

Environment, Transportation & Public Safety Meeting

Date: Wednesday, September 27, 2023

Time: 4:30 o'clock p.m.

Location: Council Chambers, 1st Floor, Windsor City Hall

All members will have the option of participating in person in Council Chambers or electronically and will be counted towards quorum in accordance with Procedure By-law 98-2011 as amended, which allows for electronic meetings. The minutes will reflect this accordingly. Any delegations have the option to participate in person or electronically.

MEMBERS:

Ward 2 – Councillor Fabio Costante (Chairperson)

Ward 3 – Councillor Renaldo Agostino

Ward 4 – Councillor Mark McKenzie

Ward 8 – Councillor Gary Kaschak

Ward 9 – Councillor Kieran McKenzie

ORDER OF BUSINESS

Item #	Item Description
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1.	CALL TO ORDER
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We [I] would like to begin by acknowledging that the land on which we gather is the traditional territory of the Three Fires Confederacy of First Nations, which includes the Ojibwa, the Odawa, and the Potawatomi. The City of Windsor honours all First Nations, Inuit and Métis peoples and their valuable past and present contributions to this land.

2.	DISCLOSURE OF PECUNIARY INTEREST AND THE GENERAL NATURE THEREOF
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3.	ADOPTION OF THE MINUTES OF THE ETPS STANDING COMMITTEE
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3.1.	Minutes of the July 26, 2023 Environment, Transportation & Public Safety Standing Committee (SCM 208/2023)
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4.	REQUEST FOR DEFERRALS, REFERRALS OR WITHDRAWALS
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5.	COMMUNICATIONS
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6.	PRESENTATIONS AND DELEGATIONS
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7.	COMMITTEE MATTERS
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7.1.	Minutes of the Essex-Windsor Solid Waste Authority Regular Board Meeting held Wednesday, July 12, 2023 (SCM 233/2023)
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7.2.	Minutes of the Essex-Windsor Solid Waste Authority Regular Board Meeting held Wednesday, August 9, 2023 (SCM 254/2023)
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8. **ADMINISTRATIVE ITEMS**

- 8.1. Community and Corporate Greenhouse Gas Emissions and Energy Monitoring Report – 2021 - City Wide (**S 4/2023**)
- 8.2. Windsor’s Bird Friendly City Designation - City Wide (**S 114/2023**)
- 8.3. Kildare Avenue (Richmond Street to Ottawa Street), Partington Avenue (Columbia Court to Labelle Street) and Lone Pine Street (Provincial Road to Maple Leaf Crescent) Traffic Calming – Wards 4, 10 & 9 (**C 140/2023**)

9. **TRANSIT BOARD ITEMS**

10. **ADOPTION OF TRANSIT BOARD MINUTES**

11. **QUESTION PERIOD**

12. **ADJOURNMENT**

Item No. 3.1



Committee Matters: SCM 208/2023

Subject: Minutes of the July 26, 2023 Environment, Transportation & Public Safety Standing Committee

Environment, Transportation & Public Safety Standing Committee Meeting

Date: Wednesday, July 26, 2023

Time: 4:30 o'clock p.m.

Members Present:

Councillors

Ward 2 - Councillor Fabio Costante (Chairperson)

Ward 3 - Councillor Renaldo Agostino

Ward 4 - Councillor Mark McKenzie

Ward 8 – Councillor Gary Kaschak

Ward 9 – Councillor Kieran McKenzie

ALSO PARTICIPATING ARE THE FOLLOWING FROM ADMINISTRATION:

Shawna Boakes, Executive Director Operations/ Deputy City Engineer

Anne Marie Albidone, Manager Environmental Services

Tyson Cragg, Executive Director, Transit Windsor

Mark Spizziri, Manager Performance Management and Business Case Development

Craig Robertson, Supervisor, Licensing / Deputy Licensing Commissioner

Anna Ciacelli, Deputy City Clerk / Supervisor of Council Services

ALSO PARTICIPATING VIA VIDEO CONFERENCE ARE THE FOLLOWING FROM ADMINISTRATION:

Chris Nepszy, Commissioner, Infrastructure Services

Sandra Gebauer, Council Assistant

Delegations—participating in Council Chambers

Item 8.2 Jessica Amlin, Ward 3 resident

Item 8.3 Jessica Amlin, Ward 3 resident

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1. CALL TO ORDER

Following the reading of the Land Acknowledgement, the Chairperson calls the meeting of the Environment, Transportation & Public Safety Standing Committee to order at 4:30 o'clock p.m.

2. DISCLOSURE OF PECUNIARY INTEREST AND THE GENERAL NATURE THEREOF

None disclosed.

3. ADOPTION OF THE MINUTES OF THE ETPS STANDING COMMITTEE

3.1. Adoption of the Environment, Transportation & Public Safety Standing Committee minutes held May 24, 2023

Moved by: Councillor Kieran McKenzie

Seconded by: Councillor Mark McKenzie

THAT the minutes of the Environment, Transportation & Public Safety Standing Committee meeting held May 24, 2023 **BE ADOPTED** as presented.

Councillor Kaschak was absent when the vote was taken on this matter.

Report Number: SCM 160/2023

4. REQUEST FOR DEFERRALS, REFERRALS OR WITHDRAWALS

None requested.

5. COMMUNICATIONS

None requested.

6. PRESENTATIONS AND DELEGATIONS

See Item 8.2 & 8.3.

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7. COMMITTEE MATTERS

7.1. Minutes of the Essex-Windsor Solid Waste Authority Regular Board Meeting held Tuesday, May 2, 2023

Moved by: Councillor Renaldo Agostino
Seconded by: Councillor Mark McKenzie

Decision Number: **ETPS 948**

THAT the Minutes of the Essex-Windsor Solid Waste Authority Regular Board meeting held May 24, 2023 **BE RECEIVED.**

Carried.

Report Number: SCM 200/2023
Clerk's File:MB2023

7.2. Essex Windsor Solid Waste Authority (EWSWA) Annual Report - Essex-Windsor Residential Waste Diversion 2022

Councillor Gary Kaschak commends the Windsor-Essex Solid Waste Authority for the progress made in waste diversion and the monetary gains for EWSWA through the sale of recycled goods.

Councillor Kieran McKenzie indicates that the Recycle Coach App available through EWSWA is a tool that helps to identify different recyclable materials.

Moved by: Councillor Gary Kaschak
Seconded by: Councillor Kieran McKenzie

Decision Number: **ETPS 949**

THAT the 2022 Annual Report of the Essex-Windsor Solid Waste Authority **BE APPROVED.**

Carried.

Report Number: SCM 201/2023
Clerk's File:MB2023

8. ADMINISTRATIVE ITEMS

8.2. Test Pilot of Garbage Relocation in Ward 3 - City Wide

Jessica Amlin, Ward 3 resident

Jessica Amlin, Ward 3 resident, appears before the Environment, Transportation and Public Safety Standing Committee regarding the administrative report "Test Pilot of Garbage Relocation in Ward 3" on behalf of her husband Nick and expresses concern with the following text in the report of the

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Manager, Environmental Services which states *“Alleys that service one-way streets (on both sides of the alley) necessitate a specialized truck, which is not currently included in the existing contract. Therefore, areas such as Victoria/Pelissier from Elliott to Erie could not be considered at this time;* and indicates that that the same size truck that goes up and down the street is the same size truck utilized in the alleys and is disappointed that the test area will be moved into a neighbourhood that does not deal with the same type of issue;s and concludes by requesting that the Standing Committee shift this conversation from an environmental issue to a public safety issue due to the presence of a homeless shelter.

Councillor Renaldo Agostino asks Administration if consideration can be given to including the block between Victoria/Pelissier from Elliott to Erie Street in the pilot project and asks why this block is not being included in the test pilot. Anne-Marie Albidone, Manager, Environmental Services appears before the Environment, Transportation and Public Safety Standing Committee regarding the administrative report “Test Pilot of Garbage Relocation in Ward 3” and indicates that the issue has nothing to do with the size of the truck, rather it is the type of truck. Ms. Albidone indicates that the block in question is a one-way street the truck can only drive one way. Ms. Albidone adds that specialized equipment is required to collect on both sides of the street while travelling in the one direction. At this time, a curbside collection truck, that is, side loading or rear loading collects from the right side of the truck. In order to collect both sides on a one-way street, an automated truck with an arm that can go to either side is required. The GFL Company that currently collects in the city does not have these types of trucks in their fleet. Ms. Albidone adds that the Pelissier side may incur additional costs as the truck will be circling the street twice in order to collect that same area.

Councillor Kaschak asks for next steps following the eight-week pilot project. Ms. Albidone responds that they will report back on the changes, if any during the pilot project and adds that any changes will have to be included in the next collection contract in 2025 which will include garbage and organics curbside collection.

Councillor Kieran McKenzie requests clarification regarding the education campaign referred to in the administrative report and what tools will be implemented to educate the public. Ms. Albidone advises that letters will be hand delivered to all of the residents and a follow-up in person to those homes to ensure that the letter was received and to answer any questions. She adds that the first week that the collection is curbside, they will be checking both curbside and alley and any resident placing garbage in the alley will be educated.

Councillor Renaldo Agostino inquires about the west side of Pelissier Street from Elliott Street to Erie Street and whether this area can be included in the pilot project. Ms. Albidone responds that GFL can be approached to determine if this area can be included as it is only one block.

Councillor Renaldo Agostino inquires about the garbage trucks. Ms. Albidone indicates that most of the recycling trucks are side loading (without an arm), although the City of Windsor does not have this type of recycling truck and the industry standard to collect recyclables is not crossing the street.

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Administration will provide information related to the Pelissier Street area being added to the pilot project when the report comes forward to Council.

Moved by: Councillor Renaldo Agostino

Seconded by: Councillor Kieran McKenzie

Decision Number: **ETPS 951**

THAT Administration **BE DIRECTED** to conduct a pilot project in the Pelissier/Victoria alley between Tecumseh Rd. W. and Jackson St, as well as the Dougall/Church alley between Tecumseh Rd. W. and Wahketa St. whereby garbage will be temporarily relocated from alley collection to curbside collection for a minimum of 8 weeks; and,

THAT Administration **REPORT BACK** on the information learned during the pilot project; and,

THAT Administration **BE REQUESTED** to explore the possibility of collecting garbage curbside on Pelissier and Victoria Streets between Elliott Street and Erie Street as part of the pilot project; and that the information **BE PROVIDED** when this report moves forward to City Council.

Carried.

Report Number: S 82/2023 & C69/2023

Clerk's File: SW2023

8.1. Response to CQ27-2021 - All-Way Stop Warrant - City Wide

Councillor Gary Kaschak inquires whether there is reasoning for the support of the All Way Stop Policy (Appendix B). Shawna Boakes, Executive Director, Operations appears before the Development and Heritage Standing Committee regarding the administrative report "Response to CQ27-2021—All-Way Stop Warrant-City Wide" and indicates that they are following what the Ontario Traffic Manual (OTM) says and adds that there are some "gives" on this new warrant that will address many concerns that have been dealt with in the past. Ms. Boakes adds that the reason that Administration is adhering to the OTM recommendations is because there is research that has been done internationally regarding what happens at all-ways stops when they are unwarranted.

Councillor Renaldo Agostino asks how many speed humps have been applied for and how many have been approved. Ms. Boakes indicates that there is less than five percent approval rate from the residents, they have done 170 petition surveys throughout the city and at this time, six streets have been approved (that will begin construction in August) and another three streets will be discussed in a report to Council on August 8, 2023.

The Chairperson clarifies that the first threshold is to respond at 50 percent and of those respondents, 60 percent have to approve, only thirty percent have responded.

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Councillor Kieran McKenzie inquires whether stop signs are addressed in the Vision Zero Plan. Ms. Boakes responds that she doesn't believe so. Councillor Kieran McKenzie indicates that it makes sense to align the four way stop warrant policy around Vision Zero and the overarching issues of neighbourhood safety as it relates to traffic management. Ms. Boakes responds that warrant systems were not addressed in Vision Zero.

Councillor Kieran McKenzie states that there is a connection between the warrant process and these different types of traffic management devices and tools that we have and Vision Zero is to promote safety. He adds that four-way stops in the wrong places create a more dangerous situation in neighbourhoods.

Moved by: Councillor Kieran McKenzie

Seconded by: Councillor Gary Kaschak

Decision Number: **ETPS 950**

THAT the All-Way Stop policy **REMAIN** status quo for the time being; and,

THAT the report of the Senior Manager, Traffic Operations dated June 5, 2023, entitled "Response to CQ27-2021—All Way Stop Warrant-City Wide" as well as any changes to the All-Way Stop Policy **BE DEFERRED** to a future meeting of the Environment, Transportation & Public Safety Standing Committee to be considered in conjunction with the Vision Zero Report.

Carried.

Report Number: S 70/2023
Clerk's File: SW2023 & ACOQ2023

8.3. Alley Maintenance Standards - City Wide

Chris Nepszy, Commissioner Infrastructure Services appears via video conference before the Environment, Transportation & Public Safety Standing Committee regarding the administrative report "Alley Maintenance Standards-City Wide" and provides a brief summary as follows:

- The focus of the report does not address a test pilot or to consider programming or other uses of the alley, It focuses on the physical maintenance of the alley itself.
- There are 147 kilometers of paved and unpaved alleys, in various conditions, 79 kilometers are paved in the older sections of the city. The majority of those alleys are not adequate in terms of their condition rating assessment (there are only 7 kilometers of alleys that are considered adequate). The remainder of the 72 kilometers are in various stages of deficiency.

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- The current Asset Management Plan identifies the current level of service. The next step of the Asset Management Plan will address proposed levels of service in the alleys along with a strategy to fund that.
- Current maintenance standards is a low level of service provided for alleys.
- The various Scenarios provided in the report provide options for obtaining that funding, i.e. one time funding through the Budget Stabilization Fund, reallocation of existing capital funds and potentially expand eligibility of the local residential roads levy to include alleys.

Councillor Kieran McKenzie inquires about the proposed Alley and Standards Development Committee and whether it has been created and if they have met. Mr. Nepszy indicates that the committee has not been struck. Although the intent would come through the 2025 Asset Management proposed level of service.

Councillor Kieran McKenzie reiterates the direction of Council related to the creation of the committee, and the approach by administration is not consistent with Council direction. Councillor Kieran McKenzie indicates that Council was looking for an opportunity to understand the whole complement of issues that are included in alley maintenance, the services that are offered, the standards that are maintained and the investments that would be required in order to achieve the service levels that Council deemed appropriate.

Councillor Fabio Costante provides clarification regarding the Council direction. For example, which alleys are available for closure, for active transportation infrastructure and theming.

Councillor Renaldo Agostino inquires about garbage collection in alleys and remarks that if the garbage is not put out properly, it is not picked up.

Craig Robertson, Licence Commissioner, appears before the Environment, Transportation & Public Safety Standing Committee regarding the administrative report "Alley Maintenance Standards-City Wide" and indicates that by-law enforcement is mostly complaint driven, and they rely on the service calls that come through the 311 Call Centre. For example, if they receive a call regarding an area that is in disarray, a by-law enforcement officer is deployed to go out and conduct an assessment. The by-law officer will then send a letter regarding the site visit and what was observed, corrections required and the date to follow-up. The by-law officer will go back and will deal with the individual property owner and will issue orders to comply. If compliance is not received, the costs can be recovered by hiring a contractor to clean up those alleys and will apply those costs to the owner. He adds there are approximately 1,600 investigations that are in the queue.

Councillor Gary Kaschak inquires about closing alleys. Mr. Nepszy provides information related to the ability for residents to petition to close alleys and the process is outlined on the City's website.

Councillor Gary Kaschak asks Administration if there are storm sewers in alleys. Chris Nepszy responds that it varies regarding which alleys you are referring to.

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Councillor Renaldo Agostino asks for clarification regarding the statement that the city owns the alley and the citizens are responsible to maintain and clean the alley. Mr. Robertson responds that the city owns the alley but the abutting property owners are responsible for the maintenance of open alleys.

Moved by: Councillor Kieran McKenzie

Seconded by: Councillor Mark McKenzie

Decision Number: **ETPS 952**

THAT the report of the Executive Director, Operations, dated July 6, 2023 entitled Alley Maintenance Standards-City Wide **BE RECEIVED**; and,

THAT Scenario 1: One-time funding from Reserves as outlined in the administrative report of the Executive Director, Operations **BE APPROVED**; and further,

THAT Administration **BE REQUESTED** to report back to City Council with a specific proposed framework and work plan for the previously approved Alley Standards and Development Committee.

Carried.

Report Number: C 106/2023

Clerk's File:SW2023

8.4. Temporary Traffic Calming Measures For Class I Collector Roadways (CQ16-2023) - City Wide

Councillor Gary Kaschak asks if the city has vehicle activated warning signs and what is the approximate cost. Ms. Boakes responds there are a couple of vehicle activated warnings signs and refers to one located at Northway towards Industrial/Huron Church and the cost is between \$8,000 to \$10,000. She notes It only activates if a person is driving 50 plus km/hr.

Councillor Kieran McKenzie inquires about adding another class of road into this program as there have been challenges with respect to supply chain. Ms. Boakes responds that adding another classification of road will not affect them.

Councillor Mark McKenzie inquires whether the data collected is shared with Windsor Police Services and how that data is used. Ms. Boakes responds that data (especially excessive speed) is always shared with Windsor Police. Ms. Boakes adds that administration recently met with Windsor Police and discussed having a more collaborative relationship and intend to continue meeting with them and exchanging data and locations of speed signs.

Councillor Mark McKenzie inquires about the red light cameras. Ms. Boakes indicates that a report is forthcoming on the red light cameras and speed enforcement cameras and provides information

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related to the Ministry program and coming changes as well as the ticket processing system and center.

Administration indicates they are reviewing the process to implement the program, and the policy and procedures around the traffic calming.

Councillor Fabio Costante inquires whether during road reconstruction if narrowing of roads can be worked into the reconstruction in any way. Administration indicates that reconstruction and engineering projects are based on standards which would have to be reviewed.

Moved by: Councillor Gary Kaschak

Seconded by: Councillor Kieran McKenzie

Decision Number: **ETPS 953**

THAT Council **APPROVE** the updated Expedited Traffic Calming Procedure as listed in Appendix A.

THAT Council **PRE-COMMIT** \$100,000 in 2026 Pay-As-You-Go funding from the Traffic Calming Initiatives project, OPS-021-07, for immediate use.

Carried.

Report Number: S 83/2023

Clerk's File: ST2023

9. TRANSIT BOARD ITEMS

None presented.

10. ADOPTION OF TRANSIT BOARD MINUTES

None presented.

11. QUESTION PERIOD

Councillor Kieran McKenzie comments on the public meeting related to a drainage project in the Devonshire neighbourhood and inquires as to what are City's maintenance service standards are for open drains in public spaces, and on arterial roads. Administration will provide the information to the Councillor.

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12. ADJOURNMENT

There being no further business, the Environment, Transportation & Public Safety Standing Committee is adjourned at 6:28 o'clock p.m. The next meeting of the Environment, Transportation & Public Safety Standing Committee will be held September 27, 2023.

Ward 2 – Councillor Costante
(Chairperson)

Deputy City Clerk /
Supervisor of Council Services

Item No. 7.1



Committee Matters: SCM 233/2023

Subject: Minutes of the Essex-Windsor Solid Waste Authority Regular Board Meeting held July 12, 2023



Essex-Windsor Solid Waste Authority Regular Board Meeting MINUTES

Meeting Date: Wednesday, July 12, 2023
Time: 4:00 PM
Location: Council Chambers
Essex County Civic & Education Centre
360 Fairview Ave. West
Essex, Ontario

Attendance

Board Members:

Gary McNamara - Chair	County of Essex
Hilda MacDonald	County of Essex
Rob Shepley	County of Essex
Michael Akpata	County of Essex
Kirk Walstedt	County of Essex
Kieran McKenzie	City of Windsor
Jim Morrison	City of Windsor
Mark McKenzie	City of Windsor

EWSWA Staff:

Michelle Bishop	General Manager
Steffan Brisebois	Manager of Finance & Administration
Cathy Copot-Nepszy	Manager of Waste Diversion
Tom Marentette	Manager of Waste Disposal
Teresa Policella	Executive Assistant

City of Windsor Staff:

Anne Marie Albidone	Manager of Environmental Services
Shawna Boakes	Executive Director of Operations
Mark Spizzirri	Manager of Performance Management and Business Case Development

County of Essex Staff:

Mary Birch	Director of Council & Community Services/Clerk
Sandra Zwiers	County CAO
Kate Hebert	Manager Records and Accessibility/Deputy Clerk
David Sundin	County Solicitor

Absent:

Drew Dilkens	City of Windsor (Ex-Officio)
Gary Kaschak – Vice Chair	City of Windsor
Tony Ardovini	Deputy Treasurer Financial Planning

1. Call to Order

Chair McNamara called the Regular meeting to order at 4:00 PM.

2. Declaration of Pecuniary Interest

The Chair called for any declarations of pecuniary interest and none were noted. He further expressed that should a conflict of a pecuniary nature or other arise at any time during the course of the meeting it would be noted at that time.

3. Approval of the Minutes

Moved by Kieran McKenzie
Seconded by Mark McKenzie

THAT the minutes from the Essex-Windsor Solid Waste Authority Regular Meeting, dated May 2, 2023, be approved and adopted.

**40-2023
Carried**

4. Business Arising from the Minutes

There were no items raised for discussion.

5. Correspondence

- A. County of Essex - May 24, 2023 Letter to Minister David Piccini, Ministry of Environment, Conservation and Parks Re: Waste Diversion Programs for Industrial, Commercial and Institutional (IC&I) Sector – Food and Organic Waste

The Chair asked if there were any questions or comments. No questions were asked.

Moved by Kirk Walstedt
Seconded by Rob Shepley

THAT the correspondence from the County of Essex dated May 24, 2023 be received as information.

**41-2023
Carried**

- B. City of Windsor Council Decision June 12, 2023

The Chair noted that Mr. Kaschak was not in attendance to speak on this decision. He asked if another member would like to speak on this item.

Mr. Kieran McKenzie asked if Administration can provide any comments on what is being proposed.

The General Manager stated that the Authority would work with the City's Administration on this request and provide any necessary support.

Mr. Kieran McKenzie asked if it would require direction from the Board to go forward.

The General Manager stated that the intention would be to work with the Technical Staff Committee (TSC).

The Chair asked if there were any questions. No questions were asked.

Moved by Kieran McKenzie

Seconded by Rob Shepley

THAT the City of Windsor Council Decision dated June 12, 2023 be received as information.

**42-2023
Carried**

6. Delegations

- A. EXP. Presentation - Logistics and Transfer of Regional Solid Waste and Source Separated Organics: Review and Strategic Plan.

The General Manager provided a summary of the EXP engagement, timelines and scope of work. She noted that the presentation by EXP would be recorded and that Administration staff from the County municipalities may be viewing the presentation virtually.

Mr. John Smith, Mr. Mike Birett and Mr. Jean-Louis Gaudet from EXP provided a PowerPoint presentation of the conclusions and recommendations included in the final report.

Mr. Kieran McKenzie asked how the recommendations and the services are going to be implemented. He asked how other municipalities responded to the implementation of clear bag policies and Every Other Week (EOW) garbage collection. He also asked if there are other things that we should be concerned about and how to address these concerns in particular illegal dumping.

Mr. Smith stated that EOW garbage collection is a critical tool to use and has become a best practice in Ontario. Most municipalities have implemented EOW garbage collection. It is critical to have a very good promotion and education (P & E) program and to implement it early before changes in the program. In regards to dumping, some municipalities have seen a small uptake at the beginning but then levels off when the program matures but most

municipalities that he has spoken with have not seen an increase in illegal dumping. He cannot stress enough that diversion targets will not be met without the implementation of EOW garbage collection.

Mr. Birett stated that the obligation to the policy statement is to achieve waste diversion targets and this is the preferred methodology. He noted that Waterloo, which has the same demographics as Essex-Windsor, tried to stay with weekly collection but has since changed to EOW garbage collection. Generally, the concerns occur over a month and then residents get comfortable with the program. He also noted that they did not see an increase in illegal dumping in the communities that have rolled out these programs.

Mr. Birett stated that with a clear bag program, bag limits become less of a concern than the problem of inequity among residents with larger families. There are many similar communities (i.e. Peterborough) that have gone this route and he can provide further information if required.

Mr. Kieran McKenzie asked if the economics and financial portion of the report are based on the assumptions that we implement the recommendations as presented.

Mr. Smith confirmed that this is correct.

Mr. Morrison stated that the logic sounds very sensible and is comfortable with EOW garbage collection. He asked if there are statistics to show that clear bags have improved diversion rates.

Mr. Smith stated that clear bags increase the diversion of Source Separated Organics (SSO) and recycling. Typically, there is a 5% to 25% increase in diversion rates with a clear bag program. He asked Mr. Birett to provide further comments.

Mr. Birett stated that statistically, residents set out 1.8 bags of garbage in the average household and most people will not notice a difference if a two-bag limit is implemented. To really increase diversion rates, limits would have to decrease to a one-bag limit and that is why clear bags tend to be a better option due to family sizes. Diversion rates can increase 10-20% (i.e. Peterborough).

Mr. Morrison stated he is excited about the idea of clear bags. He asked if they had seen value in implementing a clear bag program before the implementation of the SSO program.

Mr. Smith stated that clear bags can be implemented before the SSO program and you would see an increase in diversion in other recycling programs.

Mr. Birett stated that you will want to take the time and educate the public. The public will have concerns about privacy and putting unmentionable items in

a clear bag. With a clear bag program, residents are allowed a privacy bag to be placed inside the clear bag.

Mr. Morrison would support moving to clear bags as soon as possible even before the implementation of the SSO program.

Mr. Kieran McKenzie understands that the collector would be charged with the task of inspecting the clear bags. He asked if there are inefficiencies in adding this task into the collection framework.

Mr. Smith stated that he had not heard of any inefficiency issues. It is easy for the collector to take a visual inspection of the bag and they get used to what they are looking for.

Mr. Kieran McKenzie commented that the recommendation is for the Board to receive the reports. He asked if Administration would be bringing forward a report to the Board with recommendations and timelines to implement these programs.

The General Manager stated that currently, the Authority does not manage any individual collection of traditional waste in the County of Essex or the City of Windsor. She noted that this is the primary reason why this information was provided to all of the local municipalities so that they are aware of what the consultant has recommended. Depending on the decision of the regionalization of waste, the Authority is using this document as a roadmap to move forward to provide financial and environmental options for the municipalities to use in their own decision-making or be brought back to the Board for their consideration.

Mr. Kieran McKenzie stated that he approves the motion.

Mr. McNamara asked what type of educational programs are there for the municipalities responsible for the pickup. He noted the Town of Tecumseh (Tecumseh) at one time had twice a week garbage collection and changed to once a week collection and they were bombarded by residents. It took a while to educate the public. He also stated that Tecumseh has a by-law that garbage has to be set out in hard sided containers due to rodents. He asked how these programs were received by the general public. He noted a change in culture is not easy to achieve. He would be interested in knowing how Peterborough, Kitchener and Waterloo handled the changes in their programs.

Mr. Birett stated that these are very legitimate questions as they have also been asked by other municipalities. There are many municipalities that had garbage collection twice a week and there will be a perception that service levels are reduced. Typical concerns are rodents. There has been an evolution in the design of containers to eliminate rodents. The key is moving all the material that smells out of the garbage. Many municipalities will have to

implement by-laws. One way to implement this is to allow residents to use their hard-shell containers but put their clear bags inside the container. Other municipalities have residents put material loose into a container. He agrees that there will be many concerns and to address these concerns through public consultation. Mr. Birett can provide a "Frequently Asked Question" sheet as many of the concerns are the same across municipalities. If public education is done correctly, residents will accept the program and the change. He noted that hiring enforcement and temporary staff in the first 3-4 months due to the increase in telephone coverage should be considered to address issues. The clear bag policy component should be initiated separately from the EOW garbage collection.

Mr. Walstedt stated that he has some of the same concerns as Chair McNamara. He asked what kind of program are we going to have to educate the public. He also asked how will this be handled and how will residents be notified.

The General Manager stated that the Authority will provide education if the regionalization of waste is implemented. If not, any changes to the collection would be handled by each municipality. The implementation of an SSO program will be done through P & E via the Authority. With the implementation of an SSO program, it is critical to start a P & E program on how the program is used and what material is collected. The most critical step is educating the community. She asked Mr. Birett to provide further comments.

Mr. Birett stated it will be a challenge and be mindful of budget implications. A sufficient budget will be required to notify and consult with the public.

The Manager of Waste Diversion stated that in 2021, the Authority implemented a no plastic bag ban and a six-month P & E campaign was conducted. One P & E example for this campaign was installing banners on the recycling trucks in order to raise awareness of the program changes. A lot of information regarding the ban was provided to residents and a budget had been formed at that time to account for these P & E costs. The Authority saw a good rate of participation. This was a big change to the program and there are now no plastic bags placed in the recycling. The collectors have also been supportive. She noted that garbage may be a little harder to implement but can definitely work towards this.

Mrs. MacDonald stated that she was on the Association of Municipalities of Ontario (AMO) Waste Task Force. She has brought this up to her colleagues and they said all other municipalities have implemented this many years ago. This is best practice and we need to move forward. She noted that it will not be easy but we have a responsibility to think about the environment and the future. We cannot always think about just the dollar value and we are not the first to implement this.

Chair McNamara agreed with Mrs. MacDonald's comments. Each municipality will have to speak to its residents. He noted that there was positive feedback from the survey regarding the green bin program.

Mrs. MacDonald stated that the younger generation support environmental changes and they look forward to this change.

7. Waste Diversion

A. EXP. – Logistics and Transfer of Regional Solid Waste and Source Separated Organics: Review and Strategic Plan

Moved by Hilda MacDonald

Seconded by Rob Shepley

THAT the Board receive this report as information;

And further that the Board received the attached report from EXP. as information.

And further that the Board received the presentation from EXP. as information.

**43-2023
Carried**

B. 2022 Residential Waste Diversion Report

The Manager of Waste Diversion stated the purpose of the report is to provide an overview of the annual Waste Diversion report. The report fulfills Condition 5.2 of the Environmental Assessment Approval for the Regional Landfill (Landfill). The report provides information on the Authority's waste diversion programs. She provided a summary of the report. The overall waste diversion rate for 2022 was 32%. This figure represents residential tonnes diverted from the Landfill.

The Chair asked if there were any questions.

Mr. Kieran McKenzie asked if the increase in the usage of the Recycle Coach app was due to new users or existing users utilizing the app more often.

The Manager of Waste Diversion stated that there has been an increase in new users but also there have been more interactions on the app due to collection changes. Municipalities are also using the app to communicate with residents by asking the Authority to send out notifications regarding garbage collection issues.

Mr. Kieran McKenzie stated the Authority may have to look at promoting the app more. He noted it was a good tool and he utilizes the app weekly.

Mr. Morrison stated that we should be able to improve the diversion rate dramatically when the SSO program begins.

Mr. Morrison asked if waste audits are still being conducted.

The Manager of Waste Diversion stated the audits are still being conducted. One more quarter of data still needs to be collected and the results of the audits will be shared with the Board.

Mr. Morrison asked when audits are done are we looking at implementing change or just looking for information.

The Manager of Waste Diversion stated they are provincial audits and the audits provide information on all programs. She noted that 100 homes are randomly selected for an audit to be conducted in all four seasons. Three of the four seasons have been completed and looking to see if habits changed. The waste is collected and brought to the Landfill to sort.

Moved by Kieran McKenzie

Seconded by Jim Morrison

THAT the Board receive the 2022 Residential Waste Diversion Report as information.

**44-2023
Carried**

C. Outreach Program Update

The Manager of Waste Diversion provided an update on the Authority outreach activities in Essex-Windsor. She noted that this year the activities will focus on food and organic waste to prepare residents for the upcoming organic and food waste curbside collection program in 2025. The activities such as Earth Day, the Gold Star program and "What Goes Where" spring campaign will provide residents with strategies to divert waste from the garbage. There were no financial implications as all the activities were included in the 2023 budget.

She asked if there were any questions.

Mr. Morrison asked about the FoodCycler pilot project.

The Manager of Waste Diversion stated that the last unit was sold today. The units were distributed over a two-week period. There were 1800 residents on a waitlist.

The Chair asked if there were any further questions. No questions were asked.

THAT the Board receive the report as information.

Moved by Rob Shepley

Seconded by Kirk Walstedt

**45-2023
Carried**

8. Waste Disposal

A. Leachate Management at the Regional Landfill

The Manager of Waste Disposal stated the purpose of the report is to provide the Board with an update regarding the management of leachate at the Landfill. In addition, Administration is requesting that the Board approve the release of an Advance Contract Award Notice (ACAN) procurement document for an on-site Reverse Osmosis (RO) system rental unit for the purpose of simultaneously performing a pilot study and improving the quantity and quality of leachate being sent to the City of Windsor (City) for treatment.

The Authority has received the final report from Stantec for Task 1 and Task 2. Task 1 was presented to the Board at the previous meeting. Task 2 was revised to include a review of an on-site leachate treatment system such as RO, Biological or other advanced treatment methods.

The Manager of Waste Disposal summarized the scope and findings of the Stantec report.

The revised scope of work included the review of standalone leachate treatment alternatives to identify potential preferred options for treating leachate at the Landfill and a recommendation on a preferred alternative treatment.

The Stantec report also included a technical and financial analysis of on-site pre-treatment options which included the construction cost, operating and maintenance costs and a 20-Year Life Cycle Cost (LCC).

Stantec identified two treatment options, a Membrane Bioreactor (MBR) or Biological treatment option discharging to surface water or a RO treatment option discharging to surface water.

The Manager of Waste Disposal stated that it was important to note that an additional study will be required to confirm the site-specific suitability of any process, whether RO or Biological. This would include things like; Class EA planning, Assimilative Capacity Study (ACS) to confirm effluent limits, pilot testing to confirm treatment performance, additional engineering to better define scope and costs, and assist in obtaining regulatory approval from the Ministry of the Environment, Conservation and Parks (MECP). Regardless of the chosen treatment method, the report states that any onsite solution could take three (3) years to construct and to obtain the necessary approvals which may coincide with the current leachate trucking contract end date.

As discussed in Stantec's report, a surface water discharge from any leachate treatment process will require some additional treatment to provide quality assurances, and to accomplish a pilot study or studies are recommended.

The Manager of Waste Disposal discussed the proposed pilot study included in the report and explained it would include operating a process for an extended period, approximately one (1) year, to assess performance and this will also improve the MECP approval process by being able to engage them in the process. The current problem is securing equipment to implement the pilot study which is dependent upon equipment availability and scheduling. He further discussed the availability of both plants.

Currently, only a RO plant is available.

An MBR Biological plant would not be available for approximately 28-32 weeks. The MBR plant would not provide relief of current volume issues. The treatment capacity of an MBR pilot plant would only be in the range of 10m³ per day providing virtually no capacity for processing leachate to assist with current leachate volumes in the Landfill.

