




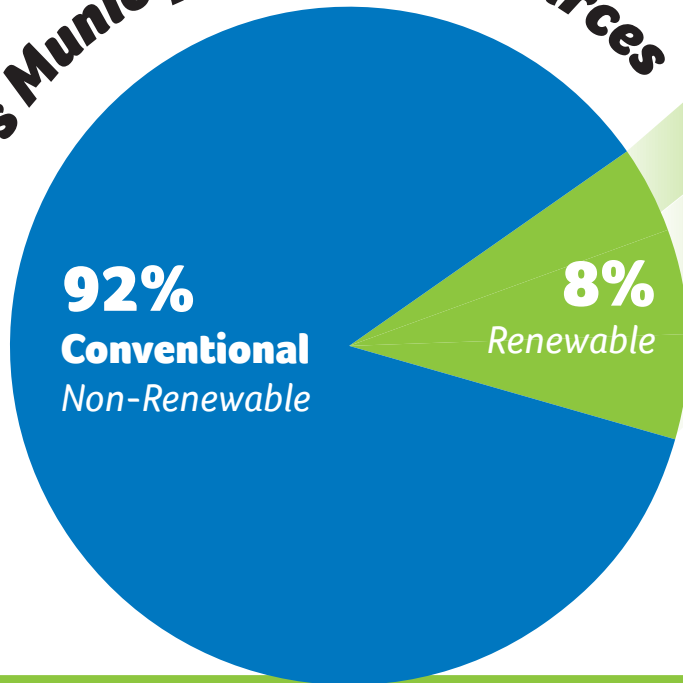
# Municipal Operations 2021 Energy and Emissions Inventory

## Moving Toward a Renewable Regina

The City of Regina's goal is to achieve net-zero carbon emissions and sourcing net-zero energy from renewable sources by 2050. The primary focus is on climate change mitigation through a three-pronged approach:

-  Reduce energy consumption
-  Improve energy usage/efficiency
-  Switch to renewable or low-carbon energy sources

### City of Regina's Municipal Energy Sources



Landfill Gas to Energy **1%**

City Biogas **2%** ↑

Green from SaskPower **5%** ↓\*

\*down from 7% due to reduced Hydroelectric energy production.

