

Annex B Technical Offer Form						
RFQ/HCR/SYR/24/38						
Supply, Delivery, Installation and Startup of an 80 KVA Immobile Soundproof Generator with Accessories						
Name of Company:						
NO PRICES are to be mentioned in this form!						
1	General Requirements and ToRs		COMPANY'S FEEDBACK			
1.1	All parts of the genset must be brand new, not refurbished or previously used, heavy-duty, and designed for nonstop operation around the clock.		YES	<input type="checkbox"/>	NO	<input type="checkbox"/>
1.2	The year of manufacture is 2020, at least.		Please specify:			
1.3	The engine and the alternator are manufactured by a reputable international manufacturer with ISO certification specializing in this domain.		Please specify:			
1.4	The genset is immobile		YES	<input type="checkbox"/>	NO	<input type="checkbox"/>
1.5	The genset is equipped with recently manufactured genset batteries 100A minimum		YES	<input type="checkbox"/>	NO	<input type="checkbox"/>
1.6	The engine and alternator are fixed on a metal base and coupled with a durable, flexible coupling to ensure that the axles of the rotating parts are straight. The static and dynamic balances are duly performed by the manufacturer or the assembly processor, who will provide certification.		YES	<input type="checkbox"/>	NO	<input type="checkbox"/>
1.7	The genset is equipped with high-quality vibration dampers that correspond to its size.		YES	<input type="checkbox"/>	NO	<input type="checkbox"/>
1.8	The Genset is compatible with the diesel available in Syria.		YES	<input type="checkbox"/>	NO	<input type="checkbox"/>
1.9	Voltage: three-phase 380V with a neutral pole; Frequency: 50Hz; Power Factor: 0.8; Rotational speed: 1500 rpm		YES	<input type="checkbox"/>	NO	<input type="checkbox"/>
1.10	The preferable delivery lead time is sixty (60) days, starting from the day following the commencement order date		Please specify:			
1.11	Place of delivery: Arida Border Crossing/Tartous (DDP) Incoterms® 2020		YES	<input type="checkbox"/>	NO	<input type="checkbox"/>
1.12	The bidder shall be well-experienced in this domain, and specialists will carry out the implementation		Please provide Supporting Documents:			
1.13	The bidder shall provide a one-year warranty for the genset.		Please specify:			
2	Diesel Engine		COMPANY'S FEEDBACK			
2.1	The engine’s prime power is 80 kVA, and the standby power 100 kVA.		Please provide tables of power calculation under operation location conditions.			
2.2	Continuous-operation, four-stroke, diesel engine with a mechanical injection system (a metal placard must be fixed on the engine indicating the country of manufacture and a plate with the full rated specifications).		YES	<input type="checkbox"/>	NO	<input type="checkbox"/>
2.3	The engine must endure a 10% overload above the rated power for one hour per 12 hours.		Please provide a table of load tests.			
2.4	Modern automatic mechanical speed regulator. The tolerated load/no-load frequency shift must not exceed ± 2%. The engine should not be allowed to run at a speed that does not appear in the manufacturer's speed graph.		YES	<input type="checkbox"/>	NO	<input type="checkbox"/>
2.5	The engine is equipped with a dry oil tank, full-flow filter with a replaceable filter element, oil level gauge, Oil with a 15W-40 viscosity, and a manual oil pump.		YES	<input type="checkbox"/>	NO	<input type="checkbox"/>
2.6	The engine cooling system is water-based (closed system) and uses an equatorial radiator filled with coolant, protected by a metal grille, equipped with a fan and a water pump on the engine driven by belts.		YES	<input type="checkbox"/>	NO	<input type="checkbox"/>
2.7	The engine is equipped with a dedicated system for the exhaust gas along with its accessories.		YES	<input type="checkbox"/>	NO	<input type="checkbox"/>
2.8	The starter must operate on 12V DC power.		YES	<input type="checkbox"/>	NO	<input type="checkbox"/>
2.9	12V battery charger (dynamo).		YES	<input type="checkbox"/>	NO	<input type="checkbox"/>
2.10	The engine is equipped with a stopping solenoid.		YES	<input type="checkbox"/>	NO	<input type="checkbox"/>
2.11	The engine is equipped with a 220V electric heater for the coolant (water heater jacket).		YES	<input type="checkbox"/>	NO	<input type="checkbox"/>
2.12	The engine is equipped with a voltmeter to measure the battery voltage.		YES	<input type="checkbox"/>	NO	<input type="checkbox"/>
2.13	The engine is equipped with a water trap to remove the water from the diesel supplied to the genset.		YES	<input type="checkbox"/>	NO	<input type="checkbox"/>
2.14	The engine/genset is equipped with a switch to disconnect the battery during maintenance.		YES	<input type="checkbox"/>	NO	<input type="checkbox"/>
3	Alternator		COMPANY'S FEEDBACK			
3.1	80 kVA three-phase brushless alternator with a visible neutral pole.		YES	<input type="checkbox"/>	NO	<input type="checkbox"/>
3.2	Voltage: 220/380V; Frequency: 50Hz; Rotational speed: 1500 rpm.		YES	<input type="checkbox"/>	NO	<input type="checkbox"/>
