

¿Quieres renovar tu Certificado de Instalador en Energías Renovables? Puedes tomar las horas que necesitas con los cursos que ofrece [Solar Energy International \(SEI\)](#), acreditados por el Colegio de Ingenieros y Agrimensores de Puerto Rico.

Revisa a continuación la lista de cursos aprobados (haz click para conocer más e inscribirte)

- **FVOL101: DISEÑO E INSTALACIÓN SOLAR ELÉCTRICA (SISTEMAS INTERACTIVOS) – 60 Horas**
Este es un curso fundamental para cualquier persona que quiera iniciar una carrera en energía fotovoltaica (FV) y/o comprender los pormenores de la generación de electricidad con base en el efecto fotoeléctrico. La plataforma del curso FV101 le permitirá continuar desarrollándose en áreas como: diseño, inspección, instalación, mantenimiento, ventas técnicas y soporte técnico; todo basado en los más rigurosos códigos eléctricos y en prácticas recomendadas por profesionales con décadas de trayectoria en la industria.
- **FVOL203: FUNDAMENTOS DE SISTEMAS FOTOVOLTAICOS BASADOS EN BATERÍAS – 40 Horas**
Este curso le proporcionará al estudiante una comprensión de los conceptos fundamentales necesarios para trabajar de forma segura en sistemas FV basados en baterías; estos incluyen los sistemas FV aislados (o autónomos) y los sistemas FV conectados a la red con respaldo de baterías.
- **CE526: The 2020 NEC®: PV and Energy Storage Systems – 8 Hours**
This course walks through the 2020 NEC® focusing on Chapters 6 and Chapter 7, and including relevant parts of Chapters 1 through 4. The focus is on critical updates, changes, and relevant details that impact PV system design and installation, for applications ranging from battery-based off-grid and all types of energy storage systems, to interactive PV systems of all sizes up to utility-scale solar farms.
- **CE510 TIPS, TOOLS AND TECHNIQUES OF THE SOLAR INDUSTRY – 2 Hours**
Veteran SEI instructor Ken Gardner shares lessons learned from on-the-job experience and best practices compiled from a variety of industry leaders over the years.
- **CE513: ROOFTOP PV: WHAT YOU NEED TO KNOW ABOUT ROOF SYSTEMS – 2 Hours**
This webinar will provide the basics about how roofs function and will explain in detail considerations specific to roof systems when PV systems are installed.
- **CE514: BUILDING AND FIRE CODES: ROOFTOP PV CONSIDERATIONS – 2 Hours**
There are several codes which govern the safe installation of PV systems, in addition to the more commonly-referenced electrical codes (such as the NEC®).
- **CE517: PERFORMANCE MODELING OF PV SYSTEMS – 3 Hours**
Estimating the production of PV systems is critical for their success. Modeling is required for any sort of financial calculations, as well as for back-testing system performance.

