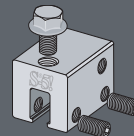
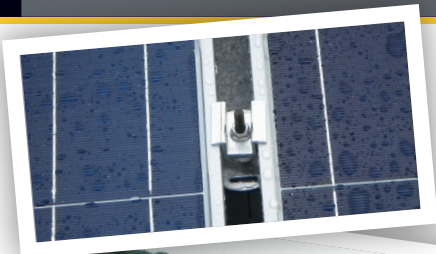


## Solar Array Installation Tecumseh, Ontario



“ The S-5! clamps and PV Kits were a key component in the success of getting the Tecumseh Arena PV project off of paper and onto the roof of the facility. ”

Marco Calibani  
Essex Energy



The S-5-PV Kit provides a strong attachment solution without piercing the roof panel!

### ■ A Forward Thinking Municipality

The Town of Tecumseh, a forward thinking municipality, was seeking to establish itself as an early adopter of the green power generation under the Ontario Feed-In Tariff Program. The Town of Tecumseh is one of the four municipal shareholders of Essex Energy's parent company, Essex Power Corporation. It is also very active in various power conservation efforts, as evidenced by its recent award as winner in its category of the Ontario Power Authority's "Power Pledge" initiative. With these efforts in mind, the municipality determined that a PV array should be installed. It became obvious that the Tecumseh Arena was the logical choice to play host to the PV system as it is the largest municipal rooftop area available in the town, and is also the town's single largest user of electricity. The arena operates two ice surfaces for hockey, figure skating, public skating, etc. on a year-round basis, requiring a massive amount of power to maintain the ice, HVAC equipment, lighting, etc.

panels, while still maximizing the number of panels installed. The walkways allow for easy navigation without having to walk across panels, facilitates easy roof inspection and maintenance, and essentially makes every panel easily accessible. The flexibility in the application of the S-5! products was key in allowing this design consideration. Their light weight, low cost, and ease of installation afforded the project tremendous savings and improved economic and financial performances across the board.

David Cozens of Ball Construction testifies, "Our installation crew was very pleased with their performance, quality, versatility, and ease of installation. The S-5! clamps and PV Kits exceeded our expectations!"

### ■ Long Term Outlook

In terms of power savings, the array will offset roughly 35% of the power consumed by the facility. This does not take into consideration any of the expected thermal efficiencies gained as a result of the sun hitting the panels, as opposed to the exposed roof. This could be substantial, particularly in the warmer months because the panels will provide shade to the arena, lowering the amount of power needed to keep the facility cooled. According to Calibani, "Rob and the rest of the S-5! team are tremendously knowledgeable and very helpful; we look forward to using their products in future installations. The S-5! products are hands down the best option for metal roof installations." His team plans to use the same products for two other similar municipal rooftop projects in LaSalle, Ontario and Amherstburg, Ontario.

### ■ A Progressive Solution

The array was commissioned on October 21, 2010, and is currently the largest operational rooftop array in Canada. Over 6,000 of the S-5-U Mini clamps and S-5-PV Kits were utilized to complete the installation, all without a single roof penetration and without voiding the roof manufacturer's warranty (which was an important concern for the town). The S-5! products provided the town with a very cost effective system, which is of primary importance when developing public projects.

Between S-5!, the panel manufacturer, and Essex Energy's engineers, a unique design was implemented. A 14" walkway was incorporated between every second row of

### At A Glance:

**Customer:** Essex Energy  
LaSalle, Ontario, Canada



**Location:** Tecumseh, Ontario, Canada

**Industry:** Recreational Venue

**Situation:** The Town of Tecumseh is a very progressive municipality. The Tecumseh Arena was a logical choice for a PV installation, as this twin-pad arena is the largest municipal rooftop area available in the town, and is also the town's single largest user of electricity.

**Results:** The S-5!® products provided the town with a very cost effective system. Over 6,000 clamps and PV Kits were used without a single penetration of the roof or any risk of voiding their roof manufacturer's warranty. The installers had not previously used the clamps and PV Kits and were very impressed with their ease of use and quick installation.

#### Stats:

- Total size of the system is 508.76 kW (DC)
- The array consists of 2,212 Canadian Solar Inc. CS6P-230P panels at 230 watts per panel
- The system uses two 250 kW Satcon Powergate Plus inverters
- The array utilized over 6,000 S-5-PV Kits and S-5-U Mini clamps
- The massive PV system was attached without penetrating the roof a single time
- The panels will offset roughly 35% of the power consumed by the facility
- In total, roughly \$150,000 in product and installation costs were saved by using S-5! products