

		<u>Bill of material</u> <u>[for Main Supply + Mandatory Spares]</u>		Annexure -[A] of PY 56319	
		<u>FPS PLC System</u>		Rev 00	
		Project: 1x660 MW Bhusawal TPS			
S. No	Item Description	Quantity [I]	UNITs	REMARKS	
[A]	FPS PLC - Supply, Design, Engg, Testing & Training - BOM for Material Code - PY9756319020 [MAIN SUPPLY]				
1	PLC Pkg for Fire Protection System along with panel mounted hardwired console	1	Set		
2	1 No's 24" TFT-LED Operator work station [OWS] with all sets of licensed Softwares + 1 No Laser Printer (color) suitable for A4 size papers + Furniture (as per annexure-[D]) & chairs as required for above OWS & printer	1	Set		
3	1 No Industrial grade Laptop (as Engineering Station)with all sets of licensed Softwares + 1 No DOT matrix printer + Furniture (as per annexure-[D]) & chairs as required for above EWS & printer	1	Set		
4	Remote IO Panel along with panel mounted hardwired console and all redundant cables (including cables between PLC and remote IO panels along with 2" rodent proof HDPE conduits) & its accessories required for interfacing with PLC panel.	2	Sets		
5	UPS with Battery,ACDB & interconnecting cables between PLC system	3	Sets		
6	Erection / Commissioning material required for completeness of above system	1	Lot	Note-(1)	
7	Any Special tools & tackles (as required)	1	Set		
8	System Hardware & Software Maintenance, Plant Operation training at site	As required			
[B]	PLC Pkg for Fire Protection System - [Vendor Services]				
1	PY9856319021	Supervision of Erection & Commissioning Services charges at site including lodging, boarding, local travel, insurance, etc. [Unit Rate = Per man day charges]	20	Days	
2	PY9856319030	Supervision of Erection & Commissioning visit charges [i.e. travel expenses like travel to & fro from vendors work to site, clearance charges like visa fee, etc.] [Unit rate = per visit travel expenses]	5	Visits	

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		Project: 1x660 MW Bhusawal TPS			
S. No	Item Description	Quantity [I]	UNITs	REMARKS	
[C]	PLC Pkg for Fire Protection System - BOM for Material Code - PY9756319038 [Mandatory Spares]				
1	CPU Card	10% of total quantity of each type used in system		Note-(1)	
2	Communication Processor Module	10% of total quantity of each type used in system		Note-(1)	
3	Binary input card	10% of total quantity of each type used in system or minimum 4(four) nos.whichever is more		Note-(1)	
4	Pulse Input Card	10% of total quantity of each type used in system or minimum 2 (two)nos.whichever is more		Note-(1)	
5	Analog Input Card(4 to 20mA type)	10% of total quantity of each type used in system or minimum 2 (two)nos.whichever is more		Note-(1)	
6	Analog Input Card(RTD input type)	10% of total quantity of each type used in system or minimum 2 (two)nos.whichever is more		Note-(1)	
7	Binary Output Card for contact	10% of total quantity of each type used in system or minimum 4(four) nos.whichever is more		Note-(1)	
8	Binary Output Card for Voltage(24VDC)	10% of total quantity of each type used in system or minimum 4(four) nos.whichever is more		Note-(1)	
9	Analog Output Card(4 to 20mA type)	10% of total quantity of each type used in system or minimum 2 (two)nos.whichever is more		Note-(1)	
10	Interposing Relay	10% of total quantity of each type used in system or minimum 4(four) nos.whichever is more		Note-(1)	
11	Output Relay Modules/Relay Board & auxillary Relay	10% of total quantity of each type used in system or minimum 4(four) nos.whichever is more		Note-(1)	
12	Prefab-cable with connector for CPU,Communication card & I/O Rack	2 nos. of each type		Note-(1)	
13	Networking Modules/Components/Switch with Power Supply module	1 no. of each type		Note-(1)	
14	Power Supply Unit for CPU,Communication Card and I/O racks	10% of total nos. used in the system or minimum 2 (two) nos. whichever is more for each type and		Note-(1)	
15	I/O & Processor module chassis	1 (one) no. of each type		Note-(1)	
16	RAM Backup Battery	2 (two) nos. for each type and rating for each system.		Note-(1)	
17	Communication Modules of various types	1No. for each type		Note-(1)	
18	Special Fuse for the Cards	Each type/ rating of fuse, 25% of total nos. used in the system or minimum 25 nos. whichever is more for each system.		Note-(1)	
19	Terminal Block	10% of total quantity used in systems for each type and rating		Note-(1)	
20	24" Colour TFT Monitor with Power and signal cable	2 (two) no.s complete set		Note-(1)	
21	Key Board	2NO.		Note-(1)	
22	Mouse/ Trackball	2NO.		Note-(1)	

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S. No	Item Description		Quantity [I]	UNITs	REMARKS
23	Complete set of Operators station		2 (two) no.s complete set		Note-(1)
24	Hard Disk Drive for the workstation		2 (two) no.s complete set		Note-(1)
25	UPS for PLC system		1 (one) no.s complete set		Note-(1)
26	Memory Module/ EEPROM chip		10% of total quantity used in the systems or minimum 4 (four) no. whichever is more.		Note-(1)
27	DVD Dual layer Read/ Write type Writer		2 (two) no.s complete set		Note-(1)
28	Blank CD/ DVD		50 (fifty) no.		Note-(1)
29	Dot Matrix Printer		2 (two) no.s complete unit		Note-(1)
30	Dot Matrix Printer's Cartridge		25 (twenty five) no.s		Note-(1)
31	Toner for Colour Laser Printer		10 (ten) no.s of each colour other than black, and 20 no.s of black toner for each type of laser printer model		Note-(1)
32	Micro PLC system (i.e. integratedCPU 8.: 1/O system, where above mentioned components are not applicable)		One Complete Set		Note-(1)
33	PLC Network Tap		10% of total quantity for each System		Note-(1)
34	PLC Network End connector		10% of total quantity for each System		Note-(1)
35	MCB		1 no. of each type and rating.		Note-(1)

NOTE ::

- 1 List and Quantities shall be reviewed during detail engineering.