Rochem has submitted a proposal to the Authority to provide for the rental of a 50,000 Gal-per-day (gpd) (189 m³ per day) plant to conduct a full-scale pilot study. This would also include operating the RO process for approximately one (1) year to assess the performance and hopefully improve the MECP approval process. This containerized RO system will provide capacity for processing approximately four (4) additional truckloads per day of leachate at the Landfill on a 24-hour cycle. Currently, this plant is available for immediate deployment.

The RO system has also demonstrated that it has the capability to address contaminants of concern that are expected to become regulated by the MECP in the coming years, including perfluorooctane sulfonate (PFOS), and polyfluoroalkyl substances (PFAS), also termed "forever chemicals". The biological treatment options are not equipped to remove these chemicals from the leachate stream.

The Authority acknowledges that timelines outlined in the Stantec report do not provide the Landfill or the City of Windsor's Lou Romano Water Reclamation Plant (LRWRP) with any short-term relief and the Authority cannot continue to hold excess amounts of leachate on site. The Manager of Waste Disposal described additional work being done to determine additional corrective measures that could be implemented at the landfill to improve leachate quality in order to truck more leachate.

The recommendation by RWDI is a short-term, pre-treatment of leachate by means of RO. This pre-treatment will allow the leachate quality to meet the requirements for the LRWRP and for the Authority to significantly reduce current leachate levels.

Administration has met with the TSC to discuss the current status of leachate at the Landfill, the recommendations provided in the Stantec and RWDI reports and discussed that a long-term solution that examines the operational, financial and environmental needs of the Authority should be pursued. The TSC also acknowledges that an immediate and short-term solution or pilot is required that supports operations at both the Landfill and the LRWRP that will eventually provide a long-term solution.

While the Stantec report identifies an MBR system as being more cost-effective, this is a similar system at the LRWRP. Leachate concentrations currently being delivered to the LRWRP are resulting in operational issues as previously noted to the Board and the TSC has noted concerns regarding a similar Biological system being constructed at the Landfill. The Manager of Waste Disposal discussed the potential challenges of operating an MBR system.

The outcome of the Rochem on-site bench scale demonstration study and the results of the analytical testing data demonstrated the effectiveness of RO in processing leachate at the Landfill. The availability of a RO system not only provides an opportunity to further demonstrate the effectiveness of RO on a large-scale operation, but it will also provide some immediate relief by processing approximately four (4) additional truckloads per day of leachate at the Landfill. However, the RO system will not provide any financial relief as it relates to the hauling and treatment costs due to the inability at this time to discharge the treated leachate to surface water until permitting is approved, but this would be the case with any system. Scheduling for procurement and delivery of the service is of critical importance due to the high demand for this equipment and its limited availability in the marketplace.

Administration recommendation is that the initial pilot study be completed using RO as a short/long-term approach to the management of leachate at the Landfill. Administration will also continue to further explore a pilot study on an MBR system for comparison, which could be completed simultaneously.

The Manager of Waste Disposal described the procurement process and noted that the financial implications were outlined on page 45 of the agenda package. He asked if there were any questions.

Mr. Kieran McKenzie commented that the process to look at alternatives to treat leachate has moved very quickly. He questioned about the capacity if we move forward with the RO pilot process. He asked what we would do with the excess if we are currently producing six (6) trucks and begin to process four (4) additional trucks.

The Manager of Waste Disposal stated that in November 2022, the Authority was sending 12-13 trucks of leachate per day. The reason we were hauling that much leachate is that we were trying to draw down ponds to ascertain the condition of these ponds and try to make room for potential rain. When the

City of Windsor had issues with treatment, we stopped hauling. Currently, we are restricted to LRWRP. He noted we seem to be losing ground. RO is an expensive process but has its advantages.

Mr. Kieran McKenzie asked if the RO positions us better due to regulations.

The Manager of Waste Disposal stated that this is correct. One of the selling points of the RO system is its ability to filter out the forever chemicals such as PFAS and PFOS.

Mr. Kieran McKenzie asked what is the timeline to implement the system.

The Manager of Waste Disposal stated that Rochem has committed to holding a plant for the Authority. It could be available September to October timeframe.

Mr. Akpata stated that he watched the presentation regarding PFOS. He asked what does it mean for us and our response to the environment when these chemicals are going to be filtered out.

The Manager of Waste Disposal stated that the news article uses a different process. Similar to RO, when you treat leachate you get clean water and concentrate, the portion that is filtered out. For this system, the concentrate (approximately 20%) would go back to the waste stream or used as dust control. Additional filters would have to be incorporated into a RO plant if we were to purchase. With the bench scale testing, we could run through the filters one time and allow us to send more leachate to the treatment plants.

Mr. Morrison stated the timing of this is very important. He and others went on a tour of the LRWRP plant and realizes the urgency of this issue. He asked if the MBR pilot would be held concurrently.

The Manager of Waste Disposal stated that the MBR is something that the Authority can pursue. Administration will continue to work to determine the cost of the pilot.

Mr. Morrison referred to the report regarding greenhouse vines and potential funding.

The General Manager stated that vines are 95% water and they don't take up much space but are problematic because they create leachate. For 2023, the Authority was able to mitigate the cost because of savings in other areas. In 2024, the TSC will be charged with looking at the costs and develop a plan to fund this ongoing issue.

The Chair asked if there were further questions.

Chair McNamara asked if discussions have started with Hydro One.

The Manager of Waste Disposal stated that he has already engaged in discussions with Hydro One.

Due to this being a pilot, Chair McNamara asked if there is a more permanent solution.

The Manager of Waste Disposal stated that a permanent solution would likely require two (2), 75,000 gallon per day units. This would build in redundancy if one goes down.

Moved by Kieran McKenzie
Seconded by Rob Shepley

THAT the Board receive this report as information.

THAT the Board receive three (3) attachments as information.

THAT the Board approve the release of an Advance Contract Award Notice (ACAN) to be published to provide notice to any potential proponents with available RO equipment and leachate processing experience an opportunity to submit a written statement of capabilities that clearly demonstrates how they meet the requirements of the ACAN.

**46-2023
Carried**

9. Finance & Administration

A. 2023-2024 EWSWA Insurance

The Manager of Finance and Administration provided an update on the Authority's comprehensive insurance program for the period of July 1, 2023 to June 30, 2024. He noted that all the policies and deductibles have remained consistent from prior year with premiums increasing by approximately 7% year over year. The portion of the renewal for 2023 resulted in a favourable variance of approximately \$500.

Moved by Kirk Walstedt
Seconded by Rob Shepley

THAT the Board receive this report as information.

**47-2023
Carried**

10. Other Items

No other items were raised for discussion.

11. By-Laws

A. By-Law 6-2023

Moved by Rob Shepley

Seconded by Hilda MacDonald

THAT By-Law 6-2023, being a By-law to Confirm the Proceedings of the Board of the Essex-Windsor Solid Waste Authority be given three readings and be adopted this 12th day of July, 2023.

**48-2023
Carried**

12. Next Meeting Dates

Tuesday, August 1, 2023 (Cancelled) – New date to be determined

Wednesday, September 13, 2023

Thursday, October 5, 2023

Tuesday, November 7, 2023

Tuesday, December 5, 2023

13. Adjournment

Moved by Mark McKenzie

Seconded by Rob Shepley

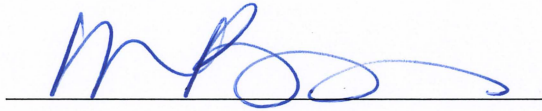
THAT the Board stand adjourned at 6:05PM.

**49-2023
Carried**

All of which is respectfully submitted.



Gary McNamara
Chair



Michelle Bishop
General Manager

Item No. 7.2



Committee Matters: SCM 254/2023

Subject: Minutes of the Essex-Windsor Solid Waste Authority Regular Board Meeting held Wednesday, August 9, 2023



Essex-Windsor Solid Waste Authority Regular Board Meeting MINUTES

Meeting Date: Wednesday, August 9, 2023

Time: 4:00 PM

Location: Zoom Meeting

Attendance

Board Members:

Gary McNamara - Chair	County of Essex
Hilda MacDonald	County of Essex
Rob Shepley	County of Essex
Michael Akpata	County of Essex
Kirk Walstedt	County of Essex
Gary Kaschak – Vice Chair	City of Windsor
Jim Morrison	City of Windsor

EWSWA Staff:

Michelle Bishop	General Manager
Steffan Brisebois	Manager of Finance & Administration
Cathy Copot-Nepszy	Manager of Waste Diversion
Tom Marentette	Manager of Waste Disposal
Teresa Policella	Executive Assistant

City of Windsor Staff:

Anne Marie Albidone	Manager of Environmental Services
Tony Ardovini	Deputy Treasurer Financial Planning
Shawna Boakes	Executive Director of Operations

County of Essex Staff:

Mary Birch	Director of Council & Community Services/Clerk
Sandra Zwiers	County CAO

Absent:

Drew Dilkens	City of Windsor (Ex-Officio)
Kieran McKenzie	City of Windsor
Mark McKenzie	City of Windsor
Mark Spizzirri	Manager of Performance Management and Business Case Development
Kate Hebert	Manager Records and Accessibility/Deputy Clerk

1. Call to Order

Chair McNamara called the Regular meeting to order at 4:02 PM.

The Chair asked the Executive Assistant to conduct the roll call:

Gary Kaschak - Present
Kieran McKenzie - Absent
Jim Morrison - Present
Mark McKenzie - Absent
Michael Akpata - Present
Rob Shepley - Present
Hilda MacDonald - Present
Gary McNamara - Present
Kirk Walstedt - Present

2. Declaration of Pecuniary Interest

The Chair called for any declarations of pecuniary interest and none were noted. He further expressed that should a conflict of a pecuniary nature or other arise at any time during the course of the meeting that it would be noted at that time.

3. Approval of the Minutes

Moved by Hilda MacDonald
Seconded by Gary Kaschak

THAT the minutes from the Essex-Windsor Solid Waste Authority Regular Meeting, dated July 12, 2023, be approved and adopted.

**50-2023
Carried**

4. Business Arising from the Minutes

There were no items raised for discussion.

5. Waste Disposal

A. Regional Landfill Leachate Management

The Manager of Waste Disposal referred to the report on pages 16-19 of the agenda package. The purpose of the report is to recommend the Board enter into a contract with Rochem Americas ("Rochem") for a one (1) year term for the rental of a 50,000 Gal-per-day (gpd) portable high-pressure reverse osmosis ("RO") system to treat and process leachate at the Regional Landfill ("RL").

At the July 12, 2023 Board meeting, the Board was provided an update regarding the management of leachate at the RL and was also provided copies of reports, including recommendations, prepared by Stantec and RWDI Air Inc. In addition, the Board was provided details about Rochem's RO system and estimated costs. The Board approved the recommendation to post an Advance Contract Award Notice ("ACAN").

On July 12, 2023, Administration published the ACAN for a period of 14 days so potential service providers could provide a statement of capability. No service providers provided a submission. Given that the Authority did not receive any submissions and per the Authority's Procurement Policy (EW-008), the Authority may enter into a contract with Rochem. If the Board chooses to award the contract to Rochem, the Authority will work with Rochem to establish a delivery date for the system, begin work on infrastructure upgrades and prepare the site to support the plant and pilot study.

The Manager of Waste Disposal referred to the table on page 18 of the agenda package that outlined the estimated costs that the Authority would be obligated to pay Rochem to rent the RO system and purchase specific chemicals. A one-time hydro service upgrade will be required. As discussed at the July 2023 Board meeting, the RL does not currently have the power to operate the plant and this would also be needed for any type of long-term treatment solution. Administration is also recommending a one-time contribution from the Rate Stabilization Reserve to fund this service upgrade.

The rental and operating costs will form part of the Regional Landfill Operating Program. A portion of the costs will be offset by revenue earned from the delivery of episodic waste and from savings in leachate hauling and treatment expenditures. The final cost will form part of the 2023 financial projection figure. The 2024 costs will be included in the 2024 Operating Plan and Budget.

The Chair asked if there were any questions. No questions were asked.

Moved by Rob Shepley
Seconded by Kirk Walstedt

1. **THAT** the Board authorize the Chair and General Manager to execute a contract with Rochem Americas for a one (1) year term in the amount of \$874,320 USD for the year [\$72,860.00 USD per month] for the rental of a 50,000 Gal-per-day (gpd) (189 m³ per day) portable high-pressure Reverse Osmosis system to treat and process leachate at the Regional Landfill.
2. **THAT** the Board approve the one-time contribution from the Rate Stabilization Reserve to fund the hydro service upgrades at the Regional Landfill.

51-2023
Carried

6. Other Items

No items were raised for discussion.

7. By-Laws

A. By-Law 7-2023

Moved by Gary Kaschak

Seconded by Jim Morrison

THAT By-Law 7-2023, being a By-law to Authorize the execution of an agreement between the Essex-Windsor Solid Waste Authority and Rochem Americas for a one (1) year term in the amount of \$874,320 USD for the year [\$72,860 USD per month] for the rental of a 50,000 Gal-per-day (gpd) (189 m³ per day) portable high-pressure Reverse Osmosis system to treat and process leachate at the Regional Landfill.

52-2023
Carried

B. By-Law 8-2023

Moved by Rob Shepley

Seconded by Michael Akpata

THAT By-Law 8-2023, being a By-law to Confirm the Proceedings of the Board of the Essex-Windsor Solid Waste Authority be given three readings and be adopted this 9th day of August, 2023.

53-2023
Carried

8. Next Meeting Dates

Wednesday, September 13, 2023

Thursday, October 5, 2023

Tuesday, November 7, 2023

Tuesday, December 5, 2023

9. Adjournment

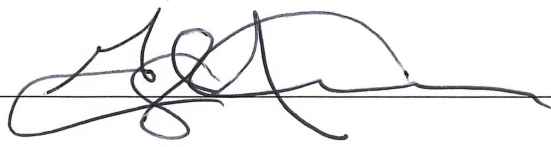
Moved by Rob Shepley

Seconded by Gary Kaschak

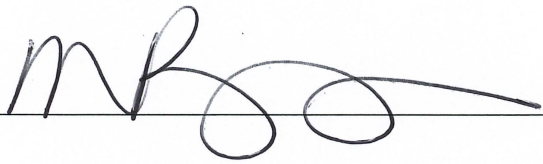
THAT the Board stand adjourned at 4:12 PM.

54-2023
Carried

All of which is respectfully submitted.



Gary McNamara
Chair



Michelle Bishop
General Manager



Subject: Community and Corporate Greenhouse Gas Emissions and Energy Monitoring Report – 2021 - City Wide

Reference:

Date to Council: September 27, 2023
Author: Michelle Moxley-Peltier
Community Energy Plan Administrator
519-255-6100 ext. 6109
mmoxleypeltier@citywindsor.ca
Asset Planning
Report Date: July 30, 2023
Clerk's File #: E/10822

To: Mayor and Members of City Council

Recommendation:

THAT the report of the Community Energy Plan Administrator dated July 30, 2023 entitled 2021 Community and Corporate Greenhouse Gas Emissions and Energy Monitoring Report **BE RECEIVED** for information

Executive Summary:

N/A

Background:

In 2015, the City of Windsor began the process of developing a long-term comprehensive plan to address energy and greenhouse gas emissions through the completion of a Community Energy Plan and associated Corporate Climate Action Plan. These plans were approved by City Council in July 2017 (CR426/2017).

The vision of the Community Energy Plan is to create economic advantage, mitigate climate change, and improve energy performance. It strives to position Windsor as an energy center of excellence that boasts efficient, innovative, and reliable energy systems that contribute to the quality of life of the residents and businesses.

The Community Energy Plan (CEP) included ambitious and transformative targets to support global efforts to keep global temperature increases within 1.5 degrees Celsius, and a community-wide goal to reduce greenhouse gas (GHG) emissions by 40% of 2014 levels and to reduce per-capita energy consumption by 40% by 2041. The Corporate Climate Action Plan (CCAP) also included a corporate-wide goal to reduce GHG emissions by 40% of 2014 levels and to reduce corporate energy usage by 40% of 2014 levels by 2041.

On November 19, 2019, City Council approved the Windsor Essex County Environment Committee's motion that the City of Windsor pass a Climate Change Emergency Declaration (CR570/2019). Included as an outcome of this report is the recommendation to update the City's GHG emission targets to reflect the commitment to achieve a reduction of 45% of 2005 levels by 2030 and reaching Net-Zero emissions by 2050, aligning with the Government of Canada's GHG Reduction Targets.

In an effort to achieve these reduction targets, a number of interim targets are required to accelerate the implementation of emission reduction activities and track progress. The Acceleration of Climate Change Actions (CR187/2020 ETPS 738) report was received by City Council on May 4, 2020 in response to the Climate Change Emergency Declaration.

In November of 2020, Council requested (CR558/2020) administration to report annually on greenhouse gas emissions and energy usage. Due to the drastic changes in energy consumption in 2020 and 2021 due to the COVID-19 pandemic, and very limited staffing resources in 2021, this is the first comprehensive report since 2019.

For the purpose of this report, data points for 2020 and 2021 are included for illustrative purposes. Administration made the decision to use 2019 data for historical trending, as 2019 is the last year available with a complete data set. Data sets from 2020 and 2021 were deemed outliers due to the impacts of COVID-19, which resulted in reduced energy consumption due to COVID restrictions, reduction of mobility, and working from home.

On May 9, 2022, the Science Based Targets for GHG Reduction (CR209/2022 ETPS 893) report was presented to City Council. The report recommended updating Windsor's Community and Corporate GHG Emission reduction targets and adopting the Science Based Target Network's methodology for setting Science Based Climate Targets. City Council approved in principle the following Science Based Climate Targets:

- 68% reduction in city-wide emissions (scope 1 and 2) and 55% reduction in corporate-wide emissions (scope 1 and 2) below 2005 baseline by 2030; and,
- Net-Zero by 2050.

The Community and Corporate Greenhouse Gas Emissions and Energy Monitoring Report for 2021 monitors and tracks actuals against both the CEP/CCAP and Science Based Climate Targets. Administration continues to evaluate Science Based Climate Targets and the related actions needed to reach those targets through the development of a Net-Zero Transition Plan. This plan will address both the strategies and the estimated costs to achieve the proposed Science Based Climate Targets. The plan is currently tracking to a Winter 2023/2024 completion date and will be presented to Council for endorsement. The strategies outlined in the CEP and CCAP remain valid and become the starting point for the development of the Net-Zero Transition Plan.

Discussion:

The attached Community and Corporate Greenhouse Gas and Energy Monitoring Report for 2021 provides in-depth details on our Community and Corporate Greenhouse Gas Inventories. This report highlights the changes in energy consumption and

Greenhouse Gas emissions resulting of actions taken at the provincial, community, and corporate levels. A summary of key performance metrics is found below.

Community Energy and Emissions Inventory

As part of the Community Energy Plan (CEP) implementation, an inventory of Greenhouse Gas Emissions (GHG) and energy consumption is completed each year such that trends can be recognized and progress towards the CEP emissions and energy reduction goals can be evaluated. These inventories serve to help evaluate the effectiveness of emissions reduction strategies and policies. The 2014 emissions inventory serves as the baseline inventory for the Community Energy Plan.

Since 2014, emissions and energy consumption for the Windsor community have generally followed a downward trend, with significant reductions observed in 2020 and 2021, which can be attributed to impacts from COVID-19 restrictions. In 2021 a total of 1,487,346 tonnes of Carbon Dioxide equivalent (tCO_{2e}) was emitted to the atmosphere compared to the 1,869,202 tonnes emitted in 2014 inventory¹. These emissions totals result in per-capita emissions of 8.13 tonnes CO_{2e} for 2019 compared to 8.86 tonnes CO_{2e} in the 2014 CEP baseline. The goal of the CEP is a per-capita emission of 5 tonnes CO_{2e} by the year 2041. Table 1 provides an overview of status of the CEP primary performance indicators.² The following tables compare 2019 to the 2014 baseline as the impacts of COVID-19 greatly affected energy use and the years 2020 and 2021 are not considered representative of actual community trends.

Table 1: Primary Performance Indicators vs. CEP Baseline 2014

Primary Performance Indicators	CEP Baseline 2014	2019	2021	% Change to Baseline (2019)
Total Emission (CO _{2e})	1,869,203	1,765,057	1,487,346	- 5.57
Total Energy (GJ)	39,016,987	37,912,495	30,313,199	- 2.83
Population	211,000 ³	217,185	229,600 ⁴	+ 2.93
Emissions per Capita	8.86	8.13	6.48	- 8.24
Energy per Capita	184.91	174.56	131.99	- 5.60

Table 2 highlights the primary performance indicators in 2019 as compared to the Science Based Target Baseline of 2005.

¹ 2014 Baseline emissions were adjusted in 2021 to include emissions from solid waste. Adjustment resulted in a corresponding increase to per-capita emissions.

² 2021 data impacted by COVID-19. For the purpose of this report, 2019 data is used to identify trends.

³ Population used for 2014 Baseline

⁴ Statistics Canada 2021 Census

Table 2: Primary Performance Indicators vs. Science Based Climate Target (SBCT) Baseline 2005

Primary Performance Indicators	SBCT Baseline 2005	2019	2021	% Change to Baseline (2019)
Total Emission (CO ₂ e)	2,551,303	1,765,057	1,487,346	- 30.82
Total Energy (GJ)	42,264,618	37,912,495	30,313,199	- 10.30
Population	215,010	217,185	229,600	+ 1.01
Emissions per Capita	11.87	8.13	6.48	- 31.51
Energy per Capita	196.57	174.56	131.99	- 11.20

Table 3 identifies the changes in emissions broken out by the various sectors. All sectors experienced a significant decrease in emissions in 2021, which can be attributed in part due to the economic impacts from COVID-19. It is anticipated that emissions will increase in 2022 as the region emerges from the pandemic and pandemic related restrictions.

Table 3: Community Emissions by Sector vs. CEP Baseline 2014

COMMUNITY EMISSIONS (tCO ₂ e)	CEP Baseline 2014	2019	2021	% Change to Baseline (2019)
Residential	366,188	323,127	284,527	- 11.76
Commercial	316,383	219,683	207,774	- 30.56
Industrial	385,206	410,984	336,555	+ 6.69
On Road Transportation	732,971	738,071	590,163	+ 0.70
Waste	68,454	73,192	68,327	+ 6.92

To put the Community emissions into context, 1.9 million acres of forest or 26 million seedlings planted and grown for ten years would be required to sequester the carbon emitted by the Windsor Community in 2021.

Table 4 highlights community emissions in 2019 by sector as compared to the Science Based Climate Target Baseline of 2005. The significant decrease in Commercial and Industrial emissions between 2005 and 2019 can be attributed to the: a) 2009 recession and b) actions taken by the Ontario government to remove coal as a fuel source in the generation of electricity in 2014.

Table 4: Community Emissions by Sector vs. SBCT Baseline 2005

COMMUNITY EMISSIONS (tCO₂e)	SBCT Baseline 2005	2019	2021	% Change to Baseline (2019)
Residential	354,635	323,127	284,527	- 8.88
Commercial	681,181	219,683	207,774	- 67.75
Industrial	668,726	410,984	336,555	- 38.54
On Road Transportation	767,224	738,071	590,163	- 3.80
Waste	79,537	73,192	68,327	- 7.98

Since the approval of the Community Energy Plan, the City of Windsor has been working towards implementation of many of the key strategies outlined in the plan. Some of the key initiatives include:

- 1) **Deep Energy Efficiency Retrofit program for homes**– A Program Design Study is currently being developed by Administration to create a path to retrofitting 80% of existing homes and businesses by 2041. This project was funded through a Community Efficiency Fund grant from the Federation of Canadian Municipalities.
- 2) **Active Transportation Masterplan** – This plan for expanding and improving the active transportation network of Windsor was approved in June 2019. The plan has set a target to increase the mode share to 25% by 2041. It is estimated that a modest elimination of 2 percent of average journeys results in emissions reduction of about 8,000 tonnes CO₂e.
- 3) **Transit Service Delivery Review** – This study, completed in 2019 (More Than Transit: 2019 Transit Master Plan) provided recommendations to improve the service delivery of transit, with the goals of increasing ridership and decreasing emissions.
- 4) **Sustainable Neighbourhood Action Plan** – In response to CQ12/2020 (CR544/2020) administration submitted a successful application to FCM for grant funding to complete a sustainable neighbourhood action plan.

Corporate Energy and Emissions Inventory

Concurrently with the development of the Community Energy Plan a Corporate Climate Action Plan (CCAP) was developed. This corporate wide plan outlines strategies at a corporate level to reduce energy and emissions from municipal operations and fleets.

Corporate emissions account for only two percent of the overall community emissions. Since 2014, Corporate emissions increased as highlighted in Table 5.

Table 5: Primary Corporate Performance Indicators vs. CCAP Baseline 2014

CORPORATE	CCAP Baseline 2014	2019	2021	% Change to Baseline (2019)
Total Emission (tCO₂e)	34,538	37,307	33,645	+ 8.02
Total Energy (GJ)	812,826	874,726	876,330	+ 7.62

Table 6 highlights the primary corporate performance indicators as compared to the Science Based Target Baseline of 2005.

Table 6: Primary Corporate Performance Indicators vs. SBCT Baseline 2005

CORPORATE	SBCT Baseline 2005	2019	2021	% Change to Baseline (2019)
Total Emission (tCO₂e)	44,104	37,307	33,645	- 15.41
Total Energy (GJ)	705,118	874,726	876,330	+ 24.05

Table 7 identifies the changes in emissions broken out by sector. The addition of the Pelletizing Plant to corporate assets in 2019, resulted in a significant increase in emissions for water and wastewater. The most significant reductions occurred for the street lighting component which was reduced by approximately 90% as a result of the installation of high efficiency LED street lighting throughout the City.

Table 7: Corporate Emissions by Sector vs CCAP Baseline 2014

CORPORATE	Emissions (tCO₂e)			% Change to Baseline (2019)
	CCAP Baseline 2014	2019	2021	
Building	17,054	19,975	12,998	+ 17.13
Vehicle	12,247	12,317	11,423	+ 0.57
Streetlights	1,484	136	200	- 90.84
Water & Sewage	3,752	4,879	9,024	+ 30.04

Table 8 highlights the changes in corporate emissions by sector as compared to the Science Based Climate target baseline of 2005.

Table 8: Corporate Emissions by Sector vs SBCT Baseline 2005

CORPORATE	Emissions (tCO ₂ e)			% Change to Baseline (2019)
	SBCT Baseline 2005	2019	2021	
Building	15,932	19,975	12,998	+ 25.38
Vehicle	13,557	12,317	11,423	- 9.15
Streetlights	4,593	136	200	- 97.04
Water & Sewage	10,022	4,879	9,024	- 51.32

Similar to the Community, a number of Corporate initiatives are underway to support the CCAP including, but not limited to:

- 1) **Integrated Site Energy Masterplan** – This study was conducted to evaluate the energy and emissions from wastewater treatment at Lou Romano Water Reclamation Plant and Little River Pollution Control Plant. The study presented recommendations for advancing these facilities to carbon neutral operation. This study was funded through FCM’s Municipal Climate Innovation Program and completed in 2020.
- 2) **Corporate Energy Management Plan (2019-2023)** This plan is a flexible document that sets goals, strategies, and initiatives to reduce the Corporation’s energy consumption and greenhouse gas emissions from Corporate facilities. The Corporate Energy Management is actively implementing strategies in this plan, including solar photovoltaic systems at a number of City facilities.
- 3) **Greenhouse Gas Reduction Pathway Feasibility Studies** These studies will outline an actionable path to reduce emissions to near net-zero for seven corporate facilities, encompassing five community centres/libraries and two twin-pad arena and pool facilities.
- 4) **Greening the Fleet** – The greening the fleet manual outlines strategies for improving local air quality by improving the fuel efficiency of the city vehicle fleet. The city fleet currently consists of fifteen hybrid or electric vehicles as of 2021.
- 5) **Transit Windsor Electrification Roadmap** – This roadmap will be developed to guide Transit Windsor to better plan for zero emission buses and infrastructure.

The above-described actions alone will not allow the City of Windsor to meet the approved 2017 CEP and CCAP targets. Significant work on actions in the CEP and CCAP will be an ongoing requirement to effect a drop in emissions and/or energy consumption to align with these targets.

Partnerships and Collaboration for 2023

The Environmental Sustainability and Climate Change office collaborates and engages with numerous municipalities and environmental stakeholders on a continuous basis. This allows for the sharing of knowledge, best-practices and lessons learned in the effort to streamline and coordinate efforts across many geographical and organizational jurisdictions. It is recognized that climate change is a challenge that transverses

municipal, provincial and federal borders and as such partnerships and collaboration are necessary to effectively address this challenge. It should be noted that the use of the term “partnerships” in this context does not constitute a legal arrangement, but an informal one designed to share information and reduce duplication of efforts across municipalities.

Municipal Partnerships

City of Burlington, City of Guelph, City of Kingston, City of London, City of Markham, City of Oakville, City of Ottawa, City of Toronto, City of Vaughn, County of Essex, Region of Durham, Region of Waterloo, Town of Newmarket. Other municipalities are consulted when similar priorities are identified.

The ESCC Office also engages with the City of Detroit. However, due to legislative differences between the two Countries, the focus is on sharing of ideas.

Organizational Partnerships

Federation of Canadian Municipalities’ Partners for Climate Protection, Global Covenant of Mayors for Climate & Energy and the Carbon Disclosure Project, Clean Air Partnership, QUEST Canada (Ontario Community Energy and Climate ON-CEC working group, Low-Carbon Thermal Network, Deep Energy Retrofit working group), University of Windsor, St. Clair College

Annual Greenhouse Gas Inventories

As noted in the background section of this report, in November 2020, Council requested (CR558/2020) administration to report annually on greenhouse gas emissions and energy usage. Unfortunately, during 2021, staffing resources were severely constrained and it was acknowledged that the GHG emissions in 2020 and 2021 were greatly impacted by the COVID-19 pandemic and associated restrictions and therefore, could not be used to accurately determine trends.

Administration is currently working on the 2022 GHG inventory report. The 2022 inventory will provide a better representation of actual Community and Corporate trends as many COVID restrictions were removed.

Moving forward, Council should anticipate annual inventory reports in Q4 of the following year. This is due to timing in receiving data from third parties, some of which is not received until August of the following year.

Risk Analysis:

There are no significant risks associated with this information report.

Climate Change Risks

Climate Change Mitigation:

The information outlined in this inventory report is challenging from a climate change mitigation risk perspective. Data reveals that neither the Windsor community nor the Corporation is progressing towards its environmental goals at the pace required to meet

our targets. This is logical as GHG-reduction strategies from the CEP or CCAP are only beginning to be implemented at this point. Until such time that major CEP/CCAP Strategies (ex. Deep Energy Efficiency Retrofits or District Energy expansion) are implemented, the city has little to no control over the community emissions within its jurisdiction and as such, the monitoring and validation of these emissions represent a first key step towards reduction. Understanding the quantity and distribution of emissions among the various sectors is paramount in determining the low-carbon pathway moving forward.

Major investment is required to affect emissions in a meaningful way. To determine the scale of these investments and the impact that inaction would have on the cities future, one can consider the future 2030 carbon tax of \$170/tonne CO₂ applied to the total community emissions of 1.5 MT. This corresponds in a total of \$253,000,000 dollars spent annually on carbon cost. This is a reoccurring cost and it would be fiscally prudent to invest in technologies to reduce this liability. This point is further emphasized when considering that the carbon tax is merely a symptom of the impacts of climate change, and the true cost is associated with the actual impacts to society due to a changing climate such as flooding, extreme heat, vector borne diseases and increased severity and frequency of intense storms. The majority of studies on the topic have determined that mitigation of climate change is less costly than adaptation to climate change impacts. A recent report from the Federal Emergency Management Agency in the US states that for every dollar spent on mitigation, six dollars are saved on adaptation. As such, investment into mitigation now will be less expensive than adaptation in the future.

Climate Change Adaptation:

Over a 50-year planning horizon, a certain level of climate change adaptation will be required regardless of mitigation efforts. This is due to a concept known as “climate inertia” which can be viewed as the time delay between the instance of emission and occurrence of the impacts caused by such emission. There is the opportunity however to prevent impacts above and beyond the inertia-based climate impacts by reducing and eventually eliminating emissions.

The GHG inventory outlined herein indicates that an environmentally relevant reduction of emissions has yet to occur. Emissions from this time period will continue to contribute to future climate change impacts as addressed in the City’s Degree of Change, Climate Change Adaptation Plan.

Financial Matters:

This report is for informational purposes, and highlights the changes in energy consumption and GHG emissions resulting from actions taken at the provincial, community, and corporate levels. Although the Community and Corporate Greenhouse Gas Emissions and Energy Monitoring report does not require an outlay of funds, its generation is the accountability of the Community Energy Plan Administrator and is funded under the existing Environmental Sustainability and Climate Change (ESCC) operations budget.

The Climate Change Reserve fund has been exhausted as remaining funds were used to match grant funding for Residential Deep Energy Efficiency Retrofit Program Study

and Sustainable Neighbourhood Action Plan Feasibility Study. As part of the 2024 budget process, ESCC will make a request to replenish this fund to continue funding adaption and mitigation efforts. Global commitments to GHG reductions are required to reduce or limit the worst impacts of climate change.

The Community Energy Plan Administrator role remains a temporary-full time position. The successful implementation of CEP strategies plus the development of the Net-Zero Transition Plan requires permanent resourcing. As part of the 2024 budget process, ESCC will request transitioning the Community Energy Plan Administrator role to a permanent-full time position.

Consultations:

- Asset Planning – Corporate Energy Initiatives – Sokol Aliko, Manager Energy Initiatives and Cole Nadalin, Supervisor Energy Initiatives
- Environmental Services – Anne Marie Albidone – Manager Environmental Services
- Fleet – Angela Marazita, Manager Fleet
- Transit Windsor – Tyson Cragg Executive Director, and Jason Scott, Supervisor, Planning
- Transportation Planning – Kathleen Quenneville – Active Transportation Coordinator

Conclusion:

Community and Corporate Greenhouse gas inventories have been completed annually. Community emissions have reduced slightly when compared to the 2014 baseline. Community emissions are expected to maintain current level or rise annually until low-carbon infrastructure projects are implemented within the community.

Corporate emissions increased in 2019 over the 2014 inventory due to the addition of new corporate assets using natural gas as a fuel source, which results in higher GHG emissions (i.e. Combined Heat and Power (CHP) installations at Huron Lodge, WFCU, and WIATC, and Pelletizing Plant). Decreases in Corporate emissions in 2020 and 2021 are attributed to closures and reduction of services during the COVID-19 pandemic.

Moving forward, Council should anticipate annual inventory reports in Q4 of the following year. This is due to timing in receiving data from third parties, some of which is not received until August of the following year.

