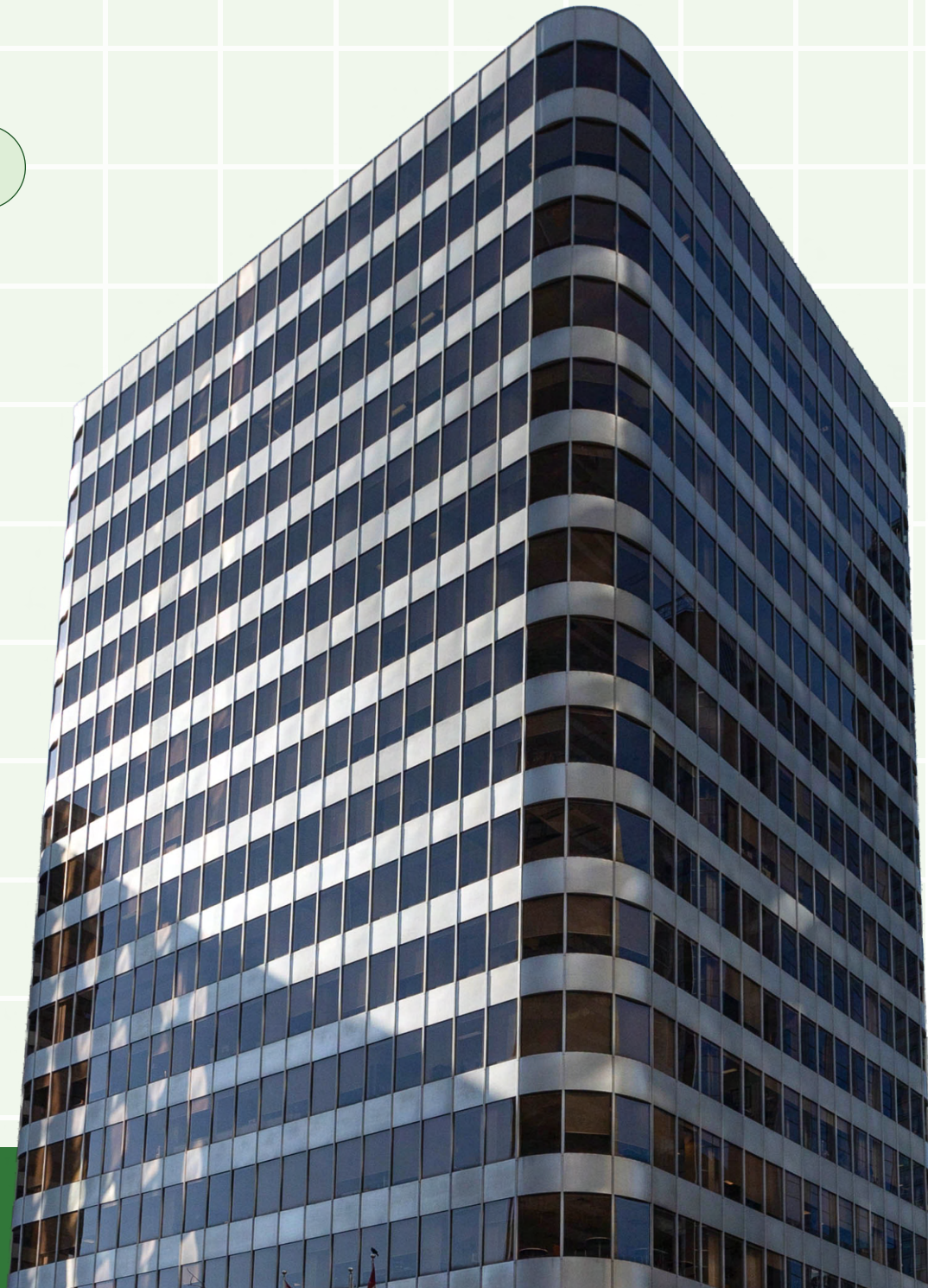
WARRINGTON PCI
SUSTAINABILITY

1090 West Georgia Street

Case Study



Warrington PCI Management
300 - 1030 West Georgia St.
Vancouver, BC, V6E2Y3

WPM Reduces Energy Use by 31%

THE BUILDING:

