

QUESTIONS AND ANSWERS for REQUEST FOR PROPOSAL: 2022/RFP/010 SUPPLY OF PRE-DESIGNED POWER SOLUTIONS FOR UNHCR OFFICES			
No.	Reference	Question	Answer
1	submission deadline	Due to summer vacation time and that many of our suppliers are closing their production this month (July), I would like to ask for a possibility to have a deadline extension?	(Updated) Submission deadline has been extended to 31 August 2022 @23:59 hrs. Geneva time.
2	submission deadline	Due to the extensive work involved in analyzing and preparing a bid following the TOR, combined with the fact that we are in the middle of the summer vacation period, where many suppliers and external partners are closed or short-staffed, we hereby in advance, kindly request an extension of the deadline for at least four (4) weeks. We thank you for your kind understanding of the same and will revert with another request for clarifications before the deadline mentioned in the RFP.	(Updated) Submission deadline has been extended to 31 August 2022 @23:59 hrs. Geneva time.
3	Requirements	We would like to know if the minimum experience requested must necessarily be UN experiences.	No, the experience need not be confined to UN experience.
4	Requirements	1. For the power of Hybrid inverter (Bi-directional inverter), can we consider kVA unit? or it should be in kW? because the characteristics of our hybrid inverter is in kVA and we consider $\cos \phi = 0.8$ ; For example for 5 kVA, the real kW power is 4 kW	The inverter nominal capacities are requested (for the three different systems: HRES, GPV and BESS) in kW. Therefore, consider the kW capacity as minimum. So, if your hybrid inverter capacity is in kVA with a $\cos \phi = 0.8$ just make sure that its capacity in kW responds to the minimum requested for each system size
5	Requirements	For HRES system, we have to supply case scenario for 60 kW or 75 kW? because in the Terms of reference you specify 60 kW but in the Annex E. VI BOQ and Annex F you mention 75 kW	For the HRES Case Scenario please consider the capacity specified in the TOR document, 60kW. The full design for 15, 60 and 150 kW must be provided for each of the three type of pre-designed power solution (HRES, GPV, BESS)
6	Requirements	Mounting structure. Is it required 15 years? Normal it is 10 years.	Manufacturer's guarantee: $\geq 15$ years for the structural integrity and corrosion; and $\geq 5$ years for the leakages.
7	Requirements	Evaluated mounting. Pass height. Please provide more information on why the pass height has to be 5 meters? Is it a area part that needs to be covered?	The 5 meters pass height has indeed been determined assuming the mounting structure will be built above a ground floor building. This height must be considered in the present tender but will be slightly adjusted on a case by case basis during the secondary bidding stage.
8	Requirements	For the Supply Phase in Case Scenario 1, 2 & 3, which destination we have to consider for the cost of: International shipping cost (maritime), incl. customs Local transportation costs (road)	"In Section 7, Bidders are requested to provide three fully designed power solutions and the complete project package, as per Section 3 Project Life Cycle, and Section 5 After-Sales Services for three hypothetical offices hypothetically situated in Kakuma, Kenya."
9	Requirements	Regarding the BESS system, you put on the BOQ document Annex E.VI: Charge regulators (MPPT) and protections - DC coupling Do you plan to connect a PV power plant with BESS? What is the power of this PV Plant? Should we consider the same like HRES? Then the system will require a lot of MPPT regulators, please clarify this point	This is a mistake. There won't be any PV plant connected to a BESS
10	Requirements	Is it possible to supply bidirectional inverter with PV inverter separately?	Yes
11	Other	Is RETScreen desktop or cloud based?	It is desktop based
12	Requirements	What is meant by "Plug and Play" system?	The system is shipped pre-cabled, Pre-labelled, and tested to reduce installation complexity
13	Requirements	Must the batteries be pre-installed in the racks?	The batteries should be shipped boxed and installed on site
14	Requirements	Is the height of the mounting structures fixed as there maybe some regulations?	Before purchasing the mounting structures, regulations /restrictions for the specific country/sites needs to be investigated
15	Requirements	Will there be a request or need for a Mobile PV solution?	No, the PV solutions are stationary
16	Requirements	Is it possible to have simultaneous orders shipped together?	Yes, To simplify it would preferably be on a country level with several sites rolled out simultaneously
17	Financial	Will there be any advanced payment?	Please refer to the Cover Letter Art. 2.8 and Annex C I. General Conditions Goods and Services Art. 30 Payment Instructions.