Planning Act Matters:

N/A

Approvals:

Name	Title
Karina Richters	Supervisor, Environmental Sustainability and Climate Change
Rosa Maria Scalia	Financial Planning Administration
Natasha Gabbana	Senior Manager, Asset Planning
Janice Guthrie	Commissioner of Corporate Services and Chief Financial Officer
Jelena Payne	Commissioner of Economic Development and Innovation
Joe Mancina	Chief Administrative Officer

Notifications:

Name	Address	Email

Appendices:

01 – 2021 Community and Corporate Greenhouse Gas and Energy Monitoring Report

Windsor's
COMMUNITY ENERGY PLAN

A powerful plan for the future



**Community and Corporate
Greenhouse Gas and Energy
Monitoring Report**

2021 Results

Executive Summary



As part of the Community Energy Plan (CEP) implementation, an inventory of Greenhouse Gas Emissions (GHG) and energy consumption is completed each year such that trends can be recognized and progress towards the CEP emissions and energy reduction goals can be evaluated. These inventories serve to help evaluate the effectiveness of emissions reduction strategies and policies. The 2014 emissions inventory serves as the baseline inventory for the Community Energy Plan.

Since 2014, emissions and energy consumption for the Windsor community have generally followed a downwards trend, with significant reductions observed in 2020 and 2021, which can be attributed to impacts from restrictions and shutdowns from COVID-19. In 2021, a total of 1,487,346 tonnes of Carbon Dioxide equivalent (tCO₂e) was emitted to the atmosphere compared to the 1,869,202 tonnes emitted in 2014 inventory¹. These emissions totals result in per-capita emissions of 6.48 tonnes CO₂e for 2021 compared to 8.86 tonnes CO₂e in the 2014 CEP baseline. The goal of the CEP is a per-capita emission of 5 tonnes CO₂e by the year 2041.

Did you know?

For 2021, the total yearly community emissions is equivalent to the carbon sequestered by 1.9 million acres of forest, or 26 million seedlings planted and grown for ten years.



Over the same timeframe, Corporate emissions saw a reduction of 2.2% over the CCAP baseline. All components of corporate emissions were reduced with the exception of wastewater treatment and pumping which increased by 140.5%, this is as a result of the addition of the Pelletizer Plant to the corporate assets in 2019. The most significant reductions occurred for the street lighting component, which was reduced by 86.5% as a result of the installation of high efficiency LED street lighting throughout the City that was completed in 2019. Emissions from buildings were reduced by 9.9% mainly as a result of

¹ 2014 Baseline emissions were adjusted in 2021 to include emissions from solid waste. Adjustment resulted in a corresponding increase to per-capita emissions.

closure and idling of buildings, and work from home protocols implemented to combat the spread of COVID-19. Vehicular emissions were also reduced by 6.7%.

Tables 1A and 1B below indicate the trends observed for both Corporate and Community emissions.











COMMUNITY		
Sector	Emissions Trend	
	2019	2021
Residential		
Industrial		
Commercial		
On-Road Transport		
Total Emissions		

Table 1A: Community Emissions Trend 2019 vs. 2014











CORPORATION		
Sector	Emissions Trend	
	2019	2021
Buildings		
Street Lighting		
On-Road Transport		
Water		
Total Emissions		

Table 1B: Corporate Emissions Trend 2019 vs. 2014

More detail for each of these sectors is provided in the body of the report.

Background

In 2002, the City of Windsor joined the Federation of Canadian Municipalities (FCM) Partners for Climate Protection (PCP). In 2006 Council approved the City's first *Environmental Master Plan (EMP)*. *The 2006 EMP* prioritized the following five goals:

- Goal A: Improve Our Air and Water Quality
- Goal B: Create Healthy Communities
- Goal C: Green Windsor
- Goal D: Use Resources Efficiently
- Goal E: Promote Awareness

In 2010, the City of Windsor undertook the development of the City's first greenhouse gas (GHG) inventory as outlined in FCM's PCP program (Milestone 1). Upon completion of this first inventory, City Council committed to completing a Climate Change Mitigation Plan.

Building on the goals of the EMP and the information obtained through the original inventory, the City developed a long-term comprehensive plan to address energy and greenhouse gas emissions through the completion of a Community Energy Plan (CEP) and associated Corporate Climate Action Plan (CCAP). Both the CEP and CCAP were approved by Council in 2017.

The Community Energy Plan aims to create economic advantage, mitigate climate change, and improve energy performance. It strives to position Windsor as an energy center of excellence that boasts efficient, innovative, and reliable energy systems that contribute to the quality of life of the residents and businesses.

The CEP includes ambitious and transformative targets to support global efforts to keep global temperature increases within 1.5 degrees Celsius. By meeting CEP targets, it is anticipated that up to 2.2 billion dollars of energy expenditure can be saved.

Figure 1 illustrates the Community and Corporate energy and emission targets as stated in the CEP and CCAP.

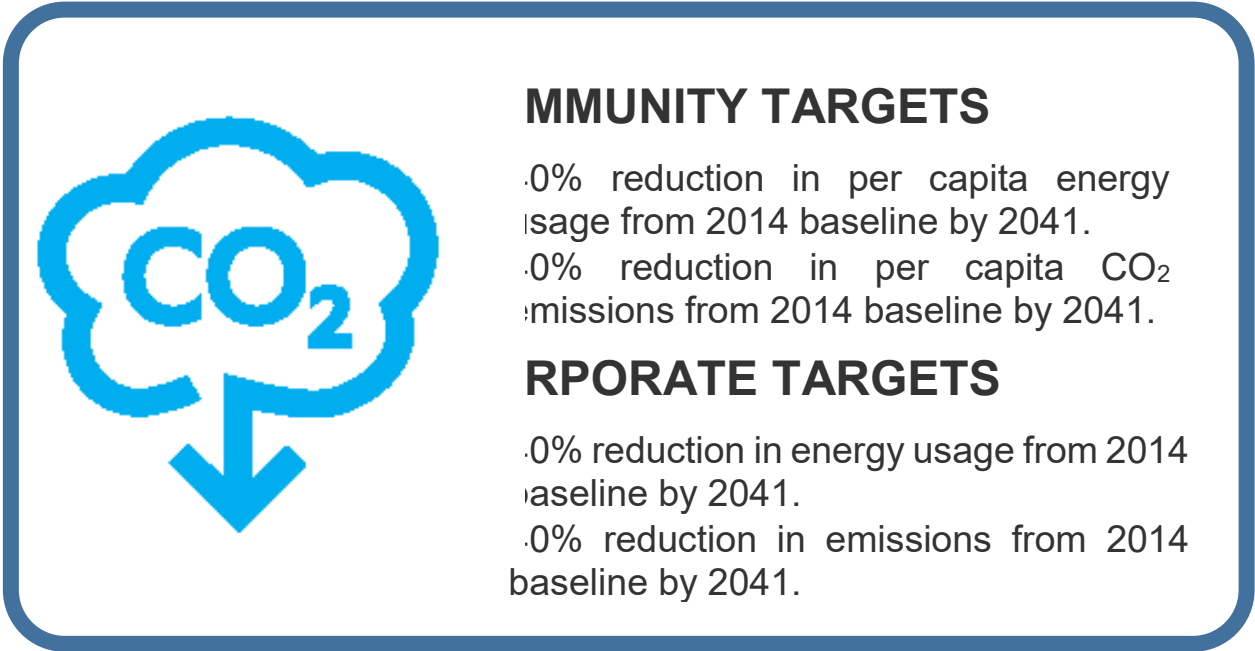


Figure 1: Community and Corporate Energy and Emission Targets

In addition to the targets outlined in the CEP and Corporate Climate Action Plan, the City has also committed to participating in the Carbon Disclosure Project (CDP) administered through the Global Covenant of Mayors for Climate and Energy. This commitment includes reporting GHG emissions inventories, mitigation actions, as well as energy and emissions targets on a yearly basis through the CDP website.

City Council approved the Community Energy Plan, Corporate Climate Action Plan and associated targets, on July 17, 2017 (CR426/2017).

On November 19, 2019, City Council approved the Windsor Essex County Environment Committee's motion that the City of Windsor pass a Climate Change Emergency Declaration (CR570/2019). Included as an outcome of this report is the recommendation to update the City's GHG emission targets to reflect the commitment to achieve a reduction of 45% of 2005 levels by 2030 and reaching Net-Zero emissions by 2050, aligning with the Government of Canada's GHG Reduction Targets.

In an effort to achieve these reduction targets, a number of interim targets are required to accelerate the implementation of emission reduction activities and progress tracked. The Acceleration of Climate Change Actions (CR187/2020 ETPS 738) report was received by City Council on May 4, 2020 in response to the Climate Change Emergency Declaration.

Figure 2 illustrates the trajectory of Windsor's Community Greenhouse Gas (GHG) emissions inventory (red) as compared to targets from the Government of Ontario (green), the Government of Canada (blue), as well as Windsor's CEP (grey) dating back to 2005. To date, Windsor's emissions have met or exceeded all targets.

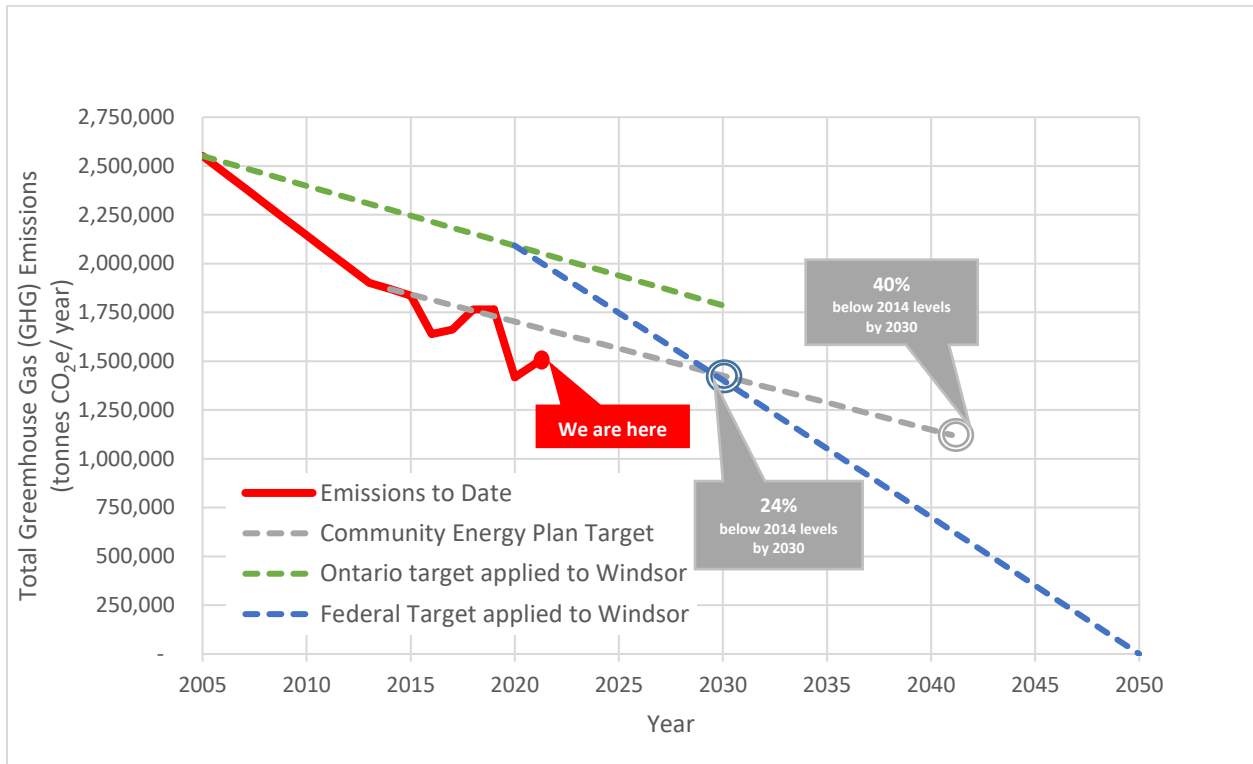


Figure 2: Community GHG Emissions Inventory – Actuals vs. Targets

Figure 3 illustrates the trajectory of Windsor’s Corporate Greenhouse Gas (GHG) emissions inventory (red) as compared to targets from the Government of Ontario (green), the Government of Canada (blue), as well as Windsor’s CCAP (grey) dating back to 2005. Since 2018, Windsor’s corporate emissions have trended above the CCAP target.

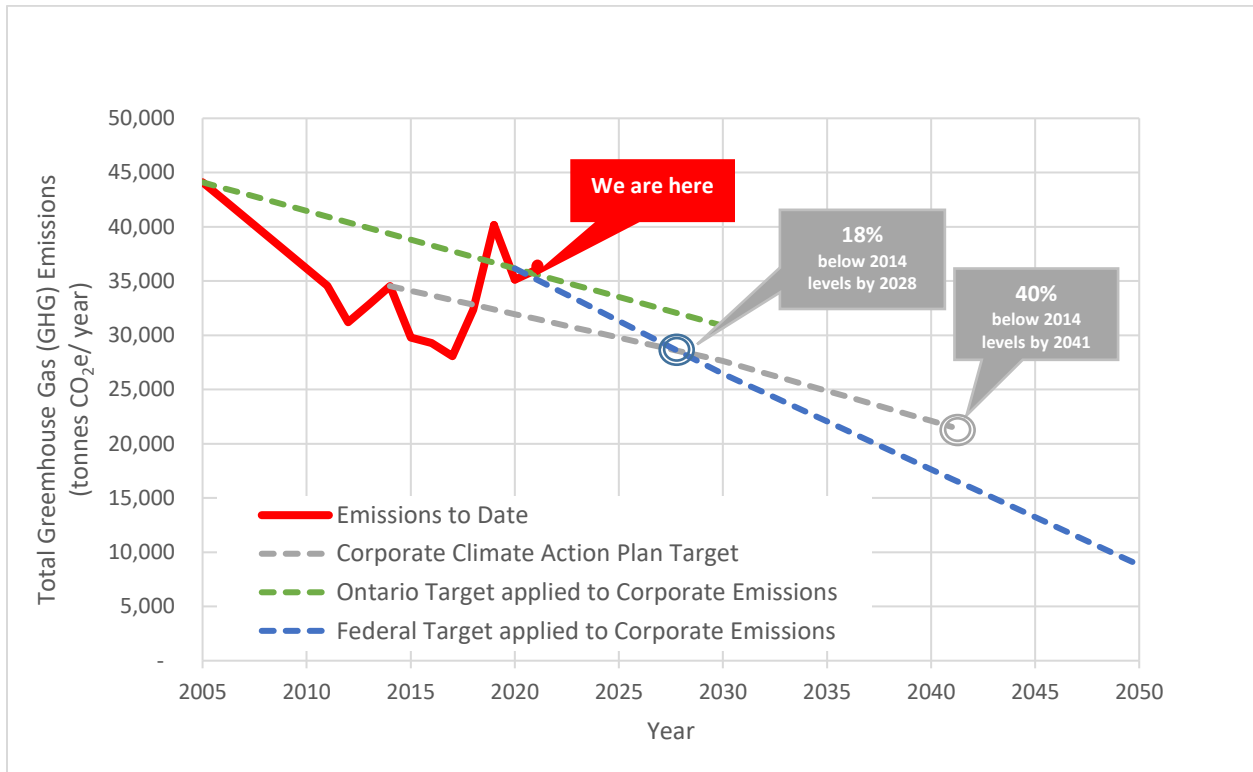


Figure 3: Corporate GHG Emissions Inventory – Actuals vs. Targets


In November of 2020, Council requested (CR558/2020) administration to report annually on greenhouse gas emissions and energy usage. Due to the drastic changes in energy consumption in 2020 and 2021 due to the COVID-19 pandemic, this is the first comprehensive report since 2019.

For the purpose of this report, data points for 2020 and 2021 are included for illustrative purposes. Administration made the decision to use 2019 data for historical trending, as 2019 is the last year available with a complete data set. Data sets from 2020 and 2021 were deemed outliers due to the impacts of COVID-19, which resulted in reduced energy consumption due to COVID restrictions, reduction in mobility, and working from home.

On May 9, 2022, the Science Based Targets for GHG Reduction (CR209/2022 ETPS 893) report was presented to City Council. The report recommended updating Windsor's Community and Corporate GHG Emission reduction targets and adopting the Science Based Target Network's methodology for setting Science Based Climate Targets to align GHG emission targets to:

- The City's Climate Change Emergency Declaration (CR570/2019);
- Government of Canada's updated GHG Reduction Targets (reduction of 40-45% below 2005 levels by 2030 and net zero by 2050); and
- The Intergovernmental Panel on Climate Change (IPCC) Special report "Global Warming of 1.5°C" recommending that emissions must decline by about 45% globally by 2030 and reach net zero by 2050.

Figure 4 illustrates the proposed Community and Corporate energy and emission targets as stated approved in principle by City Council.



COMMUNITY TARGETS

8% reduction in GHG emissions (Scope 1 and Scope 2) by 2030 from 2005 baseline
Net-Zero in 2050 (Scope 1 and Scope 2 emissions)

CORPORATE TARGETS

5% reduction in GHG emissions (Scope 1 and Scope 2) by 2030 from 2005 baseline
Net-Zero by 2050 (Scope 1 and Scope 2 emissions)

Figure 4: Proposed Community and Corporate Energy and Emission Targets

Figure 5: Proposed Community GHG Reduction Targets illustrates the pathway for Windsor’s science-based GHG emission target as compared to targets from the CEP, Government of Ontario and the Government of Canada. Science Based targets are more aggressive than government targets between 2022 and 2050.

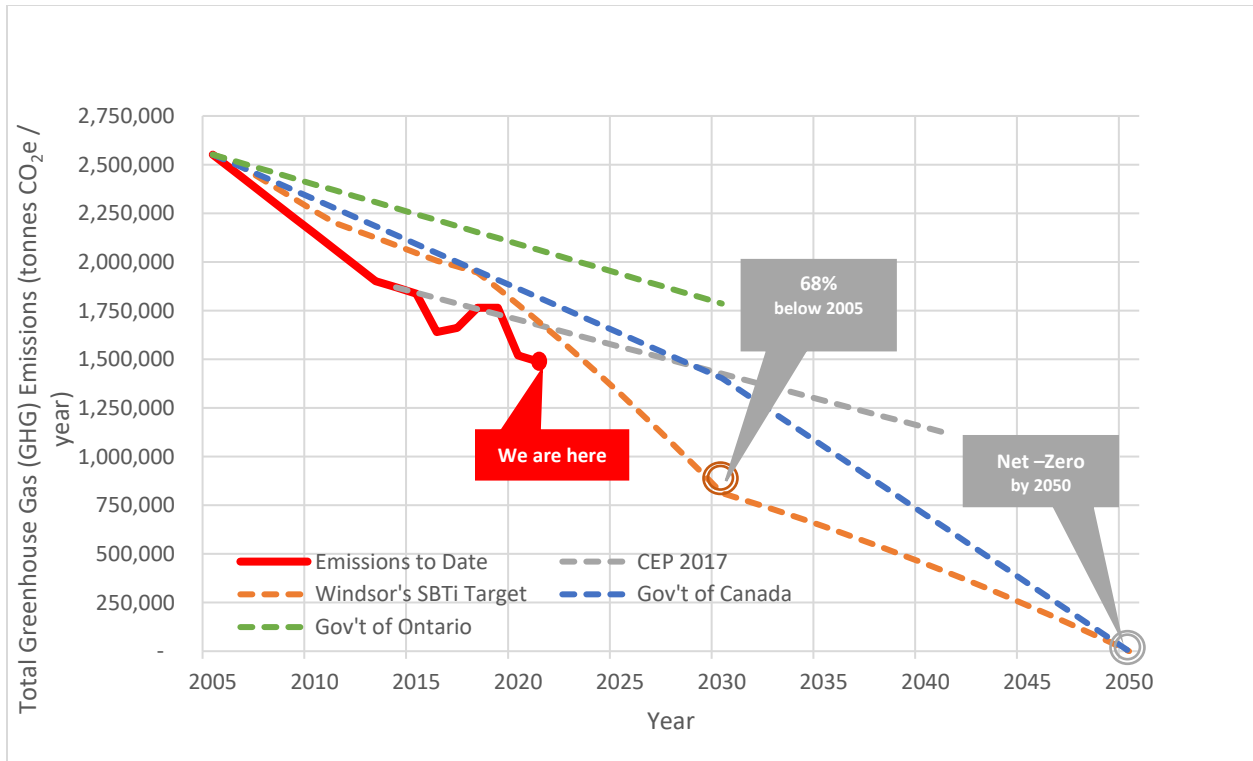


Figure 5: Proposed Community GHG Reduction Targets

Figure 6: Proposed Corporate GHG Reduction Targets for 2030, 2035, 2040, and 2045 illustrates the pathway for Windsor’s corporate science-based GHG emission target as compared to targets from the CCAP, Government of Ontario, and the operation target from the Government of Canada. Science Based targets are more aggressive than government targets between 2022 and 2050.

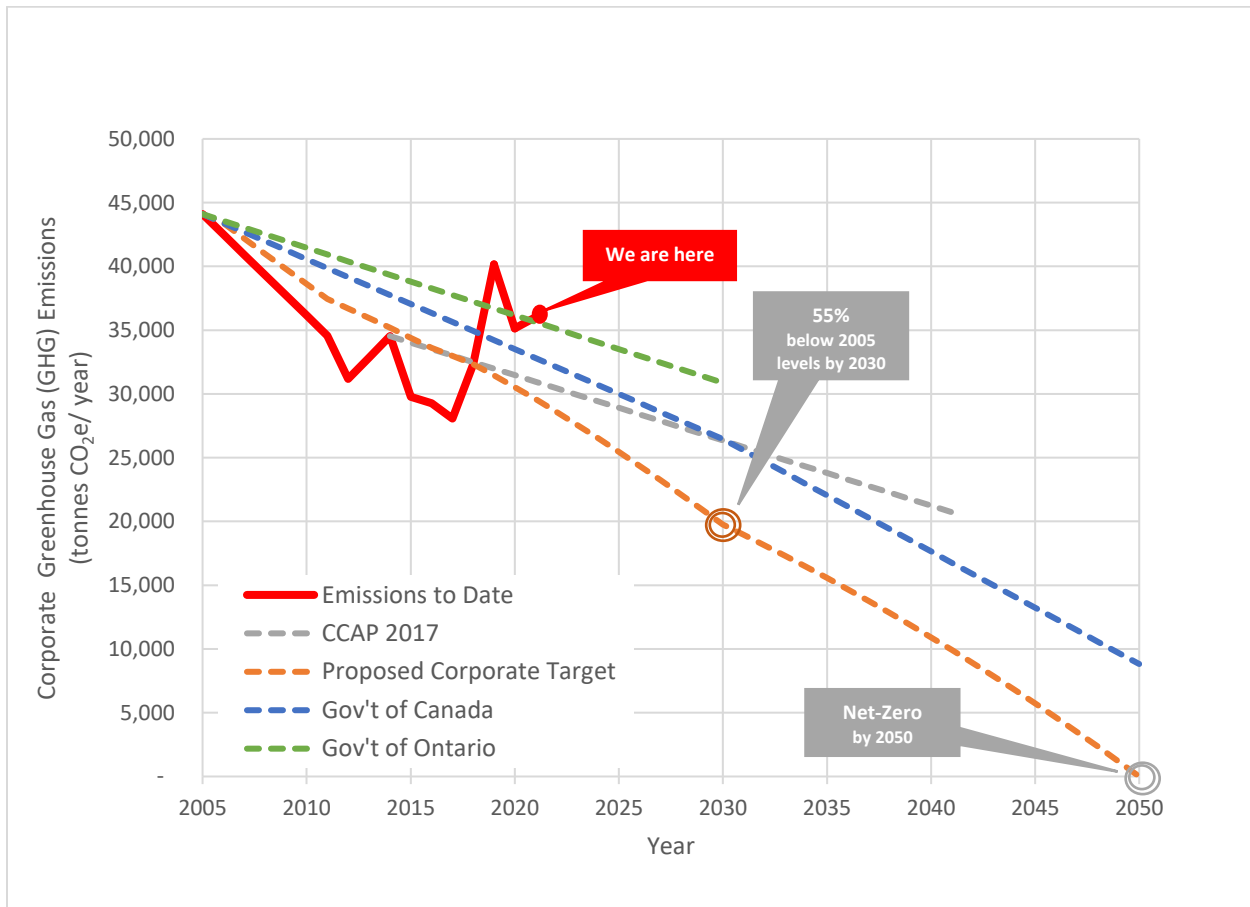


Figure 6: Proposed Corporate GHG Reduction Targets

Administration acknowledges that the aspirational targets proposed will only be possible with the collaborative efforts and support of all levels of government (municipal, provincial, federal). The proposed Community and Corporate Science Based GHG Reduction targets are ambitious and aspirational. Administration acknowledges that reaching the proposed targets will not be easy. Strategies identified in the Community Energy Plan and Corporate Climate Action Plan will achieve a portion of the GHG reductions needed for Windsor to contribute its fair share. Updating the CEP and CCAP to align to the proposed Community and Corporate GHG Reduction targets is necessary by the end of 2023.

In March 2023, the Intergovernmental Panel on Climate Change (IPCC) released a Summary of its AR6 Synthesis Report Climate Change 2023, indicating that the window

within which we can reduce GHG emissions and avoid overshooting the global warming limit of 1.5°C is rapidly closing.

“In this decade, accelerated action to adapt to climate change is essential to close the gap between existing adaptation and what is needed. Meanwhile, keeping warming to 1.5°C above pre-industrial levels requires deep, rapid and sustained greenhouse gas emissions reductions in all sectors. Emissions should be decreasing by now and will need to be cut by almost half by 2030, if warming is to be limited to 1.5°C.”²

The Community and Corporate Greenhouse Gas and Energy Monitoring Report details the progress made by the City of Windsor as we work towards our GHG Emission and Energy Consumption targets.

² [IPCC_AR6_SYR_PressRelease_en.pdf](#)

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Community GHG Emissions and Energy Inventory

When performing Climate Change Mitigation activities, it is best practise to utilize an internationally recognized protocol, which provides a methodology and framework for creating Greenhouse Gas (GHG) and Energy inventories. This includes mapping out strategies and actions for improving these inventories, and setting requirements for monitoring and verification. The protocol used by the City of Windsor for climate change mitigation is the Partners for Climate Protection (PCP) supported by the Federation of Canadian Municipalities. This protocol includes 5 milestones.

Milestone 1 – Create a baseline emissions inventory and forecast

Milestone 2 – Set emissions reduction targets

Milestone 3 – Develop a local action plan

Milestone 4 – Implement the local action plan

Milestone 5 – Monitor progress and report results.

Milestones 1, 2 and 3 have been completed as part of the Community Energy Plan and administration is currently in the process of completing Milestone 4 through the implementation of emissions reduction strategies outlined in the CEP. This report along with the associated yearly inventories represents Milestone 5. Milestones 2 through 5 are iterative as the City of Windsor transitions to a Net-Zero pathway.

The Community GHG inventory focuses on a much larger set of emissions-generating activities within the municipality. Key reporting sectors and subsectors include:

1) Stationary energy

- Residential buildings
- Commercial and institutional buildings and facilities
- Manufacturing industries and construction

2) Transportation

- On-road transportation

3) Waste

- Solid waste disposal

The annual GHG emissions and energy inventory is created using the Partners for Climate Protection - PCP Milestone Tool. The Milestone tool is a web-based resource designed to help local governments create inventories as well as track, monitor and report their greenhouse gas emissions and energy consumption.

Figures 7 and 9 presents all completed community emissions and energy inventories to date. Please note that 2014 represents the baseline emissions and energy use against which emissions and energy reduction goals are measured. Figure 8 illustrates the percentage of emissions contributed by each sector in the Community.

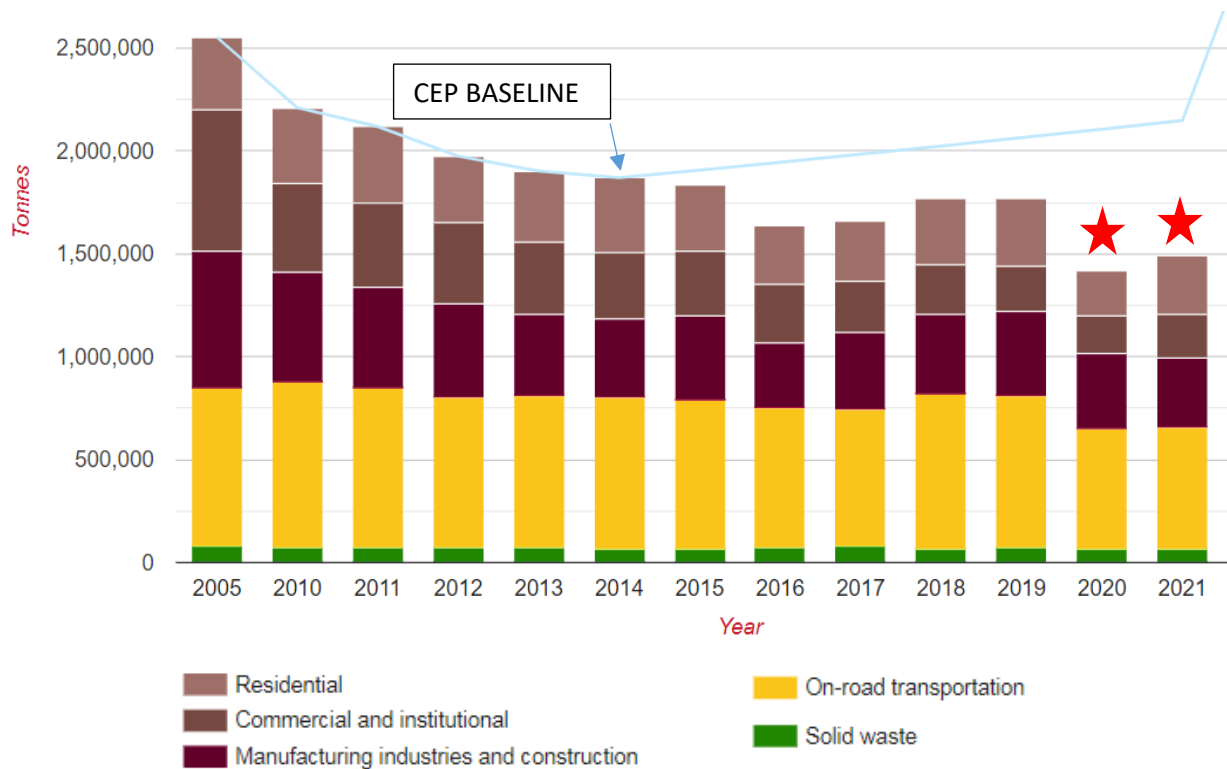


Figure 7: Community GHG Emissions 2005 – 2021³

It is important to note that the emissions reduction trend that occurred for 2005 through 2014 was the result of the de-carbonization of the Ontario electricity grid and the elimination of coal based power plants throughout the province. The current Ontario electricity grid is now primarily composed of renewable and low-carbon electricity generating facilities, however, it is important to note that natural gas generation of electricity is set to increase in Ontario, which will impact greenhouse gas emissions.

³ 2020 and 2021 data sets impacted by COVID-19. Data points are used for illustrative purposes. Extreme caution should be used when attempting to identify future trends including the 2020 and 2021 data.

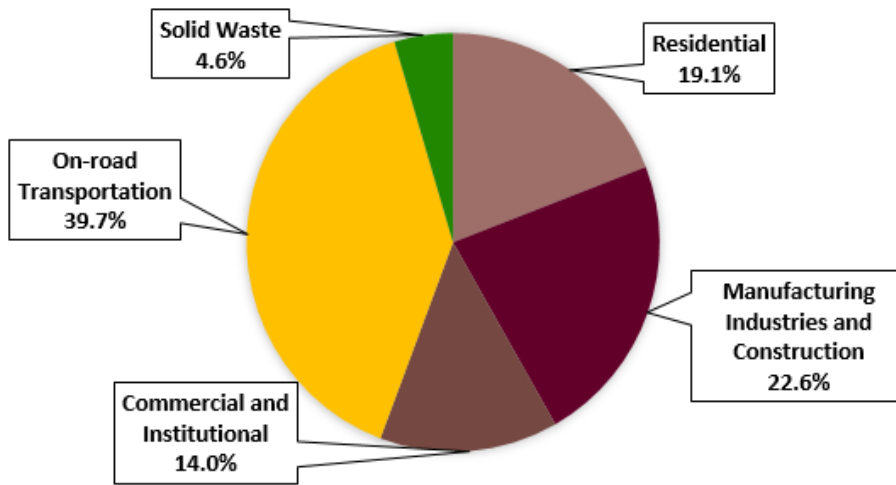


Figure 8: Community Emissions by Sector 2021

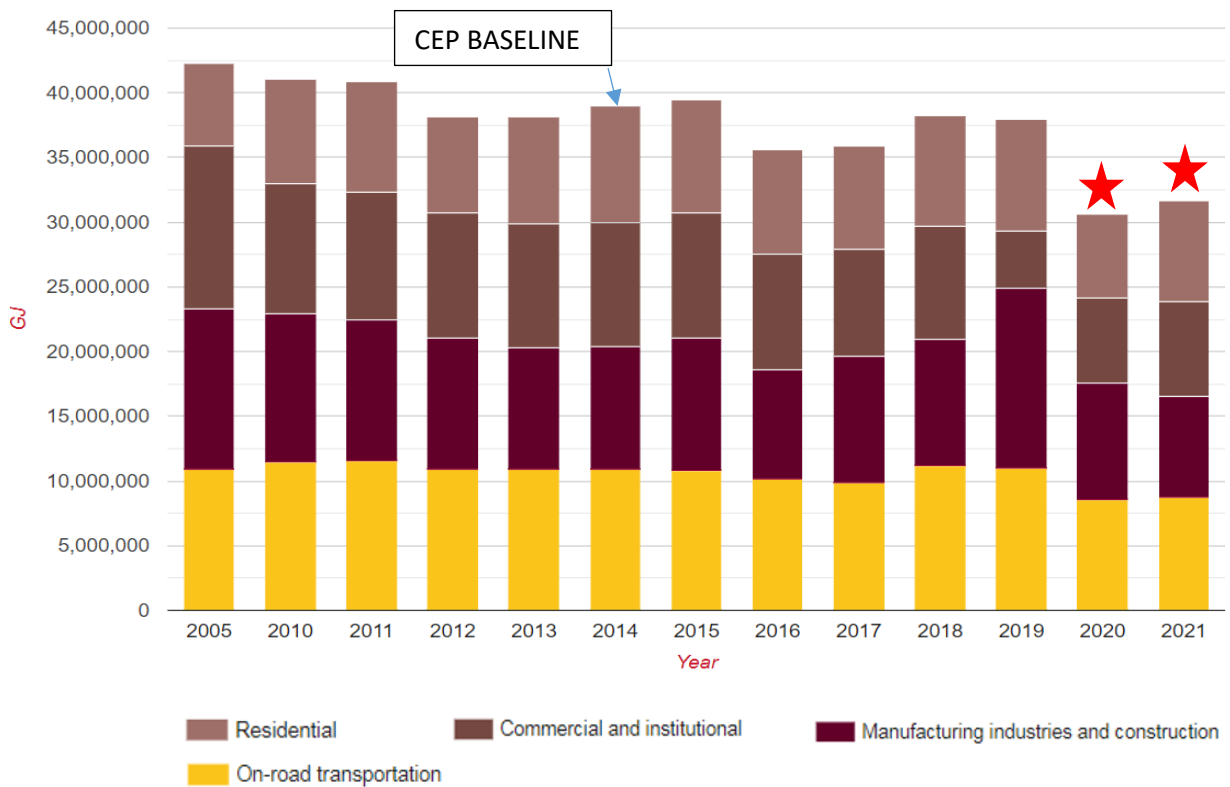


Figure 9: Community Energy Consumption 2005 - 2021⁴

⁴ 2020 and 2021 data sets impacted by COVID-19. Data points are used for illustrative purposes. Extreme caution should be used when attempting to identify future trends including the 2020 and 2021 data.

