Heavy Manufacturing Industry

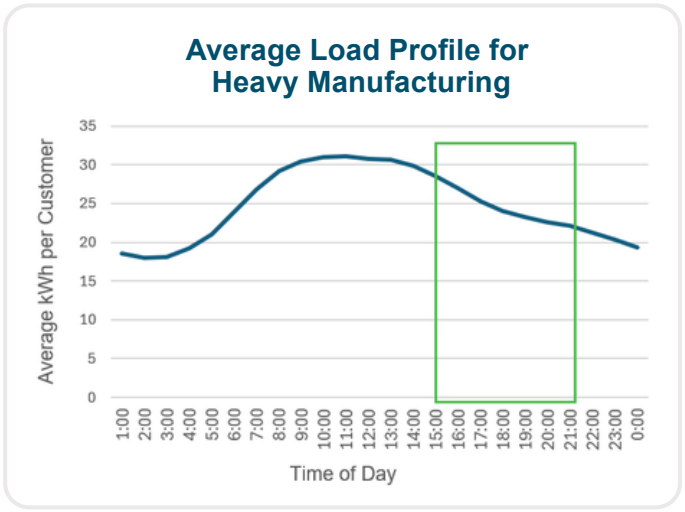


BC Hydro Demand Response Program

DEMAND OPPORTUNITY

Heavy Manufacturing offers strong demand potential as:

- They have large electrical loads such as crushers, conveyors, processing equipment, motors, and material handling systems.
- Many facilities can build inventory ahead of demand response events, providing flexibility to temporarily reduce production.
- Production schedules, maintenance activities, and certain processing operations can often be adjusted without affecting customer deliveries.



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 1 – March 31
Advanced Notification	One business day
Participation	Must have successfully performed in at least 50% of all events

PARTICIPATION BENEFITS

FINANCIAL INCENTIVES

NO COST TO ENROLL

RISK-FREE

INDUSTRIAL DR BEST PRACTICES

- Develop a DR event plan that identifies specific systems or equipment, control actions, monitoring requirements, and procedures for actions before, during, and after the event, including returning systems to normal operation.
- Assign clear roles and responsibilities so staff understand required actions, and ensure adequate staffing, particularly if the event occurs outside normal operating hours.
- Focus on controllable loads that operations staff can adjust through centralized plant SCADA/DCS or local controls.
- Monitor potential adverse impacts (including building conditions, inventory levels, product quality, safety) and determine any critical levels which will require return of systems or equipment to normal operation.
- Use automated control systems where possible to implement DR actions quickly and consistently. This could include pre-programmed shutdown sequencing.
- Perform a mock DR event when conditions are suitable. Use lessons learned from the test event to identify flaws and correct or adjust where possible.
- Following DR events, review performance and document lessons learned to improve future event execution.



“Talk to the site managers. Find out how they operate, where they have flexibility, and how they can improve it. They're focused on selling product and saving money. If demand response can help them do both, they'll participate.”

- CLAUDE, ENERGY CONSULTANT, AMRIZE

CASE STUDY: AMRIZE

Amrize operates a network of aggregate, asphalt, ready-mix concrete, and construction materials facilities across BC. Because sites serve different markets and operate under varying production schedules, Demand Response (DR) opportunities differ significantly across the organization. Amrize enrolled in BC Hydro's DR behavioural program last year, but opportunities to engage site staff and identify potential DR actions were limited during the company's transition from Lafarge to Amrize. This year, the company plans to take a more proactive approach to identifying and leveraging DR opportunities.

Successful participation will require collaboration between energy management and site managers to understand operational constraints, identify controllable electrical loads, and determine where production schedules can be adjusted without affecting customer deliveries.

For large organizations with multiple facilities, Claude, the Energy Consultant supporting Amrize, believes the first step is understanding where operational flexibility already exists.

To support this effort, Claude plans to work directly with site managers to identify demand response actions and opportunities at individual facilities. Potential opportunities vary by operation but may include:

- Shifting crushing and aggregate processing earlier in the day
- Building aggregate inventory ahead of a DR event and temporarily reducing production during the event window
- Scheduling non-essential maintenance and equipment downtime during DR events
- Adjusting production activities around shift changes
- Rescheduling truck loading and dispatch activities where operationally feasible
- Using on-site storage capacity to maintain customer service while reducing demand during event periods
- Leveraging battery energy storage systems where available

Aggregate and quarry operations are expected to offer greater flexibility than ready-mix concrete plants, where production is often driven by customer delivery schedules and just-in-time construction requirements. As Amrize prepares for future DR seasons, its focus will be on aligning operational flexibility, energy management objectives, and grid reliability through a coordinated approach.

DEMAND RESPONSE OPPORTUNITIES

- Shut down or delay non-essential equipment such as crushers, conveyors, and auxiliary machinery.
- Shift material handling and transfer activities outside DR event periods.
- Pause non-essential charging of electric vehicles, forklifts, and battery-powered equipment.
- Reduce process water pumping where storage capacity or operational flexibility allows.
- Reduce compressed air demand by eliminating non-essential uses, including silo aeration where feasible.
- Use on-site generation or battery storage to offset grid electricity consumption.

HOW DO I SIGN UP?

Enroll in the program via the Demand Response Behavioural link or QR code, log into your MyHydro account and provide:

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

BC Hydro