A Distribution Pillar, 6 ways, I/C 630 A HRC, O/G 500 A HRC	3P, 800 A Distribution Pillar, 6 ways, I/C 800A HRC, O/G 800 A HRC	Mini Feeder Pillar
2	Rated Frequency	Hz									
3	Number of poles										
4	Breaking Capacity	kA									
5	Rated Current	A									

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GTP for Bidders to Fill up					
Lot 5A (Cable Termination Kits and Straight Through Joints)					
Sl No.	Particulars	Unit	Bidders to Fill up		
			Outdoor/Indoor/Straight Through		
			33 kV	11kV	1.1 kV
1	Type				
2	Applicable Standards				
3	Rated Voltage Uo/U(Um)	kV			
4	AC Voltage withstand	kV(1min)			
	Dry				
	Wet				
5	Impulse voltage withstand(10 positive and 10 negative, 1.2us between each conductor and the ground screen)	kV			
6	Partial Discharge	kV			
7	Loading Cycle(60 cycle 5h heating, 3h cooling conductor temperature: 5+operating temperature)				
	Kit Particulars				
8	Materials of the tubing/moulded part				
9	Method of stress control				
10	Method of environment seal				
11	Allowable Kit storage temperature	Degree			
12	All the jointing kits(outdoor/indoor/straight through joint kit)is complete with all accessories	(Yes/No)			

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GTP for Bidders to Submit				
Lot 5B (Cable Termination Kit for GIS)				
Sl. No.	Particulars	Unit	Bidders to Fill up	
			ID Termination Kit for 1Cx630 sq.mm, 33kV XLPE to GIS termination	ID Termination Kit for 3Cx300 sq.mm, 33kV XLPE to GIS termination
1	Maximum System Voltage	kV		
2	Rated Current	A		
3	Partial Discharge	pC		
4	Basic Insulation Level	kV peak		
5	AC HV Test voltage for 5 min	kV		
6	DC HV Test for 15 mins	kV		
7	Thermal Short Circuit Current Test for 1 sec	kA		
8	Dynamic Short Circuit current test	kA		

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GTP for Bidders to Fill Up						
Lot 7: Switching Equipment						
Sl. #	Parameters	Units	Bidders to fill up			
			Drop Out Fuse, Two Phase (1set-2		Drop Out Fuse, Three Phase (1set-	
			11kV	33 kV	11 kV	33 kV
1	Manufacturer					
2	Manufacturer's Type Designation					
3	Applicable Standards					
4	Type					
5	Rated Voltage	kV				
6	Rated normal current (rms)	A				
7	Rated current of the fuse base	A				
8	Rated load current breaking capacity	A				
9	Insulation level:					
	Dry Impulse withstand (1.2kV/50μs) voltage (positive & negative polarity) (peak)					
a	Across the isolating distance of the fuse base	kV				
b	To earth and between poles kV	kV				
10	Wet 1 min. Power frequency withstand voltage (rms)					
a	Across the isolating distance of the fuse base	kV				
b	To earth and between poles	kV				
11	Rated short time breaking capacity	kA				
12	Minimum creepage distance	mm				
13	Mounting Arrangement					
14	Weight	kg				

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GTPs for Bidders to Fill Up				
Lot 7: Switching Equipment				
Sl. No.	Parameters	Unit	Bidders to fill up	
			LBS 33 kV	LBS 11 kV
1	Applicable Standard			
2	Rated normal current	A		
3	Rated 3 sec. withstand current	kA		
4	Rated peak withstand current	kA		
5	Rated Power frequency withstand voltage			
a	Across open contacts	kV		
b	To Earth and Between poles	kV		
6	Rated impulse withstand voltage			
a	1. Across open contacts	kV		
b	2. To Earth and Between poles	kV		