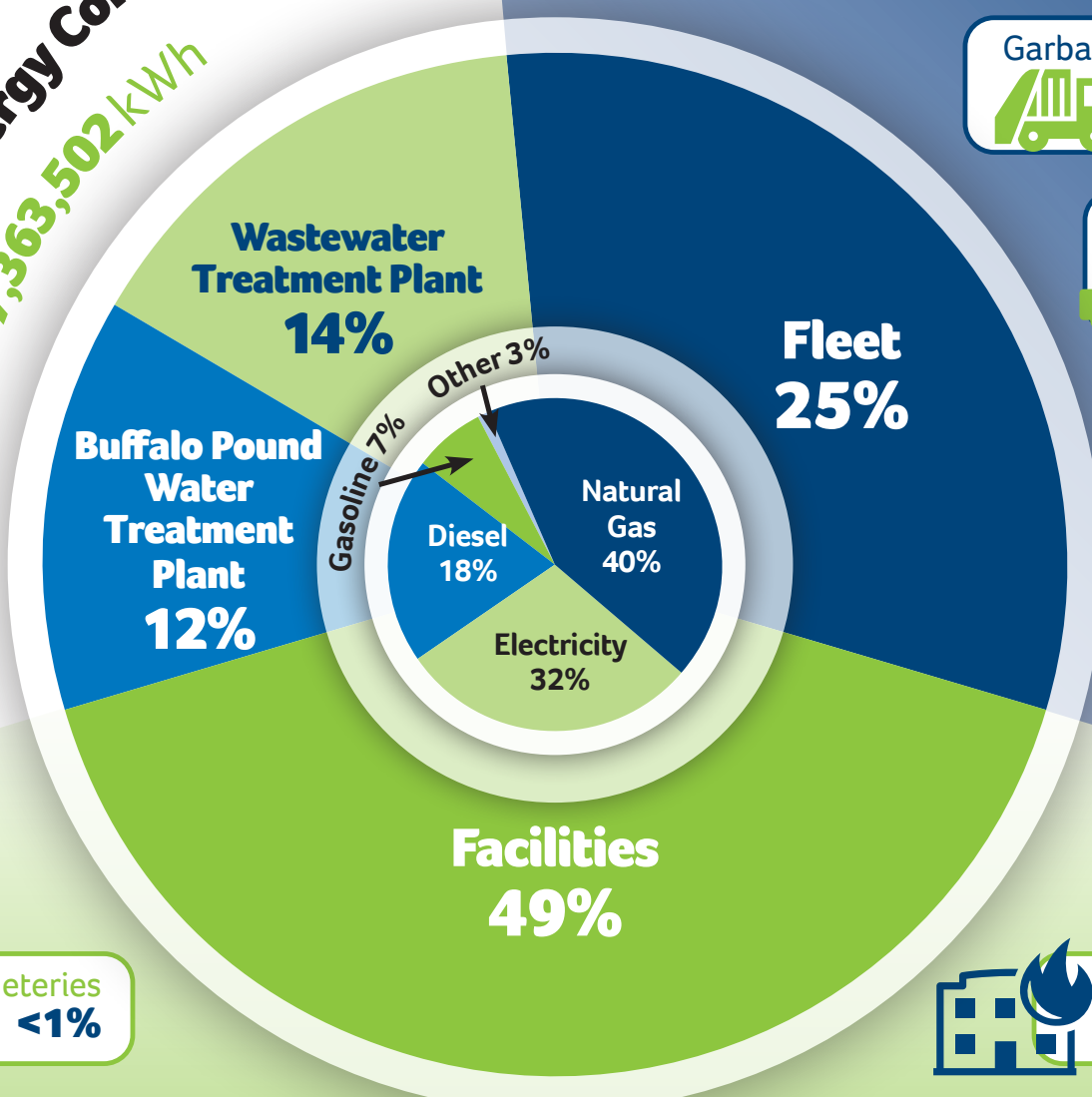
**Total Energy Generated:**  
**8,201,169 kWh**

Reflects municipal operations only  
Equivalent to powering 1,139 homes



Net zero renewable community = Greenhouse Gas (GHG) removed from air & Renewable Energy Used ≥ GHG Emissions & Non-Renewable Energy Used

