

Invitation To Bid (ITB)

Supply and Installation of Solar Panels at Ministry of Environment in Cambodia **The Additional Clarification Note to Bidder's queries**

Process 7492

Reference to the above ITB, UNDP has received the below queries from bidder and we would like to share the clarification as below:

Q1: Refer to page 39, 12.2 Information of the building: "Available area of each roof is 17m x 21.5m". Could these dimensions be kindly confirmed? Based on satellite views from google maps the building dimensions are 13.5m X 21.5m (not including the handrail). See picture below:



Are the provided roof dimensions including the thickness of the handrail? If the dimensions include the handrail, could you please provide approximate thickness of handrail?

A1: The estimation Bidder seems to be closer to the building than estimation in tender document. Handrail is about 20cm thick.

Q2: Refer to page 39, 12.2 Information of the building: "Water tanks: There are two water tanks on each roof with the height of about 1.3m. All the work of the Contractor shall not impact those tanks.". Could the dimensions of these water tanks be provided? Could a picture of the tanks be provided as well?



A2: Water tanks are about 3.5m x 1.5m x 1.5m (L x W x H).

Q3: Based on satellite view roof dimensions (13.5m x 21.5m) and water tank dimensions, and required clearance between solar arrays and shading obstacles, the maximum number of 330W panels in the two big terraces is 198, totaling 64.7kWp. Would 64.7kWp be accepted as well or is it mandatory to install 66kWp, 200 panels of 330W.

A3: it is a mandatory requirement to install 66 kwp.

Q4: Refer to page 40, 12.3. Shading issues: "The main issue is about a 55-story building on the South-West side, causing significantly shade in the afternoon from November to January on south large terrace." For purposes of homogeneity in simulations amongst bidders, could you please indicate in the height of the building used in the pre-feasibility simulations so that all bid use the same building height?

A4: The used assumption is 3.5m/floor (192.5m in total). This height is just an assumption with no information about the design of the building.

Q5: Could you please specify if a monitoring of the current of each DC inputs on the PV Inverters would be sufficient? The measuring of the current of each single string requires extensive measuring devices and is not really needed as there is a fuseholder for each string inside the PV inverter and there would be an error message if one of those fuses trips.

A5: The requirement about level of monitoring system (string level) is for the convenience in corrective maintenance, when the faults would be quickly and remotely identified by monitored data (both local and international Contractors/Consultants are involved). If fuse holder is able to sending feedback to monitoring system, the proposal of bidders will be accepted.