1090 West Georgia Street, Vancouver BC

18 storey, 171,783 square foot office tower with ground floor retail built in 1976

THE CHALLENGE:

The building was facing potential fines upwards of $52,000 a year under the City of Vancouver's new greenhouse gas intensity targets. WPM had to develop a strategy to reduce emissions in the 50-year-old building.

THE SOLUTION:

With full support of the building's ownership and in collaboration with Brightly Software, WPM's building operations team analyzed the building's performance data to create low and no-cost strategies to reduce energy use without compromising tenant comfort.

By implementing data-driven insights, WPM was able to optimize the existing ventilation, domestic hot water and mechanical cooling systems to reduce energy use, greenhouse gas emissions, and operating expenses without any capital costs.

THE RESULTS:

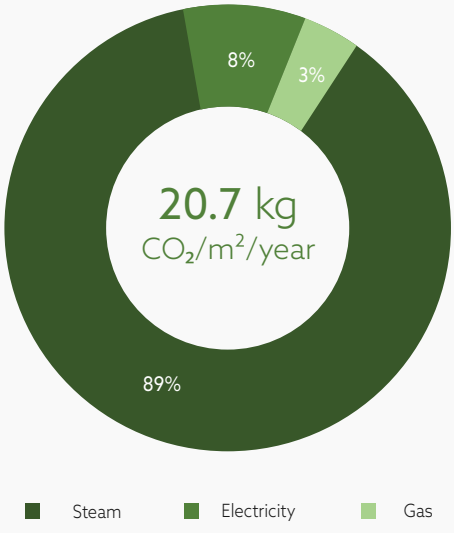
During the first year of system optimization, the building's GHG emissions had dropped by 80 tonnes. Over the following year WPM's strategy continued to yield significant improvements, leading to an additional reduction of 75 tons of CO_2 – a 27% reduction.

By bringing the property into compliance with municipal regulations, WPM's action plan:

- Avoided future bylaw penalties of $52,000 per year
- Saved more than $100,000 a year in utility costs
- Reduced utility costs by $0.48 per square foot
- Increased the Energy Star score from 33 to 75
- Reduced total energy usage by 31%

Carbon Performance

Since WPM implemented Operational Analytics in 2022



WPM's initiatives have made the building much more efficient — cutting its carbon emissions from **32 kg CO_2/m^2/year down to 20.7 kg CO_2/m^2/year**.

