

## **Proposed Building Emissions Performance Reporting By-Law**

**Date:** November 16, 2023

**To:** Infrastructure and Environment Committee

**From:** Executive Director, Environment & Climate Division

**Wards:** All

### **SUMMARY**

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Existing buildings are Toronto's largest source of greenhouse gas (GHG) emissions, accounting for approximately 58% of total community-wide emissions. The City's Net Zero Existing Buildings Strategy focuses on reducing emissions from existing buildings with the ultimate target of achieving net zero emissions by 2040, and an interim target of cutting emissions nearly in half by 2030, relative to 2008 levels. Achieving these ambitious targets will require the City to take nine key actions identified in the Net Zero Existing Buildings Strategy.

Mandatory emissions performance standards for all existing buildings that will require improved emissions performance over time is the most critical of these actions to drive transformation. In the *Updated Long-Term Financial Plan (LTFP)* (2023.EX7.1), staff recommended the expedited introduction of a mandatory emissions performance standards by-law which is necessary to drive the scale and depth of emissions reductions in the buildings sector, including residential, commercial, industrial and institutional buildings in the City of Toronto. Introduction of these requirements would establish the City of Toronto as a leader in its commitment to reducing building emissions and provide certainty to the development and retrofit sectors on actions needed to support emission reduction. A critical step towards enabling the establishment of emissions performance standards for existing buildings is to require annual emissions performance reporting and public disclosure to improve property owners' and the City's understanding of the performance of Toronto's homes and buildings. Ontario was the first jurisdiction in Canada to introduce energy benchmarking regulations, developed in consultation with Toronto and actualized through the provincial Energy and Water Reporting and Benchmarking (EWRB) program. EWRB currently requires all buildings above 50,000 square feet to report their performance data on an annual basis.

This report proposes that City Council adopt a by-law that would require owners of large and medium-sized buildings to report building energy and water use data to the City annually (the "Building Emissions Performance Reporting" By-law or the "By-Law" as set out in Attachment 1). Energy and water use both have greenhouse gas (GHG)

impacts associated with them. The energy and water use information collected under the By-law will allow the City to calculate the greenhouse gas (GHG) impacts associated with each property and building.

The Building Emissions Performance Reporting By-law would apply to all buildings 929 square meters (~10,000 square feet) and larger, which would predominantly include buildings from the commercial, multi-residential, institutional, and industrial sectors. This size threshold is based on the total gross floor area for the building, including all energy and water used on the premises, regardless if metered in bulk or separately for uses or spaces within the building. For example, a small office building with about 30 to 60 employees or a small multi-residential building with 15 average-sized suites could have a gross floor area close to this lower limit. Coverage of all buildings larger than this lower size threshold aligns with the direction adopted with the 2021 Net Zero Existing Buildings Strategy (2021.IE26.1) and is informed by feedback received during stakeholder engagement.

The By-law would phase-in compliance with buildings that have a gross floor area equal to or greater than 4,645 square meters (~50,000 square feet) being required to report as of the first business day of July 2024 (i.e. July 2, 2024) (these buildings are already required to report under EWRB) and those with gross floor area equal to or greater than 929 square meters (~10,000 square feet) would begin reporting as of the first business day in July 2025 (i.e. July 2, 2025). This 2025 reporting deadline for the smaller buildings (929 to 4,645 square meters in size) will give Environment & Climate Division time to work with utilities to ensure a streamlined reporting process, which is especially important for owners of properties with smaller buildings.

The impacts of the proposed By-law on property owners are non-monetary in nature. The cost associated with reporting stems from the time required to gather energy and water data and enter it into the City's reporting tool. This is a relatively small time-commitment, estimated at a few hours of time annually, per building. A potential side effect of the Emissions Performance Reporting By-law could yield a possible energy cost savings by encouraging property owners to more closely track and better manage their buildings' energy and water use.

Requiring property owners to report the energy and emissions performance of their buildings is critical to achieving the City's net zero by 2040 GHG emissions reduction target, both due to the GHG reduction benefits of reporting itself, and to reporting's role as a key enabling action that is needed to implement other critical GHG-reduction actions called for in the Net Zero Existing Buildings Strategy – notably, the establishment of emissions performance standards for existing buildings.