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GTP for Bidders to Fill Up				
LOT 8A: Insulators with Fittings for Distribution Lines				
Sl. No.	Description of parameters	Bidders to Fill Up		
		Unit	11kV 70 KN Polymer Disc Insulators with Fittings	33kV 70 KN Polymer Disc Insulators with Fittings
1	Applicable standards			
2	Material of insulator			
3	Specified mechanical failing load	kN		
4	Arching distance	mm		
5	Nominal spacing	mm		
6	Nominal creepage distance	mm		
7	Minimum power frequency flashover voltage			
	- dry	kV		
	- wet	kV		
8	Puncture voltage	kV		
9	Length between ball and socket couplings	mm		
	(IEC 120/IEC 61466-1)			
10	Weight (Approximate)	kg		

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GTP for Bidders to Fill Up			
LOT 8A: Insulators with Fittings for Distribution Lines			
Sl No	**Parameters**	**Unit**	**Bidders to fill up**
			Guy Insulators
1	Applicable Standards		
2	Material of insulator		
3	Cantilever Strength	kN	
4	Nominal Diameter	mm	
5	Nominal height	mm	
6	Nominal Creepage distance	mm	
7	Minimum power frequency flashover voltage		
	- dry	kV	
	- wet	kV	
8	Puncture voltage	kV	
9	Weight (Approximate)	kg	

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GTP for Bidders to Fill Up				
LOT 8A: Insulators with Fittings for Distribution Lines				
Sl No	Description of parameters	Unit	Bidders to Fill up	
			11 kV Polymer Pin Insulator with Fittings	33 kV Polymer Pin Insulator with Fittings
1	Name of Manufacturer			
2	Type of Insulators			
3	Applicable Standards			
4	Name of material used in manufacture of the Insulator			
(a)	Material of core rod			
(b)	Material of Housing & weather sheds			
(c)	Material of end fittings			
(d)	Sealing compound for end fitting			
5	Colour Glaze of Insulator			
6	**Electrical Characteristics:**			
(a)	Nominal system Voltage (KV rms)	kV		
(b)	Highest System Voltage (KV rms)	kV		
(c)	Power frequency withstand (KV rms)	kV		
(d)	Visible Discharge Voltage (kV rms)	kV		
(e)	Dry lighting impulse withstand voltage (kVp)	kVP		
	(a) Positive			
	(a) Positive			
7	Creepage distance (min) mm	mm		
8	**Mechanical Characteristics:**			
	Minimum failing load (KN)	kN		
9	**Dimensions of Insulator:**			
(i)	Weight (Kg.)	kg		
(ii)	Dia of FRP rod (mm)	mm		
(iii)	Length of FRP rod (mm)	mm		
(iv)	Dia of weather sheds (mm)	mm		
(v)	Thickness of housing (mm)	mm		
10	No. of weather sheds			
11	**Type of sheds**			
	(i) Aerodynamic			
	(ii) With under ribs			

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GTP For Bidders to Fill Up			
Lot 8B (Insulators for Transmission Lines)			
SL. No.	DESCRIPTION	UNIT	Bidders to Fill up 66 kV, 90 KN polymer Insulator
1	Name and Address of manufacturer		
2	Size and Designat ion of Ball & Socket assembly	mm	
3	Core diameter	mm	
4	Tolerance on Core Diameter	±mm	
5	Nominal length (Section Length)	mm	
6	Tolerance on Nominal Length	±mm	
7	Dry Arcing distance	mm	
8	Shed Profile		
9	Shed profile(Regular altern ating)		
10	Shed diameter-Big/Small	mm	
11	Tolerance on Shed Diameter	mm	
12	Minimum Creepage distance	mm	
13	Tolerance on Creepage distance	mm	
14	Guaranteed mechanical strength	KN	
15	Routine mechanical load	KN	
16	System Nominal Voltage	kV	
17	Highest System Voltage	kV	
18	System Frequency	Hz	
19	**Material**		
	a) FRP Rod		
	b) Sheds with % contents of silicone		
	c) Housing		
	d) End Fittings - Ball	Ball	
	e) End Fittings - Socket	So cket	
20	Minimum thickness of sheath covering over the core	mm	
21	Power frequency Withstand voltage (Wet)/ (Dry)	kV(rms)	
22	Impulse Withstand Voltage (Dry)		
	Positive	kV(Peak)	
	Negative	kV(Peak)	
23	Galvanising - Minimum mass of zinc coating	gms/ sq. mt.	
24	Packing		
25	Standard according to which the insulator shall be manufactured and tested	I EC	