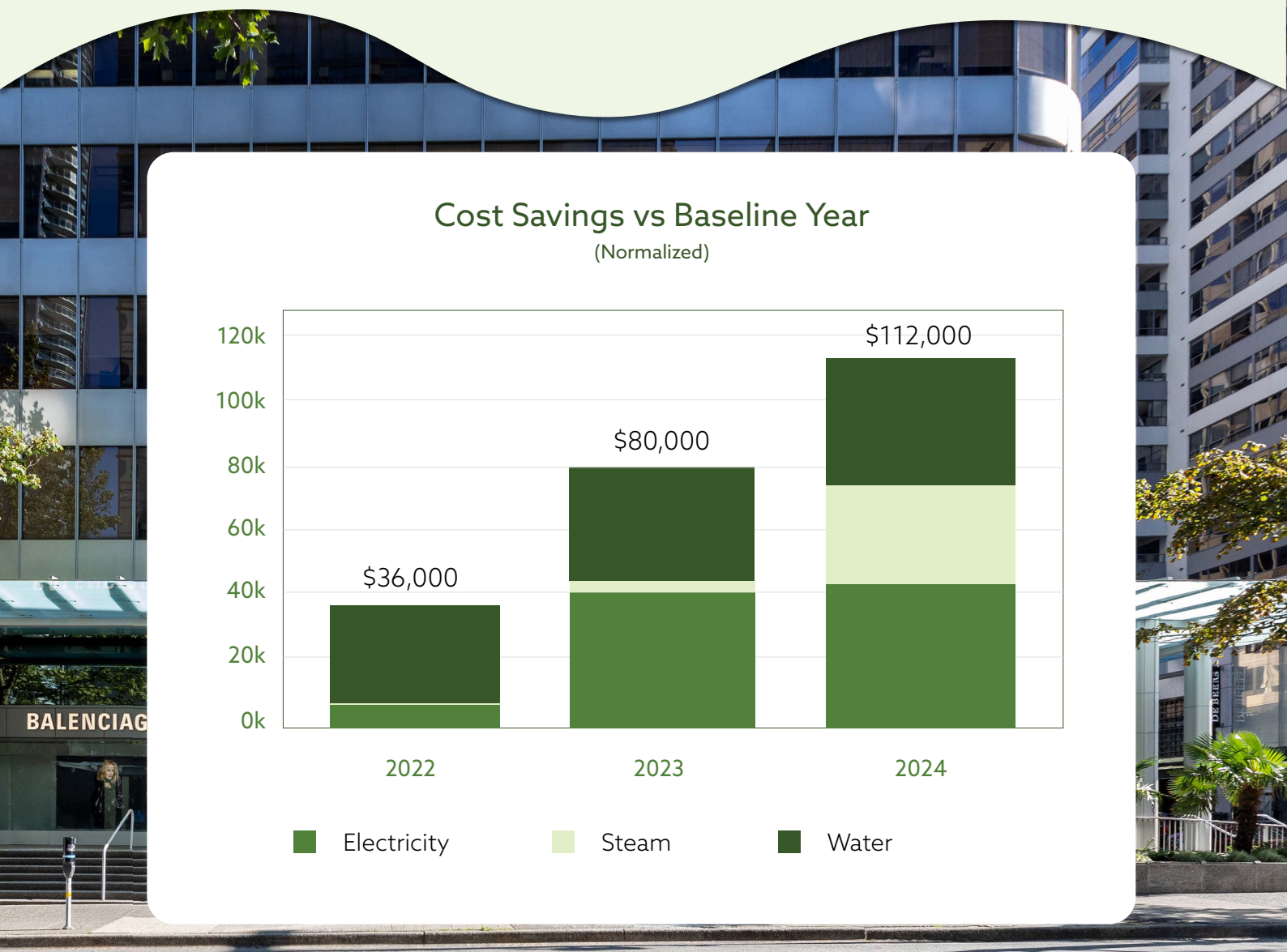
That's well ahead of Vancouver's 2026 climate goal.

THE DETAILS

01

Brightly Stream and Operational Analytics:

Access to and analysis of whole building energy use data is the cornerstone of any successful building optimization strategy. By utilizing the power of Brightly Stream and Operational Analytics, WPM was able to accurately track building performance, optimize equipment schedules, detect system imbalances, and improve mechanical system setpoints – **all of which led to the 31% non-CAPEX energy savings.**