Reporting energy and water use enables property owners to track their buildings' energy, water and emissions performance and allows them to compare their buildings' performance over time, to other buildings in their portfolio, or to other buildings in Toronto. If the old management adage "you can't manage what you don't measure" is true, then tracking, benchmarking, and reporting energy use is the first step towards better managing energy use and energy operating costs, and to improving building efficiency and energy and emissions performance.

Requiring property owners to report the energy and emissions performance of their buildings is also critical to enabling the City to implement subsequent key actions called for in the Net Zero Existing Buildings Strategy. Receiving annual building GHG emission performance data will enable the City to design future by-laws around these subsequent key actions so that they reflect an ambitious yet realistic pace for property owners to achieve the 2040 net zero emissions target. The most notable key action in this regard is establishing emissions performance standards for existing buildings, which will set limits on the amount of GHG emissions buildings can emit. The intent of establishing an emissions performance standard is to encourage building owners to make improvements to their buildings so that Toronto can achieve community-wide GHG emissions reductions which provide a benefit to all Torontonians. Environment & Climate Division staff plan to present a proposed bylaw that would require property owners to meet set emissions performance standards for their buildings (the “Building Emissions Performance Standards By-law”) to Council in 2024 as directed by Council in the LTFP.

## **RECOMMENDATIONS**

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The Executive Director, Environment & Climate, recommends that:

1. City Council adopt a new City of Toronto Municipal Code Chapter 367, Building Emissions Performance, substantially in accordance with the draft chapter attached as Attachment 1 to the report (November 16, 2023), with the chapter coming into force on January 1, 2024.
2. City Council authorize the City Solicitor, in consultation with the Executive Director, Environment & Climate Division, to make such clarification, minor modifications, amendments to the City of Toronto Municipal Code Chapter 367, Building Emissions Performance as may be required to give effect to City Council’s decision.
3. City Council direct the Executive Director, Environment & Climate Division to apply to the Ontario Court of Justice for any new set fines or to review and increase, as required, the current set fines.
4. City Council direct the General Manager, Toronto Water, in consultation with the Director, Revenue Services and the Chief Technology Officer, Technology Services, to prioritize the project to automate the aggregation of whole-building water consumption data for properties with buildings with gross floor area equal to or greater than 929 square meters (~10,000 square feet), and to enable the direct upload of whole-building water consumption data to Energy Star Portfolio Manager by Q1 2025.
5. City Council request the Mayor to consider financial impacts of the City of Toronto Municipal Code Chapter 367, Building Emissions Performance in proposing the 2024 Budget for Environment & Climate and Toronto Water, in consultation with the Chief Financial Officer and Treasurer, the Executive

Director, Environment & Climate Division, and the General Manager, Toronto Water.

6. City Council approves the Building Emissions Performance – Public Disclosure of Report Information Policy set out in Attachment 3 to the report (November 16, 2023) from the Executive Director, Environment & Climate Division which outlines the City of Toronto’s public disclosure policy for information collected under City of Toronto Municipal Code Chapter 367, Building Emissions Performance to be effective January 1, 2024.
7. City Council direct the Executive Director, Environment & Climate Division to report back to Council in 2024 on the potential of amending the Building Emissions Performance – Public Disclosure of Report Information Policy to include the public disclosure of non-anonymous data sets.
8. City Council direct the Executive Director, Environment & Climate Division to report back to Council in 2024 on the implementation of City of Toronto Municipal Code 367, Building Emissions Performance, including:
  - a. status of work with utility providers to enable automatic uploading of information into Energy Star Portfolio Manager reporting tool;
  - b. the policy and procedure developed for reporting exemptions and extensions granted by the Executive Director, Environment & Climate Division to property owners; and
  - c. the applying of new set fines to the Ontario Court of Justice.

## FINANCIAL IMPACT

There will be financial impacts for the implementation of the proposed Building Emissions Performance Reporting By-law effective January 1, 2024, which will require capital costs of \$0.480 million for a technology solution to automate the aggregation of whole-building water consumption data for properties with buildings across the City. In addition, additional staffing resources will be required to manage the relationship with the Help Centre and to administer the program and reporting requirements under the By-law, with an operating impact of \$0.681 million starting in 2024, as detailed below in Table 1.