Analysis

As indicated in the figures above, both the total yearly emissions and energy consumption for the Windsor community has decreased over the time-period. Community emissions experienced significant reductions in both 2020 and 2021 due to the onset of COVID-19, which resulted in a number restrictions influencing daily life. Below is a timeline of COVID-19 related restrictions in Windsor-Essex.

- March 20, 2020 – City of Windsor declares state of emergency, malls close. Beginning of First lockdown
- May 11, 2020 – Windsor retail stores with a street entrance reopened for curbside pickup or delivery
- May 19, 2020 – Province of Ontario announces the first stage of reopening Ontario's economy allowing for retail and recreation facilities to reopen
- June 25, 2020 – Windsor-Essex with the exception of Leamington and Kingsville move to Stage Two. Hair salons and restaurants reopen.
- August 12, 2020 – Windsor-Essex moves to Stage Three reopening, gyms reopen
- September 10, 2020 – Students return to in person learning
- December 11, 2020 – Windsor-Essex County Health Unit orders closures of schools
- December 16, 2020 –Beginning of second lockdown for Windsor-Essex.
- February 8, 2021 – Schools resume in-person learning
- February 12, 2021 – Windsor-Essex – reopening of indoor dining, gyms, and salons with restrictions and capacity limits
- February 16, 2021 – province of Ontario lifts stay at home order lifted
- April 1, 2021 – Beginning of third lockdown for Windsor-Essex
- April 12, 2021 – Province of Ontario closes Windsor-Essex schools
- June 11, 2021 – Province enters reopening Step One. Patios, non-essential retail with an outdoor entrance and outdoor fitness with 10 people is allowed
- June 30, 2021 – Windsor-Essex moves to Step Two. Haircuts allowed, malls reopen
- July 16, 2021 – Windsor-Essex moves to Step Three. Indoor dining, gyms, cinemas reopen
- October 25, 2021 – Province of Ontario removes capacity limits for restaurants, gyms, casinos, indoor recreational facilities, and indoor meeting and event spaces.
- December 10, 2021 – Windsor Essex County Health Unit placed a limit on social gatherings to 10 people inside and 25 outside
- December 19, 2021 – province of Ontario reintroduces capacity limits for indoor settings, including bars, restaurants, personal care services, retailers, and malls.
- January 5, 2022 – Province of Ontario returns to a 'modified' version of Step Two. Schools move to remote learning until at least January 17th.⁵ Indoor recreational facilities close with limited exceptions.

⁵ [Timeline of COVID-19 restrictions in Windsor-Essex | CTV News](#)

- Between January 31, 2022 and March 14, 2022, the Province of Ontario made three steps to ease public health measures and return to normal (no capacity limits)

Due to these restrictions, the use of 2020 and 2021 greenhouse gas emissions and energy use should be assessed with caution as these years do not reflect actual conditions.

Table 2 highlights a number of primary indicators as outlined in the CEP. Data from 2019 is used when calculating % Change to Baseline against the 2014 CEP baseline.

Primary Performance Indicators	CEP Baseline 2014	2019	2021	% Change to Baseline (2019)
Total Emission (C02e)	1,869,202	1,765,057	1,487,346	- 5.57
Total Energy (GJ)	39,016,987	37,912,495	30,313,199	- 2.83
Population	211,000 ⁶	217,185	229,660 ⁷	- 2.93
Emissions per Capita	8.86	8.13	6.48	- 8.26
Energy per Capita	184.91	174.56	131.99	- 5.60

Table 2: Primary Performance Indicators vs. CEP Baseline 2014

Table 3 highlights a number of primary indicators as compared to the Science Based Climate Target Baseline of 2005. Data from 2019 is used for comparison purposes.

Primary Performance Indicators	Science Based Climate Baseline 2005	2019	2021	% Change to Baseline (2019)
Total Emission (C02e)	2,551,303	1,765,057	1,487,346	- 30.82
Total Energy (GJ)	42,264,618	31,230,750	30,313,199	- 26.11
Population	215,010	217,185	229,660	+ 1.01
Emissions per Capita	11.87	8.13	6.48	- 31.51
Energy per Capita	196.57	143.80	131.99	- 26.85

Table 3: Primary Performance Indicators vs. Science Based Climate Target Baseline 2005

Table 4 highlights the changes in community emissions by sector. Data from 2019 is used when calculating % Change to Baseline against the 2014 CEP baseline.

⁶ Population data used for 2014 Baseline

⁷ Statistics Canada 2021 Census

COMMUNITY EMISSIONS (tCO₂e)	CEP Baseline 2014	2019	2021	% Change to Baseline (2019)
Residential	366,188	323,127	284,527	- 11.76
Commercial	316,383	219,683	207,774	- 30.56
Industrial	385,206	410,984	336,555	+ 6.69
On Road Transportation	732,971	738,071	590,163	+ 0.70
Waste	68,454	73,192	68,327	+ 6.92

Table 4: Community Emissions by Sector vs. CEP Baseline 2014

Table 5 highlights community emissions by sector as compared to the Science Based Climate Target Baseline of 2005. Data from 2019 is used for comparison purposes.

COMMUNITY EMISSIONS (tCO₂e)	Science Based Climate Baseline 2005	2019	2021	% Change to Baseline (2019)
Residential	354,635	323,127	284,527	- 8.88
Commercial	681,181	219,683	207,774	- 67.75
Industrial	668,726	410,984	336,555	- 38.54
On Road Transportation	767,224	738,071	590,163	- 3.80
Waste	79,537	73,192	68,327	- 7.98

Table 5: Community Emissions by Sector vs. Science Based Climate Target Baseline 2005

Stationary Emissions

Stationary energy sources are one of the largest contributors to a community's GHG emissions. These emissions come from the combustion of fuel in residential, commercial and institutional buildings, facilities and manufacturing industries. Removed from the total GHG emissions are GHG emissions from natural gas power plants used to generate grid-supplied electricity. Stationary emissions originate primarily from the use of natural gas and electricity. Stationary emissions within buildings include heating and cooling, lighting and operational energy usage. Operational energy for residences includes electricity for appliances, and electronic devices such as televisions, computers and cellular phones. Operational energy for commercial and institutional facilities generally include the same scope as residences. Operational energy for industrial facilities includes electricity to operate machinery as well as natural gas used in industrial processes such as drying, casting, moulding, smelting, etc.

Residential Emissions

Residential emissions represent a significant 19.1% proportion of total emissions for the Windsor community (Figure 9). These emissions are calculated using data provided by the local Utility companies serving Windsor including Enbridge Energy (Union Gas), Enwin Utilities and Hydro One. Enbridge provides total natural gas consumption in the unit of cubic meters (m³) for the residential sector. Enwin Utilities and Hydro One provide total electricity consumption in the unit of kilowatt-hours (kWh). Hydro One customers are generally located in the Sandwich South area. Historical residential emissions are shown in Figure 10.

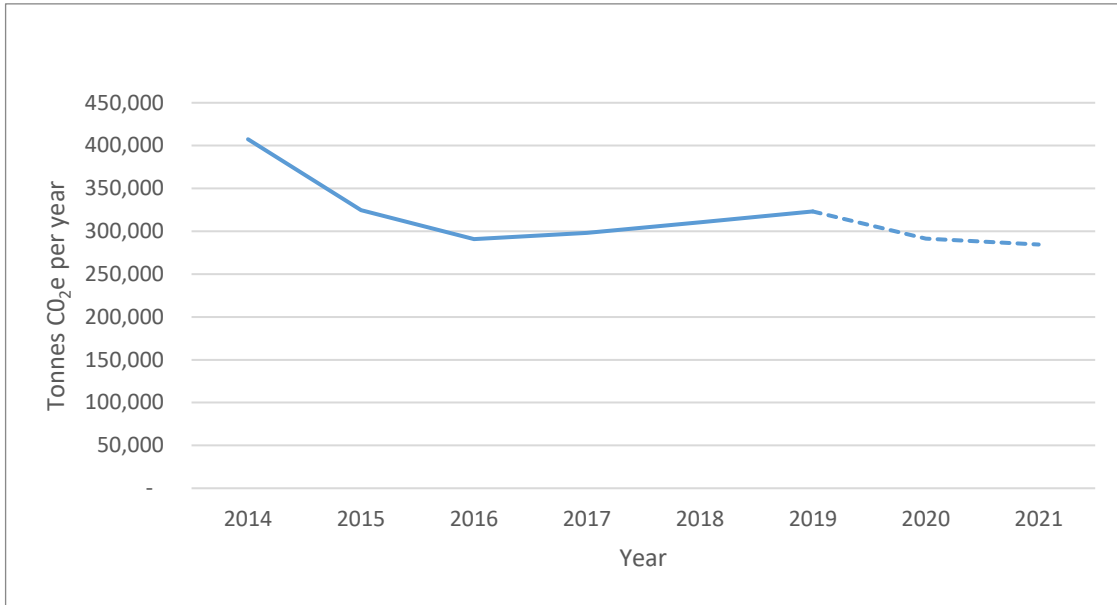


Figure 10: Historic residential emissions 2014 – 2021⁸

Figures 11 and 12 illustrate the GHG emissions contributions from electricity and natural gas respectively. Natural Gas contributes roughly 15 times the amount of GHG emissions for the residential sector (ex. 2021 – Electricity accounted for 17,261 tonnes of CO₂e compared to 267,267 tonnes of CO₂e for Natural Gas).

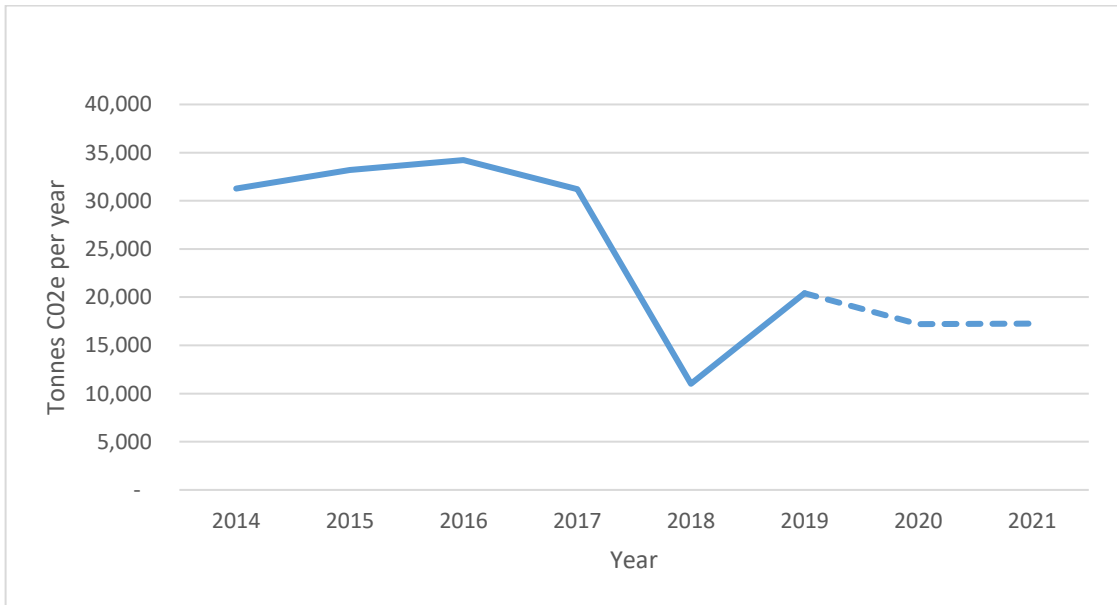


Figure 11: Residential emissions from electricity 2014 – 2021⁹

⁸ 2020 and 2021 data sets impacted by COVID-19. Data points are used for illustrative purposes. Extreme caution should be used when attempting to identify trends.

⁹ 2020 and 2021 data sets impacted by COVID-19. Data points are used for illustrative purposes. Extreme caution should be used when attempting to identify trends.

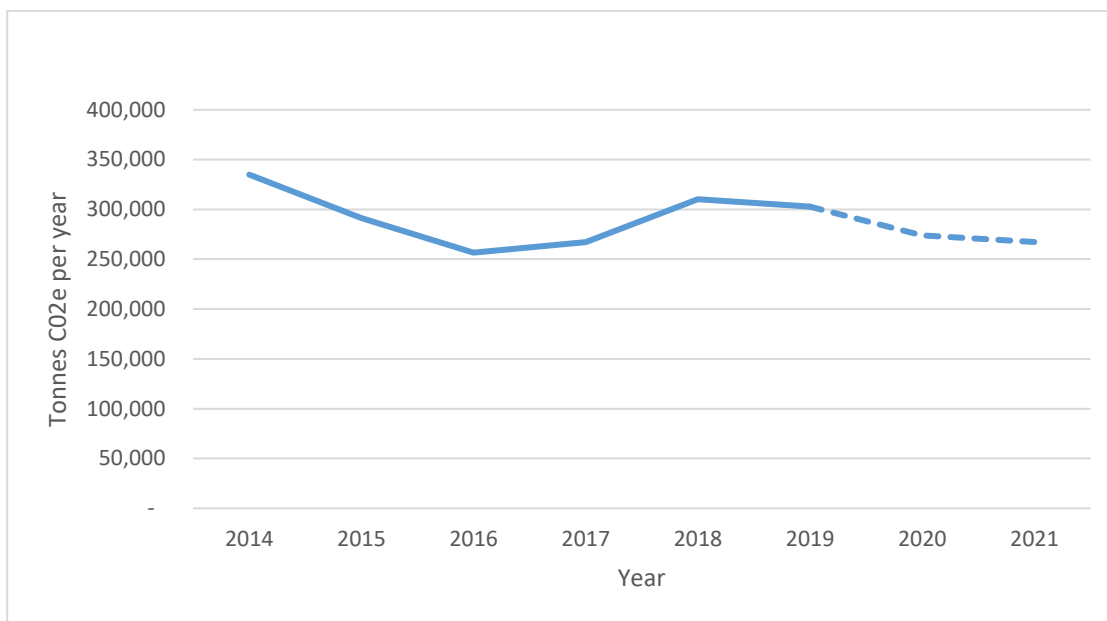


Figure 12: Residential Emissions from Natural Gas 2014 – 2021¹⁰

The quantity of residential emissions for the Windsor community is highly dependant on the weather conditions experienced in a given year, specifically expressed through heating degree-days (HDD) and cooling degree-days (CDD). Table 6 shows historic data for heating degree-days and cooling degree-days. As our average temperatures continue to rise, Windsor will generally experience a decrease in HDD and an increase in CDD compared to the historic average from 1976-2005. This trending shift from heating loads to cooling loads works to decrease residential emissions as the emissions-intensive natural gas consumption from heating is decreased.

Year	Heating Degree Days	Cooling Degree Days
Historic 1976-2005	3541	376
2016	3179	557
2017	3073	407
2018	3255	495
2019	3526	431
2020	3223	485
2021	3130	513

Table 6: Historic heating and cooling degree days

Core Strategy Underway

Deep Energy Retrofit Program for Existing Homes

In order to have a significant impact on the emissions and energy utilization trends for the Windsor residential sector, existing buildings require extensive energy efficiency retrofits.

¹⁰ 2020 and 2021 data sets impacted by COVID-19. Data points are used for illustrative purposes. Extreme caution should be used when attempting to identify trends.

Homes in Windsor are significantly older than the Ontario average and as such, result in higher energy consumption and emissions than comparable homes in other areas of the province. The average build year for the construction of a Windsor home is 1960. At that time the Ontario Building Code did not have energy efficiency requirements or considerations therefore these buildings were constructed without effective wall, attic, or basement insulation. This lack of insulation drastically increases the amount of natural gas consumed to heat the home using a furnace. The average Windsor home uses 20% more energy per square meter than the average Ontario home.

CEP Strategy 1 calls for the creation of a Deep Energy Retrofit Program for Existing Homes with the aim to improve energy efficiency by 30-50 percent depending on age and size of the home. This program would have the potential of reducing residential GHG emissions by 133,000 tonnes or 34 percent by 2041.

This is the primary action required within the residential sector to meet the CEP goals and targets. In 2019, the City of Windsor retained a consultant to develop a business case for such a program. The purpose of the business case was to investigate the feasibility of establishing an Entity to deliver high quality, standardized residential energy efficiency retrofit packages to Windsor homes. The business case explored the following program elements:

1. Goal of retrofitting 80% of Windsor homes by 2041
2. Creation of a local entity for program delivery
3. Encourage public/private partnership
4. Offer quality controlled standardized retrofits with standardized pricing
5. Retrofits realize efficiency gains of 30 to 50%
6. Financing options include repayments using Local Improvement Charges (LIC)

Recommendations were presented to City Council in February 2020. In October 2020 Administration applied to the Federation of Canadian Municipalities' Community Efficiency Financing (CEF) program. Details of the intended study and grant opportunity are available in S107/2020. In August 2021, the City of Windsor received a grant from FCM to undertake a Program Design Study. Report is due to City Council in late 2023. Figure 13 illustrates an example of eligible home energy retrofits.



Figure 13: Example of exterior upgrades to existing home

Sustainable Neighbourhood Action Plan – Sandwich South

CEP Strategy 4 calls for the creation of a Net-Zero neighbourhood as an opportunity for transformative change at the neighbourhood scale. In Q1 2021 administration submitted an application to FCM for grant funding to complete a sustainable neighbourhood action plan for Sandwich South. The Sandwich South lands represents the largest greenfield development area in the City. With a relatively blank slate, there is high potential and opportunity for development of Net-Zero (or near-zero) neighbourhoods. If the City of Windsor, wishes to achieve its environmental and sustainability goals, it is important to develop greenfield areas in a manner consistent with those goals.

Goals include emissions reduction, low-carbon economic development, and climate change resilience. The SSPD represents a unique opportunity for Windsor due to its central location, size and greenfield nature. In practice, the sustainable neighbourhood action plan will focus on:

1. Minimizing energy consumption;
2. Maximizing efficiency of energy conversion; and
3. Maximizing use of low-carbon/renewable energy sources at both the building scale, as well as the block/district scale

This creates the policy framework necessary to create new, sustainable, mixed-use communities alongside the proposed Regional Hospital. Outlined in Council Report S 116/2020 are details of this study. Work is currently underway on the development of the plan with a report due to Council in 2024. Figure 14 illustrates an example of a sustainable neighbourhood development plan.



Figure 14: Example of a Sustainable Neighbourhood Development Plan

Industrial Emissions

Industrial emissions represent 22.6% of total emissions for the Windsor community. Historic data reveals that industrial emissions and energy consumption in Windsor peaked in 2019 before undergoing a slight decline due to the impacts of COVID-19. A major contributing factor to this trend has been the recovery of the manufacturing industry and increases in industrial emissions. The year 2016 represented the lowest emissions produced and energy consumed in recorded history but also coincided with very low industrial energy usage. Industrial energy usage is an indicator of industrial economic activity that is intimately linked to the employment and economic wellbeing of the Windsor community. Figure 15 below displays historic Industrial emissions.

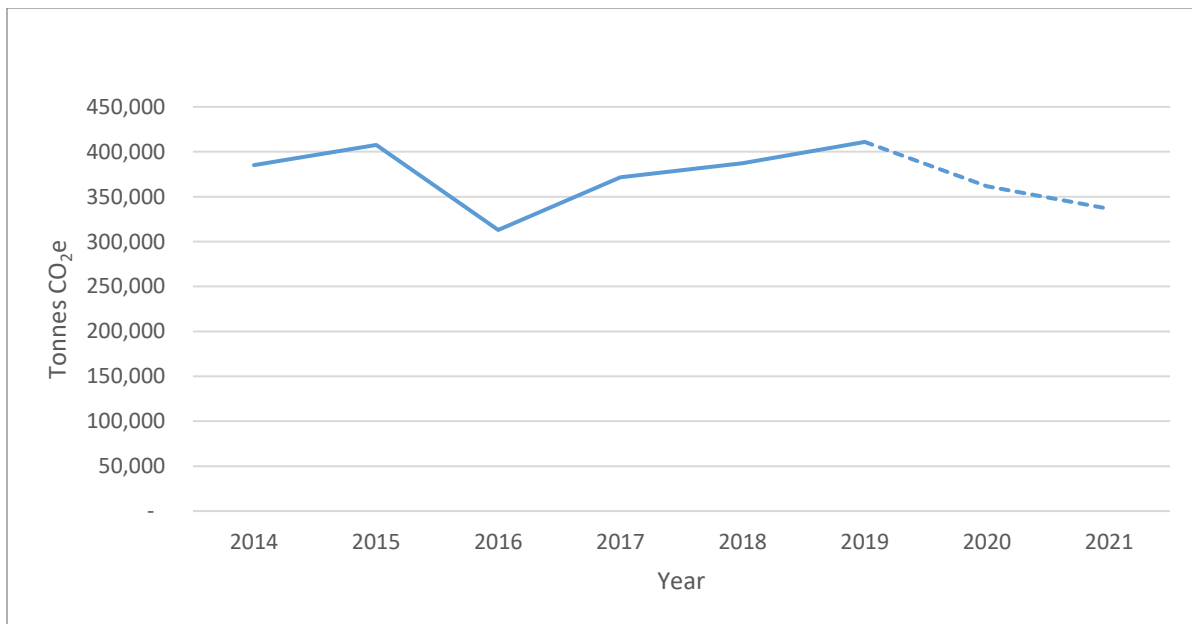


Figure 15: Industrial Emissions 2014 – 2021¹¹

For a deeper look into industrial emissions, the specific energy sources resulting in those emissions can be considered. Figure 16 below display historic industrial emissions from electrical and natural gas energy sources¹².

¹¹ 2020 and 2021 data sets impacted by COVID-19. Data points are used for illustrative purposes. Extreme caution should be used when attempting to identify trends.

¹² In 2020, Industrial Natural Gas consumption was capped at 2019 levels, as consumption data provided by Enbridge Gas Inc. indicated a significant increase in natural gas consumption that was unable to be verified/validated. Data point was considered as an outlier to the historical consumption trend.

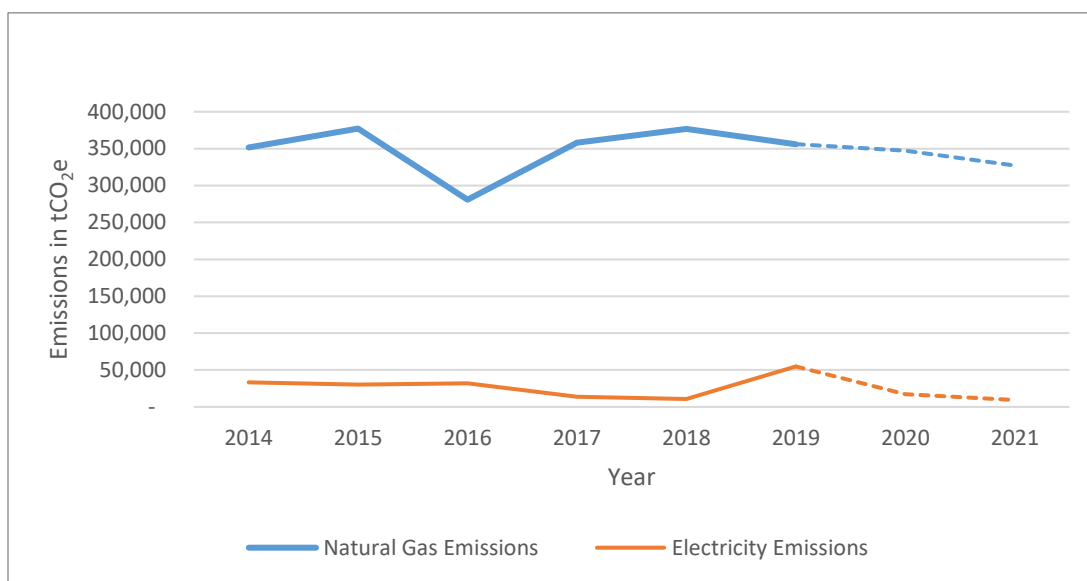


Figure 16: Industrial Emissions by Fuel Source 2014 – 2021

Figure 16 reveals an increase in natural gas utilization results in an overall increase in emissions. As heavy industry has historically been highly reliant on natural gas, the historic trend indicates a growth in heavy industrial activity for the period of interest. The reduction in electricity based emissions reveal an increase in industrial energy efficiency in regards to electrical equipment.

The diversion of the emissions from electricity and natural gas starting in 2016 may be explained by a shift to natural gas to meet energy needs, for example large energy consumers may be utilizing combined heat and power systems (CHPs). The shift may be motivated by cost savings, as CHP systems can deliver both heat and power at lower quantity costs than direct natural gas and electricity. Unfortunately this is detrimental to the carbon footprint of the community as the standard electricity grid has lower emissions than electricity generated from a CHP system.

Industrial Activity in Windsor

Invest Windsor-Essex released a Five Year Strategic Plan (2018-2022) focusing on strategies to transition Windsor-Essex from a traditionally transaction-based economy to a transformational, knowledge-based economy that recognizes continual innovation supported by open networks and complex systems as its foundational elements.

Historically, CO₂ emissions have been strongly tied to a Country/Region's GDP. But this relationship no longer holds true as many countries have managed to achieve economic growth while reducing emissions including the UK, France, Germany, Sweden, Finland, Denmark, Italy, Czechia, and Romania¹³.

Figure 17 highlights Windsor's efforts to decouple economic growth from CO₂ emissions. The figure shows the percent (%) change in GDP per capita, tCO₂e emissions per capita,

¹³ <https://ourworldindata.org/co2-gdp-decoupling>

and industrial tCO₂e emissions per manufacturing job since 2014. Windsor's economic growth indicator (GDP/capita) is increasing (growing), while the community emissions (tCO₂e)/capita and industrial emissions (tCO₂e)/manufacturing job are decreasing (reducing). Emissions and GDP have been successfully decoupled.

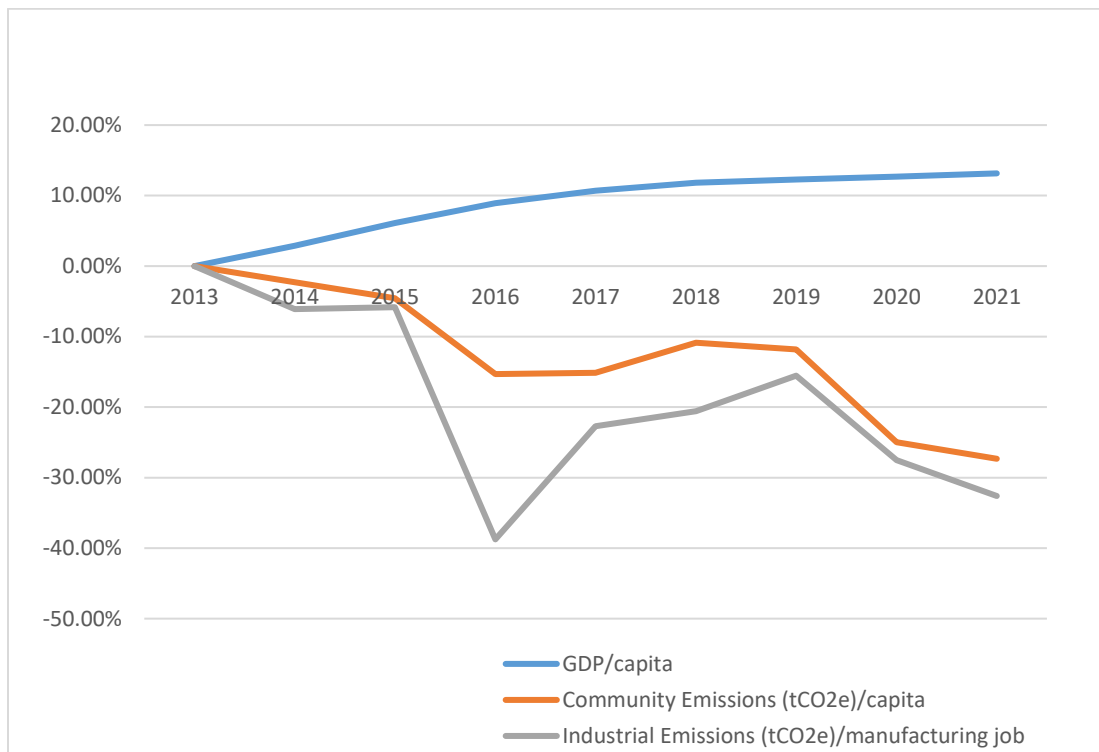


Figure 17: Percent Change in per capita tCO₂e emissions and GDP 2014 – 2021

The decline in community emissions and industrial emissions can be attributed to the number of Windsor employers committed to aggressive greenhouse gas emission reduction targets including, but not limited to;

- Pernod Richard – Committed to reducing 50% of their overall footprint by 2030 and reaching net zero by 2050, addressing scope 1, 2 and 3 emissions
- Stellantis – Be the first auto maker to be carbon free by 2028
- Caesars Windsor – Goal of reducing Scope 1 and 2 emissions by 35% by 2025 and by 100% by 2050 and reduce scope 3 emissions by 60% by 2023
- Ford Motor Company – Carbon neutrality by 2050 for vehicles, facilities and suppliers and 76% reduction in Scope 1 and 2 emissions by 2035 from 2017 baseline and a 50% reduction in Scope 3 emissions by 2035 from 2019 baseline.
- Integram (Windsor Seating) – Set a target of net carbon neutrality in global operations by 2030.

Electricity Generation

The Independent Electricity System Operator (IESO) is responsible for operating the electricity market and directing the operation of the bulk electrical system in the province of Ontario. In 2021, Ontario's electricity was generated by nuclear (58%), hydro (24%), gas/oil (8.6%), wind (8.4%), with the remaining generation split between solar and bio fuel. Ontario's electricity generation is split between three tiers.

- Baseload Generation – generation that provides a steady supply of electricity 24 hours a day, 7 days a week. The output of these generators is consistent and reliable, but rarely changes. These generators are typically used first to meet Ontario's energy needs and include nuclear and run-of-the-river hydro electric facilities.
- Intermediate and Peaking Generation – generation that provide variable supply of electricity to meet changes in demand. Generators such as natural gas plants and hydro dams play a crucial role in matching supply and demand as they can adjust their output up or down quickly. These generators can also be called upon to meet peak demand when electricity use is at its highest.
- Variable but Controllable Generation – generation that provides a supply of electricity when sun or wind is available. The amount of electricity wind and solar farms produce is always changing, their operation is very flexible, and their output can be adjusted quickly in response to the electricity system's needs.¹⁴

There are four (4) natural gas fired electricity generation stations located within Windsor's boundaries: Brighton Beach Power, East Windsor Cogeneration Centre, Windsor Essex Cogeneration and West Windsor Power. These generation stations provide intermediate and peaking generation to meet fluctuating demands on the electricity system as they are capable of adjusting their output quickly.

As electricity generation benefits residents, institutions, and companies in Windsor and beyond, City Administration has made the conscious decision to remove power generation emissions from the industrial and community total, and track it separately, to avoid double counting. Double counting refers to a situation where two parties claim the same emissions. The Government of Ontario through the IESO attributes the greenhouse gas emissions from natural gas plants to an CO₂ equivalency for Ontario's electricity system.

Windsor's community GHG inventory includes purchased electricity used within the city of Windsor, with updated equivalencies to reflect the changing fuel mix of Ontario's electricity system. Therefore, the city's community inventory incorporates the City of Windsor's fair share (proportional share) of the output from the local plants, assuming a portion of the electricity generated locally will be used locally and is reflected in the purchased electricity of residents, institutions, and corporations.

