



BRUCE COUNTY

SOCIAL HOUSING TENANTS SAVE 50% ON ENERGY CONSUMPTION

Case Study 

Case Study: Bruce County

The Challenge

Located in Kincardine, Ontario, the Bruce County Housing Co-op is a government-owned social housing complex. It's made up of sixteen similar townhouses each with two storeys plus a basement, most of which were still using the original, inefficient electric furnaces that were installed when the complex was built in the 1980s.

When the complex received a government grant to improve their infrastructure, they knew upgrading their heating would be a smart investment. Since the tenants pay their own hydro, an energy-efficient system was a must. As most of the units did not have air conditioning, it would be a bonus to have a system with cooling capabilities.

However, because AC would be an additional expense to the tenant, it was essential that the system be efficient in both heating and cooling. Other key factors to consider were a low initial capital cost, operating system cost, as well as a quick and simple retrofit.

"Reliable product that provides efficient performance in both cooling and heating."

***— Dave Montgomery, VP, Sales,
Montgomery's Comfort Centre***



"If you encounter existing electric heat, think Mitsubishi Electric heat pumps for maximum operating savings."

***— Tom Melanson, Territory Manager,
Mits Airconditioning Inc.***

The Solution

DEI & Associates Inc. specified Mitsubishi Electric's Zuba Central heat pumps because the equipment met the job specification as per the client's requirement. Tony Ban, the Housing Facilities Manager for the Corporation of the County of Bruce, also confirmed that the two mechanical consultants said no HVAC system compares to Mitsubishi Electric.

"The existence of ductwork, combined with the costly electric furnace systems, made the Mitsubishi Electric Zuba Central Heat Pumps an attractive option" explains Tom Melanson, Territory Manager, Mits AirConditioning Inc. who worked on the successful bid for the project.



The Zuba Central system is the perfect solution for our cold Canadian climate. Performing best at low temperatures, it provides 80% of its rated heat at -25°C, meaning it operates superior to other central heat pumps. Thanks to this much heat being generated efficiently at low temperatures, the inefficient backup electric heaters will rarely be used, if at all. The Zuba Central also provides efficient cooling.

The Results

Retrofit times were very quick, with each heat pump taking only one day to install. This helped keep initial capital costs in check and minimized disruption and inconvenience for the tenants. Since the installation was approximately 18 months ago and a larger time period is needed to gauge the long-term results, limited data is available.

However, since units are individually metered it is possible to get an indication. Initial readings indicate a total energy consumption savings of about 50%. Ban confirms this, saying: "Tenants love it — their hydro bills were decreased by more than 50%."

Summary

Distributor:

Mits Airconditioning Inc.
Mississauga, Ontario

HVAC Contractor:

Montgomery Industrial Services
London, Ontario

Property Management:

Bruce County Housing Corp.

Location:

Kincardine, Ontario

Industry:

Residential

Size:

Approx. 1200 square feet/unit

Challenges:

The government-owned social housing complex needed an energy-efficient, modern upgrade to their existing heating solution — electric furnaces.

Selection Criteria:

- Energy efficiency
- Cost-effective up-front and in the long run
- Quick and simple retrofit
- Could fit into existing ductwork
- Air conditioning included

Design/Engineering Solution:

Mitsubishi Electric Outdoor unit models:

- 16 x PUZ-HA36NHA
(Zuba Central)

Mitsubishi Electric Indoor unit models:

- 16 x PVA-A36AA
- 16 x EH10-MPA-L 10kW
(Electric Heater)
- All Touchscreen Wi-Fi Thermostats

Results:

- 50% reduction on heating bills, on average
- Energy-efficient models provided lower heating costs with a bonus of air conditioning
- Seamless integration of models into homes

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 manufacture, 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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