

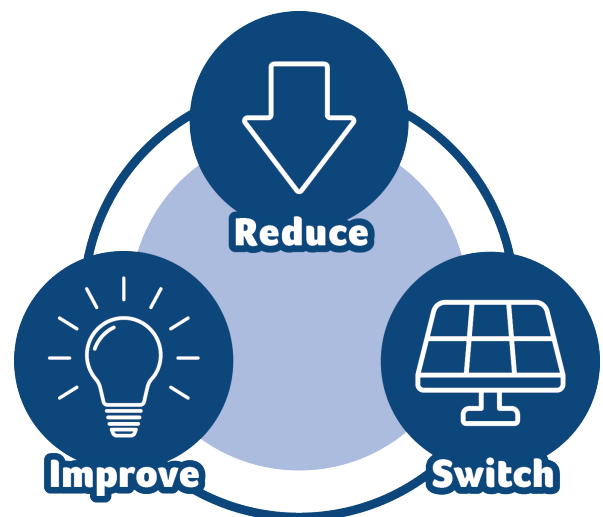
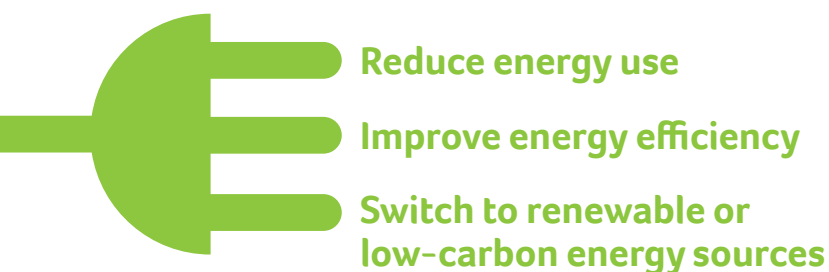
Regina's 2025 Energy and Emissions Inventory

Moving Toward a Renewable Regina

Renewable Regina is Regina's community plan to help slow climate change and create a more resilient, healthy and wealthy community for current and future generations.

The plan outlines the pathway to achieve our community-wide goal of net-zero carbon emissions and sourcing net-zero energy from renewable sources by 2050.

To meet this target, we need to reduce our community's greenhouse gas (GHG) emissions by 52 per cent by 2030 through a three-pronged approach:



Currently, most energy use involves burning fossil fuels. This means that energy consumption and GHG emissions are closely related and that generally, reducing energy use will reduce GHG emissions. Reducing energy use is also important for enabling the switch to renewable energy.

However, some fuel sources produce more emissions than others, and some activities or processes use more energy than others. This is why tracking both energy and GHG emissions is important.

**Net zero
renewable
community**

=

**Greenhouse Gas (GHG)
removed from air &
Renewable Energy Used**

≥

**GHG Emissions &
Non-Renewable
Energy Used**

Background

Measurement and reporting of energy consumption and GHG emissions is important for assessing progress towards our community and corporate GHG and energy reduction targets.

Corporate Energy and Emissions Inventory

Corporate energy use and GHG emissions are generated or consumed directly through the City of Regina's daily operations:



Fuel used to operate Transit buses and City vehicles



Heating and cooling City-owned buildings like recreation centers and office buildings



Operating major City facilities like the Wastewater Treatment Plant (WWTP) and Asphalt Plant

Community Energy and Emissions Inventory

The community inventory includes all the energy and emissions consumed and generated within Regina's city limits, such as:



Residential, commercial or industrial transportation



Heating and cooling of all houses, apartments and businesses



Industrial operations that take place within city limits

Disclaimer:

The Energy and Emissions inventory is a snapshot of energy use and GHG emissions. Wherever possible, actual data is used. In some cases where data is not available, estimations or assumptions have been made based on other data sources or previous trends.

While corporate emissions have been directly measured and reported for several years, 2023 was the first year the City measured community-wide energy use and emissions since 2016.

The community-wide energy and emissions inventory continues to evolve as data quality improves and additional information becomes available. As a result, methodologies are refined and historical data may be updated to improve the accuracy, consistency and comparability of the inventory over time.

Acronyms

RPS	Regina Police Service
RPL	Regina Public Library
WWTP	Wastewater Treatment Plant
BPWTP	Buffalo Pound Water Treatment Plant
GHG	Greenhouse Gas
LFG	Landfill Gas (methane)
LFGTE	Landfill Gas to Energy



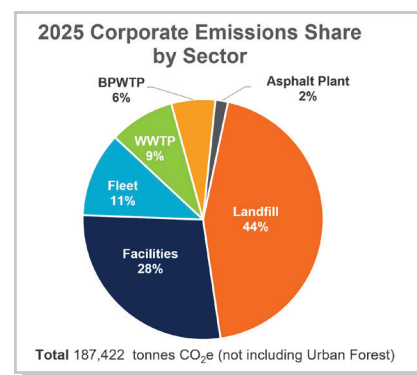
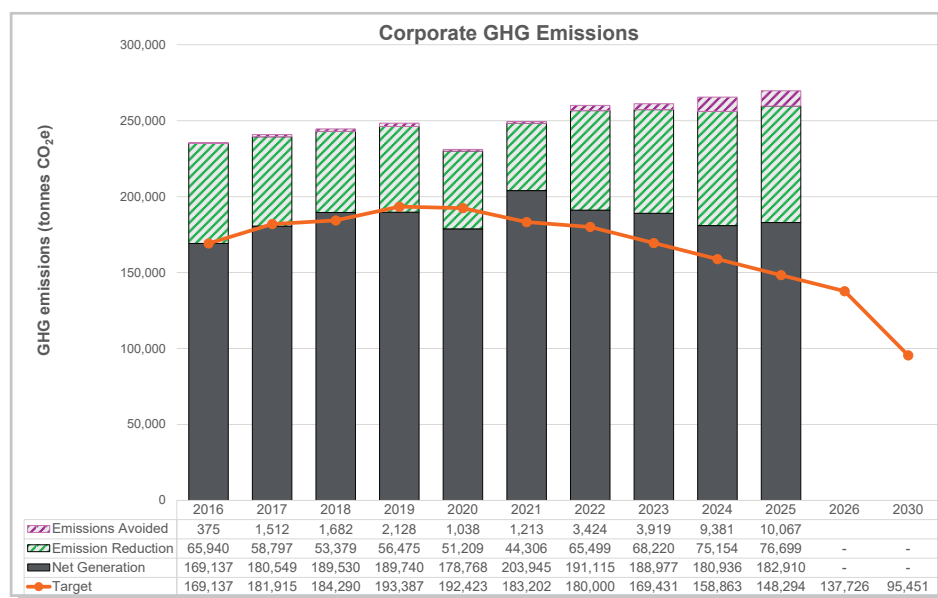
Corporate Energy and GHG Emissions

