



# ENERGY CONSERVATION AND DEMAND MANAGEMENT PLAN 2024-2028

# TABLE OF CONTENTS

- 1.0 INTRODUCTION ..... 3
- 2.0 GREENHOUSE GAS REDUCTION TARGET ..... 3
- 3.0 KEY STAFF ROLES AND RESPONSIBILITIES ..... 5
  - 3.1 Climate & Energy Division 5
  - 3.2 Corporate Energy Team 5
- 4.0 IMPLEMENTATION TIMELINE ..... 5
- 5.0 IMPLEMENTATION STRATEGY - BUILDINGS ..... 6
  - 5.1 Energy Management & Performance Tracking 6
  - 5.2 Retrofit and Renewal Projects 7
  - 5.3 Proactive Operations and Maintenance 10
  - 5.4 Purchasing and Procurement 10
  - 5.5 Education and Engagement 11
- 6.0 IMPLEMENTATION STRATEGY - FLEET ..... 12
  - 6.1 Fleet Data Management, Analysis, and Reporting 12
  - 6.2 Greening the Fleet 13
- 7.0 EVALUATION AND MONITORING ..... 14
  - 7.1 Building Performance 14
  - 7.2 Fleet Energy Performance 19
- 8.0 CONCLUSION ..... 19







## 1.0 INTRODUCTION

Dufferin County is committed to energy management as a key component of its operations and continues to strive to be a leader in energy management and conservation within the Broader Public Sector (BPS). The County is committed to the improvement of our energy efficiency through the creation of a corporate culture of conservation. This journey started with our first energy conservation and demand management plan (CDM) developed in 2014 and then updated in 2019.

Dufferin County is required in compliance with Ontario Regulation 507/18 Broader Public Sector (BPS): Energy Reporting and Conservation and Demand Management Plans; formerly Regulation 397/11 under the Green Energy Act to develop and implement a CDM plan effective 2014 and update it every 5 years. This document is the latest update to the CDM plan for Dufferin County and it covers the strategy for energy conservation in our buildings and fleet for the five-year period 2024-2028.

## 2.0 GREENHOUSE GAS REDUCTION TARGET

Dufferin County is adopting a target of a 33% reduction below 2016 levels in corporate emissions from our buildings and fleet by 2028. This target establishes a uniform energy conservation and emissions reduction goal for the County's buildings and fleet. The goal will also bring the corporate target in alignment with the direction of Dufferin County community emission reduction goals and other municipalities across Ontario.

Following the Federation of Canadian Municipalities (FCM) Partner for Climate Protection (PCP) protocol for quantifying GHG emissions, the County's corporate greenhouse gas (GHG) emissions from buildings and fleet in 2016 amounted to 2,770 tCO<sub>2</sub>e. In 2023, the County recorded a corporate emission of 2,078 tCO<sub>2</sub>e, a 25% reduction despite the addition of one Community Housing to the County's portfolio of buildings in 2018. Additionally, the streamlining of the County's fleet which resulted in the reduction of the fleet by 3 vehicles also contributed to the GHG emissions reduction recorded in 2023. These reductions in GHG emissions were achieved by stringently following an asset management approach that requires the replacement of aging assets in our buildings and fleet with low carbon and energy efficient options. Also, this reduction in GHG emissions was achieved without the expansion of ground-source and solar energy harnessed for use in County buildings.

Currently, the County has:

- a total of 47 ton geothermal heat pump system added during the 2011 expansion of the Courthouse
- a total of 62 ton geothermal heat pump system and an 18.2 kWth solar water heating system added during the development 40 Lawrence community housing in 2013.

