SINDH PUBLIC PROCUREMENT REGULATORY AUTHORITY

CONTRACT EVALUATION FORM

TO BE FILLED IN BY ALL PROCURING AGENCIES FOR PUBLIC CONTRACTS OF WORKS, SERVICES & GOODS

1.	NAME OF THE ORGANIZATION DEPTT.	Jinnah Postgraduate Medical Centre, Karachi.
1) 2)	PROVINCIAL / LOCAL GOVT / OTHER	Provincial
3)	TITLE OF CONTRACT	Supply & Installation of 1000 KVA Generating Sets (Two Units)
4)	TENDER NUMBER	F.1-1/2016-2017-(M&R-SNE)/JPMC
5)	BRIEF DESCRIPTION OF CONTRACT	Replacement of 1000 KVA old Generating Sets
6)	FORUM THAT APPROVED THE SCHEME	Competent Authority
7)	TENDER ESTIMATED VALUE	70 Million
8)	ENGINEER'S ESTIMATE (For civil works only)	N/A
9)	ESTIMATED COMPLETION PERIOD (AS P	ER CONTRACT) 120 Days (4 Months)
10)	TENDER OPENED ON (DATE & TIME)	28-11-2016 at 11:30 AM
11)	NUMBER OF TENDER DOCUMENTS SOLI (Attach list of buyers)) Ten (10)
12)	NUMBER OF BIDS RECEIVED	Four (4)
13)	NUMBER OF BIDDERS PRESENT AT THE	TIME OF OPENING OF BIDS Four (4)
14)	BID EVALUATION REPORT (Enclose a copy)	Attached
15)	NAME AND ADDRESS OF THE SUCCESSE	UI_BIDDER M/s Allied Engineering & Services (Pvt.) Ltd.
		The second second
16)	CONTRACT AWARD PRICE	Rs. 49,016,699/-
17)	RANKING OF SUCCESSFUL BIDDER IN Eq. (i.e. 1^{st} , 2^{nd} , 3^{rd} EVALUATION BID),	VALUATION REPORT 1st Evaluated Bid
18)	METHOD OF PROCUREMENT USED : - (Ti	ck one)
	a) SINGLE STAGE – ONE ENVELOPE	PROCEDURE Domestic/ Local
	b) SINGLE STAGE - TWO ENVELOPE	PROCEDURE
	e) TWO STAGE BIDDING PROCEDUR	RE
	d) TWO STAGE - TWO ENVELOPE B	IDDING PROCEDURE
	PLEASE SPECIFY IF ANY OTHER EMERGENCY, DIRECT CONTRACTING	METHOD OF PROCUREMENT WAS ADOPTED i.e. G ETC. WITH BRIEF REASONS:

19)	APPRO	IVING AUTHORITY FOR AWARD O	F	Competent Authority (As per recommendation Procurement Committee)
,			_	
20)	WHETE	HER THE PROCUREMENT WAS INC	DUUDED IN AN	
				Yes ✓ No
21)	ADVER	RTISEMENT:		
			Yes	SPPRA S.No. 30306
	i)	SPPRA Website		
		(If yes, give date and SPPRA Identific	ation No.) No	
			.50	
	ii)	News Papers (If yes, give names of newspapers and	Yes	
		(11 yes, give names of newspapers and	(dates)	Yes (Mentioned in BER)
			No	
22)	NATUR	RE OF CONTRACT		Demodul. V Int.
·				local 1111.
23)		HER QUALIFICATION CRITERIA	A. T.	
		NCLUDED IN BIDDING / TENDER B enclose a copy)	OCUMENTS?	
	(11.3 cs. (enclose a copy)	<u> </u>	Yes 🗸 No
•••		<u></u>		
24)		HER BID EVALUATION CRITERIA NCLUDED IN BIDDING / TENDER D	OCUMENTS?	Yes V No
		enclose a copy)		91-1
25)		HER APPROVAL OF COMPETENT A		
	METHO	OD OTHER THAN OPEN COMPETIT	TVE BIDD U NG?	Yes V No
_			**	
26)	WAS BI	ID SECURITY OBTAINED FROM AI	LL THE BIDDER	RS? // Yes / No
				<u> </u>
		HER THE SUCCESSFUL BID WAS L		JATED Yes / No
	BID / BI	EST EVALUATED BID (in case of Co	nsultancies)	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \
				[
		HER THE SUCCESSFUL BIDDER WA	AS TECHNICAL	LY Yes No
	COMPL	APANT (
		IER NAMES OF THE BIDDERS AN ME OF OPENING OF BIDS?	D THEIR QUOT	TED PRICES WERE READ OUT AT
	1116 111	ME OF OPENING OF DIDS!		Yes / No
301	WHETL	HER EVALUATION REPORT GIV	TX TO BUSE	SERS DUMARIE THE AWARD OF
	CONTR		EN TO BIDD	EKS DEFORE THE AWARD OF
	(Attach)	copy of the bid evaluation report)		Yes 🗸 No
				I Yes I V IINo II II

31) ANY COMPLAINTS R (If yes, result thereof)	ECEIVED	Yes	
		No	~
	OM SPECIFICATIONS (GIVEN IN THE T	ENDER NOTICE / DOCUMENTS
(If yes, give details)		Yes	
		No	/
33) WAS THE EXTENSION (If yes, give reasons)	N MADE IN RESPONSI	E TIME? Yes	
	AWres		Committee
er in the second		No	
34) DEVIATION FR OM Q (If yes, give detailed reas		RIA Yes	
		No	
35) WAS IT ASSURED B' BLACK LISTED?	Y THE PROCURING	AGENCY THAT	THE SELECTED FIRM IS NOT Yes V No
36) WAS A VISIT MADE SUPPLIER'S PREMISE BE ASCERTAINED RE	ES IN CONNECTION V	VITILI TH É PŘ OC I	PROCURING AGENCY TO THE UREMENT? IF SO, DETAILS TO BROAD:
(If yes, enclose a copy)			Yes No 🗸
37) WERE PROPER SAFE THE CONTRACT (BAY			Yes No
38) SPECIAL CONDITION (If yes, give Brief Descri		Yes	THE STATE OF THE S
	亲心	No	
Signature & Official Stamp of Authorized Officer	_{Ен. Ұ} ДНҮ <u>Д</u> КН	AN TUNIO	
OFFICE HER ONLY	Deputy Di Umman Postgradustr Morat	: ::::::::::::::::::::::::::::::::::::	
ROFFICE USE ONLY	Januari i disegrati Karat	j ti t	

<u>SPPRA, Block. No.8, Sindh Secretariat No.4-A, Court Road, Karachi</u> Tele: 021-9205356; 021-9205369 & Fax: 021-9206291

Print Save Reset

Dated the 28th March, 2017.

CONTRACT AWARD

To.

M/S. Allied Engineering & Services (Pvt.) Ltd.

21/3, Sector No. 22, Korangi Industrial Area,

Karachi.

Subject:

PURCHASE ORDER FOR THE TENDER "SUPPLY & INSTALLATION OF 1000 KVA GENERATING SETS (TWO UNITS) FOR JINNAH

POSTGRADUATE MEDICAL CENTRE, KARACHI" THROUGH SNE FOR

THE YEAR 2016-17.

Ref:

Financial Proposal number TK-I-196/2016 dated 28th November 2016

submitted by Allied Engineering & Services (Pvt.) Ltd. against our tender

inquiry number F.1-1/2016-17-(M&R-SNE)/JPMC.

You are requested to supply of following items to this Centre as per terms & conditions on back page.

S. No.	Name of Firm	Allied Engineering & Services
		(Pvt.) Ltd.
	Make	USA
	Model	CAT C-32, 1000 KVA/800 eKW
'	Sole Agent / Authorized Dealer of Manufacturer	Yes (Caterpillar)
	Unit Price CFR US\$	US\$ 138,170/-
		Equivalent to Pak Rupees Rs.
		14,452,582/-
	Two Units Price CFR US\$	US\$ 276,340/-
		Equivalent to Pak Rupees
		Rs.28,905,164/-
	Schedule Work (Site A + Site B)	20,111,535/-
	Two Units Price + Schedule Work (Site A & Site B)	49,016,699/-
1.	1000 KVA Genset Product	
	Specifications/Requirement/Parameters	
1.1_	General Genset Requirements	
	The generator set shall be Prime Duty rated at 800 ekW,	į
	1,000 kVA Prime rating / 880 ekW, 1,102 kVA Standby	
	rating, 1500 RPM, 0.8 power factors, 400 V, 3-Phase, 50	
	hertz, including radiator fan and all parasitic loads.	
	Generator set shall be sized to operate at the specified load	
	at a maximum ambient of 122.0F (50C) and altitude of 328 feet (100.0 m).	
:	Prime Power Rating:	
	 Average Power Output = 70% of prime power rating 	
	Load = Varying	
	 Typical Hours/Year = Unlimited 	
1	Typical Peak Demand = 100% of prime rated ekW with 10% overload capability for emergency use for a maximum of one (I) hour in 12. Overload operation cannot exceed 25 hours per year.	

	 Typical Application = Industrial, Pumping, 	
1	Construction, Rental or Co-Generation	
1.2	Material and Parts	
	All materials and parts comprising the unit shall be new	
	and unused.	
1.3	Engine	
	The engine shall be diesel fueled, four (4) cycles, water-	
1 1	cooled, while operating with nominal speed not exceeding	
\ \	1500 RPM.	
1.4	Engine Governing	
	The engine governor shall be electronic module	
,	with 24-volt DC Electric Actuator.	
1 [The module shall be enclosed in an 	(
	environmentally sealed, die-cast aluminum	
	housing which isolates and protects electronic	
	components from moisture and dirt	
1	contamination.	
}	 Speed droop shall be adjustable from 0 	
	(isochronous) to 10%, from no load to full rated	į
	load,	
1	 Steady state frequency regulation shall be +/- 6 	
	RPM. Speed shall be sensed by a magnetic pickup	
1	off the engine flywheel ring gear.	
	A provision for remote speed adjustment shall be	
! 	included.	
	The ECM shall adjust fuel delivery according to	
) '	exhaust smoke, altitude and cold mode limits.	
	In the event of a DC power loss, the forward acting activities and the policies of the policies.	
	actuator will move to the minimum fuel position. The Module should be owned by engine	
	manufacturer and be company fitted.	
2.	Generator	
2.1	Digital Voltage Regulator	
	The digital voltage regulator shall be microprocessor	
	based with fully programmable operating and	
	protection characteristics.	
	The regulator shall maintain generator output voltage	
	within +/- 0.25% for any constant load between no	
	load and full load.	
	 The regulator shall be capable of sensing true RMS in 	
	three phases of alternator output voltage, or	İ
	operating in single phase sensing mode.	
	 The voltage regulator shall include a VAR/Pf control 	
	feature as standard.	
	 The regulator shall provide an adjustable dual slope 	
	regulation characteristic in order to optimize voltage	
	and frequency response for site conditions.	
	The voltage regulator shall include standard the	
	capability to provide generator paralleling with	
	reactive droop compensation and reactive differential	
	compensation.	
	 The voltage regulator shall communicate with the Computer Control Panel via a 11939 communication 	
	Generator Control Panel via a J1939 communication network with generator voltage adjustments made	
L	network with generator vontage adjustments made	