The City of Regina monitors and reports its corporate energy use and GHG emissions to measure progress toward its climate and energy goals. The corporate inventory now includes historical data dating back to the 2016 baseline year, providing a more comprehensive and consistent dataset for tracking long-term trends and measuring progress toward the City's energy and emissions targets.

Corporate Emissions

Meeting Our GHG Reduction Target

Setting a target for corporate GHG emissions is important for the City to be able to measure the progress of emission reduction efforts and show accountability when it comes to communicating the success of these efforts.



Corporate emissions in 2025 were 182,910 tonnes CO₂e, a 1 per cent increase from 2024 and approximately 8 per cent higher than the 2016 baseline. Despite this slight year-over-year increase, emissions have declined by 10 per cent since peaking in 2021, indicating the City is moving in the right direction. The gap between the 2025 target and actual emissions was 23 per cent. While the target was exceeded in 2020, emissions reductions between 2021 and 2025 fell short of the target by an average of 13 per cent annually. Some increases in corporate emissions reflect investments that support broader community emissions reductions. For example, expanding transit service and increasing service hours can increase corporate emissions while encouraging a shift away from personal vehicle use, helping to reduce community-wide emissions over time.

At the same time, the City achieved 76,699 tonnes CO₂e in emission reductions - the highest annual reduction recorded since 2016. These reductions were driven primarily by increased landfill gas capture and biogas capture at the WWTP.

Meeting future targets is possible with increased efforts. However, past gaps may require setting higher targets, making them harder to achieve.

2025 Emission Mitigations Highlights



Regina's Urban Forest reduced 4,512 tonnes of GHG emissions, or 2 per cent of the City's total corporate emissions.



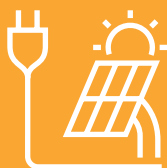
The Food and Yard Waste Pilot expanded to a full program in 2023. In 2025, this program reduced 7,691 tonnes of GHG emissions (approximately 3 per cent of the City's total corporate emissions) and diverted 17,324 tonnes of organic waste from the Landfill.



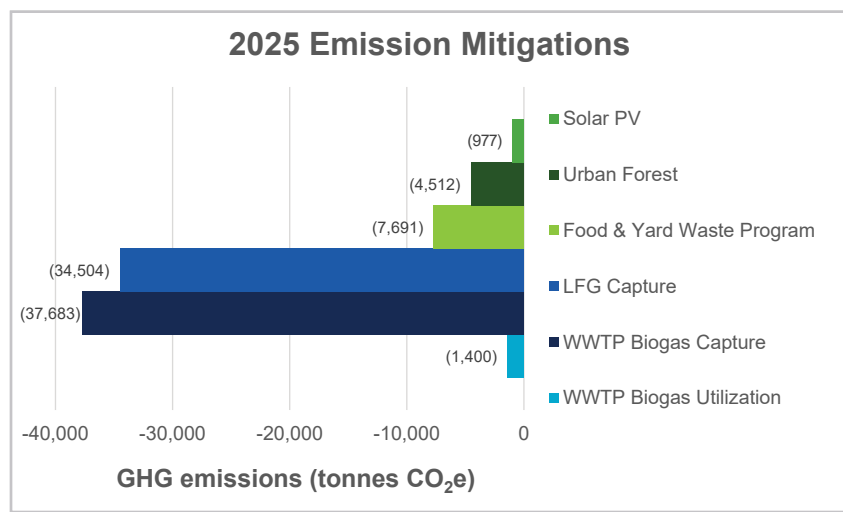
The Landfill Gas Capture system reduced 34,504 tonnes of GHG emissions, equivalent to 13 per cent of the City's total corporate emissions. This represents an improvement of 3 per cent from 2024, largely due to longer runtimes of the landfill gas engine.



The WWTP reduced 37,683 tonnes of emissions through the capture of biogas (approximately 14 per cent of the City's total corporate emissions). Additional reductions of 1,400 tonnes (0.5 per cent) were achieved by using the captured biogas to heat the facility (instead of natural gas).



