



THE FUTURE OF SOLAR TECHNOLOGY



SMA SOLAR | ACADEMY
Be a solar expert

THE SOLAR ACADEMY: ALWAYS UP TO DATE

The SMA Solar Academy offers a comprehensive range of seminars on photovoltaics and provides information on SMA products. The program also addresses current topics and recent developments in the solar industry. Classes are held at SMA America headquarters in California as well as at rotating sites all over North America.

ABOUT OUR FACILITY & WEBINARS

The state-of-the-art Solar Academy training facility features a tactile learning environment with access to an innovative inverter display. Sunny Boy and Sunny Island inverters are mounted on a “learning wall,” along with an SMA Combiner Box, Combi-Switch and Sunny WebBox. Attendees can also experience SMA’s commercial products, the Sunny Tower and Sunny Central, via hands-on training. This functional education emphasizes limited enrollment in an effort to foster ample individual attention.

In conjunction with the training facility, Web-enabled cameras allow trainees to view the interior components of inverters in operation. Webinars are also held on a regular basis to supplement the core curriculum.

THE ACADEMY CURRICULUM STRUCTURE

The Solar Academy’s broad offering provides a level of technical detail sufficient for both beginners and experienced professionals.





BASIC-TECHNICAL

This course is intended for

- » Entry-level installers
- » Solar designers
- » Renewable-energy professionals

Length 6 hours

NABCEP Credits 5

PV 1: INTRODUCTION TO PHOTOVOLTAICS

This course offers a simple overview of electricity and electronics as they relate to photovoltaics. Topics include basic understanding of AC and DC circuits, AC and DC electrical components, photovoltaic cells, module and array parameters, utility transformers and electrical safety.

BASIC TECHNICAL

This course is intended for

- » Installers
- » Solar designers
- » Renewable-energy professionals

Length 4 hours

NABCEP Credits 4

SMA 1: INTRODUCTION TO SMA PRODUCTS

This short seminar focuses on a technical overview of Sunny Boy inverters and their interaction with the utility grid. Topics include grid-tied photovoltaic components, inverter MPP tracking characteristics, single-phase and three-phase utility applications, SMA DC disconnect, and inverter installation and troubleshooting. This seminar also provides an introduction to the Sunny Central series of inverters.

NON-TECHNICAL

This course is intended for

- » Sales professionals

Length 4 hours

NABCEP Credits 0

SM: SALES & MARKETING TRAINING

The focus of this training is growing your business through the effective marketing and sale of SMA products. Topics include product features and benefits, current product line, product comparisons, economics of selling solar and in-depth product knowledge.



BASIC TECHNICAL

This course is intended for

- » Installers
- » Solar designers
- » Renewable-energy professionals

Length 6 hours

NABCEP Credits 5

Recommendation

- » Strong knowledge of PV basics or completion of Intro to PV

INTERMEDIATE TECHNICAL

This course is intended for

- » Installers
- » Solar designers
- » Renewable-energy professionals

Length 6 hours

NABCEP Credits 5

Recommendation

- » Completion of SB 1

SB 1: SUNNY BOY 1

This course offers a basic understanding of Sunny Boy inverters and their interaction with the utility grid. Topics include Sunny Boy product knowledge, U.S. utility transformer integration, SMA DC disconnect, components of grid-tied PV systems, residential grid-tied backup, and inverter safeguards per UL1741. It also covers installation requirements based on the National Electrical Code and introduces safe installation practices for high DC and AC voltages. Hands-on training provides reinforcement of course concepts.

SB 2: SUNNY BOY 2

This is an advanced-level course on multiple Sunny Boy inverters and Sunny Tower installations in three-phase applications. Topics include the design and sizing of the PV array using Sunny Design software, sizing of DC and AC over-current protection devices, as well as wiring to comply with UL and the National Electrical Code safety standards. Hands-on training provides reinforcement of course concepts.



INTERMEDIATE TECHNICAL

This course is intended for

- » Advanced installers
- » Solar designers
- » Renewable-energy professionals

Length 6 hours

NABCEP Credits 5

Recommendation

- » Completion of SB 2

EXPERT TECHNICAL

This course is intended for

- » Advanced installers
- » Solar designers
- » Renewable-energy professionals

Length 6 hours

NABCEP Credits 5

Recommendation

- » Completion of SC 1

SC 1: SUNNY CENTRAL 1

This course provides in-depth knowledge of the Sunny Central family of inverters, with and without internal transformers. Applications include large-scale PV plants ranging from hundreds of kilowatts to utility-scale, megawatt installations. This training session provides an overview of the National Electrical Code requirements and safety in dealing with high voltages. It also provides a broad perspective of data logging, monitoring, command and control options for interaction with plant operators and utilities.

