Sr. No.	*Description*	*Qty*	*Unit*	*Rate*	*Amount*

1.0 ***MV PANEL***

1.01 ***11 KV WAPDA METERING PANEL***

Supply , Installation & Commissioning of metal clad sheet steel fabricated, totally enclosed, floor mounting cubicle type, with hinged front doors, electrostatic painted MV switch board suitable for 630-A, 3 phase, 50HZ, 11 KV AC system complete with 99.99% hard drawn electrolytic copper busbars of adequate current carrying capacity and short circuit rating, copper interconnections, instruments, insulation material, wiring, comprising of followings as per WAPDA specifications.

1-Triple pole draw out type vacuum circuit breaker rated, 630 Amps with double break hand charged spring closing quick-make, quick break trip-free mechanism having breaking capacity of 25 KA at 12 KV, one minutes power frequency with stand 36 KV, BIL 95 KV, complete with key locking facility to lock the VCB trolley in either service position or test position and other standard interlock. VCB compartment door should be able to close while VCB is in test position inside the VCB compartment, auxiliary switches, trip coil, switch position indicator and other accessories and comprising:-

6-630 Amps isolating plugs & shutters.

2-Sets of 3 phase shutters.

2-Indicating lamps for on-off position of circuit breaker.

1-Set of Instrument fuses.

6-11 KV cast resin current transformers ratio 100/5 Amps having suitable output and accuracy for metering of class 0.5, 10 VA & for protection class 5P20, 15 VA.

1-Moving iron ammeter, scaled 0-100 Amps.

1-Ammeter phase selector switch, 3 way & off.

3-Single pole potential transformer cast resin type, ratio 11000/110 volt, having suitable output and accuracy.

1-Moving iron voltmeter, scaled 0-15 KV.

1-Voltmeter selector switch 3 way and off.

Sr. No.	*Description*	*Qty*	*Unit*	*Rate*	*Amount*
	1-Static/Digital (IDMT) relay having over current, short circuit and earth fault elements suitable for operation from 5 Amps CT secondary current. 1-Space & Connections for Wapda meters for measurement of KWH, MDI, KVar & P.F having accuracy class 1.0. 3-SURDGE ARRESTORS 1-Earthing switch for Busbars. 1-Cable termination arrangements for XLPE incoming & outgoing cables.			**To be supplied by IESCO**	
1.02	***11 KV OWNER PROTECTION PANEL*** Conforming to same constructional specifications as per item No. 1.01 owner supplied transformer protection panel MV Switch Board to be installed in sub station and comprising of: 1-11 KV fully wired complete cubical housing which will be metal clad sheet fabricated totally enclosed 2.3mm thick indoor type complete with copper bus bars 630Amps as per WAPDA specifications P44:96 (Amended To-Date). 1-630 Amps triple pole , 15-KV , fully enclosed Manual Operated Vacuum Circuit Breaker DRAWOUT TYPE, 95KV BIL, BC-25KA. 6-630 Amps, main isolating plugs and sockets. 2-Sets of 3 Phase shutter, having facilities for pad locking. 1-T/Pole copper bus bars rated at 630Amps. 3-Current Transformers epoxy cast ratio **(200/5Amps)** 10VA class 0.5, M5, ITH=20 Insulation Level 95KV for Metering. 3-Current Transformers **(400:200/5A)** Burden 15VA class 0.5, Insulation Level 12/36/95KV, 25KA for Protection. 3-1 Pole Voltage Transformers ratio 11000/√3/ 110V/√3, 100VA Class 0.5, Insulation Level 12/36/95KV,25KA. 1-Digital Over Current & Earth Fault Protection Relay. 1-Combined KVARH + KWH Meter with M.D.I. 1-Ammeter scaled **(200/5A)** Class 1.5 of size 96 x 96mm.				

Sr. No.	*Description*	*Qty*	*Unit*	*Rate*	*Amount*
	1-Voltmeter of scale **(0–15KV)** Class 1.5 of size 96 x 96mm. 1-Voltmeter selector switch (7-Position). 1-Annunciator for BUCHHOLZ alarm & trip. 1-Capacitor Trip Unit. 2-Indication Lamps for **(OFF - RED / ON – GREEN).** 1-Set of MCB's For Control Circuit. 1-Set of Terminal Blocks. 2-Set of cable gland for incoming/ outgoing 11 KV, 3 core XLPE cable.	1	Each		
	SUB TOTAL SECTION (1.0)				
2.0	***TRANSFORMER***				
2.01	Supply, Installation & Commissioning of **1000 KVA transformer** according to IEC standard 60076 and to be manufacture by Wapda approved manufacturer, complete for outdoor installation with Oil Conservator, Breather, filling hole & plug, lifting lugs, Bi-directional roller wheels, oil level gauge, drain valve, earthing terminal, temperature gauge, all complete as per following details:- Rated Power KVA 1000 Rated Frequency HZ 50 Static Shielding . between HT & LT winding. to avoid voltage surdges. Impulse withstand KV 95 - 50 HZ withstand KV28 - 2.5 Cooling - ONAN - ONAN MV-Bushings No. 3 4 Connection - Cable - Bus Tie Duct Vector Group - DY 11 Core losses 2000W Winding losses 13500W Impedence 5.5 % Permissible temperature: Ambient C˚ 50 Winding temperature rise of C˚ 60 Temperature rise of oil C˚ 50 Tape Changer - Type - Off Load - Tappings % ±2.5± 5 - 7.5	1	Each		
	SUB TOTAL SECTION (2.0)				
3.0	***MV CABLES***				
3.01	Supply, Laying & Commissioning of of following sizes XLPE insulated, copper				

Sr. No.	*Description*	*Qty*	*Unit*	*Rate*	*Amount*
	tape screened PVC **15/0.635 KV copper conductor** cable.				
	i) 3 core 95mm2 15 KV XLPE insulated, copper tape screened/PVC/SWA/PVC 15/0.635 KV copper conductor cable.	570	Rft		
3.02	Supply and Installation of following sizes HT cable termination kit **make REYCHEM/3M**, complete in all respects.				
	i) 3 core 95mm2 15KV XLPE copper cable (outdoor).	1	Each		
	ii) 3 core 95mm2 15KV XLPE copper cable (indoor).	5	Each		
	SUB TOTAL SECTION (3.0)				
4.0	***LT-SWITCH BOARDS, ATS PANEL, SYNCHRONIZING PANEL & PFI PLANT***				
4.01	Supply, Installation & Commissioning of **LT-SWITCH BOARD** sheet metal clad totally enclosed free standing, front excess frames fabricated from **14-SWG M.S. sheet steel derusted phosphated & with electrostatic paint of approved color,** and suitable for system voltage 400/230,50 Hz., 3 phase & Neutral bus bars (Rated as per incoming breaker) of 99.99% electrolytic copper conductor, rated to a minimum short circuit of 50 KA for 3 seconds. Earthing link, Internal wiring. The switch board shall be equipped with following air circuit breakers/moulded case circuit breakers rated at 50 ºC of specified breaking capacity ICS. Shop drawings shall be submitted by the contractor for approval before the manufacture of all distribution equipment, all breakers, instrumentations and other materials shall be of make as listed in Annexure “A” or equivalent.				
	Each panel of Switch Board shall have.				
	i) Exhaust fan on back or on top.				
	ii) Thermostat switch with control fuse.				
	iii) Imported air filter for ventilation at front.				
	iv) Imported hanges & door locks.				
	v) **All nut bolts & washers shall be of good quality stainless steel.**				
	vii) **Providing suitable arrangements for cable terminations in shape of busbars for incoming and outgoing cables.**				

Sr. No.	*Description*	*Qty*	*Unit*	*Rate*	*Amount*

viii) **Providing brass cable glands & lugs (copper/bimetallic) suitable for Incoming & Outgoing cables as per single line diagramme.**

ix) 12" high cable chamber at the bottom/top of the panel.

x) The link of copper busbars/cables shall be at the rating of **1mm2= 1.25 ampere.**

xi) **The link of neutral and earth busbars shall be at the rating of half size of phase copper busbar.**

i) LT-SWITCH BOARD

INCOMING FROM ATS

1-1500 Amps 4P ACB motorized with overload, short circuit protection under over voltage and phase sequence relays minimum short circuit capacity 50 KA at 415 volts.

1-4 pole voltage surge protector (100 KA) **make ISKARA/FATECH** or approved equivalent.

1-Digital voltmeter scaled 0-600 Volts
1-Voltmeter selector switch
3-C.T's ratio 1500/5A
1-Digital ammeter scaled 0-1500A
1-Ammeter selector switch
3-Phase indicating lights
1-Set of MCBs for control wiring
8-10 ASP MCB for control.
1-Cable Termination Arrangements.
1-Auxillary switch.
1-Shunt trip.

1-Zahra RST-25 for under, over voltage relay with phase failure phase shift, phase flashing, ASYMMETRIC, phase sequence earth leakage protection through ZAHRA CT, sensitivity 30 to 1500 mA.

1-Zahra current transformer 150mm dia.

1-multi meter, power and energy analyzer model **make ISKRA/ENTES/KHOLER/ MAKEL** or approved equivalent.

OUTGOING

1-800 ATP MCCB (30 KA)
3-100 ATP MCCB (30 KA)
2-75 ATP MCCB (30 KA)
9-50 ATP MCCB (30 KA)
7-40 ATP MCCB (30 KA)
2-30 ATP MCCB (30 KA)
2-200 ATP MCCB (Space only) 1 Each

Sr. No.	*Description*	*Qty*	*Unit*	*Rate*	*Amount*
4.02	***BUS-TIE DUCT***				
	i) Supply of 1500 Amps three phase & neutral BUS-TIE-DUCT of electrolytic copper 99.97%, including cost of M.S. sheet steel casing, all other accessories like tees, bands & insulators (Transformer to LT-Panel).	6	Meter		
	ii) Supply of 1500 ATP&N flexible copper busbars for connection between Bus-Tie Ducts & Transformer terminals complete with brass nuts & bolts as required.	1	Job		
4.03	***ATS PANEL***				
	i) Same as item No. 4.01 above but comprissing of:- 1-1500 A 4 Pole Automatic Transfer Switch comprising of 2 Nos. 1500 A 4 Pole motorized ACB's and ATS modules of **DEEPSEA (UK)/CRE TECHNOLOGY (FRANCE)** or approved equivalent for soft transfer on Wapda return, UV/OV, phase failure phase sequence relay, Auxiliary relays ON/OFF Push Button, ON/OFF Indication lights & Hand OFF Auto Switch. MOR comprising of 2 Nos. 1600 Amp 4 pole changeover switches of **SOCOMEC (France).**	1	Each		
4.04	***SYNCHRONIZING PANEL*** Same as item No. 4.01 above but panel shall be comprising of:- Synchronizing/load sharing panel for parallel operation of generators comprising of following 4 Pole ACB's and synchronizing controllers of **make DEEPSEA (UK)/CRE TECHNOLOGY (FRANCE),** or approved equivalent**,** complete in all respects. ***INCOMING FROM GENERATOR No. 1 (500 KVA)*** 1-800 A4P ACB motorized including termination arrangement of power cables shown on SLD. ***INCOMING FROM GENERATOR No. 2 (500 KVA)*** 1-800 A4P ACB motorized including termination arrangement of power cables shown on SLD. ***SYNCHRONIZING***				

Sr. No.	*Description*	*Qty*	*Unit*	*Rate*	*Amount*
	2-Synchronizing & AMF module **make DEEPSEA/CRE TECHNOLOGY** or approved equivalent for load sharing & rotation. 2-UVT. 2-Auxiliary switch 2C. 8-C.T.S.'s for module. 6-Phase indication lights. 4-On/off indication lights. 16-Control fuse. 24-Control fuse for module. 4-On/off push button. 2-Closing coils. 2-Opening coils. 2-Hand/auto-switch. 2-Battery charger. 14-8-pin relay with base. 4-Electronic timer. 50-Terminal block. 2-Fan+filter+thermostate. ***OUTGOING*** 1-Set of 1600 ATP&NE copper busbar with cables connection arrangement of outgoing cables.	1	Each		
4.05	***PFI PLANT (TO BE INSTALLED WITH LT-SWITCH BOARD*** Same as item No. 4.01 above but Power Factor Improvement Plant 400 KVAR to be installed with LT-Switch Board including power cable/copper busbars for connection, fabricated from **14-SWG M.S. sheet steel derusted phosphated and with electrostatic paint of approved color,** 415 volts, 3 phase, 50Hz, power factor improvement plant of automatically/manually controlled, complete with following. ***Incoming*** 1- 630 ATP MCCB (ICS 36 KA) ***Capacitors*** 440 volts 3 phase delta connected power capacitors following size. 4- 25 KVAR 6- 50 KVAR ***Magnetic Contactors of following size*** 4- 63 Ampere 3 Pole (AC3) 6- 96 Ampere 3 Pole (AC3) ***PFI Relay***				

