

Town of Whitby

Staff Report

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Report Title: 2023 Annual Sustainability and Climate Change Report

Report to: Committee of the Whole

Date of meeting: June 10, 2024

Report Number: CAO 16-24

Department(s) Responsible:

Office of the Chief Administrative Officer
Financial Services Department

Submitted by:

Sarah Klein, Director Strategic Initiatives

**Acknowledged by M. Gaskell,
Chief Administrative Officer**

For additional information, contact:

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Sustainability and Climate Change

1. Recommendation:

1. That Report CAO 16-24 be received as information;
2. That the Clerk's office forward a copy of Staff Report CAO 16-24 to the Region of Durham's Sustainability Department; and,
3. That Schedule S of the Fees and Charges By-Law # 7220-17, as amended, be further amended to include the new Level 3 Electric Vehicle Charging Station Fees as outlined in Staff Report CAO 16-24.

2. Highlights:

- The 2023 Annual Sustainability Report (Attachment 1) meets the reporting commitments outlined in the 2016 Corporate Sustainability Plan and highlights the Town of Whitby's sustainability and climate change actions and successes in 2023.
- This report allows the Town to meet its climate change commitments, including disclosing corporate greenhouse gas (GHG) emissions and Carbon Disclosure Project (CDP) score requirements as a member of the Global Covenant of Mayors and signatories on the C40 Cities Race to Resilience and Race to Zero campaigns.

- Key achievements in 2023 include:
 - Completion and approval of Phase 2: Mitigation of the Whitby Climate Emergency Response Plan;
 - Implementation of the zero carbon projects identified in the 2023 budget, resulting in the reduction of 514.4 Tonnes of Carbon Dioxide.
 - The selection of Whitby's Official Tree through a community campaign to support the Town's ongoing commitment to the urban forest.
- In support of action item 1.5.1 in Whitby's Climate Emergency Response Plan Phase 1: Resilience, a survey was conducted to assess the community's basic knowledge of climate change including risks, preparedness, and recovery.
- The Town of Whitby's first Level 3 EV charging station will be installed in 2024. As such, staff are recommending a user fee of \$19 per hour for this charging station that aligns with the industry standards.

3. Background:

The Town of Whitby recognizes that sustainability is a priority, both corporately and within the community. The Town of Whitby has the following Council-endorsed strategic plans and reporting commitments to guide implementation:

Strategic Plans

Community Strategic Plan (2023)

The Community Strategic Plan provides a shared vision and objectives for how the Town Council and Staff will work together to deliver on community priorities over the next four years and beyond. Within Whitby's Community Strategic Plan are four strategic pillars with the second strategic pillar focusing on Whitby's Natural and Built Environment. The first objective of this pillar: Demonstrate environmental leadership in sustainability and addressing climate change includes 7 Actions related to sustainability and addressing climate change.

Corporate Sustainability Plan (2016)

The Corporate Sustainability Plan is the Town of Whitby's overarching strategy to guide the municipality to meet the vision that "The Town of Whitby will be a healthy, sustainable, and complete community." Council endorsed this plan in 2017. This plan follows three guiding principles:

1. We will reduce our environmental footprint by protecting, conserving, and enhancing our shared natural resources.
2. We will improve the quality of life by valuing people and places.
3. We will improve our economy through the efficient and effective utilization of our resources.

The Corporate Sustainability Plan embeds the One Planet Living framework to help ensure all three pillars of Sustainability are being advanced.