**Table 1: Corporate Emissions Trends and 2028 Target**

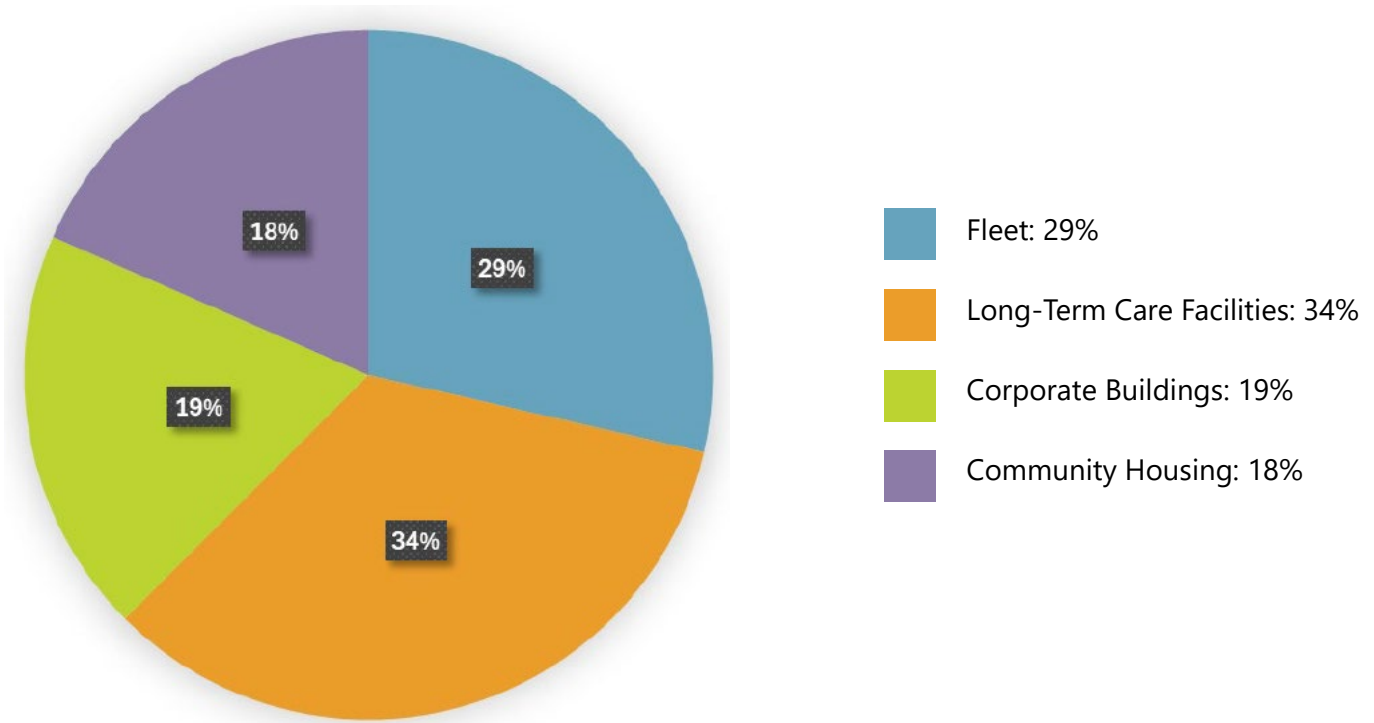
Asset Type	Baseline Year - 2016 Emissions (tCO2e)	2023 Emissions (tCO2e)	% Difference (2023 to 2016)	2028 Target (tCO2e)
Buildings	1754	1484	15.4%	1336
Fleet	1016	594	41.5%	535
Total	2770	2078	25.0%	1871

Dufferin County’s buildings assets include:

- Corporate buildings – which is comprised of administration offices, ambulance stations, cultural facilities, and operation garages
- Community housing
- Long-term care facilities

About 71% of the County’s 2023 corporate GHG emissions were from buildings (34% from long-term care facilities, 19% from corporate buildings, and 18% from community housing) while the remaining 29% were from fleet.

**Figure1: 2023 Corporate GHG Emissions by Source Category**



## 3.0 KEY STAFF ROLES AND RESPONSIBILITIES

To successfully achieve the target set for 2028, key roles and responsibilities of staff have been identified:

### 3.1 Climate & Energy Division

Climate & Energy staff within the Public Works Department play a crucial role in implementing this plan. Specifically, their responsibilities include:

- Assisting in compiling research on various initiatives to assess feasibility and develop business cases for future actions.
- Collaborating with different departments to identify gaps in energy-related knowledge and processes, informing the development of programs and policies to meet the 2028 target.
- Managing the County's Energy Management Software to deliver and communicate insights on the County's energy consumption.
- Forming and maintaining momentum within the Corporate Energy Team by developing agendas, scheduling meetings, and recording progress on initiatives to keep all staff and the community updated on the Plan's status.

