

FLASH

May 2026

Flash 26-01-FL

Plug-In Photovoltaic (PIPV) Equipment and Systems

The Electrical Safety Authority (ESA) is aware of the introduction of Plug-In Photovoltaic (PIPV) equipment and systems intended to connect to existing branch circuits through a cord-and-plug connection. These systems are marketed as simple, consumer-installable generation equipment that connects directly to a general-purpose receptacle. However, these products are not approved, and ESA has identified the following electrical hazards associated with this product:

- May cause overheating and fire from overloaded receptacles or branch circuits that were not designed or installed for the purpose,
- Potential issues with high-resistance heating at loose plug connections, back feed and islanding hazards where the equipment may continue to feed electrical energy into a localized grid section after the main utility power has failed during outages.
- Risk of shock or electrocution from accessible live parts from male-end cords, significantly increases the likelihood of serious injury or fatality.

Applicable Standard

To mitigate the risks and hazards outlined above, UL Solutions has published an Outline of Investigation (OOI) “UL 3700 for Interactive PIPV equipment”. Additionally, there is a bi-national UL standard under development, ANSI/CAN/ UL 3700 related to Plug-In Solar products. ESA will permit approval to the UL 3700 OOI until the new Canadian Standard is published. As of the date of this Flash Notice, ESA is not aware of any approved products.

Direction

Once products are available that are tested and approved to the above applicable standards, ESA will consider reviewing and accepting the installations. All electrical equipment must be approved and installed in accordance with the Ontario Electrical Safety Code (OESC). Furthermore, before such plug-in photovoltaic equipment can be accepted, the following conditions must be met:

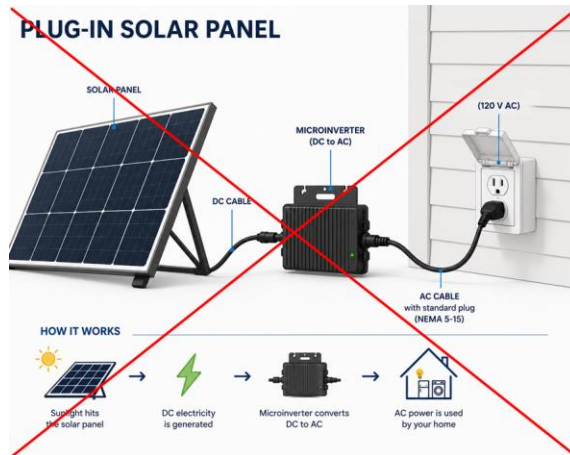
1. The equipment must bear a Recognized Canadian certification/approval marking,
2. A specialty (unique nonstandard configuration) PIPV outlet is provided
3. PIPV outlet is fed by suitable branch circuit

Plug-In Photovoltaic (PIPV) equipment connected to an existing general-use receptacle is not accepted in Ontario.

To ensure compliance, all of the above conditions shall be met, and a Notification of Work shall be filed with Electrical Safety Authority for the installation.

The product shown in the picture below is an example of PIPV equipment. This is not an approved product or installed in a Code compliant method.

Picture 1 – Example of un-approved interconnection method



Picture 2 – Examples of unapproved products and installations



Requirements of the OESC and Ontario Regulation 438/07 Product Safety

The Ontario Electrical Safety Code and Ontario Regulation 438/07 Product Safety require that all electrical products which are used, advertised, displayed or offered for sale or other disposal, are approved. **Approved electrical equipment is labelled with one of the recognized certification or field evaluation marks shown in the link below:**

<https://esasafe.com/electrical-products/recognized-certification-marks/>

How to Report Unsafe Electrical Products

If PIPV equipment and/or systems are offered for sale, unless certified, they should be considered unsafe and reported to ESA immediately. Consumers are encouraged to contact ESA at 1-877-ESA-SAFE or complete the online Product Safety Reporting Form.

<https://esaproductsafety.com/>