- **CE518: BASICS OF PV SITE ANALYSIS – 1 Hour**
Visiting a site and gathering key electrical and structural information is an important step in designing a code-compliant PV system. In this Continuing Education class, students will learn the basic information required to gather from a proposed site.
- **CE519: OFF-GRID SYSTEM CONSIDERATIONS 2 Hour**
There are many things to consider when sizing and designing an off-grid PV system. In this continuing education course, we'll take a high-level overview that will primarily focus on DC coupled off-grid systems.
- **CE523: SOLAR INSTALLATION SAFETY TRAINING – 12 Hours**
As the PV industry continues to grow at a rapid pace, it is so important to us here at SEI to ensure that solar workers have the tools and skills to work safely on the job site, so we can all return home soundly to our families at night, proud of the work we do.
- **CE524: PVSYST FOR PV SYSTEM PRODUCTION MODELING – 4 Hours**
Whether providing a production guarantee, optimizing system design, or verifying that system performance meets expectations, PVSyst software is the main tool the PV industry turns to.
- **CE525: LARGE-SCALE GROUND-MOUNTED PV INSTALLATION SAFETY– 8 Hours**
Large ground-mounted PV installations present unique hazards requiring specialized safety training, including DC circuits operating at up to 1500 volts and thousands of amps, AC circuits up to 690 volts, and hazards associated with trenching and the use of heavy machinery. This 8-hr online on-demand course covers site hazards and control methods specific to large ground-mounted PV installations.
- **CE527: THERMOGRAPHY AND DRONES IN PV APPLICATIONS– 4 Hours**
In this continuing education course we'll discuss the intersection of thermography and drones. The practice of thermography is a very safe and non-destructive test for use in all electrical applications. Infrared (IR) cameras are used to detect differences in radiation (heat) which can inform the user of various conditions and/or problems in the electrical circuit.
- **CE531: PELIGROS DE SISTEMAS ELECTROQUÍMICOS DE ALMACENAMIENTO DE ENERGÍA EN APLICACIONES FOTOVOLTAICAS (FV) 8 Horas**
Este curso brinda capacitación sobre los peligros asociados con cada tecnología de almacenamiento de energía y las medidas de control para eliminar o mitigar esos peligros.
- **CE532: THE PHYSICS OF SOLAR CELLS AND IV CURVES – 1.5 Hours**
This 90 minute course will be unique in your solar education, whether you are a novice or a 10 year veteran. We explain in detail, but without crazy equations, the actual quantum physics of how a solar cell works and how the IV curve gets its shape. Sounds intimidating?- don't worry, we make it super clear.
- **CE533: COMPARING BATTERY TECHNOLOGIES – 4 Hours**
Recent developments in lithium-ion battery technology have seen many installers shifting from lead-acid batteries, the go-to battery chemistry for decades, to lithium-ion chemistries. Customers are also starting to inquire more about lithium-ion storage technologies.

- **CE534: DIVE INTO DIODES: A PV CIRCUIT PERSPECTIVE** – 2 Hours
What does a diode do? And why should you care? Leaving the physics aside for the most part, this short course explores what diodes do; how they can be used to model an equivalent PV circuit; when and how bypass diodes operate in PV modules and circuits; and what that looks like in the operation of PV arrays. Failures, issues, and testing bypass diodes, along with a couple of case studies will also be presented. You'll never think about diodes the same again!
- **CE536: DEMYSTIFYING THE WARRANTY** – 1.5 Hours
Have you read your warranty? Do you know the difference between a workmanship and performance warranty? If you don't spend your free time reading warranty legalese, then join us for this short course where we'll look at common warranty terms and exceptions. We'll dive into details specific to PV modules, inverters, installation, and battery warranties. Some warranties have unusual terms or requirements that vary from the manufacturer's marketing literature. We'll review examples of several of these situations and other common but not well-known warranty clauses that may influence your equipment choices.
- **CE540: 2023 NATIONAL ELECTRICAL CODE (NEC®) UPDATES: SOLAR AND STORAGE SYSTEMS** – 4.5 Hours
As solar installations increase in complexity, it's vital that installers and designers understand the latest National Electrical Code (NEC®) requirements, having been adopted in all 50 United States as well as many other nations. The 2023 edition builds on a continually-evolving body of work, covering design and installation requirements for PV and energy storage systems. This course is an in-depth look at changes and updates to the 2023 NEC that reflect how PV, other generation sources, storage, and management and control systems interact in new and exciting ways.

[Descarga aquí la lista completa de cursos aprobados.](#)

Las personas que tomen los cursos y persigan realizar en PR este tipo de labores, deberán cumplir con los requisitos de Ley en PR.

Solar Energy International (SEI) es la escuela de Energía Renovable con más trayectoria en todo el mundo. Se asoció al CIAPR para desarrollar cursos que habiliten a los ingenieros obtener su recertificación. Para más información contactarse a programahispano@solarenergy.org o llamar al +1-970-527-7657 opción 8

Más información e inscripciones aquí. www.solarenergy.org/ciapr