

# Adding VFDs to hydronic system saves condo \$15,104 a year

## CASE STUDY

### ✓ ICON Management

#### PROJECT STATISTICS

Built in 2007, 11 Brunel Court is a 49-storey condominium with 612 suites.

**Before:** 3-pump domestic water booster pump system with pressure reducing valves

**After:** Added variable frequency drives to control pump motors

**Total project cost:** \$38,000

**Demand savings:** 22 kW

**Energy savings:** 125,867 kWh

**Electricity savings:** \$15,104/yr.

**Incentive:** \$18,400

**Payback with incentive:** 1.3 years



Overlooking Lake Ontario, 11 Brunel Court is a luxury condominium, in the heart of everything that downtown Toronto offers.

While it's a relatively new building, completed in 2007, ICON Property Management found they could save owners money by upgrading the domestic water booster pump system with variable frequency drives (VFD).

Property Manager Alex Beach worked with Rikos who specialize in high-rise water systems. "In addition to the installation, they handled all of the paperwork and submitted the incentive application," said Beach.

The building has three booster pumps that serve over 600 suites. When they were initially installed, they were fitted with pressure reducing valves to control the flow. However, this meant that the motors in the pumps were running much harder than needed.



ABOVE: 11 Brunel Court

RIGHT: Alex Beach, Property Manager,  
ICON Property Management

# “This was an easy sell to the board given the incentive we received and the payback. We look at any paybacks of three years or under.”

Alex Beach, Property Manager, ICON Property Management

After retrofitting them with VFDs, the pumps only supply the pressure needed by varying motor speed. Not only does that save considerable energy, it also prolongs the life of the motors.

## A fast installation, with minimal disruption

Although it may seem like a big project to retrofit a building's domestic booster water pumps, this job was completed in just one day. According to Beach, “The VFDs have performed well. We've had no issues with them and no complaints about water pressure.”

## \$18,400 incentive cheque

“The incentive, paid through the **saveONenergy<sup>OM</sup> RETROFIT PROGRAM** matched what we expected. We met with Toronto Hydro when they delivered the incentive cheque, which was nice,” said Beach.

## Domestic booster water pumps are not obvious sources of savings

It's easy to overlook the potential in retrofitting booster pumps, especially in high-rise buildings and more so in buildings that are new.

Beach suggests that property managers check all systems for potential savings. “Many builders put up buildings as efficiently as they can and although variable frequency drives have been around for a while, they've only become more popular as people get educated about them.”

## Suggestions for property managers looking for savings

Beach recommends, “Work with an energy consultant to review the building's systems to find savings. Look to common area lighting since it's on all the time. Then look at your booster pump assembly. This has worked well for us.”

## Get help with your applications

Connect to our database to find experts who can complete your incentive application for you. Go to [torontohydroari.com](http://torontohydroari.com).

## Look to new technologies for greater savings

Energy-saving technologies have made great advances in the past few years. Only recently has there been a focus on motors and pumps, yet in many cases they run 24/7. Even systems in newer buildings should be reviewed.

Also take a close look at lighting and fans in your underground garages. Using occupancy controls for lighting and carbon monoxide sensors for exhaust fans can significantly cut down on electrical usage and deliver quick paybacks.

Start your savings at: [torontohydro.com/technology](http://torontohydro.com/technology)



LEFT: New variable frequency drives save money for the owners at 11 Brunel Court every day

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for more information or to apply online for incentive programs.

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