

Annex A - The requirements / The Technical Specifications
Request for Quotation: No. RFQ/HCR/SYR/24/22

Provision and Installation of Outdoor Solar Streetlight Devices at Ibn Khaldoun Psychiatric Hospital in Aleppo

The Minimum technical specifications for required solar streetlights devices at Ibn Khaldoun Psychiatric Hospital in Aleppo	
1	Offered product is an All-in-two device (1 is the solar panel and 2 is the remaining parts LED, Battery and controller)
2	Panel, LED and supporting structure is designed to withstand site climatic, environmental and meteorological conditions.
3	<p>The proposed Solar Panel complies with all the minimum technical specification requirements:</p> <ul style="list-style-type: none"> - The solar panel is completed with metal brackets and corresponding supporting structure - All structures, bolts, nuts etc. should be made of corrosion-resistant materials - Cell: Mono-Crystalline or Poly-Crystalline with junction box including protection diodes - MC4 connection terminals - At least 10 years manufacture warranty - Panels capacity should be sufficient to fully charge the batteries in 5 hours (normal sunny day) - Module efficiency >=20% - Minimum IP rating is IP65 - The solar panel must be installed on an adjustable base separated from the LED arrays direction - The module complies with the following international standards at least: IEC 61215, IEC 61730, and TUV - The Solar Panel manufacturer is certified to ISO 9001, ISO 14001 and OHSAS 18001
4	<p>The proposed LED arrays complies with all the minimum technical specification requirements:</p> <ul style="list-style-type: none"> - LED must be manufactured according to international standards - LED technology: multichip technology - Minimum capacity 40 Watt - Minimum luminous flux: 6400 lumens at least - Minimum LED beam angle 120° at least - Minimum LED life 50000 hours - The device must be subject to dismantling and reinstallation - IP rating: IP65 at least - Optical sensitization should be either by a sensor or controller - Operation period: minimum 12 hours daily
5	<p>The proposed Battery complies with all the minimum technical specification requirements:</p> <ul style="list-style-type: none"> - Battery type: Lithium-Iron Phosphate - Battery capacity: 1080 Wh at least operate the required load for the operating period - Battery autonomy: at least two days without being recharged assuming 85% discharge and an efficiency of 90% - Life cycle at 50% discharge: minimum 5000 cycle at 25°C. - Battery operating temperature -10°C to 60°C - Battery lifespan: 5 Years at least - Battery warranty: 5 years at least - Battery production date: not more than 6 months earlier before the purchase order
6	Device should comply to the minimum protection functions: overcharge, over-discharge, overcurrent and overvoltage, short circuit, polarity inversion, and short circuit of the LED array.
7	All connections and wires should comply to the international standards and with cross-sections compatible with the voltages, currents, and lengths.
8	Warranty period is minimum 10 years for the Solar Panel and 5 years for all other components
9	Quantity required: <u>20 devices</u>