7.		
7	via the controller keypad.	
	 Additionally, the controller shall allow system 	
ł	parameter setup and monitoring, and provide fault	
İ	alarm and shutdown information through the	
	controller.	
ļ [A PC-based user interface shall be available to allow 	
	viewing and modifying operating parameters in a	
<u>_</u>	windows compatible environment.	
2.2	Motor Starting	
_	 Provide locked rotor motor starting capability of 	
	2,291.8 skVA at 30% instantaneous voltage dip as	
	defined per NEMA MG 1. Sustained voltage dip	
	data is not acceptable.	
2,3	Alternator Data	
	* The alternator provided will be 1000KVA prime duty	
	with Internal Excitation.	
	The insulation provided will be Class II, The	
	alternator pitch must be 0.6667.	
	· · · · · · · · · · · · · · · · · · ·	
	The Efficiency of generator shall be approximately PROPER AND SERVED. The Efficiency of generator shall be approximately PROPER AND SERVED. The Efficiency of generator shall be approximately PROPER AND SERVED.	
7.4	nearer to 95%.	
	Controls - Generator Set Mounted	
	Provide a fully solid-state, microprocessor based, generator	
	set control. The control panel shall be designed and built by	
	the Genset manufacturer. The control shall provide all	
	operating, monitoring, and control functions for the	
	generator set. The control panel shall provide real time	
	digital communications to all engine and regulator controls.	
	Environmental	
	The generator set control shall be tested and certified	
	to the following	
	environmental conditions:	
	1. −40°C to +70°C Operating Range	
	2. 100% condensing humidity, 30°C to 60°C	
	3. IP22 protection for rear of controller; IP55 when	
	installed in control panel	
	4. 5% salt spray, 48 hours, +38°C, 36.8V system	
	voltage	
	5. Sinusoidal vibration 4.3G's RMS, 24-1000Hz	
	6. Electromagnetic Capability (89/336/EEC,	
	91/368/EEC, 93/44/EEC, 93/68/EEC, BS EN	
	50081-2, 50082-2)	
	7. Shock: withstand 15G	
	Functional Requirements	
	The following functionality shall be integral to the	
	control panel.	
	1. The control shall include a readable pixel, positive	
	image, transflective LCD display with text based	
	alarm/event descriptions.	
	2. The control shall include a minimum of 3-line	
	data display.	
	3. Audible horn for alarm and shutdown with horn	
	silence switch	
	Standard ISO labeling.	
	4. Multiple language capability.	
	5. Remote start/stop control.	

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7	6. Local run/off/auto control integral to system	
1	microprocessor	
1	7. Cool down timer	
}	8. Speed adjust	
	9. Lamp test	
	10. Emergency stop push button	
	11. Voltage adjust	
	12. Voltage regulator V/Hz slope - adjustable	
	14. Password protected system programming	
2.5	Digital Monitoring Capability	
i	The controls shall provide the following digital readouts for	
	the engine and generator. All readings shall be indicated in	
	either metric or English units.	
	Engine	
1	Engine oil pressure	
ŀ	2. Engine oil temperature	
	3. Engine coolant temperature	
ŀ	4. Engine RPM	•
	5. Battery volts	
	6. Engine hours	
1	7. Engine crank attempt counter	
į	8. Engine successful start counter	
	9. Service maintenance interval	
ì	10. Real time clock	
ļ	<u> </u>	
Į	 Generator 	
	 Generator AC volts (Line to Line, Line to 	
i	Neutral and Average)	
	2. Generator AC current (Avg and Per Phase)	
	3. Generator AC Frequency	
}	4. Generator kW (Total and Per Phase)	
	5. Generator kVA (Total and Per Phase)	
i	6. Generator kVAR (Total and Per Phase)	
l	7. Power Factor (Avg and Per Phase)	
,	8. Total kW-hr	
	9. Total kVAR-hr	
ĺ	10. % kW	
ļ	11. % kVA	
	12. % kVAR	
2.6	Alarms and Shutdowns	
. ——	Engine Alarm/Shutdown	
i	Low oil pressure alarm/shutdown High coalant tomografture alarm/shutdown	
	2. High coolant temperature alarm/shutdown	
	3. Loss of coolant shutdown	
,	Over speed shutdown Over crank shutdown	
	6. Emergency stop shutdown	
	7. Low coolant temperature alarm	
	8. Low battery voltage alarm	
	9. High battery voltage alarm	
	10. Control switch not in auto position alarm	
	11. Battery charger failure alarm	
	 Generator Alarm/Shutdown 	
ļ	Generator phase sequence	i

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· · ·		
1	2. Generator over voltage	ŀ
7	3. Generator under voltage	
/ /	4. Generator over frequency	
	5. Generator under frequency	
1	• •	Í
]	6. Generator reverse power (real and reactive)	
	7. Generator overcurrent	
	 Voltage Regulator Alarm/Shutdown 	
	Loss of excitation alarm/shutdown	
	2. Instantaneous over excitation alarm/shutdown	
	l '	
ŀ	4. Loss of sensing	
	5. Loss of PMG	_ <u></u>
2.7	Inputs and Outputs	
	 Programmable Digital Inputs 	
	The Controller shall include the ability to accept	
	programmable digital input signals. The signals may	
l I	be programmed for either high or low activation	•
·		
1	using programmable Normally Open or Normally	
ļ	Closed contacts.	
]	Programmable Relay Outputs	
	The control shall include the ability to operate	
	programmable relay output signals, integral to the	
	controller. The output relays shall be rated for 2A @	
)	30VDC and consist of six (6) Form A (Normally	
1	Open) contacts and two (2) Form C (Normally Open	
	& Normally Closed) contacts.	
}	Programmable Discrete Outputs	
	The control shall include the ability to operate two (2)	
	discrete outputs, integral to the controller, which are	
1	capable of sinking up to 300mA.	
2.8	Maintenance	
	All engine, voltage regulator, control panel and accessory	
}	units shall be accessible through a single electronic service	
	tool. The following maintenance functionality shall be	
	integral to the generator set control	
	1. Engine running hours display	
}	Service maintenance interval (running hours or	
l İ	calendar days)	
ļ	3. Engine crank attempt counter	
1	4. Engine successful starts counter	
1	5. 40 events are stored in control panel memory	
	6. Programmable cycle timer that starts and runs the	
	generator for a predetermined time. The timer shall	
	use 7 user-programmable sequences that are repeated	•
1		
	in a 7-day cycle. Each sequence shall have the	
	following programmable set points:	
	a) Day of week	1
1	b) Time of day to start	
1	c) Duration of cycle	
2.9	Remote Communications	
1		
	communications as standard via RS-485 half duplex	
<u> </u>	with configurable baud rates from 2.4k to 57.6k.	<u> </u>

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3.	Cooling System	
	 The generator set shall be equipped with a rail- 	
	mounted, engine-driven radiator with blower fan	
	and all accessories.	
	 The cooling system shall be sized to operate at full 	
	load conditions and 110 F*(50C) ambient air	
	entering the room or enclosure (If an enclosure is	
	specified).	
	 The generator set supplier is responsible for 	
	providing a properly sized cooling system based	
	on the enclosure static pressure restriction.	
2 1	Fuel Contain	
3.1	Fuel System The fuel system whall be integral with the applies. In	
	The fuel system shall be integral with the engine. In addition to the standard fuel filture grant had be the standard fuel filture.	
	addition to the standard fuel filters provided by the	
	engine manufacturer, there shall also be installed a primary fuel filter/water separator in the fuel inlet	
	line to the engine.	
	 All fuel piping shall be black iron or flexible fuel hose 	
	rated for this service. No galvanized piping will be	
	permitted.	
	Flexible fuel lines shall be minimally rated for 300	
	degrees F and 100 psi.	
3.2	Exhaust System	
	Silencer	
	 A industrial grade silencer, companion flanges, and 	
	flexible stainless steel exhaust fitting properly sized	
	shall be furnished and installed according to the	
	manufacturer's recommendation.	
	 Mounting shall be provided by the contractor as 	
	shown on the drawings.	
	The silencer shall be mounted so that its weight is not	
	supported by the engine nor will exhaust system	
	growth due to thermal expansion be imposed on the	
	engine.	
	Exhaust pipe size shall be sufficient to ensure that	
	exhaust back-pressure does not exceed the maximum	
3.3	limitations specified by the engine manufacturer.	
	Starting System Starting Motor	
	A DC electric starting system with positive	
	engagement shall be furnished. The motor voltage	
	shall be as recommended by the engine	
	manufacturer,	
	Jacket Water Heater	
	Jacket water heater shall be provided and shall be	
	sized to insure that Genset will start within the	
	specified time period and ambient conditions.	
	■ Batteries	
	Batteries - A lead-acid storage battery set of the	
	heavy-duty diesel starting type shall be provided.	
	Battery voltage shall be compatible with the	
	starting system.	
	Battery Charger	
	Battery Charger - A current limiting battery	

charger shall be furnished to automatically recharge batteries. The charger shall be dual charge rate with automatic switching to the boost rate when required. The battery charger shall be mounted on the Genset package or inside the Genset enclosure/room. 4. General 4.1 References and Standards The generator set covered by these specifications shall be designed, tested, rated, assembled and installed in strict accordance with all applicable standards below: • CSA C22.2 No14 • CSA 282 • CSA 100 • EN61000-6 • EN55011 • FCC Part 15 Subpart B • ISO8528 • IEC61000 • UL508 • UL2200 • UL142 • Designed to allow for installed compliance to NFPA 70, NFPA99 and NFPA 110 4.2 Work Included • Fuel System The CONTRACTOR shall provide a full tank of diesel fuel for the completion of all testing. • System Test	
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UL508 UL2200 UL142 Designed to allow for installed compliance to NFPA 70, NFPA99 and NFPA 110 4.2 Work Included Fuel System The CONTRACTOR shall provide a full tank of diesel fuel for the completion of all testing.	į
UL12200 UL142 Designed to allow for installed compliance to NFPA 70, NFPA99 and NFPA 110 4.2 Work Included Fuel System The CONTRACTOR shall provide a full tank of diesel fuel for the completion of all testing.	
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70, NFPA99 and NFPA 110 4.2 Work Included • Fuel System The CONTRACTOR shall provide a full tank of diesel fuel for the completion of all testing.	}
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diesel fuel for the completion of all testing.	
diesel fuel for the completion of all testing.	i
	ŀ
A complete system load test shall be performed	
after all equipment is installed. Guidelines in the	
	}
Start-up Section.	Ì
Requirements, Codes and Regulations	•
The equipment supplied and installed shall meet the	
requirements of above standards. All equipment shall	
be of new and current production by a	
MANUFACTURER who has 25 years of experience	ነ
building this type of equipment. Manufacturer shall	
be ISO9001 certified.	:
4.3 Submittals	·
■ Engine-generator submittals shall include the	
following information:	Į.
Factory published specification sheet.	1
2. Manufacturer's catalog cut sheets of all	
auxiliary components such as battery charger,	
control panel, enclosure, etc.	
3. Dimensional elevation and layout drawings of	
the generator set and related accessories.	
4. Weights of all equipment.	
5. Interconnect wiring diagram of complete	
emergency system, including generator battery	
charger, control panel.	
6. Engine mechanical data, including heat	
v. 24gae mesantica and metaling fieat	

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_	rejection, exhaust gas flows, combustion air and ventilation air flows, fuel consumption,	
	etc. 7. Generator electrical data including temperature and insulation data, cooling requirements, excitation ratings, voltage regulation, voltage regulation.	
	8. Generator resistances, reactance's and time constants.	
	9. Generator Locked Rotor Motor starting curves. 10. Manufacturer's documentation showing maximum expected transient voltage and	
	frequency dips, and recovery time during operation of the generator set at the specified site conditions with the specified loads.	
4.4	11. Manufacturers and dealers written warranty.	
4.4	System Responsibility Generator Set Distributor	
	The completed engine generator set shall be manufactured in USA/Europe/ Japan and supplied by the Manufacturer's Sole Agency/Authorized Dealer only.	
4.5	Warranty	
	Prime (ISO 8528-1: PRP) Rated Generator Set Warranty The manufacturer's standard warranty shall in no	
	event be for a period of less than five (5) years from date of initial start-up of the system including with service contract; shall include consumables,	
	overhauling works, repair parts, labor, and reasonable travel expense necessary for repairs at the	
	job site. Running hours shall not be a limiting factor for the system warranty by either the manufacturer or servicing distributor.	
·	 Submittals received without written warranties as specified will be rejected in their entirety. 	
4.6	Parts and Service Qualifications • Service Facility	
	The engine-generator supplier shall maintain 24-hour parts and service capability within 100 miles of the project site. The distributor shall stock parts	
	as needed to support the generator set package for this specific project. The supplier must carry sufficient inventory to cover no less than 80% parts service within 24hrs and 95% within 48 hours.	
	Service Personnel The dealer shall maintain qualified factory trained service personnel.	
5	Execution	
	Start-Up and Testing Coordinate all start-up and testing activities with the Engineer and Owner. After installation is complete and normal power is available, the manufacturer's local dealer shall perform the	