¹⁴ [Supply Mix and Generation \(ieso.ca\)](https://www.ieso.ca)

Figure 18 below illustrates the differences to industrial emissions with and without accounting for emissions from Windsor’s four (4) natural gas-fired power generation stations. Since 2015, the proportion of emissions attributed to Windsor’s natural gas-fired power generation stations have decreased significantly. Changes to Ontario’s energy mix, coupled with a reduced reliance on natural gas generation to meet system demand are contributing factors. The increase in emissions experienced in 2021 can be attributed to an increased reliance on natural gas-fired generation to compensate for system capacity reductions due to the refurbishment of Ontario’s nuclear facilities. Depending on the annual generation, GHG emissions from natural gas fired electricity generation could have a significant impact on the community’s overall GHG emissions if included. For example, if emissions from electricity generation were included in the community GHG inventory, overall emissions would have increased by:

- 32% in 2010 to 3,128,000 tCO₂e
- 25% in 2014 to 2,551,000 tCO₂e
- 4% in 2020 to 1,478,000 tCO₂e¹⁵

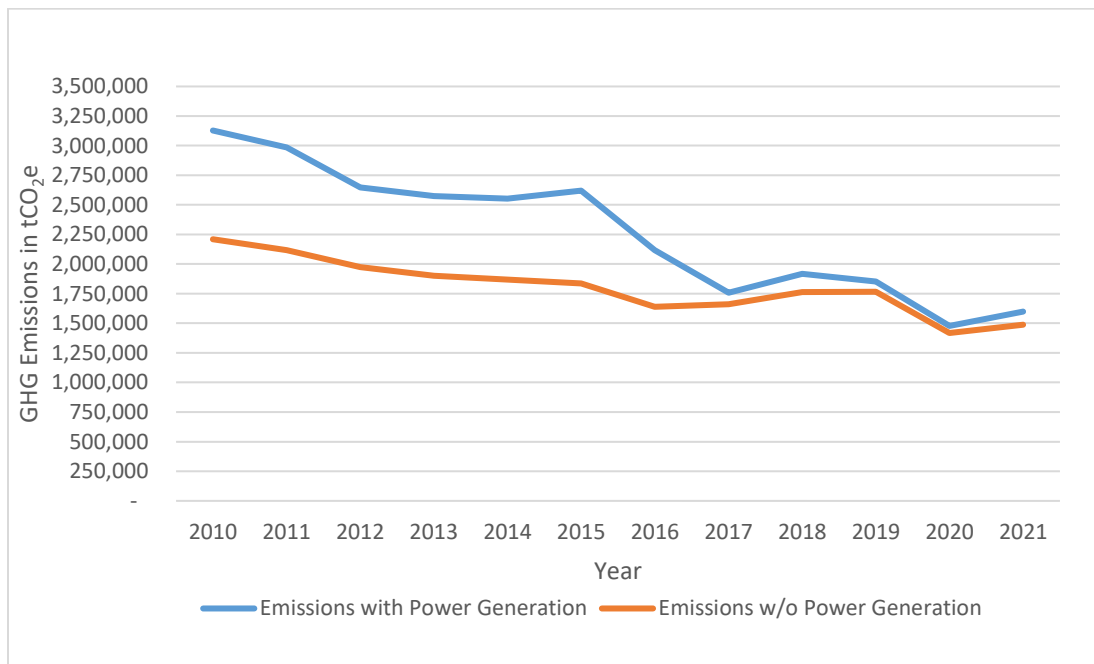


Figure 18: Industrial Emissions with and without Power Generation 2010-2021

It is challenging to predict the impact of emissions attributed to natural gas-fired generation stations, as they operate to meet peak demand and compensate for system outages due to scheduled or unscheduled maintenance. Public reporting on natural gas-fired generation stations is a lagging indicator. It can take upwards of three calendar years from the time generators disclose their emissions to government entities to when disclosures are made public. Early indications are that the proportion of industrial emissions attributed to natural gas-fired generating stations will increase significantly in

¹⁵ Most recent data available from Greenhouse Gas Emissions (PDGES-GHGRP) - Government of Canada (tCO₂e)

2022, in direct proportion to the increase in generation. Figure 19 illustrates the annual power generation output from Windsor’s four (4) natural gas-fired generation stations as reported by IESO’s Generator Output and Capability Reports.¹⁶

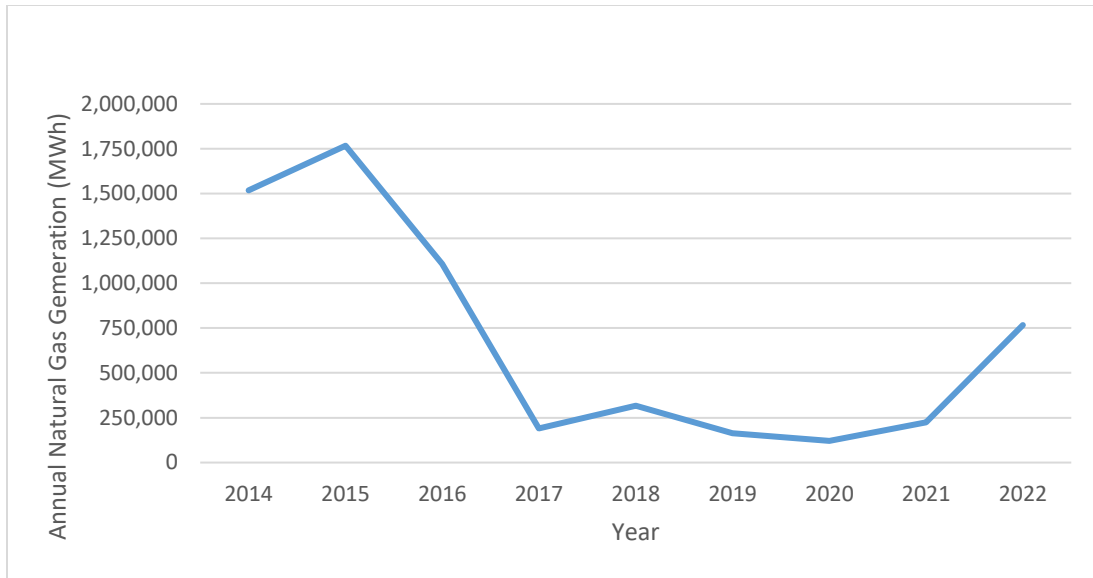


Figure 19: Windsor’s Annual Natural Gas Generation Output 2014-2022

Monitoring and tracking energy and emissions data from power generation provides administration with analytical data to track how provincial decisions impacts local emissions. This will allow the City to advocate with the Government of Ontario and the IESO regarding the region’s GHG emissions attributed to electricity generation. This ensures that decarbonization plans remain a priority for the Government.

¹⁶ Source: [Index of /public/GenOutputCapabilityMonth \(ieso.ca\)](https://www.ieso.ca/en/Generator-Output-and-Capability-Reports)

Commercial and Institutional Emissions

Commercial and Institutional emissions represent 14.0% of total community emissions and are based on natural gas consumption for this sector as reported by Enbridge Gas Inc. (formerly Union Gas Limited) and the electricity consumption reported by Enwin Utilities. Historical emissions are shown in Figure 20.

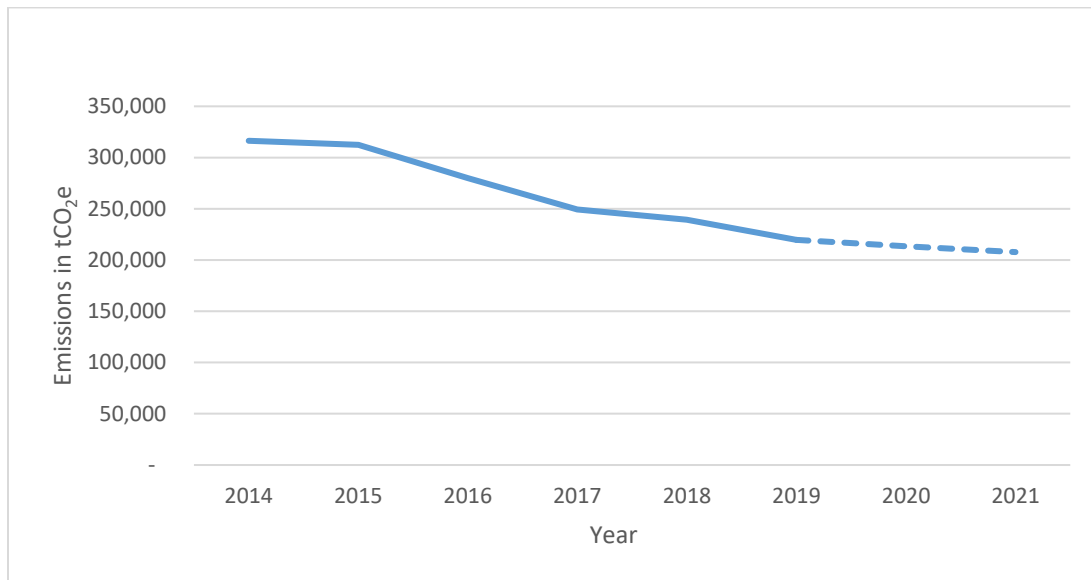


Figure 20: Commercial and Institutional GHG Emissions 2014 – 2021¹⁷

District Energy

The utilization of district energy heating and cooling systems is a strategy for reduction of commercial/institutional emissions. The expansion of the existing Windsor district energy system should be a near-term priority as the existing system is at full capacity and does not have available capacity for including other buildings and operations in this system.

In 2020, Windsor Utilities Commission sold its interest in the district energy system to Enwave. Administration and Enwave are working closely together to identify opportunities to expand the system beyond the downtown loop.

¹⁷ 2020 and 2021 data sets impacted by COVID-19. Data points are used for illustrative purposes. Extreme caution should be used when attempting to identify trends

On-Road Emissions

Another segment experiencing a significant overall decrease in emissions in 2021 due to COVID-19 was on-road, which saw emissions decline 20.0% since 2019. On-road emissions are calculated based on the reported fuel sales within the city using standard emissions factors for each of the transportation fuels (Table 7 and Figure 21). There are two primary elements, which increase the margin of error for this emissions measurement, including cross border refueling as well as national/international trucking based out of the Windsor region.

It is also of note that these fuel sale totals would include non-vehicular uses including lawn mowers and other yard maintenance equipment.

Yearly emissions from total fuel components

Year	E10 (Tonnes eCO ₂)	Gas (Tonnes eCO ₂)	Diesel (Tonnes eCO ₂)	Total (Tonnes eCO ₂)	Total Tonnes eCO ₂ /million km travelled
2015	208,994	455,637	50,937	715,568	329.1
2016	637,293	28,881	62,749	728,923	276.7
2017	623,866	46,503	58,119	728,488	366.9
2018	642,369	53,557	52,204	748,130	343.9
2019*	637,343	49,190	51,538	738,071	308.8
2020*	533,287	42,448	41,472	617,208	258.6
2021*	544,576	38,885	39,009	622,470	260.8

* Limited data for mileage available from Traffic division. Mileage estimated from 2018 traffic count reports

Table 7: Yearly emissions from fuel components

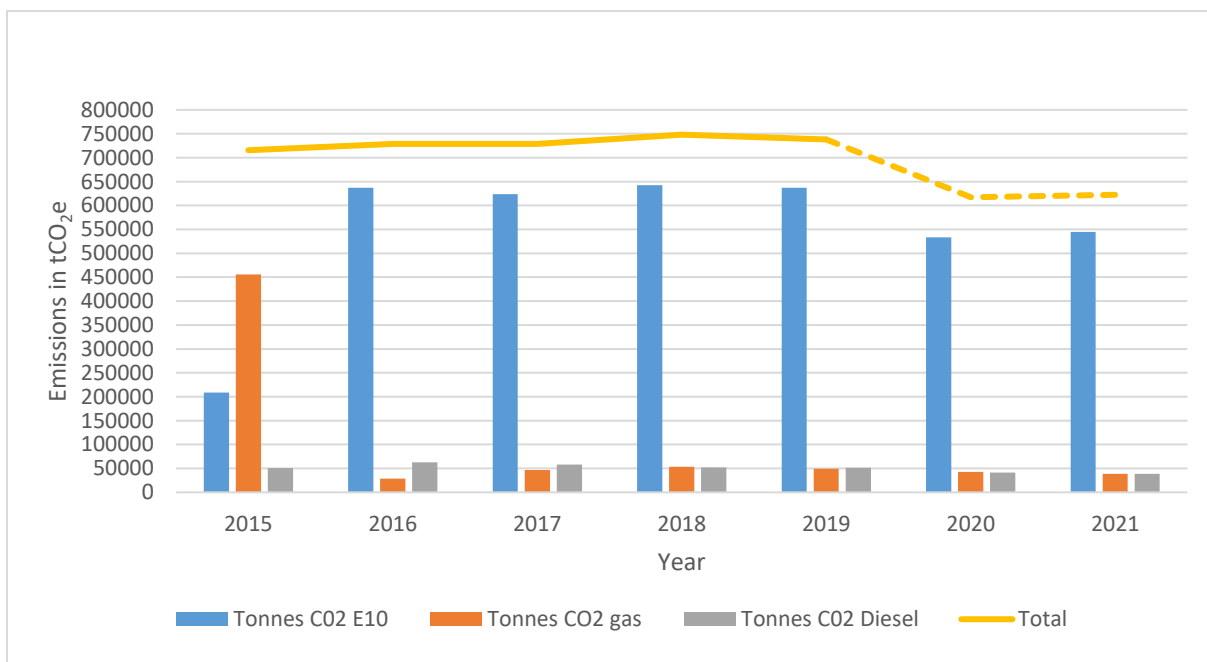


Figure 21: On-Road Community GHG emissions¹⁸

In a follow-up to the CEP, a detailed analysis of cross-border traffic impacts on GHG emissions showed that cross-border traffic only accounted for 4% of the total transportation GHG emissions.

In the years prior to COVID-19 (2015-2019), transportation emissions increased slightly, consistent with trends for Canadian nation-wide on-road emissions. This increase can be associated with the increase in passenger light trucks and SUVs, which have grown in popularity. Based on this national trend of citizens purchasing larger vehicles coupled with automotive manufacturers discontinuing of car-based platforms, it is expected that transportation emissions will continue to increase, as larger vehicles tend to have worse fuel economy as compared to smaller vehicles. This trend of increasing on-road emissions can be mitigated by:

- Improving the modal split of transport in favor of low/zero carbon transport methods including active transportation (walking/cycling) and public transit; and,
- A transition towards electric vehicles (EVs).

Reductions in transportation emissions in 2020 and 2021 are contributed to decreased commuter and recreational travel due to restrictions experienced in Windsor-Essex.

Encourage a Modal Shift towards Public Transportation and Active Transportation

Supporting the improved modal split towards low-carbon (public transit) and zero carbon transport are Strategies number 9 and 10 of the CEP.

The Active Transportation Master Plan was approved by City Council on July 22, 2019. This plan calls for a modal split of 25% by 2041. This means that 25% of all trips made in Windsor would be achieved through public transit or active transportation. According to the 2021 Census data, Windsor's current modal split is approximately 7.4%¹⁹. Achieving a modal split of 25% could result in an emissions reduction of 38,000 tonnes a year in 2041. If interim targets are met over the lifetime of the plan, 378,000 tonnes of CO₂e can be reduced.

Foster the Adoption of Electric Vehicles

Supporting the adoption of electric vehicles (EV) is Strategy 11 of the CEP. The City of Windsor received funding from the federal government under a program to develop supportive EV infrastructure. The City of Windsor installed and commissioned eleven (11) level two (2) charging stations in municipal parking lots, libraries, and recreation complexes in 2021. Table 8 shows the monthly vehicle charging in kWh and the

¹⁸ Ontario introduced a mandate to require suppliers to supply at least an annual average of 10% renewable content in gasoline sold in Ontario (i.e. E10). This significantly decreased the amount of non E10 gasoline sold after 2015.

¹⁹ 2021 Census data provided modal split for primary mode of transportation for commuting to work only.

corresponding GHG offset attributed to “fueling” vehicles using electricity vs. gasoline in 2022. As part of the pilot, vehicles could charge at City charging stations at no charge.

Next		
Month	Charging (kWh)	GHG Offset (kgCO ₂)
April	252	286
May	2,367	2,689
June	3,913	4,445
July	4,407	5,006
August	3,889	4,418
September	5,549	6,304
October	6,674	7,582
November	7,024	7,979
December	6,906	7,845
Total	40,981	46,554

Table 8: 2022 Electric Vehicle Charging

Figure 22 depicts a Windsor – Essex Electric Vehicle Association display at Earth Day.



Figure 22: Windsor Essex Electric Vehicle Association Earth Day Display

Solid Waste Emissions

The solid waste sector tracks methane (CH₄) emissions that enter the air directly as organic waste decomposes at landfills as well as nitrous oxide (N₂O) and non-biogenic carbon dioxide (CO₂) emissions. These chemical emissions are converted to tonnes of equivalent CO₂ using emissions equivalency coefficients. Figure 23 shows the estimated emissions from solid waste since 2015. The peak in 2017 is likely contributed by the increase in waste to landfill as a result of the 2017 flood event, with the smaller increase in 2019 as a result of a smaller flood event due to increased lake levels.

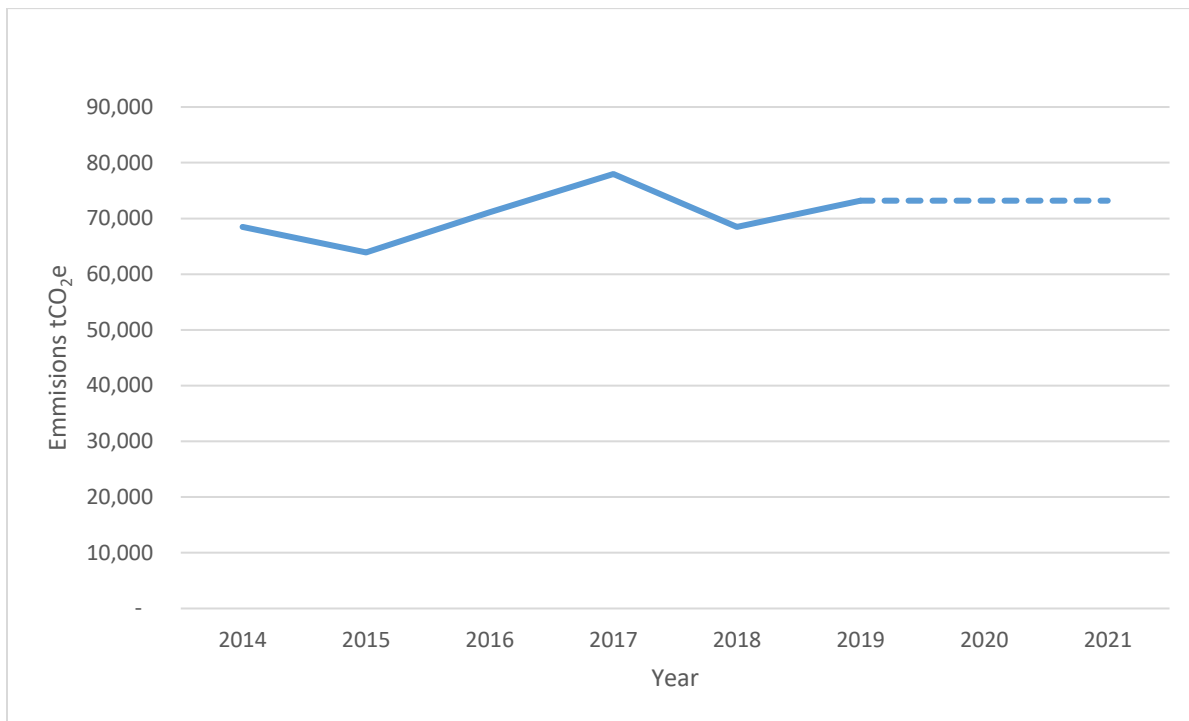


Figure 23: Emissions from Solid Waste 2014 – 2021

Establishing an Organics Program

The Strategies for solid waste fall under the Corporate Climate Action Plan and include researching and developing an organics collection program.

The city is currently investigating curbside organic collection, in accordance with the provincial mandate. The City of Windsor is on track for starting a curbside organics collection program in 2025. This organic collection and associated treatment of source-sorted organics has the potential to reduce emissions from solid waste if appropriate measures for capturing the methane from decomposing organics are put into place.

Anaerobic digestion is one option that assists with the biodegradation of organic material (organic food waste, sewage sludge). Anaerobic digestion results in the production of methane gas, a known greenhouse gas, however, in a controlled system the methane

gas can be purified and used as a renewable natural gas. This system is used globally and can offset non-renewable natural gas with a renewable, biogenic natural gas.

Renewable Energy Generation

The Community Energy Plan outlines a target for installed renewable energy capacity of 90 MW by the target year 2041. Presently, Windsor has one utility-scale solar farm in operation, namely the Windsor Solar project. Windsor solar has a maximum capacity of 50 MW and is located at the Windsor international Airport. The project reached commercial operation in 2016.

Smaller scale solar installations are also in operation throughout the city representing a maximum installed capacity of 23.4 MW. Overall the current total renewable energy generation in Windsor is 73.4 MW which equates to 82% of the CEP renewable energy generation goal. This includes 1.3 MW of solar capacity installed on City-owned buildings. Due to the accounting structure of currently installed solar capacity under the FIT program, the renewable energy is accounted for in the overall emissions from the grid and does not directly offset usage. This will change when the contracting of the generation is switched to net-metering in the future

Unfortunately, the legislative frame-work under which the existing solar capacity was installed was cancelled in 2018 by Ontario's provincial government. This cancellation eliminated the opportunity for such projects to provide electricity for the grid and generate revenue through a Feed-In Tariff program. The virtual net metering program was also cancelled, which allowed for large energy consumers to offset electricity usage at one site by generating it on another property under the same owner. It is anticipated that these changes will stunt the growth of renewable energy generation for the Windsor community.

In August 2022, the City of Windsor announced a renewable energy project, which would see the installation of new solar photovoltaic (PV) systems and net metering infrastructure to 12 city facilities. The new systems will add approximately 1.0MW of solar capacity. Facilities include:

- Optimist Community Centre and Library
- Forest Glade Community Centre and Library
- Constable John Atkinson Memorial Community Centre
- Fire Hall #2
- Fire Hall #5
- Fire Hall #6 and Emergency Operations Centre
- Fire Hall #7
- Fire Apparatus Building
- Parks & Recreation Facilities Storage
- Parks & Recreation Maintenance Yard

- South Windsor Library
- Fountainbleau Library

Figure 24 illustrates a typical solar farm installation.



Figure 24: Solar PV Installation – Windsor International Aquatic Centre

Community Progress Towards CEP Goals

The CEP projected GHG emissions increase of 20% under the baseline scenario. Without action, the community is on track to reach a per capita emissions of 9.5 Tonnes/year by 2041 (Figure 25). The CEP also predicts energy costs to grow from \$842 million in 2014 to \$1.8 to \$3.2 Billion by 2041 without action. These expected increases are being realized currently and highlights the need for a rigorous approach to the implementation of all CEP strategies.

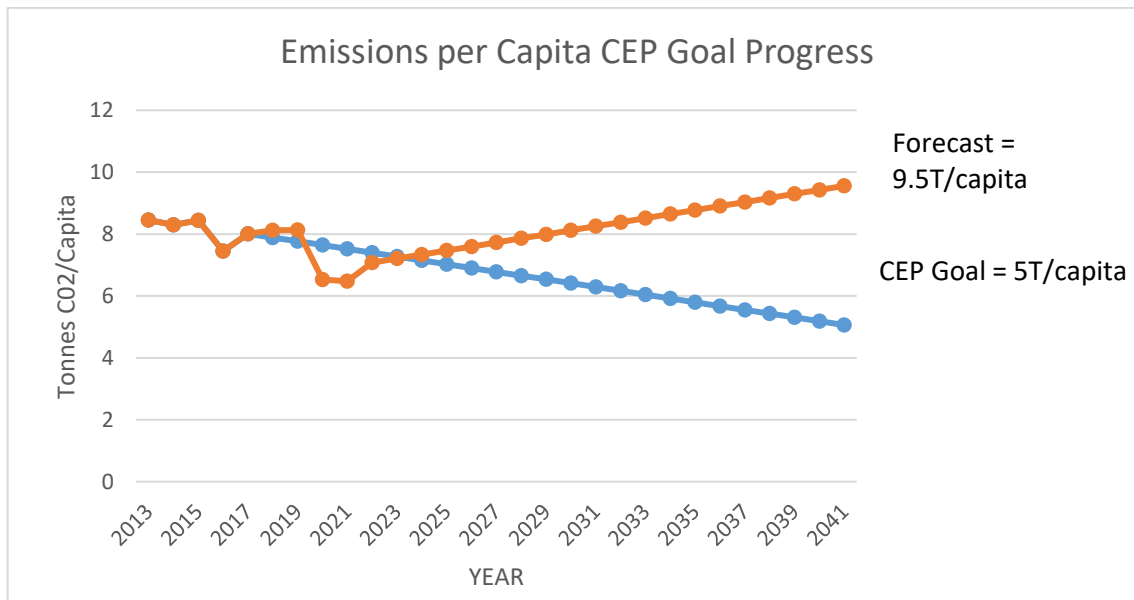


Figure 25: Projection for per capita emissions based on 2014-2019 trend

Although the CEP was approved in 2017, implementation of the major strategies and programs outlined in the CEP began in the later half of 2018 upon the recruitment of the temporary 2-year Community Energy Plan Project Administrator. Since 2020, the Community Energy Plan Administrator role has received single year extensions at budget deliberations. The goal is to obtain budgetary approval to make the position permanent. At this time, a number of the Strategies are under program development. It is anticipated that emissions will continue to rise until the Strategies are at the implementation stage. The following section outlines the status of the emissions reduction strategies outlined in the CEP.

CEP Community Strategy Update

Table 9: CEP Community Strategy Summary

Status updates provided for strategies listed below are as of January 2023.

Strategy #	Strategy Title	Lead Department	Status
1	Create a Deep Energy Retrofit Program for Existing Homes	Environmental Sustainability and Climate Change (ESCC)	FCM Green Municipal Fund (GMF) Grant received for Program Design Study. Administration led initiative. Full report to be presented to Council Q3/Q4 2023.
2	Continue to Ensure Compliance with the Ontario Building Code for New Residential Development	Building	Plan Examiners ensure compliance with energy code requirements outlined in the OBC prior to issuance of a building permit. Building systems are reviewed by Building Inspectors at various phases of construction.
3	Integrate Energy Performance Labelling for Homes and Buildings	ESCC	Select City facilities have been assessed using an online tool provided by Natural Resources Canada. The results are being used as tools for public engagement and education.
4	Create a Net Zero Neighbourhood as an Opportunity for Transformative Change at the Neighbourhood Scale	ESCC	FCM Green Municipal Fund (GMF) Grant received in 2022 to conduct a plan study.
5	Create a Deep Retrofit Program for Existing Businesses and Public Buildings	ESCC	The study being completed under Strategy 1 (residential) will form the basis for discussion for other buildings. Starting with Strategy 1 provides a context for this Strategy where the procedure is more complex as the building types vary more.
6	Continue to Ensure Compliance with the OBC for New Commercial and Institutional Development	Building	Plan Examiners ensure compliance with energy code requirements outlined in the OBC prior to issuance of a building permit. Building systems are reviewed by building inspectors at various phases of construction.

Strategy #	Strategy Title	Lead Department	Status
7	Continually Increase Industrial Efficiency Energy	ESCC	ENWIN has fulfilled their requirement under their energy conservation mandate. Energy efficiency programs are continuing through IESO but managed through Toronto. There are no local representatives.
8	Reinforce a Windsor Network and Mentorship Program for Transfer of Best Practices	ESCC	In collaboration with Enwin and Enbridge (Union Gas) a Sustainable buildings workshop was held in May 2019. Looking to reinstate in 2023.
9	Encourage a Modal Shift towards Public Transit	Transit Windsor	<p>More Than Transit Plan Approved in 2020 Implementation underway</p> <ul style="list-style-type: none"> • New routes underway with express route 518X implemented in 2021 • Work to expand existing garage to start end of 2023 • Automatic Passenger Counters to be installed on fleet by end of 2023 <p>Transit Windsor Route Infrastructure Planning and Design Guidelines were approved by Council in 2022</p>
10	Develop and Implement an Active Transportation Master Plan	Transportation Planning	The Active Transportation Master Plan was approved by City Council on July 22, 2019. The plan includes a target of 25% mode split by 2041 shifting from current 10%.
11	Adoption of Electric Vehicles and Alternative Fuel Vehicles	ESCC / Asset Planning	<p>Essex Powerlines received funding from NRCan to install EV chargers at sites across Windsor Essex. Program fully subscribed in 2022</p> <ul style="list-style-type: none"> • 12 level 2 chargers and 1 fast charger installed in Windsor • Additional 42 level 2 chargers and 14 fast chargers in queue for Windsor <p>The City of Windsor will continue to look for funding for charging infrastructure. 11 level 2 chargers installed to date.</p>

Strategy #	Strategy Title	Lead Department	Status
12	Continue to Advance Smart Energy Systems through Effective Land Use Planning	Planning	ESCC staff completed an Energy Strategy and incorporated into the development process.
13	Designate and Plan District Energy Areas	ESCC	Enwave Utilities purchased Windsor District Energy network in 2020. The ESCC Office has been collaborating with Enwave to address current challenges and identify how the City of Windsor can help to support the expansion of District Energy.
14	Create a Gordie Howe International Bridge Low-Energy Development Area	Planning	No progress to date.
15	Encourage the Installation of Solar Arrays	ESCC / Asset Planning	The Province of Ontario no longer permits virtual net metering for solar installations. However, solar PV can still be net metered at buildings. Solar PV and wind are now the cheapest available source of new electricity generation.
16	Develop a Community Education and Communications Campaign	ESCC	Education and Engagement is ongoing. Public engagement was limited in 2020 and 2021 due to COVID restrictions. In 2023, engagement has returned with events at Devonshire and Tecumseh malls, the Windsor-Essex Home Show and Earth Day 2023.
17	Detailed Energy Mapping	ESCC	Completed as part of Strategy #1 in 2018. Detailed energy mapping allows Administration to review local energy needs and opportunities for generation. These maps should be recreated every 7 to 10 years to monitor the changing energy use patterns of the City.
18	Transition Community Energy Plan Administrator role from temporary full time to permanent full time	ESCC	The CEP Administrator has been retained under a 1-year temporary contract, renewed annually. It is recommended that this position be made permanent during 2024 budget deliberations.

Strategy #	Strategy Title	Lead Department	Status
19	Facilitate the Community Implementation Task Force	ESCC	Community Task Force has recommitted for the implementation of the CEP. Interest from the local business community to participate is continuing to increase.
20	Monitoring and Verification	ESCC	This report is the second full monitoring report completed for the CEP. A similar report is expected to City Council annually.

Table 10 – Community Performance Indicators

Community Performance Indicator	2014	2019	2021 ²⁰
<i>Primary Indicators</i>			
Total energy use	39,016,987 GJ/yr	37,912,495 GJ/yr	30,313,199 GJ/yr
Total energy use per capita	184.9 GJ/yr	168.8 GJ/yr	132.0 GJ/yr
Percent change in energy per capita from baseline	NA	-8.7%	-28.6%
Total energy use per job	251.3 GJ/job	228.2 GJ/job	180.1 GJ/job
Percent change in energy use per full time job from baseline	NA	-9.2%	-28.3%
Total GHG emissions	1,869,202 tCO ₂ e/yr	1,765,057 tCO ₂ e/yr	1,487,346 tCO ₂ e/yr
GHG emissions per capita	8.86 tCO ₂ e/yr	7.86 tCO ₂ e/yr	6.48 tCO ₂ e/yr
Percent change in GHG emissions from CEP baseline	NA	-5.6%	-20.4%
<i>Secondary Indicators</i>			
Total Energy Residential	9,029,158 GJ/yr	8,611,567 GJ/yr	7,757,133 GJ/yr
Total Emissions Residential	366,188 tCO ₂ e/yr	323,127 tCO ₂ e/yr	284,527 tCO ₂ e/yr
Emissions Residential as percent of total	19.6%	18.3%	19.1%
Residential Energy Intensity	NA	0.93 GJ/m ²	
Total Energy Commercial and Institutional	9,583,784 GJ/yr	4,444,893 GJ/yr	7,326,653 GJ/yr
Total Emissions Commercial and Institutional	316,383 tCO ₂ e/yr	219,683 tCO ₂ e/yr	207,774 tCO ₂ e/yr

²⁰ 2021 data is not representative of actual conditions due to COVID impacts, and is used for illustrative purposes only.

Community Performance Indicator	2014	2019	2021
<i>Secondary Indicators</i>			
Emissions Commercial and Institutional as percent of total	16.9%	12.4%	14.0%
Total Energy Industrial	9,524,808 GJ/yr	13,887,625 GJ/yr	6,506,781 GJ/yr
Total Emissions Industrial	385,206 tCO ₂ e/yr	410,984 tCO ₂ e/yr	336,555 tCO ₂ e/yr
Emissions Industrial as percent of total	20.6%	23.3%	22.6%
Total Energy On-Road	10,879,237 GJ/yr	10,968,410 GJ/yr	8,722,632 GJ/yr
Total Emissions On-Road	732,971 tCO ₂ e/yr	738,071 tCO ₂ e/yr	590,163 tCO ₂ e/yr
Emissions On-Road per million km travelled	278.2 tCO ₂ e/million km travelled	308.8 tCO ₂ e/million km travelled	260.8 tCO ₂ e/million km travelled
Change in Emissions On-Road per million km travelled over baseline	NA	11.0%	-6.3%
Emissions On-Road as percent of total	39.2%	41.2%	39.7%
Total Emissions solid waste	68,454 tCO ₂ e/yr	73,192 tCO ₂ e/yr	68,327 tCO ₂ e/yr
Solid Waste Emissions as percent of total	3.7%	4.1%	4.6%
Total Installed distributed Solar PV	NA	62MW	73 MW

CEP Next Steps

Benchmarking Best Practices

Administration is tracking best practices from municipalities and government agencies provincially and federally.

1. Benchmarking Deep Retrofit Programs in the market or under development. Across Ontario, Canada, North America, and Across Europe
 - a. Developing comparisons of program features including program eligibility, financing options, and program steps
 - b. Conducting interviews with a number of municipal program administrators regarding challenges and successes of program development and launch (focusing on lessons learned).
 - c. Monitoring Clean Air Partnership (CAP) initiative to collaborate with seven (7) Ontario municipalities on developing a common program design for Residential Deep Retrofits.
 - d. Participating on working groups:
 - i. QUEST's Deep Retrofit working group,
 - ii. CAP webinars and stakeholder meetings highlighting programs from across Canada.
 - iii. Community Efficiency Financing (CEF) learning opportunities
2. Benchmarking of Sustainable Neighbourhood Action Plans
 - a. Clarington, Edmonton, Guelph, London, Ottawa, Victoria, West Vancouver, focusing on key elements
 - i. Natural and Cultural
 - ii. Energy Efficiency
 - iii. Biodiversity
 - iv. Land Use Density, etc.
3. Benchmarking Community Energy Plans, Climate Action Plans, or Net-Zero Plans of Municipalities

Municipalities			
Burlington	Guelph	Hamilton	Kingston
London	Markham	Ottawa	Saskatoon
Thunder Bay	Toronto	Vancouver	

4. Benchmarking Net-Zero or Pathways to Net-Zero plans from government and utilities
 - a. Government of Canada 2030 Emissions Reduction Plan
 - b. Enbridge Gas Inc.'s Ontario Pathways to Net Zero
 - c. Independent Electricity System Operator's (IESO) Pathways to Decarbonization
5. Benchmarking government initiatives related to new technology and alternative fuels

- a. Ontario's Low-Carbon Hydrogen Strategy
- b. Hydrogen Strategy for Canada
- c. Government of Canada's Clean Electricity Standard Discussion Paper
- d. Scenarios for a Net-Zero Electricity System in Ontario

Transition to Net-Zero Plan

In 2022, Administration reported to Council (S 42/2022 Science Based Targets for GHG Reduction) requesting approval in principle of an update to the Community and Corporate GHG Emissions Reduction Targets. As part of Council Decision (CR209/2022 ETPS 893):

- That the report of the Community Energy Plan Administrator dated April 8, 2022 entitled "Science Based Targets for GHG Reduction – City Wide" **BE RECEIVED** for information; and,
- That City Council **APPROVE IN PRINCIPLE** Windsor's Science Based Targets of a 68% reduction in city-wide emissions (scope 1 and 2) and a 55% reduction in corporate-wide emissions (scope 1 and 2) below 2005 baseline by 2030; and,
- That City Council **APPROVE IN PRINCIPLE** a NET ZERO Target for 2050; and,
- That Administration **BE DIRECTED** to report back with an updated strategy to reach these targets by November 2023 that considers implementation timelines, resourcing and financial impacts of meeting science-based targets; and further,
- That Administration **BE DIRECTED** to send a letter to the County of Essex and City of Detroit requesting their support of Windsor's Science Based Targets for GHG Reduction.

