



# B.M.S. S.O.S.

In Brazeau County's most energy-intensive municipal building, lowering heating & cooling during unoccupied hours, weekends, and holidays reduced air handler energy consumption by 68%.

## THE CHALLENGE

Brazeau County's most energy consuming municipal building, the Administration Building, was upgraded with a building management system (BMS) in 2017. Faced with competing priorities and limited knowledge of the BMS, county staff were unable to optimize the system to the building's operating schedule.

## THE SOLUTION

Municipal Energy Coordinator Aman Tiwari began by working to earn the county's facilities team's confidence—helping fix ongoing problems (e.g. cold temperatures due to clogged heating coils) and sharing his knowledge on air handling and building management systems.

With the facilities team's trust, Aman started to investigate this particular BMS. By leveraging Municipal Energy Managers resources, consulting BMS contractors, exploring the system interface, and conducting building walk arounds, Aman spotted several energy-saving opportunities.

Notably, Aman found that the air handling unit was running even when the building was unoccupied. Further investigation revealed that adjustments needed to be made to the control logic. This fix reduced the building's energy needs by 25 MWh per year.

## BRAZEAU COUNTY

*Brazeau County is a proud oil and gas community in west-central Alberta. Home to 7,200 residents, the area is known for outdoor recreation and natural resource extraction.*

*The Administration Building is the largest building among all municipal facilities with an area of 63,300 ft<sup>2</sup> and is supported by a 245 kW capacity rooftop solar installation that was completed in Nov. 2016.*



GOAL	PROJECTS	SUCCESS		
5% ↓	14 ⚙️	65t ↓	11% ↓	\$16,200 ↓
greenhouse gas emissions reduction below 2019 levels	energy conservation measures	greenhouse gas emissions Year 1 reduction	greenhouse gas emissions reduction below 2019 levels	annual energy cost savings

## MEET THE ENERGY MANAGER



### Aman Tiwari, Municipal Energy Coordinator

*Aman Tiwari is a young professional with a strong passion for energy management and conservation. Aman joined Brazeau County in 2021 to support the County's GHG reduction goals. His role focuses on implementing energy-saving measures across the portfolio of buildings managed by the County, optimizing the performance of energy systems, capacity building around energy efficiency and sustainable practices, and developing an energy culture in the municipality.*



## LESSONS LEARNED

Supporting the facilities team to rectify ongoing operational and control problems in the BMS **opened the door** to discussing energy-saving opportunities.

To earn the facility manager's support, Aman built a **detailed business case** for each project, highlighting how each would optimize operations and produce energy & cost savings. This not only helped secure approval but Aman could also put these cases to use in **knowledge sharing sessions**.

Implementing energy conservation projects in energy-intensive systems, such as HVAC, can result in significant energy savings. The measures instituted in the Administration Building helped Brazeau County achieve its greenhouse gas emissions reduction targets for Year 1 and enabled Aman to **put those financial savings toward longer-term projects**.

## KEY ACTIONS IMPLEMENTED

- 🔑 Lighting retrofit: LEDs produce higher quality light than fluorescent and last tens of thousands of hours longer, reducing maintenance costs.
- 🔑 Installing notched motor belts: reduces slippage losses and saves on belt replacement costs.
- 🔑 Reducing hot water temperature setback: saves on heating costs when demand is light.
- 🔑 Weatherstripping: keeping the cold air outside in winter and inside in summer saves on HVAC costs.
- 🔑 Installing smart power bars: saves on energy costs for office equipment and computer displays when the workplace is closed.
- 🔑 Scheduling exhaust fan: operating only when the building is occupied saves energy.



## THE MUNICIPAL ENERGY MANAGER PROGRAM

*The Municipal Energy Manager Program provides funding for Alberta municipalities to hire an energy manager. Participating municipalities receive up to \$80,000 in salary to hire a professional to develop energy management plans, improve building performance, and produce noticeable energy savings.*

*The program was designed and delivered by the Municipal Climate Change Action Centre, a partnership of:*