	1. Perform a 4 hour load bank test at 1.0 PF at		•
	full name plate rating. Load Bank, Cables		
	and other equipment required for this test		
	to be supplied to the customer.		
•	Operation and Maintenance Manuals		
	Provide two (2) sets of operation and maintenance		
	manuals covering the generator, and auxiliary		
	components. Include final as-built wiring		
	interconnect diagrams and recommended		
1	preventative maintenance schedules.		
•	Training		
	On-Site Training		
	Provide on-site training to instruct the owner's		
	personnel during commissioning in the proper		
	operation and maintenance of the equipment.		
	Review operation and maintenance manuals, parts		
	manuals, and emergency service procedures.		
	er terms and conditions	·	
Site	planning		
· •	The bidder shall visit the site before submission of		
1	tender and ensure that cost of all necessary		
	civil/electrical boards/cables/earthling needed to		
	install and commissioning the complete system is		
	included in the tender cost for the two units 1000		
ĺ	KVA Diesel Generating Sets.		
•	in the second of		
	etc. needed to install and commissioning the complete		
	system as per standard shall be responsibility of		
	successful firm/vender.		
-	The successive in the state of the section for		
	backup at onsite till new unit 1000 KVA Genset		
	installation, testing & commissioning. Their rent		
4-	expenses will be included in tender cost.		
	lity Safety Standards:		<u> </u>
	bidder should have own in-house facility of minor and		
	or overhauling works simultaneously for fuel pump		
	tor calibration.		
ı	ntry of manufacture and origin should be		
1	/Europe/Japan and equipment approval of their		
	ective quality standards is mandatory.		
	FAL (Two Units Price + Schedule Work Site A & Site B)	49,016	,699/-

(Pak Rupees Four Crore Ninety Lacs Sixteen Thousand Six Hundred Ninety Nine only)

(DR. YAHYA KHÂN TUNIO) JANG DEPUTY DIRECTOR SUCH MPH Deputy Director Deputy Director Medical Centro Karachi

Copy to:-

1. The Incharge, Instrument Section, JPMC, Karachiaring



TENDER FOR SUPPLY & INSTALLATION OF 1000 KVA GENERATING SETS (TWO UNITS) FOR JINNAH POSTGRADUATE MEDICAL CENTRE, KARACHI.

NAME OF WORK :-

SUPPLY AND INSTALLATION OF 1000 KVA GENERATING SETS (TWO UNITS) FOR JINNAH POSTGRADUATE MEDICAL CENTRE KARACHI.

"SCHEDULE 'B' "

		QTY/	RATE	AMOUNT
S#	DESCRIPTION OF WORK FOR "SITE-A"	UNIT	11,112	111100111
1	Supply, installation, testing and commissioning of 1000 kVA Prime / 1102 kVA Standby diesel generating set operating on 3-phase, 400V, 50 Hz,1500 RPM, Water cooled.	1 Unit	US\$ 138,170/-	Equivalent to Pak Rupees Rs. 14,452,582/-
2	Installation and Placement of (1000 KVA) Genset with Engine mounted Radiator and its attachments on Genset foundation pad as per Installation guideline including crane, fork lifter, rigging or chain block arrangement as required to move and place Genset from Outside Power House Building to foundation Pad inside engine room.	1 Job	198,864/-	198,864/-
3	Leveling, alignment and grouting work of Genset on its foundation pad with installation of vibration isolators.	1 Job	31,818/-	31,818/-
FUEL	SYSTEM	ļ		
4	Supply and installation of MS Sch 40 fuel piping (Supply & Return) from existing Diesel Day Fuel Tank to engine with valves, elbows, premiering & painting of pipe with necessary supporting and fixing arrangement.	1 Job	I11,364/-	111,364/-
5	Adjustment of height in Diesel Day Fuel Tank as per height of DG set such that max fuel level height should be above than engine injector level. (Existing Fuel Tank will be used).	1 Job	15,909/-	15,909/~
LUBE	OIL SYSTEM			
6	Extension (with supply of flexible pipe included) of Fume disposal / Crank case breather piping with supply of oil collector pan.	1 Job	23,864/-	23,864/-
EXH <i>A</i>	AUST SYSTEM			
7	Supply and Installation of 1 lot of MS Sch 20 Exhaust System piping having 10-12" dia with bellow expander, elbows, supports & Brackets with 100kq/m3 Density, 100 mm thick Rock Wool Thermal Lagging & GI Cladding with 24 Gauge Sheet on pipe complete in all respects. Thermal lagging and GI Cladding will be done on exhaust pipe within engine room only.	1 Job	286,364/-	286,364/-

ŔADI	ATOR DUCTING	<u></u>		
	Supply & Installation of Radiator Ducting of GI 22	1 Job	143,182/-	143,182/-
	Gauge sheet with supporting of MS Angle Iron &		110,102,	110/102/
8	flexibility through Canvas. The area of duct opening			
	should be 1.25 times the area of radiator.			
EART	HING & NEUTRAL SYSTEM			
	Digging / Boring connection of 1 lots of Earth &		206,818/-	413,636/-
9	Neutral pit up to water level or 80 Ft. whichever	2 Nos.	, , ,	
	comes first for Genset.			
10	Supply, laying and termination of earthing cable (95	50	1909.1/-	95,455/-
ŢÜ	sq. mm)	Meters	'	, ,
ELEC	TRICAL SYSTEM			
	Supply & Installation of MCC Panel for 40,000-50,000		350,000/-	350,000/-
11	CFM Supply Fans, Jacket Water Heater, Space Heater,	1 No.		,
	Pre Lube Pump & Battery Charger.	<u> </u>	}	
	Supply, laying and termination of power cables for	_	12,727/-	12,727/-
12	40,000-50,000 CFM Supply Fans, Jacket Water Heater,			, ,
14	Space Heater, Pre Lube Pump & Battery Charger in		1	
<u>.</u>	conduit/cable tray.	1 Lot		
-	Supply & Installation of Power Panel (1600Amp) with		1,909,091/-	1,909,091/
13	Motorized Circuit Breakers with ATS / AMF			•
	function. (As per 1000kVA – 1600Amps required)	1 No.		
14	Dismantling of existing power cables and connection		47,727/-	47,727/-
	with new Genset with lugs and glands.	1 Job		
	Supply, laying and termination of 1C, Cu, 300 Sq.		6363.6/~	1,069,091/
a =	mm, PVC/PVC, unarmored cables, 4 per phase and 2]	
15	for neutral. (12 meter each length) (630sqmm power			
į	cable is difficult to install at site therefore 1C -	168	\ \	
	300sqmm is recommended)	Meter	 	
16	Supply & Installation of cable ladder for power	4.7	87,500/-	87,500/~
VENT	cables. ILATION SYSTEM	1 Lot	 	
V CINI			0-0.000	
ļ	Supply & Installation of 1 lot. of Air Intake Canopy		350,000/-	350,000/-
17	with Air Intake Louvers, wire mesh, Aluminum	1 Job]	
	washable filters and ducting works including leveling	- ,		
	& alignment.			
10	Supply & Installation of 40,000-50,000 CFM supply		397,727/-	397,727/-
18	fan including leveling, alignment complete in all			
18	respects.	1 Job	<u> </u>	
- -	C 1 (1 TAT)	er r 1	397 <i>,</i> 727/-	397,727/-
19	Supply of kWh meter along with fitness approval	1 Job		
19	Supply of kWh meter along with fitness approval TIONAL MISCELLANEOUS WORK	I Job	· · · · · · · · · · · · · · · · · · ·	·
19	TIONAL MISCELLANEOUS WORK			843.182/-
19 ADDI 20	TIONAL MISCELLANEOUS WORK Supply of 2000 hrs spares	1 Job	843,182/-	
19 ADDI	TIONAL MISCELLANEOUS WORK Supply of 2000 hrs spares Paint work and renovation with lighting , fire	1 Job		
19 ADDI 20 21	TIONAL MISCELLANEOUS WORK Supply of 2000 hrs spares Paint work and renovation with lighting , fire extinguisher etc.	1 Job	843,182/- 397,727/-	397,727/-
19 ADDI 20	TIONAL MISCELLANEOUS WORK Supply of 2000 hrs spares Paint work and renovation with lighting , fire extinguisher etc. Supply of load bank for testing for 4 hours	1 Job	843,182/- 397,727/- 286,364/-	397,727/- 286, 364/-
19 ADDI 20 21	TIONAL MISCELLANEOUS WORK Supply of 2000 hrs spares Paint work and renovation with lighting , fire extinguisher etc.	1 Job	843,182/- 397,727/-	843,182/- 397,727/- 286,364/- 1,750,000/



S#	DESCRIPTION OF WORK FOR "SITE-B"	QTY	RATE	AMOUNT
J#		UNIT		
1	Supply, installation, testing and commissioning of 1000 kVA Prime / 1102 kVA Standby diesel generating set operating on 3-phase, 400V, 50	1 Unit	US\$ 138,170/-	Equivalent to Pak Rupees
	Hz,1500 RPM, Water cooled.			Rs. Rs. 14,452,582/-
2	Supply & Installation of Weather Proof Sound Proof Drop Over Type Canopy. Sound level will be 85 dBA @ 1 meter with 5-7 meter clearance. Supply of Drop Over type Acoustic Canopy for D.G. Set with Open Bottom, painted with two coats of Anti Corrosive Primer and two coats of Synthetic Enamel paint.	1 No	1,590,909/-	1,590,909/-
3	Supply of Critical Muffler.	1 No	318,182/-	318,182/-
4	Supply and Installation of 1 lot of MS Sch 20 Exhaust System piping having 10-12" dia with bellow, expander, elbows, supports & Brackets with 100kq/m3 Density, 100 mm thick Rock Wool Thermal Lagging & GI Cladding with 24 Guage Sheeton pipe complete in all respects. Thermal lagging and GI Cladding will be done on exhaust pipe within canopy only.	I Job	127,273/-	127,273/-
GEN	VERATOR SET	- · -		<u> </u>
5	Construction of Genset Foundation Pad.	1 Job	636,364/-	636,364/-
6	Installation and Placement of (1000 KVA) Genset with Engine mounted Radiator and its attachments on Genset foundation pad as per Installation guideline including crane, fork lifter, rigging or chain block arrangement as required to move and place Genset from Outside Power House Building to foundation Pad inside engine room.	1 Job	318,182/-	318,182/-
7	Leveling, alignment and grouting work of Genset on its foundation pad with installation of vibration isolators.	1 Job	31,818/-	31,818/-
FUE	LSYSTEM	·		
8	Supply and installation of MS Sch 40 fuel piping (Supply & Return) from existing diesel day fuel tank to engine with valves, elbows, premiering & painting of pipe with necessary supporting and fixing arrangement.	1 Job	135,227/-	135,227/-
9	Adjustment of height in Diesel Day Tank as per height of DG set such that max fuel level height should be above than engine injector level. (Existing Fuel Tank will be used).	1 Job	15,909/-	15,909/-
EAR	THING & NEUTRAL SYSTEM			