The One Living Framework contains 10 simple principles covering all aspects of social, environmental, and economic sustainability. These principles are:

1. Health and happiness
2. Equity and local economy
3. Culture and community
4. Land and nature
5. Sustainable water
6. Local and sustainable food
7. Travel and transport
8. Materials and products
9. Zero waste
10. Zero-carbon energy

Zero Carbon Whitby Framework (2021)

Zero Carbon Whitby is the Town of Whitby's Corporate Climate Action Plan. This plan includes a framework to develop and implement actions to align capital and operating budgets with GHG reduction targets. Embedded in this framework, the Town of Whitby has identified the following short, medium, and long-term corporate GHG emissions reduction targets (relative to 2019 levels):

- 20% GHG emissions reduction by 2025
- 40% GHG emissions reduction by 2030
- 100% GHG emissions reduction by 2045

The plan also contains two objectives:

1. Systematically integrate consideration of climate change into the decision-making processes of the Town of Whitby; and,
2. Provide a viable carbon management framework that aligns with the existing business planning cycle to enable the Town of Whitby to substantively address the climate emergency for its corporate operations.

Zero Carbon Costing Study (2022)

The Zero Carbon Costing Study provides a detailed implementation plan for Whitby to achieve its carbon budget and reach zero emissions by 2045. The Zero Carbon Costing Study provides a schedule and incremental budget for the Zero Carbon Whitby Plan that aligns with the Town of Whitby's corporate carbon budget with its existing capital budget and asset management plans. It also provided guidance on the establishment of the Zero Carbon Revolving Reserve Fund.

Durham Community Climate Adaptation Plan (2017)

This plan addresses climate adaptation/resiliency across the Region. The plan includes actions to limit the damage to people, communities, the environment, and infrastructure resulting from current and near-future projected climatic changes. This plan outlines actions to meet the vision: "In the face of a changing climate, Durham Region remains a

liveable, resilient, and prosperous community through at least mid-century.” The goals of the Durham Community Climate Adaptation Plan are as follows:

1. Increase the resiliency of community infrastructure, programs, and services to the changing climate in Durham;
2. Promote and facilitate the incorporation of the proposed programs into the business planning of the responsible agencies;
3. Improve emergency planning for weather extremes and, in particular, our vulnerable populations;
4. Advance the infusion of climate change information into the business planning of both the public and private sectors;
5. Improve the awareness, knowledge, skills, and resources of government, citizens, and businesspeople regarding climate adaptation;
6. Improve the sustainability of Durham Region and its attraction as a place to invest, live, and play; and,
7. Lead to recognition of Durham Region as a leader in climate adaptation planning and implementation.

Durham Community Energy Plan (2019)

The Durham Community Energy Plan (DCEP) will accelerate the transition to a clean energy economy in Durham while simultaneously achieving multiple economic, environmental, and social benefits. The plan highlights the following six over-arching programs that will allow this target to be met:

1. Durham Green Standard: Enhanced Energy Performance for New Buildings
2. Durham Deep Retrofit Program: Transforming Existing Buildings
3. Renewable Energy Co-Operative: Stimulating Local Renewable Energy Projects
4. Electric Vehicle Joint Venture
5. Education and Outreach Program: Engaging the Community
6. Co-Ordinating Land-Use Policies: Sustainable Growth

Reporting Commitments

In addition to plans and strategies, the Town of Whitby is also dedicated to climate action through the following commitments:

Global Covenant of Mayors

The Town of Whitby joined the Global Covenant of Mayors (GCoM) in 2019. GCoM is a global network of more than 10,000 cities spanning 139 countries worldwide. These local governments all recognize that ambitious climate initiatives in their communities need to be taken to keep global temperatures from rising more than 1.5°C.

Whitby’s participation in the Global Covenant of Mayors commits the community and Town of Whitby to the following milestones:

- Develop GHG emissions Inventory;
- Assess climate risks and vulnerabilities;
- Define ambitious climate mitigation, resilience, and energy targets; and,
- Create complete climate action plans.

To meet the requirements of this campaign, Whitby reports all of its climate action through the Carbon Disclosure Project.

Race to Zero and Race to Resilience

Race to Resilience and Race to Zero are global campaigns run by the COP26 Presidency and high-level Climate Champions. The purposes of these campaigns are to rally leadership and support from cities, regions, businesses, and investors to help frontline communities build resilience and adapt to the impacts of climate change while also reducing GHG emissions to stay within the 1.5°C global temperature increase, as outlined in the 2016 Paris Agreement.