SC 2: SUNNY CENTRAL 2

This course provides advanced-level training on central inverters for utility-scale applications. The curriculum focuses on the design, installation and monitoring of PV plants in the megawatt range. It reviews features and functionalities of central inverters with internal and external transformers connected to low- and medium-voltage grids. The seminar also provides an overview of grid management features that allow utilities to remotely control PV plants.



INTERMEDIATE TECHNICAL

This course is intended for

- » Installers
- » Solar designers
- » Renewable-energy professionals

Length 6 hours

NABCEP Credits 5

Recommendation

- » Completion of SB 1

SI 1: SUNNY ISLAND 1

This course provides an in-depth understanding of the functionality of the Sunny Island and its role in single-phase, split-phase and three-phase grid-tied backup power systems. Topics include Sunny Island management of battery charging and load shedding, as well as AC-coupled sources such as conventional fuel generators, PV inverters and wind inverters. This course covers guidelines of system design, installation and troubleshooting using examples of actual job sites. Hands-on training provides reinforcement of course concepts.

EXPERT TECHNICAL

This course is intended for

- » Installers
- » Solar designers
- » Renewable-energy professionals

Length 6 hours

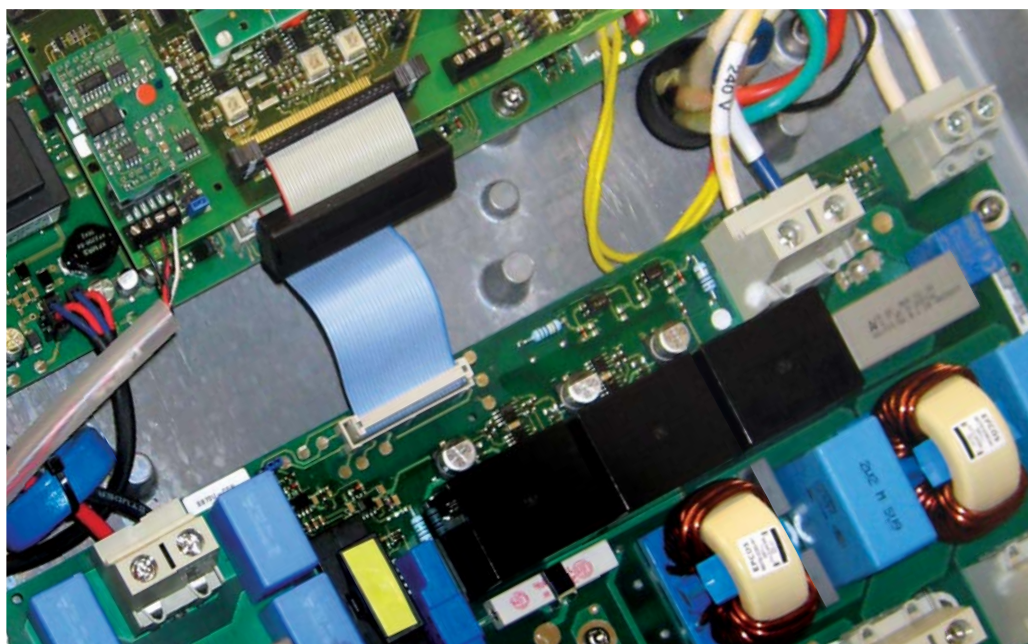
NABCEP Credits 5

Recommendation

- » Completion of SI 1

SI 2: SUNNY ISLAND 2

Topics include a review of grid-tied backup systems and focuses on off-grid applications and hybrid systems using AC and DC coupled energy sources. This course covers design, installation and troubleshooting guidelines of systems using a multicenter box for village power supplies. Hands-on training provides reinforcement of course concepts.



INTERMEDIATE TECHNICAL

This course is intended for

- » Entry-level installers
- » Solar designers
- » Renewable-energy professionals

Length 6 hours

NABCEP Credits 5

Recommendation

- » Completion of SB 1

INTERMEDIATE TECHNICAL

This course is intended for

- » Entry-level installers
- » Solar designers
- » Renewable-energy professionals

Length 6 hours

NABCEP Credits 5

Recommendation

- » Completion of SB 1 and COM

COM: COMMUNICATIONS

This course provides an overview of inverter communication options including displays, user interfaces, data logging, monitoring and control of renewable energy plants. Topics include RS-232, RS-485, wired and wireless hardware, and communication protocol standards. The course includes an introduction to data logging using the Sunny WebBox, Sunny Beam and SMA software for single and multiple inverters.

WB: WEBBOX

This course provides an in-depth look at the installation and setup of the Sunny WebBox, a data-logging and monitoring system. This session focuses on wiring and configuring the Sunny WebBox to monitor single and multiple SMA inverters locally and over the Internet. Attendees will also learn how to register the Sunny WebBox to the Sunny Portal to post and customize renewable-energy-plant Web pages.

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