

**ADD AS CORRECTIONS/CLARIFICATIONS REGARDING THE 30/31.5 KWp
SPV PLANT: TO ANNEXURE – II OF PUBLIC TENDER NO.PR/SPV/HCT/CAP/40
DATED 10.05.2007**

CORRECTIONS

1.INVERTER:

A.C.output voltage : 415V AC 3 PH 50Hz; 12.5 KVA (10KW load at 0.8pf)

2.BATTERY BANK:

Battery Type : Low Maintenance Lead acid storage batteries.

3.BATTERY HOUSING:

The battery, Inverter and DB Panel should be housed in a permanent building. This building should maintain +10 degree C even in extreme winter (-25 Deg C) for optimum performance of battery bank. The building should be designed based on solar passive heating and should be highly insulated. The walls, flooring and roof should be designed to maintain constant temperature inside building. Walls should be made be Ladakhi Mud bricks and of 600 mm thickness with infill 50 mm Thermocoal. Floor should have insulating layer and finished with acid proof tiles. Necessary trench with covers should be provided for cable routing wherever necessary. Roof should be made of local wood Purdung, Mardung and Talu with false ceiling. Roof should be covered with 250 mm mud. The mud should be covered by Galvanized corrugated sheets and fixed by MS angle purlins. False ceiling should be provided. The door and windows should be made of first class Deodar wood. Windows should be double glazed. For solar heating of building, Trombe wall should be provided. The building should be provided with electric fittings and exhaust fan.

CLARIFICATIONS

INVERTER:

1. Grid connection should be provided for load sharing and reverse charging of batteries.
2. Provision of Boost charging of batteries should be provided in the system.
3. Necessary hardware and software to be provided for connecting the PCU to PC.
4. Energy meter should be provided in ACDB/Inverter to record energy supplied to load.
5. The Inverter should be able to deliver unbalance load.

BATTERY BANK:

1. The batteries shall be solar photo voltaic batteries of flooded electrolyte, low maintainance, lead Acid and electrolyte of 1.280 specific gravity shall be used.

SPV ARRAY:

1. Array isolation boxes to be provided for easy maintenance and checking of arrays.
2. The Array structure shall be so designed that it will occupy minimum space without sacrificing the output from SPV panels at the same time it will withstand the low temperature and harsh wind speed.
3. The supplier/manufacturer shall specify installation details of the PV modules and the support structures with appropriate diagrams and drawings.

JUNCTION BOXES:

Array Junction box should have following arrangements.

1. Combine groups of modules into independent charging sub-arrays that shall be wired to the controller.
2. Provide arrangement for disconnection for each of the groups.
3. Provide a test point for each sub-array for quick fault location and measurement of voltage.
4. To provide group array isolation.

EARTHING:

The array structure of the PV yard shall be grounded properly using adequate number of Earthing kits. All metal casing/shielding/supply Neutral of the plant shall be properly grounded by separate earthings to ensure safety of the power point. Since the soil at site is dry, special arrangements should be made to get good earthing.

LIGHTING:

The SPV power plant shall be provided with lightning and over voltage protection.

MISCELLENEOUS:

1. Solar distillation plant to produce distilled water for Battery bank should be provided by the company.
2. The company should mention the warranty period for various parts.
3. All nut bolts should be made of very good stainless steel materials.
4. The supplier should submit drawings along with detailed design to IIA, Bangalore for approval before starting the execution of work. The work will be carried out as per designs approved by IIA, Bangalore.

OPTIONAL ITEM:

1. Vendor may quote for one spare PCU/Inverter, 20KVA 16 KW @ 0.8 pf with system.