**TOTAL Municipal Energy Consumption:**  
**277,363,502 kWh**



Transit **43%**

Roadways **19%**

Police **7%**

Water & Sewer **7%**

Parks **7%**

Fire **2%**

Garbage Collection & Landfill **11%**

Other Light Vehicles **4%**

Cemeteries **<1%**

Fire Stations **2%**

Golf Courses **1%**

Traffic Lights/ Street Lights **2%**

Outdoor Pools/ Athletic Fields **2%**

Arenas **3%**

Sport Parks/ Parks **4%**

Asphalt **5%**

Rec Centres **11%**

Offices **26%**

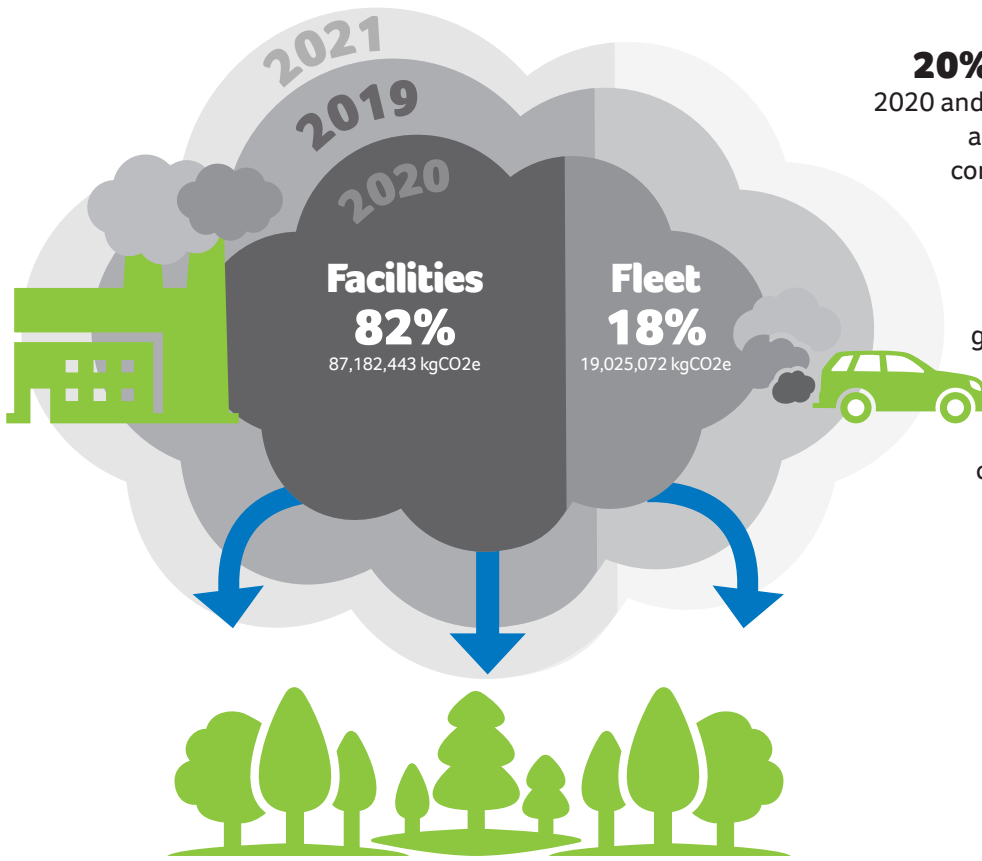
Water & Sewer Stations **9%**

REAL Campus **23%**

Mosaic Stadium **11%**

\* corrected from 2020

# 2021 Municipal Greenhouse Gas (GHG) Emissions From Energy Consumption

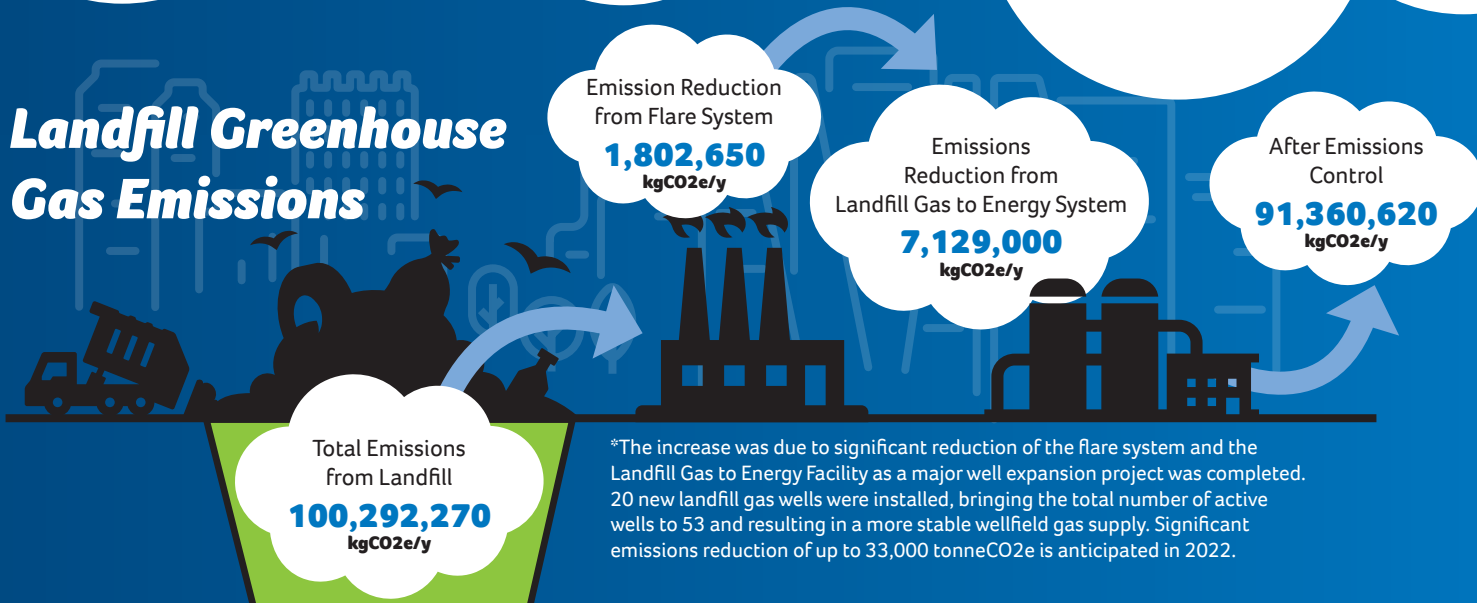


**20%** increase in GHG emissions between 2020 and 2021 due to return of staff to offices and an increased energy consumption combined with an increase in electricity emission intensity on the supply.

The increase in Saskpower emission intensity was due to reduced hydro generation availability, increased load requirements, unplanned outages at carbon capture facility at Boundary Dam Power Station and delays in commissioning renewable projects as a result of supply chain delays.

In 2021, the City of Regina maintained an inventory of 178,826 City-owned trees throughout the community. This vital urban forest is responsible for absorbing carbon and reducing GHG emissions by 3% (4,535,960 kgCO<sub>2e</sub>).

