

Make way for a successful modernization at the Memphrémagog CSSS

The Centre de santé et des services sociaux (CSSS) de Memphrémagog comprises a hospital centre, a CHSLD and a CLSC. The building was constructed in the early 1960s and there have been several modifications and expansions since that time. Inevitably, these changes have increased energy costs. The hospital administrators wanted to do more with less by offering increased comfort to clients and employees while reducing energy consumption.

Improving boiler room reliability

The boiler room included two 250 HP boilers dating from 1960 and 1980. They produced steam, which fed the vapor-water exchangers. The older boiler showed signs of wear and frequent repairs made its reliability questionable. The need for a second functional heating source with a long life expectancy led to the replacement of one of the two boilers by a new and efficient Cleaver Brooks model.

The CSSS uses natural gas as the principal energy source for heating, domestic hot water and steam production, and humidification.

Modernizing by implementing efficient measures

To optimize energy consumption after replacing the boiler, energy efficiency measures were also put in place.

The engineering firm CIMA+ in the Sherbrooke region was mandated to re-engineer the systems affected by the measures, select equipment and supervise installation.

Installing heat exchangers

One of the measures given priority was the addition of a heat economizer on the new boiler stack. A stack economizer is a heat exchanger between air and a liquid designed to use a boiler's hot combustion gases to preheat the liquid. The normal temperature of the combustion products is about 571 °F. The temperature falls to about 274 °F by transferring its heat to the liquid circuit.

The economizer must be made to measure so that it can be installed in the stack, as close as possible to the combustion gas outlet, in order to achieve optimal performance.



Installing independent controls in each room

Another measure was the addition of a control in each room of the CHSLD so patients can choose their own room temperature. In addition to avoiding energy waste, this resulted in a higher comfort level.

Installing heat reflective panels

Panels reflecting heat from the baseboard heaters back into the room were also installed on some floors of the hospital. This facilitated temperature control while reducing overheating. In addition, peripheral office heating was modified to allow individual control.

Guaranteed energy savings!

As a general rule, installing a boiler stack economizer offers a return on investment in about two years. Thanks to Gaz Métro's energy efficiency programs (EEP), this payback period is significantly reduced. The addition of a regulating mechanism is also eligible for EEP.

Gaz Métro offers matchless consulting service and energy efficiency programs that enable you to obtain a return on your investment and look after the management of your buildings. Call René Lamothe, your Corporate Accounts Representative, who, in concert with

a DATECH Group Engineer, can propose measures that will help you achieve your objectives.

To reach René Lamothe, call 450-434-3191 or visit www.gazmetro.com/efficacite to find out more about our energy efficiency programs.

CONSUME BLUE ENERGY EFFICIENTLY

Gaz Métro believes it is important to do all it can to increase your competitiveness. That is why our energy efficiency programs, with their financial incentives, facilitate your acquiring higher energy efficiency equipment. And, if you already use natural gas, you can implement measures to optimize the use of this energy source and reduce your consumption.

OUR PROGRAMS AT A GLANCE

| | PROGRAM | APPLIANCE EFFICIENCY | CONTRIBUTION FINANCIÈRE* DE GAZ MÉTRO |
|--|---|------------------------------|---|
| PROGRAMS TO ACQUIRE MORE EFFICIENT EQUIPMENT | Condensing boiler and direct contact system | Efficiency of 90% and higher | \$1,200 to \$20,000 |
| | Intermediate energy-efficiency boiler | Efficiency of 85% and higher | \$600 to \$6,000 |
| | Condensing water heater | Efficiency of 90% and higher | \$1,200 to \$20,000 |
| | Intermediate energy-efficiency water heater | Efficiency of 85% and higher | \$600 to \$6,000 |
| | Infrared heating unit | — | \$2.50 per 1,000 BTU/h installed |

* Financial incentives are determined according to the capacity of the appliance installed or, in certain cases, the volume of the building to be heated. For information about eligible equipment makes and models, visit www.gazmetro.com or contact your Gaz Métro Advisor.

| | SEGMENT | BRIEF DESCRIPTION | FINANCIAL INCENTIVE FROM GAZ MÉTRO |
|--|---|--|--|
| Feasibility Study and implementation incentive for energy efficiency measures <small>This program in two sections, is reserved for current Gaz Métro customers, is aimed at encouraging the more efficient use of natural gas.</small> | Feasibility Studies | Encourages mandating a participating engineering consulting firm to conduct a feasibility study | General studies 50% of the cost of the study up to a maximum of \$5,000 Specific studies¹ 50% of the cost of the study up to a maximum of \$20,000 |
| | Implementation incentive for energy efficiency measures | Encourages the implementation of energy efficiency measures for the more efficient use of natural gas <small>Excluding appliances already covered by appliance acquisition programs</small> | \$0.10 per cubic metre of natural gas saved, up to a maximum of \$50,000 |

¹ Certain conditions apply. Consult the "Participant's Guide" at www.gazmetro.com or on your ViGiE extranet.