

Technical Details

1. Survey:

- a. System Location with Geographic Coordinates:
- b. Source of Water:
- c. Irrigation Land Area (Kattha):
- d. Total Head (m):
- e. Water Requirement (liter/day):

2. Design:

I. System Voltage:

II. Solar Array

- a) Solar Array Capacity (Wp):
- b) Capacity of each Solar Module (Wp): Total No of Solar Modules :
- c) Manufacturer Name:
- d) Brand/Model :
- e) No of Solar Modules in a string (x):
- f) No of Parallel Strings (y):
- g) Design Calculations (Mathematical calculation/ Simulation / Performance Curve):
- h) Catalogues:
- i) RETS Certificates:

III. Pump

- a) Pump Type: submersible: Surface:
- b) If Surface,
 - Suction head (m):
 - Delivery head (m):
 - Total Head(m):
- c) Manufacturer Name:
- d) Brand/Model:
- e) Pump Capacity (HP):
- f) Design calculations for Pump selection and sizing (Mathematical calculation/ Simulation / Performance Curve):
- g) Catalogues:
- h) IEC certificate/Test report:
- i) Controller:
 - i. Rating (amp/watt):
 - ii. Manufacturer name:
 - iii. Model/Brand:

IV. Cable

- a) Manufacturer Name:
- b) Brand :
- c) Cross sectional area (sqm):
- d) Cable Length (solar array to Pump):
- e) Maximum Voltage Drop between PV Modules and Pump (shall be <=3%):
- f) Cables shall be PVC insulated, weather resistant and suitable for a wide temperature range (Yes/No):
- g) UV Resistant (Yes/No):

V. Protection System

- a) Air Termination System:
 - i. Length of the Air terminal rod above the PV array:m
 - ii. Diameter of the air terminal rod.....mm
 - iii. Material of air terminal rod: Aluminum / copper / copper bonded.
 - iv. Comply with IEC 62305
 - v. Technical datasheet of Air termination system
- b) Down Conductor:
 - i. Cross sectional area of Down Conductor:..... mm²
 - ii. Material of Down conductor: Copper / Aluminum / GI/ Copper bonded
 - iii. Comply with IEC 62305
 - iv. Technical datasheet of Down Conductor
- c) Earthing:
 - i. Length of the earth electrode:..... m
 - ii. Diameter of the rod :....mm
 - iii. Comply with IEC 62305
 - iv. Technical datasheet of Earthing system
- d) Surge Protector:
 - i. SPD is DC Type
 - ii. SPD of Type 2
 - iii. Manufacturer Name :
 - iv. Brand /Model:
 - v. Comply with IEC 61643-31:2018
 - vi. Technical Datasheet

VI. Delivery Pipe

- a) Pipe type: GI: HDPE: Other:
- b) Pipe diameter :
- c) Pipe length (m):

VII. Mounting Structure

- a) Mounting structure material (shall be of aluminum or steel angles and channels with properly galvanized):
- b) Mounting structure shall be non-corrosive (Yes/No):
- c) Tilt angle:
- d) Orientation of solar panel:
- e) Foundation type for mounting structure:
- f) Clearance between ground level and bottom edge of PV modules (shall be >0.8m):
- g) Fasteners used for fixing structure shall be non-corrosive (Yes/No):