In 2021, Whitby Council endorsed joining these campaigns. By joining Race to Resilience and Race to Zero, Whitby joined cities worldwide in committing to be catalysts for change while also demonstrating the commitment to and delivery of the goals of the Paris Agreement and COP26. To meet the requirements of this campaign, Whitby reports all its climate actions through the Carbon Disclosure Project.

Carbon Disclosure Project

The Carbon Disclosure Project (CDP) is a not-for-profit charity that runs a global disclosure system for investors, companies, cities, states, and regions to manage their environmental impacts.

The annual evaluation report is used to gain an overview of environmental performance and how the Town of Whitby's response can be improved in the future. Reporting through CDP meets yearly reporting requirements as a member of the Global Covenant of Mayors, Race to Zero, and Race to Resilience.

4. Discussion:

Many sustainability projects and initiatives were accomplished in 2023. Key highlights include:

- Completion and approval of Whitby's Climate Emergency Response Plan - Phase 2: Mitigation; and,
- Implementation of the zero carbon projects identified in the 2023 budget, resulting in the reduction of 514.4 Tonnes of Carbon Dioxide equivalent.

Further information about these initiatives can be found in Attachment 1 – 2023 Sustainability Annual Report.

It is anticipated that 2024 will further Whitby's Sustainability journey with some of the priority initiatives including:

- Exploring the feasibility of an incentive and/or recognition program to support the implementation of the Whitby Green Standard;
- Develop Version 2 of the Whitby Green Standard as part of continuous improvement in order to incorporate latest Green Development Standard practices;
- Develop the Corporate Waste Management Strategy;
- Partner with the Region of Durham on the Durham Greener Homes (DGH) Energy Retrofit program and provide additional funding to Whitby residents to implement energy retrofits;
- Install Electric Vehicle Supply Equipment (EVSE) or Charging Stations at various Town Facilities as part of the Zero Emission Vehicle Infrastructure Program (ZEVIP) through Natural Resources Canada (NRCAN) and introduce new fees for Level 3 charging stations;
- Turn off the Combined Heat and Power (CHP) system at the Whitby Civic Recreation Complex (CRC) to reduce significant Greenhouse Gas (GHG) emissions and explore options to use it as back up power for the facility;
- Initiate the detailed design for Iroquois Park Sports Centre (IPSC) Deep Energy Retrofit with the goal of reducing significant GHG emissions and improving energy efficiency;
- Continue work on other Zero Carbon Whitby initiatives as identified in the Zero Carbon Whitby Plan & Costing Study; and,
- Support Facilities team on the Zero Carbon Building Design and LEED Gold Certification process for the new Whitby Sports Complex.

Further information on some of the key initiatives for 2024 is as follows:

Corporate EV Charging Stations Infrastructure Expansion and New Fees

To meet the GHG Emissions reduction goals, the Town of Whitby recognizes the importance of electrifying the community and corporate transportation systems.

The Town has installed nine (9) dual port and one (1) single port Level 2 Electric Vehicle Supply Equipment (EVSE) in December 2021 as part of the Zero Emission Vehicle Infrastructure Program (ZEVIP), which is administered by Natural Resources Canada. Nine (9) of the EVSE (total 17 ports) were designated for staff and public use while one (1) dual port station, installed at the Operations Yard, was dedicated for the Town's Fleet use.

There are three levels of EV Charging that determine how long it takes to charge an Electric Vehicle or a Plug-In Hybrid Electric Vehicle (PHEV). The higher the level of charging, the faster the charging process, as more electric energy is delivered to the vehicle's battery in a shorter timeframe. The Town currently has Level 2 charging stations installed and will be installing two Level 3 charging stations in 2024 at Operations and IPSC. The Level 2 EVSE at the Town (manufactured by ChargePoint) can deliver up to 7.2 kilowatt (kW) of power per port, which translates to approximately 25 miles of Range Per Hour or RPH. Level 3 EVSE, the fastest chargers, outputs anywhere from 50 kW to 350 kW of Power, using 2.3 – 13.6 times more electricity per

hour compared to a Level 2 EVSE. Due to its speed, Level 3 EVSE can fully charge most EVs in under an hour.