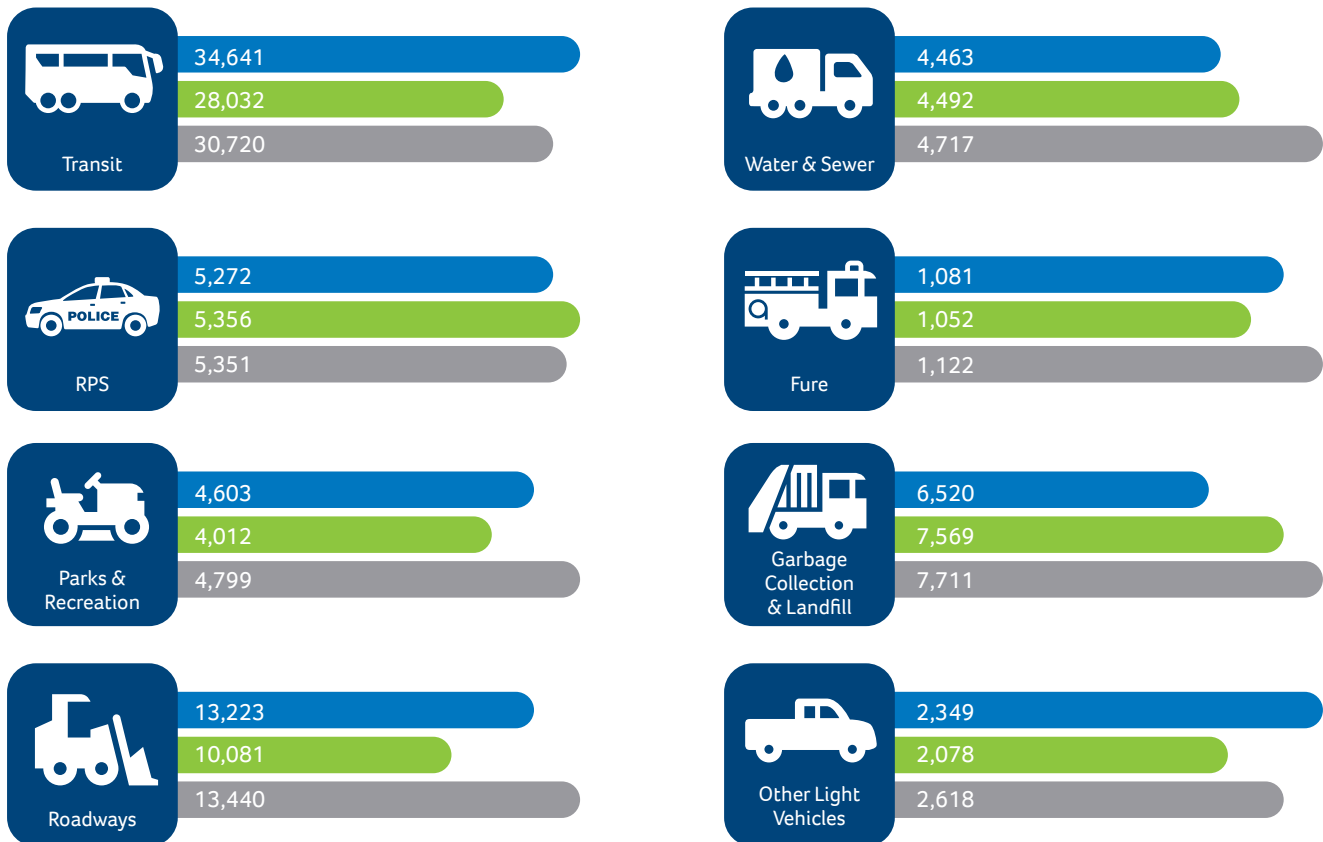
## Landfill Greenhouse Gas Emissions



\*The increase was due to significant reduction of the flare system and the Landfill Gas to Energy Facility as a major well expansion project was completed. 20 new landfill gas wells were installed, bringing the total number of active wells to 53 and resulting in a more stable wellfield gas supply. Significant emissions reduction of up to 33,000 tonneCO<sub>2e</sub> is anticipated in 2022.