**Table 1: Operating Impacts and Ongoing Costs by Year/Division**

Line Item	2024 Capital Costs	2024 Operating Cost	2025 – 2034 Ongoing Annual Operating Cost	Program
Help Centre		\$50,000	\$100,000	Environment & Climate Division
Project Lead, Environment (1 FTE) for program delivery		\$111,000	\$111,000	Environment & Climate Division
Customer Records Management System to track compliance with By-law		\$420,000	\$50,000	Environment & Climate Division
Technology Services solution - Water Data Aggregation Automation	\$400,000			Toronto Water
Technology Services solution - Energy Star Portfolio Manager (ESPM) Direct Uploads	\$80,000			Toronto Water

Line Item	2024 Capital Costs	2024 Operating Cost	2025 – 2034 Ongoing Annual Operating Cost	Program
Toronto Water Customer Care (1 FTE) to increase staff capacity to manually process requests for aggregated water data until an automated solution becomes available		\$100,000		Toronto Water
<b>Total</b>	<b>\$480,000</b>	<b>\$681,000</b>	<b>\$261,000</b>	

2024 Capital and Operating costs associated with implementation of Toronto Water’s component, outlined in the table above, are not included in Toronto Water’s current budget. Should this report be approved, these costs will be included for consideration with the 2024 Budget process.

2024 Operating costs of \$0.581 million gross and net will be funded through reprioritization of deliverables within the operating budget of Environment & Climate Division and will be included in the 2024 Budget submission.

Ongoing annual costs from 2025 onwards, where necessary, will be submitted for consideration as part of the future budget processes. This includes, but is not limited to, increased staff capacity for enforcement and costs associated with expanded outreach & education, enforcement, etc.

The Chief Financial Officer and Treasurer has been advised of the financial impacts associated with this report and agrees with the financial impact information presented.

**EQUITY IMPACT**

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Emissions performance reporting will impact owners of buildings that have gross floor areas equal to or greater than 929 square meters. This group of impacted parties includes a range of different types of property owners, from corporate owners of large commercial and multi-residential real-estate portfolios to smaller corporate owners to single individuals who may own properties with only one or few buildings. Environment & Climate Division staff understand that the introduction of the proposed By-law will have different impacts on these different types of property owners.

Based on stakeholder engagement, Environment & Climate Division staff anticipate that property owners with smaller buildings will face greater challenges than property owners with larger buildings because property owners with smaller buildings likely have fewer

resources to dedicate to reporting and less previous experience with building emissions performance reporting, while property owners with larger buildings are likely already reporting similar data.

However, the impacts of the proposed By-law are non-monetary in nature. The cost associated with reporting stems from the time required to gather energy and water data and enter it into the online reporting tool. This is a relatively small time-commitment, estimated at a few hours of time annually, per building. A potential side effect of the Emissions Performance Reporting By-law could yield a possible energy cost savings by encouraging property owners to more closely track and better manage their buildings' energy and water use.

In order to facilitate the reporting process for property owners with smaller buildings and mitigate the time impact associated with reporting, Environment & Climate Division staff have created several resources to assist property owners, including:

- A series of step-by-step instructional videos to educate and assist property owners with the process of entering their data into the reporting tool and submitting emissions performance reports for their buildings.
- Written documents summarizing the reporting process.
- A dedicated [buildingreporting@toronto.ca](mailto:buildingreporting@toronto.ca) inbox where property owners can ask questions and reach out for support.

Environment & Climate Division staff also intends to take the following actions during By-law implementation to further mitigate impacts on property owners:

- Procure the services of a dedicated Help Centre to provide property owners with assistance and support during the reporting process.
- Work with water, electricity and natural gas utilities to make reporting easier by enabling direct upload of data.

In the proposed By-law, Environment and Climate Division staff have proposed that property owners with smaller buildings between 929 square meters and 4,645 square meters should be required to report for the first time in 2025 in order to allow for more time to target this segment of property owners with outreach and support before they are required to report for the first time.

Environment and Climate Division staff recognize that as the Net Zero Existing Buildings Strategy (the "Strategy") is further implemented, the additional key actions included in the Strategy will have additional impacts on property owners, including the potential to improve equity, economic prosperity, community resilience and health when implemented with equity as a core focus. However, the scope of this particular Equity Impact discussion is limited to the proposed By-law, which deals with the reporting of energy and water use information of large and medium sized buildings only.

