

Annexure-II - Power System Characteristics - 220kV Sagapara

Table-1		220kV Sagapara	
Sr. No.	Power System Characteristic	Value	unit
1	Nominal ac system voltage, line-to-line	220	kV
2	Maximum continuous ac system voltage, line-to-line	245	kV
3	Minimum continuous ac system voltage, line-to-line	198	kV
4	Maximum short-term ac system voltage, line-to-line	246.4	kV
5	Maximum duration of item 4	10	sec
6	Minimum short-term ac system voltage, line-to-line	33	kV
7	Maximum duration of item 6	5	sec
8	Continuous negative-sequence voltage component (used for performance calculation)	1%	%
9	Continuous negative-sequence voltage component (used for rating calculation)	1.50%	%
10	Continuous zero-sequence voltage component	1%	%
11	Nominal ac system frequency	50	Hz
12	Maximum continuous ac system frequency	50.5	Hz
13	Minimum continuous ac system frequency	48.5	Hz
14	Maximum short-term ac system frequency	52.5	Hz
15	Minimum short-term ac system frequency	47.5	Hz
16	Basic Insulation Level (BIL)	1050	kV peak
17	Switching impulse level (SIL)	NA	kV peak
18	Power Frequency Withstand voltage	460	kV
19	Maximum three-phase fault current		
	-for performance requirements	50	kA
	-for rating of STATCOM	50 for 1sec	kA/s
	-X/R (Positive/Negative Seq)	9.061	
	-X/R (Zero Seq)	3.02	
	-Clearing time - normal	0.16	s
	-Clearing time - backup	0.8	s
20	Maximum three-phase fault current	50	kA
21	Minimum three-phase fault current		
	-for performance requirements	11.15	kA
	-for safe operation	11.15	kA
22	Maximum single-phase fault current	50.00	kA
23	Minimum single-phase fault current	11.15	kA
24	Harmonic impedance sectors for each harmonic number up to the 49 th harmonic or system impedance data as R-X values with frequency steps not larger than 1 Hz (for performance and/or STATCOM system component rating)	Chapter 7.3 of CIGRE Publication 139	
25	Background harmonic voltage (or current) spectrum (for STATCOM components rating) (Distortion up to 15 th Harmonic)	5 th Harmonic 1.5 %	
		7 th Harmonic 1 %	
		Other Harmonics 0.5 % (each)	

Note:

GETCO will provide PSS/E file to obtain study for bidder. A Non-Discloser Agreement to be carried out by bidder with GETCO for sharing of PSS/E file. The load flow model (Peak / off peak condition) is covered in PSS/E file.