The current Community Energy and Corporate Climate Action Plans will form the foundation of the Transition to Net-Zero Plan, with information gathered from benchmarking activities analysed and incorporated as applicable.

Government Advocacy

Administration is expanding its responsibilities as it relates to regional energy supply and energy security. Administration is working to:

1. Support City Council decisions
2. Liaise between Energy proponents and the IESO for procurement RFPs
3. Collaborate with IESO, the Ontario Ministry of Energy, Northern Development and Mines, Enbridge Gas Inc., and local stakeholders as appropriate to support initiatives and actions that align with Pathways to Net-Zero.

Council Decision (CR422/2022) in response to Power Advisory report C161/2022

- I. **THAT** City Council **SUPPORT IN PRINCIPLE** the five proposed electricity transmission infrastructure projects West of London, as recommended by the Independent Electricity System Operator (IESO), and the measures to ensure their rapid completion announced by the Province of Ontario; and,
- II. **THAT** City Council **ADVOCATE** for the Province of Ontario to pursue energy efficiency and green energy alternatives, while maintaining the existing energy

generation initiatives until such time as affordable, sufficient and sustainable alternatives are in place; and further, to help alleviate regional electricity supply constraints prior to the completion of new electricity transmission infrastructure in 2030; and,

- III. **THAT** City Council **SUPPORT** Independent Electricity System Operator (IESO) efforts to immediately re-contract the Brighton Beach Generating Station to supply power for local job creation and economic expansion in Windsor-Essex; and,
- IV. **THAT** City Council **ADVOCATE** for the Province of Ontario to investigate near-term firm electricity imports from the State of Michigan via the Windsor-Detroit Energy Intertie; and,
- V. **THAT** City Council **SUPPORT IN PRINCIPLE** the City of Windsor as a host for future projects that will enhance the energy supply, subject to approval through the appropriate federal, provincial and Council processes; and,
- VI. **THAT** Administration **BE AUTHORIZED** to participate in, and provide comment to, any public consultations regarding energy supply and development to convey the interests of the Corporation of the City of Windsor; and,
- VII. **THAT** City Council **REQUEST** that the Board of Directors, Invest WindsorEssex engage their resources, from a regional representation and advocacy perspective, to track efforts and vigorously advocate on behalf of the region for short, medium and long term solutions for adequate and sustainable energy solutions to support economic investments and growth; and,
- VIII. **THAT** City Council **DIRECT** Administration to facilitate a presentation by Power Advisory to Essex County Council at their earliest opportunity; and further, pursuant to approval of the Recommendations noted above; and further,
- IX. **THAT** City Council **REQUEST** that Essex County Council pass a resolution endorsing the Recommendations of Windsor City Council to ensure a consistent approach to this regional issue.

Intergovernmental Panel on Climate Change (IPCC)

In March 2023, the IPCC released its sixth assessment report (AR6) which summarized the state of knowledge of climate change, its widespread impacts and risks, and climate change mitigation and adaptation, based on the peer-reviewed scientific, technical and socio-economic literature since the publication of the IPCC's Fifth Assessment Report (AR5) in 2014. Administration has identified a number of key findings to focus on and mitigate in the years leading up to 2030.²¹

²¹ [AR6 Synthesis Report: Summary for Policymakers Headline Statements \(ipcc.ch\)](https://www.ipcc.ch/)

Category	Task	Description
Observed warming and its causes	A.1	Human activities, principally through emissions of greenhouse gases, have unequivocally caused global warming, with global surface temperature reaching 1.1°C above 1850–1900 in 2011–2020. Global greenhouse gas emissions have continued to increase, with unequal historical and ongoing contributions arising from unsustainable energy use, land use and land-use change, lifestyles and patterns of consumption and production across regions, between and within countries, and among individuals
Current Mitigation Progress, Gaps and Challenges	A.4	Policies and laws addressing mitigation have consistently expanded since AR5. Global GHG emissions in 2030 implied by nationally determined contributions (NDCs) announced by October 2021 make it likely that warming will exceed 1.5°C during the 21st century and make it harder to limit warming below 2°C. There are gaps between projected emissions from implemented policies and those from NDCs and finance flows fall short of the levels needed to meet climate goals across all sectors and regions.
Carbon Budgets and Net Zero Emissions	B.5	Limiting human-caused global warming requires net zero CO ₂ emissions. Cumulative carbon emissions until the time of reaching net-zero CO ₂ emissions and the level of greenhouse gas emission reductions this decade largely determine whether warming can be limited to 1.5°C or 2°C (<i>high confidence</i>). Projected CO ₂ emissions from existing fossil fuel infrastructure without additional abatement would exceed the remaining carbon budget for 1.5°C (50%)
Mitigation Pathways	B.6	All global modelled pathways that limit warming to 1.5°C (>50%) with no or limited overshoot, and those that limit warming to 2°C (>67%), involve rapid and deep and, in most cases, immediate greenhouse gas emissions reductions in all sectors this decade. Global net zero CO ₂ emissions are reached for these pathway categories, in the early 2050s and around the early 2070s, respectively
Urgency of Near-Term Integrated Climate Action	C.1	Climate change is a threat to human well-being and planetary health. There is a rapidly closing window of opportunity to secure a liveable and sustainable future for all. Climate resilient development integrates adaptation and mitigation to advance sustainable development for all, and is enabled by increased international cooperation including improved access to adequate financial resources, particularly for vulnerable regions, sectors and groups, and inclusive governance and coordinated policies. The choices and actions implemented in this decade will have impacts now and for thousands of years.
The Benefits of Near-Term Action	C.2	Deep, rapid and sustained mitigation and accelerated implementation of adaptation actions in this decade would reduce projected losses and damages for humans and ecosystems, and deliver many co-benefits, especially for air quality and health. Delayed mitigation and adaptation action would lock-in high-emissions infrastructure, raise risks of stranded assets and cost-escalation, reduce feasibility, and increase losses and damages. Near-term actions involve high up-front investments and potentially disruptive changes that can be lessened by a range of enabling policies
Mitigation and Adaptation Options across Systems	C.3	Rapid and far-reaching transitions across all sectors and systems are necessary to achieve deep and sustained emissions reductions and secure a liveable and sustainable future for all. These system transitions involve a significant upscaling of a wide portfolio of mitigation and adaptation options. Feasible, effective, and low-cost options for mitigation and adaptation are already available, with differences across systems and regions.

Corporate Emissions and Energy Inventory

Similar to the Community energy and GHG emissions inventory the Corporate inventories are calculated using the PCP Milestone tool.

Corporate emissions account for only 2% of the overall community emissions as displayed in Figure 26.

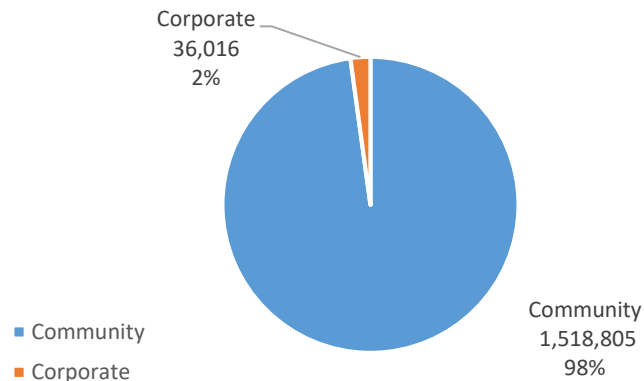


Figure 26: Contributions from community and corporate inventories 2021

Corporate energy and emissions include the following sections;

- Building
- Fleet
- Streetlights
- Water and Sewage

Figures 27 and 29 presents all completed Corporate emissions and energy inventories to date. Please note that 2014 represents the baseline emissions and energy use against which emissions and energy reduction goals are measured. Figures 28 and 30 illustrates the percentage of emissions and energy by sector for the Corporation.

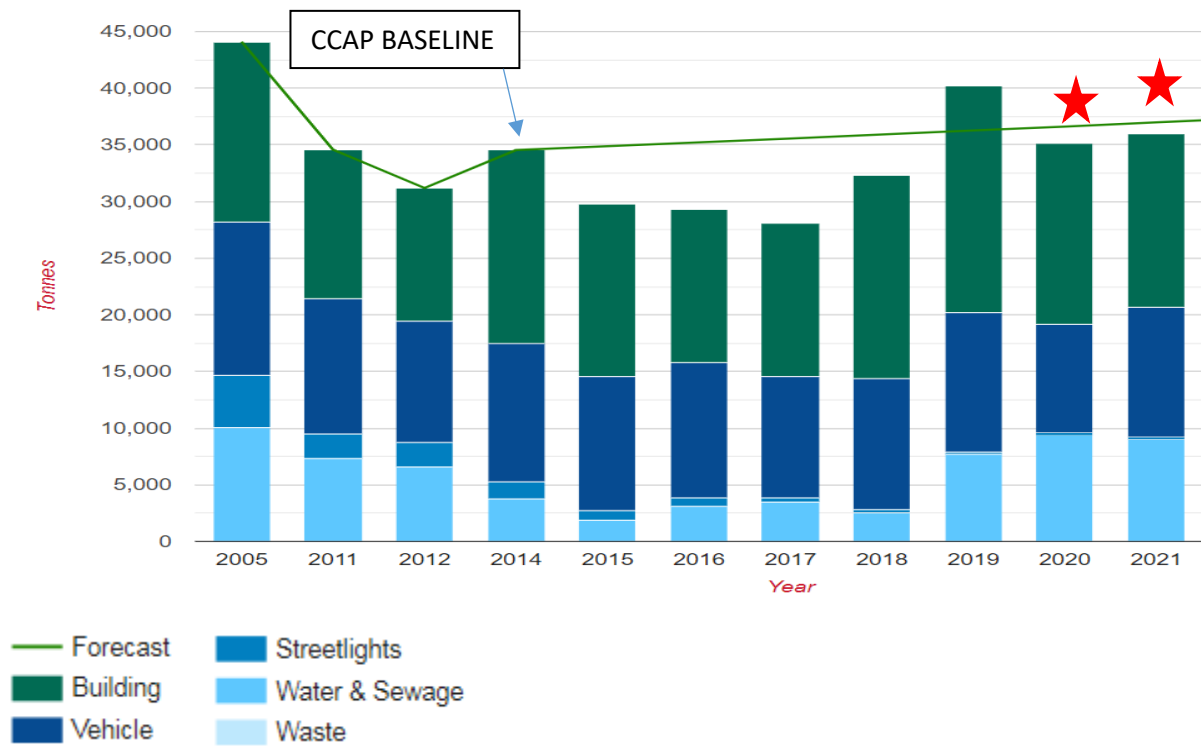


Figure 27: Corporate Emissions 2005-2021²²

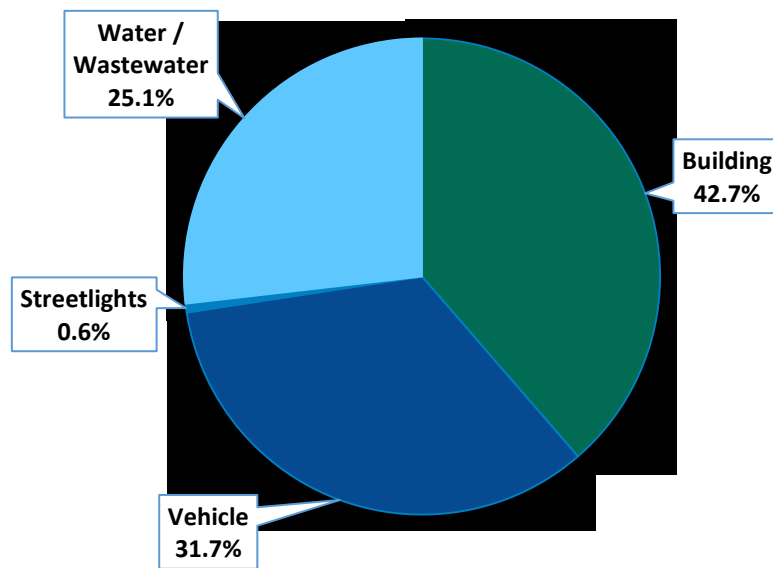


Figure 28: Corporate Emissions by Sector 2021

²² 2020 and 2021 data sets impacted by COVID-19. Data points are used for illustrative purposes. Extreme caution should be used when attempting to identify future trends including the 2020 and 2021 data.

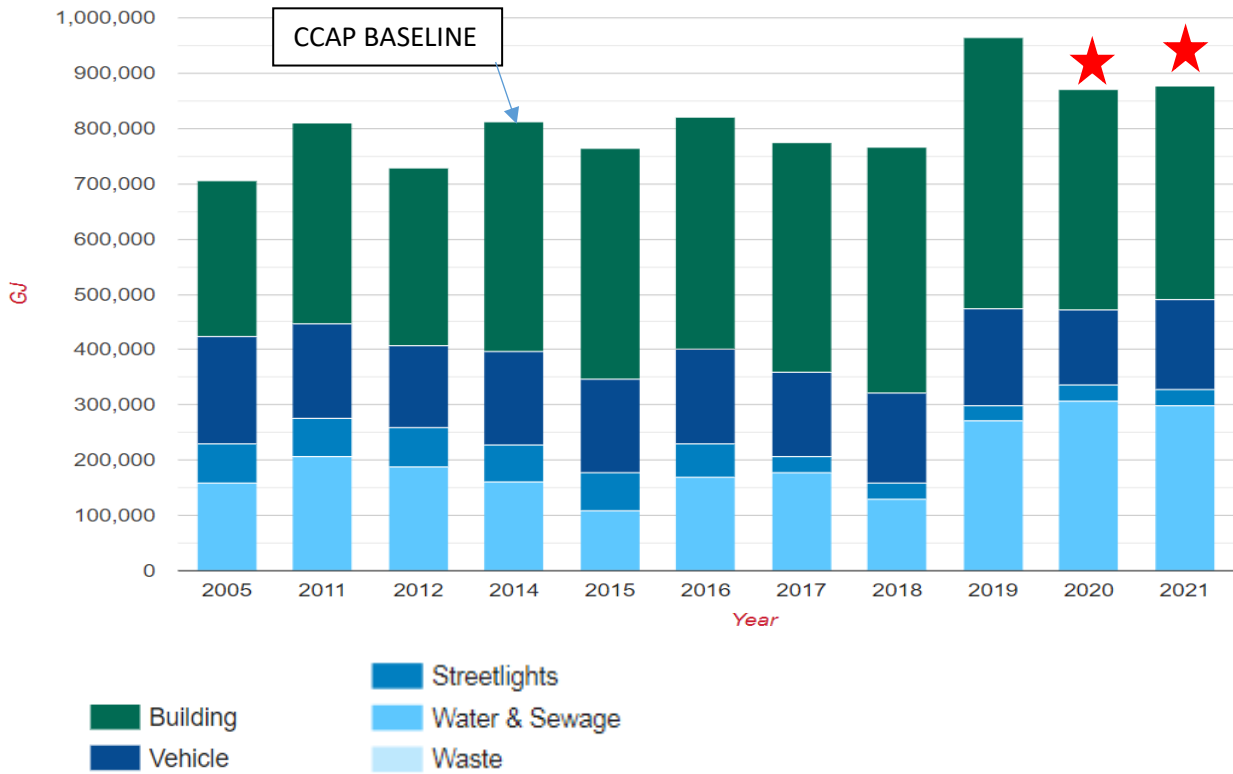


Figure 29: Corporate Energy Consumption 2005-2021^{23,24}

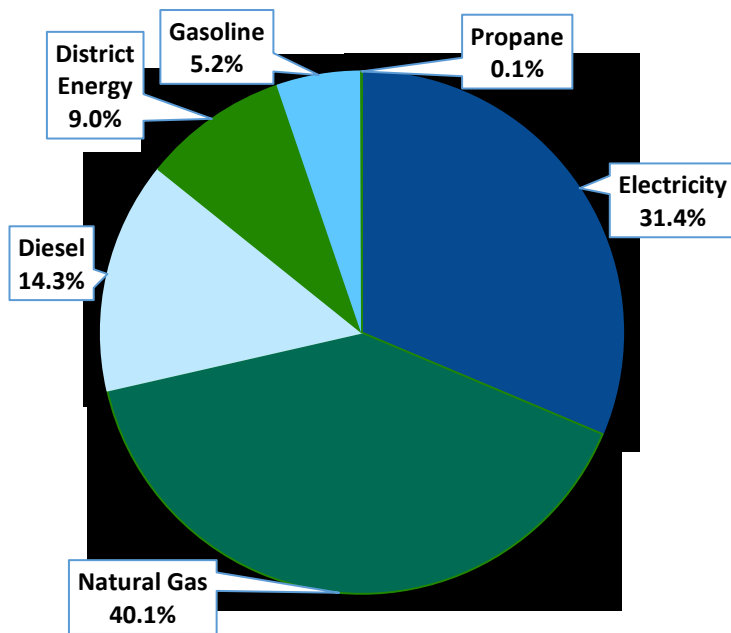


Figure 30 – Total Corporate Energy by source

²³ Waste energy consumption is included and tracked under community inventory

²⁴ 2020 and 2021 data sets impacted by COVID-19. Data points are used for illustrative purposes. Extreme caution should be used when attempting to identify future trends including the 2020 and 2021 data.

Analysis

As indicated in the Figures 26 and 28, the total yearly emissions and energy consumption for the Corporation decreased slightly between 2014 and 2021. Table 11 highlights a number of primary indicators as outlined in the CCAP. Data from 2019 is used when calculating % Change to Baseline.

CORPORATE	Baseline 2014	2019	2021	% Change to Baseline (2019)
Total Emission (CO₂e)	34,538	37,307	36,016	+8.02%
Total Energy (GJ)	812,826	874,726	876,330	+7.62%

Table 11: Primary Corporate Performance Indicators vs. CCAP Baseline 2014

Table 12 highlights the primary performance indicators as compared to the Science Based Climate Target Baseline of 2005. Data from 2019 is used when calculating % Change to Baseline.

CORPORATE	Science Based Climate Baseline 2005	2019	2021	% Change to Baseline (2019)
Total Emission (CO₂e)	44,104	37,307	36,016	-15.41%
Total Energy (GJ)	705,118	874,726	876,330	+24.05%

Table 12: Primary Corporate Performance Indicators vs. Science Based Climate Target Baseline 2005

Table 13 highlights the changes in corporate emissions in 2021 as compared to the 2014 CCAP baseline by sector.

	Emissions (tCO₂e)			% Change to Baseline (2019)
CORPORATE	CCAP Baseline 2014	2019	2021	
Building	17,054	19,975	15,369	+17.13%
Vehicle	12,247	12,317	11,423	+0.57%
Streetlights	1,484	136	200	-90.84%
Water	3,752	4,879	9,024	+30.04%

Table 13: Corporate Emissions by Sector .vs CCAP Baseline 2014

Table 14 highlights the changes in corporate emissions by sector as compared to the Science Based Climate Target Baseline of 2005 CCAP baseline.

CORPORATE	Emissions (tCO _{2e})			% Change to Baseline (2019)
	Science Based Climate Baseline 2005	2019	2021	
Building	15,932	19,975	15,369	+25.38%
Vehicle	13,557	12,317	11,423	+9.15%
Streetlights	4,593	136	200	-97.04%
Water	10,022	4,879	9,024	-51.32%

Table 14: Corporate Emissions by Sector .vs Science Based Climate Baseline 2005

Corporate Building Emissions

Corporate building emissions account for 42.7% of total corporate emissions. These emissions are calculated using the PCP Milestone tool along with natural gas, district heating/cooling and electricity consumption data provided by the Corporate Energy department. Figure 31 shows a decreasing emissions trend from 2014 through 2017 followed by increases in 2018 and 2019 followed by decreases in 2020 and 2021.

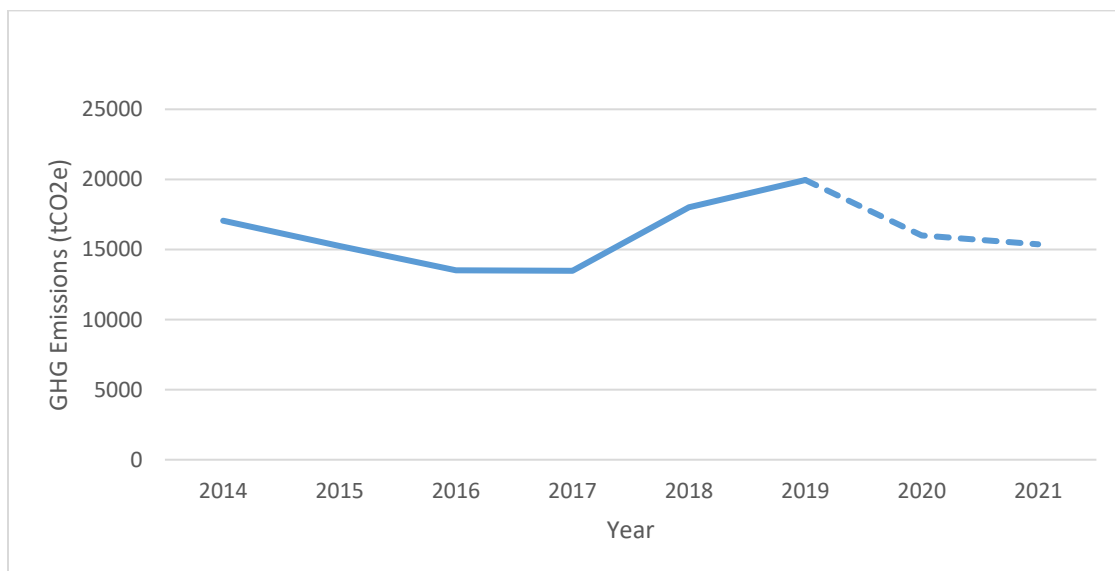


Figure 31: Corporate emissions from buildings

A large proportion of the overall increase is due to the operation of Combined Heat Power (CHP) units, which are now operational at WFCU, Huron Lodge, and WIATC facilities. CHP is a cost efficient technology that generates electricity and thermal energy through the combustion of relatively inexpensive natural gas. Heat from the combustion of the fuel is captured and utilized for space heating, cooling, domestic hot water and industrial processes. The electricity produced by the CHP reduces the amount of electricity purchased from the provincial grid and as such reduces operational costs. However, generating electricity through natural gas increases Corporate GHG emissions. It should also be noted that as natural gas costs rise and carbon costs increase, the financial benefit of CHPs will be minimized.

CHP technology was approved for implementation by City Council at Huron Lodge & WFCU Center in 2015 (CR 144/2015) and was subsequently approved for the WIATC in 2016 (CR 641/2016). At the time the City introduced this technology, the Provincial government was aggressively supporting and promoting implementation of CHPs and offered capital cost incentives of up to 40%. This equates to \$2.6 million of incentives for the City’s three CHP systems. When fully operational it is estimated that the three systems will generate \$1 million in annual operational savings.

By plotting electricity consumption, natural gas consumption and emissions on the same graph (as displayed in figures 32, 33, and 34 below), the effects of the CHP utilization are observed.

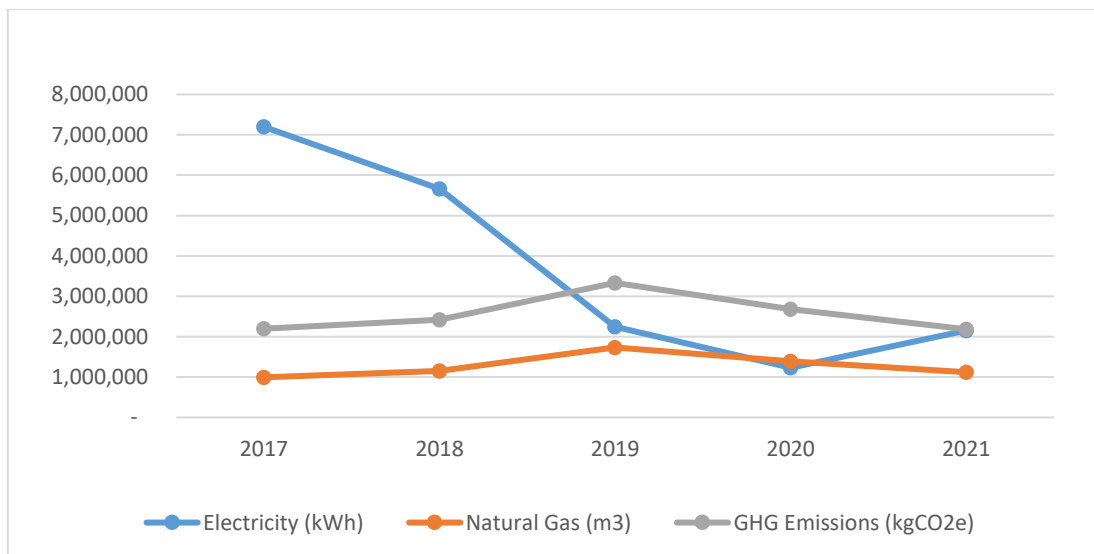


Figure 32 – Energy Utilization and Emissions from WFCU Center

For WFCU the CHP system became operational in 2019 and this is consistent with the data showing a decrease in electrical consumption with a simultaneous increase in natural gas consumption. The implementation of CHP at WFCU resulted in a 38% increase in emissions.

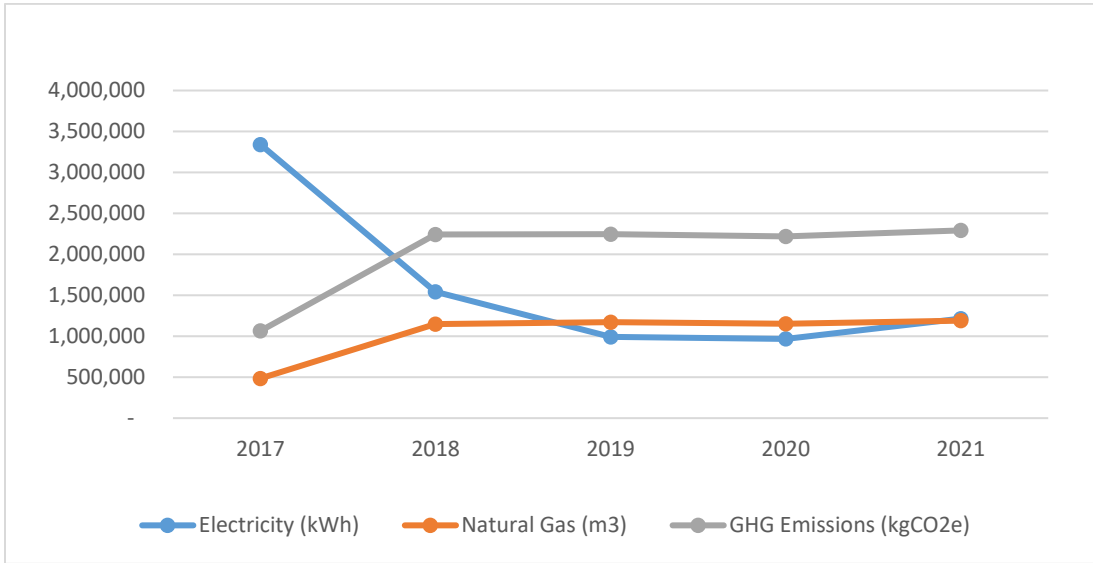


Figure 33 – Energy Utilization and Emissions from Huron Lodge

The CHP for Huron Lodge came online in 2018 resulting in the 110% increase in emissions.

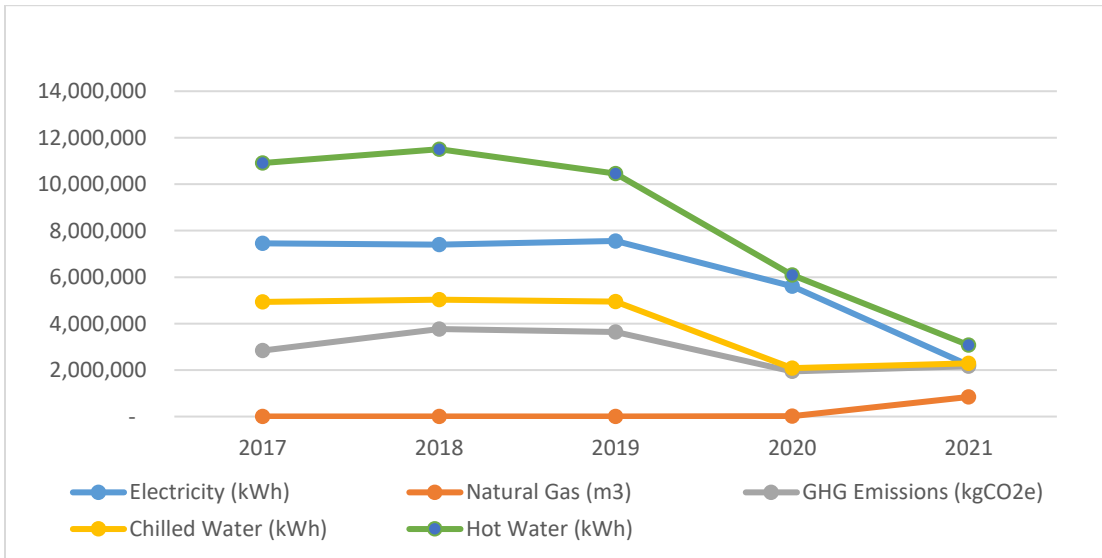


Figure 34 – Energy Utilization and Emissions from WIATC

The CHP for WIATC came online in 2021 during a year when the building was underutilized as a result of impacts of COVID-19. Emission impacts related to the operation of the CHP are currently not fully realized.

The three CHP systems combined have increased natural gas consumption by approximately 242,000 cubic metres between 2019 and 2021. This has resulted in a net annual increase of 460 Tonnes CO₂ per year.

It should be mentioned that this increase is smaller at 79 Tonnes CO₂ if the marginal emissions factor (MEF) for the electricity grid is considered (31CO₂ g/kWh vs. 134 CO₂

g/kWh). This in essence compares GHG emissions from the CHP with the GHG emissions from gas powered power plants in the province.

While the increase in GHG emissions appear to conflict with our reduction goals, it should be noted that decisions to implement the CHP's units was not solely based on reduction of costs to electricity. CHP systems generate the electricity needed at these three sites ensuring they are operationally viable in the event of power not being available from the grid. As Huron Lodge is a home for the age and WFCU and WIATC both provide shelter in emergency situations this additional benefit from these systems provides the City the ability to address other objectives and needs in the community.

The majority of City buildings have decreased or maintained emissions levels showing that building retrofits are helping. However, the increased emissions at WFCU, Huron Lodge, and WIATC have negated these reductions.

These three facilities contributed more than 51% of emissions from Corporate Buildings in 2021.

The City's Energy Initiatives office works to improve the performance of the building fleet by implementing projects such as Net Metering, Battery Storage, Electric Vehicle Charging Stations, LED Lighting Retrofits, Sub-metering, and Enterprise-wide Smart Energy Management Systems. These projects play a vital role in increasing energy efficiency and aiding in the City's climate actions.

The Corporate Energy Management Plan (C 301/2019) is a living document that establishes a framework to better understand the Corporation's annual utility costs for its buildings and identifies opportunities to reduce energy usage. The Corporate Energy Management Plan will be updated in 2024

Corporate Vehicle Emissions

Emissions from corporate vehicles account for 31.7% of total Corporate Emissions. These emissions are calculated using fuel consumption data provided by the Fleet department, Transit Windsor and the City of Windsor Police fleet. Historical Emissions are shown in Figure 35.

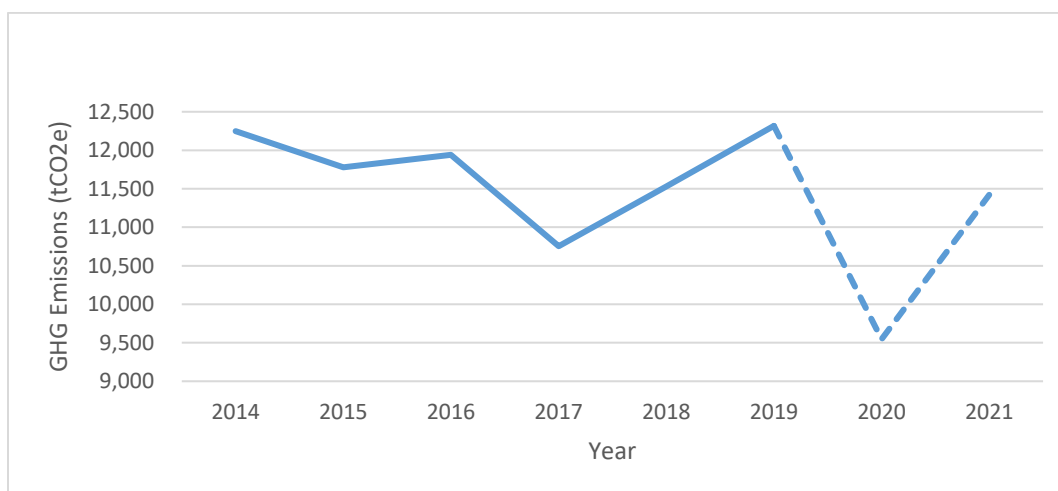


Figure 35: Emissions from Vehicle Fleet 2014-2021

Emissions from corporate vehicles can be reduced by increasing the fuel efficiency of fleet vehicles. This includes strategies outlined in the “Greening the Fleet” plan. The Corporation currently has several EVs which are being used and tested by various departments.

Another method for reducing corporate vehicle emissions is through encouraging employees to use active transportation for short trips during their course of duty. In 2019, the Office of Environmental Sustainability and Climate Change conducted a short pilot project where an electric bicycle was used for trips between city buildings. The electric bike has been used for approximately 300kms of City business trips prior to being put on pause in 2020 due to COVID restrictions. Administration is looking to re-establish the pilot project in 2023.

A significant contributor to the reduction in GHG emissions from the corporate vehicle fleet is the change in operation at Transit Windsor. From the onset of the COVID-19 pandemic, Transit Windsor operated the following schedules in 2020:

- March 30 to May 3, 2020 – suspended service,
- May 4 to September 2020 – a Sunday schedule,
- September to December 31, 2020 – a Saturday schedule on weekdays.

These reductions in service accounted for an annual reduction in Transit’s GHG emissions of approximately 39%.

Corporate Street Light and Traffic Signal Emissions

Emissions from Corporate Street lighting accounts for 0.6% of total corporate emissions. Figure 36 illustrates the reduction in emissions for City Street Lights and Traffic Signals.