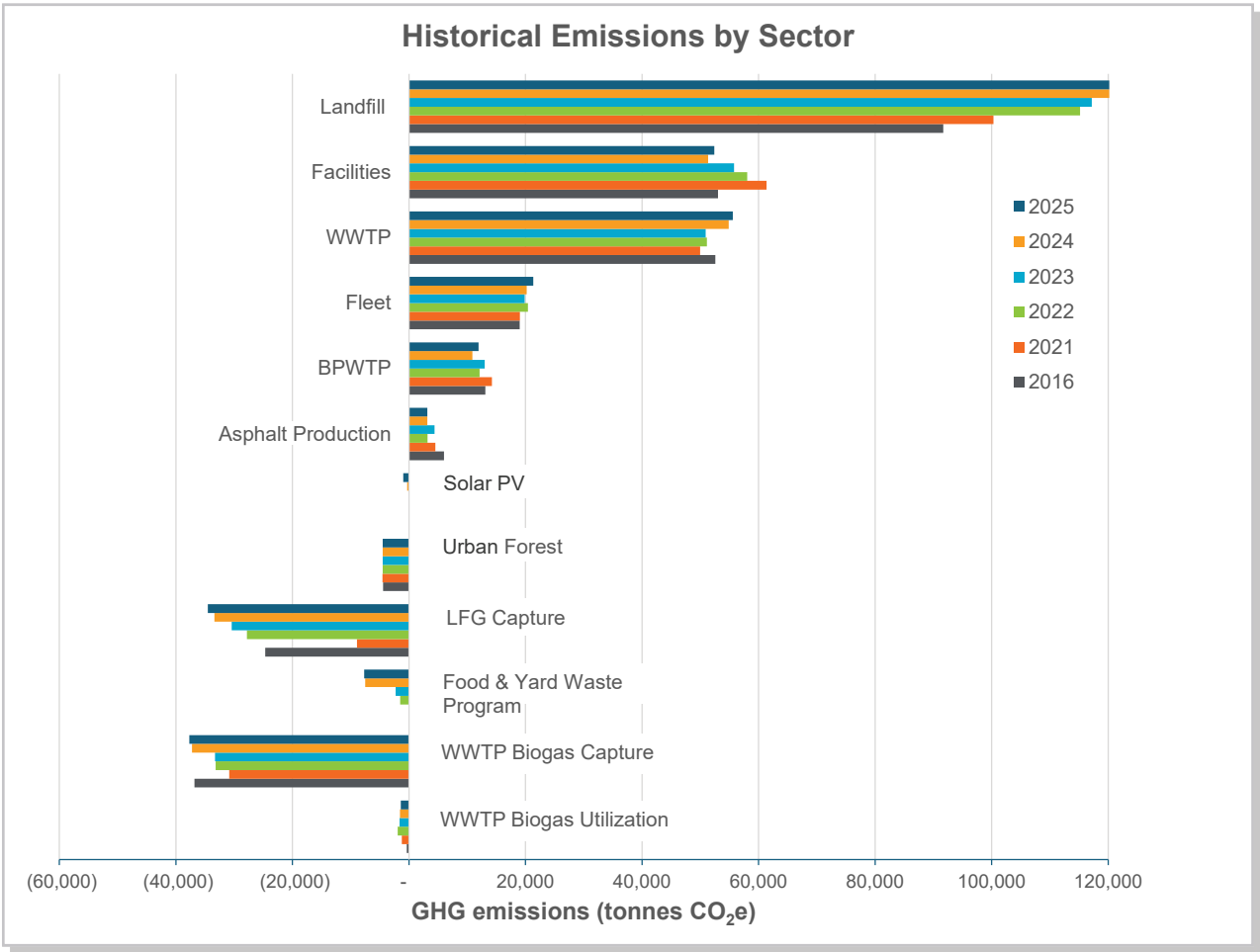
The City's solar photovoltaic (PV) systems reduced 977 tonnes of GHG emissions (approximately 0.4 per cent of the City's total corporate emissions) in 2025. The City has significantly expanded solar PV installations over the past two years, increasing renewable electricity generation and reducing grid electricity consumption. The Buffalo Pound Water Treatment Plant (BPWTP) accounted for approximately 88 per cent of the City's total solar PV generation, making it the City's largest solar energy producer.



Breakdown by Sector

The City tracks and reports emissions by sector, with most emissions being generated by the Regina Landfill, municipal buildings and facilities and fleet vehicles. Progress towards achieving the City’s corporate emission target requires reduction strategies for these three areas.

Historical GHG emission trends are displayed in the chart below by each sector along with the results of various reduction efforts like the WWTP biogas boiler system and landfill gas capture and utilization projects.



Note:

- 1) The significant increase in landfill emissions in 2022 is attributed to Environment and Climate Change Canada's (ECCC)'s adjustment in methane's global warming potential (GWP) by 12 per cent. This increase highlights the necessity for ongoing and enhanced emission reduction strategies across all sectors to meet future emissions reduction targets.
- 2) Positive values shown for each sector represent gross GHG emissions before accounting for emission reduction initiatives. Negative values represent GHG reductions achieved through activities such as landfill gas capture, biogas utilization and the Food & Yard Waste Program. The Net Total is calculated by combining the gross emissions and emission reductions and represents the City's net corporate GHG emissions for reporting purposes.

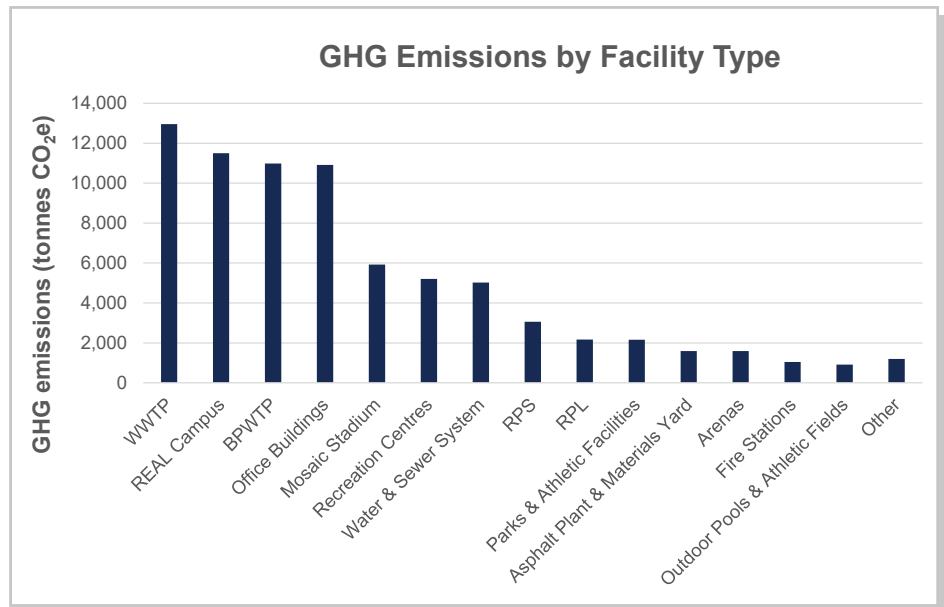


Emissions from City Facilities



Municipal building emissions result primarily from the use of energy (e.g., electricity, natural gas, and propane) to heat, cool, light and power them. The City is planning on adopting improved standards for both new facilities and building retrofits to help improve their energy efficiency.