Sr. No.	*Description*	*Qty*	*Unit*	*Rate*	*Amount*
	1- PFI relay for switching in & out the capacitor in 12 steps. ***Accessories*** 1- Auto/manual selector switch. 3- Auxiliary contactor relay 220V. 1- Current transformer 1600/5A. 10- HRC switch **fuse switches with disconnector box** for short circuit protection of required rating. 20- ON/Off push button. 20- On/Off indication light. 3- Control MCB's. 1- Panel fan with louver filter, thermostat switch and control MCB.	1	Each		
	SUB TOTAL SECTION (4.0)				
5.0	***POWER DISTRIBUTION BOARDS & DISTRIBUTION BOARDS***				
5.01	Supply, Installation & Commissioning of **POWER DISTRIBUTION BOARDS** sheet metal clad totally enclosed free standing, front excess frames fabricated from 14-SWG M.S. sheet steel derusted phosphated & with electrostatic paint of approved color, and suitable for system voltage 400/230,50 Hz., 3 phase & Neutral bus bars (Rated as per incoming breaker) of 99.99% electrolytic copper conductor, rated to a minimum short circuit of 50 KA for 3 seconds. Earthing link, Internal wiring. The switch board shall be equipped with following air circuit breakers/moulded case circuit breakers rated at 50 ºC of specified breaking capacity ICS. Shop drawings shall be submitted by the contractor for approval before the manufacture of all distribution equipment, all breakers, instrumentations and other materials shall be **make LEGRAND/ABB/TERASAKI/ SCHNEIDER** as listed in Annexure "A" or approved equivalent. Each panel of Switch Board shall have. i) Exhaust fan on back or on top. ii) Thermostat switch with control fuse. iii) Imported air filter for ventilation at front. iv) Imported hanges & door locks. v) **All nut bolts & washers shall be of good quality stainless steel.**				

Sr. No.	*Description*	*Qty*	*Unit*	*Rate*	*Amount*
	vi) **Providing suitable arrangements for cable terminations in shape of busbars for incoming and outgoing cables.**				
	vii) **Providing brass cable glands & lugs (copper/bimetallic) suitable for Incoming & Outgoing cables as per single line diagramme.**				
	viii) 12" high cable chamber at the bottom/top of the panel.				
	ix) The link of copper busbars/cables shall be at the rating of 1mm2= 1.25 ampere.				
	x) The link of neutral and earth busbars shall be at the rating of half size of phase copper busbar.				
	i) PDB-LIFT				
	INCOMING				
	1-100 ATP MCCB (25 KA) 1-Digital voltmeter 1-Volt selector switch 3-C.T's ratio 100/5A 1-Digital ammeter scaled 0-1500A 1-Ammeter selector switch 3-Phase indication lights 1-Set of control fuses				
	OUTGOING				
	3-60 ATP MCCB (15 KA) 9-10/15/20 ASP MCB (10 KA)	1	Each		
	ii) PDB-P3 (MECHANICAL)				
	INCOMING				
	1-100 ATP MCCB (25 KA) 1-Digital voltmeter 1-Volt selector switch 3-C.T's ratio 100/5A 1-Digital ammeter scaled 0-1500A 1-Ammeter selector switch 3-Phase indication lights 1-Set of control fuses				
	OUTGOING				
	1-30 ATP MCCB (15 KA) 2-20 ATP MCCB (15 KA) 12-25 ASP MCB (10 KA)	1	Each		
	iii) PDB-UPS				
	INCOMING				
	1-75 ATP MCCB (25 KA) 1-Digital voltmeter 1-Volt selector switch 3-C.T's ratio 100/5A				

Sr. No.	*Description*	*Qty*	*Unit*	*Rate*	*Amount*
	1-Digital ammeter scaled 0-1500A 1-Ammeter selector switch 3-Phase indication lights 1-Set of control fuses ***OUTGOING*** 6-30 ATP MCCB (15 KA) 1-40 ATP MCCB (15 KA)	1	Each		
	iv) PDB-A.C. ***INCOMING*** 1-800 ATP MCCB (25 KA) 1-Digital voltmeter 1-Volt selector switch 3-C.T's ratio 800/5A 1-Digital ammeter scaled 0-1500A 1-Ammeter selector switch 3-Phase indication lights 1-Set of control fuses ***OUTGOING*** 1-630 ATP MCCB (15 KA) 12-30 ATP MCCB (15 KA) 2-60 ATP MCCB (Space only)	1	Each		
5.02	***DISTRIBUTION BOARDS*** Supply, Installation and Commissioning of recessed/wall mounting type **DISTRIBUTION BOARDS** f**abricated from 16-SWG sheet steel with electrostatic paint of approved color and with back box,** comprising of incoming 3 phase moulded case circuit breakers or earth leakage circuit breakers (as specified) and outgoing single phase Miniature circuit breakers (having magnetic & thermal trip devices) as given below, complete with internal wiring earthing, neutral link, termination blocks and cable chamber at the top of the DB..**PVC slotted duct to be installed on three side of DB**, digital voltmeter, Voltmeter /selector switch, Phase indication lights & control fuses on incoming. All breakers & instrumentation and other materials shall be **make LEGRAND/ABB/ TERASAKI/SCHNEIDER** or approved equivalent as listed in Annexure "A". It shall be manufactured by any one of the manufacturers. ***i) DB-B3, M, 5TH, LA*** ***INCOMING***				

Sr. No.	*Description*	*Qty*	*Unit*	*Rate*	*Amount*
	1-40 ATP MCCB (15 KA) 1-Digital voltmeter+volt selector switch. 3-Phase indication lights+control fuses/MCB(2A). ***OUTGOING*** 3-40 ADP ELCB (300mA) each couple to & having 6-10/15 ASP MCB and neutral link on outgoing.	4	Each		
	ii) DB-B2, F, S,T,4TH ***INCOMING*** 1-50 ATP MCCB (15 KA) 1-Digital voltmeter+volt selector switch. 3-Phase indication lights+control fuses/MCB(2A). ***OUTGOING*** 6-40 ADP ELCB (300mA) each couple to & having 5-10/15 ASP MCB and neutral link on outgoing.	5	Each		
	iii) DB-B1 ***INCOMING*** 1-50 ATP MCCB (15 KA) 1-Digital voltmeter+volt selector switch. 3-Phase indication lights+control fuses/MCB(2A). ***OUTGOING*** 3-40 ADP ELCB (300mA) each couple to & having 5-10/15 ASP MCB and neutral link on outgoing. 3-40 ADP ELCB (300mA) each couple to & having 4-10/15 ASP MCB and neutral link on outgoing.	1	Each		
	iv) DB-G ***INCOMING*** 1-50 ATP MCCB (15 KA) 1-Digital voltmeter+volt selector switch. 3-Phase indication lights+control fuses/MCB(2A). ***OUTGOING*** 6-40 ADP ELCB (300mA) each couple to & having 4-10/15 ASP MCB and neutral link on outgoing.	1	Each		
	v) DB-FA ***INCOMING*** 1-40 ATP MCCB (15 KA) 1-Digital voltmeter+volt selector switch.				

Sr. No.	*Description*	*Qty*	*Unit*	*Rate*	*Amount*
	3-Phase indication lights+control fuses/MCB(2A). ***OUTGOING*** 3-25 ADP ELCB (300mA) each couple to & having 4-10/15 ASP MCB and neutral link on outgoing. 3-25 ADP ELCB (300mA) each couple to & having 3-10/15 ASP MCB and neutral link on outgoing.	1	Each		
	vi) DB-RF ***INCOMING*** 1-30 ATP MCCB (15 KA) 1-Digital voltmeter+volt selector switch. 3-Phase indication lights+control fuses/MCB(2A). ***OUTGOING*** 3-25 ADP ELCB (300mA) each couple to & having 3-10/15 ASP MCB and neutral link on outgoing.	1	Each		
	vii) DB-UPS-G ***INCOMING*** 1-30 ATP MCCB (15 KA) 1-Digital voltmeter+volt selector switch. 3-Phase indication lights+control fuses/MCB(2A). ***OUTGOING*** 3-25 ADP ELCB (300mA) each couple to & having 4-10/15 ASP MCB (6 KA) and neutral link on outgoing.	1	Each		
	viii) DB-UPS-F ***INCOMING*** 1-30 ATP MCCB (15 KA) 1-Digital voltmeter+volt selector switch. 3-Phase indication lights+control fuses/MCB(2A). ***OUTGOING*** 3-25 ADP ELCB (300mA) each couple to & having 4-10/15 ASP MCB (6 KA) and neutral link on outgoing.	1	Each		
	ix) DB-UPS-S ***INCOMING*** 1-30 ATP MCCB (15 KA) 1-Digital voltmeter+volt selector switch. 3-Phase indication lights+control fuses/MCB(2A). ***OUTGOING***				

Sr. No.	*Description*	*Qty*	*Unit*	*Rate*	*Amount*
	3-25 ADP ELCB (300mA) each couple to & having 5-10/15 ASP MCB (6 KA) and neutral link on outgoing.	1	Each		
	x) DB-UPS-4TH				
	INCOMING				
	1-30 ATP MCCB (15 KA)				
	1-Digital voltmeter+volt selector switch.				
	3-Phase indication lights+control fuses/MCB(2A).				
	OUTGOING				
	3-25 ADP ELCB (300mA) each couple to & having 4-10/15 ASP MCB (6 KA) and neutral link on outgoing.	1	Each		
	xi) DB-UPS-CAMERA				
	INCOMING				
	1-40 ATP MCCB (15 KA)				
	1-Digital voltmeter+volt selector switch.				
	3-Phase indication lights+control fuses/MCB(2A).				
	OUTGOING				
	6-25 ADP ELCB (300mA) each couple to & having 4-10 ASP MCB (6 KA) and neutral link on outgoing.				
	3-25 ADP ELCB (300mA) each couple to & having 5-10 ASP MCB (6 KA) and neutral link on outgoing.	1	Each		
	SUB TOTAL SECTION (5.0)				
6.0	***MOTOR CONTROL CENTRES FOR HVAC***				
6.01	Supply, Installation & Commissioning of **MOTOR CONTROL CENTRES** sheet metal clad totally enclosed free standing, front excess moister proof, frames fabricated from **14-SWG M.S. sheet steel derusted phosphated & with electrostatic paint of approved color,** and suitable for system voltage 400/230,50 Hz., 3 phase & Neutral bus bars (Rated as per incoming breaker) of 99.99% electrolytic copper conductor, rated to a minimum short circuit of 50 KA for 3 seconds. Earthing link, Internal wiring. The switch board shall be equipped with following air circuit breakers/moulded case circuit breakers rated at 50 ºC of specified breaking capacity ICS. Shop drawings shall be submitted by the contractor for approval				

Sr. No.	*Description*	*Qty*	*Unit*	*Rate*	*Amount*

before the manufacture of all distribution equipment, all breakers, instrumentations and other materials shall be **make LEGRAND/ABB/TERASAKI/ SCHNEIDER** as listed in Annexure "A".

Each panel of Switch Board shall have.

i) Exhaust fan on back or on top.
ii) Thermostat switch with control fuse.
iii) Imported air filter for ventilation at front.
iv) Imported hanges & door locks.
v) **All nut bolts & washers shall be of good quality stainless steel.**
vii) **Providing suitable arrangements for cable terminations in shape of busbars for incoming and outgoing cables.**
viii) **Providing brass cable glands & lugs (copper/bimetallic) suitable for Incoming & Outgoing cables as per single line diagramme.**
ix) 12" high cable chamber at the bottom/top of the panel.
x) The link of copper busbars/cables shall be at the rating of **1mm2= 1.25 ampere.**
xi) **The link of neutral and earth busbars shall be at the rating of half size of phase copper busbar.**

Note:-

1- The DOL starters shall have line magnetic contactor ON/OFF push buttons, electronic adjustable overload relay with phase failure protections, hand-off auto switch, remote ON/OFF operation and following indication.

