

structurally
sound

SUNNY SIDE UP



WHAT'S THE SIZE of seven hockey rinks and has an annual power output of nearly 900,000 kilowatt hours?

Canada's largest rooftop solar photovoltaic plant.

The 120,000-sq.-ft array sits atop hollow structural section (HSS) producer Atlas Tube's (an AISC member) facility in Essex, Ontario. Designed by OYA Solar, Inc., the 718-kilowatt plant is the first phase—now connected to the grid and producing electricity—of a planned 3.5-megawatt rooftop project.

This portion of the project features 2,244 solar modules supported by more than 30 tons of HSS, supplied by Atlas Tube, as well as Polar Racking's (one of OYA's sister companies) rooftop ballasted mounting system.

Polar, which also designs, manufactures and assembles racking in nearby Windsor, has also incorporated Atlas' HSS

to manufacture its second generation of ground-mounted solar racking systems, citing HSS' competitive cost, greater strength and structural rigidity over the use of aluminum, which is typically used in solar applications of this type.

The steel mounting structure, which uses 2-in. by 3-in. HSS, is comprised of a lattice of thin-walled HSS on top of the roof. The front edges of the solar panels are mounted to this lattice using a proprietary clamping system. The rear edges are propped up using a steel wind deflector, which is integral to the structural strength of the rack.

The current installation (roughly one-fifth of the total project) can supply enough electricity to power 60 homes for a whole year. It will offset more than 420 tons of greenhouse gas emissions, the equivalent of planting more than 25,000 trees. ■