Iroquois Park Sports Centre (IPSC) Deep Energy Retrofit Study

WalterFedy was engaged by the Town of Whitby to complete a Net Zero Pathway Feasibility Study for IPSC in order to identify and analyze measures that reduce utility use, GHG emissions, and utility costs. Based on the analysis, the objective was to determine the best path forward in terms of the implementation of Energy Conservation Measures (ECMs) to reduce GHG emissions. The analysis came up with over fifteen (15) ECMs that can be implemented to reduce GHG emissions by more than 450 Tonnes of CO₂ Equivalent (tCO₂e) within the next 3-4 years. Next step includes finalizing the design for this Deep Energy Retrofit Project.

5. Financial Considerations:

Partnership with the Region on Durham Greener Homes Retrofit Program

- Staff have allocated \$250,000 from the Housing Accelerator Fund (HAF capital project # 55247606 that is fully grant funded) towards this multi-year rebate partnership with the Region which will run from May 2024 to December 2027.

Corporate EV Charging Stations infrastructure expansion

The current Electric Vehicle Supply Equipment (EVSE) capital projects are listed in Table 1:

Table 1: Current EVSE Capital Projects

Project Name & Number	Grant Financing	Town of Whitby Financing	Total Budget
EV Charging Stations – Round 3 - 55227608	\$160,000 ZEVIP (NRCan)	\$330,100 Long Term Finance Reserve	\$490,100
EV Charging Stations – Round 4 – 71245501*	\$150,000 ZEVIP (NRCan)	\$150,000 Long Term Finance Reserve	\$300,000
TOTAL	\$310,000	\$480,100	\$790,100

*The EV Charging Stations – Round 4 project # 71245501 above excludes twenty (20) Dual Port Level 2 Charging stations to be installed at the Whitby Sports Complex. They are included in the Whitby Sports Complex construction project # 71201033 for which the Town has been approved \$200,000 in grant funding via ZEVIP Round 4.

Current Fees

- Fees associated with the Level 2 EVSE were approved in November 2021. While an EV is plugged in, the Town charges (including HST) a \$1.50 per session (flat session fee), and a usage fee of \$1.50 per hour for the first three (3) hours, then \$4 per hour thereafter. The intent of introducing these fees was to ensure that the operation of the installed Level 2 EVSEs were user-fee supported and encourage the timely disconnection from the EV Chargers, which allows other EV owners to use the chargers.

Proposed Fees for 2024

- To continue with the deployment of EVSE, the Town will be installing Twelve (12) Dual Port Level 2 stations (24 ports in total), and Two (2) Level 3 (62 kW) stations by November 2024 as part of the ZEVIP program Round 3 (and some as part of round 4). Refer to Attachment 2 for the locations of each charging station that has either been installed (in 2021) or will be installed (2024 or 2025) as part of the ZEVIP Program.
- The existing Level 2 EV Charging fees will apply to the newly installed Level 2 EVSE. However, a new fee structure is needed for the Level 3 EVSE as these stations would use more energy and charge EVs in a quicker timeframe.
- Upon conducting a review of the Region and the nearby municipalities, it has been determined that Pickering has installed an equivalent Level 3 EVSE at Chestnut Hill Developments Recreation Complex as part of a pilot project in 2023 and has set the fee structure at \$19 per hour of charging time. Pickering is the only municipality in Durham Region that has installed a Level 3 EVSE.

Table 2 lists the locations and fee charged by the City of Pickering, two private charging providers and the proposed fee for Town of Whitby Level 3 EVSE.