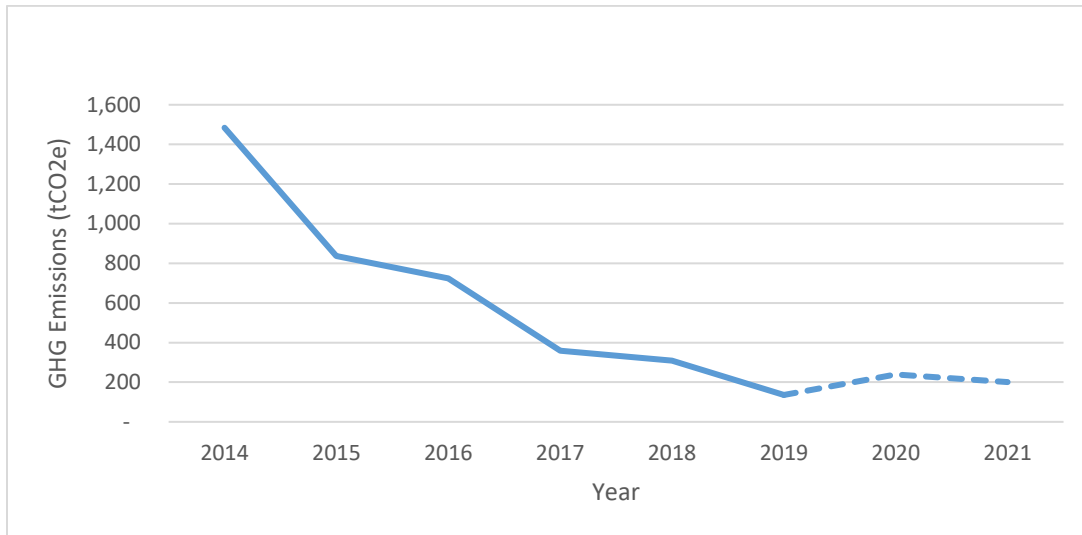


Figure 36: Emissions from Street Lights and Traffic Signals 2014-2021

The drastic reduction in emissions from Street lighting between 2015 and 2019 is the result of converting all streetlights to LED bulbs which consume significantly less energy than incandescent bulbs which had been previously used. Currently all standard streetlights are LED. There is the opportunity for further reduction in street lighting emissions through the conversion of ornamental lighting and parks lighting to LED bulbs.

Corporate Emissions from Water and Wastewater

Emissions from Water and Waste Water account for 25.1% of total corporate emissions. These emissions are calculated using the PCP Milestone tool using natural gas, electricity as well as diesel fuel used to power back-up generators. This inventory includes the two city owned wastewater treatment facilities, the Retention Treatment Basin, the Windsor BioSolids (Pelletizer) facility, the 49 pump stations and interceptor chambers as well as Windsor Utilities Commission water treatment facility and associated pumping. Historical emissions are shown in Figure 37.

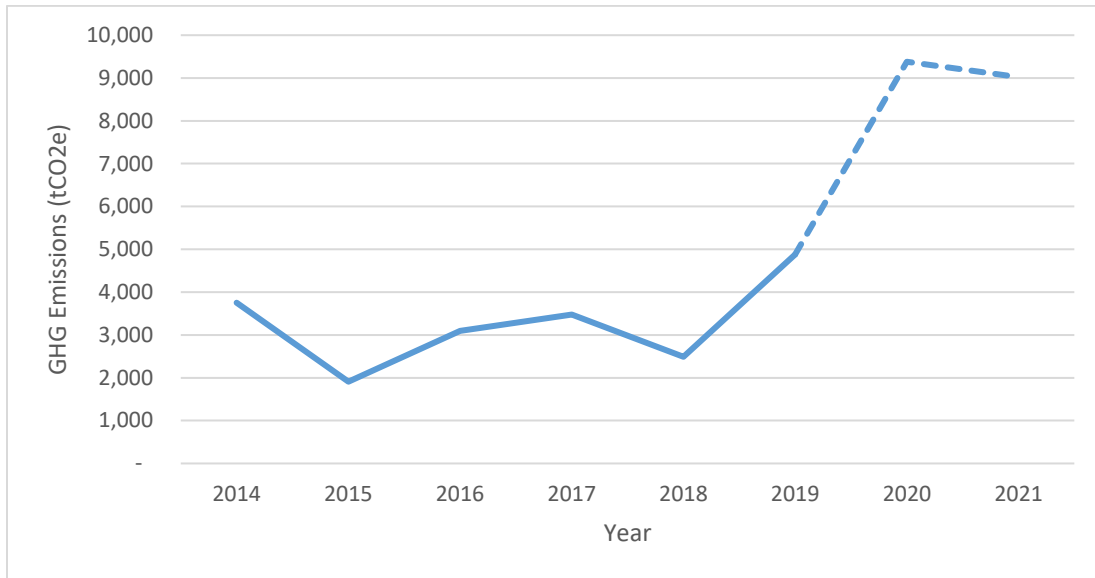


Figure 37: Emissions from Water and Wastewater 2014-2021

In 2019, The City of Windsor took over the Windsor Biosolids processing (Pelletizer) Facility. This facility processes the wastewater sludge by-product from our wastewater treatment facilities into a land-applied fertilizer. Facility operations account for 4,906 tCO₂e in 2021. The addition of this facility is a major contributor to the increase in emissions and represents 55% of total water and wastewater emissions.

Analysis of historic emissions from wastewater facilities (excluding the Pelletizer) have indicated that emissions per litre of wastewater treatment have remained consistent at 0.02 Tonnes/Litre, so the increase is not due to a loss of efficiency within the wastewater treatment process. Emission increases have a positive correlation to the volume of wastewater treated. Historic Lake St. Clair Water levels as well as wastewater treated at the Lou Romano Water Reclamation Plant and Little River Pollution Control Plant are presented below in Figure 38.

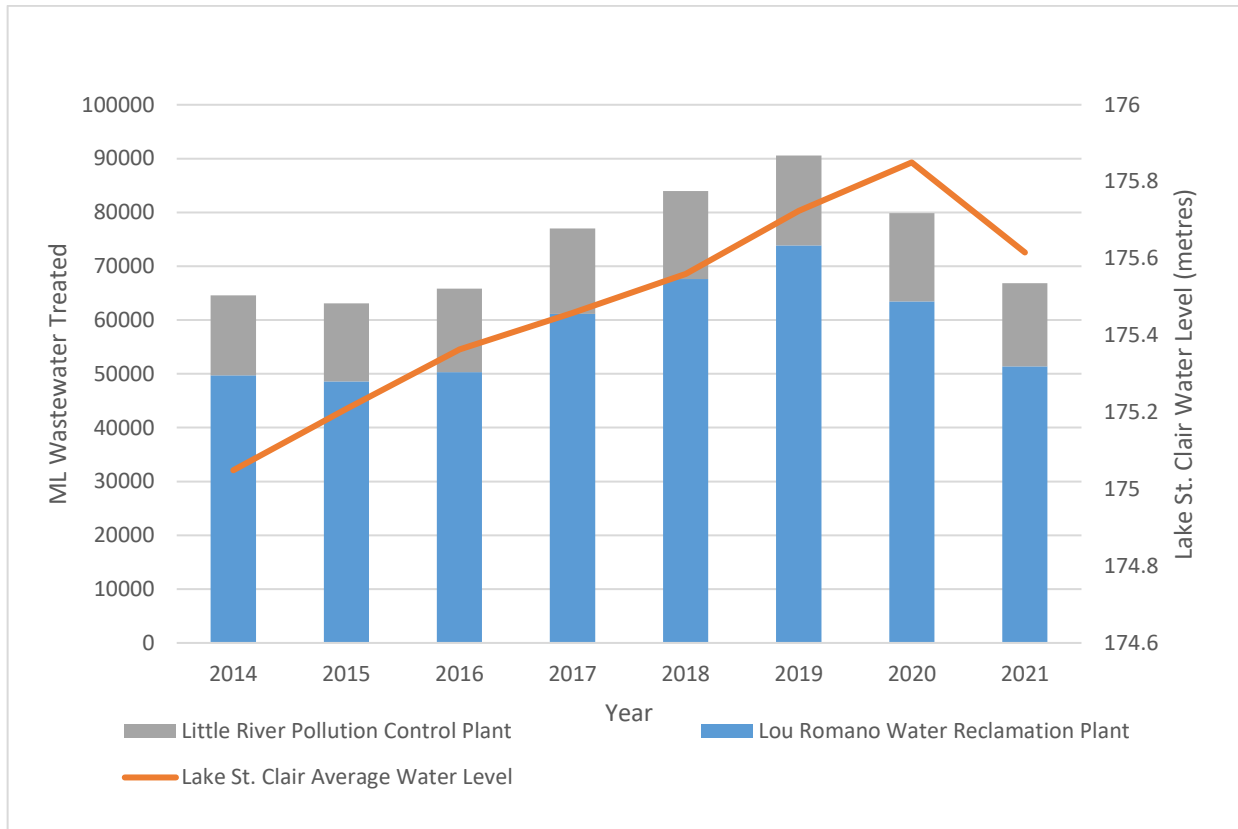


Figure 38: Wastewater Treated

The total quantity of emissions from wastewater treatment and pumping is highly dependant on the amount of precipitation entering the sewer system. In order to normalize this data such that carbon-intensities of water treatment can be evaluated, the total emissions per year can be divided by the total amount of water treated. Figure 39 below displays the flow normalized emissions intensity of waste water treatment. As can be seen from the figure the emissions per litre of water treated has remained relatively consistent since 2014.

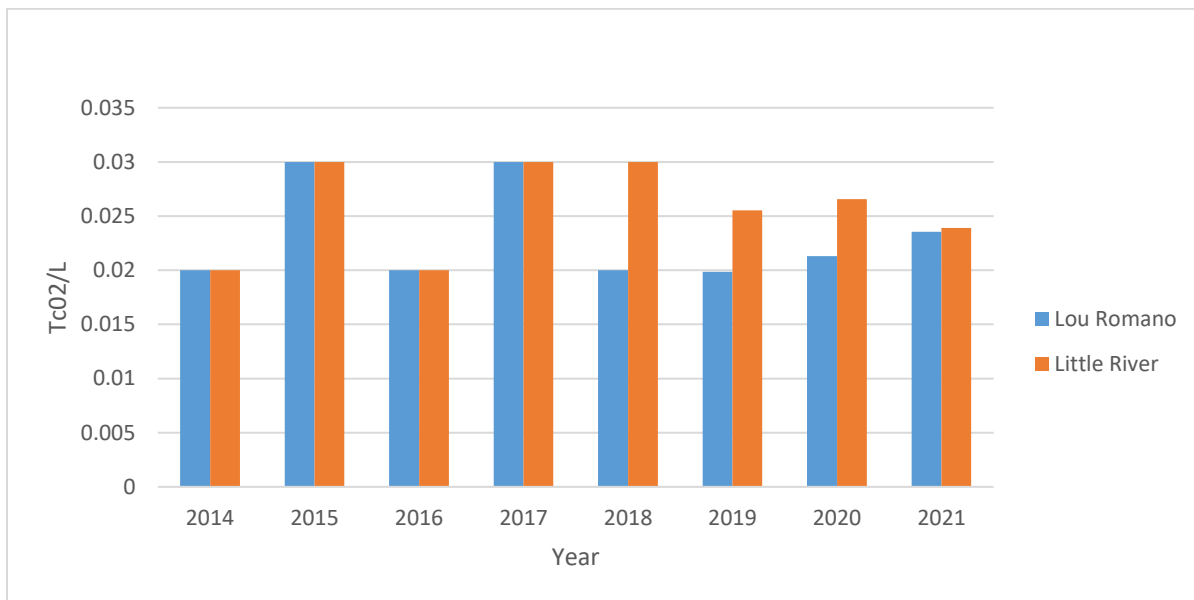


Figure 39: Carbon emissions intensity of treated water

In addition to precipitation volumes, a significant driver may be the high water levels recently experienced in the Lake St. Clair / Detroit River watershed as shown in Figure 39.

The trend of rising water levels since 2014 is clearly evident from the data shown. The rise in water level is consistent with the rise in treated wastewater volumes and this would suggest that there are new interactions occurring between the wastewater network and the water bodies. Under normal conditions, the storm water sewer system discharges into the river/lake at times of precipitation. Under the new high water levels, several outlets are at or below lake level and as such may experience backflow of lake water into the sewer network, which may result in increases of water being treated at the plant. This was known to have occurred at a couple locations in 2019 and mitigation measures have been put in place.

Another element to the interaction is the increase in ground water level resulting from increased lake level. Under higher ground water levels, the opportunities for increased infiltration into sump pumps, private drain connections, and sewer mains may be a contributing factor in the increased wastewater volumes.

A deeper analysis into the magnitude of backflow and infiltration as well as locations of where this may be occurring within the sewer network are beyond the scope of this inventory report. The Sewer and Coastal Flood Protection Master Plan has already identified actions to reduce the impacts of high water levels on the City's east side. In addition, the City of Windsor recently completed the West Windsor Flood Risk Assessment that identified additional areas of concern under high water levels.

Integrated Site Energy Master Plan (ISEMP)

The City of Windsor retained a consultant to conduct an Integrated Site Energy Master Plan (ISEMP) for both City owned and operated waste water treatment plants in 2020. An ISEMP is essentially a neighborhood community plan for each of these facilities. The plan not only looked at the individual equipment but also reviewed treatment plant processes to identify complimentary gains. The ISEP provided a list of actions for implementation that will move the plants towards a net zero energy (NZE) future and drastically reduce GHG emissions.

Corporate Strategy Update

Table 15 – Corporate Climate Action Plan Strategy Summary

Strategy #	Strategy Title	Lead Department	Status
P1	Create an Internal 'Energy First' Ethic	Asset Planning	<p>The updated Corporate Energy Management Plan was presented to Council in 2019. The Energy Initiatives Unit continuously promotes energy conservation and GHG reduction throughout the Corporation by implementing projects and providing assistance for the implementation of energy efficient technologies and processes.</p> <p>An updated edition of the Corporate Energy Management Plan will be prepared by the end of 2024.</p> <p>Administration is working to establish an internal framework to that will reset the roles and accountabilities of the Corporate Task Force as it relates to the implementation of strategies contained within the CEP and CCAP in support of City Council's climate change emergency declaration</p>
P2	Integrate Energy Solutions into Land Use Policies	Planning	<p>Environmental Sustainability and Climate Change (ESCC) staff is working with Planning to incorporate an Energy Strategy component into the development process to fulfil PPS 2020, Section 1.8.1: Planning authorities shall support energy conservation and efficiency, improved air quality, reduced GHG emissions, and preparing for the impacts of a changing climate through land use and development patterns.</p>
P3	Ensure Sufficient Resources to Support Implementation	ESCC	<ul style="list-style-type: none"> Temporary CEP Administrator retained with continuing 1-year contracts. A request to convert this position to a full-time regular position is forthcoming in the 2024 budget.

Strategy #	Strategy Title	Lead Department	Status
P4	Increase Staff Training, Education, and Awareness	ESCC	The ESCC office is working to re-establish previous efforts for staff training and awareness that was limited during COVID. Examples of awareness training to date include: <ul style="list-style-type: none"> • Education sessions hosted with supervisors and managers • Creation of a Green Team, this involves staff across the corporation that has an interest in promoting environmental sustainability at their worksites. • Training sessions on writing the Climate Lens section of Council reports Engaged York University to present The Energy Conscious Community: An Energy Course for Planning Professionals to regional planners
P5	Continue to Pursue Funding and Incentive Opportunities	ESCC	The City of Windsor has been successful in obtaining numerous grants to support the strategies outlined in the CEP and CCAP including: <ul style="list-style-type: none"> • FCM M Municipal Climate Innovation Program (3 grants) • FCM Community Efficiency Financing • FCM Green Municipal Fund (2) • Infrastructure Canada, Zero Emission Transit Fund • Natural Resources Canada Zero Emissions Vehicle Infrastructure Program
P6	Create a Corporate Energy Task Force	ESCC	The Corporate Task Force was established shortly after plan approval and continues to meet as required.
B1	Continue Existing Building Retrofits	Asset Planning	Underway. A new study (GHG Reduction Pathway) and the revised Energy Management Plan will assist the City on progressing toward a net-zero target.
B2	Increase Efficiency through New Building Design	ROW & Development	Energy assessments completed for full building when additions or expansions are planned.
B3	Continue to Improve Operations, Maintenance, and Monitoring	Asset Planning	Asset Planning will be undertaking a pilot project for sub-metering our 10 highest users in 2024. The project will include the monitoring of live data.
B4	Integrate Supportive Infrastructure for Existing and New Buildings	Asset Planning, Right of Way and Development	Asset Planning's Corporate Energy Team is available to support the project teams involved in building new or retrofitting Corporate facilities.
F1	Continue to Implement the Actions Prescribed in the Greening the City Fleet Manual	Fleet	Continuing to implement the Greening the City Fleet Manual. Pilot EV program completed. Six new EVs have been added in 2019 with an additional six new PHEVs in 2020. Program to install 22 charging stations for fleet use is underway.

Strategy #	Strategy Title	Lead Department	Status
F2	Review the Efficient Driver Training Program	Fleet	Need to identify further opportunities to educate drivers.
F3	Advance Anti-Idling Initiatives and Technologies	Fleet	Continue to investigate the auto start-stop and timed idle shut-down options of vehicles. GPS is installed on most corporate units which allows tracking of vehicle idling time
F4	Review Renewable Natural Gas Opportunities	Fleet	Outstanding.
F5	Explore Benchmarking Opportunities	Fleet	MBN Canada benchmarking currently underway. CAMFM benchmarking currently underway. E3 fleet review looking to get rated in the future.
T1	Advance Vehicle Replacement	Transit Windsor	Transit Windsor is working towards replacing buses to its fleet. Two grant proposals have been submitted to replace 18 and 24 buses with energy efficient buses.
T2	Join the Canadian Urban Transit Research and Innovation Consortium (CUTRIC)	Transit Windsor	Completed
T3	Explore Alternative Propulsion Vehicles	Transit Windsor	Cutric is exploring opportunities on behalf of member municipalities.
T4	Continue Efficient Driver Training	Transit Windsor	Ongoing
W1	Develop Long-Term Water Conservation and Sanitary and Stormwater Master Plans	Engineering	The Sewer Coastal Flood Protection Master Plan approved in December 2020, which includes a number of strategies to reduce inflow and infiltration into the sewer system.
W2	Implement Water and Wastewater Treatment Plant Upgrades and Retrofits	Pollution Control	Completed
W3	Develop an Integrated Site Energy Plan	Pollution Control	Report was completed in 2020. Implementation has not yet commenced. Class Environmental Assessment (EA) process is underway to develop a long-term Bio-solids Management Plan for the municipal wastewater treatment plants. Public engagement is ongoing until February 2024
W4	Review Renewable Natural Gas Generation	Pollution Control	Preliminary review will be conducted under Strategy W3.
S1	Complete Street Light and Intersection Light Conversion to LED	Engineering / Traffic	Streetlights and traffic signals completed. Decorative and Parks lighting not completed.
R1	Explore Net Metering	Asset Planning	The City is implementing net-metering PV projects in 12 facilities.
R2	Continue to Invest in Rooftop Solar Photovoltaic	Asset Planning	See R1. Will continue to investigate possible PV projects in other facilities including Solar Thermal.
R3	Explore Parking Lot Solar Photovoltaic	Asset Planning	Virtual net metering is no longer permitted in Ontario. Any parking lot solar project will need to be tied into a facility.
G1	Conduct a Solid Waste Audit Program	Environmental Services	Small waste audits have been completed at a couple of arenas (WFCU, Capri Arena and Adie Knox). Placed on hold due to competing priorities. Goal to revisit in 2025.

Strategy #	Strategy Title	Lead Department	Status
G2	Establish a Corporate Waste Diversion Target and Strategy	Environmental Services	Environmental Services is working towards developing a baseline from the results in Strategy G1. Placed on hold due to competing priorities. Goal to revisit in 2025.
G3	Collaborate with Neighbouring Communities to Establish an Organics Program	Environmental Services	Dillon Consulting has been retained to identify a path forward for an organics program for the City only and a program, which includes the City, Tecumseh, LaSalle, and Amherstburg. Report was completed in 2020. Working with municipal partners in the County of Essex to develop regional organics program. A curbside food and organic waste program will begin in the City in 2025.



Subject: Windsor's Bird Friendly City Designation - City Wide

Reference:

Date to Council: September 27, 2023
Author: Barbara Lamoure
Environment and Sustainability Coordinator
519-255-6100 ext. 6108
blamoure@citywindsor.ca
Asset Planning
Report Date: 8/30/2023
Clerk's File #: EI2023

To: Mayor and Members of City Council

Recommendation:

1. THAT the report from the Environment Sustainability Coordinator dated August 30th, 2023 regarding Windsor' Bird Friendly City Status **BE RECEIVED** for information;
2. THAT City Council **SUPPORT** continuing efforts to be a Bird Friendly City;
3. THAT City Council **APPROVE** the creation of a Bird Friendly Working Team under the Environment and Climate Change Advisory Committee;
4. THAT Administration **BE DIRECTED** to provide an annual report card on activities related to the Bird Friendly City Status to Nature Canada.

Executive Summary:

N/A

Background:

In 2021, the Pelee Island Bird Observatory (PIBO) began efforts to make Windsor one of Canada's first Bird Friendly Cities. A designation bestowed by Nature Canada to communities working to make Cities Bird Friendly.

The Bird Friendly City Program Overview

The Bird Friendly City program demonstrates to residents how important birds are to the health and well-being of our communities. The certification provides a standard that reflects what a city needs to do to decrease bird mortality and, more generally, decrease biodiversity loss. In this sense, it can be considered a bird conservation strategy framework for a city.

“The standard is also a tool that allows for an independent assessment of how bird friendly a particular city is at any moment in time, assessing performance on key issues, establishing benchmarks and allowing for measurement of progress over time and comparison with other cities.” (Bird Friendly City Certification Rubric, Nature Canada).

The development of the Bird Friendly City program is in response to the knowledge that bird populations have decreased by more than 25% in North America over the past 50 years. Without action this trend will continue.

On May 5, 2022, a letter of support was submitted to Nature Canada from the Office of the Mayor in order to secure the City’s Bird Friendly designation, being one of the first 30 cities in Canada to be certified (Appendix A).

In the letter, several initiatives were proposed including to:

- Attain a Council resolution in support of Windsor becoming a Bird Friendly City
- Post information on Bird Friendly practices on the City of Windsor website
- Issue a proclamation in support of Migratory Bird Day held annually
- Support the selection of an Official Bird for Windsor
- Host an event for Migratory Bird Day. Note: PIBO hosted an event called the Urban Bird Challenge over Migratory Bird Day weekend in 2022 and 2023. Citizens were invited to compete in birding challenges. Ojibway Nature Guides provided birding hikes and programs during this event. PIBO desires to continue to have this event every year. The City of Windsor can continue providing support by scheduling nature hikes and programs at the Ojibway Nature Centre and offering rental space at the Nature Centre and/or Malden Park.

On June 16, 2022, the City of Windsor was certified as a Bird Friendly City. This certification came after work and partnerships, between City of Windsor staff, the Pelee Island Bird Observatory (PIBO) and Nature Canada.

In 2023, Citizens voted for an official bird in a poll organized by Tourism Windsor Essex. The Tufted Titmouse was chosen on April 12, 2023 as Windsor’s Official Bird.

“I am proud to see Windsor designated as a Bird Friendly City in partnership with Nature Canada and Pelee Island Bird Observatory, and excited to announce the Tufted Titmouse as our Official City Bird. As Windsor continues on the path to working with upper levels of government and stakeholders to create the Ojibway National Urban Park, it is more important than ever to highlight some of the animal and plant species, including the Tufted Titmouse, that make this area incredibly unique to this region, and

in Canada. Proclaiming Windsor as Bird Friendly City is a great boost for us, with economic and ecotourism potential, while positioning us alongside cities like Toronto, Vancouver, Hamilton, Guelph and London. I look forward to the positive impacts this initiative will continue to have in Windsor and across Essex County.”

- **Windsor Mayor Drew Dilkens**

To date, all of the above initiatives have been completed successfully, except for the attainment of a Council resolution, which is a recommendation of this Council report.

Discussion:

In order to maintain our status as a Bird Friendly City, there must be evidence of progress since the previous application. Nature Canada provides an evaluation rubric that outlines ways for municipalities to show their commitment. In 2023 PIBO completed the rubric for Nature Canada, but in future years, they would appreciate guidance from City administration on answering questions regarding City policies and actions.

The rubric grades actions taken by the municipality for a variety of objectives including: threat reduction, habitat protection, restoration, and climate resilience, and community outreach/education. A variety of solutions are suggested in the rubric such as building standards and outreach campaigns.

The scoring and evaluation rubric for Bird Friendly City Canada is attached as Appendix B for reference.

Next Steps

There already exist several City initiatives that align with the Bird Friendly City framework, including but not limited to:

- The 2023 Voucher program that helped sterilize 260 cats.
- Several city plans aimed to protect and increase the number of natural areas including the Environmental Master Plan and the Climate Change Adaptation Plan.
- Bird conservation efforts are spearheaded by staff at the Ojibway Nature Centre through a variety of educational programs and ecosystem monitoring efforts.
- The City already aims to reduce pesticide use, decrease plastic waste, calm roads, protect and expand the urban forest canopy. These efforts can be found in plans such as Walk Wheel Windsor, Windsor's Official Plan, and the proposed Urban Forest Management Plan.

Establishing a Bird Team

One of the mandatory criteria to maintain Bird-Friendly City status is the establishment of a Bird Team. The Bird Team is responsible to aid in advancing the objectives of Nature Canada's Bird Friendly City status.

The Bird team should be made up of diverse perspectives and may include: naturalists, birding groups, environmental organizations, municipal representatives, Indigenous communities, horticulture clubs, businesses, educational institutions, community groups, and residents.

The Bird Team's mission is to champion the implementation of bird friendly actions in their city to create safer urban environments for birds. The Bird Team will seek to complete its mission by: (1) addressing and mitigating key threats to birds in their city, (2) protecting and restoring natural habitat and increasing climate resiliency in their city, and (3) conducting community outreach and education.

The Bird Team will provide an annual report, completed jointly by City Administration and PIBO, on activities related to the Bird Friendly City Status, which include:

- Holding a World Migratory Bird Day event annually;
- Demonstrating that the municipality is taking action to protect bird populations, through the development of policies, programs and education measures.
- The team also provides evidence that the municipality is committed to Natural Area and Biodiversity protection in its Municipal Plans. And that the municipality has a climate change adaptation strategy with nature-based climate solutions. The City's Climate Change Adaptation Plan fulfills this requirement.
- The municipality must demonstrate an appropriate habitat management strategy with importance placed on the planting of native flora and efforts to increase the urban tree canopy. As mentioned above, the City is currently developing an Urban Forestry Management Plan and is actively working toward obtaining the Natural Urban Park designation for the Ojibway Complex.

Administration is recommending that the Bird Team Working Group be created under the Environment and Climate Change Advisory Committee, with the Environmental Sustainability Coordinator as the Working Group lead. Initially, a select group would be involved including: the Executive Director of the Pelee Island Bird Observatory, Ojibway Nature Centre Staff, and a representative from the ECC Advisory committee. Other individuals may be invited to join including University staff and students, local naturalists, indigenous community members, humane society staff and local environmental business owners.

The team would meet 4 times a year and focus on the initiatives described in Nature Canada's Bird Friendly Rubric.

The recommendations from the working group would be brought forward to the ECC Advisory Committee prior to being presented to the Environment, Transportation and Public Safety Standing Committee and City Council.

Risk Analysis:

There are no identified risks from participating in the Bird Friendly City Program.

Climate Change Risks

Climate Change Mitigation:

Biodiversity protection is a nature-based climate solution. Protecting birds and their habitats can reduce the negative effects of climate change by improving the functioning of ecosystems and increasing their carbon capture and storage potential.

Climate Change Adaptation:

Creating a safer urban environment for birds will increase the chances of their survival in a changing world. Protecting natural spaces for birds has a cascading effect on the local environment – from decreasing the urban heat island effect to, improving storm water absorption.

Financial Matters:

There are no financial costs associated with the participation in the Bird Friendly City Program. Existing internal resources from the Environmental Sustainability and Climate Change Team and the Ojibway Nature Centre will be sufficient to support the Bird Friendly City Program.

Consultations:

Worked closely with Suzanne Friemann, the Executive Director of the Pelee Island Bird Observatory to determine their level of contribution.

City Naturalist - Karen Alexander

Conclusion:

In order to maintain Bird Friendly City status, the rubric from Nature Canada must be completed annually and progress must be demonstrated. A World Migratory Bird Day event should be celebrated annually in May as a combined effort between PIBO and the City of Windsor with guided hikes and programming at the Ojibway Nature Centre and an Urban Birding Challenge created by PIBO. It is recommended that a Bird Friendly working group be created to campaign for the implementation of bird friendly actions.

Approvals:

Name	Title
Karina Richters	Supervisor, Environmental Sustainability & Climate Change
Rosa Maria Scalia	Financial Planning Administrator
Michael Dennis	Acting Senior Manager Asset Planning
Janice Guthrie	Commissioner of Corporate Services and Chief Financial Officer

Name	Title
Joe Mancina	Chief Administrative Officer

Notifications:

Name	Address	Email
Suzanne Friemann		Suzanne.friemann@pibo.ca

Appendices:

Letter from the Office of the Mayor in Support of the Bird Friendly City Program

Scoring and evaluation Rubric for Bird Friendly City Canada Version 2.0 2023

Nature Canada's Bird Team Structure Template



THE CITY OF WINDSOR

OFFICE OF THE MAYOR

DREW DILKENS, DBA
MAYOR

May 5, 2022

Pelee Island Bird Observatory
585 Stone Road
Pelee Island, ON N0R 1M0

Dear Windsor Bird Team and Nature Canada,

We have watched with great interest as the Windsor Bird Team, led by the Pelee Island Bird Observatory (PIBO) and comprised of local partners and volunteers from the community, have worked towards certification of Windsor as a Bird Friendly City.

We agree that healthy bird populations are of critical importance to biodiversity and ecosystem health. As proof of that commitment, the City is working hard towards an urban nature park - the Ojibway National Urban Park, an expansion of the existing Ojibway Prairie Complex - that would improve bird habitat in Windsor, among many other benefits.

Proclaiming Windsor as a Bird Friendly City would be a great boost for our city, as our region boasts many important birding areas that residents take pride in and visitors travel from around the world to experience, as well as economic benefits through added ecotourism potential. Lead cities like Toronto, Vancouver, Hamilton, Guelph, and London are already certified and many others are well on their way to certification this year. We want Windsor to be part of this environmentally enlightened group of Canadian cities.

We support the Windsor Bird Team's goal of making Windsor one of the first 30 cities to be certified in Canada. Many of the criteria for community engagement and education have already been met. To help further this initiative, we hope to:

- propose a Council resolution in support of Windsor becoming a Bird Friendly City
- include information on Bird Friendly practices on our City of Windsor website
- issue a proclamation in support of World Migratory Bird Day-May 14, 2022
- support the selection of an official City Bird for Windsor

We look forward to helping the Windsor Bird Team meet the highest standard of Nature Canada's accreditation program. We will be proud to bear the designation, **Bird Friendly City**.

