

All communications should be addressed
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In reply please quote
No:.....

REPUBLIC OF ZAMBIA OFFICE OF THE PRESIDENT

PROVINCIAL ADMINISTRATION
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RESPONSES TO QUERRIES 3

Question: 1: In the tender document, 10,000 kg/cycle throughput is mentioned for 20ft solar cold storage. Please clarify the duration of **one cycle** in hours / days. The cycle duration is not clear as 10,000 kg/day throughput on off-grid systems will require much larger solar panels and would make the system costing non-practical. 6.5 KW solar power is insufficient.

If the cycle duration is 10 days and 1000kg/day is cooled through the solar cold storage, the operations will be simpler, less costly and much more efficient in an off-grid environment. Please suggest if such a design would be feasible.

RESPONSE:

As initially indicated, it is difficult to give a definite duration of one cycle for the following reasons:

- i. Horticultural commodities have varying shelf life.
- ii. Production at the FLISs shall be market driven and markets demands may not be similar.
- iii. Farmers may produce varying crops from site to site.

Having taken the aforementioned reasons into considerations, one cycle may vary from between 2 days to 10 days. It should again be noted that prospective bidders are advised the desired solar cold facility shall be expected to meet the requested basic parameters such as storage capacity and purpose, as well warrant provisions.

Question 2: In the tender document, temperature requirement of 0C to 10C is mentioned for the cold storage. For fruits and vegetables storage, 2C to 15C is a more practical range. Below 2C there is a very high chance of chilling injury in the case of the majority of fruits and vegetables. Please inform that a solar cold storage facility which is able to maintain temperature in the range of 2C to 15C, is acceptable.

RESPONSE:

As initially explained, the temperature range of 2°C to 15°C can be acceptable since the deviation from the desired temperature (0°C to 15°C) is not so significant and can accommodate a wider range of horticultural and vegetable products.

Question 3: PV Panel capacity: 6.5KWP and the actual Refrigeration capacity will be 75% of the selected pV Panel and The solar panel size:250w panel, required 24 Panels for each container. which need space for 37sqm.

RESPONSE:

Improved versions of panels that can improve both refrigeration efficiency and panel space are welcome. Also refer to the earlier responses in previous clarifications.

Question 4: shall we provide PUF Pre quoted panels as dismantled type, since there are difficulties to transport the containers loading and offloading etc. The system will run with solar energy including battery backup for 10 to 12 hours. The remaining period will require genset to operate for 12 to 14 hrs which may be required during the rainy seasons and cloudy climate full time. It is necessary to provide stand by refrigerant system and stand by generator back up to avoid decomposing of products during the breakdown period.

RESPONSE

There is no harm in transporting dismantled type of panels and assembling them at the site. The PV system required should be able to sufficiently utilize solar energy for powering cold storage facility. There shall no need of a standby genset that may set the subproject in environmental requirements for the ZIFLP.

Question 5: Ice bank refrigeration using the same energy as a refrigeration system not possible. Clarification required.

RESPONSE

This ice bank refrigeration has not specifically referred to in our documents.

Question 6: The addendum automatically excludes bidders who have already purchased the document. The addendum also introduces an irrelevant requirement that has no relation to the project.

RESPONSE

The ERB License is a legal requirement for importers of solar. Please further note that bidders shall be well established and based in Zambia or having a representative in Zambia as stated in the bid document.



Head – Procurement and Supplies Unit
For/ PERMANENT SECRETARY
EASTERN PROVINCE