

Siemens Power Academy TD

# Distributed Generation and Energy Storage Applications

PDEC 620

## At a glance

Distributed generation (DG) is becoming a key component of current and future energy strategy in the US and throughout the world. The **Distributed Generation and Energy Storage Applications** course focuses on DG technologies, the power system impacts of DG, DG interconnection requirements and issues/solutions that must be addressed to integrate DG onto the electric power system.

The **PDEC 620** course covers:

- Key interconnection problems that must be addressed, related to system control, voltage regulation, fault protection, islanding protection, service restoration, and grounding
- Various DG technologies and applications in detail, including internal combustion engine generators, small combustion turbine generators, fuel cells, renewable sources, and dispatch capable energy storage devices
- Comparison of performance aspects of power converters: inverter, synchronous generator and induction generator types
- Power system impacts, including voltage regulation, flicker, power quality, reliability, fault levels, and power losses
- System interconnection and impacts, including protective relaying and controls, grounding and transformer connections, power quality issues, and interconnection standards (such as IEEE 1547).

Upon completion of the course, participants will have a general understanding of DG and energy storage technologies, interconnection issues and methods for identifying problems that may arise and solutions that can be applied.

## Prerequisites

No previous experience in DG is required, although a basic understanding of power distribution systems is recommended. This course is recommended for engineers, planners, and managers who wish to understand how to apply the appropriate DG technologies to the power system.

## Course structure

This is a two-day course. Material is presented in both morning and afternoon sessions for a total of six hours of daily instruction. Standard course hours are 9:00 a.m. to 4:00 p.m. each day.

## To view the PDEC 620 Course Schedule on the web:

[https://siemens.coursewebs.com/siemens/pageCourseInfo.aspx?Course\\_ID=PDEC\\_620](https://siemens.coursewebs.com/siemens/pageCourseInfo.aspx?Course_ID=PDEC_620)

### Instructors

All courses offered through Siemens Power Academy are developed and taught by leading industry engineers. In addition to their proven instructional ability, our engineers have advanced degrees complemented by first-hand knowledge and experience solving power system problems throughout the world.

### Continuing Education Units (CEUs), Professional Development Hours (PDHs):

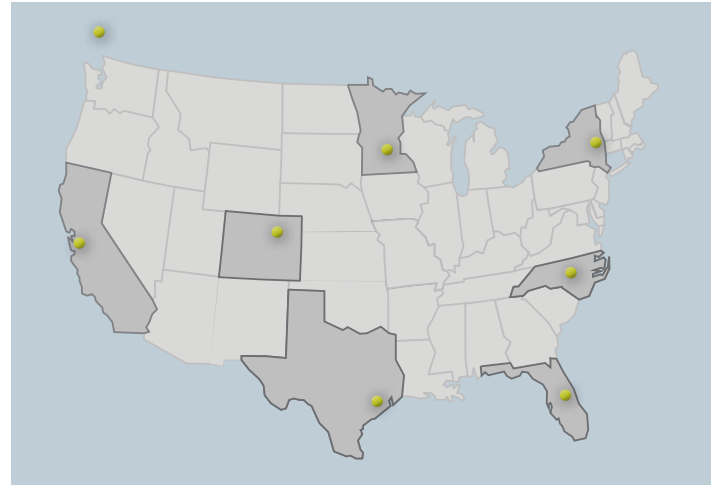
Licensed engineers, on a voluntary or mandated basis, attend continuing professional education for licensure renewal to ensure competency. All courses offered through Siemens Power Academy meet the requirements for CEUs and PDHs.

- Continuing Education Units (CEUs) are the nationally recognized units for recording participation in professional development and noncredit educational programs. Participants completing this course will be awarded CEUs based on the instructional hours of the course: one CEU is awarded for 10 classroom hours of instruction.
- Professional Development Hours (PDHs) – Continuing education training for the Professional Engineer (PE) – that needs to earn annual Professional Development Hours (PDHs). Through our instructor-led training, participants earn one PDH for each one hour of instruction. The participant is responsible for maintaining records of courses taken in support of licensure.

### Convenient training locations

The course is scheduled on a regular basis at Siemens offices located throughout North America, including:

- Burlington, Ontario, Canada
- Houston, Texas, USA
- Littleton, Colorado, USA
- Minnetonka, Minnesota, USA
- Mountain View, California, USA
- Orlando, Florida, USA
- Schenectady, New York, USA
- Wendell, North Carolina, USA



### Client site and custom training

All courses are available for presentation at any client's location by special arrangement. At client sites, it is recommended that sufficient computer terminals be available to enable a fully interactive and productive class, if applicable. Client site courses can also be tailored to address specific topics of local importance.

### Contact us

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