1-On indication light (red).
1-Off indication light (green).
1-Overload indication light (yellow)

2- The automatic star delta starters shall have line contactors, astarcontactor, delta contactor ON/OFF push buttons, electronic adjustable overload relay with phase failure protections timers, hand-off auto switch, remote ON/OFF operation and following

1-On indication light (red).
1-Off indication light (green).
1-Overload indication light (yellow)

i) MCC-1

INCOMING

1-630 ATP MCCB (25 KA)
1-Digital voltmeter scaled-0-600 volt

Sr. No.	*Description*	*Qty*	*Unit*	*Rate*	*Amount*
	1-Digital ammeter scaled 0-630 A 1-Voltmeter selector switch 3-C.T's ratio 630/5A 1-Ammeter selector switch 3-Phase indicating lights ***OUTGOING*** 2-300 ATP MCCB (15 KA) 6-5 ATP MCB (10 KA) 3-40 ATP MCCB couple to & having 15 KW star delta starter. 1-30 ATP MCCB couple to & having 8 KW star delta starter.	1	Each		
	ii) ACP-1 ***INCOMING*** 1-30 ATP MCCB (15 KA) 1-Digital voltmeter scaled-0-600 volt 1-Voltmeter selector switch 3-Phase indicating lights ***OUTGOING*** 1-15 ATP MCCB couple to & having 4 KW DOL starter.	1	Each		
	iii) ACP-2 ***INCOMING*** 1-30 ATP MCCB (15 KA) 1-Digital voltmeter scaled-0-600 volt 1-Voltmeter selector switch 3-Phase indicating lights ***OUTGOING*** 9-16 ASP MCB (6 KA) 1-10 ATP MCCB couple to & having 3 KW DOL starter.	1	Each		
	iv) ACP-3 ***INCOMING*** 1-30 ATP MCCB (15 KA) 1-Digital voltmeter scaled-0-600 volt 1-Voltmeter selector switch 3-Phase indicating lights ***OUTGOING*** 12-16 ASP MCB (6 KA)	1	Each		
	v) ACP-4 ***INCOMING*** 1-30 ATP MCCB (15 KA) 1-Digital voltmeter scaled-0-600 volt 1-Voltmeter selector switch 3-Phase indicating lights ***OUTGOING***				

Sr. No.	*Description*	*Qty*	*Unit*	*Rate*	*Amount*
	6-5 ATP MCB (10 KA) 9-16 ASP MCB (6 KA)	1	Each		
	vi) ACP-5 ***INCOMING*** 1-30 ATP MCCB (15 KA) 1-Digital voltmeter scaled-0-600 volt 1-Voltmeter selector switch 3-Phase indicating lights ***OUTGOING*** 12-16 ASP MCB (6 KA)	1	Each		
	vii) ACP-6 ***INCOMING*** 1-30 ATP MCCB (15 KA) 1-Digital voltmeter scaled-0-600 volt 1-Voltmeter selector switch 3-Phase indicating lights ***OUTGOING*** 12-16 ASP MCB (6 KA)	1	Each		
	viii) ACP-7 ***INCOMING*** 1-30 ATP MCCB (15 KA) 1-Digital voltmeter scaled-0-600 volt 1-Voltmeter selector switch 3-Phase indicating lights ***OUTGOING*** 12-16 ASP MCB (6 KA)	1	Each		
	ix) ACP-8 ***INCOMING*** 1-30 ATP MCCB (15 KA) 1-Digital voltmeter scaled-0-600 volt 1-Voltmeter selector switch 3-Phase indicating lights ***OUTGOING*** 12-16 ASP MCB (6 KA)	1	Each		
	x) ACP-9 ***Comprising of:-*** 1-30 ATP MCCB (15 KA) 3-Phase indicating lights	1	Each		
	xi) ACP-10 ***Comprising of:-*** 1-30 ATP MCCB (15 KA) 3-Phase indicating lights	1	Each		
				SUB TOTAL SECTION (6.0)	
				Grand Total:-	

LIST OF MANUFACTURERS/ SUPPLIERS

OFFICE BUILDING OF FEDERATION OF PAKISTAN CHAMBER OF COMMERCE AT ISLAMABAD

Note:- **The manufacturers of the equipment/components may be any of listed below or approved equivalent.**

1 ***MV PANEL***

i) PEL
Ph:- 0300-8406508
ii) SIEMENS (Germany)
iii) M-TECH (MULTI TECHNOLOGY)
Ph:- 0300-8457105
iv) S.A. ELECTRIC
Ph:- 0300-8477067
v) TARIQ ELECTRIC
Ph:- 0302-8413930
vi) GAFOOR ENGINEERING (PVT.) LTD
Ph:- 0321-7173332
vii) BILAL SWITCHGEAR ENGINEERING
Ph:- 0311-4999119
viii) M-TECH (Multi Technology (Pvt.) Limited)
Ph:- 0302-8457105

2 ***TRANSFORMER***

i) PEL
Ph:- 0300-8406508
ii) HAMAMD ENGINEERING
Ph:- 0300-6488919
iii) TRANSFOPOWER
Ph:- 0300-8460702
iv) M-TECH (Multi Technology (Pvt.) Limited)
Ph:- 0302-8457105

3 ***LT-PANELS, METERING PANELS, PDB & DB/SDB & MCU***

i) PEL
Ph:- 0300-8406508
ii) ERCON
Ph:- 0302-8442447
iii) MESSI SWITCHGEAR
Ph:- 0300-8442447
iv) TARIQ ELECTRIC
Ph:- 0302-8413930
v) AL-REHMAN SWITCHGEAR
Ph:-0333-4215873, 0321-4449866
vi) BILAL SWITCHGEAR
Ph:- 0311-4999119
vii) S.A. ELECTRIC
viii) GAFOOR ENGINEERING (PVT.) LTD
Ph:- 0321-7173332
ix) CAPITAL ELECTRO
x) JEI
xi) M-TECH (Multi Technology (Pvt.) Limited)
Ph:- 0302-8457105

4 ***CIRCUIT BREAKERS***

a) ***TP MCCBS***

i) LEGRAND (ITALY)
ii) SCHNEIDER (FRANCE)
iii) ABB (ITALY)
iv) TERASAKI (JAPAN)

b) ***SP MCBS / ELCBS***

i) LEGRAND
ii) SCHNEIDER (FRANCE)
iii) ABB (ITALY)
iv) TERASAKI (JAPAN)

5 ***CONTACTORS***

i) SCHNEIDER (FRANCE)
ii) ABB (ITALY)
iii) TERASAKI

6 ***SELECTOR SWITCHES***

i) BRETER (ITALY)
ii) KRAUS & NAIMER (NEWZEALAND/AUSTRIA)
iii) GGT (ITALY)

7 ***VOLTMETER, AMPEREMETERS***

i) SIGMA (TURKEY)
C-XOR Engineering
Ph:- 042-36126722
ii) ENTES (TURKEY)
iii) LUMEL (POLAND)

8 ***ENERGY ANALYZER***

i) JANITZA (GERMANY)
C-XOR Engineering
Ph:- 042-36126722
ii) ENTES (TURKEY)
iii) ISKRA (SALVANIA)
iv) KLEMSAN (TURKEY)

9 ***ATS & SYNC MODULES***

i) CRE TECHNOLOGY (FRANCE)
Ph:- 0333-4561619
ii) DEEPSEA
Ph:- 0300-4025737

10 ***ENERGY METERING SYSTEM***

i) ***ISKRA*** (SALVANIA)
Pyramid Automotion
Ph:- 0300-4025737
ii) ENTES (TURKEY)
SHAHID INTERNATIONAL
iii) ***KHOLER (TURKEY)***
Ph:- 0321-4404025
iv) ***MAKEL (TURKEY)***
Ph:- 0333-4561619

11 ***INDICATION LIGHTS***

i) LEGRAND (JAPAN) (FRANCE)
ii) CHINT (CHINA)
iii) GGT (ITALY)

12 ***TERMINAL BLOCKS***
i) LEGRAND (FRANCE)
ii) ONKA (TURKEY)
iii) KLEMSAN (TURKEY)

13 ***CURRENT TRANSFORMER***
i) HOBOT (UK)
ii) EFFEN (GERMANY)
iii) ISKRA (SALVANIA)

14 ***ON/OFF PUSH BUTTON***
i) MARUYASU (JAPAN)
ii) SCHNEIDER (EU)
iii) GGT (ITALY)
iv) LEGRAND (FRANCE)

15 ***AUXILIARY CONTACTOR RELAY***
i) SIEMENS
ii) ABB (GERMANY)
iii) RELPOL (POLAND)

16 ***Surge Protection Devices***
i) Leutron
Ph:-
ii) FATECH (FRANCE)
Ph:- 0333-4561619
ii) ISKRA (SALVANIA)
Ph:- 0300-4025737

17 ***Power Factor Relay***
i) NOKIAN (GERMANY)
ii) ISKRA (SALVANIA)
iii) KLEMSAN (TURKEY)
iv) ZELSILKO (CZEC REPUBLIC)

18 ***Power Capacitors***
i) SHIZUKI (JAPAN)
ii) ISKRA (SALVANIA)
iii) ZELSILKO (CZEC REPUBLIC)

The Federation of Pakistan
Chambers of Commerce & Industry

ISLAMABAD

BIDDING DOCUMENTS

For

NATIONAL COMPETITIVE BIDDING

PACKAGE-2

FOR PROCUREMENT OF MV Panels, Transformer (1000 KVA), LT-Switchgear & MV cable

Price: Rs.5,000/-

The Federation of Pakistan
Chambers of Commerce & Industry

Invitation for Bids/Quotations For Package-2 (For procurement of MV Panels, Transformer (1000 KVA), LT-Switchgear & MV cable)

Bid Ref No. FPCCI 01/2020

1. Federation of Pakistan Chamber of Commerce and Industry (FPCCI), Islamabad invites sealed bids from the original manufacturers/ authorized distributors in Pakistan, registered with Income Tax & Sales Tax Dept. for Supply and Installation of MV Panels, Transformer (1000 KVA), LT-Switchgear & MV cable.

2. Interested bidders may obtain bidding documents, containing detailed terms and conditions & specifications of required item from the office of the **Secretary General, the Federation of Pakistan Chambers of Commerce & Industry, Federation House, Block-5, Main Clifton, Karachi Ph:- 021-35873691-94,** on submission of written application. Price of the bidding documents is Rs. 5,000/- (PO/DD favoring FPCCI non refundable). The procurement shall be completed in accordance with PPRA Rules 2004.The advertisement & bidding documents are also available on www.fpcci.org.pk free of cost. However, the applicants must register with FPCCI for any future communication.

3. A single package for each containing Technical and Financial proposal, in separate envelopes, duly signed, stamped, sealed and in complete conformity with tender document should reach **the Federation of Pakistan Chambers of Commerce & Industry, Federation House, Block-5, Main Clifton, Karachi Ph.:- 021-35873691-94 on or before Tuesday 07th July, 2020, at 11:00 am.** Tenders will be opened at 1200 noon on the same day in the presence of bidders/representatives who choose to attend, at FPCCI Head Office, Karachi. Late tenders will be rejected and returned unopened to bidders.

4. Bidders are advised to visit the site for physical inspection of the building /site etc. FPCCI staff can assist.

5 Bidders must ensure that all the required documents indicated in the Bidding Documents are submitted with the bid without fail. Incomplete bids or bids received without undertakings, valid documentary evidence, supporting documents or are not sealed, signed or stamped, late or submitted by other than specified mode will not be considered. Single stage two envelope procedure of open competitive Bidding will be followed.

6. Income/sales tax registration certificate, PEC certificate and other documents as mentioned in bidding documents must accompany the bids. Taxes will be deducted as per Government of Pakistan rules.

7. The bid security at the rate of 2% of the total Quoted value in the shape of call deposit or a bank guarantee issued by a scheduled bank in the name of the Federation of Pakistan Chambers of Commerce & Industry (FPCCI), Karachi must accompany with the offer Tender.

8. The bidder must submit followings:-

i) Copy of enrollment with PEC and renewed for the year 2020 in the required category (CAT-6 in the field of EE-04 & EE-05).

ii) List of complete permanent business management, finance management & engineering/technical staff with their complete bio data and proof of stay with the firm.

iii) Year of establishment supported by certificate from registrar of the firms.

iv) Details of similar projects completed by the firm/contractor in last 05 years showing location, contact details, purchase orders and approximate cost of project which will be verified from individual client.