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GTP For Bidders to Fill Up			
Lot 8B (Insulators for Transmission Lines)			
SL. No .	DESCRIPTION	UNIT	Bidders to Fill up 132 kV, 90 KN polymer Insulator
1	Name and Address of manufacturer		
2	Size and Designation of Ball & Socket assembly	mm	
3	Core diameter	mm	
4	Tolerance on Core Diameter	±mm	
5	Nominal length (Section Length)	mm	
6	Tolerance on Nominal Length	±mm	
7	Dry Arcing distance	mm	
8	Shed Profile		
9	Shed profile(Regular alternating)		
10	Shed diameter -Big/ Sm all	mm	
11	Tolerance on Shed Diameter	mm	
12	Minimum Creepage distance	mm	
13	Tolerance on Creepage distance	mm	
14	Guaranteed mechanical strength	KN	
15	Routine mechanical load	KN	
16	System Nominal Voltage	kV	
17	Highest System Voltage	kV	
18	System Frequency	Hz	
19	**Material**		
	a) FRP Rod		
	b) Sheds with% contents of silicone		
	c) Housing		
	d) End Fittings - Ball	Ball	
	e) End Fittings - Socket	Socket	
	f) Grading Rings		
20	Minimum thickness of sheath covering over the core	mm	
21	Power frequency Withstand voltage (Wet/ Dry)	kV(rms)	
22	Impulse Withstand Voltage (Dry)		
	Positive	kV(Peak)	
	Negative	kV(Peak)	
23	Galvanising - Minimum mass of zinc coating	gms/ sq . mt.	
24	Packing		
25	Standard according to which the in sulator shall be manufactured and tested	IEC	

GTP For Bidders to Fill Up			
Lot 8B (Insulators for Transmission Lines)			
SL. No .	DESCRIPTION	UNIT	Bidders to Fill up 220 kV, 120 KN polymer Insulator
1	Name and Address of manufacturer		
2	Size and Designation of Ball & Socket assembly	mm	
3	Core diameter	mm	
4	Tolerance on Core Diameter	mm	
5	Nominal length (Section Length)	mm	
6	Tolerance on Nominal Length		
7	Dry Arcing distance		
8	Shed Profile		
9	Shed profile(Regular alternating)		
10	Shed diameter-Big/Small	mm	
1 1	Tolerance on Shed Diameter	mm	
12	Minimum Creepage distance	mm	
13	Tolerance on Creepage distance	mm	
14	GUaranteed mechanical strength	KN	
15	Routine mechanical load	KN	
16	System Nominal Voltage	kV	
17	Highest System Voltage	kV	
18	System Frequency	Hi	
19	Material		
	a) FRP Rod		
	b) Sheds with % contents of silicone		
	c) Housing		
	d) End Fittings - Ball	Ball	
	e) End Fittings - Socket	Socket	
	f) Grading Rings		
20	Minimum thickness of sheath covering over the core	mm	
2 1	Power frequency Withstand voltage (Wet/Dry)	kV(rms)	
22	Impulse Withstand Voltage (Dry)		
	Positive	kV(Peak)	
	Negative	kV(Peak)	
23	Galvanising - Minimum mass of zinc coating	gms/sq. mt.	
24	Packing		
25	Standard according to which the insulator shall be manufactured and tested	IEC	

