

## THE PORTLAND CLEAN ENERGY FUND BRINGS YOU:

# Basics of Solar Hands-on Training: SOLAR INSTALLATION TRAINING

Organized by the Oregon Solar Storage Industries Association (OSSIA)

---



This is a 2.5-day training program designed to introduce participants to solar energy installation. Central Oregon Community College COCC will host this class, while our amazing and talented instructors teach the basics of grid-tied PV systems. They will acquaint participants with safety protocols, plans, roof layout, flashing installation, stringing inverter systems, testing voltage and amperage, and careers in the solar industry.

**Course Title:** SEI: Fundamentals of Grid-Direct PV Installation

**Dates:** June, 16,17, and 18

**Instructors:** TBD

**Place:** 2600 NW College Way, Bend, OR 97703, in Cascades Hall, room 104

**To Request Disability Accommodation:** At COCC, [bdancen@cocc.edu](mailto:bdancen@cocc.edu) for accommodation with instructional materials: [shakunda@orssia.org](mailto:shakunda@orssia.org)

### **Class Notebook Table of Contents:**

Green Week Schedule .....	1
Basics of Grid-Connected PV Systems Presentation .....	4
SEI: Professional Solar Training .....	30
SEI: Solar Certificate Program .....	31
NABCEP Board Certifications .....	33
NABCEP: PV Career Pathways .....	34

# GREEN WEEK SCHEDULE

## Monday 6/16/2025

8:30 A.M. – 12:00 P.M. (Training Center)

- Solar Installation Careers, LRT Apprenticeship Program Introduction.
- Basics of grid-tied PV systems
- Review mechanical plan sets for lab yard PV systems
- Roof standoffs and racking demonstration in the classroom (review parts)
- Safety – fall protection, ladders, and working safely on roofs

12:30 P.M. - 4:30 P.M. Outdoor Lab–Training Roof: Three small group rotations:

- Roof Penetrations
  - Review the plan set of roof layout, Chalk line, and finding rafters
  - Using a drill to make pilot holes, install and waterproof flashings
  - Installing L-feet, rails, and optimizers for a module-level power electronics (MLPE) system
- Inverter Comparison
- Safety & Fall Protection

## Tuesday 6/17/2025

8:30 A.M. – 12:00 P.M. (Training Center)

- Review of Day 1 and racking best practices
- Safety – module handling, getting modules to the roof, and electrical safety
- Basics of Electricity & PV Modules
  - Specifications, Testing voltage and amperage, handling/passing to the roof
  - Wire management & wire bending radius, Connectors, and tools
- Electrical Best Practices
- Solar Electrical Safety
- Certification/Licensing, LRT Apprenticeship Program

12:30 P.M. - 3:30 P.M. Outdoor Lab–Training Roof: Three small group rotations:

- Handle/install modules, connect modules, and do wire management to the rooftop junction box
- Tracing the flow in the system through the BOS components of the grid
- PV module testing and using a DMM

3:30 P.M. - 4:30 P.M. Meet with Solar Contractors and Evaluation

- TBD

## Wednesday 6/18/2025

8:00 A.M. - 10:30 A.M. Instructors' meeting for feedback

11:00 A.M. – 12:00 P.M.: Work Site Visit: TBD