BC Hydro Demand Response Program

Reducing Demand for Public Hospitals

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.

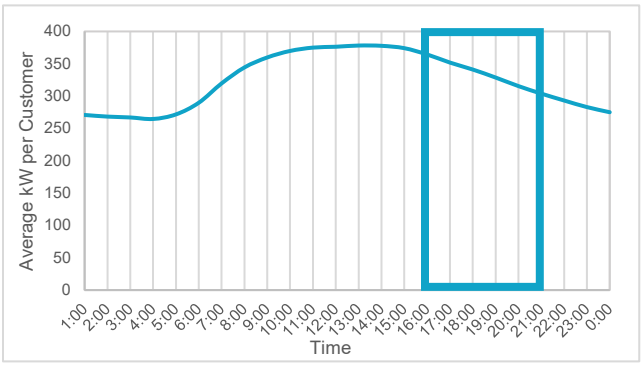
WHY DO DEMAND RESPONSE?

- 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

Public hospitals offer strong demand response potential because:

- Hospitals operate 24/7 and have consistent, high-energy consumption, making them ideal candidates for predictable load management.
- Most hospitals have non-critical systems that can be adjusted temporarily without impacting patient care.
- Many public hospitals utilize Battery Energy Storage Systems (BESS) and building automation systems which can help facilitate load adjustments and grid response.



Typical Load Profile for Public Hospitals

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 PUBLIC HOSPITALS

Building System Adjustments

- Disable non-critical exhaust fans in unoccupied patient rooms and washrooms.
- Reduce static pressure setpoint in air handling units, resulting in a reduction of fan speeds.
- Raise cooling setpoint temperature or lower heating setpoint temperature on electric HVAC equipment and refrigeration equipment for patient rooms and staff offices before the event.
- Limit humidification by adjusting HVAC system controls in non-critical areas.
- Lockout back-up electric heating sources (e.g., baseboard heaters).
- Temporarily modify HVAC scheduling, focusing on unoccupied patient and staff rooms.

Behavioural Changes

- Turn off laptops, computers and chargers, printers, copiers, etc. that are not in active use.
- Reschedule energy-intensive activities such as sanitization, cooking, laundry, and BESS charging.
- Turn off or dim lighting in unoccupied patient and staff rooms.
- Discourage staff from operating kitchen equipment in cafeterias and staff rooms.

BC Hydro Power smart

CASE STUDY: PROVIDENCE HEALTH CARE

Source: https://endocrinology.medicine.ubc.ca/about-ubc/about/location/st-pauls-hospital/

Providence Health Care was referred to BC Hydro's DR program while exploring energy storage options for off-peak charging as part of a Battery Energy Storage Systems pilot project. They immediately signed up as they saw the DR program as a chance to gain better control of energy loads across facilities, improve operational efficiency, and build on existing DR related energy conservation measures.

Providence Health Care has multiple daily energy efficiency measures in place, as well as additional initiatives that happen throughout the year. Five major sites were enrolled in the DR program, while smaller sites were excluded due to limited staff capacity. The facility managers were notified before each event to ensure that everything was in place prior to the event beginning. During the DR events, they altered their kitchen schedules to operate outside peak windows. The kitchens were typically shut down by about 3pm. The facility managers also ensured that all unnecessary lights were turned off and used their building automation controls to adjust VFD fan speeds of the exhaust and supply fans, where applicable.

During the 2024/25 season, Providence took part in all seven DR events. Each ran smoothly, with no notable operational issues or staff complaints.
Participation in the program delivered several benefits including:

- Creating a culture of ongoing energy awareness.
- Gaining a better understanding of measure impacts through the quick receipt of event results from BC Hydro.
- Reinforcing the need for automation in upcoming system enhancements.
- Generating a bill credit of approximately $12,000.

Providence is upgrading their building automation with the aim of improving response times which can contribute to quicker and more efficient load adjustments during DR events. They plan to continue participating in the DR program for the upcoming event season.

"I recommend participating in this program, as it gives you better direction for saving energy"

- Mehrdad, Providence Health Care

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 business' BC Hydro bill.