18	Requirements	The efficiency requirements of the inverters are different for different solutions 95%,98% why is this?	Correction on the minimum efficiency required for the battery back-up inverter: it is <b>95%</b> instead of the 98% stated in Annex B page 27
19	Requirements	Will there be access to water and power on site for the installation?	This would depend on the site which will be defined during secondary bidding. More than likely to have water and some source of power.
20	Requirements	What voltage is required, 110-220 volts or 230-400 volts?	It will be country dependent, 110/220 60 Hz for Central and Latin America; and 230/400 50 Hz for most other countries
21	Requirements	Please elaborate what is meant by Enclosed system?	Solutions not containerized shall come in enclosures, i.e. electrical cabinet.
22	Requirements	What is the difference between 'containerized' and 'Enclosed' solution?	A Containerized solution would be in a container, which is preferable if the office may relocate, whereas an Enclosed solution would be in a Electrical cabinet where there is indoor or covered space to house it.
23	Requirements	Are the PV panels part of the Plug and Play?	As much as possible: Yes. The systems should come completely pre-designed, pre-tested and pre-assembled as much as possible (e.g. the string boxes should come pre-wired, with pre-sized cabling and protection devices, and ready to plug the different PV strings).
24	Requirements	Are the PV panels assembled and installed on site?	Yes
25	Requirements	Please clarify for which system sizes a full design is required?	<b>Nine pre-designs</b> must be provided for each type of PPS (HRES, GPV and BESS) and for the following capacities: 15, 60, 150 kW. These 9 designs shall include:  <ul style="list-style-type: none"> <li>•System's detail and operation - architecture, components, operation, planned maintenance schedule</li> <li>•System's block diagram identifying each component</li> <li>•System's single line diagram (including the manual changeover switch)</li> <li>•System's components sizing rationale and calculations</li> <li>•Cabling design details (AC and DC) and protection devices</li> <li>•Ground Supporting Structure - architecture, components</li> <li>•Roof Supporting Structure - architecture, components</li> <li>•Elevated Supporting Structure @ 2.6 and 5 meters - architecture, components</li> <li>•Datasheets of system components (PV, Inverters, Hybrid Inverter, Charge Regulator (if), Battery system, Cabling, Protection Devices, Electric/String boxes, supporting structures)</li> <li>•Container option drawing and components distribution</li> </ul> <p>These nine designs are a representation of the entire solutions available in the catalogue for pre-designed power solutions available as the outcome of the first bidding stage. Please see page 13 and 14 of the Annex A for more details.</p> <p><b>Additionally, three finalized design</b> must be provided for the three case scenarios, using the site-specific inputs given in Annex B. Section 7 and the deliverables aim at evaluating how the selected Bidders would, if they are selected during the 1st bidding stage, finalize their proposed pre-designed power solution according to site-specific inputs, and thereby having a fully designed power solution that is ready to be shipped and installed at the office as a plug &amp; play system. Any missing site-specific information that may be required by Bidders in order to finalize the design of the power solution for this particular project shall be assumed and assumptions shall be clearly detailed in the technical proposal. The proposed finalized design shall be ready for implementation. The finalisation of the pre-designed power solutions in these case scenarios are to simulate the process that will take place during the secondary bidding stage.</p>
26	Annex B Technical Specs	<b>DC/AC coupling.</b> Annex B, Tech Specs, Section 2.1 System configuration, states "UNHCR wishes to offer Bidders the possibility to offer systems with different configurations, namely AC and DC-coupling. Bidders will choose <i>one configuration or the other</i> depending on the equipment they have and in order to achieve the highest PV penetration / lowest cost of energy possible." Can we propose a mixed configuration with both DC-coupled and AC-coupled PV arrays in the same system?	Yes
27	Annex B Technical Specs	Voltage of 60Hz system. Annex B, Tech Specs, Sections 2.1.1, 2.6.3.2 and 2.8 refer to a system voltage option of 110/220V 60hz, which seems to refer to an American split-phase (three-wire) system. Section 2.6.2.2 refers to 120/220V 60 Hz. On the other hand, section 2.6.1.2 states that the hybrid inverter output shall be single phase or three phase. Regarding the 60 Hz system, could you please clarify whether the project requires a split-phase (three-wire) system or a three-phase system?	Split-phase systems are <u>not</u> required. Instead, three-phase systems are required
28	Annex A	Case scenario 2 enclosure/container. Annex A – Section 4.2.3. Technical Design Document (HRES). The text first says "container option drawing" and then it says "Case scenario 2 – 60kW hybrid – enclosure". Could you please clarify if the case scenario 2 shall be designed with a container or an enclosure?	The case scenario 2 shall be installed in enclosures. Section 4.2.3. Technical specification response refers to the nine designs of "pre-designed power solutions" (cf details answered in question #25). Additionally, the designs of three fully designed power solutions shall be provided as per the site-specific inputs given in the three case scenarios.