Secretary General
The Federation of Pakistan Chambers of Commerce & Industry
Federation House, Block-5, Main Clifton, Karachi
Tel: 021-35873691-4

The Federation of Pakistan
Chambers of Commerce & Industry

BIDDING DOCUMENTS

For

NATIONAL COMPETITIVE BIDDING

(*For procurement of MV Panels, Transformer (1000 KVA), LT-Switchgear & MV cable)*

Part One	I. Instructions to Bidders(ITB) II. Bid Data Sheet (BDS)
Part Two	I. Schedule of Requirements II. Technical Specifications III. Standard Forms
Part Three	I. General Conditions of Contract (GCC) II. Special Conditions of Contract (SCC)

FEDERATION OF PAKISTAN CHAMBER OF COMMERCE AND INDUSTRY

ISLAMABAD

July, 2020

Part One

Section I. Instructions to Bidders (ITB)

Instructions to Bidders (ITB)

A. Introduction

1. Name of Client and address

1.1 Federation of Pakistan Chamber of Commerce and Industry (FPCCI), Sector G-8/1, Islamabad

2. Eligible Bidders

2.1 General Sales Tax Registered.
2.2 Active National Tax Number Registered.
2.3 The bidder must submit.
  i) Company's audit report for last three years.
  ii) Last three years tax return.
  iii) Bank statements of last three years.
2.4 Registered with PEC in relevant category & field.
2.5 Bidder should be Wapda approved manufacturer of MV panel, transformers and LT-Switchgears.
2.6 The bidder should be ISO 9001:2015 certified.
2.7 Bidders shall not be under a declaration of ineligibility for corrupt and fraudulent practices issued by the Government of Pakistan in accordance with ITB Clause 31.1.

3. Cost of Bidding

3.1 The Bidder shall bear all costs associated with the preparation and submission of its bid, and the Client named in the Bid Data Sheet, hereinafter referred to as "the Client," will in no case be responsible or liable for those costs, regardless of the conduct or outcome of the bidding process.

B. The Bidding Documents

4. Content of Bidding Documents

4.1 The Goods & services required, bidding procedures, and contract terms are prescribed in the bidding documents. In addition to the Invitation for Bids, the bidding documents include:

(a) Instructions to Bidders (ITB)
(b) Bid Data Sheet (BDS)
(c) General Conditions of Contract (GCC)
(d) Special Conditions of Contract (SCC)
(e) Schedule of Requirements
(f) Technical Specifications
(g) Bid Form and Price Schedules
(h) Contract Form

4.2 The Bidder is expected to examine all instructions, forms, terms, and specifications in the bidding documents. Failure to furnish all information required in the bidding documents or to submit a bid not substantially responsive to the bidding documents in every respect will be at the Bidder's risk and may result in the rejection of the bid.

5. Clarification of Bidding

5.1 A prospective Bidder requiring any clarification of the bidding documents may notify the Client in writing at the Client's address

Documents

indicated in Bid Data Sheet (BDS). The Client will respond in writing to any request for clarification of the bidding documents which it receives no later than five (05) days prior to the deadline for the submission of bids prescribed in the Bid Data Sheet. Written copies of the Client's response (including an explanation of the query but without identifying the source of inquiry) will be sent to all prospective bidders that have received the bidding documents, directly from the client.

6. Amendment of Bidding Documents

6.1 At any time prior to the deadline for submission of bids, the Client, for any reason, whether at its own initiative or in response to a clarification requested by a prospective Bidder, may modify the bidding documents by amendment, without substantially changing nature of procurement.

6.2 All bidders that have purchased the bidding documents, from the Client, will be notified of the amendment in writing which will be binding on them.

6.3 In order to allow prospective bidders reasonable time in which to take the amendment into account in preparing their bids, the Client, at its discretion, may extend the deadline for the submission of bids.

C. Preparation of Bids and Bidding Procedure

7. Language of Bid

7.1 The bid prepared by the Bidder, as well as all correspondence and documents relating to the bid exchanged by the Bidder and the Client, shall be written in the language specified in the Bid Data Sheet.

8. Documents Comprising the Bid

8.1 The bid prepared by the Bidder shall comprise the following components:

(a) a Bid Form, specifications and a Price Schedule completed in accordance with ITB Clauses 9, 10, and 11; and

(b) bid security furnished in accordance with ITB Clause 13.

(c) Single stage one envelope bidding procedure will be adopted.

9. Bid Form

9.1 The Bidder shall complete the Bid Form and the appropriate Price Schedule furnished in the bidding documents, indicating the Goods to be supplied& services to be carried out, a brief description of the Goods+ services, quantity, and prices.

10. Bid Prices

10.1 The Bidder shall indicate on the appropriate Price Schedule the unit prices (where applicable) and total bid price of the Goods it proposes to supply under the contract.

10.2 Prices indicated on the Price Schedule shall be delivered duty paid

(DDP) i.e. inclusive of all applicable taxes, prices. The price of other (incidental) services, if any, listed in the Bid Data Sheet will be entered separately.

10.4 The Bidder's separation of price components in accordance with ITB Clause 10.2 above will be solely for the purpose of facilitating the comparison of bids by the Client and will not in any way limit the Client's right to contract on any of the terms offered.

10.5 Prices quoted by the Bidder shall be fixed during the Bidder's performance of the contract and not subject to variation on any account, unless otherwise specified in the Bid Data Sheet. A bid submitted with an adjustable price quotation will be treated as nonresponsive and will be rejected two or more prices for a single item will be treated as non-responsive.

11. Bid Currencies

11.1 Prices shall be quoted in Pak Rupees unless otherwise specified in the Bid Data Sheet.

12. Documents Establishing Bidder's Eligibility and Qualification

12.1 Pursuant to ITB Clause 8, the Bidder shall furnish, as part of its bid, documents establishing the Bidder's eligibility to bid and its qualifications to perform the contract if its bid is accepted.

12.2 The documentary evidence of the Bidder's qualifications to perform the contract if its bid is accepted shall establish to the Client's satisfaction:

(a) The Bidder meets the qualification criteria listed in the Bid Data Sheet.

13.
(i) Bid Security
(ii) Performance Guaranty

13.1 Pursuant to ITB Clause 8, the Bidder shall furnish, as part of its bid, a bid security in the amount specified in the Bid Data Sheet.

13.2 The bid security is required to protect the Client against the risk of Bidder's conduct which would warrant the security's forfeiture, pursuant to ITB Clause 13.7.

13.3 The bid security shall be in Pak. Rupees and shall be in one of the following forms:

(a) Irrevocable en-cashable call-deposit/bank draft/pay order in name of the Client given under ITB clause 13.1 of Bid Data Sheet.

13.4 Any bid not secured in accordance with ITB Clauses 13.1 and 13.3 of the BDS will be rejected by the Client as nonresponsive, pursuant to ITB Clause 22.

13.5 Unsuccessful bidders' bid security will be discharged or returned as promptly as possible but not later than thirty (30) days after the

expiration of the period of bid validity prescribed by the Client pursuant to ITB Clause 14.

13.6 The bid security may be forfeited:

(a) if a Bidder withdraws its bid during the period of bid validity specified by the Bidder on the Bid Form; or

(b) in the case of a successful Bidder, if the Bidder fails:

(i) to sign the contract in accordance with ITB Clause 30;
(ii) Fails to deliver the Goods within stipulated time period as per Schedule of Requirements: Section: I – Part Two. 13.710% of the total quoted price shall be treated as performance guarantee for the whole period of warranty.

14. Period of Validity of Bids

14.1 Bids shall remain valid for the period specified in the Bid Data Sheet after the date of bid opening prescribed by the Client, pursuant to ITB Clause 20. A bid valid for a shorter period shall be rejected by the Client as nonresponsive.

14.2 In exceptional circumstances, the Client may solicit the Bidder's consent to an extension of the period of validity. The request and the responses thereto shall be made in writing. The bid security provided under ITB Clause 13 shall also be suitably extended. A Bidder may refuse the request without forfeiting its bid security. A Bidder granting the request will not be required nor permitted to modify its bid.

15. Format and Signing of Bid

15.1 The Bidder shall prepare an original and the number of copies of the bid indicated in the Bid Data Sheet, clearly marking each "ORIGINAL BID" and "COPY OF BID," as appropriate. In the event of any discrepancy between them, the original shall govern.

15.2 The original and the copy or copies of the bid shall be typed or written in indelible ink and shall be signed by the Bidder or a person or persons duly authorized to bind the Bidder to the contract. All pages of the bid, except for unamended printed literature, shall be initialed by the person or persons signing the bid.

15.3 Any interlineations, erasures, or overwriting shall not be valid even if they are initialed by the person or persons signing the bid. The bid should be duly binded and each page signed/stamped by authorized person.

D. Submission of Bids

16. Sealing and Marking of Bids

16.1 The Bidder shall seal the original and each copy of the bid in separate envelopes, duly marking the envelopes as "ORIGINAL" and "COPY." The envelopes shall then be sealed in an outer envelope.

16.2 The inner and outer envelopes shall:

(a) be addressed to the Client at the address given in the Bid Data Sheet; and

(b) bear the name indicated in the Bid Data Sheet, the Invitation for Bids title and number indicated in the Bid Data Sheet, and a statement: "DO NOT OPEN BEFORE," to be completed with the time and the date specified in the Bid Data Sheet, pursuant to ITB Clause 20.

16.3 The inner envelopes shall also indicate the name and address of the Bidder to enable the bid to be returned unopened in case it is declared "late".

16.4 If the outer envelope is not sealed and marked as required by ITB Clause 16.2, the Client will assume no responsibility for the bid's misplacement or premature opening.

17. Deadline for Submission of Bids

17.1 Bids must be received by the Client at the address specified in the Bid Data Sheet no later than the time and date specified in the Bid Data Sheet.

17.2 The Client may, at its discretion, extend this deadline for the submission of bids by amending the bidding documents in accordance with ITB Clause 6, in which case all rights and obligations of the Client and bidders previously subject to the deadline will thereafter be subject to the deadline as extended.

18. Late Bids

18.1 Any bid received by the Client after the deadline for submission of bids prescribed by the Client pursuant to ITB Clause 17 will be rejected and returned unopened to the Bidder.

19. Modification and Withdrawal of Bids

19.1 The Bidder may modify or withdraw its bid after the bid's submission, provided that written notice of the modification, including substitution or withdrawal of the bids, is received by the Client prior to the deadline prescribed for submission of bids.

19.2 The Bidder's modification or withdrawal notice shall be prepared, sealed, marked, and dispatched in accordance with the provisions of ITB Clause 16. A withdrawal notice may also be sent by cable, but followed by a signed confirmation copy, postmarked not later than the deadline for submission of bids.

19.3 No bid may be modified after the deadline for submission of bids.

19.4 No bid may be withdrawn in the interval between the deadline for submission of bids and the expiration of the period of bid validity specified by the Bidder on the Bid Form. Withdrawal of a bid during this interval may result in the Bidder's forfeiture of its bid security, pursuant to the ITB Clause 13.7.

E. Opening and Evaluation of Bids

20. Opening of Bids by the Client

20.1 The Client will open all bids in the presence of bidders' representatives who choose to attend, at the time, on the date, and at the place specified in the Bid Data Sheet. The bidders' representatives who are present shall sign a register/ attendance sheet evidencing their attendance.

20.2 The bidders' names, bid modifications or withdrawals, bid prices, discounts, and the presence or absence of requisite bid security and such other details as the Client, at its discretion, may consider appropriate, will be announced at the opening. No bid shall be rejected at bid opening, except for late bids, which shall be returned unopened to the Bidder pursuant to ITB Clause 18.

20.3 Bids (and modifications sent pursuant to ITB Clause 19.2) that are not opened and read out at bid opening shall not be considered further for evaluation, irrespective of the circumstances. Withdrawn bids will be returned unopened to the bidders.

20.4 The Client will prepare minutes of the bid opening.

21. Clarification of Bids

21.1 During evaluation of the bids, the Client may, at its discretion, ask the Bidder for a clarification of its bid. The request for clarification and the response shall be in writing, and no change in the prices or substance of the bid shall be sought, offered, or permitted.

22. Preliminary Examination

22.1 The Client will examine the bids to determine whether they are complete, whether any computational errors have been made, whether required sureties have been furnished, whether the documents have been properly signed, and whether the bids are generally in order.

22.2 Arithmetical errors will be rectified on the following basis. If there is a discrepancy between the unit price and the total price that is obtained by multiplying the unit price and quantity, the unit price shall prevail, and the total price shall be corrected. If the Contractor does not accept the correction of the errors, its bid will be rejected, and its bid security may be forfeited. If there is a discrepancy between words and figures, the amount in words will prevail.

