Residential Solar PV Plan Reviews

Course Outline

Course Description: This 10-module course, is based on the *2014 National Electrical Code (NEC)*. It teaches the practical application of requirements specific to performing residential photovoltaic (PV) plan reviews. Each of modules consists of an integrated video presentation, including presentation slides, explanation, and examples. Modules are designed to be roughly 20-60 min. in length., with over **6 hrs.** of detailed instruction.

Course Objectives: Solar photovoltaic (PV) system installations continue to increase throughout the country. Thorough plan reviews and inspections are essential for their safe installation. This course will give many examples of different types of solar PV systems and will walk the students step by step through the plan review process for each one. Topics to be covered throughout the presentation include: requirements for site plans, line diagrams, and manufacture spec sheets. Topics also covered include: wire/breaker sizing, wire deration, cold temperature voltage, rapid shutdown of systems, disconnect locations, interconnection requirements, roof fire access clearances, equipment/wiring installation, and signage. This course will be very beneficial for plan reviewers and inspectors, but will also be helpful for solar contractors and designers to better understand what information is required on solar PV plans and what is expected during inspections. This course is based on the 2014 NEC and 2015 IBC/IRC.

Texts and Readings: The *2014 National Electrical Code* is the textbooks for this course. It is highly recommended that you purchase a paper-back copy of these codes, which are available online at www.iccsafe.org.

Course Outline of Topics:

Module:	Topics:	Readings:	Quiz:	Duration:
1	Rapid Shutdown	None	N	23 min.
2	Point of Interconnection Rules	None	N	55 min.
3	Example System #1, Enphase M250s	None	N	53 min.
4	Example Systems #2 and #3, Enphase IQ6s	None	N	39 min.
5	Example System #4, SMA Sunny Boy	None	N	33 min.
6	Example System #5, SolarEdge	None	N	33 min.
7	Example System #6, SolarEdge HDwave Inverter	None	N	22 min.
8	Example System #7, StorEdge Battery Backup Inverter	None	N	26 min.
9	Example System #8, Tesla AC Powerwall Battery Backup System	None	N	49 min.
10	Example System #9, Radian Battery Backup System	None	N	44 min.
	Practice Exam			*60 min.*
	Total Course Hours			**7.5 hours**

Expectation of Participants: You can progress through this course at your own pace; however, you only have access for 120 days.

Continuing Education Credits: Completion of this course results in **.75 CEU's** being provided by ICC, as West Coast Code Consultants is a Preferred Provider.

ICC PREFERRED EDUCATION PROVIDER

Course #- Pending

Instructor:

Doug Smith, MCP, CBO serves as both a plans examiner and building inspector for WC3. He has been an inspector since 2005 and has more than 20 years of experience in the building safety and construction industries. He has obtained over 18 ICC certifications including Certified Master Code Professional. He specializes in the requirements of the electrical code and is especially knowledgeable on the topic of solar photovoltaic systems.