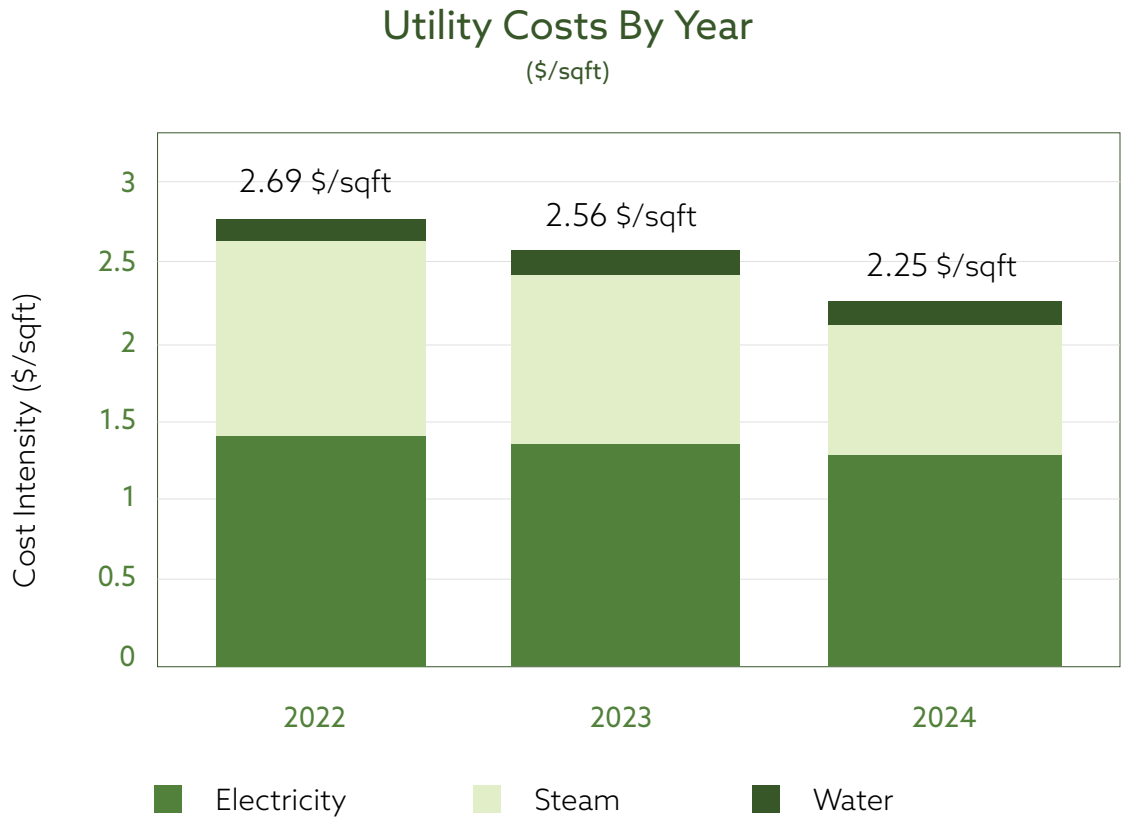


THE DETAILS

02

Cost Reduction Through Operational Optimization:

Historically, the ventilation system ran 24/7 during extreme cold weather to help maintain comfortable building temperatures. The unoccupied zone temperature setpoints were **adjusted to eliminate the need to run the HVAC system after hours.**