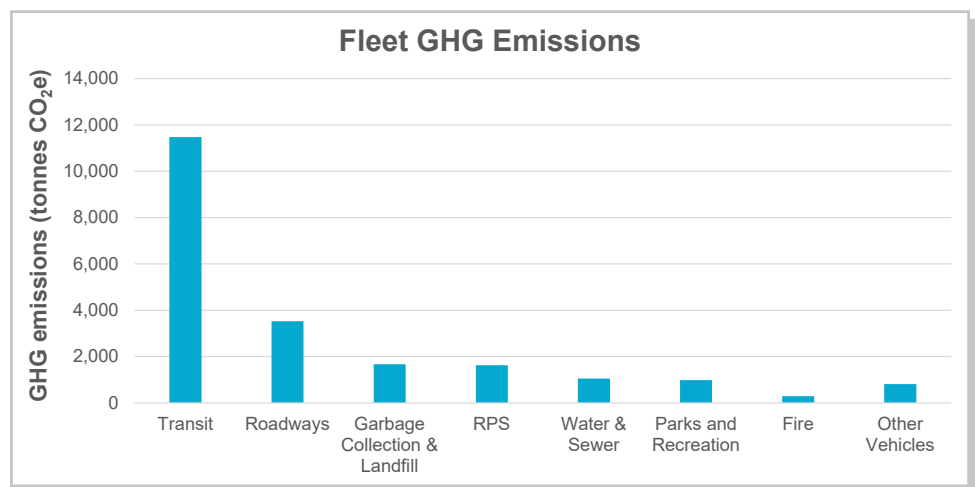
Emissions associated with water and wastewater treatment, water distribution and wastewater and stormwater collection systems are also included in this category because of their significant energy use.



Emissions from Vehicle Fleet



Fleet emissions result from the combustion of fossil fuels used to power the City's buses, vehicles and mobile equipment. The City is making investments in electrification and anti-idling programs to reduce emissions from the municipal fleet.

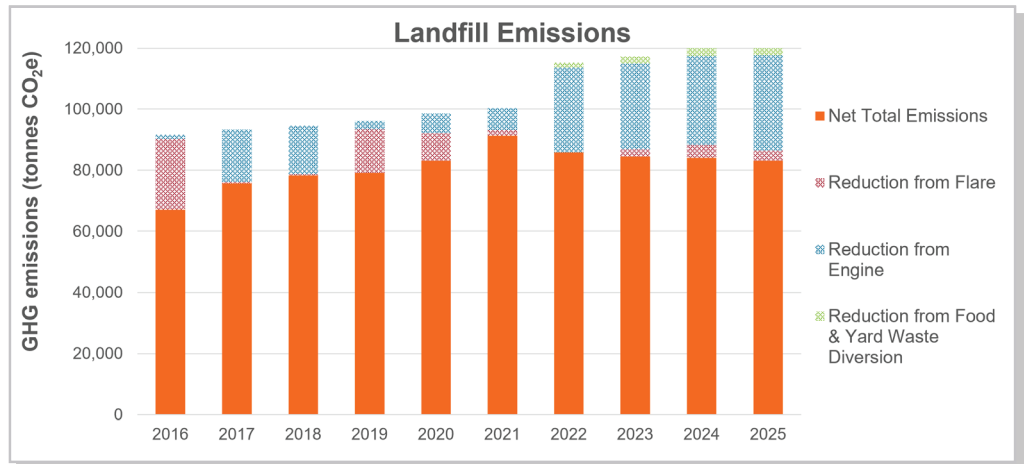


Emissions from Landfill



The landfill sector is the biggest GHG emitter within corporate operations. As biodegradable waste breaks down in landfills, gases (primarily methane and carbon dioxide) are released. This process spans many years, meaning that the GHGs emitted from the landfill today are the result of decades of dumping biodegradable waste.

The City is actively working to reduce GHG emissions associated with the Landfill by operating a landfill gas recovery system.

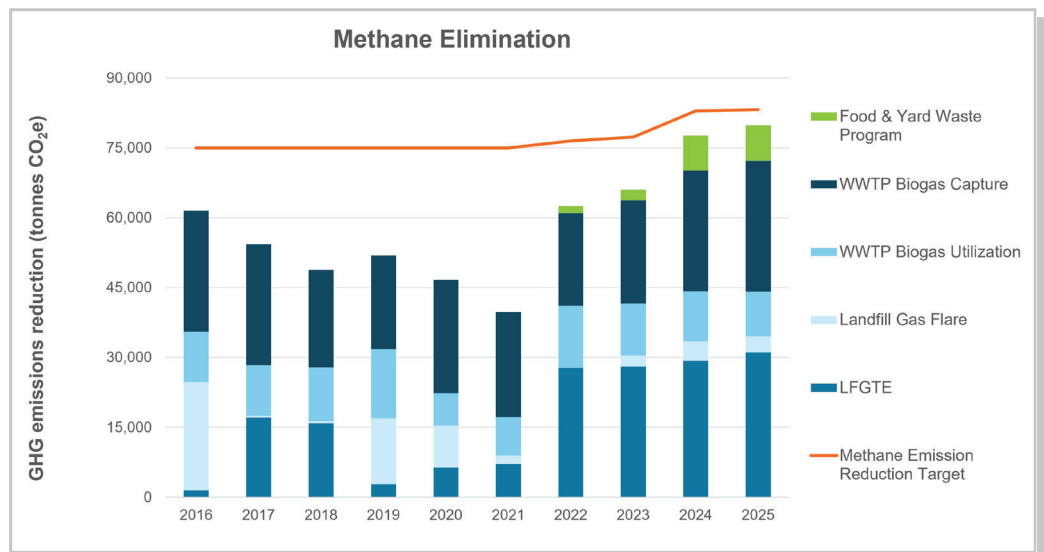


Methane Elimination

Methane is generated at both the Landfill and the WWTP. Methane is a GHG that is 28 times more potent than carbon dioxide and is produced when organic matter breaks down in the absence of oxygen.