29	BoQ	Cable specification at BoQ. The BoQ categorizes the cables by length. However, multiple cable sections will most likely be within the same length category (i.e. 0-10m), making the final cost per meter confusing. Could we simplify the cable BoQ specification and just group the cables in just two categories, AC cables DC cables?	No, the section on AC/DC cables cannot be changed at this stage.
30	Requirements	Definition of enclosed system. The definition of enclosed system is quite wide. Which type of enclosures are of UNHCR preference?	Cf section 2.3 Enclosure of power systems in the Annex B
31	Requirements	Main AC cable. It is understood that our scope finishes with the connection (power/communication) of the enclosure/container to the Main Distribution Board of the UNHCR compound. Could you please provide us an estimated length for this connection so that we can apply it in all systems?	Yes, connection to the MDB in the UNHCR compound shall have to be done by the contractor. The length between the power system and the MDB shall be provided during the secondary bidding process using site-specific data. In the case scenarios it can be estimated using the information (layout) available. Regarding the case scenarios: where the information provided is not sufficient, assumptions can be made and justified accordingly.

32	Annex B Technical Specs	Inverter's output power definition. Annex B TechSpecs, Section 1.7.3 HRES Capacities, states that "The HRES capacities are defined using the hybrid inverter output power capacities at an operating temperature of a minimum of 40 degrees Celsius". Same statement happens for the GPV and BESS inverters at sections 1.8.3 and 1.9.3 respectively. However, section 2.6.1.2 states "rated power given at ambient operating temperature under continuous load" and states an ambient operating temperature of 50 degrees. Please clarify at which ambient temperature is the output power of the inverters defined.	The Operating temperature range is from -10 to +50 degrees Celsius. In this tender, the output power of the inverter is defined at an ambient operating temperature of <b>40 degrees</b> .
33	Annex B Technical Specs	& symbol. Annex B Tech Specs, Section 1.7.3 HRES Capacities, Table 1 « HRES capacities ». In system configuration, it says "Container & enclosure". What does the & exactly mean? Do we have to design both a container and an enclosure for the same system type?	The nine pre-designs requested in Section 1 of the Annex B can be made in enclosures only. No container design is requested here. In Section 2.2.3 of the Annex B it is mentioned that "The Bidders must include a layout of the designed internal arrangement of the containers with their proposals." That design shall be for a HRES system whose capacity is left open, i.e. bidders can choose for which HRES capacity they provide the layout of the designed internal arrangement of the container.
34	Annex B Technical Specs	BESS inverter efficiency. In Annex B Tech Specs, the hybrid inverter minimum efficiency is 95%, whereas battery backup inverter has a requirement of 98%. We note that some of the most common battery inverter manufacturers that have a proven history in these type of harsh isolated environments comply with the 95% requirement, but do not comply with the 98%. We kindly ask to lower the 98% requirement to 95%.	Correction on the minimum efficiency required for the battery back-up inverter: it is <b>95%</b> instead of the 98% stated in Annex B page 27
35	Annex B Technical Specs	According to the requirements of "Annex B_Tech Specs_2022_RFP_010", the financial evaluation will be done against the above suggested PV capacity, minimum battery capacity.  In the file "Annex F_2022_RFP_010_Financial returnables". The quantity of Hybrid inverter, PV inverter and Battery inverter should be filled in with the actual quantity of the design or the Minimum capacity in the "Annex B_Tech Specs_2022_RFP_010". Compared with the requirements of the left column, which one should be the specific requirement?	The hybrid inverter capacity is stated as minimum; depending on the suppliers equipment it may be matched or exceeded but a lower capacity (calculated at an operating temperature of 40 degrees) cannot be proposed. Similarly for the battery capacity, the stated capacity is minimum. It may be matched or exceeded only. Regarding the PV capacity, it is a recommended capacity and therefore Bidders may propose a slightly lower/higher PV capacity. Cf Section 1.7.3 of Annex B for more details
36	Annex B Technical Specs & Annex F	According to the requirements of "Annex B_Tech Specs_2022_RFP_010", three types of monitoring systems will be used as needed: 1. Technical monitoring system 2. Managerial monitoring system 3. Metering for charging purposes  In the file "Annex F_2022_RFP_010_Financial returnables" The number of electricity meters in the multi user energy metering system is determined according to the number of users to be measured. In the current preliminary scheme, only the unit price of one user can be provided. Is this way to give the quotation feasible?	In the BOQ, there is one line for monitoring and metering system. The three types of monitoring needed (technical, managerial, metering) should be quoted on that single line.  The number of electricity meters in the multi user energy metering system is determined according to the number of users to be measured. In the current preliminary scheme, only the unit price of one user can be provided. Is this way to give the quotation feasible? The answer is yes.
