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Rooftop solar panel installation in Orillia one of largest in province

Trio behind project atop former Royce Industries building in Progress Park

By Submitted

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Orillia is home to one of the largest rooftop solar-panel installations in the province.

Perched atop an industrial building on Progress Drive, the 250 kilowatt, 1,200 solar panel system generates electricity for Ontario's power grid — and is a key part of a unique business plan for a trio of local entrepreneurs.

When Dan MacNaughton, Ron Elliott and Brian Abbott purchased the former Royce Industries building — a mammoth 50,000-square-foot structure and an adjacent, vacant 2.5- acre plot of land — in March of 2007, they felt the long-dormant property was full of potential. The group purchased the building under a new name, Heated Self Storage Inc., with the vision of having one aspect of the partners' business portfolio to include heated interior storage units.

But first, the building, originally constructed in 1988, needed work. Of paramount importance was a new roof, so the trio decided to invest in removing the old-fashioned tar and gravel roof. The cost of replacing the massive roof system was 25% of the purchase price of the building a year earlier.

"When we bought the building, the roof was in disrepair and needed immediate attention," MacNaughton said. "A thermoplastic polyolefin (TPO) roof system was chosen."

A TPO roof is a heat-reflective and energy-efficient lightweight roofing system, weighing approximately one-third of the traditional tar and gravel roof system. The weight reduction on the acre-plus of roof proved to be a valuable attribute during the design two years later of the solar panel system.

"I had a number of people walk in here wanting to lease the roof for solar panels," MacNaughton said. "I knew we had something really valuable." That's why when the provincial government announced its new feed-in tariff (FIT) program, MacNaughton was among the first to sign up to express interest in the innovative green energy plan.

And while it was a long, complicated and, at times, frustrating process, the Orillia entrepreneurs persevered.

"Between myself and our head accountant, we probably collectively spent about eight hours a week working on this over a 13-month period to get in place all the designs, regulatory agreements and financing requirements," MacNaughton said, adding the actual construction and commissioning took a further four months, making this almost an 18-month venture from start to finish.

While much of that involved working with the Ontario Power Authority, which is tasked with overseeing the green energy program for the province, there was much more to do. After doggedly researching solar panels, MacNaughton and Abbott travelled to a manufacturing plant in Tucson, Ariz., before deciding to purchase the panels from Solon, the German pioneer who had recently set up the plant in Arizona.

"They sell a lot in the southern United States to the utility companies and produce a high quality, industrial-calibre solar panel," MacNaughton explained. He added they produce larger-sized panels than others, which allowed the Orillia group to purchase 1,200 panels instead of the more than 1,400 that the original solar plan design entailed. "That meant less racking, less wiring and, in the end, a far superior product. As such, we had Steenhof Building Services of Orillia redesign the system for a second time. "

Though the panels came from the United States, this venture is uniquely Orillia-based. Steenhof managed all the engineering work, Orser Technical Services handled the electrical work and Steel Tree Structures created the custom racking for the rooftop installation.

"That was a huge advantage to be able to use all Orillia services to complete this project," MacNaughton said. "These local companies were really up to the challenge and proved themselves on what is one of the bigger rooftop installations in the province."

MacNaughton also recognized the efforts of the City of Orillia's economic development office for keeping the project moving along.

"The EDC and other city staff were very helpful when we came up against a couple of obstacles in this project," he said. "It was refreshing to have them working with us along the way."

However, the project did not come cheap. The price of the 1,200 panels, a critical inverter (that converts the energy from DC to AC) and all the associated costs of the project add up to about $1.5 million. The trio behind the project look at it as an investment.

"So far, it's worked really well and we expect to be able to recoup our investment within six years," MacNaughton said.

That, he said, represents a great return on investment. Perhaps more importantly, it feels good, he said, to be at the forefront of the green energy movement and to repurpose what was a long-dormant building.

Today, the building is alive and well. While the roof is the focal point of the group's efforts, it is just one part of their three-pronged, diversified business plan. In addition to operating Quinan Construction Ltd. out of the building, they have created indoor storage units. The storage unit business operates under the name Heated Self Storage Inc.

"We built storage units in the first half of the building in 2009," MacNaughton said. The second half of the project was completed recently. Today, there are more than 300 storage units inside the cavernous facility. They are heated, have 24-hour access thanks to a security card system and there is around-the-clock video surveillance of the space to ensure safety.

