Understanding NEC Requirements for Solar Photovoltaic and Energy Storage Systems

Program Outline

This is an 8 hour course which provide insight and understanding of solar systems and energy storage (battery) systems according to the National Electric Code

Schedule of Classes

Classes will be held at the Idaho State University Campus as well as Simplot facility Fall 2024) in Pocatello Idaho. Classes will be held Spring of 2025, Spring 2026, and Spring 2027.

Quiz
N/A

Sample Certificate
(See attachment)

Sample Evaluation Card
(See attachment)

Instructor Information

Todd Wilding, Idaho Electrical Journeyman, State Inspector for State of Idaho
(See attached resume)

Course Title: Understanding NEC Requirements for Solar Photovoltaic and Energy Storage Systems

Instructor:

- **Todd Wilding**, Idaho Electrical Master Electrician and Journeyman, State Inspector for the State of Idaho

Course Description: This 8-hour course provides an insight an understanding of solar systems and energy storage (battery) systems according to the National Electric Code.

Course Objectives:

By the end of this course, participants will be able to:

1. Demonstrate a comprehensive understanding of the National Electrical Code (NEC) requirements for solar photovoltaic (PV) and energy storage (battery) systems.

2. Identify and interpret key NEC articles related to the installation, grounding, overcurrent protection, and wiring methods for PV systems and energy storage units.

3. Apply NEC standards to ensure the safe and compliant design and installation of solar PV and energy storage systems.

4. Evaluate and solve practical scenarios involving PV systems and battery storage to ensure adherence to NEC safety protocols and operational efficiency.

5. Understand the latest NEC updates and how they impact the integration of PV systems with existing electrical infrastructure.

Target Audience:

Journeyman electricians requiring continuing education credits to maintain licensure.

Limited Electrical Installers.

Course Format:

- **Duration:** 8 hours
- **Delivery Method:** Classroom-based lecture with PowerPoint presentation
- **Discussion and Q&A sessions**

Schedule:

- Offered in the Fall 2024, Spring 2025, Spring 2026, and Spring 2027
- **Location:** Idaho State University Campus and Simplot Facility, Pocatello, Idaho

Course Materials:

- Mike Holt's Solar Photovoltaic and Energy Storage Systems (purchase is optional)
- Instructor-led PowerPoint presentations provided.

Teaching Methods:

- Lectures with PowerPoint presentations to outline and discuss NEC 2023 Code changes.
- Class discussions led by Todd Wilding with real-world examples and scenarios.

Assessment Methods:

- Participants will engage in class discussions and a Q&A session to demonstrate understanding of the course material.

Technology Use:

- PowerPoint presentations will be used to support visual learning and provide a structured flow of information.

Certificate of Completion:

- Issued to participants at the conclusion of the class, verifying their participation and understanding of the NEC 2023 updates.

Course Evaluation:

- Participants will complete an evaluation card at the end of the course to provide feedback on the instruction and content, ensuring quality and relevance of the course.

Idaho State University

Continuing Education and Workforce Training

John XXXXX

Has completed 8 contact hours

Understanding NEC Requirements for Solar Photovoltaic & Energy Storage Systems

Idaho Course #00-000000

_____

Signed

_____

Date

IDAHO STATE UNIVERSITY
College of Technology

WORKFORCE TRAINING
Course Evaluation

Course: **Instructor:**

Location: **Date:**

How Satisfied were you with the…	**Very Dissatisfied**	**Dissatisfied**	**Neutral**	**Satisfied**	**Very Satisfied**
Presenter's knowledge?					
Organization (flow) of the presentation?					
Quality of course materials?					
Opportunity for questions and participation?					
Instructor's ability to relate material to class needs?					
Relevance of the course with your job?					
Thought that you received at least one specific skill/tool that will help you be more effective?					
Amount of time given for the material covered?					
Overall course contribution to your knowledge & skill?					

How would you rate the instructor on a scale of 1 – 10 (1 is low – 10 is high)

Low	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**High**

List one thing you will be able to take away from today:

What did you like most about today's training?

What can we do to improve today's training?

Additional training requests:

Email Addresses:

Todd Wilding

Instructor

PROFILE

I have worked in the Electrical industry for 28 years, 5 years going through the JATC Apprentice program, 23 years as a Journeyman Electrician, and have had a Masters license for 13 years. I have been an Electrical Inspector for the State of Idaho for 19 years.

EXPERIENCE

State Electrical Inspector, State of Idaho, Division of Occupational and Professional Licenses—2004-Present

Instructor for ISU Work Force Training teaching 1st and 2nd year Apprenticeship classes , 2004-Present

Journeyman Electrician, Greenway Electric 2003-2004

Journeyman, Forman SBA, 2000-2003

Apprentice-Journeyman, Wasatch Electric 1995-2000

Marsh Valley High School varsity assistant football coach- 2014-2015

Marsh Valley Middle School basketball coach 2010-2013,

Coaching youth sports for the last 15 years.

EDUCATION

High School at Marsh Valley High School

JATC Apprenticeship Training SLCC

SKILLS

While in the trade I have designed, laid out, and planned jobs as well as over sought the work being done. As an Instructor I have helped with building the curriculum and the testing for the apprenticeship program at I.S.U. as well as teaching the continuing education classes for Electrical Journeyman. Inspecting electrical jobs and working with contractors and doing compliance in state jurisdiction. Coaching youth and kids and helping them develop skills and good work ethics along with leadership skills on and off the field.