Table 2: Nearby Equivalent Level 3 EVSE User Fee Rates

Address	Provider	Power (kW)	Fee Per Hour
Chestnut Hill Developments Recreation Complex, Pickering	City of Pickering	62	\$19.00
Whitby – IPSC & Operations	Town of Whitby	62	\$19.00
1635 Victoria Street East, Whitby	Flo – Aura Thickson Ridge	50	\$23.75
1735 Pickering Parkway, Pickering	Flo – Canadian Tire	50	\$20.00

Based on the information above, it is recommended that the Town implement a fee of \$19 per hour for Level 3 EVSE prorated based on connected time, i.e., while the EV is plugged in. This fee is inline with Pickering (as our Level 3 charging stations will be similar) and is less than the nearby equivalent private charging providers highlighted above. This lower fee will encourage the uptake of the Level 3 stations and hence increase usage of Electric Vehicles.

It is also recommended that the Town of Whitby continue to apply a flat \$1.50 per session fee to the Level 3 stations to be consistent with the Town's Level 2 EVSE Fee structure. The Town of Whitby is currently the only municipality that charges the flat rate session fee in addition to usage fee. The purpose of the per-session fee is to help fund the Town's Zero Carbon initiatives.

Once the Level 3 stations are installed by November 2024, it is recommended that the Town review the fees again in 2025 to make necessary adjustments.

In summary, staff are requesting a \$19 per hour fee (including HST) be introduced for Level 3 EVSE to help offset Town costs for the EVSE and encourage timely disconnection. The following line items would be added to Schedule S of By-law # 7220-17 "Electric Vehicle Charging Stations Fees". Further information can be found in Amendment to the draft Fees and Charges By-law.

Table 3: Proposed Town of Whitby Level 3 EV Charging Station Fee

Fee No.	Category	Fee Title	Fee (Excluding Taxes)	Fee Basis	HST Applicable
EVC - 4	Charging Station	EV Charging Fee for Level 3 Charging Stations	\$16.81	Per hour	Yes

6. Communication and Public Engagement:

Public education and engagement are critical to the success of becoming a sustainable community. The following initiatives highlight the public engagement carried out in 2023:

- The selection of Whitby's Official Tree through a community campaign to support the Town's ongoing commitment to the urban forest.
- In support of action item 1.5.1 in Whitby's Climate Emergency Response Plan Phase 1: Resilience, a survey was conducted to assess the community's basic knowledge of climate change including risks, preparedness, and recovery.

The Town will also continue to offer sustainability initiatives to build awareness and encourage community-wide participation through:

- Education events and seminars;
- Community Greening Program in partnership with LEAF (Local Enhancement and Appreciation of Forest); and,
- Community Anti-Litter Cleanup Online Tool.

7. Input from Departments/Sources:

The Strategic Initiatives Division has prepared this report with support from Operational Services, Finance, Community Services, and the Whitby Public Library.

8. Strategic Priorities:

The initiatives outlined in this report directly align with the priorities of the Community Strategic Plan endorsed by Council in 2023. Specifically, with Objective 2.1: "Demonstrate environmental leadership in sustainability and addressing climate change" of Strategic Pillar 2: Whitby's Natural & Built Environment. The initiatives outlined in this report directly support the following Actions:

- 2.1.1 Develop community climate mitigation measures to achieve zero-carbon emissions by 2045
- 2.1.3 Implement actions to increase community resilience to the impacts of climate change
- 2.1.4 Implement corporate plan to achieve zero-carbon emissions by 2045
- 2.1.5 Implement Green Standard Incentive Program focused on encouraging the adoption of sustainable development practices
- 2.1.6 Promote the use of electric vehicles and lead by example by implementing electric vehicles in the Town's municipal fleet
- 2.1.7 Update Whitby Green Standard, designed to advance sustainable development in the community

Sustainability initiatives are developed with considerations for inclusivity and accessibility. All documents for this report have been reviewed to ensure they are accessible to all readers.

The 2023 Sustainability Annual Report describes how the Town of Whitby is meeting its goals of becoming a healthy and sustainable community while addressing climate change through a mitigation and adaptation lens.

9. Attachments:

Attachment 1 – 2023 Sustainability Annual Report

Attachment 2 – ZEVIP - List of EV Charging Stations