37	Annex F	In the file "Annex F_2022_RFP_010_Financial returnables", regarding the quotation of "lithium iron phosphate batteries incl cabling and protection"  In the file "Annex F_2022_RFP_010_Financial returnables" Does the quotation of "lithium iron phosphate batteries incl cabling and protection" include the quotation of battery rack?	Yes, the BOQ should be modified as little as possible. Related items of core items should be quoted together. Other items that can't be directly related to the items already listed in the BOQ can be added under spare & miscellaneous.
38	Annex F	In the file "Annex F_2022_RFP_010_Financial returnables" Cables are required to be quoted according to different lengths  Cabling AC cable: 0-10m m 1 AC cable: 11-30m m 1 AC cable: 31-60m m 1 AC cable: >60m m 1 DC cable: 0-10m m 1 DC cable: 11-30m m 1 DC cable: 31-60m m 1 DC cable: >60m m 1  In the system, cables are divided into DC cables and AC cables. DC cables include photovoltaic cables and battery cables, and the wire diameters of different kinds of cables are also divided into many kinds. In addition to the length, the wire diameter is a very important factor affecting the quotation. Please consider adjusting the quotation list of cables according to different cable diameters	Cf answer to question 29
39	Annex B Technical Specs	According to the requirements of "Annex B_Tech Specs_2022_RFP_010", 1.8.3 The GPV capacities are defined using the PV inverter output power capacities at an operating temperature of minimum 40 degrees Celsius. The PV capacities are suggested. Bidders can therefore propose different ones. The suggested PV capacities are calculated as 1.5 times the inverter capacities.  The top 22 countries are all in Africa and the Middle East with high solar irradiance values. The bidding documents require that the capacity of PV is 1.5 times that of the inverter, which is relatively high, inverter being saturated, can cause clipping losses. We propose to change it to 1.3.	Yes clipping will occur when the sun is high but the 1.5 ratio was determined as an optimum throughout the entire day and in order to optimize financial figures too. It cannot be changed at this stage.
40	Annex B Technical Specs	According to the requirements of "Annex B_Tech Specs_2022_RFP_010", Paragraph 1.7.1 □ General System Configuration "The Supplier will be requested to add a manual changeover switch to the HSPS in order to power the loads directly from the mains and genset, similarly to the architecture prior to the installation of the HSPS, and in order to anticipate for unplanned downtime from the HSPS power system."  What does "HSPS" mean in the paragraph?	The document was corrected and HSPS replaced with HRES.
41	Annex B Technical Specs	According to the requirements of "Annex B_Tech Specs_2022_RFP_010", Paragraph 1.8.1 □ General System considerations "The GPV shall make use of existing UNHCR diesel generators at site whenever possible."  Does UNHCR be able to provide the model and technical manual of the local diesel genset controller accordingly?	Yes, during the secondary bidding process. At that stage the LTA holders will be given the site-specific data and the generator specifications. Bidders will detail in their proposal what may be the technical limitations for doing so (only isochronous or droop-controlled diesel generator; maximum generator capacity, etc.). The architecture of the GPV shall be made in such a way that the loads can be powered by the GPV and the grid or the genset in parallel.
42	Annex B Technical Specs	According to the requirements of "Annex B_Tech Specs_2022_RFP_010", Paragraph 2.8 □ Voltage and Frequency Stabilizers "Stability in terms of voltage and frequency will be needed and as stabilization may be needed for systems that use renewable energy and that renewable energy may be able to be fed back into the grid, stabilizers and converters should be able to allow current flow in both directions."  The Hybrid inverters and Battery Backup Inverter already can provide such voltage and frequency Stabilizer functions, Can the voltage stabilization and frequency stabilization device be cancelled?	If it is not needed because already integrated in the inverter then yes this device does not need to be added.
43	Cover	According to the requirements of "Cover_2022_RFP_010", Page 1, the closing date and time: 21/08/2022 – 23:59 hrs Geneva time  Due to the short time frame for this proposal, we would highly appreciate if UNHCR could consider extending the bid closing date to 08/09/2022 – 23:59 hrs Geneva time to enable bidders prepare competitive offers.	The deadline of submission for this RFP has been extended to 31 August 2022 at 23:59 hrs. Geneva time, and the deadline for receipt questions for this RFP has been extended to 19 August 2022 at 23:59 hrs. Geneva time.