The best way to reduce corporate GHG emissions is through the elimination of methane. This can be achieved by either preventing its creation or burning (flaring) it off. The City can also convert this gas into electricity or use it to replace natural gas.

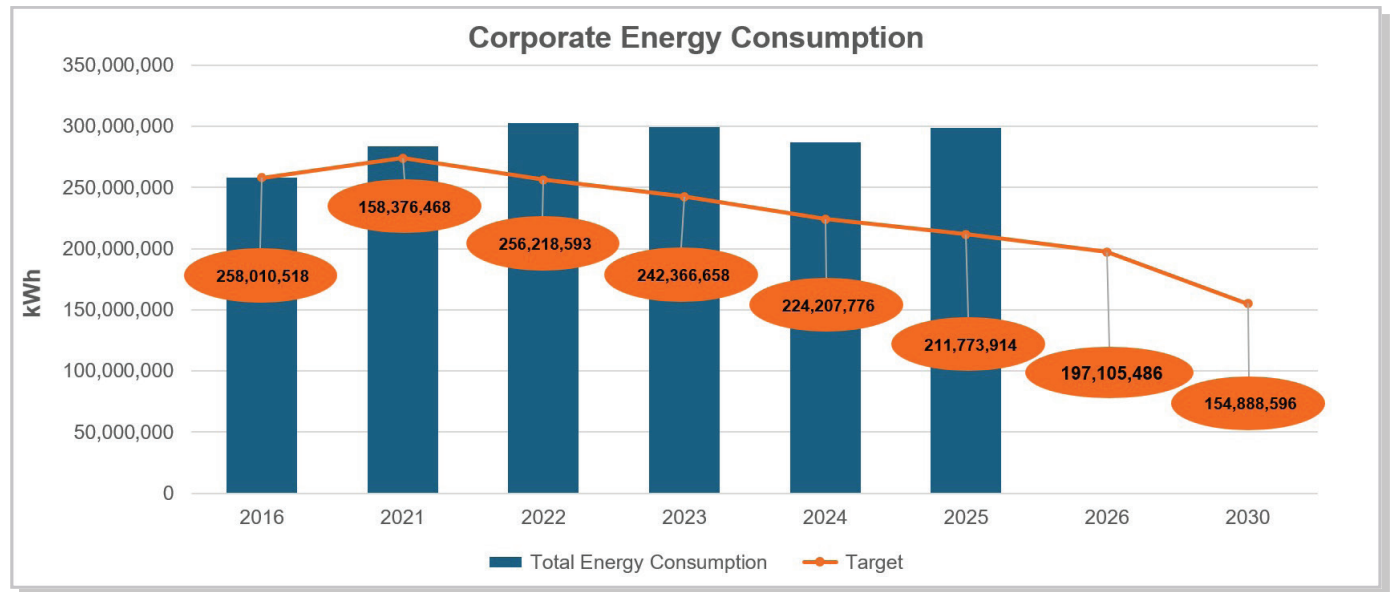
In response to new methane reduction regulations, the City continues to increase methane targets as new programs and technologies are adopted. This approach supports continuous improvement and ensures we can measure the effectiveness of current initiatives. For example, when the Food & Yard Waste Program was fully operational in 2024, the target was updated to reflect this additional capacity.



Corporate Energy Consumption

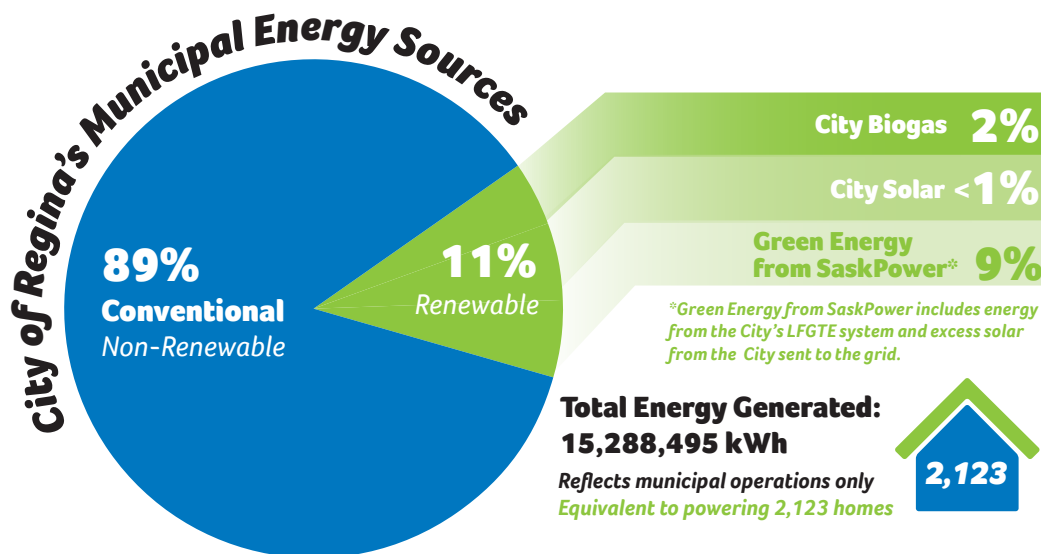
Meeting Our Energy Reduction Target

Setting a target for corporate energy use is important for measuring progress towards our corporate and community objectives. Measuring energy use also helps identify opportunities for improving energy efficiency in different operational areas and for switching to renewable sources and fuels.