22.3 The Client may waive any minor informality, nonconformity, or irregularity in a bid which does not constitute a material deviation, provided such waiver does not prejudice or affect the relative ranking of any Bidder.

22.4 Prior to the detailed evaluation, pursuant to ITB Clause 23 the Client will determine the substantial responsiveness of each bid to the bidding documents. For purposes of these Clauses, a substantially responsive bid is one which conforms to all the terms and conditions of the bidding documents without material deviations. Deviations from, or objections or reservations to critical provisions, **such as** those concerning Bid Security (ITB Clause 13) and Taxes and Duties will be deemed to be a material deviation. The Client's determination of a bid's responsiveness is to be based on the contents of the bid itself without recourse to extrinsic evidence.

22.5 If a bid is not substantially responsive, it will be rejected by the Client and may not subsequently be made responsive by the Bidder by correction of the nonconformity.

23. Criteria for Evaluation of Technical Proposal

The Bidder shall be liable to post qualification for being "Eligible" for participating in the Bidding Process for the "**Supply & Installation of MV Panels, Transformer (1000 KVA), LT-Switchgear & MV Cable**" of The Federation of Pakistan Chamber of Commerce and Industry (FPCCI) which as mandated under Government of Pakistan PPRA Rule 2004 vide Rule No. 36 (b) shall be based upon single stage "Two Envelope Bidding Procedure.

23.1 General

The technical proposal of the Bidders shall be evaluated for the Post-qualification of bidders for construction of the subject project basing as the criteria given in succeeding paras regarding the Applicant's Basis Eligibility, Work Experience, Personnel Capabilities, Registration/Licenses and Financial Soundness. Sub-contractor's experience and resources shall not be taken into account in determining the applicant's compliance with the qualifying criteria.

23.2 Mandatory Requirements

For consideration of the Technical Proposals submitted by the bidders, following are the mandatory requirements.

i) License of the bidder with Pakistan Engineering Council (PEC), valid up to June, 30th 2020 or later in Category and above and having specialization code of Category-6 in the field of EE-04 & EE-05.
ii) Bid security as mentioned in Instruction to Bidders Clause ITB 13.1.
iii) Documentary evidence of the year of establishment of the bidding firm. Must have minimum 10 years' experience as per Instruction to Bidders Clause ITB 12.2.

Further evaluation of only those bidders will be done who have cleared above mandatory requirements. Bids of applicants who do not have the required PEC License and/or have not provided the above mandatory documents, will be declared as non-responsive, and will not be proceed further & their financial bids will be returned un-opened.

23.3 Weightage/ Marks

The weightage/distribution of the marks shall be as given below:-

i)	Registrations/Licenses.	30
ii)	Work Experience.	25
ii)	Personnel Capabilities.	20
iii)	Financial Capabilities.	25
	Total	**100**

23.5 Joint Venture (JV)

A Joint Venture submitting a bid must comply with the following requirements.

a) Following are minimum qualification requirement.

i) The lead partner shall obtain not less than 40 percent of maximum marks allocated under each head of the qualification criteria set forth in Para 4 to 7 heretofore.

ii) Additionally, the joint venture must collectively satisfy the criteria of Para-2 i.e. secure a total of 60 marks for which purpose the relevant figures of each of the member shall be added together to arrive at the JV's total capacity.

Bid shall be signed by all members in the JV so as to legally bind all partners jointly and severally and bid shall be submitted with a copy of JV agreement providing the joint and several liabilities with respect to the contract.

24. Evaluation and Comparison of Bids

24.1 The Client will evaluate and compare the bids which have been determined to be substantially responsive, pursuant to ITB Clause 22.

24.2 The Client's evaluation of a bid, further elaborated under Bid Data Sheet, will be on delivered duty paid (DDP) price inclusive of prevailing duties and transportation charges, and it will exclude any allowance for price adjustment during the period of execution of the contract, if provided in the bid.

25.Contacting the Client

25.1 Subject to ITB Clause 21, no Bidder shall contact the Client on any matter relating to its bid, from the time of the bid opening to the time the contract is awarded. If the Bidder wishes to bring additional information to the notice of the Client, it should do so in writing.

25.2 Any effort by a Bidder to influence the Client in its decisions on bid evaluation, bid comparison, or contract award may result in the rejection of the Bidder's bid.

F. Award of Contract

26. Qualification

26.1 In the absence of prequalification, the Client will determine to its satisfaction whether the Bidder that is selected as having submitted the lowest evaluated responsive bid is qualified to perform the contract satisfactorily.

26.2 The determination will take into account the Bidder's compliance with the qualification criteria defined in the Bid Data Sheet.

27. Award Criteria

27.1 Subject to ITB Clause 28, the Client will award the contract to the successful Bidder whose bid has been determined to be substantially responsive and has been determined to be the lowest evaluated bid, provided further that the Bidder is determined to be qualified to perform the contract satisfactorily.

28. Client's Right to Vary Quantities at Time of Award

28.1 The Client reserves the right at the time of contract award to increase or decrease, by the percentage indicated in the Bid Data Sheet, the quantity of goods and services originally specified in the Schedule of Requirements without any change in unit price or other terms and conditions.

29. Client's Right to Accept any Bid and to Reject any or All Bids

29.1 The Client reserves the right to accept or reject any bid, and to annul the bidding process and reject all bids at any time prior to contract award, without thereby incurring any liability to the affected Bidder or bidders. The Client will inform the affected Bidder or bidders of the grounds for the Client's action, if so requested, but the Client shall not be required to justify the grounds.

30. Notification of Award

30.1 Prior to the expiration of the period of bid validity and subject to ITB Clause 29.3, the Client will notify the successful Bidder in writing by registered letter or by cable, to be confirmed in writing by registered letter, that its bid has been accepted.

30.2 The notification of award under ITB 29.1 will constitute the formation of the Contract.

30.3 The Client shall announce the results of bid evaluation in the form of a report giving justification for acceptance or rejection of bids at least ten days prior to the award of contract.

31. Signing of Contract

31.1 At the same time as the Client notifies the successful Bidder that its bid has been accepted, the Client will send the Bidder the Contract Form provided in the bidding documents, incorporating all agreements between the parties.

31.2 Within fifteen (15) days of receipt of the Contract Form, the successful Bidder shall sign and date the contract and return it to the Client.

32. Corrupt or Fraudulent Practices

32.1 The Client observes the highest standard of ethics during the procurement and execution of such contracts. In pursuance of this policy, the Client:

(a) defines, for the purposes of this provision, the terms set forth below as follows:
"corrupt and fraudulent practices" includes the offering, giving, receiving, or soliciting of anything of value to influence the action of a public official or the Contractor or contractor in the procurement process or in contract execution to the detriment of the procuring agencies; or misrepresentation of facts in order to influence a procurement process or the execution of a contract, collusive practices among bidders (prior to or after bid submission) designed to establish bid prices at artificial, non-competitive levels and to deprive the procuring agencies of the benefits of free and open competition and any request for, or solicitation of anything of value by any public official in the course of the exercise of his duty

(b) will reject a proposal for award if it determines that the Bidder recommended for award has engaged in corrupt or fraudulent practices in competing for the contract in question;

(c) will declare a firm ineligible, either indefinitely or for a stated period of time, to be awarded a PPRA financed contract if it at any time determines that the firm has engaged in corrupt and fraudulent practices in competing for, or in executing, a PPRA financed contract.

33.Tender Cost

33.1 The Tenderer shall bear all costs / expenses associated with the preparation and submission of the Tender(s) and the FPCCI shall inno case be responsible / liable for those costs / expenses.

34.Submission / Preparation of Tender.

34.1 The Tender besides Firm/Company profile, shall submit the proposal two parts i.e. **the Technical Proposal and the Financial Proposal**.

34.2 Technical Proposal shall comprise the following, **without quoting the price**:

(a) Undertaking (All terms & conditions and qualifications listed anywhere in this tender document have been satisfactorily vetted).

(b) Certificate of Company/Firm Registration/Incorporation under the laws of Pakistan.

(c) Covering letter duly signed and stamped by authorized representative.

(d) Technical Brochures / Literature/certificate.

(e) Submission of undertaking on legal valid and attested stamp paper that the firm is not blacklisted by any of Provincial or

Federal Government Department, Agency, Organization or autonomous body or Private Sector Organization anywhere in Pakistan

(f) Valid Registration Certificate for Income Tax & Sales Tax.

(g) Income Tax & Sales Tax Returns for the last three (3) tax years.

h) All the other information as detailed in para 13.2 and 13.3 in the tender document.

34.3 The Financial Proposal shall comprise the following:

(a) BOQ Form

(b) This is made obligatory to affix authorized signatures with official seal on all original documents, copies, certificates, brochures, l literature, drawings, letters, forms and all relevant documents as part of the bids submitted by the tenderer.

35.Tender Validity 35.1 The Tender shall have a minimum validity period of **three months** from the last date for submission of the Tender.

Section II.

Bid Data Sheet (BDS)

Bid Data Sheet

The following specific data for the goods to be procured shall complement, supplement, or amend the provisions in the Instructions to Bidders (ITB): Section I. Whenever there is a conflict, the provisions herein shall prevail over those in ITB.

A. The Bidding Document		
ITB 7.1	Language of the Bid	English

B. Preparation of Bids		
ITB 10.2	The price quoted shall be	Pak Rupees inclusive of all applicable taxes & transportation charges.
ITB 10.5	The price shall be	1.Best / final / fixed and valid until completion of all delivery i.e. not subject to variation / escalation and price should remain valid for 6 months; 2. Fixed and must include the Income & General Sales Taxes (GST) and other taxes and duties, where applicable as per law. If there is no mention of taxes, the offered / quoted price(s) will be considered as inclusive of all prevailing taxes / duties. 3.Includes all charges up to the delivery point 4. Where no prices are entered against any item(s), the price of that item shall be deemed free of charge, and no separate payment shall be made for that item(s).
ITB 12.2 (a)	Qualification requirements.	1. The bidder must be a registered/incorporated company/firm in Pakistan and have at least ten (10) years of experience in manufacturing or supplying and installing similar items as requisitioned in the bid. 2. Must be registered with Tax Authorities as per prevailing tax rules (Only those companies which are validly registered with sales tax and income tax departments can participate) 3. Has valid Registration of General Sales Tax (GST), National Tax Number (NTN)& PEC certificate. 4. Has submitted bid for all works required. 5. Has not been blacklisted by any of Provincial or Federal Government Department, Agency, Organization or autonomous body anywhere in Pakistan. (Submission of undertaking on legal stamp paper is mandatory). 6. Compliance to the technical specifications mentioned in BDS, in full compliance of the Execution Schedule and Delivery Period mentioned in tender document (Undertaking of same on legal stamp paper is must). 7. Must have Office /Regional Office / in Islamabad and is Registered with Pakistan Engineering Council. 8. Must have 15 or more corporate clientele where installation of 1000 KVA or higher transformer have been undertaken by the

		firm. Documentary evidence/ customer testimonial from at least 5 customers would be required. 9. Documentary evidence to the above must be provided with the Bid, which includes copy of contract/purchase order, etc. 10. The bidder must submit National Tax No., Sales Tax No. Certificates, as well as certificate of incorporation/registration of the firm.
ITB 13.1	Amount of bid security	2 % of the total quoted bid price.
	Amount of Performance Guaranty	10% of the total quoted price shall be treated as guaranty for the whole period of warranty.
ITB 13.3	Form of Bid Security	(i) The tenders found deficient of the amount as bid security compared to total bid price will not be considered. (ii) No personal cheques will be acceptable at any cost. (iii) The previous bid security will not be considered or carried forward.
ITB 14.1	Bid validity period.	Bid should remain valid for 90 days from the closing date.
ITB 15.1	Number of copies.	One original & One additional Copy.

C. Submission of Bids		
ITB 17.1	Address for bid submission.	FPCCI head office, Federation House, Block 5, Main Clifton, Karachi. Ph.:- 021- 35873691- 94
ITB 17.1	Deadline for bid submission.	Tuesday 07th July, 2020at 11:00 am

D. Opening of Bids		
ITB 20.1	Time, date, and place for bid opening.	Tuesday 07th July, 2020at 1200 noon FPCCI head office, Federation House, Block 5, Main Clifton, Karachi. Ph.:- 021- 35873691- 94

E. Calculation of Marks for Technical Evaluation		
ITB 23	**Registrations/ Licenses**	The overall minimum qualifying score shall be 70% marks and at least 50% marks in each category to qualify. A detailed post-qualification criterion is given hereunder.

