

Certificates, certification and licensure in the U.S.



Both employees and owners of a photovoltaic installation benefit from certified labour skills and experience

Photo: Dennis Schroeder/NREL

Workers are entering the solar industry at a number of entry points. Specifically, entry-level positions are in demand and many people are transitioning from other careers into the solar photovoltaics industry. As more PV systems are installed, the demand for operations and maintenance (O&M) is growing as well.

Articulating a career pathway

In accordance with the National Fire Protection Association's National Electrical Code (NFPA 70) used in the U.S., the definition of a qualified person is "one who has skills and knowledge related to the construction and operation of the electrical equipment and installation and has received safety training to avoid the hazards involved."

In the U.S. the career pathways would typically be certificates, certification after 2 years, and licensure after 4 years of practical experience, and then additional certifications and certificates, after a contractor's license and then expert level credentials after 5 years of contracting.

Each state may have different licensing requirements which typically include an examination. However, some states have reciprocity. To most people it is not clear what certificates, certification and licensure are, and what they are not and how they differ:

- A license is certification, typically for the license qualifier only.
- A license is required to practice within those states requiring a license.
- The requirements may include building codes, guidelines, and safety.
- A certificate or certification alone cannot allow a person to practice.

In the United States there are differences between certificates, certification and licensure.

Certificates are credentials one receives typically with no continuing education credits requirements. Certification typically has a requirement of continuing education. And finally, a license allows one to practice the trade.

- A safety certificate requirement for construction is different from a certification.
- A person who is certified or has a certificate may work with someone who is licensed.

For example, should you have an engineering degree, to practice engineering you would require a professional engineering license. In California, "all businesses or individuals who construct or alter, or offer to construct or alter, any building, highway, road, parking facility, railroad, excavation, or other structure" must be licensed.

There are approximately 1000 active solar contractor licenses issued in California. This is double the figure recorded in 2008. With the largest number of solar installations, California has a special contractor's license in solar. There are classifications authorised to install solar, but the qualifier may consider additional specialised training – certificates and certification – to become proficient.

Certification organisations are trade-based and have yet to combine both the university-level theoretical knowledge and practical skills in an entry level certificate.

The makeup of entry-level people are changing in the US and a demand for internationally recognised certificates with practical knowledge, including industry standard practices, is growing in the U.S.

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The author is lecturer at the European Energy Centre (EEC), an independent professional body that trains about 5000 individuals every year in over 300 training courses across Europe. Courses leading to the internationally recognised Galileo Master Certificate (GMC) are delivered across 21 European universities. All individuals who succeed in gaining the GMC are recognised as having both the theoretical and practical skills to be a quality technician.

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