In the previous Energy Conservation and Demand Management Plan (2019), the County committed to creating a dedicated role within the Climate & Energy division focused on corporate energy and emissions reduction. This position, the Corporate Climate Initiatives Coordinator, was filled in 2023 and is responsible for developing strategies to achieve targets, supporting climate training for staff to facilitate climate-informed decisions, and collaborating closely with Operations, Facilities, and Finance staff to monitor energy use and performance, and recommend actions to meet the County's corporate climate and energy targets.

### 3.2 Corporate Energy Team

The Corporate Energy Team will consist of Dufferin staff dedicated to developing, implementing, and measuring the effectiveness of measures to achieve the goals set in this Plan. The positions and roles of the Corporate Energy Team members are:

- **Corporate Climate Initiatives Coordinator:** Chair and primary contact responsible for creating and circulating agendas and minutes, facilitating discussions, and ensuring participation.
- **Climate and Energy Manager:** Vice-chair supporting the Chair as needed.
- **Facility Manager:** Provides an overview of energy use and projects in the building portfolio.  
**Facility Division Representative(s):** Offers insights into energy use and projects in corporate and community buildings.
- **Dufferin Oaks Representative(s):** Offers insights into energy use and projects at Dufferin Oaks
- **Operations Division Representative(s):** Supports the development and implementation of the Green Fleet Strategy and provides updates on the new operations center.

## 4.0 IMPLEMENTATION TIMELINE

The implementation timeline is as follows:

- Immediate: 2024 – 2025
- Medium: 2026
- Long term: 2027 – 2028
- Ongoing

## 5.0 IMPLEMENTATION STRATEGY - BUILDINGS

The following measures will help achieve the greenhouse gas reduction targets for buildings.

### 5.1 Energy Management & Performance Tracking

This section provides strategies to monitor and benchmark energy consumption data to track the progress of energy management strategies.

#### 5.1.1: Track and monitor monthly energy bills

**Tasks:**

- Continue to monitor monthly energy consumption in buildings to respond to consumption irregularities (i.e. high energy consumption)
- Use dashboards to view energy data
- Generate regular reports on energy consumption

**Responsibility:**

- Climate & Energy
- Facilities

**Tools:**

- Energy Management Software
- Sub-metering

**Timeline:** Ongoing

**Key Performance Indicators:**

- Number of billing flags responded to
- kWh or m3 avoided
- Cost savings
- Real-time energy usage

**Co-Benefits:**

- Increased awareness of energy consumption and energy spikes
- Identification and resolution of billing errors
- Improved tracking of utility budgets
- Provides up-to-date information on energy consumption patterns, and detect anomalies

#### 5.1.2: Update energy performance using RETScreen Expert and monitor progress towards reduction targets

**Tasks:**

- Establish energy models for each facility using the baseline year of 2016 and maintain these models on a quarterly basis
- Develop energy models in RETScreen Expert for new facilities
- Monitor progress towards 2028 energy reduction target on an annual basis

**Responsibility:**

- Climate & Energy
- Facilities

**Tools:**

- Energy Management Software
- RETScreen Expert

**Timeline:** Ongoing

**Key Performance Indicators:**

- Number of facility energy models updated
- Annual tracking of progress towards target, Quantification of avoided energy and GHG emissions

**Co-Benefits:**

- Advanced energy literacy of staff
- Knowledge of energy drivers and trends
- Benchmarking of historical performance
- Awareness of progress towards 2028 target

## 5.2 Retrofit and Renewal Projects

This section outlines strategies for prioritizing and implementing building retrofit and renewal projects, as well as improving the management of County assets.