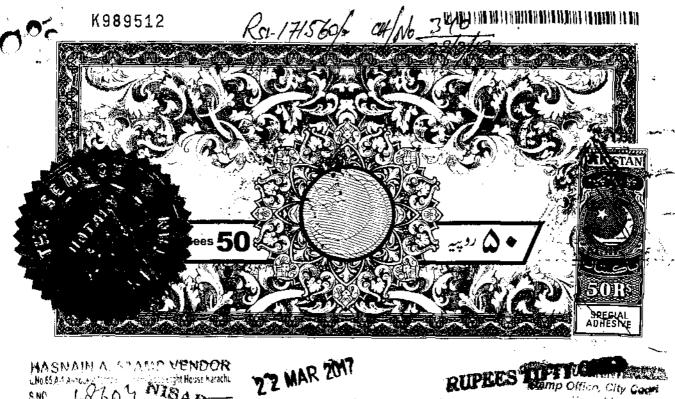
1	Digging / Boring connection of Hots of Earth &	_	190,909/-	381,818/-
10	Neutral pit up to water level or 80 Ft. whichever	2 Nos.	170,707/	301,010/ -
**	comes first for Genset.	21105.		
1.1	Supply, laying and termination of earthing cable	_ _ _	1909.1	95,455/-
11	(95 sq. mm)	50 Mtr		, , , , ,
ELE	CTRICAL SYSTEM	·		
	Supply & Installation of MCC Panel for Jacket		350,000/-	350,000/-
12	Water Heater, Space Heater, Pre Lube Pump &	1 No.	,	
ļ	Battery Charger.			
	Supply, laying and termination of power cables		95,455/-	95,455/-
13	for Jacket Water Heater, Space Heater, Pre Lube		·	.
L	Pump & Battery Charger in conduit/cable tray.	1 Lot_		
	Supply & Installation of Power Panel (1600Amp)	·	1,909,091/-	1,909,091/-
14	with Motorized Circuit Breakers with ATS / AMF		Ì	
	function.	1 Nos.		
\ \	Supply of Power cable Non Armoured IC -		3,510/-	1,080,180/-
15	300sqmm PVC / PVC 1C - 300sq mm , 4/P + 2N -	308 mtrs		
<u> </u>	(22 meter each length)		 	
	Laying and termination of Power cable Non		681.82/-	210,000/-
16	Armored 1C - 300sqmm PVC / PVC 1C - 300sq	308 mtrs	 	
	mm, $4/P + 2N - (22 meter each length)$			
17	Supply of kWh meter with electrical fitness	1 Job	397,727/-	397,727/-
1/	certificate	1 100		
ADI	DITIONAL MISCELLANEOUS WORK		-	
18	Supply of 2000 hrs spares	1 Job	843,182/-	843,182/-
19	Dismantling of existing shade and then re	7 [ab	159,091/-	159,091/-
12	installation with painting work	1 Job		
20	Removal of shade work	1 Job	159,091/-	159,091/-
	Provision of rental Generator (Backup Power) till	·	1,750,000	1,750,000/-
21	the completion & commissioning of complete		-,,	, = =, = =,
i	project.	1 Job		

Total Site A (Included Genset) = Pak. Rs. 23,671,901/Total Site B (Included Genset) = Pak. Rs. 25,344,798/Grand Total (Site A+ Site B Included Genset) = Pak Rs. 49,016,699/-

Total Site B (Included Genset)

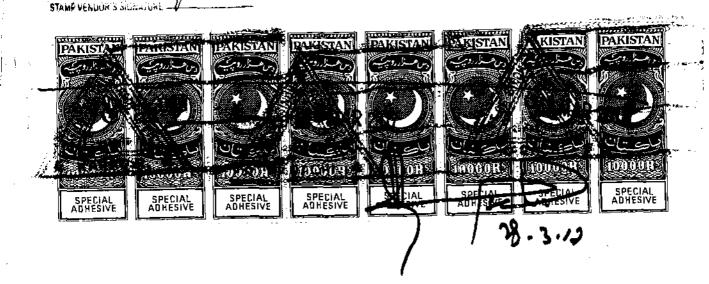
(Pak Rupees Four Crore Ninety Lacs Sixteen Thousand Six Hundred Ninety Nine only)

25,344,798/-



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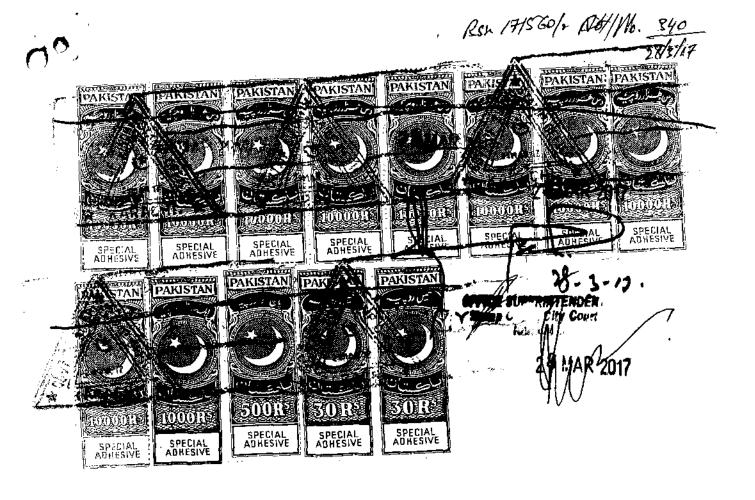
CONTRACT AGREEMENT

THIS CONTRACT AGREEMENT is made the 29th day of March, 2017; in reference to JPMC tender number F.1-1/2016-17-(M&R-SNE)/JPMC

BETWEEN

(1) Jinnah Postgraduate Medical Centre, Karachi, a Hospital incorporated under the laws of the Islamic Republic of Pakistan and having its principal place of business at the Rafiqui Shaheed Road, Jinnah Postgraduate Medical Centre, Karachi (hereinafter called "the Purchaser"), and (2) M/s Allied Engineering & Services (Pvt.) Ltd. a permittation incorporated under the laws of Islamic Republic of Pakistan and having its principal place of business at Sector No. 22, Korangi Industrial Area, Karachi. (hereinafter called "the Contractor").

WHEREAS the Purchaser desires to engage the Contractor to Supply, Installation, Testing, Commission schedule works, certain Facilities, viz.



1. Jinnah Postgraduate Medical Centre, Karachi.

("The Facilities") and the Contractor have agreed to such engagement upon and subject to the terms and conditions hereinafter appearing,

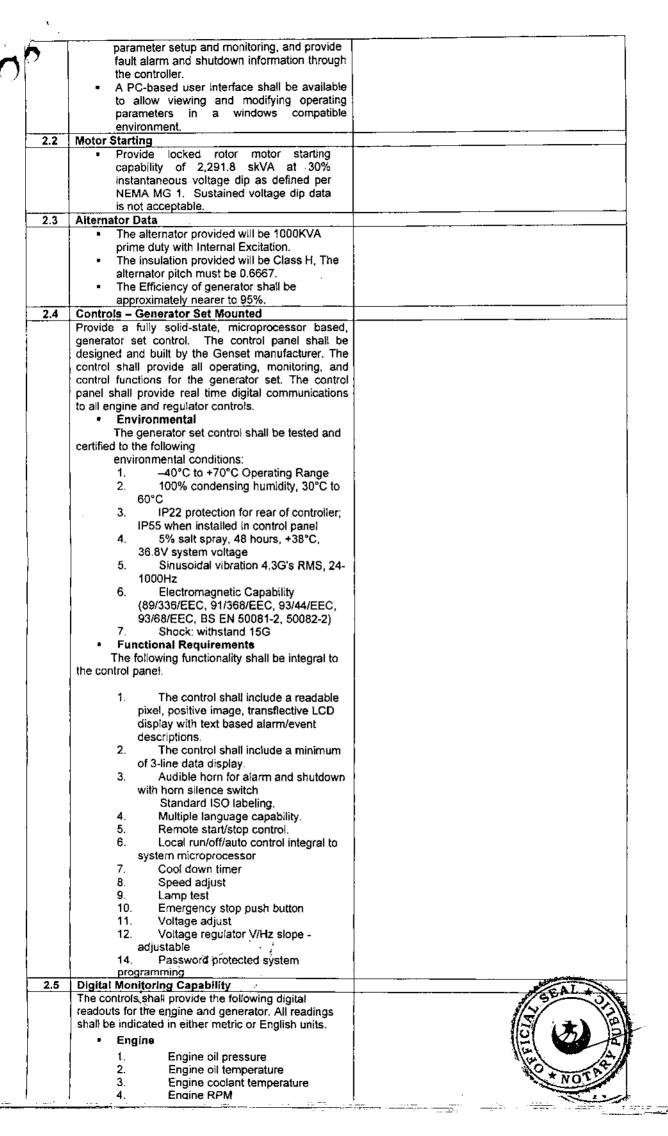
NOW IT IS HEREBY AGREED as follows:

<u>Contract Documents</u>
Following shall constitute the Contract between the Purchaser and the Contractor, and each shall be read and construed as an integral part of the Contract:

Specification and Price as per detail given below:-

. No.	Name of Firm	Allied Engineering & Services (Pvt.) Ltd.
	Make	USA
	Model	CAT C-32, 1000 KVA/800 eKW
	Sole Agent / Authorized Dealer of Manufacturer	Yes (Caterpillar)
	Unit Price CFR US\$	US\$ 138,170/-
	ł ł.	Equivalent to Pak Rupees Rs. 14,452,582/-
	Two Units Price CFR US\$	US\$ 276,340/-
		Equivalent to Pak Rupees Rs.28,905,164/-
İ	Schedule Work (Site A + Site B)	20,111,535/-
	Two Units Price + Schedule Work (Site A + Site B)	49,016,699/-
1.	1000 KVA Genset Product (Specifications/Requirement Paramete)	
1.1	General Genset Requirements	and the state of t
	The generator set shall be Parite	JON * C
	Duty rated at 800 ekW, 1000 kVA	A STATE OF THE STA
	Prime rating / 880 ekW, 1-102 kVA	
ſ	Standby rating, 1996 RPM, 2-8 power	10 22
	factors, 400 V, 3-Phase, 50 hertz, including	1131 (* ' 75)

