



Owner:
Niigon Technologies

Architect:
Akitt, Swanson/
Pearce Architects Inc.

Our Services:

- Sustainable Design Facilitation
- Energy Efficiency Consulting
- Construction Supervision
- Building Commissioning

Niigon Technology Centre

A sustainable First Nations community
MacTier, Ontario



The Moose Deer Point First Nation near Mactier, Ontario, is being re-developed as a sustainable community in terms of ecology, energy, water resources, and employment. The cornerstone of the re-development is the community owned and operated Niigon injection molding facility, which brings economic stability to the community. The first phase is a 2,400 m² facility housing up

to 10 injection-molding machines. At the heart of project design is a goal of providing site services (water, sewer, electricity, and heat) in an environmentally-appropriate manner. The energy efficient industrial plant is 62% more efficient (non-process energy use) than a conventional building. The cost premium over a conventional facility design is estimated to be 7%.

Notable Features

- Natural landscaping using native species
- Constructed wetland to absorb water run-off
- Wastewater treatment using biofiltration
- Well-insulated building envelope
- Triple-glazed windows with insulating frames
- Façade panels of local aggregate
- Saw-tooth roof profile to accommodate skylights on the north side and PV panels on the south side
- Louvered overhangs on south-facing building facade
- Space heating and cooling from waste heat
- Radiant heating and cooling in office and plant
- Desiccant dehumidification of ventilation air
- 40kW PV system
- Daylighting in production area