### 5.2.1: Optimize building sustainability through efficient equipment asset management practices

#### Tasks:

- Conduct buildings systems review and designs that promotes the uptake of low carbon options during equipment asset replacement
- Explore potential to consider lifecycle costing for asset management
- Maintain and update inventory of building systems and equipment

#### Responsibility:

- Climate & Energy
- Facilities
- Finance - Asset Management

#### Tools:

- Equity and Climate Lens Assessment Tool
- Energy Audits
- Building Condition Assessments
- Asset Management Tool

**Timeline:** Immediate to Medium

#### Key Performance Indicators:

- Percentage of projects that considers and adopts low-carbon replacement options
- Number of equipment asset replacement project that used lifecycle costing for the business case
- Avoided energy and associated GHGs and costs
- Percent of facility equipment kept up to date

#### Co-Benefits:

- Better planning of equipment replacement and alternative low-carbon technologies
- Support for building the business case for energy retrofit projects
- Improved understanding of the lifecycle cost of equipment

### 5.2.2: Develop a whole systems approach to scoping projects

#### Task:

- Consider building envelope, building automation and lighting upgrades as part of mechanical and other major system renewal projects

#### Responsibility:

- Climate & Energy
- Facilities

#### Tools:

- Equity and Climate Lens Assessment Tool
- Corporate Green Building Standard

**Timeline:** Ongoing

#### Key Performance Indicators:

- Number of projects implemented considering whole system approach
- Avoided energy and associated GHGs and costs

#### Co-Benefits:

- Enhance opportunities to identify alternative low carbon technologies for equipment replacement
- Reduction in natural gas consumption and associated GHGs

### 5.2.3: Conduct monitoring and verification (M&V) for energy retrofit projects

**Tasks:**

- For new technologies, verify actual energy savings and compare to the target to inform future business cases for other facilities
- Implement M&V techniques (i.e. BAS review and investigation) for equipment retrofit projects and other relevant element

**Responsibility:**

- Climate & Energy
- Facilities

**Tools:**

- Sub-metering
- RETScreen Expert

**Timeline:** Immediate

**Key Performance Indicators:**

- Manufacturer claimed savings vs verified savings
- Avoided energy consumption and associated cost and GHG

**Co-Benefits:**

- Improved understanding of the performance of new technologies
- Improved operation and education on new equipment used in County buildings
- Business case justification to expand proven new technologies across the County's building portfolio

### 5.2.4: Develop a renewable energy strategy

**Tasks:**

- Develop a comprehensive renewable energy strategy that takes into account current energy use, areas of greatest opportunity, feasibility studies, and new construction targets
- Consider a study to highlight the investment and business case pathways for retrofitting facilities to achieve net zero emissions

**Responsibility:**

- Climate & Energy
- Facilities

**Tools:**

- Energy Audits
- Building Condition Assessments
- Net-zero feasibility studies

**Timeline:** Long term

**Key Performance Indicators:**

- Number of renewable energy projects implemented
- Number of buildings included in strategy
- kWh of renewable energy generated

**Co-Benefits:**

- Renewable energy integrated into new construction design specifications
- Energy independence
- Reduced energy operating costs



## 5.2.5: Develop a Green Building Standard

### Task:

- Create standards for equipment and building systems including right-sizing and power density

### Responsibility:

- Climate & Energy
- Facilities staff

### Tools:

- Equity and Climate Lens Assessment Tool
- Tri-County Green Development Standard

**Timeline:** Medium to long-term

### Key Performance Indicators:

- Number of new buildings and major retrofit built to new standard
- Avoided energy consumption and associated costs and GHGs savings

### Co-Benefits:

- Meeting and exceeding exceptional energy performance standards in every new building
- Reduced low carbon footprint in new buildings
- Increased comfort and health for occupants
- Resiliency to extreme weather, climate, and energy prices
- Improved facility operations



## 5.3 Proactive Operations and Maintenance

This section outlines strategies for managing daily operations and maintenance in buildings to enhance energy performance.

