

Eurêka! Award 2019: CHUS & TGWT

Translated from: <https://www.eureka-quebec.com/post/du-tanin-pour-moderniser-les-bâtiments>



WINNER

Public and para-public organizations—CIUSSS—CHUS—Fleurimont Hospital

SECTOR

Public and para-public organizations
(ministries, agencies, institutions, and other public and para-public organizations)

TECHNOLOGY ADOPTER

Centre intégré universitaire de santé et de services sociaux de l'Estrie
Centre hospitalier universitaire de Sherbrooke - Hôpital Fleurimont (CHUS Fleurimont)

TECHNOLOGY DEVELOPER

TGWT Clean Technologies

PROJECT

Technology that uses tannins to optimize the efficiency of their steam boilers and cooling systems while ensuring the protection of their equipment.

INITIAL STAKES

Energy efficiency, Water use efficiency, Wastewater management and/or treatment, Control and/or reduction of GHG emissions, Reduction in the use of contaminants and/or replacement of polluting materials.

LOCATION

City: Sherbrooke
Province: Quebec
Country: Canada

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INNOVATION IN ACTION

The Centre Hospitalier Universitaire de Sherbrooke (CHUS) is the 4th largest hospital center in Québec and the main establishment of the Réseau universitaire intégré de santé (RUIS) of the Université de Sherbrooke's Faculty of Medicine and Health Sciences. With more than 6,800 employees, doctors and pharmacists and over 3,400 students, the CHUS is an important academic and economic hub in Eastern Quebec and the second largest employer in the Eastern Townships.

The CHUS commissioned TGWT ("The Tannin Guys®") to install purified tannins for the treatment of steam boilers water to heat the establishment. The system is environmentally friendly and allows an improvement in energy efficiency as well as a reduction in the effluent.

ECONOMIC BENEFITS

- Combined savings of \$288,647 over 10 years, without capital investment
- Energy consumption reduced by 2.1% or 52,718 m³/year of natural gas
- Reduction in man-hours for water analysis by 82 hours/year
- Water consumption reduced by 12.2% or 1,079,997 litres/year
- Increase in the thermal efficiency of boilers and reduction in maintenance costs
- Over the past 10 years, this is the equivalent of the heating required for 420 residential homes of 1,500 sq. ft., 480 water tanker trucks saved, or about 820 hours and \$20,500 saved.

ENVIRONMENTAL BENEFITS

- Reduction of GHG emissions by 2.1% or 100 t/year
- Reduction of blowdown (water discharged to the drain) by 75.7% and reduction of purge toxicity
- Replacement of the 3 rather toxic conventional chemical products by a single green chemical product based on purified tannins.
- Using 2 to 3 barrels of chemicals per year compared to 12 to 15 barrels with competing products, generating less transportation and less plastic scrap.
- Over the past 10 years, that's the equivalent of taking 220 average cars off the road; or about 500 tanker trucks that have not been dumped down the drain.

ABOUT THE EURÉKA! AWARDS AND ÉCOTECH QUÉBEC

Every year, hundreds of organizations and companies in Quebec adopt clean technologies. They do so to meet their needs effectively, while reducing their environmental footprint. To highlight their commitment to a cleaner economy, Écotech Québec (<https://www.ecotechquebec.com/en/>) is proud to have launched in 2019, the 1st edition of Eureka! for a green and prosperous Québec.

The first organization of its kind in Canada, Écotech Québec represents the clean technology cluster. It supports local players, companies, researchers, investors and clusters-in order to accelerate the development of clean technologies development, financing and commercialization of clean technologies. Écotech Québec is a founding partner of the CanadaCleantech Alliance, a member of the International Cleantech Network and founding member of the Global Alliance for Efficient Solutions of the Solar Impulse Foundation.