	radiator fan and all parasitic loads. Generator set	
	shall be sized to operate at the specified load at a	
	maximum ambient of 122.0F (50C) and altitude of	
	328 feet (100.0 m).	
	Prime Power Rating:	
	 Average Power Output = 70% of prime 	
	power rating	
	Load = Varying	
	Typical Hours/Year = Unlimited	
	Typical Peak Demand = 100% of prime	
	rated ekW with 10% overload capability for	
	emergency use for a maximum of one (1)	į
	hour in 12. Overload operation cannot	
	exceed 25 hours per year.	
	 Typical Application = Industrial, Pumping, 	
	Construction, Rental or Co-Generation	
1.2	Material and Parts	
	All materials and parts comprising the unit shall be new and unused.	
1.3	Engine	
	The engine shall be diesel fueled, four (4) cycles,	
	water-cooled, while operating with nominal speed not	
	exceeding 1500 RPM.	
1.4	Engine Governing	
	The engine governor shall be electronic madula with 24 years DC Floatin Advantage	
	module with 24-volt DC Electric Actuator. The module shall be enclosed in an	
	environmentally sealed, die-cast	
	aluminum housing which isolates and	
	protects electronic components from	
	moisture and dirt contamination.	
	Speed droop shall be adjustable from 0 (loop from 0) to 10% from an investment of the first state of t	
•	(isochronous) to 10%, from no load to full rated load.	
	Steady state frequency regulation shall be	
	+/- 6 RPM. Speed shall be sensed by a	
	magnetic pickup off the engine flywheel	
	ring gear.	
	 A provision for remote speed adjustment 	
	shall be included. The ECM shall adjust fuel delivery	·
	according to exhaust smoke, altitude and	
	cold mode limits.	
	 In the event of a DC power loss, the 	
	is a read a stick a setuple a will prove to the	
	forward acting actuator will move to the	
-	minimum fuel position,	
	minimum fuel position. The Module should be owned by engine	
2.	minimum fuel position,	
2. 2.1	minimum fuel position. The Module should be owned by engine manufacturer and be company fitted. Generator	
	 minimum fuel position. The Module should be owned by engine manufacturer and be company fitted. 	
	minimum fuel position. The Module should be owned by engine manufacturer and be company fitted. Generator Digital Voltage Regulator The digital voltage regulator shall be microprocessor based with fully	
	minimum fuel position. The Module should be owned by engine manufacturer and be company fitted. Generator Digital Voltage Regulator The digital voltage regulator shall be microprocessor based with fully programmable operating and protection	
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	minimum fuel position. The Module should be owned by engine manufacturer and be company fitted. Generator Digital Voltage Regulator The digital voltage regulator shall be microprocessor based with fully programmable operating and protection characteristics. The regulator shall maintain generator output voltage within +/- 0.25% for any constant	,
	minimum fuel position. The Module should be owned by engine manufacturer and be company fitted. Generator Digital Voltage Regulator The digital voltage regulator shall be microprocessor based with fully programmable operating and protection characteristics. The regulator shall maintain generator output voltage within +/- 0.25% for any constant load between no load and full load.	
	minimum fuel position. The Module should be owned by engine manufacturer and be company fitted. Generator Digital Voltage Regulator The digital voltage regulator shall be microprocessor based with fully programmable operating and protection characteristics. The regulator shall maintain generator output voltage within +/- 0.25% for any constant load between no load and full load. The regulator shall be capable of sensing	,
	minimum fuel position. The Module should be owned by engine manufacturer and be company fitted. Generator Digital Voltage Regulator The digital voltage regulator shall be microprocessor based with fully programmable operating and protection characteristics. The regulator shall maintain generator output voltage within +/- 0.25% for any constant load between no load and full load. The regulator shall be capable of sensing true RMS in three phases of alternator output	,
	minimum fuel position. The Module should be owned by engine manufacturer and be company fitted. Generator Digital Voltage Regulator The digital voltage regulator shall be microprocessor based with fully programmable operating and protection characteristics. The regulator shall maintain generator output voltage within +/- 0.25% for any constant load between no load and full load. The regulator shall be capable of sensing true RMS in three phases of alternator output voltage, or operating in single phase sensing mode.	
	minimum fuel position. The Module should be owned by engine manufacturer and be company fitted. Generator Digital Voltage Regulator The digital voltage regulator shall be microprocessor based with fully programmable operating and protection characteristics. The regulator shall maintain generator output voltage within +/- 0.25% for any constant load between no load and full load. The regulator shall be capable of sensing true RMS in three phases of alternator output voltage, or operating in single phase sensing mode. The voltage regulator shall include a VAR/Pf	
	minimum fuel position. The Module should be owned by engine manufacturer and be company fitted. Generator Digital Voltage Regulator The digital voltage regulator shall be microprocessor based with fully programmable operating and protection characteristics. The regulator shall maintain generator output voltage within +/- 0.25% for any constant load between no load and full load. The regulator shall be capable of sensing true RMS in three phases of alternator output voltage, or operating in single phase sensing mode. The voltage regulator shall include a VAR/Pf control feature as standard.	
	minimum fuel position. The Module should be owned by engine manufacturer and be company fitted. Generator Digital Voltage Regulator The digital voltage regulator shall be microprocessor based with fully programmable operating and protection characteristics. The regulator shall maintain generator output voltage within +/- 0.25% for any constant load between no load and full load. The regulator shall be capable of sensing true RMS in three phases of alternator output voltage, or operating in single phase sensing mode. The voltage regulator shall include a VAR/Pf control feature as standard. The regulator shall provide an adjustable	,
	minimum fuel position. The Module should be owned by engine manufacturer and be company fitted. Generator Digital Voltage Regulator The digital voltage regulator shall be microprocessor based with fully programmable operating and protection characteristics. The regulator shall maintain generator output voltage within +/- 0.25% for any constant load between no load and full load. The regulator shall be capable of sensing true RMS in three phases of alternator output voltage, or operating in single phase sensing mode. The voltage regulator shall include a VAR/Pf control feature as standard. The regulator shall provide an adjustable dual slope regulation characteristic in order	,
	minimum fuel position. The Module should be owned by engine manufacturer and be company fitted. Generator Digital Voltage Regulator The digital voltage regulator shall be microprocessor based with fully programmable operating and protection characteristics. The regulator shall maintain generator output voltage within +/- 0.25% for any constant load between no load and full load. The regulator shall be capable of sensing true RMS in three phases of alternator output voltage, or operating in single phase sensing mode. The voltage regulator shall include a VAR/Pf control feature as standard. The regulator shall provide an adjustable dual slope regulation characteristic in order to optimize voltage, and frequency response	
	minimum fuel position. The Module should be owned by engine manufacturer and be company fitted. Generator Digital Voltage Regulator The digital voltage regulator shall be microprocessor based with fully programmable operating and protection characteristics. The regulator shall maintain generator output voltage within +/- 0.25% for any constant load between no load and full load. The regulator shall be capable of sensing true RMS in three phases of alternator output voltage, or operating in single phase sensing mode. The voltage regulator shall include a VAR/Pf control feature as standard. The regulator shall provide an adjustable dual slope regulation characteristic in order to optimize voltage, and frequency response for site conditions. The voltage regulator shall include standard	
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	•		
` ~	ı,"——	5. Battery volts	
~ < <>	1	6. Engine hours	
€)		 Engine crank attempt counter 	
		 Engine successful start counter 	
		Service maintenance interval	
		10. Real time clock	
·		Generator	
	!	Generator AC volts (Line to	
		Line, Line to Neutral and Average)	
	1	Generator AC current (Avg and	
	!	Per Phase)	
		Generator AC Frequency Generator kW (Total and Per	
	1	Phase)	
	ĺ	5. Generator kVA (Total and Per	
		Phase)	
	ĺ	Generator kVAR (Total and Per	
		Phase)	
		7. Power Factor (Avg and Per Phase)	
		8. Total kW-hr	
		9. Total kVAR-hr	
		10. % kW	
	1	11. % kVA	<u> </u>
		12. % kVAR	
	2.6	Alarms and Shutdowns	
	1	Engine Alarm/Shutdown	
	•	Low oil pressure alarm/shutdown	
]	High coolant temperature	
	1	alarm/shutdown 3. Loss of coolant shutdown	
	}	Loss of coolant shutdown Over speed shutdown	
		5. Over crank shutdown	
		Emergency stop shutdown	
	1	Low coolant temperature alarm	
		Low battery voltage alarm	
	1	High battery voltage alarm	
		10. Control switch not in auto position alarm	
	1	11. Battery charger failure alarm	İ
	ì	Generator Alarm/Shutdown	
	!	Generator phase sequence	
	1	2. Generator over voltage	
		 Generator under voltage 	
	}	 Generator over frequency 	
		5. Generator under frequency	
		6. Generator reverse power (real]
	1	and reactive) 7. Generator overcurrent	
	İ		
	1	Voltage Regulator Alarm/Shutdown	
	1	Loss of excitation alarm/shutdown Instantaneous over excitation	
		alarm/shutdown	
		Time over excitation alarm/shutdown	
	l	4. Loss of sensing	
		5. Loss of PMG	
	2.7	Inputs and Outputs	
		 Programmable Digital Inputs 	
		The Controller shall include the ability to	
		accept programmable digital input signals.	
		The signals may be programmed for either	
		high or low activation using programmable Normally Open or Normally Closed contacts.	
		Programmable Relay Outputs	
		The control shall include the ability to operate	
		programmable relay output signals, integral	
		to the controller. The output relays shall be	
		rated for 2A @ 30VDC and consist of six (6)	
		Form A (Normally Open) contacts and two	
		(2) Form C (Normally Open & Normally Closed) contacts.	
		Programmable Discrete Outputs	
		The control shall include the ability to operate	
	1	two (2) discrete outputs, integral to the	
	1	controller, which are capable of sinking up to	
		300mA.	A STORY
			· · · · · · · · · · · · · · · · ·

2.8		
	Maintenance	
	All engine, voltage regulator, control panel and	İ
	careagn units shall be essentially through a single	
	accessory units shall be accessible through a single	
	electronic service tool. The following maintenance	
	functionality shall be integral to the generator set	
	control	
	Engine running hours display	
	Service maintenance interval (running	
	hours or calendar days)	
	3. Engine crank attempt counter	
	4 Engine evecephful starts counter	
	Engine successful starts counter	
	40 events are stored in control panel	
	memory	
	· ·	
	6. Programmable cycle timer that starts and	
	runs the generator for a predetermined time.	
	The timer shall use 7 user-programmable	
	sequences that are repeated in a 7-day	
	cycle. Each sequence shall have the	
	following programmable set points:	
	a) Day of week	
	· ·	
	c) Duration of cycle	
2.9	Remote Communications	
	The control shall include Modbus RTU	
	communications as standard via RS-485 half	
	duplex with configurable baud rates from	
	2.4k to 57.6k.	
3.	Cooling System	
<u>J.</u>		
	 The generator set shall be equipped with 	
	a rail-mounted, engine-driven radiator	
	with blower fan and all accessories.	
	The cooling system shall be sized to	1
	operate at full load conditions and 110	
	F*(50C) ambient air entering the room or	
	enclosure (If an enclosure is specified).	
	The generator set supplier is responsible	
	for providing a properly sized cooling	
	system based on the enclosure static	
	pressure restriction.	
3.1	Fuel System	
٠.!		
1	The fuel system shall be integral with the	
	engine. In addition to the standard fuel filters	
	provided by the engine manufacturer, there	
	shall also be installed a primary fuel	
	filter/water separator in the fuel inlet line to	
	•	
	the engine.	
	 All fuel piping shall be black iron or flexible 	
	fuel hose rated for this service. No	
	galvanized piping will be permitted.	
	gaivantzed piping will be permitted.	1
	Flexible fuel lines shall be minimally rated for	
	300 degrees F and 100 psi.	
3.2	Exhaust System	
4.4		i
	Silencer	
	Silencer • A industrial grade silencer, companion	
	Silencer • A industrial grade silencer, companion	
******	Silencer A industrial grade silencer, companion flanges, and flexible stainless steel exhaust	
	Silencer A industrial grade silencer, companion flanges, and flexible stainless steel exhaust fitting properly sized shall be furnished and	
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	. <u></u>	
)	Batteries	
i	Batteries - A lead-acid storage battery set	
	of the heavy-duty diesel starting type shall	
	be provided. Battery voltage shall be	
j j	compatible with the starting system.	ļ
] i	Battery Charger	1
.	Battery Charger - A current limiting	
i	battery charger shall be furnished to	
	automatically recharge batteries. The	
	charger shall be dual charge rate with	
	automatic switching to the boost rate	i i
	when required. The battery charger shall	
	be mounted on the Genset package or	
	inside the Genset enclosure/room.	
4	General	
4.1	References and Standards	
	The generator set covered by these specifications	•
1	shall be designed, tested, rated, assembled and	
	installed in strict accordance with all applicable	
	standards below:	
]	CSA C22.2 No14	
	• CSA 282	
	• CSA 100	
1	• EN61000-6	
}	·	
	• EN55011	
	FCC Part 15 Subpart B	
	• ISO8528	1
1	• IEC61000	
1	• UL508	
!	• UL2200	
-		
1	• UL142	1
1	Designed to allow for installed compliance to	i
<u></u>	NFPA 70, NFPA99 and NFPA 110	
4.2	Work Included	1
	<u> </u>	
1	 Fuel System 	
	The CONTRACTOR shall provide a full	
	tank of diesel fuel for the completion of all	
	testing.	
	System Test	
1	A complete system load test shall be	
1		
	performed after all equipment is installed.	
1	Guidelines in the Start-up Section.	
	 Requirements, Codes and Regulations 	
	The equipment supplied and installed shall	
	meet the requirements of above standards.	Į.
	All equipment shall be of new and current	
ļ	production by a MANUFACTURER who has	
1	25 years of experience building this type of	ļ.
	equipment. Manufacturer shall be ISO9001	į į
1	certified.	
4 2	Submittals	
4.3		
(Engine-generator submittals shall 	1
	include the following Information:	
1	Factory published specification	į į
1	sheet.]
-	Manufacturer's catalog cut sheets	ļ .
	of all auxiliary components such as	
	battery charger, control panel,	
1	enclosure, etc.	
	3. Dimensional elevation and layout	
]
1	drawings of the generator set and)
	related accessories.	
	Weights of all equipment.	
	5. Interconnect wiring diagram of	
	complete emergency system,	
	including generator battery charger,	
}	control panel.	
	6. Engine mechanical data, including	a significant to the same of t
	heat rejection, exhaust das flows,	EAL
1	combustion an and ventilation air	
	flows, fuel consumption, etc.	
]		Med A Xall
1	7. Generator electrical data including	121 121 151
	temperature and insulation data,	la la
	cooling requirements, excitation	
	ratings, voltage regulation, voltage	W 1
!	regulator, efficiencies.	TON
	8. Generator resistances, reactance's	
	and time constants.	