Sincerely,



Drew Dilkens

Scoring and evaluation Rubric for Bird Friendly City Canada Version 2.0 2023

Criteria	Description	Indicators/evidence	Scoring	
Mandatory	Bird Team. Establish a Bird Team (standing committee) to drive the project forward. Try to ensure that your team represents different perspectives and has a liaison with the municipality	Provide a list of the Bird Team members, affiliations and contact information.		
PROOF				
Mandatory	Indigenous engagement. Provide evidence you have determined in which indigenous traditional territory (ies) your municipality occurs and that you are encouraging the participation and perspective of the local Indigenous community in the initiative.	Provide the name of the relevant Indigenous Nation (s) and report on the outcome of an invitation to participate in the initiative. Report on Progress an annual requirement		
PROOF				
Mandatory	Municipal support. Pass a council resolution nominating or supporting your municipality's efforts to be a Bird Friendly City OR a letter of support from a high ranking city official (latter only applies to entry level).	Willingness to pass council resolution within the first year of certification OR a letter of support for the certification program from a high ranking city official (mayor, CEO, etc). Intermediate and High status require a Council resolution.		
PROOF				
Mandatory	Annual Report. Once your municipality has been accorded Bird Friendly City status, the Bird Team must provide an annual report card on activities related to your Bird Friendly City status.	Provide an Annual Report card by your municipality's one-year certification anniversary.		
PROOF				

Scoring and evaluation Rubric for Bird Friendly City Canada Version 2.0 2023

Mandatory	Renewal of status. Bird Friendly City status will last two years, after which you must reapply. It is expected that the reapplying applicant can demonstrate progress and provide new evidence in many cases to support their new application.	Evidence of progress since the previous application. No evidence of change or progress will result in rejecting application or dropping a certification level.		
PROOF				
Mandatory	Program visibility. Include information about Bird Friendly City on the City website somewhere it can be easily found.	Provide a link and proof of posting.		
PROOF				
Mandatory	World Migratory Bird Day. Hold a World Migratory Bird Day event annually to celebrate birds in your municipality.	This is a mandatory action for this program. Cities must hold a Bird Day within the year of application and continue the event to maintain status. OPTIONAL: Provide proof of the event and Mayor’s or Council proclamation in support of Bird Day.		
PROOF				
		Generally all of the points are awarded contingent on evidence in support of the action. However, points can be rewarded even if the action has not been completed, as long as there is strong evidence that a process to implement or complete the action is underway.		
1.1 Threat Reduction	Cat predation of birds. Regulatory and educational measures taken to help control and reduce populations of cats roaming at large: a. Coordinated efforts directed at cat owners to reduce the number of owned cats outside such as educational campaigns, licensing and no-roam bylaws. (2) b. Within the municipality there is an active strategy to reduce	Proof of each action required. Two points per action. Generally if you can demonstrate some level of progress for each action, you will be awarded one point. Two points will be limited to comprehensive efforts to address that one issue. For example, for a. To get 2 points, you need to have a no-roam bylaw and demonstrate both enforcement of the bylaw and an educational campaign to reach the	6 points	

Scoring and evaluation Rubric for Bird Friendly City Canada Version 2.0 2023

	<p>populations of unowned (feral) cats and mitigate their threat to birds (e.g. removing feral colonies from areas of high bird importance). (2)</p> <p>c. The Bird Team and/ municipality either has, or is a partner in programs/ projects to estimate the number and/or distribution of cats outdoors so that progress on reducing the populations of outdoor cats can be tracked over time. (2)</p>	<p>public and make them aware of the bylaw. High level certification requires proof of a no-roam bylaw. For b, evidence of an active program to humanely reduce the number of unowned outdoor cats. 2 points will be awarded for broad, municipal-wide strategies and actions that demonstrate progress on reducing the population of unowned cats, and / or removing feral cats from important bird habitats where the present increased risk to birds. For c. proof of implementation of a cat counting/ estimating protocol to establish baseline numbers or to compare with baseline numbers will be awarded 2 points. Proof of intent to implement such a protocol gets one point. Data collected from shelters gets one point.</p>		
PROOF				
<p>1.2 Threat Reduction</p>	<p>Window collisions. Demonstrate that your municipality is taking measures to reduce window collisions by:</p> <p>a. Developing and implementing bird friendly design standards/CSA Bird Friendly Building Design standard for new construction (2)</p> <p>b. Assessing and mitigating risk to birds from existing and proposed municipal buildings (1)</p> <p>c. Informing and educating property owners and tenants of existing buildings (including home owners) of measures they can take to mitigate bird collision risk (1)</p> <p>d. Establishing a baseline and maintaining a database of the number of residences or buildings with treated windows in the city to demonstrate progress over time. (1)</p>	<p>Proof of each action required. Two points for a and one for b,c and d.</p> <p>a. refers to the municipality developing or adopting bird friendly or bird safe standards for new construction. One point is awarded if the standard is a guideline, two points if the standard is a requirement.</p> <p>*Note High-level communities the a municipality must have at least a guideline.</p> <p>b. One point if individuals or a group monitors window collisions, and/or assess risk by using BirdSafe, or a similar program.</p> <p>c. One point is awarded with evidence of educational campaigns focused on the broad public or specific neighbourhoods.</p> <p>d. Evidence of the database is provided.</p>	5 points	
PROOF				

Scoring and evaluation Rubric for Bird Friendly City Canada Version 2.0 2023

<p>1.3 Threat Reduction</p>	<p>Light pollution. a.Municipality has a light pollution reduction strategy and supports actions to reduce light pollution, particularly during migratory seasons. b. Light pollution mitigation standards for all new developments and/or retrofit program to replace street lamps with energy-efficient shielded fixtures c. Outreach campaign for residents and businesses to reduce external lighting that attracts nocturnal migrants</p>	<p>A. One point is given upon evidence of a strategy to reduce light pollution. B. One point given for either proof of mitigation standards (e.g. bylaw or guidance), and/ or proof of a retrofit program (e.g. retrofitting standard street lights with downward directional, wildlife-friendly street lighting (e.g. LED lighting that is 3000K or less). To attain “high level” certification, there must be evidence of both standards for new development and a retrofit program. C. One point for educational and outreach campaigns to reduce light attraction during migration periods such as the “lights out Toronto” campaigns of the past.</p>	<p>3 points</p>	
<p>PROOF</p>				
<p>1.4 Threat Reduction</p>	<p>Pesticides. Municipality has a policy to reduce or eliminate non-essential pesticide use that directly or indirectly harms birds, on public and private land that is implemented through local bylaws. This policy should include restrictions on pesticides used to control nuisance insects such as mosquitos (such as Bti) unless there is a demonstrated health risk (such as proof of West Nile in larvae).</p>	<p>Proof of the policy is provided. Examples of such policies would include a ban on cosmetic use of pesticides or the use of rodenticides when harm to bird populations has been demonstrated. 1 point for ban on cosmetic pesticide use. 1 point for ban on either rodenticides in areas where this is a concern for birds and/or strict controls on use of Bti. There is strong evidence that Bti reduces the available food for aerial insectivores like swallows and has a negative impact on their populations.</p>	<p>2 points</p>	
<p>PROOF</p>				
<p>1.5 Threat Reduction</p>	<p>Plastic waste reduction. Municipality has effective regulatory or non-regulatory measures that result in a reduction in the amount of plastic waste generated (e.g. banning of single use plastics).</p>	<p>Provide proof of regulatory (e.g. a municipal bylaw) and voluntary measures (e.g. a local business) such as a ban on single use plastics, shopping bags, plastic straws, etc.</p>	<p>1 point</p>	
<p>PROOF</p>				

Scoring and evaluation Rubric for Bird Friendly City Canada Version 2.0 2023

1.6 Threat Reduction	Collisions with vehicles. Measures in place to reduce bird collisions with vehicles such as lower speed limits when passing through important bird habitat, and measures to reduce the number of vehicles on the roads (such as a good public transit system and cycling infrastructure).	Provide proof of measures to protect birds from vehicle collisions. For example, at locations where a busy road cuts through a wildlife corridor, evidence of mitigation would include lower speed limits, signage about wildlife crossing, or proof of engineered solutions such as wildlife underpasses or overpasses.	1 point	
PROOF				
1.7 Threat Reduction	Disturbance of birds in their natural habitat. Municipality has policy and practices to prohibit or mitigate disturbance of birds from humans or their pets at natural areas or important bird habitat (e.g., leash bylaw, no-go zones certain times of year).	Provide proof of policy and examples of implementation such as signage at important bird habitat (e.g. a natural area, wetland or known migratory stopover site) or evidence of a bylaw in place.	1 point	
PROOF				
Scoring		Entry – 10 points from at least 3 categories Intermediate – 13 points from at least 5 categories including at least 2 categories worth 3 or more. High – 15 points or more. Must include at least 3 points in categories 1 and 2. Must have no roam bylaw (cats), and bird friendly building guidelines for high level.	19 points	
2.1 Habitat Protection, Restoration, and Climate Resiliency	Natural Area protection. Natural areas within the municipal boundaries are protected within the Municipal Plan and there is a commitment to increase this area. Plan distinguishes between natural areas and other types of municipal space such as recreational parks.	Provide proof of the policy. To maintain this criterion, the city must document the size of the area protected, and demonstrate a commitment to increase in this area over time. Any municipal plan that includes protection of natural area spaces will receive one point. Additional points are based on the evidence of implementation and whether there are ambitious targets to increase the number and size of the protected areas.	3 points	
PROOF				

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<p>2.2 Habitat Protection, Restoration, and Climate Resiliency</p>	<p>Biodiversity protection and recovery. Municipality has an official strategy to protect and restore the biological diversity in its parks and natural areas. The strategy can include measures such as: promoting connectivity between natural areas, buffering core biodiversity hotspots from harmful human activities, increasing the number of protected areas, and bird monitoring within municipal limits to assess the success of the strategy.</p>	<p>Provide proof of the strategy and its implementation.</p> <p>The strategy to protect and restore biological diversity can be part of the protected areas plan, or <i>vice versa</i>, but must specifically identify protection of biological diversity as a goal. One point is awarded for having an official strategy (adopted by Council). Two points if the strategy has targets and metrics for success and evidence of implementation. Three points for municipalities that meet the previous two tests as well as using monitoring to track changes to biodiversity and use results for adaptive management (e.g. bird monitoring in city owned natural areas).</p>	<p>3 points</p>
<p>PROOF</p>			
<p>2.3 Habitat Protection, Restoration, and Climate Resiliency</p>	<p>Municipality has a climate change adaptation strategy that includes specific measures including nature-based climate solutions. Examples of this include wetland creation to absorb and retain flood water, or planting trees to create shade and lower the surface air temperature.</p>	<p>Provide proof of the strategy and its implementation. One point if the City has an official strategy to address the impacts of climate change and reduce the municipality's climate impact . Additional points are awarded based on evidence of: implementation and ambitious targets.</p>	<p>3 points</p>
<p>PROOF</p>			
<p>2.4 Habitat Protection, Restoration, and Climate Resiliency</p>	<p>Municipality has a habitat management strategy based on ecological and climate considerations. These include: a. increasing the number of trees and area of the urban forest canopy;</p>	<p>Provide proof of implementation of the strategy and each action. One point per action. Evidence for a. includes inventories of trees and plans for increasing the numbers. For b. One point on snag retention based on evidence such as policy statements or</p>	<p>4 points</p>

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	<p>b. leaving snags standing in cases where public safety is not jeopardized;</p> <p>c. protecting trees on <u>private and public</u> lands; and</p> <p>d. prohibiting active vegetation management during breeding season on municipal lands, including forests, storm-water management facilities, and easements.</p>	<p>evidence within management plans for natural areas. C. refers to a tree bylaw that protects trees as a public value from private land owners cutting them down without permits. For d. a point is accorded if a city can demonstrate that its employees involved in active habitat management do not harm breeding birds or their habitat.</p>	
PROOF			
2.5 Habitat Protection, Restoration, and Climate Resiliency	<p>Municipality has an Important Bird and Biodiversity Area (IBA) within or adjacent to its boundaries. A local partnership promotes the protection and stewardship of this area.</p>	<p>One point if there is one or more nearby IBAs and the Bird Team can provide the names of the IBAs and at least one IBA caretaker group or individual.</p>	1 point
PROOF			
2.6 Habitat Protection, Restoration, and Climate Resiliency	<p>Municipality promotes the importance of planting native flora appropriate for the ecoregion on municipal lands, especially where new development is occurring through development and landscaping guidelines and standards in areas near natural features. Subdivision permits should include conditions protecting existing natural habitat and promote use of native vegetation and include measures to discourage illegal disposal of yard waste (a source of invasive exotic plants) in natural areas.</p>	<p>One point for evidence that the municipality promotes the use of site-appropriate native flora in landscaping for its own properties and for development landscaping standards for subdivision permits.</p>	1 point
PROOF			
2.7 Habitat Protection, Restoration,	<p>Demonstrate widespread community participation in initiatives to encourage native plant habitat that supports native birds and pollinators on private property,</p>	<p>One point if you provide evidence supporting “widespread community participation” in at least one national or international initiative or local program that encourages increasing</p>	1 point

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and Climate Resiliency	to increase the urban tree canopy on private land, and to support other “green infrastructure” initiatives to address climate change.	wildlife habitat on private land. This could include membership in a program like Bee City for example.	
PROOF			
2.8 Habitat Protection, Restoration, and Climate Resiliency	Bird Friendly City partner groups implement stewardship to increase or improve breeding or stopover habitat for bird conservation priority species from your Bird Conservation Region Plan. Example species include Species at Risk (e.g. Chimney Swift) and other aerial insectivores, Eastern Meadowlark and other grassland birds and shorebirds. Example actions include providing housing (e.g., maintained Purple Martin condos), and maintaining bird-friendly hay production.	One point is awarded to cities in which there are active stewardship recovery projects such as those suggested in the criterion description. One additional point if there are stewardship projects in place for two or more species.	2 points
PROOF			
Scoring		<p>Entry - 9 points from at least 3 categories</p> <p>Intermediate - 12 points from at least 4 categories</p> <p>High - 15 points from at least 6 categories including at least 1 point from categories 2.1, 2.2, 2.3 and 2.4.</p>	18 points
3.1 Community Outreach/ Education	A significant percentage of local schools and other educational organizations (e.g. Scouts Canada, Earth Rangers, 4-H) provide students with opportunities to connect with nature, enjoy birds and learn how to help them. Local school boards, conservation authority, or municipality, have facilities/staffing to support outdoor/environmental education, including opportunities to observe birds. At least one school does a specific bird-related program such as Christmas bird count for kids or curriculum from Keep cats safe and save bird lives. Educational programs must include specific	One point is awarded if there are local education facilities and institutions that offer public programming on nature appreciation and bird observation. One point if there are specific bird-related nature programs for recent arrivals to Canada, underprivileged, marginalized or racialized families. One point if at least one school or organization does a specific bird-related programs for children and youth, such as Christmas bird count for kids or curriculum from Keep cats safe and save bird lives.	3 points

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	elements designed to engage members of the public who could be considered underprivileged families and groups, racialized youth and recent arrivals to Canada.		
PROOF			
3.2 Community Outreach/ Education	College and University campuses have adopted practices that actively reduce threats to birds or establish habitat that benefits birds. Implementation of practices should include or be driven by student committees or groups.	One point is awarded based on evidence that institutions that have policies and practices to benefit birds including names of institutions, the programs that they participate in (e.g BirdSafe, Bee City), as well as an example of a recent action and evidence of student involvement.	1 point
PROOF			
3.3 Community Outreach/ Education	Bird Team partners (including Municipality) provide public access to resources (web links, brochures etc.) that encourage and inform the public of: 1) the benefit to birds from native plant gardening or establishment of natural habitat patches on their property in support of birds and/or pollinators (e.g. backyard habitat program), 2) best practices in feeding birds that mitigate risks from feeding (e.g. predation at feeder, contamination from disease).	One point if you can provide evidence of the digital or paper resources, as well as evidence of public interest and knowledge of them (e.g. social media activity).	1 point
PROOF			
3.4 Community Outreach/ Education	Municipality and Bird Friendly City partners install demonstrations or displays in public areas that educate citizens on the benefits of bird friendly actions and encourage engagement (benefits of dark sky lighting, window modifications etc.)	One point based on proof of installations (e.g. photographic evidence, or news stories.)	1 point

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	PROOF		
3.5 Community Outreach/ Education	There is at least one birding location within your city or town that has infrastructure to facilitate the observation and appreciation of birds (e.g. signs, panels, observation tower, and trails). This facility is publicly accessible for people without a car (serviced by public transit and/or bicycle and pedestrian trails. Digital information on birding areas should be easily available.	One point based on evidence of a local birding area that is publicly accessible, a brief description of the infrastructures (e.g. trails, observation tower), and how the area can be accessed by someone without a car.	1 point
PROOF			
3.6 Community Outreach/ Education	A Bird Team partner periodically publishes a “Bird checklist” for your city or town. This checklist should be easily available in digital form on the Internet. Alternatively, there are eBird hotspots in your City.	One point based on proof that a local bird checklist exists in a published form or there are eBird hotspots in your city.	1 point
PROOF			
3.7 Community Outreach/ Education	Businesses in your area promote bird friendly practices (e.g. sell or offer bird friendly coffee, no single use plastics, treat their windows with feather-friendly markers, etc.). These businesses should be recognized on partner websites.	To receive a point, you must name the businesses and describe what bird-friendly practices they have. These practices must include both bird-friendly products that are sold, and demonstrated bird-friendly business practices (e.g. window treatments, low carbon footprint, plastic bag policy, etc). For cities under 100,000 residents, there must be at least 2 businesses. For cities from 100,000 to 500,000 there must be at least 3 businesses. For cities between 500,000 and 1,000,000, there must be at least 4 businesses. For cities over 1 million, there must be 5 or more businesses.	1 point
PROOF			

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3.8 Community Outreach/ Education	You have a “City Bird” species that was selected through a public engagement process.	For one point, you must provide proof that a campaign to select a “City Bird” is underway or has been successfully completed alongside evidence of community engagement. For two points, provide the name of the “City Bird” species, and proof that it is officially the “City Bird through council support/recognition.”.	2 points
3.9 Community Outreach/ Education	There are active community science programs to monitor birds in your municipality including Christmas Bird Count, Swift Night Out, and Marsh Monitoring, Project FeederWatch, the Great Backyard Bird Count, and Global Bird Rescue, which monitor birds on areas that include public land. Public participation in these programs is promoted on local media. Demonstrate efforts to engage members of the public could be considered underprivileged, racialized or recent arrivals to Canada.	To receive one point, provide a list of bird-related citizen science programs in your city and describe the level of public interest and engagement of target audiences. A second point is awarded in communities where more than three of these programs are practiced and you can demonstrate widespread community involvement.	2 points.
Scoring		Entry - 7 points from at least 3 categories Intermediate - 9 points from at least 5 categories. High – 11 points from at least 7 categories.	13 points
How your status is determined		Status achieved equals the LOWEST level of all three scored categories. I.E. if a city scores 12 in category 1, 18 in category 2 and 13 in category 3, they would achieve ENTRY level certification based on the score of 12 in category 1.	Total possible points = 50



Bird Team Structure Template - Terms of Reference

This document aims to provide terms of reference template for Bird Teams working towards helping their city become bird friendly as part of the Bird Friendly City initiative. Alterations of the team structure will be shared with Nature Canada, and can be redesigned with all party agreement at any time.

Mandate:

The Bird Team's mission is to campaign for implementing bird friendly actions in their respective city(ies) to create safer urban environments for birds. The Bird Team will seek to complete its mission by: (1) addressing and mitigating key threats to birds in their city, (2) protecting and restoring natural habitat and increasing climate resiliency in their city, and (3) conducting community outreach and education.

Principles:

- A shared responsibility
- Safe, inclusive and accessible environment for discussion and decision-making
- Proactive, innovative and goal-orientated
- Building relationships to achieve mandate
- Engaging the public to drive political action
- Bringing forward meaningful change that includes multiple levels of society (individual, civil society, institutional, business and the municipal government)
- Working towards a city that balances nature, wildlife and people

Membership:

- Membership in a Bird Team can consist of, but is not limited to naturalist groups, birding clubs, environmental organizations, municipal representatives, Indigenous groups, businesses, educational institutions, researchers, and private citizens.
- Membership in a Bird Team is strictly voluntary.
- A Bird Team should consider electing:
 - An annual Chair; or a rotational system for a chair position;
 - a representative to liaise with Nature Canada;



- a representative to liaise with the municipality (if no municipal representative is on the Bird Team);
- A communications lead
- A volunteer recruitment lead.

Member Requirements:

- A strong interest in working towards helping their city become bird friendly;
- Residence or have a working connection to your city.

Roles and Responsibilities:

ALL MEMBERS WILL:

- Work towards implementing the mandate and the principles;
- Ensure a safe and inclusive working environment;
- Participate in the development and implementation of their city's Bird Friendly campaign strategy;
- Maintain regular communications with each other, and Nature Canada.

CHAIR WILL:

- Call Bird Team meetings to discuss and strategize ongoing efforts;
- Develop agendas in coordination with liaisons;
- Assist with recruitment of new members.

LIAISON (NATURE CANADA) WILL:

- Accurately represent the local Bird Team and provide updates to Nature Canada's organizer;
- Be the communicating bridge between the local Bird Team and Nature Canada;
- Highlight important considerations and context of the Bird Team's efforts;
- Assist with identifying new members.

LIAISON (MUNICIPAL) WILL:

- Be the communicating bridge between the local Bird Team and the municipality;
- Highlight important considerations and context of the Bird Team's efforts;
- Assist with identifying champions and allies on the municipality;
- Recruit municipal representatives on the Bird Team.



Decision-Making Process:

- Within the Bird Team, each member has equal voice and power to make and influence decisions;
- Make decisions by arriving a consensus as much as possible;
- Nature Canada's representative can provide support and consultation (if need be).
- The end goal (creating a bird friendly city that protects bird populations) should be considered in every decision made by the Bird Team.

Meeting Frequency:

- The members must establish the frequency of meetings; however, the Bird Team must officially meet at least 4 times a year to ensure all is going according to plan.

Reporting:

- Liaison (Nature Canada) will provide Nature Canada with, at minimum, quarterly reports on Bird Team's efforts (can be done verbally).
- Bird Team will provide an in-depth annual report, which includes information on status of Bird Team, reporting on planned and current actions, and next steps.
- If funding is provided from Nature Canada, then annual report must also include funding results.

Subject: Kildare Avenue (Richmond Street to Ottawa Street), Partington Avenue (Columbia Court to Labelle Street) and Lone Pine Street (Provincial Road to Maple Leaf Crescent) Traffic Calming – Wards 4, 10 & 9

Reference:

Date to Council: 9/27/2023
Author: Clare Amicarelli
Transportation Planning Coordinator
519-255-6100 ext 6463
camicarelli@citywindsor.ca

Public Works - Operations
Report Date: 9/7/2023
Clerk's File #: ST/13863

To: Mayor and Members of City Council

Recommendation:

THAT Administration **BE DIRECTED** to install speed humps on Kildare Avenue between Richmond Street and Ottawa Street; and,

THAT Administration **BE DIRECTED** to install speed humps on Partington Avenue between Columbia Court and Labelle Street; and,

THAT Administration **BE DIRECTED** to install speed humps on Lone Pine Street between Provincial Road and Maple Leaf Crescent; and,

THAT City Council **SUPPORT** an expenditure in the amount of \$105,000 which will be charged to the Traffic Calming Initiatives project, OPS-021-07; and,

THAT the CFO/City Treasurer **BE DIRECTED** to consider the \$105,000 a pre-commitment of funding allocated in principle in 2026 as part of the 2024 10-year capital plan and allow the funds to be made available for immediate use; and,

THAT a budget issue with regards to annual maintenance of \$8,030 **BE CONSIDERED** as part of the 2024 operating budget development process as a priority item based upon approval for the installation of the speed humps noted.

Executive Summary:

N/A.

Background:

Traffic Calming Policy and Local Road Speed Hump Procedure

The City of Windsor Traffic Calming Policy was first adopted in 2005. The Policy underwent major updates in 2015 and 2021.

When the 2021 Traffic Calming Policy was brought before Council at its April 19, 2021 meeting, in addition to adopting the proposed policy, Council directed that Administration report back with additional policy measures related to traffic calming (CR168/2021):

That administration BE DIRECTED to report back to Council with a policy, including a rollout plan, that would allow residents to request speed bumps if the majority in the subject block wish to see that happen.

The requested report back was brought before Council on May 9, 2022. The report provided a new Local Road Speed Hump Procedure as well as related minor amendments to the Traffic Calming Policy in order to implement the new procedure. Council adopted this new Procedure.

Report S 76/2022, "Local Road Speed Humps Program - Initial Set of Locations" came before Council at its September 6, 2022 meeting. In response to this report, Council resolved as follows:

Decision Number: CR374/2022 ETPS 907

That Administration BE DIRECTED to install speed humps and associated signs and pavement markings on Dandurand Avenue between Piazza Street and Northwood Street, and Partington Ave. between College Avenue to Tecumseh Road; and,

That Administration BE DIRECTED to include the seven additional signatures that were provided in the addendum (attached) to approve speed humps for Partington Avenue; and further,

That Administration BE REQUESTED to report back to a future meeting of Council to provide a review of the Speed Hump Policy and options to approve the same.

The speed hump installations directed by this resolution are currently being installed. The requested review of the Local Road Speed Hump Procedure will come forward with the next update to the Traffic Calming Policy.

Report C 118/2023, “Avondale Avenue (West Grand to Norfolk), Beals Avenue (Dougall to Huntington) and Academy (Northwood Street to North Service Road West) Traffic Calming – Wards 1, 9 & 10” came before Council at its August 8, 2023 meeting. In response to this report, Council resolved as follows:

Decision Number: CR318/2023

That Administration BE DIRECTED to install speed humps on Avondale Avenue between West Grand Boulevard and Norfolk Street; and,

That Administration BE DIRECTED to install speed humps on Beals Street East and Beals Street West between Dougall Avenue and Huntington Avenue; and,

That Administration BE DIRECTED to install speed humps on Academy Drive between Northwood Street and North Service Road West; and,

That funding from each of the above noted installations come from Traffic Calming capital budget project 7069022; and,

That a budget issue with regards to annual maintenance of \$5,420 be presented as part of the 2024 operating budget development process and be considered a priority item based upon approval for the installations; and further,

That Administration BE DIRECTED to continue, on a trial basis collecting data and getting the required feedback moving forward; and that this information BE REVIEWED and if warranted used to determine next steps with traffic calming initiatives on similar streets.

Discussion:

Kildare Road

A resident request for traffic calming on Kildare Road between Richmond Street and Ottawa Street was received in February 2023. The street was reviewed and confirmed to be eligible for speed humps under the Local Road Speed Hump Program. A resident survey to determine neighbourhood support was carried out from June 2, 2023 to July 2, 2023. Residents were able to vote online or via 311. The results of the survey are summarized in Table 1.

Table 1: Traffic Calming Approval Survey Results – Kildare Road

Criteria	Required	Actual		Result
Level of Support	50% of households or commercial properties	Yes	58% (34 households)	Pass

	voting "yes" (30 of 59 households)	No	3% (2 households)	
		Did Not Vote	39% (23 households)	

Some residents provided additional comments when voting. A summary of comments received are as follows:

- From study area residents voting in support of speed humps:
 - Lots of speeding traffic on the street
 - Kildare is used as a cut-through route
- From study area residents voting against speed humps:
 - Other traffic calming measures should be considered instead

In addition to votes by residents in the study area, 19 responses were received from addresses outside the study area. Of these responses not counted toward the approval threshold, the breakdown is as follows:

- 79% (15 responses) supported speed humps on Kildare Road
- 10.5% (2 responses) opposed speed humps on Kildare Road
- 10.5% (2 responses) provided no response to speed humps on Kildare Road

Some additional comments received from these out-of-area responses are as follows:

- Would like to see speed limits of 40km/h within the area

Partington Avenue

A resident request for traffic calming on Partington Avenue between Columbia Court and Labelle Street was received in August 2022. The street was reviewed and confirmed to be eligible for speed humps under the Local Road Speed Hump Program. A resident survey to determine neighbourhood support was carried out from June 16, 2023 to July 16, 2023. Residents were able to vote online or via 311. The results of the survey are summarized in Table 2.

Table 2: Traffic Calming Approval Survey Results – Partington Avenue

Criteria	Required	Actual		Result
Level of Support	50% of households or commercial properties voting “yes” (8 of 16 households)	Yes	63% (10 households)	Pass
		No	6% (1 households)	
		Did Not Vote	31% (5 households)	

Some residents provided additional comments when voting. A summary of comments received are as follows:

- From study area residents voting in support of speed humps:
 - Vehicles drive too fast in the neighbourhood
 - Speeding vehicles in the neighbourhood are a hazard for pedestrians and pets
 - School and park nearby so this area needs to be made safe for children
- From study area residents voting against speed humps:
 - Speed humps are not necessary
 - Speed humps will not deter vehicles from parking where there are no stopping signs

In addition to votes by residents in the study area, 4 responses were received from addresses outside the study area. Of these responses not counted toward the approval threshold, the breakdown is as follows:

- 25% (1 responses) supported speed humps on Partington Avenue
- 75% (3 responses) opposed speed humps on Partington Avenue

Some additional comments received from these out-of-area responses are as follows:

- A request to increase parking enforcement during school hours
- A request to add bollards on Partington Avenue similar to Roseland Public School on Cabana

The Traffic Calming Policy notes that speed humps should only be installed on roads with curbs however the policy is not specific to the type of curb. With standard curb and gutter, vehicles have no way to drive around the hump and therefore are forced to travel over it, hence serving the purpose of slowing down the vehicle. With a mountable curb, the concern raised by Administration is that vehicles may mount the curb and drive on the right-of-way and/or the sidewalk in order to avoid slowing down. In order to reduce this risk, Administration is recommending to use this section of Partington Avenue as a trial location. Flexible bollards will be installed on the right corner of the approach side of humps in order to keep vehicles on the road. Unfortunately bollards are required to be removed during the winter months and therefore during this time, vehicles may attempt to drive on the curb. It is intended that the trial be in place for 1 year from the time of installation of the humps and the measurement of evaluation will be the number of complaints about vehicle trajectory and evaluation of any damage in the ROW. No other streets with mountable curbs will be eligible for speed humps, pending the results of the trial.

Lone Pine Street

A resident request for traffic calming on Lone Pine Street between Provincial Road and Maple Leaf Crescent was received in July 2022. The street was reviewed and confirmed to be eligible for speed humps under the Local Road Speed Hump Program. A resident survey to determine neighbourhood support was carried out from June 30, 2023 to July 30, 2023. Residents were able to vote online or via 311. The results of the survey are summarized in Table 3.

Table 3: Traffic Calming Approval Survey Results – Lone Pine Street

Criteria	Required	Actual		Result
Level of Support	50% of households or commercial properties voting “yes” (4 of 8 households)	Yes	50% (4 households)	Pass
		No	12.5% (1 households)	
		Did Not Vote	37.5% (3 households)	

Some residents provided additional comments when voting. A summary of comments received are as follows:

- From study area residents voting in support of speed humps:
 - Lots of speeding traffic on the street

In addition to votes by residents in the study area, 17 responses were received from addresses outside the study area. Of these responses not counted toward the approval threshold, the breakdown is as follows:

- 76% (13 responses) supported speed humps on Lone Pine
- 24% (4 responses) opposed speed humps on Lone Pine

Some additional comments received from these out-of-area responses are as follows:

- Would like to see speed humps near Maple Leaf Park
- Would like to see a traffic light at the intersection of Lone Pine St and Provincial Road.

Due to timing of this report and subsequent approvals, these humps will be installed in the 2024 construction season.

Risk Analysis:

No critical or significant risks have been identified with the report recommendations.

Risks related to the Partington installation are noted above.

Construction costs for speed humps are subject to normal price variability for materials and tender costs. These financial risks are mitigated by following the procedures in the Purchasing By-law and normal project management practices.

Climate Change Risks

Climate Change Mitigation:

N/A

Climate Change Adaptation:

N/A

Financial Matters:

Tables 4 through 6 below will detail the specific costs related to each speed hump installation by location. Table 7 below will summarize the costs of all installations and proposed funding sources for the initial capital costs of installation and the ongoing annual operating cost to maintain the speed humps.

Kildare Road

The estimated cost to install speed humps and related signage on Kildare Road between Richmond Street and Ottawa Street is summarized in Table 4.

Table 4: Cost Estimate – Kildare Road Traffic Calming

Item	Unit	Cost per Unit		Quantity	Total Cost	
		Initial Installation	Annual Maintenance		Initial Installation	Annual Maintenance
Speed humps and associated signs and pavement markings	Each	\$10,250	\$770	5	\$51,250	\$3,850
“Traffic Calmed Neighbourhood” Signs	Each	\$350	\$5	2	\$240	\$10
Grand Total – Kildare Road					\$51,490	\$3,860 per year

Partington Avenue

The estimated cost to install speed humps and related signage on Partington Avenue between Columbia Court and Labelle Street is summarized in Table 5.

Table 5: Cost Estimate – Partington Avenue Traffic Calming

Item	Unit	Cost per Unit		Quantity	Total Cost	
		Initial Installation	Annual Maintenance		Initial Installation	Annual Maintenance
Speed humps and associated signs and pavement markings	Each	\$10,250	\$770	3	\$30,750	\$2,310
“Traffic Calmed Neighbourhood” Signs	Each	\$350	\$5	2	\$700	\$10
Flexible Bollards	Each	\$253	\$150	2	\$506	\$300
Grand Total – Partington Avenue					\$31,956	\$2,620 per year

Lone Pine Street

The estimated cost to install speed humps and related signage on Lone Pine Street between Provincial Road and Maple Leaf Crescent is summarized in Table 6.

Table 6: Cost Estimate – Lone Pine Street Traffic Calming

Item	Unit	Cost per Unit		Quantity	Total Cost	
		Initial Installation	Annual Maintenance		Initial Installation	Annual Maintenance
Speed humps and associated signs and pavement markings	Each	\$10,250	\$770	2	\$20,500	\$1,540
“Traffic Calmed Neighbourhood” Signs	Each	\$350	\$5	2	\$700	\$10
Grand Total – Lone Pine Street					\$21,200	\$1,550 per year

Table 7: Summary of Cost Estimates and Funding

Summary of Costs:				
	Initial Installation	Annual Maintenance	Funding Source	
Kildare Road	\$ 51,490	\$ 3,860	Installation - Funding Pre-Commitment - Capital Project 7069022 Maintenance - Traffic Operations Operating Budget	
Partington Avenue	\$ 31,956	\$ 2,620	Installation - Funding Pre-Commitment - Capital Project 7069022 Maintenance - Traffic Operations Operating Budget	
Lone Pine Street	\$ 21,200	\$ 1,550	Installation - Funding Pre-Commitment - Capital Project 7069022 Maintenance - Traffic Operations Operating Budget	
Total Cost	\$ 104,646	\$ 8,030		

The Traffic Calming capital budget project 7069022 was established to track and record expenditures related to the initial installation of the speed humps at all locations; however, there are currently insufficient funds available in the project.

The 2023 10-year capital funding plan currently includes funding for Traffic Calming as follows:

2023 \$0
 2024 \$0
 2025 \$0
 2026 \$400,000

2027	\$0
2028	\$100,000
2029	\$0
2030	\$0
2031	\$1,140,000
2032	\$281,000

Funding for the installation of the speed bumps identified in this report will require the use of \$105,000 from the \$400,000 approved in principal in 2026. By doing so, the project will incur financing charges over the next 2 years estimated at \$12,000.

The ongoing annual maintenance cost is estimated at \$8,030 per year. Maintenance costs for initiatives such as this project have not been previously identified within operating budgets and therefore this cost may not be able to be accommodated in the existing Signs and Markings operating budget. Should Council approve the traffic calming plan, a budget increase will be brought forward as part of the 2024 operating budget submission as a priority matter.

Consultations:

Operations: Phong Nguy, Manager of Contracts, Field Services and Maintenance

Traffic Operations: Ian Day, (A) Senior Manager of Traffic Operations and Parking Services

Human Resources: Gayle Jones, Diversity and Accessibility Officer

Windsor Fire Rescue Services: Mike Coste, Chief Fire Prevention Officer

Windsor Police Service: Barry Horrobin, Director of Planning and Physical Resources

Transit Windsor: Jason Scott, Manager of Transit Planning

Finance: Cindy Becker, Financial Planning Administrator – Public Works

Mike Dennis, Manager, Strategic Capital Budget Development & Control

Public Consultation – Kildare Road

The resident approval survey was carried out from June 2 to July 2, 2023. Methods used for resident notification and outreach were as follows:

- Mailout to all property owners and tenants in the project area, attached as Appendix A (May 31, 2022)
- A follow-up mailout to property owners and tenants that had not yet voted (June 21, 2022)
- Social media posts (June 2, 2022)

- Notification signs posted in the survey area

Public Consultation – Partington Avenue

The resident approval survey was carried out from June 16 to July 16, 2023. Methods used for resident notification and outreach were as follows:

- Mailout to all property owners and tenants in the project area, attached as Appendix B (June 14, 2022)
- A follow-up mailout to property owners and tenants that had not yet voted (July 5, 2022)
- Social media posts (June 16, 2022)
- Notification signs posted in the survey area

Public Consultation – Lone Pine Street

The resident approval survey was carried out from June 30 to July 30, 2023. Methods used for resident notification and outreach were as follows:

- Mailout to all property owners and tenants in the project area, attached as Appendix C (June 28, 2023)
- A follow-up mailout to property owners and tenants that had not yet voted (July 19, 2022)
- Social media posts (June 30, 2022)

Notification signs posted in the survey area

Conclusion:

Having met the criteria for speed humps in the Local Road Speed Humps Procedure under the Traffic Calming Policy, Administration recommends installing speed humps on Kildare Road between Richmond Street and Ottawa Street, on Partington Avenue between Columbia Court and Labelle Street and on Lone Pine Street between Provincial Road and Maple Leaf Crescent.

Planning Act Matters:

N/A

Approvals:

Name	Title
Cindy Becker	Financial Planning Administrator
Shawna Boakes	Executive Director of Operations

Name	Title
Chris Nepszy	Commissioner, Infrastructure Services and City Engineer
Janice Guthrie	Commissioner, Corporate Services and Chief Financial Officer
Joe Mancina	Chief Administrative Officer

Notifications:

Name	Address	Email
<i>Area residents and project notification list – Kildare Road (list provided to Clerks)</i>		
<i>Area residents and project notification list – Partington Avenue (list provided to Clerks)</i>		
<i>Area residents and project notification list – Lone Pine Street (list provided to Clerks)</i>		

Appendices: