

Beginning Photovoltaic Installation

Day One

Introduction to PV (1/2 day)

- Suggested Reading Material
- History of Photovoltaic Technology
- Photovoltaic Nomenclature
- How Electricity Works
- The Photovoltaic Effect
- How Photovoltaic Cells are created
- Different Types of Module

System Design (1/2 day)

- Understanding Layouts
- Understanding Solar resource
- Different Types of Loading
- Ohm's law
- Series vs. parallel
- How to Calculate Voltages and Amperages
- Interconnection
- Utilizing PV Watts

Day Two

System Installation (1 day)

Mechanical

- Nomenclature For Buildings
- Types of Roofs
- Trusses vs. Rafters vs. Joists
- Roof Measurements
- Tool list
- Locating Rafters/ Trusses
- Creating the Layout
- Uniform Roof Loading
- Selecting the Right Lag Bolt
- Flashing
- Different Racking Types
- Planning Homes Runs and Grounding
- Setting the Modules
- Checking Your Work

Day Three

Electrical (1 day)

- Understanding the NEC 2008 Code
- Nomenclature- Electrical
- The Balance of the Electrical Components
- Placement of the Junction Box/Penetration
- Planning Wire Routes
- BOS installation (Inverters, Combiners, etc..)
- Conduit runs
- Pulling Wires/ Transitions
- Terminations
- Panel interconnection
- Acceptance Tests
- Turning On the System

Day Four

Permitting (1/2 day)

- Module charts
- Drafting Site Plans
- NEC Code Requirements
- Calculating Voltages/ Ampacities
- Onelines
- Professional Engineers
- Putting Permit Packages Together
- Licensing Requirements
- Understanding the Various Inspections

Rebates (2 hrs.)

- Finding Rebates
- State vs. Federal Incentives
- Application Process
- Application Timing

Aftercare (1 hr.)

- Owners Manuals
- Warranties
- Commissioning the System
- Follow Up
- Maintenance

Day Five

First Aide/CPR (1 Day)

- Attain Your First Aide/CPR Certification