·		
·	9. Generator Locked Rotor Motor	
)	starting curves.	
	10. Manufacturer's documentation	
	showing maximum expected transient	
	voltage and frequency dips, and	
	recovery time during operation of the	
	generator set at the specified site	
	conditions with the specified loads.	
)	 Manufacturers and dealers written 	
	warranty.	
4.4	System Responsibility	
	Generator Set Distributor	
	The completed engine generator set shall be	
	manufactured in USA/Europe/ Japan and	
	supplied by the Manufacturer's Sole	
]	Agency/Authorized Dealer only.	
4.5	Warranty	
	Prime (ISO 8528-1: PRP) Rated Generator	
	Set Warranty	
	 The manufacturer's standard warranty shall 	
	in no event be for a period of less than five	
	(5) years from date of initial start-up of the	
	system including with service contract; shall	
	include consumables, overhauling works,	
	repair parts, labor, and reasonable travel	
	expense necessary for repairs at the job site.	
	 Running hours shall not be a limiting factor 	
	for the system warranty by either the	
ļ	manufacturer or servicing distributor.	
	 Submittals received without written 	
	warranties as specified will be rejected in	'
	their entirety.	
4.6	Parts and Service Qualifications	
]	 Service Facility 	
	The engine-generator supplier shall	
ļ	maintain 24-hour parts and service	
	capability within 100 miles of the project	
1	site. The distributor shall stock parts as	
	needed to support the generator set	
	package for this specific project. The	
1	supplier must carry sufficient inventory to	
	cover no less than 80% parts service	
	within 24hrs and 95% within 48 hours.	
ſ	 Service Personnel 	
ļ	The dealer shall maintain qualified factory	
	trained service personnel.	<u> </u>
5	Execution	
	 Start-Up and Testing 	· · · · · · · · · · · · · · · · · · ·
	Coordinate all start-up and testing	
ļ	activities with the Engineer and Owner.	
1	After installation is complete and normal	
ļ	power is available, the manufacturer's	
	local dealer shall perform the following:	
	 Perform a 4 hour load bank test at 	
ļ	1.0 PF at full name plate rating.	
]	Load Bank, Cables and other	
ļ	equipment required for this test to	
	be supplied to the customer.	
	 Operation and Maintenance Manuals 	
	Provide two (2) sets of operation and	
I	maintenance manuals covering the	
I		
	generator, and auxiliary components.	
	generator, and auxiliary components. Include final as-built wiring interconnect	
	generator, and auxiliary components. Include final as-built wiring interconnect diagrams and recommended preventative	
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	included in the tender cost for the two units 1000 KVA Diesel Generating Sets. Necessary civil/electrical boards/cables/earthling etc. needed to install and commissioning the complete system as per standard shall be responsibility of successful firm/vender. The successful firm/bidder shall provide Genset for backup at onsite till new unit 1000 KVA Genset installation, testing & commissioning. Their rent expenses will be included in tender cost.	
	ty Safety Standards:	
and m	idder should have own in-house facility of minor najor overhauling works simultaneously for fuel injector calibration.	
USA/I	try of manufacture and origin should be Europe/Japan and equipment approval of their ective quality standards is mandatory.	

* The conversion rate of Dollar into Pak Rupees is Rs.104.60 equal US \$ on dated 27th February, 2016.

2.1 Contract Price

The Purchaser hereby agrees to pay to the Contractor the Contract Price in consideration of the performance by the Contractor of its obligations hereunder. The Contract Price shall be the of: 49,016,699/- (Pak Rupees Four Crore Ninety Lacs Sixteen Thousand Six Hundred Ninety Nine only)

3.1 Effective Date (Reference GCC Clause 1)

The Time of Completion of the Facilities shall be determined from the date when all of the following conditions have been fulfilled:

- (a) This Contract Agreement has been duly executed or signed for and on behalf of the Purchaser and the Contractor;
- (b) The Contractor has submitted to the Purchaser the performance security.

Each party shall use its best efforts to fulfill the above conditions for which it is responsible as soon as practicable.

Local Transportation:

 All type of transportation of Machinery, equipment, etc. up to the consignee at one site i.e. Rafiqui Shaheed Road, Jinnah Postgraduate Medical Centre, Karachi is the responsibility of contractor.

General Conditions of Contract

A. Contract and Interpretation

1. Definitions

1.1 The following words and expressions shall have the meanings hereby assigned to them:

"Contract" means the Contract Agreement entered into between the Purchaser and the Contractor, together with the Contract Documents referred to therein; they shall constitute the Contract, and the term "the Contract" shall in all such documents be construed accordingly.

"GCC" means the General Conditions of Contract hereof.

"SCC" means the Special Conditions of Contract.

"Day" means calendar day

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"Month" means calendar month

"Purchaser" means the person named as such in the SCC.

"Contractor" means the person(s) whose bid to perform the Contractor has been accepted by the Purchaser and is named as such in the Contract Agreement, and includes the legal successors or permitted assigns of the Contractor.

"Contract Price" means the sum specified in the Contract Agreement, as may be made pursuant to the Contract.

"Facilities" means the Plant and Equipment to be supplied and installed, as well as all the Installation Services to be carried out by the Contractor under the Contract.

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"Plant and Equipment" means permanent plant, equipment, machinery, apparatus, articles and things of all kinds to be provided and incorporated in the Facilities by the Contractor under the Contract

"Installation Services" means all those services ancillary to the supply of the Plant and Equipment for the Facilities, to be provided by the Contractor under the Contract; e.g. transportation and provision of marine or other similar insurance, inspection, installation, testing, precommissioning, commissioning, operations, maintenance, the provision of operations and maintenance manuals, training, etc.

"Country of Origin" means the countries and territories eligible under the rules

"Site" means the land and other places upon which the Facilities are to be installed.

"Time for Completion" means the time within which Completion of the Facilities as a whole is to be attained in accordance with the specifications in the SCC and the relevant provisions of the Contract.

"Completion" means that the Facilities have been completed operationally and put in a tight and clean condition, and that all work or such specific part thereof has been completed.

"Pre-commissioning" means the testing, checking and other requirements specified in the Technical Specifications that are to be carried out by the Contractor in preparation for Commissioning.

"Commissioning" means operation of the Facilities which operation is to be carried out by the Contractor

2. Contract Documents

2.1 All documents forming part of the Contract (and all parts thereof) are intended to be correlative, complementary and mutually explanatory. The Contract shall be read as a whole.

3. Interpretation

3.1 Language

- 3.1.1 All Contract Documents, all correspondence and communications to be given and all other documentation to be prepared and supplied under the Contract shall be written in English.
- 3.1.2 If any of the Contract Documents, correspondence or communications are prepared in any language other than the governing language under GCC Sub-Clause 3.1.1 above, the English translation of such documents, correspondence or communications shall prevail in matters of interpretation.

3.4 Amendment

No amendment or other variation of the Contract shall be effective.

3.5 Independent Contractor

The Contractor shall be an independent contractor performing the Contract. The Contract does not create any agency, partnership, joint venture or other joint relationship between the parties hereto. Subject to the provisions of the Contract, the Contractor shall be solely responsible for the manner in which the Contract is performed

3.6 Country of Origin

"Origin" means the place where the materials, equipment and other supplies for the Facilities are mined, grown, produced or manufactured, and from which the services are provided.

4. Notices

- 4.1 Unless otherwise stated in the Contract, all notices to be given under the Contract shall be in writing, and shall be sent by personal delivery, airmail post, special courier, telegraph, telex, facsimile to the address of the relevant party set out in the SCC, with the following provisions:
 - 4.1.1 Any notice sent by telegraph, telex, facsimile shall be confirmed within two (2) days after dispatch by notice sent by airmail post or special courier, except as otherwise specified in the Contract.
 - 4.1.2 Any notice sent by airmail post or special courier shall be deemed (h, the absence of evidence of earlier receipt) to have been delivered ten (10) days after dispatch. In proving the fact of dispatch, it shall be sufficient to show that the envelope containing such notice was properly addressed, stamped and conveyed to the postal authorities or courier service for transmission by airmail or special courier.
 - 4.1.3 Any notice delivered personally or sent by telegraph, telex, facsimile shall be deemed to have been delivered on date of its dispatch.

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- 4.1.4 Either party may change its postal, telex, facsimile address or addressee for receipt of such notices by ten (10) days' notice to the other party in writing.
- 4.2 Notices shall be deemed to include any approvals, consents, instructions, orders and certificates to be given under the Contract.
- 5. Governing Law
- 5.1 The Contract shall be governed by and interpreted in accordance with laws of the country specified in the SCC.
- 6. Settlement of Disputes
- 6.1 Adjudicator
 - 6.1.1 If any dispute of any kind whatsoever shall arise between the Purchaser and the Bidder in connection with or arising out of the Contract, including without prejudice to the generality of the foregoing, any question regarding its existence, validity or termination, or the execution of the Facilities—whether during the progress of the Facilities or after their completion and whether before or after the termination, abandonment or breach of the Contract—the parties shall seek to resolve any such dispute or difference by mutual consultation. If the parties fail to resolve such a dispute or difference by mutual consultation, then the dispute shall be referred in writing by either party to the Adjudicator, with a copy to the other party.
 - 6.1.2 The Adjudicator shall give its decision in writing to both parties within twenty-eight (28) days of a dispute being referred to it.
- 6.2 If, after thirty (30) days from the commencement of such informal negotiation, the Purchaser and the supplier have been unable to resolve amicably a Contract dispute, either party may require that the dispute be referred to the arbitrator for resolution through arbitration.
- 6.3 In case of any dispute concerning the interpretation and application of contract that shall be referred to the Law Department, Govt. of Sindh, who or his nominee shall act as sole arbitrator. The award rendered by the sole arbitrator shall be final and binding on the Parties

B. Subject Matter of Contract

- 7. Scope of Facilities
- 7.1 Unless otherwise expressly limited in the Technical Specifications, the Contractor's obligations cover the provision of all Plant and Equipment and the performance of all Installation Services required for the manufacture (including procurement, quality assurance, installation, Pre-commissioning and delivery) of the Plant and Equipment and the installation, completion and commissioning of the Facilities in accordance with the procedures, specifications, codes and any other documents as specified in the Technical Specifications.
- 7.2 The Contractor shall, unless specifically excluded in the Contract, supply all such items and materials not specifically mentioned in the Contract but that can be reasonably inferred from the Contract as being required for successful commissioning of the equipment as if such work and/or items and materials were expressly mentioned in the Contract.
- 7.3 In addition to the supply of Mandatory Spare Parts included in the Contract during the warranty period, the Contractor agrees to ensure availability of spare parts required for the operation and maintenance of the Facilities for the period specified in the Special Conditions of Contract.
- 8. Time for Commencement and Completion
- 8.1 The Contractor shall commence work on the Facilities within the period specified in the SCC and without prejudice to GCC Sub-Clause 22.2 hereof, the Contractor shall thereafter proceed with the Facilities in accordance with the time schedule specified.
- 9. Contractor's Responsibilities
- 9.1 The Contractor confirms that it has entered into this Contract on the basis of a proper examination of the data relating to the Facilities provided by the Purchaser, and on the basis of information that the Contractor could have obtained from a visual inspection of the Site. The Contractor acknowledges that any failure to acquaint itself with all such data and information shall not relieve its responsibility for properly estimating the dational of the contractor.