### 5.3.1: Enhance and expand smart building controls

#### Tasks:

- Prepare business case to expand BAS to additional buildings
- Develop service contract and staff training standards
- Standardize thermostats in buildings without a BAS
- Develop new and continue to optimize existing system of operating schedules and temperature and humidity setpoints

#### Responsibility:

- Climate & Energy
- Facilities

#### Tools:

- Equity and Climate Lens Assessment Tool

**Timeline:** Medium

#### Key Performance Indicators:

- Proportion of buildings, floor area and energy use under BAS control
- Number of facilities with standardized thermostat
- Number of facilities following recommended set points
- Avoided energy consumption and associated cost and GHG savings

#### Co-Benefits:

- Better management of HVAC equipment and occupant comfort
- Reduction in energy use and costs
- Enhanced facility operations and staff training
- Optimized equipment life

## 5.4 Purchasing and Procurement

This section details strategies to improve procurement standards and financial mechanisms, aiming to reduce energy consumption in existing and new buildings.

### 5.4.1: Develop a sustainable procurement policy and procedures

#### Task:

- Explore the development of an approach to procurement that will best reduce emissions and embodied carbon in buildings
- Implement lifecycle analysis in procurement decisions to minimize environmental impact

#### Responsibility:

- Climate & Energy
- Facilities
- Procurement

#### Tools:

- Equity and Climate Lens Assessment Tool
- Sustainable Procurement Strategy

**Timeline:** Immediate

#### Key Performance Indicator:

- Avoided energy consumption and associated cost and GHG savings
- Percentage reduction in embodied carbon emissions

#### Co-Benefit:

- Reduction in embodied carbon
- Enhanced sustainability of building materials and practices

## 5.5 Education and Engagement

This section outlines strategies for engaging County staff and coordinating energy-specific training workshops.

### 5.5.1: Enhance staff climate training and communication

**Tasks:**

- Launch online climate training modules for County staff and expand offering to staff at member municipalities
- Schedule regular in-person climate training
- Development and sharing of quarterly and annual energy performance reports
- Explore and offer targeted energy and role-specific training for maintenance and operations staff

**Responsibility:**

- Climate & Energy

**Tools:**

- Online and in-person staff climate trainings
- Quarterly Corporate Energy Team Meeting

**Timeline:** Ongoing

**Key Performance Indicators:**

- Number of completed online climate training
- Attendance at in-person climate trainings
- Number of Corporate Energy Team meetings held
- Number of energy performance reports per building provided

**Co-Benefits:**

- Increased staff engagement and energy literacy
- Better identification of energy savings opportunity
- Informed progress tracking towards reduction targets
- Positive work environment and increased uptake in the County’s corporate energy initiatives



## 6.0 IMPLEMENTATION STRATEGY - FLEET

The following measures will help achieve the greenhouse gas reduction targets for the County's fleet.

### 6.1 Fleet Data Management, Analysis, and Reporting

This section provides strategies to better track and analyze the County's fleet data and vehicle inventory.

#### 6.1.1: Track fuel consumption and identify opportunities for route optimization

**Tasks:**

- Monitor fuel consumption
- Explore potential of inputting consumption data into RETScreen Expert
- Explore opportunities to provide fuel benchmarking reports
- Explore opportunities to remove or reduce deadheading

**Responsibility:**

- Climate & Energy
- Operations

**Tools:**

- MyGeoTab
- RETScreen Expert

**Timeline:** Ongoing

**Key Performance Indicators:**

- Data on fuel consumption and distance covered
- Number of opportunities identified
- Reduction in vehicle and equipment deadheading

**Co-Benefits:**

- Improved monitoring and understanding of corporate fuel consumption and associated GHGs
- Enable ability to conduct analyses of year-over-year fuel consumption and trends
- Reduce vehicle kilometres traveled

#### 6.1.2: Update the Fleet Management Plan to include a centralized and regularly updated inventory of all vehicles and equipment

**Task:**

- Build upon existing vehicle list to include all fuel-based and non-fuel based equipment and vehicles.

