

## Questions & Answers raised in the Request for clarifications for

### INVITATION TO BID: No. UNHCR ITB 420

**For the Supply, delivery, and Installation of 1000 Units of Solar Systems for the refugees and host Communities in Kharaz Camp, Lahj, Yemen**

**Question (1):** I have some inquiries about the installation of the panels. Does the executing contractor need to create a steel base for the panels?

**Answer (1):** Yes, the galvanized Iron base including with the panels in the same item, kindly read the item 1 in the BoQs its clear and in the scope of work.

**Question (2):** Regarding the PV panels wattage, is it acceptable to offer PV panel with different wattage than requested while maintaining the total required wattage of each system for example :

-It's requested 2 panels of 200 W For each refugee shelter (400W in total) while we can offer instead one 400 W panel

- It's requested 4 panels of 250 W for each host community house (1000 W in total) while we can offer instead two 500 W panels or even 5 200 W.

Notes:

1- Reducing number of panels will reduce the needed space for installation

2- Panels with high wattage in the market are higher quality than others

**Answer (2):** Kindly restrict on the specification mentioned in the BoQs and Scope of work.

**Question (3):**

I am writing to inquire about the appropriate cable length or distance from the solar PV module to the inverter. Could you please provide clarification on the recommended specifications for this?

Additionally, I would like to highlight an important consideration regarding battery types. Gel batteries are not suitable for temperatures reaching 50 degrees celsius, while tubular batteries are more appropriate for high-temperature conditions. I would appreciate any guidance or recommendations you may have regarding this matter.

**Answer (3):** the specification of the DC cable is clear, regarding the length as mentioned in the BoQs its lumpsum, it depends on the locations of the panels' implementation, which may differ from one house/Shelter to another.

**Question (4):**

IN BOQ NO 5 ( Annex D2- Financial form for 200 Units of Solar System for the Host Community in Kharaz Camp)

## DC Breakers Box

Supply, install, test, and commissioning DC breakers box including 2X 100 A for batteries DC+1x125A breaker and all the required accessories.

The size of the dc breaker is very large (OVERSIZE)

we need one dc breaker 50amper for battery & one dc breaker 32amper for dc input from PV for inverter.

Answer (4): kindly restrict on the specification mentioned in the BoQs and Scope of work, the box specifications are set for any future expansions for the house/shelter owner.

### Question (5):

1. How many light switches and socket outlets are required for each of the 800 units?
2. Is it necessary to install breakers between:
  1. The solar panels and the inverter,
  2. The inverter and the battery, and
  3. A breaker for the inverter's AC output?

### Answer (5):

- 1- the light switches, socket outlets are for the refugee shelters 800 units, the switch for the operation the light and the fan, and one socket outlet.
- 2- All the necessary breakers are including in the types of solar system with 200 units, the other type with 800 units is small system restrict with the specification mentioned in the BoQs and scope of work.

END.