Meeting Our Renewable Energy Target

Achieving the Renewable Regina target of a net-zero renewable community means transitioning to 100 per cent renewable energy sources by 2050. The City can accelerate this transition by producing its own renewable energy when possible.

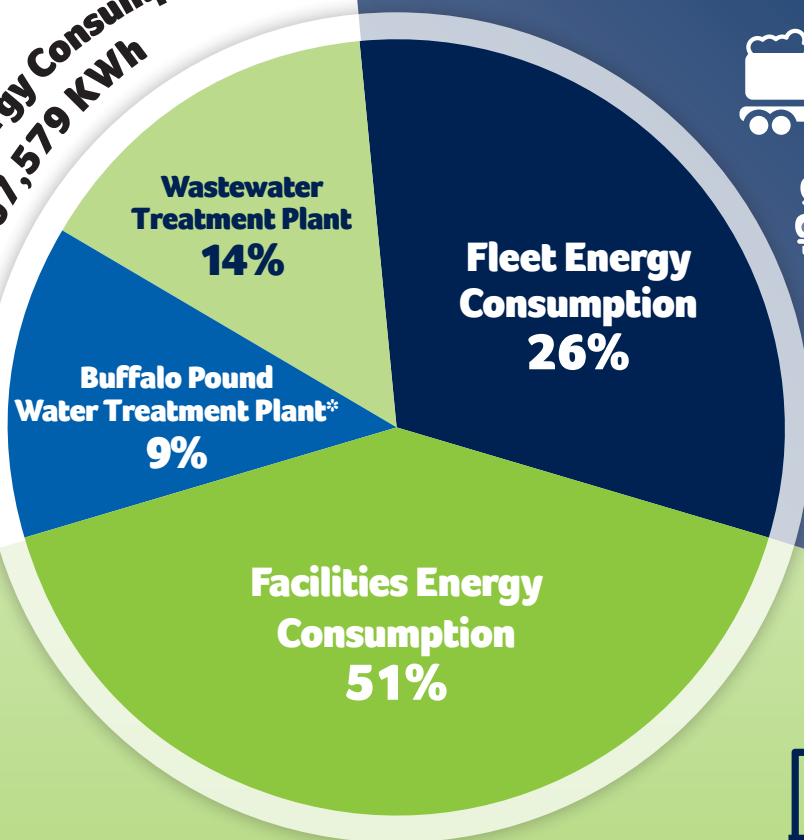


In 2025, 89 per cent of the energy used by the City of Regina was generated from non-renewable sources such as coal, natural gas and oil. The remaining 11 per cent came from renewable sources including solar, wind, biogas and hydroelectric power.

2025 Energy Consumption at a Glance

Most of the energy used by the City is for the operation of facilities. These include City office buildings, recreation centers and major facilities like the WWTP and the BPWTP.

