Technical Details

1. Survey:

a. System Location with Geographic Coordinates:
b. Source of Water:
c. Irrigation Land Area (ha):
d. Total Head (m):
e. Water Requirement (litre/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: ……..mm^2
    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 >0.5m):
g) Fasteners used for fixing structure shall be non-corrosive (Yes/No):