



AEDEI
JOB ORIENTED AND SKILL DEVELOPMENT INSTITUTE

SOLAR DESIGN TRAINING INSTITUTE

(ISO 9001:2008 CERTIFIED INSTITUTE) : NEW DELHI
(SOLAR POWER PLANT AC SIDE DESIGN)



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Solar Power Plant AC Side Design

**For Rooftop KW scale solar power plant
and land based MW solar power plant**

- Preparation of Single Line Diagrams
- Selection sizing of inverter duty transformer
- Selection & sizing of Power Solar transformer
- Selection of Aux. transformer
- Selection of two winding and five winding transformer
- Selection criteria of inverter duty transformer
- Selection of solar central inverter
- Selecting of string inverter
- Selection of ACDB and MDB
- Selection and sizing of LT cable and HT cable
- Calculation of fault level at 132 & 66 and 11KV system by IEC 60909 simulation in ETAP Software .
- Selection and sizing of CT PT
- Designing and Engineering Calculation of Earth mat
- Selection and sizing of HT Power Cable
- Selection of Circuit Breaker , Isolator, ACSR Conductor LA etc.

**Address: 107,B-39,1st Floor Near
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- Prepare switchyard plan, section
- Sizing of DC Battery bank (IEEE-485)
- Prepare Design Basis Report of Switchyard
- Prepare Cable trench route of Switch yard.
- Cable Schedule HT , LT Control and Communication
- DSLP Calculation
- Transmission line design
- Calculation of AC Conventional Type Earthing (IS :3043).
- Calculation of Chemical Earthing (BS:7430).
- Prepare cable trench route and Design on standard (IS 1255/IEC-60502) .
- Selection of Cable tray for HT/LT Communication cable in Control room Building.
- Calculation of early streamer emission type lightning arrestor (NFC17-102 Standard Calculation of lightning risk factor of Main Control Room (IS:2309).
- Preparation of HT/LT/Communication equipment layout in Control Room.

- Preparation of HT /LT Cable Schedule.
- Calculation of UPS Sizing.
- Preparation of Transformer Fault/VCB Inputs control Cable schedule.
- Preparation of Control Room Lighting layout (CPWD/NBC).
- Design of interior illumination (IS:3646).
- Design Exterior illumination(Boundary /Plant lighting) (IS:1944).
- Preparation Technical specification of Communication device
- Calculation of DI/DO of PLC and Communication device
- Preparation outline of SCADA system.
- Selection of Multi sensor Smoke and heat sensor.
- Selection of fire alarm control Panel system.
- Preparation of BOQ and BOM.

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