**Responsibility:**

- Operations

**Tools:**

- MyGeoTab
- Fleet Management Plan

**Timeline:** Long term

**Key Performance Indicator:**

- Inventory expanded to include all vehicles and equipment

**Co-Benefits:**

- More organized and coordinated approach to fleet asset management approach to identifying and prioritizing vehicle and equipment retrofit and/or replacement opportunities



## 6.2 Greening the Fleet

This section outlines strategies to evaluate green fleet renewal criteria, fuel conversion, and expand the County's electric vehicle charging station infrastructure for low-emission solutions.

### 6.2.1: Review current fleet and equipment fuel usage to identify options for converting to low-carbon fuels

**Tasks:**

- Review fuel mixes and conversion options and determine viable low-carbon options for current fleet vehicles
- Identify fuel-using equipment and identify viable electric or low-carbon fuel options
- Identify required user maintenance training and investments required for alternative fuel types.

**Responsibility:**

- Climate & Energy
- Operations

**Tools:**

- Green Fleet Strategy

**Timeline:** Medium to Long-term

**Key Performance Indicators:**

- Number of converted vehicles to low-carbon options
- Number of low-carbon or electric equipment

**Co-Benefits:**

- Improved staff capacity for maintaining an electrified fleet
- Enhanced community reputation for adopting electric vehicles

### 6.2.2: Expand electric vehicle (EV) charging infrastructure for fleet vehicles

**Tasks:**

- Continue to pursue the installation of more EV charging infrastructure at County-owned facilities
- Collaborate with lower-tier municipalities to expand the County's EV charging station network
- Maintain EV charging station inventory and tracking repairs and maintenance

**Responsibility:**

- Climate & Energy
- Facilities staff
- Operations staff

**Tool:**

- Green Fleet Strategy
- Online EV charging station dashboard

**Timeline:** Ongoing

**Key Performance Indicators:**

- Number of EV charging stations
- Number of facilities with EV charging stations
- Ratio of EV stations to EV fleet vehicles

**Co-Benefits:**

- Increased access to EV charging infrastructure for County vehicles and the community
- Expanded EV network and closing gaps of EV infrastructure



## 7.0 EVALUATION AND MONITORING

The following targets for energy conservation were set in County’s 2019 CDM Plan:

- T1. Reduce overall energy consumption in Corporate Buildings that have a normalized benchmark higher than the 2016 provincial median to a level below provincial average within 3 years.
- T2. Reduce overall energy consumption in Corporate Buildings that have a normalized benchmark lower than the 2016 provincial median by 5% over 5 years.
- T3. Integrate the energy conservation plan with the Corporate Climate Action plan.
- T4. Reduce overall energy consumption in Community Housing units by 10% over 5 years.
- T5. Reduce overall energy consumption in Fleet assets by 10% over 5 years

### 7.1 Building Performance

The following section is the annual building performance for the County’s buildings.

**Table 3: Corporate Building Energy Performance**

Buildings	Target Category	2023 Target (kWh/ft2)	2016 Baseline (kWh/ft2)	2023 Levels (kWh/ft2)	% Difference (2016 – 2023)
<b>Administration Offices:</b> Courthouse	T2	18.5	19.5	16.4	15.7%
<b>Administration Offices:</b> Edelbrock Centre	T2	17.4	18.3	18.9	-3.3%
<b>Ambulance Station:</b> Orangeville	T2	18.3	19.2	21.3	-10.9%
<b>Ambulance Station:</b> Shelburne	T2	24.3	25.6	31.7	-23.6%
<b>Ambulance Station:</b> Grand Valley	T1	28.1	33.0	32.1	2.6%
<b>Cultural Facilities:</b> Museum of Dufferin	T2	11.9	12.5	19.6	-57.3%
<b>Cultural Facilities:</b> Museum Church	T1	17.7	31.4	10.7	65.7%
<b>Operations Garage:</b> Primrose North	T1	20.1	32.6	27.2	16.6%
<b>Operations Garage:</b> Primrose South	T1	20.1	29.0	30.8	-6.4%
<b>Total</b>	<b>N/A</b>	<b>N/A</b>	<b>19.9</b>	<b>19.2</b>	<b>3.4%</b>