## DECISION HISTORY

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On September 6, 2023 City Council adopted the “Updated Long-Term Financial Plan” (2023.EX7.1) which included recommendations for Environment & Climate Division to accelerate the development of proposed by-laws for emissions performance reporting that would require existing buildings in Toronto to annually submit to the City of Toronto building-level performance data and to require existing buildings in Toronto to meet specific greenhouse gas emissions performance standards.

The City Council Decision document can be viewed at:

<https://secure.toronto.ca/council/agenda-item.do?item=2023.EX7.1>

On December 15, 16, and 17, 2021, City Council adopted “TransformTO - Critical Steps for Net Zero by 2040” (2021.IE26.16). In adopting the report, City Council endorsed the TransformTO Net Zero Strategy (TransformTO) on climate, including the TransformTO Short-Term Implementation Plan 2022-2025 and the community-wide target of net zero greenhouse gas emissions by 2040 and interim targets.

The City Council Decision document can be viewed here:

<https://secure.toronto.ca/council/agenda-item.do?item=2021.IE26.16>

On July 14, 15, and 16, 2021, City Council adopted – “Net Zero Existing Buildings Strategy” (2021.IE23.1). In adopting the report, City Council endorsed the Net Zero Existing Buildings Strategy and provided direction on short term implementation goals including developing work plans towards requiring annual energy and emissions performance reporting and disclosure for Toronto's homes and buildings and establishing sector-specific mandatory emissions performance standards.

IE 23.1 Included the following two directions that are directly relevant to this report:

1. City Council request the Government of Ontario to amend the Province's Reporting of Energy Consumption and Water Use (O.Reg. 506/18) regulation to mandate commercial, institutional and multi-unit residential buildings smaller than 50,000 square feet and single family homes and other building types (e.g. industrial) to report their energy consumption and water use, and to expand the scope of the regulation to include energy, water and greenhouse gas emissions reporting and labelling.
2. City Council direct the Director, Environment and Energy to report back to City Council by the second quarter of 2023 on the development of a proposed by-law and implementation plan to require mandatory annual energy, water, and greenhouse gas emission reporting, and mandatory emissions benchmarking and labelling, for commercial, institutional and multi-unit residential buildings that are smaller than 50,000 square feet, to further advance energy and emissions data reporting in Toronto should the Government of Ontario not amend its Reporting of Energy Consumption and Water Use regulation as per Part 1 above.

The City Council Decision document can be viewed at:

<https://secure.toronto.ca/council/agenda-item.do?item=2021.IE23.1>

## COMMENTS

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### Background

The City's Net Zero Existing Buildings Strategy focuses on reducing emissions from existing buildings with the ultimate target of achieving net zero emissions by 2040, and an interim target of cutting emissions nearly in half by 2030, relative to 2008 levels. Achieving these ambitious targets will require the City to take nine key actions identified in the Net Zero Existing Buildings Strategy.

Mandatory emissions performance standards for all existing buildings that will require improved emissions performance over time is the most critical of these actions to drive transformation. In the *Updated Long-Term Financial Plan (LTFP)* (2023.EX7.1), staff recommended the expedited introduction of a mandatory emissions performance standards by-law which is necessary to drive the scale and depth of emissions reductions in the buildings sector, including residential, commercial, industrial and institutional buildings in the City of Toronto. Introduction of these requirements would establish the City of Toronto as a leader in its commitment to reducing building emissions and provide certainty to the development and retrofit sectors on actions needed to support emission reduction. A critical step towards enabling the establishment of emissions performance standards for existing buildings is to require annual emissions performance reporting and public disclosure to improve property owners' and the City's understanding of the performance of Toronto's homes and buildings.

### Proposed Building Emissions Performance Reporting By-law

This report proposes that City Council adopt a by-law that would require owners of large and medium-sized buildings to report building energy and water use data to the City annually (the "Building Emissions Performance Reporting" By-law or the "By-Law" as set out in Attachment 1). Energy and water use both have greenhouse gas (GHG) impacts associated with them. The energy and water use information collected under the By-law will allow the City to calculate the greenhouse gas (GHG) impacts associated with each property and building. Existing buildings are Toronto's largest source of greenhouse gas (GHG) emissions, accounting for approximately 58% of total community-wide emissions.