3.3	Power factor: 0.8 lagging.		YES	<input type="checkbox"/>	NO	<input type="checkbox"/>
3.4	Self-excited, auto-regulated, and auto-ventilated.		YES	<input type="checkbox"/>	NO	<input type="checkbox"/>
3.5	Class H insulation.		YES	<input type="checkbox"/>	NO	<input type="checkbox"/>
3.6	IP23 ingress protection rating, or higher.		YES	<input type="checkbox"/>	NO	<input type="checkbox"/>
3.7	Protection against radio, television, or telephone interference [EMI] in accordance with the international norms.		YES	<input type="checkbox"/>	NO	<input type="checkbox"/>

3.8	Highly productive.	YES	<input type="checkbox"/>	NO	<input type="checkbox"/>
3.9	Modern automatic voltage regulator (AVR) performing the required regulation where the tolerated load/no-load voltage shift must not reach beyond ± 2%, or better. The voltage must be manually adjustable via a variable resistor.	YES	<input type="checkbox"/>	NO	<input type="checkbox"/>
3.10	Equipped with overheating protection, and the vendor must indicate its tolerance of the increase in the rotational speed.	YES	<input type="checkbox"/>	NO	<input type="checkbox"/>
4	Operation, control, and automatic start-up panel (Control Panel)	COMPANY'S FEEDBACK			
4.1	A metal panel of iron sheets is sufficiently sized to accommodate its components and ensure easy maintenance. Its door must be tightly shut and equipped with an injected rubber gasket. It is highly impermeable and sprayed with thermal coating for weather protection (heat and humidity). It is mounted on the gen-set’s base, vibration-proof, and equipped with internal LED lighting with a special ON/OFF switch powered by the battery.	YES	<input type="checkbox"/>	NO	<input type="checkbox"/>
4.2	The assembly processor supplies the genset’s operation/control panel.	YES	<input type="checkbox"/>	NO	<input type="checkbox"/>
4.3	It must be a modern model equipped with a microprocessor programmed with all operation, monitoring, and protection commands and a backlit LCD screen for easy reading in dim light.	YES	<input type="checkbox"/>	NO	<input type="checkbox"/>
4.4	Easy to use and upgradable, with adjustable settings, and displays multiple fault alerts simultaneously.	YES	<input type="checkbox"/>	NO	<input type="checkbox"/>
4.5	IP65 ingress protection rating.	YES	<input type="checkbox"/>	NO	<input type="checkbox"/>
4.6	On automatic start-up mode, the genset starts up with the load on as fast as possible.	YES	<input type="checkbox"/>	NO	<input type="checkbox"/>
4.7	The genset operates during: <input type="checkbox"/> Voltage failure on one of the main power phases. <input type="checkbox"/> Undervoltage on one of the main power phases below 80% of the rated voltage (adjustable). <input type="checkbox"/> Alternating mains power phases.	YES	<input type="checkbox"/>	NO	<input type="checkbox"/>
4.8	The start-up settings include three start-up attempts at adjustable intervals.	YES	<input type="checkbox"/>	NO	<input type="checkbox"/>
4.9	It has a standard MCCB thermal-magnetic circuit breaker (supplied with the genset).	YES	<input type="checkbox"/>	NO	<input type="checkbox"/>
4.10	The panel displays the following readings: <input type="checkbox"/> Voltage and frequency on each phase. <input type="checkbox"/> The current on each phase. <input type="checkbox"/> Rated power (kVA) and actual power (kW). <input type="checkbox"/> Power factor. <input type="checkbox"/> Coolant’s temperature. <input type="checkbox"/> Oil pressure. <input type="checkbox"/> Operation hours. <input type="checkbox"/> Engine temperature.	YES	<input type="checkbox"/>	NO	<input type="checkbox"/>
4.11	The panel must contain the following protection systems: <input type="checkbox"/> Low oil pressure (alert and turn off). <input type="checkbox"/> Low fuel level. <input type="checkbox"/> Low coolant level. <input type="checkbox"/> Coolant overheating (alert and turn off). <input type="checkbox"/> Overvoltage/undervoltage (alert and turn off). <input type="checkbox"/> Over-frequency/under-frequency (alert and turn off). <input type="checkbox"/> Overload (alert and turn off). <input type="checkbox"/> Start-up failure (alert and turn off). <input type="checkbox"/> Battery charge failure (alert only). <input type="checkbox"/> Battery voltage alternation (alert only). <input type="checkbox"/> All protection systems must run on any operation mode.	YES	<input type="checkbox"/>	NO	<input type="checkbox"/>
4.12	The panel must contain pilot lights or display messages for the following: <input type="checkbox"/> Operation mode: Automatic, Manual, or OFF (pilot light or message). <input type="checkbox"/> Load (pilot light or message). <input type="checkbox"/> Battery charging (pilot light or message). <input type="checkbox"/> Faults: start-up failure, low oil pressure, engine overheating, overload, overvoltage, undervoltage, over-frequency, and under-frequency (pilot light or message).	YES	<input type="checkbox"/>	NO	<input type="checkbox"/>
4.13	There is a mode selection switch (OFF, Manual, Automatic) and an emergency press button to turn the genset off for troubleshooting.				
