



Scheduling Optimization

LANGARA'S COMMITMENT TO SUSTAINABILITY

CHALLENGE

Managing comfort in buildings is a mix of art and science. Electricity and natural gas enable us to regulate the temperature and air flow within these spaces, and this energy consumed adds up in utility costs and greenhouse gases. Getting the right balance leads to comfortable and productive spaces, while also avoiding costs and minimizing our impact on the environment.

SOLUTIONS

Air handling units are controlled by a direct digital control (DDC) system, which enables Langara's Facilities Department to automatically start and stop operation based on specific schedules. Prior to the schedule optimization project, Langara's air handling units (which heat, cool and circulate air throughout the building) were running from 6:00 am until 11:00 pm.

In the summer of 2014, Langara's Energy Team launched a pilot scheduling program in B Building. Occupants were encouraged to fill out a short paper survey to indicate when they used the space. New schedules were developed and implemented based on the survey results for the summer months.

In the fall, the Energy Team toured B Building to check in with occupants and ensure that needs were being met and confirm schedules for the fall months. Based on the results of the pilot, the DDC schedules for the Library, C Building, and LSU were also reviewed to align with B Building operation hours. Announcements about the changes were communicated through *By the Way*, Langara's employee intranet.

By matching schedules of air handling units with when spaces were actually in use, Langara was able to optimize energy use and reduce waste.

SUSTAINABILITY

Langara is committed to sustainability and optimizing energy use on campus as a way to limit greenhouse gas emissions.

Learn more.

www.langara.ca/sustainability

ANNUAL SAVINGS

The DDC scheduling optimization project has led to the following overall energy savings:

- Electrical: 91,000kWh = \$7,000 = 1%
- Natural Gas: 80GJ = \$800 = 0.4%
- Emissions: 4.8tCO₂e = \$120 = 0.4%

This is equivalent to the amount of CO₂ sequestered by four acres of forest each year.

Langara.

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