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# Energy Insider

Smart savings for business

## Optimizing building control strategies

The pandemic continues to impact commercial buildings' energy use in predictable and unpredictable ways. If we've learned anything, say Enbridge Gas' Paoyun Liu and George Hantzis, it's that increasing a building's flexibility to respond to a variety of operating conditions is key.



Here are some of the top building control strategies that add flexibility and help you save:

## 1. Outdoor temperature reset

Also referred to as 'weather-responsive' controls, these sensor systems provide two big benefits: significant energy savings and increased occupant comfort. This is primarily achieved through reducing dramatic temperature swings by continuously adjusting heating requirements, based on outdoor temperatures and indoor heating demand.

## 2. Demand control ventilation (DCV) with CO2 sensors

This control method for indoor air quality adjusts the ventilation rate, in contrast to just having a constant airflow. These devices can also detect carbon monoxide and carbon dioxide levels. DCV is essential for buildings with unpredictable occupancy, including theatres, gyms, auditoriums, retail stores and more.

## 3. HVAC scheduling

Many control systems use a standard setting to throttle down equipment during hours that are traditionally unoccupied: nights, weekends and holidays. Depending on foot traffic and occupancy, there may be a greater opportunity to adjust scheduling and save more.

Contact your Energy Solutions Advisor for consultation today. As lockdown restrictions are lifted, our Energy Solutions Advisors will get in touch to schedule a site assessment.

Connect with an Energy Solutions Advisor today

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## Expert help to move projects forward

Regardless of the size of your commercial business, our Energy Solutions Advisors are here to support you and your energy conservation goals. Here, **Bryana Smith** explains how she helps customers save money and energy.



What value does an Energy Solutions Advisor provide?

Enbridge Gas has an extensive suite of energy-efficiency programs so it's helpful to have an advisor guide you through the options and make sure you're taking advantage of all the incentives you're eligible for. We provide technical support and help projects move forward, all at no cost to you.

For us, it's not just "save you \$1,000 and see you later." It's about building a relationship. Whether you're focused on making your business more efficient or have a sustainability mandate, we're here to help you reach your goals.

What are the top energy-efficiency upgrades you see in your area?

In my area, the leading upgrade is the installation of retrofit condensing boilers, as generally this piece of equipment consumes the most natural gas. When working with customers and discussing boilers, it's important to get a full understanding of how it's being utilized. From there, we can work together to select the best retrofit option and determine which energy-efficiency program will work best for their needs.

Number two is Demand Control Ventilation (DCV) with CO2 sensors. Building ventilation systems often operate at constant ventilation rates, regardless of the occupancy level of the building. When installed, the sensors monitor the CO2 levels in the space and manage ventilation based on occupancy. The benefits of adding a CO2 sensor include better air quality, more comfortable spaces and reduced energy costs.

Number three is energy recovery and heat recovery ventilators. The savings and comfort from these small devices is amazing! And people don't realize how easy they are to install—they can often be retrofitted into your current system.

What's the most rewarding part of your job?

Building relationships and understanding our customers' needs are key to the success of our commercial energy conservation programs. While natural gas continues to be one of the most economical fuels, we also want to ensure that customers are being as efficient as possible with their usage. Working as an Energy Solutions Advisor gives me the unique opportunity to work with people to help them understand the value in saving energy, which in turn will help save them money.

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## Big space, big savings: how to cut costs in warehouses

With the rise in online shopping, warehouses are in demand. Seasonal heating accounts for the largest portion of energy costs—costs that can be reduced with the right approach to energy efficiency. From insulation to shipping doors, Enbridge Gas' Per Polderman highlights the top opportunities to save.



In his experience, warehouses can save as much as 50 percent of their annual energy costs through a combination of the following energy-efficient upgrades:

### 1. Shipping door equipment

With shipping and receiving doors opening and closing all day, hot or cool air can leak easily in and out; that's energy wasted, at a cost that adds up. Dock door seals and air curtains are simple energy efficiency solutions that can keep heat and cooled air indoors, while allowing vehicles and people to pass through.

More benefits:

- Reduce heat loss up to 90 percent.
- Keep out snow, dust, exhaust and insects.
- Maintain more comfortable indoor temperatures.

### 2. Destratification fans

As a result of warm air rising, there's often a difference in temperature between the floor and ceiling of a warehouse. This difference can be so significant that some temperature-sensitive products, such as medication or food, cannot be adequately stored on higher racks. Destratification fans push the hot air down to balance out the temperature difference.

Why they work:

- Less strain on heating and cooling systems.
- More comfortable, consistent temperatures.
- Improve heat distribution from floor to ceiling.

### 3. High-temperature, high-volume (HTHV) MUAs

Large warehouses have extremely high heat and air loads. Make-up air (MUA) units are designed to bring in fresh, outdoor air to replenish the air that's been pushed out through exhaust systems. HTHV systems flow fresh, warm air throughout the warehouse, eliminating any drafts and higher ceiling temperatures.

Added benefits:

- Minimal positive pressure prevents dust from coming in.
- Improves air quality for those indoors by reducing contaminants with 100 percent fresh air.
- Creates a less drafty, more comfortable environment.

#### 4. Building Automation System (BAS) for HVAC

Connecting your HVAC system to your wider BAS can give you more control over your heating costs. Unless your warehouse is a 24/7 operation, temperature setbacks reduce the heat by a few degrees when your warehouse is unoccupied, so you're not paying to heat an empty space.

Added benefits:

- Extend the life of HVAC equipment.
- Reduce energy and operating costs.
- Generate savings automatically.

#### 5. Roof insulation

Large warehouses can be cold or even damp. A properly-insulated roof can prevent heat from escaping in the winter and keep warm air out in the summer. By increasing the R-value of your roof, you'll help create a more comfortable indoor space year-round.

More reasons to insulate:

- Reduce external noise.
- Keep space warm in the winter, cool in the summer.
- Reduce heating costs.

### Get expert help and incentives

Take advantage of expertise to save energy, reduce energy costs and lower your carbon footprint. Many of the measures listed above are eligible for incentives and can help speed up payback on energy-efficiency projects.

Ready to get started?

Contact an [Energy Solutions Advisor](#) to see how we can help you reach your goals.