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GTP For Bidders to Fill Up			
Lot 8B (Insulators for Transmission Lines)			
SL. No.	DESCRIPTION	UNIT	Bidders to Fill up 400 kV, 160 KN polymer Strain Insulator
1	Name and Address of manufacturer		
2	Size and Designation of Ball & Socket assembly	mm	
3	Core diameter	mm	
4	Tolerance on Core Diameter	±mm	
5	Nominal length (Section Length)	mm	
6	Tolerance on Nominal length	±mm	
7	Dry Arcing distance	mm	
8	Shed Profile		
9	Shed profile(Regular alternating)		
10	Shed diameter-Big/ Small	mm	
11	Tolerance on Shed Diameter	mm	
12	Minimum Creepage distance	mm	
13	Tolerance on Creepage distance	mm	
14	Guaranteed mechanical strength	KN	
15	Routine mechanical load	KN	
16	System Nominal Voltage	kV	
17	Highest System Voltage	kV	
18	System Frequency	Hz	
19	**Material**		
	a) FRP Rod		
	b) Sheds with % contents of silicone		
	c) Housing		
	d) End Fittings - Ball	Ball	
	e) End Fittings - Socket	Socket	
	f) Grading Rings		
20	Minimum thickness of sheath covering over the core	mm	
21	Power frequency Withstand voltage (Wet/ Dry)	kV(rms)	
22	Impulse Withstand Voltage (Dry)		
	Positive	kV(Peak)	
	Negative	kV(Peak)	
23	Galvanising - Minimum mass of zinc coating	gms/ sq. mt.	
24	Packing		
25	Standard according to which the insulator shall be manufactured and tested	IEC	

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GTP for Bidders to Fill up						
Lot 9 A: Lightning Arrestor						
Sl. No.	Parameters	Units	Bidders to fill up			
			9 kV, 5 kA Polymer Lightening Arrestor complete set (gapeless type) -set of 3	9 kV, 10 kA Polymer Lightening Arrestor complete set (gapeless type) -set of 3	30 kV, 5 kA Polymer Lightening Arrestor complete set (gapeless type) -set of 3	30 kV, 10 kA Polymer Lightening Arrestor complete set (gapeless type) -set of 3
1	Manufacturer					
2	Manufacturer's Type Designation					
3	Applicable Standards					
4	Maximum continuous operating voltage (phase voltage)	kV rms				
5	Rated voltage	kV rms				
6	Rated nominal discharge current	kA				
7	Residual voltage for a 8/20 ms nominal discharge current (Clause 7.3.2 IEC 99-4)	kV peak				
8	Residual voltage for 1/20 ms, 10 kA lightning impulse current	kV peak				
9	Number of sections per Surge Arrester					
10	Type of dielectric that fills the space between the surge arrester and porcelain					
11	Maximum discharge current withstand capability	kA				
12	Energy absorption capability	kJ/kV				
13	Material of main terminal					
14	Material of earthing terminal					
Surge Arresters Housing						
1	Manufacturer					
2	Manufacturer's Type Designation					
3	Applicable Standards					
4	Rated voltage	kV				
5	Full wave withstand test (impulse voltage)					
a	Positive	kVp				
b	Negative	kVp				
8	Wet withstand power frequency test voltage	kV rms				
9	Nominal insulator creepage distance mm/kV	mm				
10	Maximum permissible cantilever load	N				
11	Material					
12	Colour of bushing insulator					
13	Weight of complete arrester with bushing	kg				

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GTP For Bidders to Fill Up			
Lot 9B (Surge Monitor)			
SL. No .	DESCRIPTION	Bidders to Fill up	
		Surge Monitor for LA, 120 kV, 10KA	Surge Monitor for LA, 30 kV, 10KA
1	Make		
2	Model		
3	Type		
4	Sensitivity of Surge Counter(min. current at which the Counter operates)		
5	Nominal Discharge Current		
6	Max. Current to be withstood by the Surge Monitor		
7	Counter operation		
Operation of Current Meter			
8	Safe Leakage Current Indication		
9	Indication of deterioration of Surge Arrester		
10	Net. Weight		

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