

## Solar Storage Workshop 2024

### PREREQUISITE

Working knowledge of solar PV; currently working in the solar industry; and/or have taken a fundamentals course such as FSPV: Fundamentals of Solar PV Design and Installation is required to register for this advanced course.

### COURSE DESCRIPTION

This 24-hour course is offered by the NC Clean Energy Technology Center at NC State University covers fundamental principles of battery-based systems including understanding customer needs; specifying and sizing a battery bank, inverters, and charge controllers for battery-based systems; defining system architecture and functionality; battery metering; and understanding the code implications of these systems. The course will end with a tour of a commercial PV installation with a battery system.

### WHO SHOULD ATTEND THIS COURSE

- Residential and Industrial Solar System Installers and Designers
- Electricians
- Professional Engineers
- Energy Professionals
- Code Officials
- Emergency Service Providers
- Facility Energy Managers
- Architects and Building Designers

### CONTINUING EDUCATION INFORMATION FOR 2024

- 19 PDHs are approved by the NC Board of Examiners for Professional Engineers and Land Surveyors (NCBELS)
- 24 LU|HSW are approved by the American Institute of Architects (AIA), course code SS2024
- 24.0 CEs are approved by the North Carolina Board of Examiners for Electrical Contractors (NCBEEC)
- This course is approved by the North American Board of Certified Energy Practitioners (NABCEP) for initial exam application JTA credits and recertification credits. For more information about approved credits, visit the [course listing](#).

**COURSE OUTLINE**

Day 1	<p><b>Possibilities of Battery Systems</b></p> <ul style="list-style-type: none"> <li>• Understanding customer needs</li> <li>• System types— UPS, Stand-alone, Bi-modal, AC Coupled</li> </ul> <p><b>Load Analysis and Billing Analysis</b></p> <p><b>Inverters</b></p> <ul style="list-style-type: none"> <li>• List of products</li> <li>• Sizing and specifications</li> <li>• NEC compliant installation</li> </ul>
Day 2	<p><b>Charge Controllers</b></p> <ul style="list-style-type: none"> <li>• List of products</li> <li>• Sizing</li> <li>• NEC compliant installation</li> </ul> <p><b>Battery Types</b></p> <ul style="list-style-type: none"> <li>• Chemistry</li> <li>• Sizing</li> <li>• Maintenance</li> <li>• Safety</li> </ul>
Day 3	<p><b>NEC 2017 and PV Systems with Batteries</b></p> <p><b>Battery Metering: The Ins and Outs of Battery Living</b></p> <ul style="list-style-type: none"> <li>• System design and configuration</li> <li>• Programming equipment</li> </ul> <p><b>PV Battery System Tour</b></p>