TOTAL Municipal Energy Consumption:
298,607,579 KWh



Transit
53%



Police
8%



Roadways & Asphalt Serv.
4%



Water & Sewer
5%



Parks & Recreation
5%



Landfill Operations
5%



Sweeping and Alleys
2%



Garbage Collection
3%



Winter Maintenance
6%



Fleet Services
4%



Fire
1%



Other Light Vehicles
4%

Facilities Energy Consumption
51%



Cemeteries
<1%



Golf Courses
1%



Traffic Lights/
Street Lights
<1%



Outdoor Pools/
Athletic Fields
2%



Arenas
3%



Sport Parks/
Parks
4%



Regina Police
Service
6%



Asphalt
Plant
4%



Rec
Centres
11%



Offices
23%



Regina
Public
Library
5%



City Water &
Sewer System
8%



REAL
Campus
21%



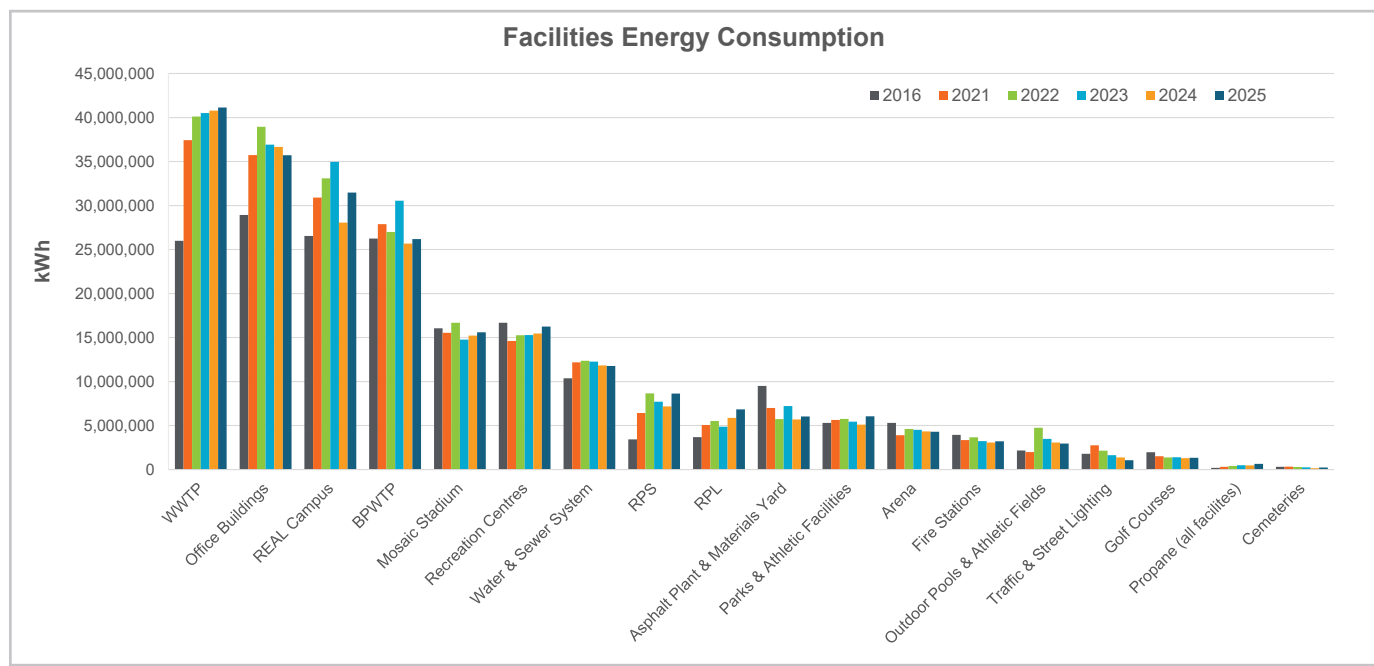
Mosaic
Stadium
10%

* We account for 85% of the Buffalo Pound Water Treatment Plant's energy consumption to reflect Regina's share of the plant's water distribution.

Facility Energy Consumption Trends

The WWTP and City office buildings have consistently been top energy consumers. Other major energy consumers in the City's portfolio include the REAL Campus and BPWTP.

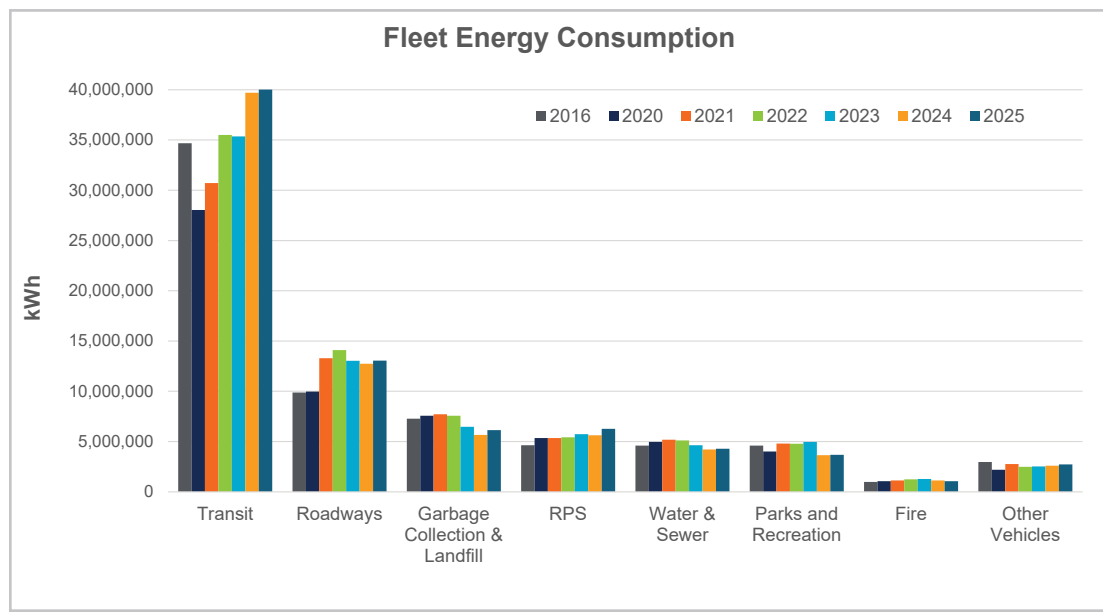
Initiatives to improve energy efficiency in these sectors are underway and can help demonstrate how other building and facility operators in Regina can adopt their own energy efficiency measures.



Fleet Energy Consumption Trends

The municipal vehicle fleet primarily consumes fossil fuels like gasoline and diesel. Transit has consistently been the largest fuel consumer, followed by Roadways, Waste Collection, the landfill and RPS.

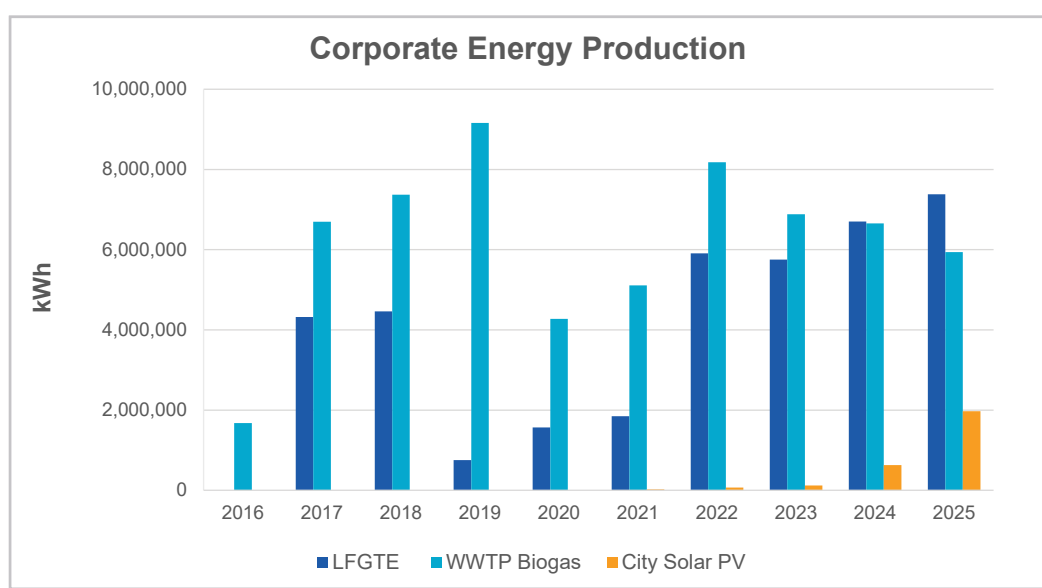
Electrifying transit will have a major impact on the City's energy transition.