4.14	Troubleshooting press button.	YES	<input type="checkbox"/>	NO	<input type="checkbox"/>
4.15	To operate properly, the panel must be equipped with all the protection systems and proper circuit breakers.	YES	<input type="checkbox"/>	NO	<input type="checkbox"/>
4.16	The genset records a fault log showing the fault's type, date, and time.	YES	<input type="checkbox"/>	NO	<input type="checkbox"/>
5	Sound attenuated enclosure	COMPANY'S FEEDBACK			
5.1	The enclosure is preferred to be manufactured/supplied by the assembly processor and meet international standards.	YES	<input type="checkbox"/>	NO	<input type="checkbox"/>
5.2	Sound attenuation must be around 75 dB from seven meters or better.	Please specify: in dB			
5.3	IP44 ingress protection rating at least.	YES	<input type="checkbox"/>	NO	<input type="checkbox"/>
5.4	The enclosure's soundproofing material must be thick enough, and preferably, it should be as thick as possible.	Please specify:			
5.5	The enclosure and its components must be rustproof, coated with thermal spray, and preferably electrostatic coating.	YES	<input type="checkbox"/>	NO	<input type="checkbox"/>
5.6	It must have doors on both sides and a glass window revealing the control panel.	YES	<input type="checkbox"/>	NO	<input type="checkbox"/>
5.7	It must be equipped with an outer press button for emergency turn off, and a see-through door revealing the control panel.	YES	<input type="checkbox"/>	NO	<input type="checkbox"/>
5.8	It must be equipped with one-pin and three-pin electric outlets.	YES	<input type="checkbox"/>	NO	<input type="checkbox"/>

5.9	Both the enclosure and the panel must be lighted.	YES	<input type="checkbox"/>	NO	<input type="checkbox"/>
5.10	It must be equipped with a 1 kg fire extinguisher	YES	<input type="checkbox"/>	NO	<input type="checkbox"/>
6	Mains grid/genset power source switch panel	COMPANY'S FEEDBACK			
6.1	The panel must be made of thermally sprayed iron sheets with a minimum thickness of 1 mm. It has two doors: the inner one made of iron sheets and consisting of two panels and the outer one made of glass and locked. The outer door must be sufficiently sized to accommodate all the equipment and electric fixtures.	YES	<input type="checkbox"/>	NO	<input type="checkbox"/>
6.2	IP42 ingress protection rating.	YES	<input type="checkbox"/>	NO	<input type="checkbox"/>
6.3	High quality 200 A three-pole circuit breaker from the local market, dedicated to the mains power supply, protected against under-voltage and meeting the IEC standards as an automatic circuit breaker.	YES	<input type="checkbox"/>	NO	<input type="checkbox"/>
6.4	High quality 150 A three-pole circuit breaker from the local market, dedicated to the mains power supply, protected against under-voltage and meeting the IEC standards as an automatic circuit breaker.	YES	<input type="checkbox"/>	NO	<input type="checkbox"/>
6.5	High quality 220 A three-pole contactor from the local market, dedicated to the mains power supply, protected against under-voltage, and meeting the IEC standards as an automatic circuit breaker.	YES	<input type="checkbox"/>	NO	<input type="checkbox"/>
6.6	High quality 220 A three-pole contactor from the local market, dedicated to the genset, protected against under-voltage, and meets the IEC standards as an automatic circuit breaker.	YES	<input type="checkbox"/>	NO	<input type="checkbox"/>
6.7	To protect the load, the panel must be equipped with a phase sequence relay that connects/disconnects upon mains power failure, phase failure, or phase under-voltage/overvoltage.	YES	<input type="checkbox"/>	NO	<input type="checkbox"/>
6.8	Fuses or circuit breakers to protect the control devices.	YES	<input type="checkbox"/>	NO	<input type="checkbox"/>
6.9	Three-mode switch key: Mains, Genset, and Automatic.	YES	<input type="checkbox"/>	NO	<input type="checkbox"/>
