BC Hydro Demand Response Program

Reducing Demand for Municipalities

WHAT IS DEMAND RESPONSE?

Demand Response (DR) is a program that encourages electricity users to temporarily reduce or shift their energy use during BC Hydro peak demand periods. It helps balance the grid, improves system reliability, and can be carried out manually or through automated systems.

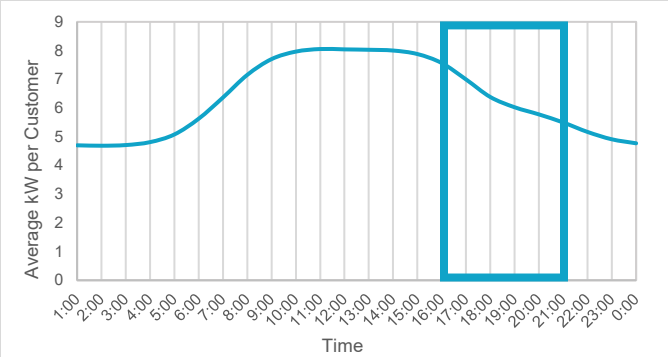
WHY DO DEMAND RESPONSE?

- To reduce energy costs without disrupting operations.
- To help BC Hydro maintain a more resilient, efficient power system.
- To accelerate the transition to a cleaner energy future.

DEMAND OPPORTUNITY

Municipal buildings offer strong demand response potential due to:

- Facilities such as city halls and recreation centres typically experience large demand peaks and have consistent, predictable energy usage patterns.
- DR events are typically scheduled near the end of the workday when it is often more feasible to adjust or shut off equipment in office-type buildings.
- Many municipal buildings are equipped with centralized systems that allow for heating load adjustments with minimal impact on operations or occupant comfort.



Typical Load Profile for Municipal Buildings

PROGRAM OVERVIEW

Program Incentive	$50 per average kilowatt (kW) of demand reduction per season
Event Duration	Up to 20 events per season, no more than four hours each
Event Season	November - March
Advanced Notification	One day notification prior to an event
Participation	Must participate in at least 50% of all events to be eligible for incentive

PARTICIPATION BENEFITS

FINANCIAL INCENTIVES

NO COST TO ENROLL

RISK-FREE

DEMAND RESPONSE OPPORTUNITIES FOR MUNICIPALITIES

Building System Adjustments

- Disable domestic hot water recirculation pump.
- Reduce HVAC use in low-occupancy or unused rooms like council chambers or community centres.
- Shift EV fleet charging to nighttime.
- Raise cooling setpoint temperature or lower heating setpoint temperature on electric HVAC equipment for occupied spaces.
- Disable non-essential water features in recreational areas (turn off pumps).
- Lockout back-up electric heating sources (e.g., baseboard heaters).
- Reduce variable frequency drive fan speeds.
- Limit or disable humidification in unoccupied meeting rooms.

Behavioural Changes

- Discourage staff from using space heaters in individual office areas.
- Turn off or dim non-essential lighting in offices, hallways, and parking lots.
- Reschedule energy-intensive activities such as floor cleaning, laundry and building maintenance.
- Turn off computers, laptops, printers, and copiers, etc.

BC Hydro Power smart

CASE STUDY: CITY OF VICTORIA

The City of Victoria joined BC Hydro's Demand Response (DR) program based primarily on their Energy Manager's (EM) encouragement. Their initial experience with a smooth and straightforward registration process made the decision to participate even easier.

Source: https://www.flickr.com/photos/bobkh/266598440

The City began with a pilot at three smaller facilities with electric heating systems to tryout proposed DR measures, monitor their effectiveness, and ensure they would not adversely impact occupant comfort. The EM chose these buildings because they had a high-level of familiarity with site operations and felt making changes to these sites was manageable. The demand response measures implemented at the buildings included the following:

- Building 1: Adjusted electric boiler temperatures.
- Building 2: Modified scheduling for their rooftop heat pumps.
- Building 3: Modified rooftop heat pump schedules.

The City found the demand response measures in Buildings 1 and 2 to be successful, largely due to their centralized heating systems, despite the absence of automated controls. Implementing measures in Building 3 proved more challenging due to the need for manual adjustments across multiple heating systems and concerns surrounding occupant comfort.

During the 2024/25 event season, the City of Victoria participated in approximately 65% of the DR events, most of which took place outside of occupied hours. The City succeeded in achieving demand savings during all events. Participating in BC Hydro's DR program delivered several benefits:

- Helped gain insight into the DR program and improvement areas.
- Identified scheduling inefficiencies (e.g. high setpoints, early activations).
- Shifted Energy Manager's focus toward operational optimization.

"Focus on buildings with good control systems."

"To know what is most effective, do some simulation tests the day before. Do some tests and isolate different equipment, just to see how much scheduling that matters."

- Charlie, City of Victoria

The City of Victoria will likely enroll larger buildings in the DR program, but only if there is sufficient building automation in place to facilitate the automation of most DR measures and support DR event participation.

FAQS

HOW DO I SIGN UP?

Enroll in the program by following the enrollment link on our webpage, **Demand Response for Business**, and logging into your MyHydro account. You'll need the following information:

- A list of the sites you want to enroll.
- The name and contact information for the person on site who will receive event notices.

HOW WILL I KNOW HOW IT WENT?

Within 48 hours after the event, we'll send you an email letting you know the results of the event.

HOW ARE MY INCENTIVES CALCULATED?

BC Hydro monitors your kW demand during each demand response event compared to the kW demand value from the five eligible days prior to the event. Your incentive is calculated based on your average kW demand reduction across all demand response events in a season and you receive $50/kW for all savings, with no penalty if there are none.

HOW DO I GET MY INCENTIVES?

At the end of each event season, you will receive a season ending email outlining your overall performance along with eligible incentives. Your total rewards earned during the season will be applied as a rebate on your subsequent BC Hydro bill.