

Photovoltaic Systems



Photovoltaic systems convert solar energy into direct current electricity. These systems use solar panels composed of a number of solar cells to supply useable electricity. They can be set up as remote, or stand-alone, systems to supply electricity independently from the grid. They can also be integrated into a structure's existing electrical system to reduce the user's draw on the utility grid and potentially provide surplus power back to the grid.

Legislated Requirements

Photovoltaic systems must be installed by qualified workers. In Alberta, any work related to electrical installation can fall under several trade regulations, including the *Electrician Trade Regulation 274/2000*, which require installers to be certified electricians or registered apprentices working under the supervision of a certified electrician. This includes, but is not limited to, the installation of conductors, conduits and grounding/bonding, as well as the installation and termination of photovoltaic inverter systems. Some of this work may also be done by certified power system electricians or powerline technicians or their apprentices.

Stand-alone or remote systems that form an independent electrical system may also require such certified tradespeople or their apprentice to connect the electrical load, depending on the method of termination.

Other related work, such as installation of mounting racks, placement of solar array panels or any roof membrane penetration, would fall outside the related duties of the trade regulations related to electrical work and could be performed by other competently trained installers.

Compliance

In addition to being expected to comply with applicable building and electrical codes and Occupational Health and Safety standards, contractors/installers are required to comply with both the Apprenticeship and Industry Training (AIT) Act and any applicable trade regulations. Failure to comply carries a maximum penalty of \$15,000.

For details, visit:

AIT Act: www.gp.alberta.ca/1266.cfm?page=A42.cfm&leg_type=Acts&isbncln=9780779752232

Electrician Trade Regulation 274/2000:

www.gp.alberta.ca/1266.cfm?page=2000_274.cfm&leg_type=Regs&isbncln=9780779755899

Powerline Technician Trade Regulation 296/2000:

www.gp.alberta.ca/1266.cfm?page=2000_296.cfm&leg_type=Regs&isbncln=9780779771530

Power System Electrician Trade Regulation 297/2000:

www.gp.alberta.ca/1266.cfm?page=2000_297.cfm&leg_type=Regs&isbncln=9780779775507

**For more information, or to report non-compliance, contact the
AIT Information Line at 1-800-248-4823.**