6.10	The panel door must be secured with a lock.	YES	<input type="checkbox"/>	NO	<input type="checkbox"/>
6.11	DIN rails to mount the components.	YES	<input type="checkbox"/>	NO	<input type="checkbox"/>
6.12	Suitably sized load electric junctions on the three phases, neutral pole, and ground pole.	YES	<input type="checkbox"/>	NO	<input type="checkbox"/>
6.13	Digital meters of the current voltage and intensity on the three phases as well as the power and frequency.	YES	<input type="checkbox"/>	NO	<input type="checkbox"/>
6.14	Six pilot lights indicating the mains/genset current along with the necessary protection systems.	YES	<input type="checkbox"/>	NO	<input type="checkbox"/>
6.15	A protecting cover for the bars and contactors.	YES	<input type="checkbox"/>	NO	<input type="checkbox"/>
6.16	Time relays.	YES	<input type="checkbox"/>	NO	<input type="checkbox"/>
7	Supply and wire an electric power cable	COMPANY'S FEEDBACK			
7.1	A 4x35 mm² NYY flexible or stranded cable manufactured as per the Syrian Standards for cables, equipped with the needed lugs, fasteners, etc.	YES	<input type="checkbox"/>	NO	<input type="checkbox"/>
8	Supply and wire electric control cables	COMPANY'S FEEDBACK			
8.1	4x1.5 mm² control cables, manufactured as per the Syrian Standards for cables.	YES	<input type="checkbox"/>	NO	<input type="checkbox"/>
9	Supply and install a fuel tank along with the piping	COMPANY'S FEEDBACK			
9.1	Supply and install the required fuel tank with a min. The capacity of 2000L, made of black iron sheets with a min. The thickness is 4 mm, mounted on a proper metal base with metal corners with a minimum thickness of 4mm and adequate height. The tank must be coated on both sides with two layers of red oxide primer as a base coating, plus two layers of oil-based paint. It must have a level gauge, a 2-inch upper refill inlet with a padlock, a vent, and a 1-inch bottom discharge opening.	YES	<input type="checkbox"/>	NO	<input type="checkbox"/>
9.2	A 1” feeding outlet with a ball valve (copper core) of the same size.	YES	<input type="checkbox"/>	NO	<input type="checkbox"/>
9.3	All the necessary auto-refill sensors and piping, where the tank is equipped with an outlet and a hose to fill the genset’s tank.	YES	<input type="checkbox"/>	NO	<input type="checkbox"/>
9.4	Refilling is done automatically via the necessary refill sensors.	YES	<input type="checkbox"/>	NO	<input type="checkbox"/>
10	Testing and delivery	COMPANY'S FEEDBACK			
10.1	The vendor must provide an official test certificate including the genset load tests for a period of 2 hours for with the loads of: 25%, 50%, 75%, 100%, and 110% of the load and overload rated by the assembly processor.	Please provide Supporting Documents:			
10.2	Start-up, safety, and protection tests (overheating and low oil pressure) must be conducted by the vendor who will also bear the testing fuel costs (diesel).	YES	<input type="checkbox"/>	NO	<input type="checkbox"/>
10.3	The vendor is responsible for any breakdowns resulting from manufacturing defects or wiring malfunctions during the startup tests.	YES	<input type="checkbox"/>	NO	<input type="checkbox"/>
	UNHCR Visibility				
1	The UNHCR blue logo should be engraved or printed on the four sides of the generator's sound-attenuated enclosure (excluding the top and bottom), with a preference for white color as the background; the dimension of the logo should be a minimum of 20 cm x 15 cm.	YES	<input type="checkbox"/>	NO	<input type="checkbox"/>
	b) Delivery Time: Please confirm your shortest delivery time (as from the PO issuance Date)	PLEASE provide realistic estimations.			
	Delivery Time required from the PO date till delivery to the required location (in weeks)	Please specify:			

Name and signature of company representative:

Company Stamp and Date: