

# 1622BE- City Hall

110 Laurier Ave W

Reporting Period: 2021 Calendar Year

Property Type: Office

Gross Floor Area: 27,393m<sup>2</sup>

Year Built: 1990



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## Your Highlights

**50** Number of properties of the same type as yours.

**-2%** Your trend in GHGI since the previous year.  
(GHGI, greenhouse gas emission intensity, kgCO<sub>2</sub>e/m<sup>2</sup>)

**31 / 50** Your rank in GHGI compared to the same property type.  
(where 1st is the lowest emitter)

**193 / 333** Your rank in GHGI compared to the whole City of Ottawa dataset.

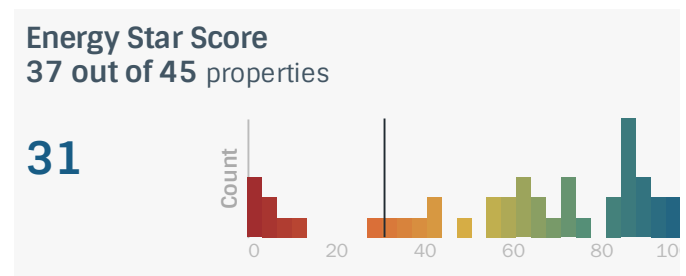
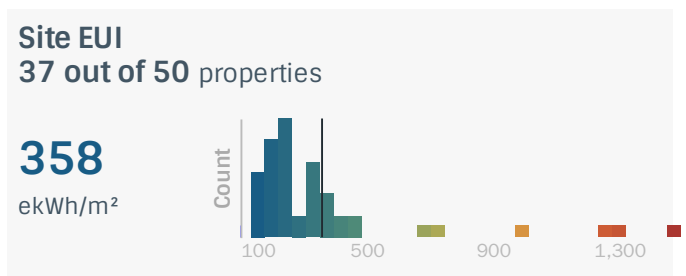
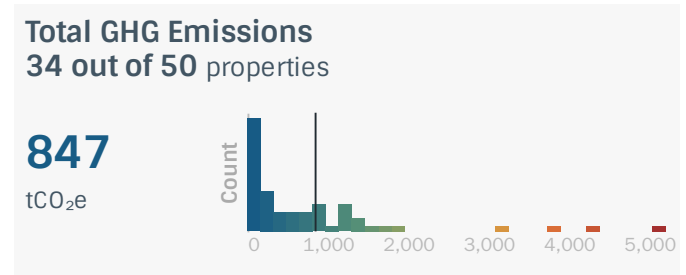
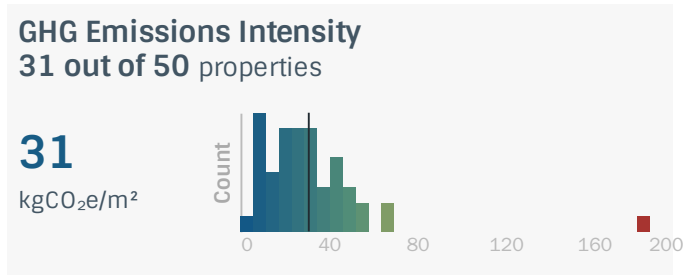
## Year-Over-Year

A snapshot of your yearly performance metrics compared to buildings of the same property type, including your recent trend, based on your raw, non-weather normalized, data. Note for percentiles: a high percentile means “good” performance and 100% means “best performer”.

	2019	2020	2021	Since 2020
<b>GHGI</b> Greenhouse Gas Intensity	<b>39.6</b> kgCO <sub>2</sub> e/m <sup>2</sup> 38th percentile	<b>31.5</b> kgCO <sub>2</sub> e/m <sup>2</sup> 50th percentile	<b>30.9</b> kgCO <sub>2</sub> e/m <sup>2</sup> 40th percentile	<b>-2%</b> → avg building +5%
<b>GHG</b> Total Greenhouse Gas	<b>1084.8</b> tCO <sub>2</sub> e 26th percentile	<b>863.1</b> tCO <sub>2</sub> e 32nd percentile	<b>847.3</b> tCO <sub>2</sub> e 34th percentile	<b>-2%</b> → avg building +5%
<b>Site EUI</b> Site Energy Use Intensity	<b>408.4</b> ekWh/m <sup>2</sup> 21st percentile	<b>358.4</b> ekWh/m <sup>2</sup> 34th percentile	<b>358.4</b> ekWh/m <sup>2</sup> 28th percentile	<b>0%</b> → avg building +1%
<b>ENERGY STAR</b>	<b>19</b> 13th percentile	<b>34</b> 24th percentile	<b>31</b> 20th percentile	<b>-9%</b> → avg building -1%

# Current Year Benchmarks

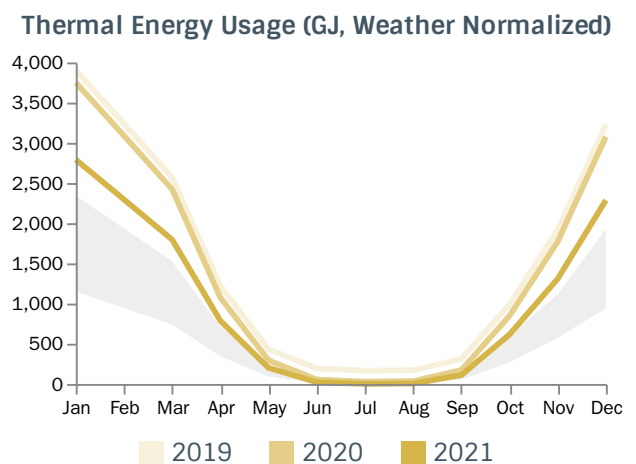
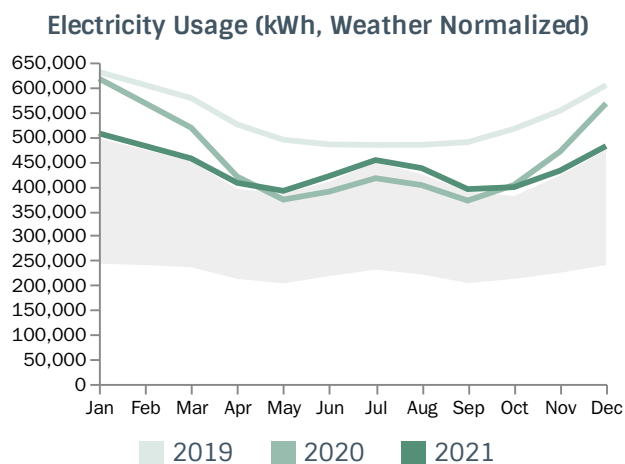
For the most recent year of data, a comparison of your building performance (the black line) against buildings of the same property type. The height of each bar shows how many properties have the same performance score.



# Monthly Performance

A comparison of your building's monthly energy performance, by energy type, year-over-year. When a significant correlation between energy consumption and weather was detected, the data was "weather-normalized" with the 30-year average weather. Otherwise, your billed data is presented.

*Note: "thermal energy usage" combines natural gas, renewable natural gas, district hot water, district steam, propane, fuel oil, and biomass. District chilled water is not yet accounted for.*



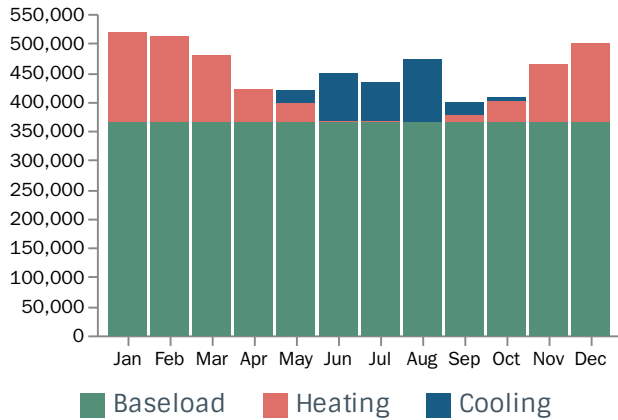
The grey band represents the 25th and 75th percentile performance for the same property type.

# Energy Load Breakdown

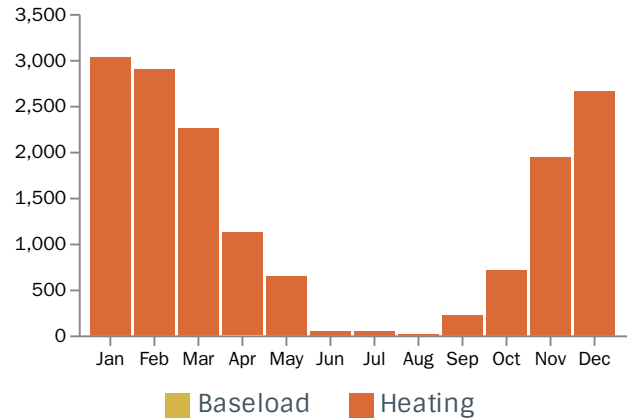
A modelled breakdown of your building's energy consumption into its main components: heating load, cooling load, and baseload.

When there is a correlation between energy consumption and weather, the approximate load breakdown for the current year is presented. Otherwise, the billed data is shown, and the entire load is assumed to be "baseload".

**Electricity Breakdown (kWh, Approximate)**



**Thermal Energy Usage Breakdown (GJ, Approximate)**

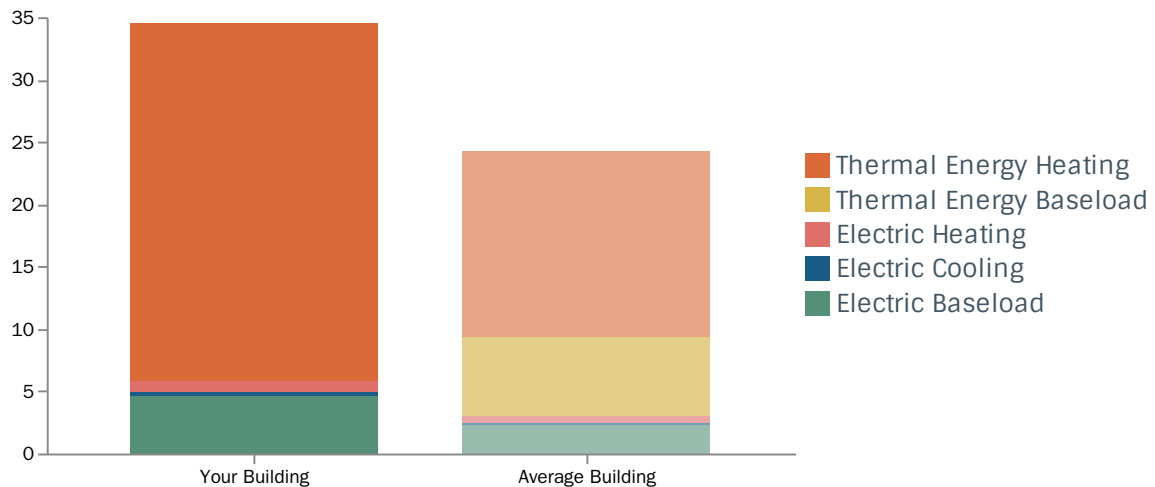


# Greenhouse Gas Intensity Breakdown by End-Use

Greenhouse gases (GHGs) are known to be the leading cause for climate change. The graph below shows which end-use(s) are the main culprits for GHG emissions at your property. It also compares to the average building's GHGI breakdown (for the same property type).

To reduce your GHG emissions, consider "fuel-switching" from high-emission thermal energy use (such as natural gas) to electrical energy, which has a lower emission factor. Start by focussing on end-uses which emit more greenhouse gases.

**Greenhouse Gas Intensity (kgCO<sub>2</sub>e/m<sup>2</sup>)**



# How Can You Improve?

This section contains insights and recommendations based on comparing each of your energy loads (heating, cooling, baseload) to those of the same property type.

For each energy end-use, your percentile ranking is provided (higher percentile ranking is better). Also provided are the carbon and dollar savings if you achieved the "75th percentile", or if you are already above the 75th percentile, 10% savings above current performance.

Energy costs are approximated and based on average blended rates, combining consumption and demand charges (\$0.123/kWh for electricity and \$8.5/GJ for thermal energy), and include a \$50/tCO<sub>2</sub>e carbon tax.

*Note: "thermal energy usage" combines natural gas, renewable natural gas, district hot water, district steam, propane, fuel oil, and biomass. District chilled water is not yet accounted for.*

## General Recommendations

- ✓ Undertake Retrocommissioning to ensure all equipment is operating at optimal efficiency
- ✓ Consider fuel-switching to electric heating to reduce your GHG emissions.
- ✓ Participate again in next year's Better Buildings Ottawa Benchmarking Program!

### Heating Energy



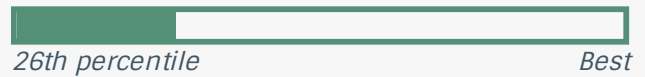
If you achieved the **75th percentile**, you would:

**Reduce: 475 tCO<sub>2</sub>e/yr**

**Save: \$199,705/yr**

Where to look: The heating load typically consists of heat loss through the building envelope (windows, walls, roofs) and heating energy for ventilation. *Consider envelope upgrades, higher efficiency heating equipment, heat recovery ventilation systems, minimizing simultaneous heating and cooling, and optimizing operation setpoints. To reduce greenhouse gas emissions, consider fuel switching from fossil fuel based energy to electrical energy.*

### Electric Baseload



If you achieved the **75th percentile**, you would:

**Reduce: 5.07 tCO<sub>2</sub>e/yr**

**Save: \$26,389/yr**

Where to look: The electric baseload typically consists of lighting loads, plug loads (computers, servers), and equipment loads (elevators, machinery). *Consider lighting improvements and plug load management tactics.*

## Electrical Cooling



If you achieved the **75th percentile**, you would:

**Reduce: 2.46 tCO<sub>2</sub>e/yr**

**Save: \$12,799/yr**

Where to look: The electric cooling load typically consists of equipment loads from chillers and/or air conditioning units. *Consider upgrading to higher-performance equipment and reducing heat gain through the building envelope.*