



SIFTON CENTRE

CREATING SUSTAINABLE COMMUNITIES WITH NET-ZERO DESIGN

Case Study CITY MULTI®



Case Study: Sifton Centre


The Challenge

Sifton Properties, a land developer operating in office, retail, industrial and residential construction and leasing, is embarking on its most ambitious project this year – creating the most sustainable, energy-efficient community in Ontario.

Located in London and named West 5, the project will include residential apartment buildings, townhomes, a retirement home, grocery store and medical offices. In total, there will be approximately 2000 residential units and 250,000 to 300,000 square feet of commercial construction. The entire master-planned community will take about 10 years to complete.

The cornerstone of this project is Sifton Centre, which was completed in 2016. As the first building in the community and the developer's main space, the Sifton Centre needed to model everything the community was going to be – innovative, technologically advanced and energy efficient.

With net-zero energy consumption as the goal, every aspect of the design was carefully considered, from solar panels to LED lighting to ultra-tight insulation. For the heating and cooling system, Neil Carter, Director of Commercial Construction at Sifton, explains that energy efficiency, cost effectiveness and the best payback period were the key considerations.



“Looking at our energy modelling and some of the invoices that we get from our local utility, I think the Mitsubishi Electric system is the most cost-effective and energy-efficient solution you could put into a building of this size.”

Neil Carter, Director of Commercial Construction, Sifton Properties

The Solution

Because net-zero construction was such an important feature for this project, Sifton worked with Smith and Andersen Ltd., an engineering consulting firm, to conduct energy modelling to determine the most efficient HVAC system that would also be the most cost effective. The results of the energy modelling revealed that an electric air source variable refrigerant flow (VRF) system was the best option.

Sifton decided to set up an open bid for HVAC companies to compete to win the business. After accepting three bids, Sifton selected Mitsubishi Electric's City Multi Air Source system, as it met all their criteria the best. Smith and Andersen then proceeded to design the building around Mitsubishi Electric's Heating and Cooling systems.

The Results

After using their new office space for three years, Sifton is very pleased with their HVAC system. Carter reports that year-round, including throughout winter's below-freezing temperatures and summer's heat waves, everyone is quite comfortable in the building.

Even -20°C temperatures are no match for the fan coil and condensing units, which are able to completely provide all the heat required throughout the building. In terms of energy efficiency, Carter confirms the system is extremely efficient, "exactly as we modelled it."

In fact, the system works so well with the building's other net-zero construction features that the building actually produces more energy than it consumes (is net positive) and Sifton receives a credit on their monthly utility bills.

Eric Shaw, Regional Sales Manager at Baymar Supply Ltd., Mitsubishi Electric's distributor for the region, says Sifton is so pleased with the results that they have already signed on to use Mitsubishi Electric Heating and Cooling in three more buildings, plus their residential projects.

"A net-zero home gets you to the next level, not just in building code. It also allows you to virtually come off the grid. On an annual basis, it would produce as much energy as it uses, including space heating, cooling, ventilation, hot water heat and all household electrical consumption."

***– Richard Sifton, President,
Sifton Properties***

Summary

Owner/Developer:
Sifton Properties

Distributor:
Baymar Supply Ltd.

HVAC Contractor:
JMR Electric + Mechanical

Engineering Consulting Firm:
Smith and Anderson Ltd.

Architectural Firm:
Diamond Schmitt Architects

Challenges:
Create a net-zero energy building cost effectively, where the energy being consumed is also being produced by the building.

Selection Criteria:

- Energy efficiency
- Cost effectiveness
- Payback period
- Low maintenance

Location:
London, Ontario

Industry:
Office

Size:
60,000 square feet

Solution:
Mitsubishi Electric Indoor Unit Models:

- 17 X PEFY-P08NMAU-E3
- 17 X PEFY-P12NMAU-E3
- 17 X PEFY-P18NMAU-E3
- 17 X PEFY-P24NMAU-E3
- 6 X PEFY-P30NMAU-E3
- 2 X PWFY-P36NMU-BU
hot water booster units

Mitsubishi Electric Outdoor Units Models:

- 8 X PURY-HP72TKMU-A
- 10 X PURY-HP96TKMU-A
- 4 X PUHY-HP96TKMU-A (DOAS)

Results:

- Net-positive energy usage
- Very low maintenance
- Comfortable indoor temperatures

Mitsubishi Electric Canada

Mitsubishi Electric Sales Canada Inc. was established in 1979 as a subsidiary of the Mitsubishi Electric Corporation of Japan. Since then Mitsubishi Electric Sales Canada Inc. has been at the forefront of heating and air conditioning technology, sales, installation and service.

With over 90 years of experience in providing reliable, high-quality products to both corporate clients and general consumers

all over the world, Mitsubishi Electric Corporation is a recognized world leader in the manufacturing, marketing and sales of electrical and electronic equipment used in information processing and communications, consumer electronics, industrial technology, energy, transportation and construction. No matter what you do, or where you live, work or play, chances are a Mitsubishi Electric product touches your life.

Vision:

To be the most trusted industry leader in providing innovative heating, cooling and ventilation technology, engineered specifically for Canadian climates.

Mission:

To deliver quality, comfort and value to all Canadians through leading-edge engineering, locally inspired design and a dedication to superior service.



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