THE DETAILS

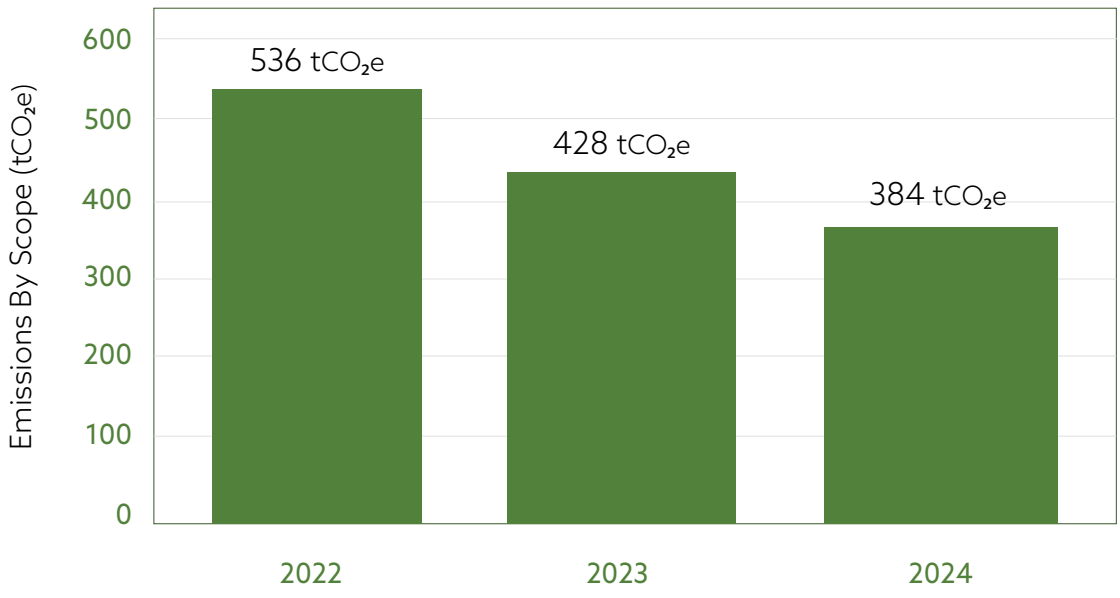
03

Primary Hot Water System Supply Temperature:

Previously, the primary hot water loop maintained a constant supply temperature of 90°C year-round. The WPM operations team reset this based on outdoor air temperature, **resulting in energy savings while maintaining tenant comfort.**

GHG Emission Reductions By Year

(excluding RECs & VERs)



THE DETAILS

04

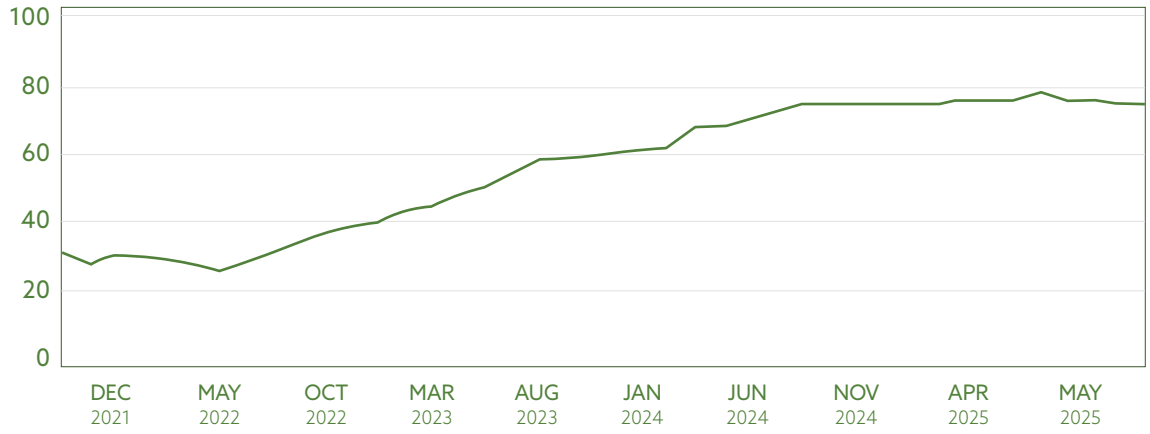
Mechanical Cooling & Radiator Loop Supply Setpoint Adjustments:

By increasing the mechanical cooling outdoor air temperature setpoint, chiller run-time during the shoulder season has been minimized, **while a reduction of approximately 10°C in the radiator loop supply water temperature setpoint has contributed to steam savings.**

ENERGY STAR SCORE

75

History of ENERGY STAR Scores By Year



THE FUTURE

Further efficiency gains achieved without capital investment

Chilled Water Supply Temperature Controls:

The chiller plant currently maintains a constant 6.5°C chilled water supply temperature. By implementing reset controls based on air handling unit (AHU) cooling demand, WPM plans to reduce unnecessary chiller load and drive significant electricity savings.

Primary Hot Water Loop Summer Ramp Down:

Gradually ramping down temperatures will help minimize leaks and reduce steam consumption, improving both reliability and efficiency.

Perimeter Radiator Loop Nighttime Setback:

The perimeter radiator loop runs at the same temperature day and night. Introducing a nighttime temperature setback during milder outdoor conditions will maintain comfort while significantly reducing steam consumption.

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