Sr. No.	Description	Marks
1.	Registration with FBR as active tax payer.	5

<table>
<tr><td></td><td></td><td>
<table>
<tr><td>2.</td><td>Wapda approved manufacturer for MV Panels & Transformer.</td><td>10</td></tr>
<tr><td>3.</td><td>ISO 9001 certification.</td><td>5</td></tr>
<tr><td>4.</td><td>PEC license valid up to 30th June, 2020 CAT-6 in the field of EE-04 & EE-05</td><td>10</td></tr>
<tr><td colspan="2">Total Marks</td><td>30</td></tr>
</table>
</td></tr>
<tr><td>ITB 23</td><td>Work Experience</td><td>Marking for work experience of the firm or joint venture shall be evaluated as per following criteria.
<table>
<tr><th>Sr. No.</th><th>Description</th><th>Max. Marks</th></tr>
<tr><td rowspan="2">1.</td><td>Project of similar nature and complexity (Completed).</td><td rowspan="2">15</td></tr>
<tr><td>Project with cost at least Rs. 2.5 million completed in last 5-years.</td></tr>
<tr><td rowspan="2">2.</td><td>Project similar nature and complexity (in hand)</td><td rowspan="2">10</td></tr>
<tr><td>Project with cost at least Rs. 2.5 million in-hand at least one.</td></tr>
<tr><td colspan="2">Total Marks</td><td>25</td></tr>
</table>
Note: Proof of projects completed and in hand shall be in the shape of completion certificate and letter of award respectively.</td></tr>
<tr><td>ITB 23</td><td>Professional Capabilities</td><td>Making for personal capabilities of the firm/joint venture shall be evaluated on the basis of following criteria.
<table>
<tr><th>Sr. No.</th><th>Description</th><th>Max. Marks</th></tr>
<tr><td>I.</td><td>Graduate Engineers (Electrical Engineers)
a) Electrical Engineer 5 marks having 10 years of relevant experience, and 2.5 marks with 5-10 years of experience.</td><td>10</td></tr>
<tr><td>II.</td><td>Diploma of Associate Engineers-DAE (Mechanical & Electrical)
a) Associate Engineer-Mechanical 2 marks for each DAE Mechanical Engineering with 5-10 years of experience (Maximum 2 Marks).
b) Associate Engineer-Electrical 2 marks for each DAE Electrical Engineering with 5-10 years of experience (Maximum 2 Marks).</td><td>10</td></tr>
<tr><td></td><td>Total marks</td><td>20</td></tr>
</table>
Note:-CV’s, PEC registration certificate and affidavit on stamp</td></tr>
</table>

<table>
<tr><td></td><td></td><td>paper of the professional staff currently employed with the firm in mandatory for submission.</td></tr>
<tr><td>ITB 23</td><td>Financial Capabilities</td><td>Making for financial capabilities of the firm or joint venture shall be evaluated on the basis of following criteria.
<table>
<tr><th>Sr. No.</th><th>Description</th><th>Max. Marks</th></tr>
<tr><td>1.</td><td>Balance available/Current Assets
Balance available amount to Rs. 2.5 million or more Balance available less than Rs. 2.5 million shall be evaluated proportionately.</td><td>10</td></tr>
<tr><td>2.</td><td>Business Turnover
Business Turnover for the last 3 years is 2 times amount to Rs. 2.5 million or more Constriction turnover less than Rs. 2.5 million shall be evaluated proportionately.</td><td>10</td></tr>
<tr><td>3.</td><td>Financial Bid Capacity
Financial Bid Capacity equal to amount of Rs. 5million or more Financial Bid Capacity less than Rs. 5 million shall be evaluated proportionately.</td><td>5</td></tr>
<tr><td></td><td>Total marks</td><td>25</td></tr>
</table>
- Maximum marks. 100
- Minimum marks. 70</td></tr>
</table>

<table>
<tr><th colspan="3">F. Technical Evaluation Criteria for Bids</th></tr>
<tr><td>ITB 24</td><td>Criteria for bid evaluation.</td><td>1. As per ITB 12.2 (a) listed above.
(i) Delivered Duty Paid (inclusive of all applicable taxes & transportation charges), installation & commissioning Price Only.
(ii) Bidders cannot bid for partial quantities of an item in the Schedule of requirement. The bid must be for the whole quantity of an item required in the schedule of requirement.
(iii) The bidder has to quote only one rate for each item as per tender specification. No alternate model or separate accessories will be accepted.</td></tr>
</table>

Part Two

I. Schedule of Requirements
II. Technical Specifications
III. Standard Forms

I. Schedule of Requirements

II. Technical Specifications

TECHNICAL SPECIFICATIONS

1.0 ***MEDIUM VOLTAGE SWITCHGEAR***

The switchgear shall be 11000 volt metal clad type, of 350 MVA breaking capacity, for indoor application. It shall be triple pole and all the three poles shall be coupled so as to operate simultaneously.

The switchgear shall comprise of vacuum circuit breaker/load break switches.

The switchgear shall be supplied and tested in accordance with the following International Elector Technical Commission Publications.

IEC	Publication	56-1
IEC	Publication	56-1A
IEC	Publication	56-1B
IEC	Publication	56-2
IEC	Publication	56-3
IEC	Publication	56-4
IEC	Publication	185-1 Specification for current Transformers
IEC	Publication	51-Specifications for Instruments.

The definitions given in the above IEC Publication shall apply herein.

In case the requirements laid down herein differ from those given in the IEC Publications, these requirements shall be deemed to be in additions of the requirements as laid down in IEC Publications.

All the associated equipment and accessories shall be so constructed and designed so as comply with all the requirements set out in these specifications. The switchgear shall be designed for indoor use and to be mounted on the floor. The switchgear shall be supplied in the form of single panels for quick assembly at Site in the form of a switchboard.

Each panel shall comprise of a draw out type circuit breaker and all its associated equipment and accessories shall be self-contained and self-supporting. Each panel shall be capable of being connected to a switchboard on either side. In each panel the circuit breaker shall be equipped with a mechanism for moving it physically between the connected and dis-connected positions and also equipped with self-aligning and self-coupling primary and secondary dis-connecting devices.

All secondary circuit wiring, instruments, meters and relays etc, shall as for as possible be isolated by grounded metal barriers from all primary circuit elements with the exception of short lengths of wires such as instrument transformer terminals. All removable components of the same type and rating in a switchboard shall be physically and electrically interchangeable.

The breaker shall have mechanical “ON”, “OF” and “EARTHS” position indicator. Mild steel rails shall be provided at the base to guide smooth entry of the breaker carriage into the panel. The

terminals and inter-connections between parts shall be designed to ensure permanently low resistance contacts. The power carrying circuits shall be capable of carrying its rated current at rated voltage and rated frequency continually without excessive maintenance. Even after repeated fault interruption, the capability of the circuit breaker to carry its rated current continuously shall not be seriously impaired. The manufacturer's literature and technical data to prove this point shall be furnished by the Contractor.

The circuit breaker shall be capable of interrupting any current form Zero to its rated breaking current when used on any predominantly resistive and/or inductive circuits. The breaking time at all ratings less than the rated breaking current shall not exceed the rated breaking time. The arc interrupting mechanism shall be designed with ample mechanical and electrical factors of safety in all its parts. The parts shall consist of a minimum number of assemblies arranged for convenient installation and readily removable for repair or inspection. The mechanical strength and physical characteristics of the insulation structure shall be such that it can withstand the shocks of the circuit breaker operations within the rated capacities and reasonable strains of connecting conductors under the specified service conditions. This insulation shall be in accordance with the classification of the IEC Publication No. 85.

The rods or tubes used for raising or lowering the moving contacts of the circuit breaker shall be securely pinned at each end to prevent rotation for displacement of the contacts.

Ventilation outlets from circuit breaker shall be so arranged that any discharge of oil and/or gases or both will not cause electrical breakdown and shall be directed away from a likely palace where an operator may have to be in the cause of this ordinary duties. The construction shall be such that gas cannot collect at any point where fire can be caused during or after operation, by sparks arising from normal working of the circuit breaker or its ancillary equipment. A set of 6 male and 6 female silver plated self-aligning isolating contacts shall be provided for separating the breaker from the bus bars. These shall be interlocked and protected by automatic shutters with locking facility. The shutters shall marked "BUSBARS" and "CABLES" and distinctly colored. No operation shall cause exposure of the high voltage bus or equipment. The shutters shall operate with certainty upon the withdrawal and replacement of a removable portion but shall be so arranged as to permit the cover over a set or sets of live contacts to the locked by hand in the closed position while the cover over the dead contacts may be opened.

Silver plated plug contacts shall be provided between separate units to complete the secondary circuits. They shall be pressure loaded self-aligning type. The temperature rise of the main circuit of a circuit breaker shall not exceed the values given in Table I of IEC publication 56-2. The maximum temperature of auxiliary circuits and devices when the circuit breaker is carrying the rated current and voltages and when tested in accordance with Clause II of IEC Publication No. 56-2 shall not exceed the value given in Table I. The reference ambient temperature shall be taken as 50 degree centigrade.

These circuit breakers shall have the following characteristics:-

Sr. No.		Characteristics
1.	Current Rating	630 Amps
2.	Voltage Rating	11/12 KV
3.	Frequency	50 Cycles/Second

4.	Breaking Capacity	350 MVA
5.	Breaking Current Sym	18.4 KA/16.9 KA
	Asym	23 KA/21 KA
6.	Making Capacity	892.5 MVA
7.	Power Frequency withstan Voltage	
	i- Type Test	36 KV
	ii- Routine Test	28 KV
8.	Impulse withstand voltage	95 KV
9.	Operating duty	0-15 Cycles-Co-Cum-Co
10.	Total maximum break time	6 Cycles

The circuit breakers shall be capable of breaking any power up to their rated braking capacity. For all recovery voltages between the two rated voltages the breaking capacity ratings in amperes shall be inversely proportional to the voltage. For recovery voltages below rated voltages the breaking capacity expressed in amperes shall have a constant value corresponding to the lower rated voltage. The operating mechanism shall be charged spring power mechanism with manual push button for closing and opening the breaker. The closing spring shall be hand charged.

The mechanism shall be trip free. The closing mechanism shall not prevent or delay the opening of the circuit breaker beyond the standard interrupting time. Latches shall be so designed as to not require delicate or frequent adjustments. The mechanism shall be such as to give a minimum of 1000 operations without wear, breaking or adjustments. Each operation shall consist of complete opening and closing of the circuit breaker. The mechanism shall be of robust construction and of rust proof materials. It shall be capable of withstanding shocks and prevent inadvertent operation, due to fault current stresses, vibrations or other causes. Convenient means of applying lubricants where needed shall be provided. The mechanism shall be provided with means to prevent operation during maintenance.

The following routine tests shall be make on all circuit breakers and manufacturer's certificate shall accompany each breaker.

i) Temperature rise test (IEC Publication 56-2 Clause 15).
ii) Test for operating Conditions (IEC Publication 56-3 Clause 37).
iii) Power frequency dry voltage (IEC Publication 56-4 Clause 17).
iv) Tests on auxiliary circuits (IEC Publication 56-4 Clause 19).
v) Oil Tank leakage tests by any one of the following methods:-
    a) Compressed Air Test.
    b) Oil or Water Pressure Test.
    c) Penetrating liquid without pressure.

The Contractor shall make suitable arrangements for the Engineer to witness such tests at the manufacturer's premises or any recognized test laboratory without any expense to the Owner.

Duly certified and complete test reports of tests carried out by an independent authority on one representative breaker of the same design shall be submitted by the Contractor failing which he shall arrange to carry out the following type test to be witnessed by the Engineer without any expense to the Owner.

i) Temperature rise test (IEC Publication 56-2 Clause 10).
ii) Making capacity and braking capacity rating and short time current rating test (IEC Publication 56-1 Part-III).
iii) Operation tests and mechanical endurance tests (IEC Publication 56-3 Clause 36 except that number of closing and opening operations in case of mechanical endurance test shall be 1000).
iv) Impulse voltage dry withstand test (IEC Publication 56-4 Part-4).
v) One minute Power frequency voltage dry withstand test (IEC Publication 56-Part-4).
vi) One minute power frequency voltage wet withstand test (IEC Publication 56-4 Part-4)

A set of three bus bars made of 98 % I.A.S.C electrical conductivity copper of current rating of 1000 Amps shall be provided. The bus bars shall be fully covered with insulation capable of withstanding the full line voltage. These shall be supported on porcelain insulators and air insulated. The bus bars shall be tinned at all joints and a drawing showing details and method of joining shall accompany the bus bars.

