



## Solar Panels and Firefighting Concerns

**Do you own or lease solar (photovoltaic) generation facilities on your buildings, commercial structures or on municipal facilities in your area?** As solar generation continues to proliferate across Ontario there is a rising concern among first responders as to the safety of the systems. Solar generation systems present unique situations of which firefighters need to be aware. According to the Ministry of Labour, an array of multiple panels can produce DC current and voltages above 600 volts, representing a hazard for firefighters should they come into contact with damaged panels or energized, exposed wiring during firefighting or ventilation activities. The panels remain a hazard even after the utility disconnects the switch and the inverter is shut off, because as long as there is light there is generation; and thus current and exposure from the system.

The MEARIE Liability policy includes solar generation activities as part of your Operations Covered, provided MEARIE has been notified of the activity. **If you are in the process of installing solar generation facilities or looking to purchase/lease existing facilities it is important to consider the following:**

- Local building code requirements – location and signage
- Roof load analysis – was one done and what were the results, will the roof support the additional weight of the panels and structure, what about additional weight of people under a firefighting scenario?
- Wind speed/shear study and analysis – system safety and stability
- ESA Guidelines – related to alternative energy generation

**Once you own or lease the solar generation facility it is important you contact, communicate and work with your local fire department to pre-plan response procedures.** Provide proper signage at the site indicating there is a solar (photovoltaic) system present and identifying where the main electrical switch and system utility disconnect switches are located; as well, signage should provide emergency contact information.

For your customers who are connected to your Distribution System, the same recommendations related to communication with the local fire department and signage, particularly the location of the system utility disconnect switch, should be encouraged.

### For Your Reference:

The Ontario Ministry of Labour has produced a [Firefighters Guidance Note #6-3](#) related to Solar Photovoltaic (PV) Systems. Work with your local fire department to develop Standard Operating procedures on fighting fires involving solar systems.

The ESA has published a guide entitled [Renewable Generation Safety](#) which can be shared with first responders.