**Table 4: Courthouse Annual Energy Performance**

Year	Energy Use Intensity (kWh/ft2)	% Difference (compared to 2016)
2016	19.5	N/A
2017	19.9	-2.0%
2018	20.7	-6.1%
2019	23.0	-18.0%
2020	20.4	-5.0%
2021	18.7	4.1%
2022	17.3	11.0%
2023	16.4	15.7%

**Table 5: Edelbrock Centre Annual Energy Performance**

Year	Energy Use Intensity (kWh/ft2)	% Difference (compared to 2016)
2016	18.3	N/A
2017	18.2	0.8%
2018	19.8	-8.1%
2019	20.2	-10.2%
2020	17.3	5.4%
2021	16.9	7.7%
2022	18.2	0.9%
2023	18.9	-3.3%

**Table 6: Orangeville Ambulance Station Annual Energy Performance**

Year	Energy Use Intensity (kWh/ft2)	% Difference (compared to 2016)
2016	19.2	N/A
2017	21.4	-11.4%
2018	21.1	-10.0%
2019	22.9	-19.1%
2020	21.3	-10.8%
2021	22.4	-16.5%
2022	23.4	-21.9%
2023	21.3	-10.9%

**Table 7: Shelburne Ambulance Station Annual Energy Performance**

Year	Energy Use Intensity (kWh/ft2)	% Difference (compared to 2016)
2016	25.6	N/A
2017	25.8	-1.0%
2018	30.5	-19.2%
2019	31.0	-20.9%
2020	29.9	-16.7%
2021	25.8	-0.6%
2022	28.5	-11.3%
2023	31.7	-23.6%

**Table 8: Grand Valley Ambulance Station Annual Energy Performance**

Year	Energy Use Intensity (kWh/ft2)	% Difference (compared to 2016)
2016	33.0	N/A
2017	35.6	-7.9%
2018	34.8	-5.6%
2019	34.0	-3.2%
2020	29.9	9.1%
2021	30.5	7.6%
2022	31.4	4.7%
2023	32.1	2.6%

**Table 9: Museum of Dufferin Annual Energy Performance**

Year	Energy Use Intensity (kWh/ft2)	% Difference (compared to 2016)
2016	12.5	N/A
2017	12.1	2.7%
2018	14.4	-15.1%
2019	14.2	-13.6%
2020	22.0	-76.4%
2021	25.2	-102.4%
2022	21.2	-70.2%
2023	19.4	-55.4%

**Table 10: Museum Church Annual Energy Performance**

Year	Energy Use Intensity (kWh/ft2)	% Difference (compared to 2016)
2016	31.4	N/A
2017	21.0	33.0%
2018	19.5	37.7%
2019	17.2	45.1%
2020	4.7	84.9%
2021	0.4	98.7%
2022	10.0	68.0%
2023	10.7	65.7%

**Table 11: Primrose Operations Centre North Garage Annual Energy Performance**

Year	Energy Use Intensity (kWh/ft2)	% Difference (compared to 2016)
2016	32.6	N/A
2017	33.1	-1.6%
2018	35.2	-7.9%
2019	36.6	-12.1%
2020	35.8	-9.9%
2021	30.5	6.6%
2022	24.0	26.4%
2023	27.2	16.7%

**Table 12: Primrose Operations Centre South Garage Annual Energy Performance**

Year	Energy Use Intensity (kWh/ft2)	% Difference (compared to 2016)
2016	29.0	N/A
2017	31.2	-7.7%
2018	33.0	-13.9%
2019	31.3	-8.2%
2020	26.2	9.6%
2021	32.7	-12.9%
2022	38.4	-32.6%
2023	30.8	-6.4%