# Fleet: Energy Consumption (kWh, '000s)

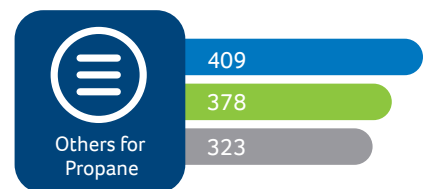
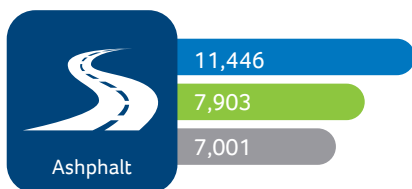
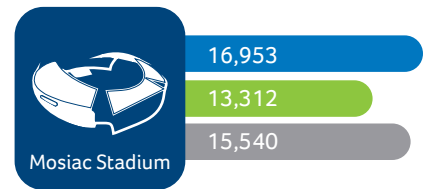
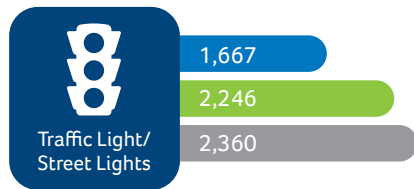
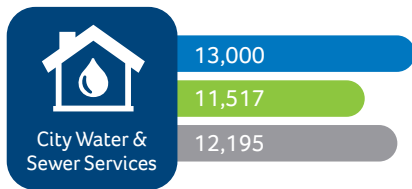
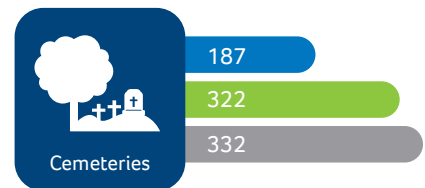
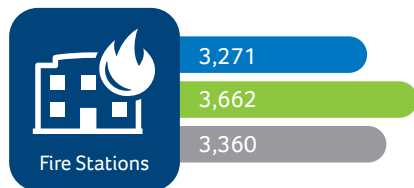
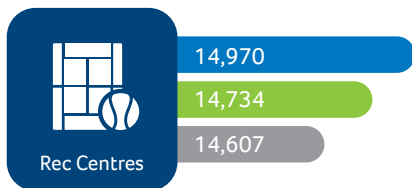
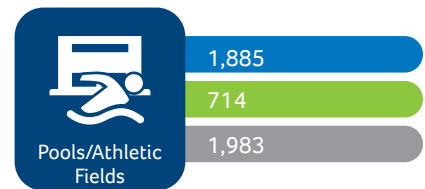
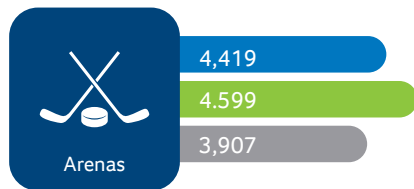
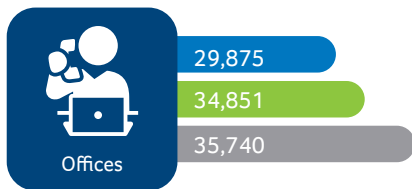
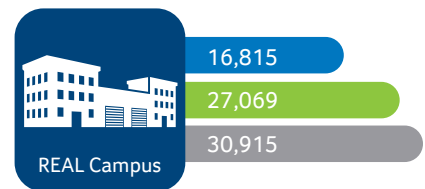
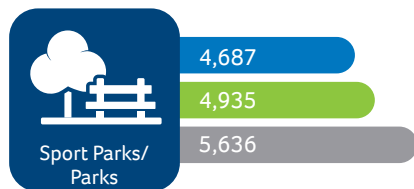
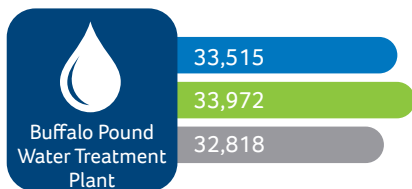
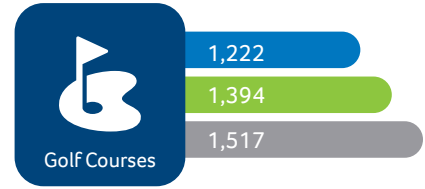
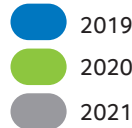
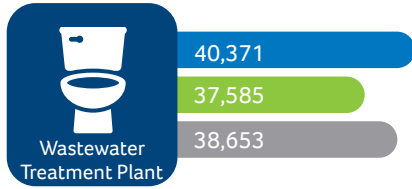
The City has many initiatives planned to reduce vehicle emissions. By 2030, all light-duty City vehicles purchased will be electric and City transit buses will begin to be electrified in 2024. For medium- and heavy-duty trucks, the City will explore options such as electric or hydrogen-fueled or using renewable diesel as a transition fuel.