The authority to impose the proposed Building Emissions Performance Reporting By-law comes from the City of Toronto's broad authority under section 8 of the City of Toronto Act, 2006 to pass by-laws respecting the environmental well-being of the City, including climate change.

The Building Emissions Performance Reporting By-law would apply to property owners that own buildings equal to or greater than 929 square meters (~10,000 square feet), which would predominantly include buildings from the commercial, multi-residential,

institutional, and industrial sectors. This size threshold is based on the total gross floor area for the building, including all energy and water used on the premises, regardless if metered in bulk or separately for uses or spaces within the building. For example, a small office building with about 30 to 60 employees or a small multi-residential building with 15 average-sized suites could have a gross floor area close to this lower limit. Coverage of all buildings larger than this lower size threshold aligns with the direction adopted with the 2021 Net Zero Existing Buildings Strategy (2021.IE26.1) and is informed by feedback received during stakeholder engagement. For more information on the feedback received during stakeholder engagement, please see the “Stakeholder Engagement” section of *Attachment 2 – Impacted Stakeholders*.

## **The need for mandatory emissions performance reporting**

One of the key insights from the Net Zero Existing Buildings Strategy was that voluntary measures will not be sufficient to catalyze the scale of action required to achieve net zero emissions and that mandatory requirements are necessary. Requiring property owners to report their buildings energy and emissions performance information is critical to achieving the City’s net zero by 2040 GHG emissions reduction target, both due to the GHG reduction benefits of reporting itself, and the reporting’s role as a key enabling action needed to implement the City’s other critical GHG-reduction actions called for in the Net Zero Existing Buildings Strategy – notably, the establishment of emissions performance standards for existing buildings.

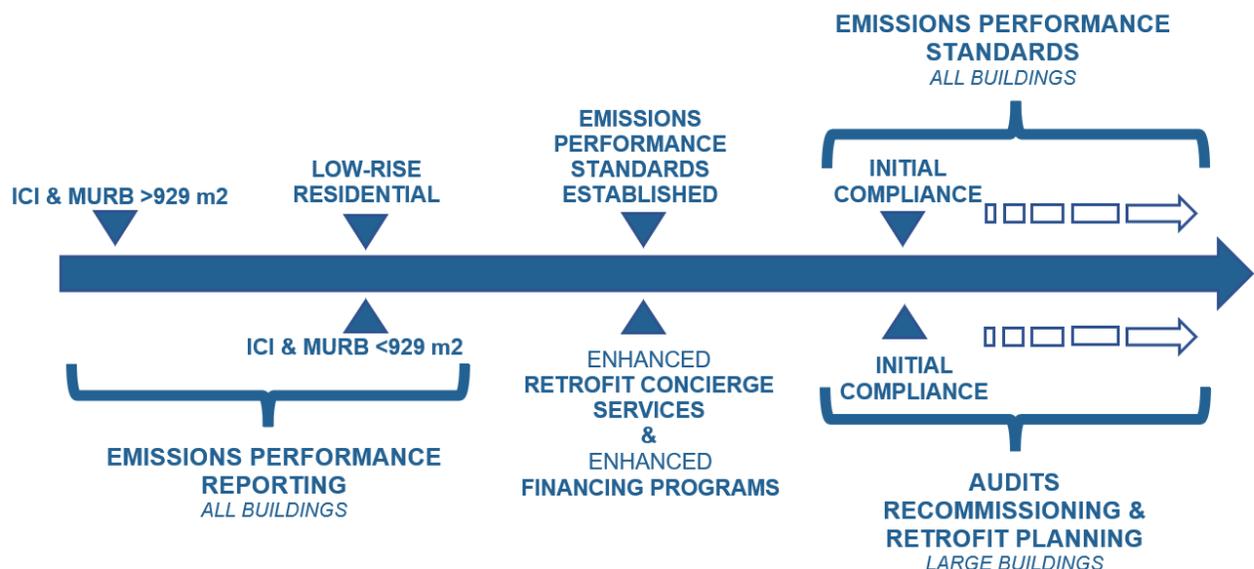
Reporting energy and water use of a building to the City enables property owners to track their buildings’ energy, water and GHG emissions performance and allows them to compare their buildings’ performance over time, to other buildings in their portfolio, or to other buildings in Toronto. If the old management adage “you can’t manage what you don’t measure” is true, then tracking, benchmarking, and reporting energy and water use is the first step towards better managing energy and water use, the energy and water operating costs, and to improving building energy efficiency, water efficiency and reducing GHG emissions.

