



HURON PERTH HEALTHCARE ALLIANCE STRATFORD GENERAL HOSPITAL

CONSTRUCTION YEAR

2021

HIGHLIGHTS

Annual Electricity Reduction =
128 kWh/yr

Annual Natural Gas Reduction =
8029 m³/yr

Annual Energy Reduction =
84,888 ekWh/yr

Annual GHG Reduction =
15 tons/yr

EQUIVALENCY RESULTS

CO₂ Emissions From

4.59
Passenger Vehicles

3.51
Homes' Energy Use for One Year

10.035
Homes' Electricity for One Year

HEATING AND SSU ELECTRICAL

Stratford General Hospital (SGH) undertook a transformational project in the basement of their Special Services Unit (SSU) building and Cottage replacing existing steam heating with natural gas and electric heating equipment. This initiative encompassed the removal of steam piping from SGH through the Avon Crest building and to the Cottage. It included the replacement of hydronic circulation pumps and steam heat exchangers with condensing boilers and an electric domestic hot water heater. Hydronic heating pumps and steam control valves were replaced in the West Building and College. The endeavour aimed to enhance hospital infrastructure, allowing for removal of the Avon Crest steam and condensate distribution infrastructure while bolstering the efficiency of heat generation within these buildings.

ENERGY & CARBON SAVINGS

The HPHA – Stratford General Hospital (SGH) project introduced eco-friendly innovations focusing on energy conservation and carbon reduction. Removal of the steam infrastructure within the Avon Crest building substantially reduced the site heat losses and pumping energy. Hydronic and domestic water recirculating pumps in SSU were replaced with VFD and ECM controlled motors to reduce pumping energy. Domestic hot water heating was replaced with electric heating decarbonizing the facility's potable water system. Due to the operating temperature of the heat pump loop in SSU, the use of condensing boilers was possible. With replacement of the SSU mechanical room ventilation fan, airflow was reduced, and a low leakage backdraft damper was installed to lower heating and cooling loads within the building. Valve and pump replacements in the West Building and College reduced pneumatic controls compressed air consumption and upgraded controls to digital with supply water reset capabilities increasing the efficiency of the existing heating loops. These features collectively spearheaded sustainable practices within the SSU and Cottage facilities, fostering substantial energy savings and notable reduction in the hospital's carbon footprint, aligning with a commitment to environmentally conscious healthcare infrastructure.