City of Regina Renewable Energy Production

The City also produces renewable energy on-site, which is used directly through City operations or sold to SaskPower for use in the electricity grid. In 2025, the City generated 15,288,495 kWh of renewable energy, representing a 9 per cent increase from 2024. This is equivalent to the energy needed to power 2,123 homes. This growth was driven primarily by the significant expansion of the City's solar PV systems at the Buffalo Pound Water Treatment Plant, while generation from the LFGTE facility also increased.

The City has significantly increased renewable energy generation over the last seven years, primarily by improving methane capture and utilization through the LFGTE and biogas systems at the WWTP. Continued investment in these systems, together with the City's growing solar PV installations, has strengthened the City's renewable energy portfolio, reduced reliance on conventional energy sources and contributed to lower corporate GHG emissions.



Although solar PV currently represents a smaller share of the City's renewable energy portfolio than the LFGTE facility and WWTP biogas system, its contribution continues to grow as additional installations are brought online.

Looking ahead, the City aims to increase the proportion of renewable energy coming from solar power, aligning with our goal of diversifying and expanding the City's renewable energy sources.

Further opportunities for improving biogas capture and utilization at the Landfill and WWTP are being explored and will be advanced wherever possible.



Community Energy and GHG Emissions

Currently, most of the energy used in Regina involves burning fossil fuels. This means that energy consumption and GHG emissions are closely related, so reducing energy use will also reduce GHG emissions.

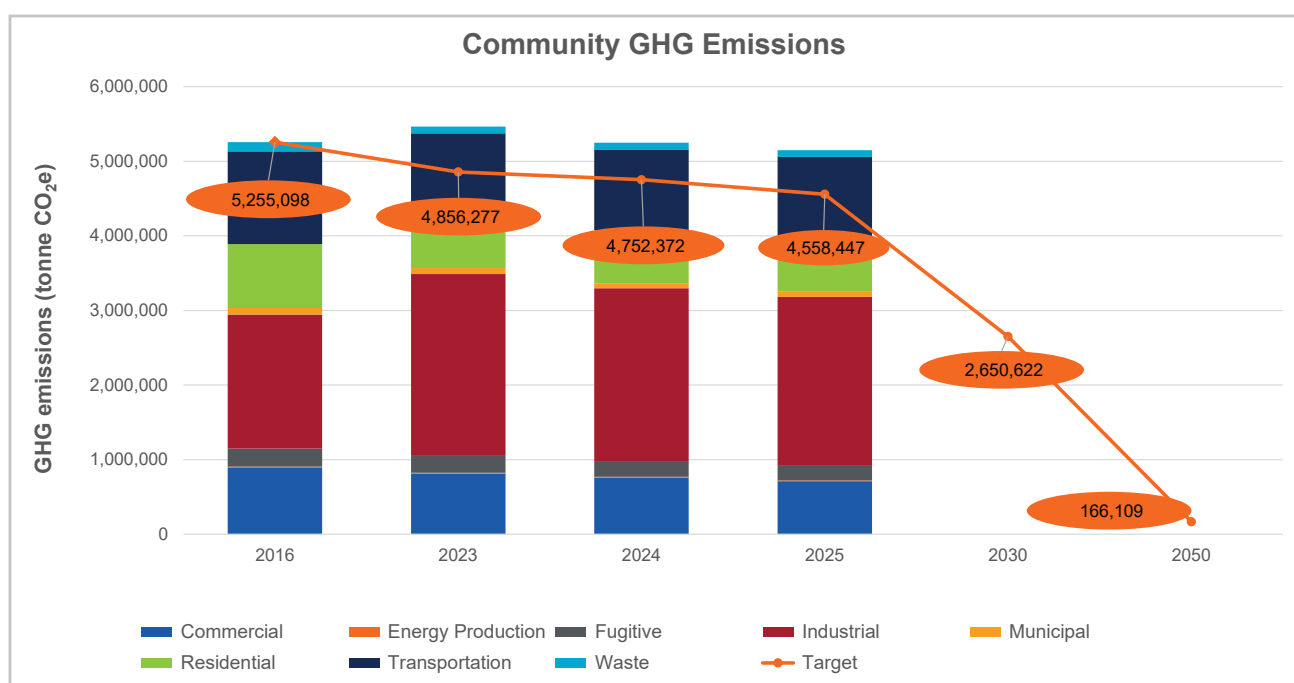
However, some fuel sources, activities and processes produce more emissions than others. This is why tracking both energy and GHG emissions is important.

Community Emissions

The community emissions inventory shows GHG emissions for the city (community), comparing the 2016 baseline year from the Energy and Sustainability Framework with actual estimated emissions in 2025.

In 2025, the community generated 5,148,503 tonnes of GHG emissions, exceeding the annual target of 4,558,447 tonnes by approximately 13 per cent. However, emissions declined by 2 per cent compared to both the 2016 and 2024 baseline, continuing the overall downward trend. Most sectors recorded lower emissions than in 2024, including commercial, transportation, fugitive emissions (unintentional methane leaks from natural gas systems), waste, and industrial. Despite these improvements, industrial emissions remain significantly above 2016 levels and continue to be the largest contributor to community emissions.

Continued efforts to improve industrial efficiency, expand renewable energy, electrify transportation, and improve energy efficiency across all sectors will be essential for achieving future GHG reduction targets.



Community Energy Consumption

The following graph illustrates community energy consumption in Regina. In 2025, total community energy consumption was 12 per cent lower than the 2016 baseline and 6 per cent below the 2025 energy reduction target. This also represents a 3 per cent decrease from 2024, continuing the overall downward trend in energy use. The commercial and industrial sectors contributed the most to this decline, while residential energy consumption remained relatively stable and transportation energy use increased slightly.

This decrease could result from a variety of factors including improvements in energy efficiency and/or reductions in energy use. More permanent changes are necessary for reducing emissions and making the switch to renewable energy.