The Contractor shall acquire in its name all permits, approvals or licenses from all local, state or national government authorities or public service undertakings in the country where the Site is located that are necessary for the performance of the Contract, including, without limitation, visas for the Contractor's and Subcontractor's personnel and entry permits for all imported Equipment. The Contractor shall acquire all other permits, approvals and/or licenses that are not the responsibility of the Purchaser and that are necessary for the performance of the Contract.

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9.3 The Contractor shall comply with all laws in force in the country where the Facilities are installed and where the Installation Services are carried out. The laws will include all local, state, national or other laws that affect the performance of the Contract and bind upon the Contractor. The Contractor shall indemnify and hold harmless the Purchaser from and against any and all liabilities, damages, claims, fines, penalties and expenses of whatever nature arising or resulting from the violation of such laws by the Contractor or its personnel, including the Subcontractors and their personnel, but without prejudice to GCC Sub-Clause 10.1 hereof.

10. Purchaser's Responsibilities

- 10.1 The Purchaser shall ensure the accuracy of all information and/or data to be supplied by the Purchaser to the Contractor.
- 10.2 The Purchaser shall be responsible for acquiring and providing legal and physical possession of the Site and access thereto, and for providing possession of and access to all other areas reasonably required for the proper execution of the Contract, including all requisite rights of way, as specified. The Purchaser shall give full possession of and accord all rights of access thereto on or before the date(s) specified.
- 10.3 If requested by the Contractor, the Purchaser shall use its best endeavors to assist the Contractor in obtaining in a timely and expeditious manner all permits, approvals and/or licenses necessary for the execution of the Contract from all local, state or national government authorities or public service undertakings that such authorities or undertakings require the Contractor or Subcontractors or the personnel of the Contractor or Subcontractors, as the case may be, to obtain.

C. Payment

11. Contract Price

- 11.1 The Contract Price shall be as specified in Article 2 (Contract Price) of the Form of Contract Agreement.
- 11.2 Unless indicated otherwise in the SCC, the Contract Price shall be a firm lump sum not subject to any alteration, except in the event of a Change in the Facilities or as otherwise provided in the Contract.

12. Terms of Payment

- 12.1 The Contract Price shall be paid as specified in the Contract Agreement. The procedures to be followed in making application for and processing payments shall be finalized at the time of Contract.
- 12.2 The currency or currencies in which payments are made to the Contractor under this Contract shall be specified in the Contract Agreement, subject to the general principle that payments will be made in the currency or currencies in which the Contract Price has been stated.

13. Securities

13.1 Issuance of Securities

The Contractor shall provide the securities specified below in favor of the Purchaser at the times, and in the amount, manner and form specified below.

13.2 Performance Security

- 13.2.1 The Contractor shall, within seven (07) days of the notification of contract award, provide a security for the due performance of the Contract in the amount specified in the SCC.
- 13.2.2 The security shall be denominated in the currency or currencies of the Contract, or in a freely convertible currency acceptable to the Purchaser, and shall be in one of the forms, pay order / bank draft or bank guarantees.

14. Taxes and Duties

- 14.1 Except as otherwise specifically provided in the Contract, the Contractor shall bear and pay all taxes, duties, levies and charges assessed on the Contractor, its Subcontractors or their employees by all municipal, state or national government authorities in connection with the Facilities in and outside of the country where the Site is located.
- 14.2 If any tax exemptions, reductions, allowances or privileges may be available to the Contractor in the country where the Site is located, the Purchaser shall use its best endeavors to enable the Contractor to benefit from any such tax savings to the maximum allowable extent.
- 14.3 For the purpose of the Contract, it is agreed that the Contract Price specified in Article 2 of the Form of Contract Agreement is based on the taxes, duties, levies and charges prevailing at the date of bid submission in the country where the Site is located. If any rates of Tax

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are increased or decreased, a new Tax is introduced, an existing Tax is abolished, or any change in interpretation or application of any Tax occurs in the course of the performance of Contract, which was or will be assessed on the Contractor.

E. Execution of the Facilities

15. Work Program

15.1 Work Procedures

The Contract shall be executed in accordance with the Contract Documents and procedures given in the section on Sample Forms and Procedures of the Contract Documents.

The Contractor may execute the Contract in accordance with its own standard project execution plans and procedures to the extent that they do not conflict with the provisions contained in the Contract.

16. Design and Engineering

16.1 Specifications

Technical specifications as mentioned in SCC.

17. Procurement

17.1 Plant and Equipment

The Contractor shall manufacture or procure and transport all the Plant and Equipment in an expeditious and orderly manner to the Site.

17.2 Transportation.

- 17.2.1 The Contractor shall at its own risk and expense transport all the Plant and Equipment to the Site by the mode of transport that the Contractor judges most suitable under all the circumstances.
- 17.2.2 Unless otherwise provided in the Contract, the Contractor shall be entitled to select any safe mode of transport to carry the Plant and Equipment.
- 17.2.3 Upon dispatch of each shipment of the Plant and Equipment, the Contractor shall notify the Purchaser by telex, facsimile of the description of the Plant and Equipment, the point and means of dispatch, and the estimated time and point of arrival in the country where the Site is located, if applicable, and at the Site. The Contractor shall furnish the Purchaser with relevant shipping documents to be agreed upon between the parties.
- 17.2.4 The Contractor shall be responsible for obtaining, if necessary, approvals from the authorities for transportation of the Plant and Equipment to the Site. The Purchaser shall use its best endeavors in a timely and expeditious manner to assist the Contractor in obtaining such approvals, if requested by the Contractor. The Contractor shall indemnify and hold harmless the Purchaser from and against any claim for damage that may be caused by the transport of the Plant and Equipment to the Site.

17.3 Customs Clearance

The Contractor shall, at its own expense, handle all imported Plant and Equipment and Contractor's Equipment at the point(s) of import and shall handle any formalities for customs clearance.

18. Installation

18.1 Setting Out/Supervision/Labor

- 18.1.1 Bench Mark. The Contractor shall be responsible for the true and proper setting-out of the equipment in relation to benchmarks, reference marks and lines provided to it in writing by or on behalf of the Purchaser.
- 18.1.2 Contractor's Supervision: The Contractor shall give or provide all necessary superintendence during the installation of the equipment. The Contractor shall provide and employ only technical personnel who are skilled and experienced in their respective callings and supervisory staff who are competent to adequately supervise the work at hand.

19. Preliminary Inspection

- 19.1 The Purchaser or its representative shall have the right to preliminary inspection of the Plant & Machinery to confirm their conformity to the Contract specification.
- 19.2 The inspection will be conducted at the premises of the arrival, reasonable facilities and assistance shall be furnished to the inspectors at no charge to the Purchaser.
- 20. Completion of the Facilities
- 20.1 As soon as the Facilities or any part thereof has, in the opinion of the Contractor, been completed operationally and put in a good condition as specified in the Technical Specifications, excluding minor items not



21.Commissioning and Operational Acceptance materially affecting the operation or safety of the Facilities, the Contractor shall so notify the Purchaser in writing.

21.1 Commissioning

Commissioning of the Facilities or any part thereof shall be commenced by the Contractor immediately after issue of the Completion Certificate by the Purchaser.

F. Guarantees and Liabilities

22. Completion Time Guarantee

- 22.1 The Contractor guarantees that it shall attain Completion of the Facilities within the Time for Completion specified in the SCC
- 22.2 If the Contractor fails to attain Completion of the Facilities (installation, commissioning and inspection) within the Time for Completion or any extension thereof under GCC, the Contractor shall pay to the Purchaser liquidated damages in the amount specified in the SCC as a percentage rate of the Contract Price, or the relevant part thereof. The aggregate amount of such liquidated damages shall in no event exceed the amount specified as "Maximum" in the SCC. Once the "Maximum" is reached, the Purchaser may consider termination of the Contract.

Such payment shall completely satisfy the Contractor's obligation to attain Completion of the Facilities within the Time for Completion or any extension thereof under GCC. The Contractor shall have no further liability whatsoever to the Purchaser in respect thereof.

However, the payment of liquidated damages shall not in any way relieve the Contractor from any of its obligations to complete the Facilities or from any other obligations and liabilities of the Contractor under the Contract.

23. Defect Liability

- 23.1 The Contractor warrants that the Facilities or any part thereof shall be free from defects in the design, engineering, materials, and workmanship of the Plant and Equipment supplied and of the work executed.
- 23.2 In case of defect in any part at the time of installation it shall be dealt under the warranty.

24. Functional Guarantees

24.1 The Contractor guarantees that during the Guarantee Test, the Facilities and all parts thereof shall attain the Functional, subject to and as specified in Technical Specification.

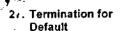
25. Force Majeure

25.1 Not with-standing the provisions of GCC Clauses 16,17 & 18 the supplier shall not be liable for forfeiture of its performance security / earnest money, or termination / blacklisting for default if and to the extent that it delay in performance or other failure to perform its obligation under the contract is the result of an event of Force Majeure means an act of God or an event beyond the control of the supplier and not involving the supplier's fault or negligence directly or indirectly purporting to mis-planning, mismanagement and / or lack of foresight to handle the situation. Such events may include but are not restricted to acts of the purchaser in its sovereign capacity, wars or revolutions, fires, floods earthquakes. Epidemics, quarantine restrictions and freight embargoes. If a Force Majeure situation arises, the supplier shall promptly notify the purchaser in writing with sufficient and valid evidence of such condition and the cause thereof. The Force Majeure Committee will examine the pros and cons of the case and all reasonable alternative means for completion of supply orders under this contract and will submit its recommendations to the competent authority. However, unless otherwise directed by the purchaser in writing, the supplier shall continue to perform its obligations under the contract as far as is reasonably practical and shall seek reasonable alternative means for performance not prevented by the Force Majeure event.

H. Change in Contract Elements

26. Extension of Time for Completion

- 26.1 The Time(s) for Completion specified in the SCC shall be extended the Contractor is delayed or impeded in the performance of any obligations under the Contract by reason of any of the following:
 - (a) any Change in the Facilities as provided in GCC
 - (b) any occurrence of Force Majeure as provided in GCC unforeseen conditions or other occurrence of any of the matters
 - (c) any other matter specifically mentioned in the Contract



- 27.1 The purchaser, without prejudice to any other remedy for breach of contract by written notice of default sent to the supplier, may terminate this contract in whole or in part:
 - (a) if the supplier fails to deliver any or all of the Plant and Machinery within the period(s) specified in the Contract, or within any extension thereof granted by the Purchaser.
 - (b) If the Supplier fails to perform any other obligation(s) under the Contract.
 - (c) If the supplier, in the judgment of the Purchaser has engaged in corrupt or fraudulent practices in competing for or in executing the Contract. For the purpose of this clause:

"corrupt practice" means the offering, giving, receiving or soliciting of anything of value to influence the action of a public official in the procurement process or in contract execution

"Fraudulent Practice" means a misrepresentation of facts in order to influence a procurement process or the execution of a contract to the detriment of the Purchaser, and includes collusive practice among bidders (prior to or after bid submission) designed to establish bid prices at artificial non-competitive levels and to deprive the Purchase of the benefits of free and open competition.

Special Conditions of Contract

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

1. Definitions (GCC Clause 1)

The Purchaser is: Jinnah Postgraduate Medical Centre, Karachi.

The Project Manager is: Prof. Tariq Mahmood, Head of Radiology, Cyber knife & Oncology Departments, Chairman Procurement Committee.

The Contractor is: M/s. Allied Engineering & Services (Pvt.) Ltd. Plot No. 21/3, Sector No. 22, Korangi Industrial Area, Karachi.