Bracings of sufficient mechanical strength shall be provided to withstand forces of short circuit current to the extent of 23 KA.

The bus bars shall be capable of extension on either side and have adequate provision for expansion and contraction due to temperature variations over a range of 80 degree centigrade. Single pole, epoxy resin insulated, dry type self-contained indoor current transformers suitable for mounting in switchgear shall be supplied. The current transformers shall be manufactured and tested in accordance with IEC Publication 185)1966) and particulars listed therein.

The transformation ration shall be as stated in the Bill of Quantities. The current transformers shall have two core constructions and each core shall be designed for protection and metering. Both cores shall be identical.

The minimum output on any tap for each core of current transformer shall be 30 VA for protection and 10 VA for instruments and metering. The standard accuracy class for the protective service shall be 10P and the accuracy limit factor shall be + 1 %. The standard accuracy class for the instrument and metering service shall be + 1 %. The rated short time Thermal current ratings shall be 13.1 KA. The rated dynamic peak current which the current transformers will withstand without being damaged electrically or mechanically shall be 33.4 KA.

The insulation levels for the current transformers shall be as under:-

Highest Expected Voltage	One Minute Power Frequenc With Sand Voltage (rms)	Impulse With Stan Voltage KV peak
12 KV	34 KV	95 KV

The following routine tests shall be made in accordance with IEC Publication 185 for all ratios and at all taps:-
i) Verification of terminal markings (Clause-14).
ii) Power frequency test at primary windings (Clause-15).

iii) Power frequency test at secondary windings (Clause-16).
iv) Over voltage interterm test (Clause 17 and Clause-40 as applicable).

The following type tests shall be carried out in accordance with IEC Publication 185.
i) Short time current test (Clause 19)/
ii) Temperature rise test (Clause 20).
iii) Impulse voltage test (Clause 21).
iv) Accuracy test (Clause 29).
v) Composite error test (clause 39).
vi) Tests for instrument security current (Clause 31).

The above tests may be omitted if a complete type test result for an identical transformer carried out by an independent agency is supplied by the manufacturers. Three phase, self-contained, indoor, draw out type voltage transformers shall be supplied as required and detailed in the Bill of Quantities. The transformers shall be epoxy resin insulate. The rated frequency shall be 50 Hz and voltage ration shall be 11000/110 volts. The accuracy and tests shall have the above noted frequency and voltage ratio as reference.

The characteristics shall be as follows:-
i) Rated Burden VA 100 Per Phase
ii) Accuracy Limit 0.6 %

The voltage transformer shall withstand for one second the mechanical and thermal stresses resulting from short circuit on the secondary terminals with full voltage maintained on the primary terminals.

The following test shall be carried out on the voltage transformer:-
i) Dielectric test of low frequency.
ii) Impulse test on high voltage windings only.
iii) Ratio and phase angle tests at one standard burden.
iv) Temperature rise test.
v) Impedance Test.

The dielectric test voltage shall be as under;-

	Impulse Test Voltage			
Rated Primar	Low Frequency Test Voltage (rms)	Chopped Wave Crest Voltage	Min. time Flash-over	Full wave Crest
11 KV	34 KV	110 KV	1.8 microseconds	95 KV

The voltage transformers shall be equipped with fuse and fuse links in accordance with B.S. 88/1967.

Back connected dust proof, semi-flush, switchboard type protective relays with transparent removable and sealable covers shall be provided. These shall be preferably plug-in withdraw

able type and all operations for removal and replacement shall be carried out from the front side of the panel.

The relays shall be suitable for climatic conditions described in these specifications and capable of 5000 electrical operations when tested at rated quantities and at a rate which will not result in overheating. The relays shall withstand a test-voltage of 2000 volts (rms). The relays shall be three element type two for over current and one for earth fault. These shall be inverse over-current definite minimum time induction type with inverse time characteristics. These shall be either directional or non-directional as suited to the service conditions. All relays shall be A.C. operated and provided with time and current setting adjustments with suitable range. The relays shall be equipped with instantaneous elements with a setting range from 10 to 40 amps, adjustable continuously. It shall also have an infinity setting or look out position to make the instantaneous element in-operative.

The rated error of all the protective relays shall be not more than 7.5 % at all settings. The relay characteristics shall not change more than plus or minus 7.5 % with changes in ambient temperature of plus or minus 10 degree centigrade from the reference temperature of 25 degree centigrade and with changes in frequency of plus 2 % and minus 6 % from the rated frequency.

The following type tests shall be carried out:-

i) Limits of error.
ii) Temperature rise test.
iii) Overload.
iv) Contact rating test
v) mechanical Durability
vi) Variation characteristics with ambient conditions and frequency.

Certified test results by an independent agency on the type of relays shall be supplied by the manufacturer.

All live parts of the panel including bus bars, connections, circuit breaker, isolators, voltage transformer, and current transformers shall be suitably enclosed. Access for normal maintenance shall be through doors with locking facilities. The enclosure shall have hinged door in front and bolted plates in rear. However, the incoming panels will be provided with hinged doors with locks in the rear as well.

The enclosure shall be making of high grade sheet steel of minimum thickness ⅛ (3mm) except that smaller compartments may be of a lesser thickness. The steel sections shall be rigidly welded and the entire enclosure shall be self-supporting and free standing. Suitable eye bolts shall be provided for lifting each individual panel by means of slings. The enclosure shall be completely vermin proof with special regard to dangers of flashover both in service and isolated position.

The enclosure and the breaker shall be completely de-rusted and degreased. It shall be given a priming coat of zinc chromate and iron oxide or any other equivalent. The following instruments shall be installed on the Wapda incoming panel and it shall be manufactured as per Wapda standard specification P44:87.

i) One voltmeter 0-12 KV range, moving iron spring controlled in a pressed steel case.
ii) One ammeter of suitable range conforming to the C.T ratio, moving iron, spring controlled in pressed steel case.
iii) One voltmeter phase selector switch.
iv) One ammeter phase selector switch.
v) One KWH meter with M.D.I.
vi) One KVARH meter.
vii) One IDMT relay.

The following instruments shall be installed on the outgoing panels for the transformers.
i) One voltmeter 0-12 KV range iron, moving spring controlled in a pressed steel case.
ii) One ammeter of suitable range conforming to the C.T. ratio, moving iron, spring controlled in pressed steel case.
iii) One voltmeter phase selector switch.
iv) One ammeter phase selector switch.
v) IDMT relay.
vi) Auxiliary relay, single pole for BUCHHLOZ relay protection.

The indicating instruments shall be flush mounted back connected, dust proof with a transparent dust proof cover. The dials shall be white with permanent, black graduations.

The instruments shall be manufactured and tested in accordance with IEC Publication 51.

The panel or the switch board as described in the Bill of Quantities shall be delivered complete at site ready wired complete with name plate, designation labels, circuit labing the small wiring shall be tested at 2000 Volts D.C.

The following data shall appear on the name plate of each circuit breaker.
1. Manufactures name and Address.
2. Manufacture's type, designation and serial number.
3. Year of Manufacture.
4. Owner's Identification Mark.
5. Standard to which Manufactured.
6. Rated Voltage.
7. Rate Frequency.
8. Rated Normal Current.
9. Rate Impulse Withstand Voltage.
10. Symmetrical Breaking Capacity.
11. Asymmetrical Breaking Capacity.
12. Rated short time Current.
13. Making Capacity.
14. Rated Operating Duty.
15. Total Break Time at rated Breaking Current.
16. Control and Tripping Voltage.

III. Standard Forms

1. Bid Form/Cover Letter

Date: _____
No: _____

To: Deputy Sect. FPCCI
Federation of Pakistan Chamber of Commerce and Industry (FPCCI), Capital Office Islamabad .

Dear Sir,

Having examined the bidding documents, the receipt of which is hereby duly acknowledged, we, the undersigned, offer to supply deliver and install *the transformer* in conformity with the said bidding documents for the sum of Rs.----------.

We undertake, if our Bid is accepted, to deliver and install the transformer in accordance with the delivery schedule specified in the Schedule of Requirements.

If our Bid is accepted, we hereby agree that our Bid Security as being provided herewith this "Bid Form", will remain with the Client according to Clause 13.7 of Instructions to Bidders.

We also agree to abide by this Bid for a period of *90* days from the date fixed for Bid opening under Clause 20 of the Instructions to Bidders, and it shall remain binding upon us and may be accepted at any time before the expiration of that period.

Until a formal Contract is prepared and executed, this Bid, together with your written acceptance thereof and your notification of award, shall constitute a binding Contract between us.

Dated this _____ day of _____ 2020

_____ _____
[signature] *[in the capacity of]*

Duly authorized to sign Bid for and on behalf of _____

2. Price Schedule

Name of Bidder _____

Total amount of Bid in Figures----------

Total amount of Bid in words----------

Signatures & stamp of authorized person----------

3. Contract Form

THIS AGREEMENT made on the _____ day of _____ 2020 between *Federation of Pakistan Chamber of Commerce and industry (FPCCI)* (hereinafter called "the Client") of the one part and *[name of Contractor]* (hereinafter called "the Contractor") of the other part:

WHEREAS the Purchaser invited bids for MV Panels, Transformer (1000 KVA), LT-Switchgear & MV cable and has accepted a bid by the manufacture or authorized dealer for the supply of those items in the sum of *[contract price in words and figures]* (hereinafter called "the Contract Price").

NOW THIS AGREEMENT WITNESSETH AS FOLLOWS:

1. In this Agreement words and expressions shall have the same meanings as are respectively assigned to them in the Conditions of Contract referred to.

2. The following documents shall be deemed to form and be read and construed as part of this Agreement, viz.:

(a) The Bid Form and the Price Schedule submitted by the Bidder;
(b) The Schedule of Requirements;
(c) The Technical Specifications;
(d) The General Conditions of Contract;
(e) The Special Conditions of Contract;
(f) The Client's Notification of Award.

3. In consideration of the payments to be made by the Client to the Contractor as hereinafter mentioned, the Contractor hereby covenants with the Client to provide the Goods and to remedy defects therein in conformity in all respects with the provisions of the Contract

4. The Client hereby covenants to pay the Contractor in consideration of the provision of the goods the remedying of defects therein, the Contract Price or such other sum as may become payable under the provisions of the contract at the times and in the manner prescribed by the Contract.

IN WITNESS whereof the parties hereto have caused this Agreement to be executed in accordance with their respective laws the day and year first above written.

Signed, sealed, delivered by _____ the for the Client)

Signed, sealed, delivered by _____ the for the Contractor)

Part Three

Section I.

General Conditions of Contract (GCC)

General Conditions of Contract (GCC)

1. Definitions

1.1 In this Contract, the following terms shall be interpreted as indicated:

(a) "OWNER" means Client
The federation of Pakistan
Chamber of Commerce & Industries,
G-8/1 Aiwan-Sanat-o-Tijarat Road Mauve Area, Islamabad.

(b) "CONSULTANT" means
M/s Z.A. Sheikh & Associates and their associate M/s International Engineers.
5E/1, Gulberg-III, Lahore
And/or any person duly authorized by him.

(c) "CONTRACTOR" means the firm or company, group of companies, who's Tender has been accepted by the OWNER. The term CONTRACTOR, includes sponsor/representative of the company, firm/consortium their successors and his approved authorized representatives.

(d) "GOODS" all equipment/material to be supplied & installed by the CONTRACTOR in accordance with the CONTRACT. Insofar as to be understood from the wording of the text, WORK also means the entirety of all or individual components which are to be completed and maintained until finally accepted within the scope of CONTRACT.

(e) "The Contract" means the agreement entered into between the Client and the Contractor, as recorded in the Contract Form signed by the parties, including all attachments and appendices thereto and all documents incorporated by reference therein.

(f) "The Contract Price" means the price payable to the Contractor under the Contract for the full and proper performance of its contractual obligations.

(g) "The Goods" means all of the equipment, machinery, and/or other materials which the Contractor is required to supply to the Client under the Contract.

(h) "The Services" means those services ancillary to the supply of the Goods, such as transportation and insurance, and any other incidental services, such as installation, commissioning, provision of technical assistance, training, and other such obligations of the Contractor covered under the Contract.