"The first phase went well and now we're looking to rent out the units in the second phase of the project," MacNaughton said.

Now that the solar panels are soaking in the rays — they went online in July and are now just subject to periodic, minor tweaking — attention has turned to marketing the storage units. All the while, the trio keeps their eyes on Quinan Construction Ltd., which was started in 2003 and focuses on additions and renovations in institutional settings across the province.

"For example, we do a lot of work in correctional facilities, in hospitals and municipal buildings across the province," said MacNaughton — a Maritimer who came to Orillia in 1988 — who named Quinan after a small hamlet in Nova Scotia.

He said the construction firm continues to do well. "As we all know, now that the infrastructure spending from the government has dried up, the construction sector is slow, but we are continuing to get our share of work," he said. "We don't have big dreams of growing the construction side of things right now; it's more about staying the course and focusing on what we do well."

And that means staying in Orillia.

"Once you've been in a place for 10 years, you become part of the community and put down roots," MacNaughton said. "I don't see myself leaving here. We like it here. It's been very good to us."

Ontario's feed-in tariff (FIT) program is North America's first comprehensive guaranteed pricing structure for renewable electricity production. It offers stable prices under long-term contracts for energy generated from renewable sources, including onshore wind, biomass, solar and water power. The FIT program was enabled by the Green Energy and Green Economy Act, 2009, which was passed into law on May 14, 2009. The Ontario Power Authority is responsible for implementing the program. By encouraging the development of renewable energy in Ontario, the FIT program will help Ontario phase out coal-fired electricity generation by 2014, boost economic activity and the development of renewable energy technologies and create new green industries and jobs. The project on the rooftop of the former Royce Industries on Progress Drive was the sixth Ontario Power Authority rooftop-commissioned project completed in Ontario and is one of the largest of its kind

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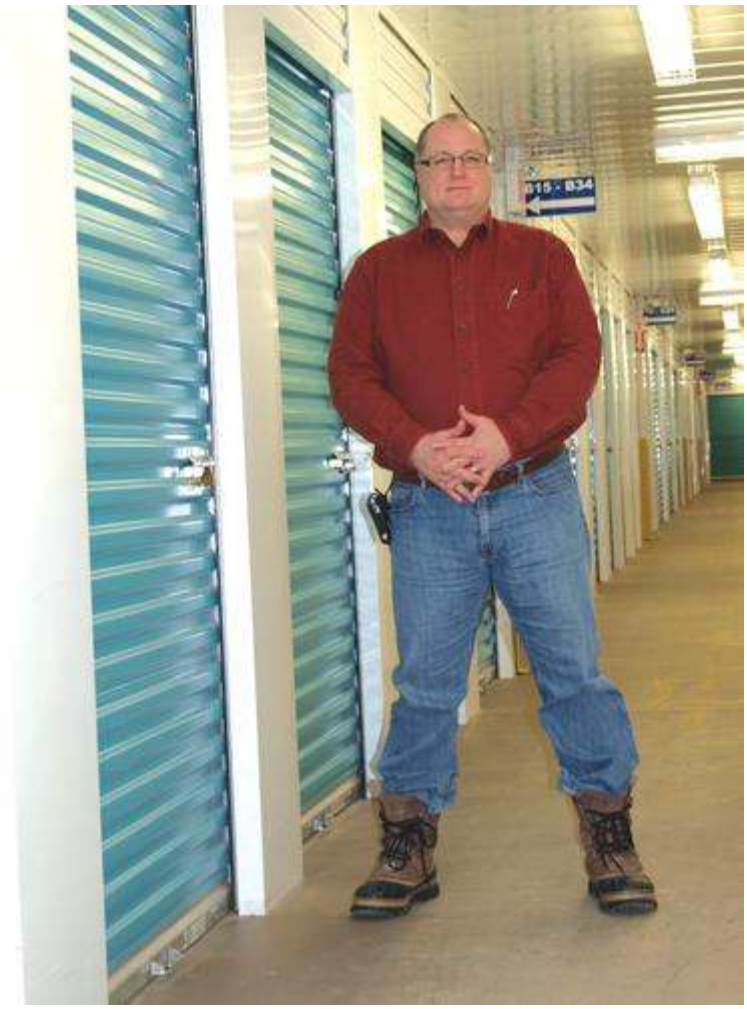

Dan MacNaughton stands among the more than 300 heated storage units that are now inside the former Royce Industries building in Progress Park.