Country of Manufacturing & Origin: USA

2. Notices (GCC Clause 4)

GCC 4.1—Purchaser's address for notice purposes:

Jinnah Postgraduate Medical Centre, Rafiqui Shaheed Road, Karachi, Pakistan

Contractor's address for notice purposes: M/s. Allied Engineering & Services (Pvt.) Ltd. Plot No. 21/3, Sector No. 22, Korangi Industrial Area, Karachi.

3. Governing Law (GCC Clause 5)

Sample Provision

GCC 5.1-The Contract shall be interpreted in accordance with the laws of the Purchaser's country.

4. Scope of Facilities /Spare Parts/ (GCC Clause 7)

GCC 7.3—The Contractor agrees to ensure the availability of spare for a period of 10 years (Ten) years.

The Contractor shall carry sufficient inventories to ensure an ex-stock supply of consumable spares for the plant and equipment. Other spare parts and components shall be supplied as promptly as possible, but at the most within six (6) Weeks of placing the order and opening the letter of credit. In addition, in the event of termination of the production of spare parts, advance notification will be made to the Purchaser of the pending termination, with sufficient time to permit the Purchaser to procure the needed requirement. Following such termination, the Contractor will furnish to the extent possible and at no cost to the Purchaser the blueprints, drawings and specifications of the spare parts, if requested.

5. Time for Commencement and Completion

The Contractor shall commence work on the Facilities from the Effective Date for determining Time for Completion as specified in the Contract Agreement.

The Completion of the Facilities shall be attained within eight (08) Weeks

6. Contract Price (GCC Clause 11)

The Contract price shall be fixed





Securities (GCC Clause 13)

GCC 13.2.1— The amount of performance security, as a percentage 10% (Ten Percent) of the Contract Price for the Facility is provided, shall be

GCC 13.2.2— The performance security shall be in the form of the: Pay order / Bank Draft / Bank Guarantee No. | GI-0.786,000,803,77 dated:27-03-2017 amounting to Gallace on the Bank, Plaza Branch, attached hereto in the section on Sample Forms and Procedures.

8. Completion Time Guarantee (GCC Clause 22)

GCC 22.2-Applicable rate for liquidated damages:

Maximum deduction for liquidated damages: 0.5% per week, (Maximum upto 10%)

The above rate and maximum apply to the price of the part of the Facilities, as quoted in the Price Schedule, for that part for which the Contractor fails to achieve Completion within the particular Time for Completion.

IN WITNESS WHEREOF the Purchaser and the Contractor have caused this Agreement to be duly executed by their duly authorized representatives the day and year first above written.

Signed by, for and on behalf of the Purchaser (Executive Director, JPMC Karachi)

[Signature] Dr. YAHYA KHAN TUNIO MBBS.OCN.MPH.

Jinnah Postgraduate Medical Centre

[Title] Karachi

Signed by, for and on behalf of the Contractor (Regional Manager (CAT Power Systems) AESL, Karachi)

[Signature]

Zeeshan Kazmi Regional Manager, CAT Power Systems)

[Title]

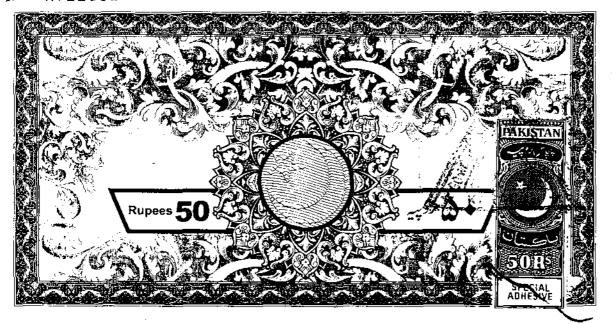
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GHULAM HABIS BALL BAdvoorle Notary Public City Cours Karachi - Pakistan

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Integrity Pact

DECLARATION OF FEES, COMMISSION AND BROKERAGE ETC. PAYABLE BY THE SUPPLIERS/CONTRACTORS/CONSULTANTS.

Contract Number

F.1-2016-(M&R-SNE)/17498/JPMC

Dated: 25-03-26

Contract Value

PAK Rs.49,016,699/-

Contract Title

Supply & Installation of 1000 kVA Generator Sets (Two Units) for

Jinnah Postgraduate Medical Centre, Karachi.

Allied Engineering & Services Pvt. Ltd. hereby declares that it has not obtained or indeed the procurement of any contract, right, interest, privilege or other obligation or benefit from Government of Sindh (GoS) or any administrative subdivision or agency thereof or any other entity owned or controlled by it (GoS) through any corrupt business practice.

Without limiting the generality of the foregoing, Allied Engineering & Services Pvt. Ltd. Represents and warrants that it has fully declared the brokerage, commission, fees etc. paid or payable to anyone and not given or agreed to give and shall not give or agree to give to anyone within or outside Pakistan either directly or indirectly through any natural or judicial person, including its affiliate, agent, associate, broker, consultant, director, promoter, shareholder, sponsor or subsidiary, any commission, gratification, bribe, finder's fee or kickback, whether described as consultation fee or otherwise, with the object of obtaining or inducing the procurement of a contract, right, interest, privilege or other obligation or benefit, in whatsoever form, from Procuring Agency (PA), except that which has been expressly declared pursuant hereto.

Allied Engineering & Services Pvt. Ltd. certifies that it has made and will make full disclosure of all agreements and arrangements with all persons in respect of or related to the transaction with PA and has not taken any action or will not take any action to circumvent the above declaration, representation or warranty.

Allied Engineering & Services Pvt. Ltd. accepts full responsibility and strict liability for making any false declaration, not making full disclosure, misrepresenting facts or taking any action likely to defeat the purpose of this declaration, representation and warranty. It agrees that any contract, right, interest, privilege or other obligation or penent obtained as processed or other instrument of remedies available to PA under any law, contract or other instrument. or other obligation or benefit obtained or procured as aforesaid shall, without prejudice to any other right and a voidable at the option of PA.

Notwithstanding any rights and remedies exercised by PA in this regard, Allied Engineering & Services Pvt. Ltd. Agrees to indemnify PA for any loss or damage incurred by it on account of its corrupt business practices and further pay compensation, bribe, finder's fee or kickback given by Allied Engineering & Services Pvt. Ltd. as aforesald for the purpose of obtaining or inducing the procurement of any contp. right, interest, privilege or other obligation or benefit, in whatsoever form, form PA.

On behalf of

Dr. YAHYATEHAN TICTURE

DEpergutive divinecte Jimah Poster admite Medical Centre Karachi

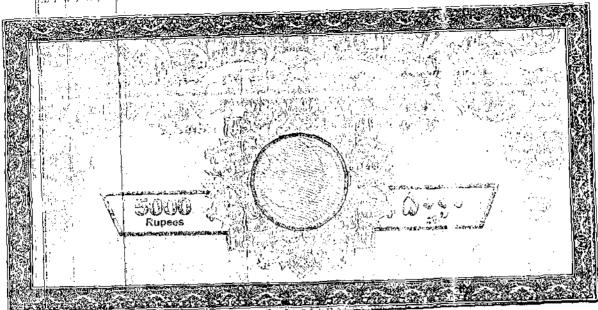
AM HABIB B.A.L.LB Advoc

Regional Manager (CAT Power System

Karachi

AESL., Karachi.





Issued to Selective Director, Carcalla Security No. 1201-B886003 (1111)

On behalf of chalan No. 3012 Dr. 251111

Intry No. Executive Director, JPMC, Rail Shaheed Rood, Admin Block, JPMC, Karachi.

(RUPLES FIVE THOUSAND LAND)

BANK GUARANTEE NO. 1GT078600080317 DATED: 27-March-2017 AMOUNT: PKR 4,901,700.00 VALID UNTIL: 21-March-2018

Dear Sir,

PERFORMANCE BOND

Whereas M/s Allied Engineering & Services Limited, 21/3, Sector # 22, Korangi Industrial Area, Karachi (hereinafter called "the Contractor") have requested us to issue a Bank Guarantee in your favor for the sum of Rs.4,901,700/- (Rupees Four Million Nine Hundred and One Thousand Seven Hundred Only) being a Performance Bond against your Letter of Acceptance No.F,1-2016-(M&R-SNE)/17498/JPMC dated 25** March, 2017 for supply of 2 Units Caterpillar Generator Sets Model C32-1000 KVA.

In consideration of above, we, Habib Bank Limited, HB Plaza Branch, 2-HB Plaza, Li Chundrigar Road, Karachi, , hereby unconditionally guarantee to make payment of Rs.4,901,700/- (Rupees Four Million Nine Hundred and One Thousand Seven Hundred Only) to you against your written statement that the Contractor has failed to perform their obligations subject to the guarantee being operative.

Notwithstanding anything contained hereinbefore our liability under this guarantee is restricted to Rs.4,901,700/- (Rupees Four Million Nine Hundred and One Thousand Seven Hundred Only). All claims must be lodged with us in writing during working hours up to the expiry date i.e. 21-March-2018 and bank shall stand discharged and released of all its obligations under the guarantee after the expiry date and shall not be liable for any claim lodged with the bank thereafter.

This guarantee is not transferable or assignable.

This guarantee is to be governed and construed in accordance with the Laws of the Islamic Republic of Pakistan.

Upon expiry or on the submission of valid claim this document should be returned to us by yourselves.

For and on behalf of

for Habib Bank Limited nauthoromen, Kreech (4766)

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NO.F.1-2016-(M&R-SNE)/ / LAND JIPMC GOVERNMENT OF SINDH JINNAH POSTGRADUATE MEDICAL CENTRE KARACHI-75510

Dated the 25th March, 2017.

To, M/S. Allied Engineering & Services (Pvt.) Ltd. 21/3, Sector No. 22, Korangi Industrial Area, Karachi.

Subject:

LETTER OF ACCEPTANCE FOR THE TENDER "SUPPLY & INSTALLATION OF 1000 KVA GENERATING SETS (TWO UNITS) FOR JINNAH POSTGRADUATE MEDICAL CENTRE, KARACHI" THROUGH SNE FOR THE YEAR 2016-17.

Ref:

Financial Proposal number TK-I-196/2016 dated 28th November 2016 submitted by Allied Engineering & Services (Pvt.) Ltd. against our tender inquiry number F.1-1/2016-17-(M&R-SNE)/JPMC.

As per recommendation of procurement committee and with the approval of competent authority, it is to inform you that your above mentioned offer against subject tender /bid enquiry is hereby accepted as per detail given below:-

Supply & Installation of 1000 KVA Generating Sets (Two Units) for Jinnah Postgraduate Medical Centre, Karachi.

S. No.	Name of Firm	Allied Engineering & Services (Pvt.) Ltd.
	Make	USA
l	Model	CAT C-32, 1000 KVA/800 eKW
	Sole Agent/Authorized Dealer of Manufacturer	Yes (Caterpillar)
} }	Unit Price CFR US\$	US\$ 138,170/-
		Equivalent to Pak Rupees Rs. 14,452,582/-
	Two Units Price CFR US\$	US\$ 276,340/-
\		Equivalent to Pak Rupees Rs.28,905,164/-
<u> </u>	Schedule Work (Site A + Site B)	20,111,535/-
	Two Units Price + Schedule Work (Site A + Site B)	49,016,699/-

The above acceptance is subject to 10% Performance Security Deposit, which may please be furnish in the shape of Pay Order/Bank Druft/Bank Guarantee of Rs.4,901,699.9/= in the name of Executive Director, JPMC and sign the contract agreement and Integrity Pact before 28th March, 2017. Final Purchase Order will be issued after fulfillment of above codal formalities.

(DR. YAHYA KHAN TUNIO) DEPUTY DIRECTOR

Copy to:-

1. 6/3/13/0

1. The Accounts Officer, JPMC, Karachi, with the request to intimate the undersigned, immediately after submission of security money.