**Table 13: Long-Term Care Facility Annual Energy Performance**

Building	2016 Baseline (kWh/ft <sup>2</sup> )	2017 (kWh/ft <sup>2</sup> )	2018 (kWh/ft <sup>2</sup> )	2019 (kWh/ft <sup>2</sup> )	2020 (kWh/ft <sup>2</sup> )	2021 (kWh/ft <sup>2</sup> )	2022 (kWh/ft <sup>2</sup> )	2023 (kWh/ft <sup>2</sup> )	% Diff. (2016-2023)
Dufferin Oaks	57.8	57	58.2	91.1	65.3	50.4	48.5	49.5	14.4%
Mel Lloyd Centre	51.5	52.8	51.7	50.6	49.9	56	54.8	51.1	0.8%
<b>Total</b>	<b>56.8</b>	<b>56.3</b>	<b>57.1</b>	<b>59.4</b>	<b>62.7</b>	<b>51.3</b>	<b>49.6</b>	<b>49.8</b>	<b>12.4%</b>

**Table 14: Community Housing Annual Energy Performance**

Based on data availability, the baseline year for Community Housing is 2020 and Table 14 below provides a description of the energy performance of the County's Community Housing.

Building	2020 Baseline (kWh/ft <sup>2</sup> )	2021 (kWh/ft <sup>2</sup> )	2021 % Diff.	2022 (kWh/ft <sup>2</sup> )	2022 % Diff.	2023 (kWh/ft <sup>2</sup> )	2023 % Diff.
22 Third Ave	41.2	40.5	1.7%	43.3	-4.9%	40.5	1.9%
301 First Ave	18.9	17.8	5.9%	16.7	11.7%	17.9	5.6%
40 Lawrence	12.2	11.7	4.6%	11.8	3.3%	11.0	9.8%
43 Bythia	22.1	20.8	5.9%	21.4	3.2%	21.5	3.0%
54 Lawrence	6.2	6.7	-8.0%	6.8	-9.6%	6.8	-9.5%
56 Bythia	16.8	16.7	0.8%	20.6	-22.9%	17.0	-1.2%
71 Emma	19.0	17.7	6.8%	19.3	-2.0%	17.8	6.2%
207 William	24.0	23.9	0.7%	22.0	8.5%	22.9	4.9%
227 William	17.6	16.6	5.8%	15.5	11.7%	14.8	16.1%
250 Simon	19.1	20.0	-4.5%	19.0	0.8%	18.1	5.7%
<b>Total</b>	<b>17.8</b>	<b>17.3</b>	<b>2.6%</b>	<b>17.4</b>	<b>2.4%</b>	<b>17.0</b>	<b>4.7%</b>



## 7.2 Fleet Energy Performance

Due to data availability, the baseline year for the County's corporate fleet is 2021 and Table 15 below provides a description of the energy performance of the County's fleet.

**Table 15: Fleet Energy Performance**

Year	Total - Energy (ekWh)	Distance covered (km)	Total - Energy (ekWh/km)	% Difference (compared to 2021)
2021	1,789,858	650,567	2.8	N/A
2022	2,470,417	833,739	3.0	-7.7%
2023	2,383,108	878,993	2.7	1.5%

## 8.0 CONCLUSION

Dufferin County remains dedicated to energy management and conservation as essential components of its operations, aiming to lead the Broader Public Sector (BPS) in these areas. Since our initial energy conservation and demand management plan (CDM) in 2014 and its update in 2019, we have made significant strides in creating a corporate culture of conservation.

As part of our ongoing commitment and in compliance with Ontario Regulation 507/18, we have developed this updated CDM plan for the period 2024-2028. Our ambitious target of reducing corporate emissions from buildings and fleet by 33% below 2016 levels by 2028 reflects our alignment with Dufferin County's community emission reduction goals and the broader objectives of municipalities across Ontario.

The progress we have made thus far, achieving a 25% reduction in corporate emissions by 2023, demonstrates our capability and determination. This was accomplished by adhering to an asset management approach that prioritizes low carbon and energy-efficient replacements for aging assets, alongside streamlining our fleet. These efforts were achieved without expanding our use of ground-source and solar energy, highlighting the effectiveness of our current strategies.

Moving forward, we will continue to develop innovative strategies, provide robust support for staff climate training, and closely monitor energy use to recommend effective actions. Our commitment to these principles will ensure we meet our energy and emission reduction targets, fostering a sustainable future for Dufferin County. Together, we will build on our successes and continue to lead by example in energy management and conservation.