● 2019    
 ● 2020    
 ● 2021

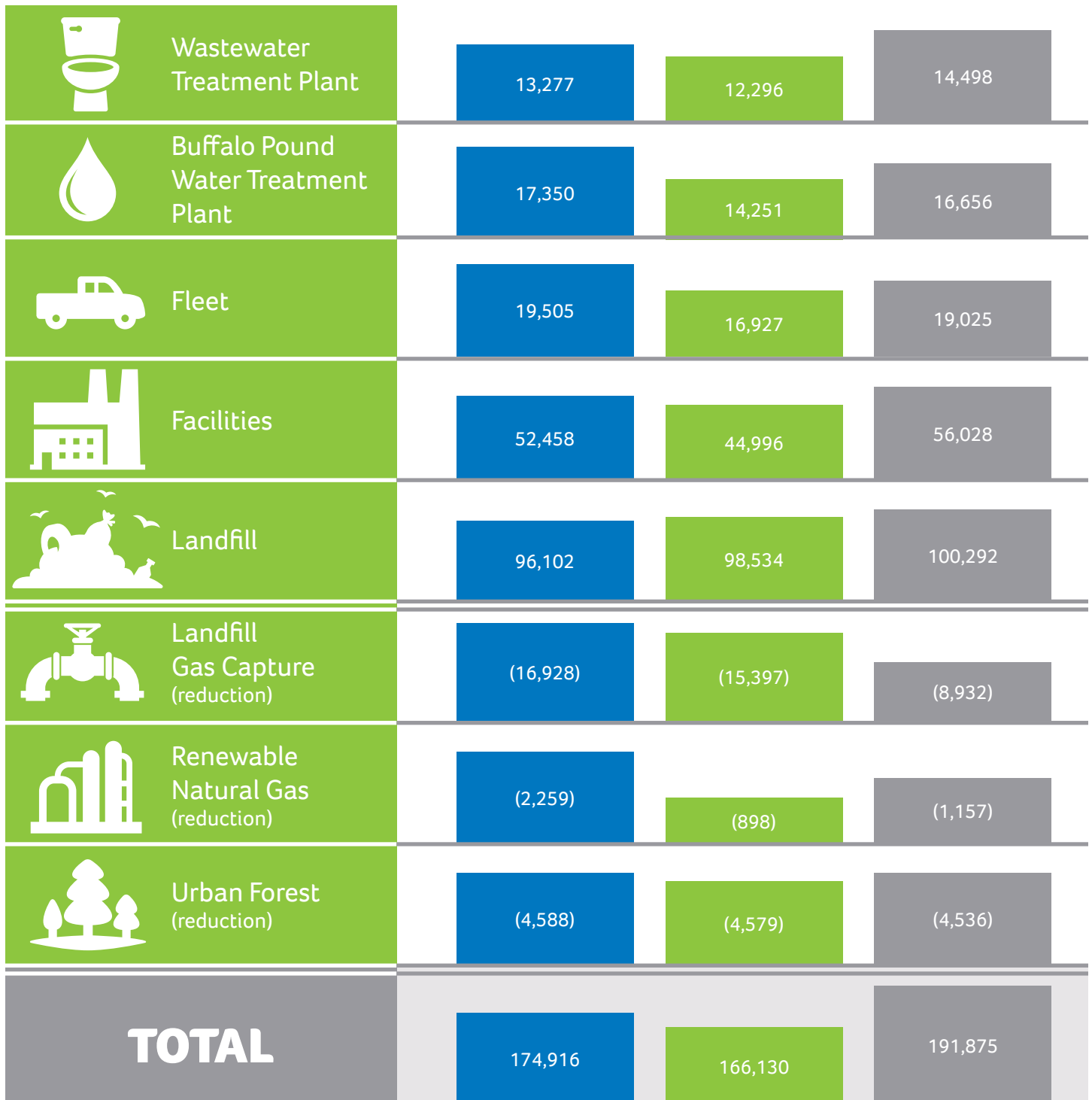
# Facilities: Energy Consumption

(kWh, '000s)



# City of Regina GHG Emissions

## GHG Emissions (Tonne CO2e)



● 2019   
 ● 2020   
 ● 2021

# City of Regina Energy Consumption (kWh, '000s)



Gasoline

18,591

16,441

19,267



Diesel

53,420

46,156

50,917



Renewable  
Natural  
Gas

11,070

5,229

6,332



Propane

549

451

617



Electricity

91,611

84,024

89,422



Natural  
Gas

98,879

109,563

110,808



2019



2020



2021

# City of Regina Energy Sources



Conventional

236,779,938 kWh

235,553,336 kWh

254,039,964 kWh

17,509,856 kWh

19,513,627 kWh

15,122,369 kWh



Green from SaskPower



City Biogas

11,070,277 kWh

5,228,599 kWh

6,332,612 kWh

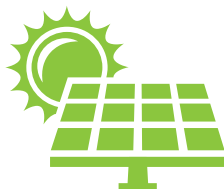
8,760,000 kWh

1,568,830 kWh

1,845,720 kWh



Landfill Gas to Energy



Solar

22,837 kWh



2019



2020



2021