

Photovoltaic Systems



Photovoltaic systems convert solar energy into direct current electricity. These systems can use solar modules, charge controllers, inverters, and storage (i.e., batteries) to create useable electricity for grid-connected and grid-isolated solar systems. 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, interconnection, and termination of any conductors (including bonding/grounding), conduits, and solar-specific equipment such as any inverters, solar modules, charge controllers, combiners, and storage systems. Some of this work may also be done by power system electricians or powerline technicians or their apprentices.

Other related work, such as installation of mounting systems or any roof membrane penetration, or material handling (but not final installation) of solar modules, 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 codes, electrical permitting procedures and Occupational Health and Safety standards, professional 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.qp.alberta.ca/1266.cfm?page=A42.cfm&leg_type=Acts&isbncln=9780779752232

Electrician Trade Regulation 274/2000:
www.qp.alberta.ca/1266.cfm?page=2000_274.cfm&leg_type=Regs&isbncln=9780779755899

Powerline Technician Trade Regulation 296/2000:
www.qp.alberta.ca/1266.cfm?page=2000_296.cfm&leg_type=Regs&isbncln=9780779771530

Power System Electrician Trade Regulation 297/2000:
www.qp.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.**

2016-May-11