(i) Tools & plants means all tools, machinery equipment,

appliances, ladders, scaffolding or thins what so ever nature required for the execution, installation, commissioning and maintenance of the works.

(j) "GCC" means the General Conditions of Contract contained in this section.

(k) "SCC" means the Special Conditions of Contract.

(l) "The Client" means Federation of Chamber of Commerce and Industry.

(m) "The Contractor" means the individual or firm supplying the Goods and Services under this Contract.

(n) "Day" means calendar day.

2. Application

2.1 These General Conditions shall apply to the extent that they are not superseded by provisions of other parts of the Contract.

3. Standards

3.1 The Goods supplied under this Contract shall conform to the standards mentioned in the Technical Specifications, and, when no applicable standard is mentioned, to the authoritative standards appropriate to the Goods' country of origin. Such standards shall be the latest issued by the concerned institution.

4. Inspections and Tests

4.1 The inspections and tests may be conducted on the premises of the Contractor or its subcontractor(s), at point of delivery, and/or at the Goods' final destination. If conducted on the premises of the Contractor or its subcontractor(s), all reasonable facilities and assistance, including access to drawings and production data, shall be furnished to the inspectors at no charge to the Client.

4.2 Should any inspected or tested Goods fail to conform to the Specifications, the Client may reject the Goods, and the Contractor shall either replace the rejected Goods or make alterations necessary to meet specification requirements free of cost to the Client.

4.3 The Client's right to inspect, test and, where necessary, reject the Goods after the Goods' arrival at the Client's delivery point shall in no way be limited or waived by reason of the Goods having previously been inspected, tested, and passed by the Client or its representative prior to the Goods' shipment from the factory/warehouse.

4.4 Nothing in GCC Clause 4 shall in any way release the Contractor from any warranty or other obligations under this Contract.

5. Packing

5.1 The Contractor shall provide such packing of the Goods as is required

to prevent their damage or deterioration during transit to their final destination, as indicated in the Contract. The packing shall be sufficient to withstand, without limitation, rough handling during transit and exposure to extreme temperatures, salt and precipitation during transit, and open storage. Packing case size and weights shall take into consideration, where appropriate, the remoteness of the Goods' final destination and the absence of heavy handling facilities at all points in transit.

5.2 The packing, marking, and documentation within and outside the packages shall comply strictly with such special requirements as shall be expressly provided for in the Contract, including additional requirements, if any, specified in SCC, and in any subsequent instructions ordered by the Client.

6. Delivery and Documents

6.1 Delivery of the Goods shall be made by the Contractor in accordance with the terms specified in the Schedule of Requirements.

7. Transportation

7.1 The Contractor is required under the Contact to transport the Goods to a specified place of destination i.e. Islamabad Office.

8. Warranty

8.1 The Contractor warrants that the Goods supplied under the Contract are new, unused, of the most recent or current models, and that they incorporate all recent improvements in design and materials unless provided otherwise in the Contract. The Contractor further warrants that all Goods supplied under this Contract shall have no defect, arising from design, materials, or workmanship (except when the design and/or material is required by the Client's specifications) or from any act or omission of the Contractor, that may develop under normal use of the supplied Goods in the conditions prevailing in the country of final destination.

9. Payment

9.1 The method and conditions of payment to be made to the Contractor under this Contract shall be specified in SCC.

9.2 The Contractor's request(s) for payment shall be made to the Client in writing, accompanied by an invoice describing, as appropriate, the Goods delivered and Services performed and upon fulfillment of other obligations stipulated in the Contract.

9.3 Payments shall be made promptly by the Client, but in no case later than thirty (30) days after submission of an invoice or claim by the Contractor.

9.4 The currency of payment is Pak. Rupees.

10. Prices

10.1 Prices charged by the Contractor for Goods delivered and Services

performed under the Contract shall not vary from the prices quoted by the Contractor in its bid, with the exception of any price adjustments authorized in SCC or in the Client's request for bid validity extension, as the case may be.

11. Change Orders

11.1 The Client may at any time, by a written order given to the Contractor pursuant to GCC Clause 21, make changes within the general scope of the Contract.

11.2 If any such change causes an increase or decrease in the cost of, or the time required for, the Contractor's performance of any provisions under the Contract, an equitable adjustment shall be made in the Contract Price or delivery schedule, or both, and the Contract shall accordingly be amended. Any claims by the Contractor for adjustment under this clause must be asserted within fifteen (15) days from the date of the Contractor's receipt of the Client's change order.

12. Contract Amendments

12.1 No variation in or modification of the terms of the Contract shall be made except by written amendment signed by the parties.

13. Assignment

13.1 The Contractor shall not assign, in whole or in part, its obligations to perform under this Contract.

14. Delays in the Contractor's Performance

14.1 Delivery of the Goods and performance of Services shall be made by the Contractor in accordance with the time schedule prescribed by the Client in the Schedule of Requirements.

14.2 If at any time during performance of the Contract, the Contractor or its subcontractor(s) should encounter conditions impeding timely delivery of the Goods and performance of Services, the Contractor shall promptly notify the Client in writing of the fact of the delay, its likely duration and its cause(s).

14.3 Except as provided under GCC Clause 17, a delay by the Contractor in the performance of its delivery obligations shall render the Contractor liable to the imposition of liquidated damages pursuant to GCC Clause 15, unless an extension of time is agreed upon pursuant to GCC Clause 14.2 without the application of liquidated damages.

15. Liquidated Damages

15.1 Subject to GCC Clause 17, if the Contractor fails to deliver any or all of the Goods or to perform the Services within the period(s) specified in the Contract, the Client shall, without prejudice to its other remedies under the Contract, deduct from the Contract Price, as liquidated damages, a sum equivalent to the percentage specified in SCC of the delivered price of the delayed Goods or unperformed Services for each week or part thereof of delay until actual delivery or performance, up to a maximum deduction of the percentage specified in SCC. Once the maximum is reached, the Client may consider termination of the Contract pursuant to GCC Clause 16.

16.Termination for Default

16.1 The Client, without prejudice to any other remedy for breach of Contract, by written notice of default sent to the Contractor, may terminate this Contract in whole or in part:

(a) if the Contractor fails to deliver any or all of the Goods within the period(s) specified in the Contract, or within any extension thereof granted by the Client pursuant to GCC Clause 14.2; or

(b) if the Contractor fails to perform any other obligation(s) under the Contract.

(c) if the Contractor, in the judgment of the Client has engaged in corrupt and fraudulent practices in competing for or in executing the Contract.

For the purpose of this clause:

"corrupt and fraudulent practices" includes the offering, giving, receiving, or soliciting of anything of value to influence the action of a public official or the Contractor or contractor in the procurement process or in contract execution to the detriment of the procuring agencies; or misrepresentation of facts in order to influence a procurement process or the execution of a contract, collusive practices among bidders (prior to or after bid submission) designed to establish bid prices at artificial, non-competitive levels and to deprive the procuring agencies of the benefits of free and open competition and any request for, or solicitation of anything of value by any public official in the course of the exercise of his duty.

16.2 In the event the Client terminates the Contract in whole or in part, pursuant to GCC Clause 16.1, the Client may procure, upon such terms and in such manner as it deems appropriate, Goods or Services similar to those undelivered, and the Contractor shall be liable to the Client for any excess costs for such similar Goods or Services. However, the Contractor shall continue performance of the Contract to the extent not terminated.

17. Force Majeure

17.1 For purposes of this clause, "Force Majeure" means an event beyond the control of the Contractor and not involving the Contractor's fault or negligence and not foreseeable. Such events may include, but are not restricted to, acts of the Client in its sovereign capacity, wars or revolutions, fires, floods, epidemics, quarantine restrictions, and freight embargoes.

17.2 If a Force Majeure situation arises, the Contractor shall promptly notify the Client in writing of such condition and the cause thereof. Unless otherwise directed by the Client in writing, the Contractor shall continue to perform its obligations under the Contract as far as is

reasonably practical, and shall seek all reasonable alternative means for performance not prevented by the Force Majeure event.

18. Resolution of Disputes

18.1 The Client and the Contractor shall make every effort to resolve amicably by direct informal negotiation any disagreement or dispute arising between them under or in connection with the Contract.

18.2 If, after thirty (30) days from the commencement of such informal negotiations, the Client and the Contractor have been unable to resolve amicably a Contract dispute, either party may require that the dispute be referred for resolution to the formal mechanisms specified in SCC. These mechanisms may include, but are not restricted to, conciliation mediated by a third party, adjudication in an agreed manner and/or arbitration.

19. Governing Language

19.1 The Contract shall be written in the language specified in SCC. Subject to GCC Clause 20, the version of the Contract written in the specified language shall govern its interpretation. All correspondence and other documents pertaining to the Contract which are exchanged by the parties shall be written in the same language.

20. Applicable Law

20.1 The Contract shall be interpreted in accordance with PPRA Ordinance 2002, Public Procurement Rules 2004 and other laws of Islamic Republic of Pakistan. If there is any discrepancy between the laws and these biding documents, the provisions of the laws and rules will prevail.

21. Notices

21.1 Any notice given by one party to the other pursuant to this Contract shall be sent to the other party in writing or by cable, telex, or facsimile and confirmed in writing to the other party's address specified in SCC.

21.2 A notice shall be effective when delivered or on the notice's effective date, whichever is later.

22. Taxes and Duties

22.1 Contractor shall be entirely responsible for all taxes, duties, license fees, etc., incurred until delivery of the contracted Goods to the Client.

Section II.

Special Conditions of Contract (SCC)

Special Conditions of Contract (SCC)

The following Special Conditions of Contract shall supplement the General Conditions of Contract. Whenever there is a conflict, the provisions herein shall prevail over those in the General Conditions of Contract. The corresponding clause number of the GCC is indicated in parentheses.

1. Site inspection

The contractor shall before starting manufacturing, survey the site in detail to check the exact requirements of PDB's & DB's since the building is functioning for many years. Therefore the site requirements may differ from the BOQ.

2. Amount of bid bond

2% (two percent) of the contract value.

3. Amount of performance bond

10% of the price of the contract (performance bond from a scheduled bank) at the time of signing the agreement of contract

4. Securities for the proposed performance bond (state name and address of the proposed scheduled bank.

1. Name:- _____

Address:-_____

5. Proposed time of completion of the work

Time of completion of the work is (6) months.

6. Period of maintenance

Period of maintenance shall be 12 months.

7. Inspections and Tests (GCC Clause 4)

GCC 4.1—**Inspection and tests prior to supply of Goods and at final acceptance are as follows:** The Client or its representative shall have the right to inspect and or to test the supplies at the destination to confirm their conformity to the Contract specifications at no extra cost to the Client.

8. Packing (GCC Clause 5)

GCC 5.2 – **Packing & accessories**: The contractor shall deliver the supplies at the destination in scratch-less condition with all the manufacturer supplied accessories.

9. Tool & plant

The contractor shall arrange for all tools & plants on his cost required for installation, testing & commissioning of works.

10. Payment (GCC Clause 9)

GCC 9.1 & 9.3 —The method and conditions of payment to be made to the Contractor under this Contract shall be as follows:

i) Mobilization advance payment against guarantee from a schedule bank
10% (ten percent) of the total price of the contract at the time of signing of the agreement of contract.

ii) Deduction of mobilization advance
10% (ten percent) of the gross value of the first and subsequent interim running payments until the mobilization advance has been wholly recovered.

iii) Interim payment
on verified running bills up-to 50% of the contract price

iv) Percentage of retention
Percentage of retention shall be deducted @ 10% of the value of all running bill.
i) 5% shall be released after completion of the project.
ii) 5% shall be release after 1 year of the completion of project.

v) Final Payment:
Payment shall be made in Pak. Rupees.
(i) **On Acceptance: Hundred (100**) percent final payment shall be made to the contractor for the project completion as per completion certificate issued by the consultant within 15 days.

11. Prices (GCC Clause 10)

GCC 10.1—**Prices shall be:** Fixed.

12. Liquidated Damages (GCC Clause 15)

GCC 15.1—**Applicable rate:** Applicable rates shall not exceed one (1.0) % per day and the maximum shall not exceed ten (10) % of the contract price.

13. Resolution of Disputes (GCC Clause 18)

GCC 18.2—**The dispute resolution mechanism to be applied pursuant to GCC Clause 18.2 shall be as follows:**

In the case of a dispute between the Client and the Contractor, the dispute shall be referred to arbitration in accordance with the laws of the Islamic Republic of Pakistan.

14. Governing Language (GCC Clause 19)

GCC 19.1—**The Governing Language shall be:** English.