Requiring a property owner to report their buildings energy and water use information (i.e. emissions performance information) is also critical to enabling the City to implement subsequent key actions called for in the Net Zero Existing Buildings Strategy. Mandatory (as opposed to voluntary) emissions performance information reporting is needed because voluntary submission of this information by property owners of the information will not result in a large enough and complete enough dataset for the City to be able to design, implement, and enforce future by-laws related to the subsequent key actions in the Net Zero Existing Buildings Strategy – most notably, emissions performance standards. The City needs robust annual building emission performance information in order to inform the design of future key action-related by-laws so that they reflect an ambitious yet realistic pace for property owners to achieve the 2040 net zero emissions target for their buildings. The most notable key action in this regard is establishing emissions performance standards for existing buildings, which will set limits on the amount of GHG emissions buildings can emit. The intent of establishing an emissions performance standard is to encourage property owners to make improvements to their buildings so that Toronto can achieve community-wide emissions

reductions which provide a benefit to all Torontonians. If Council passes the proposed Building Emissions Performance Reporting By-law in 2023, Environment & Climate Division staff plan to propose a Building Emissions Performance Standards By-law to Council in 2024 as directed by Council in the LTFP.

Figure 1 outlines the anticipated high-level implementation sequencing for the Environment & Climate Division to bring forward additional by-laws based on key actions from the City’s Net Zero Existing Building Strategy. The majority of these actions would build upon the proposed By-law.

**Figure 1: Overview of sequencing for major Strategy actions**



**Relationship to O.Reg. 506/18: Provincial Reporting of Energy Consumption and Water Use under Electricity Act, 1998**

The Province of Ontario already has Reg. 506/18: Reporting of Energy Consumption and Water Use under Electricity Act, 1998 (Regulation) that requires large buildings to report energy and water usage to the Province on an annual basis. However, the Regulation applies only to those buildings 50,000 square feet (~4,645 square meters) and larger. In 2021 City Council, under the Net Zero Existing Buildings Strategy, requested the Government of Ontario amend the Regulation to extend the reporting requirement to buildings smaller than 50,000 square feet; however, no such amendment has been made.

Furthermore, the City of Toronto does not have access to the full dataset of the information reported to the Province under the Regulation. It is the Province’s current policy to only publicly disclose semi-anonymous building-level data, limited to intensity

metrics. The publicly available data from the Province lack several data fields that the City needs to complete the analyses required to inform and support the work needed to implement the City’s Net Zero Existing Building Strategy. For these reasons, the Regulation and the information publicly disclosed by the Province fall short of what is necessary for the City’s work to implement the Net Zero Existing Buildings Strategy, and therefore necessitates the City to enact its own by-law that would require property owners in Toronto to report their buildings’ energy and water consumption information to the City.

The Province of Ontario’s O.Reg. 507/18: Broader Public Sector: Energy Reporting and Conservation and Demand Management Plans under Electricity Act, 1998 includes similar requirements to report energy and water use information for public buildings.

**Key elements of the Building Emissions Performance Reporting By-law**

Application of the proposed By-law:

The proposed By-law would apply to all property owners with properties that contain buildings with gross floor areas equal to or greater than 929 square meters (~10,000 square feet). Coverage of all buildings larger than this lower size threshold aligns with the direction adopted with the 2021 Net Zero Existing Buildings Strategy (2021.IE26.1) and is informed by feedback received during stakeholder engagement.

Approximately 5,800 property owners would be affected, who own approximately a total of 16,100 buildings. Of those 16,100 buildings, approximately 7,500 buildings (owned by approximately 2,100 property owners) are already required to report energy and water data to the Province annually in order to comply with their obligations under the Province’s O.Reg. 506/18: Reporting of Energy Consumption and Water Use (O.Reg. 506/18) and O.Reg. 507/18: Broader Public Sector: Energy Reporting and Conservation and Demand Management Plans (O.Reg. 507/18). Thus, for those property owners, very little additional effort will be required to also report their information to the City (i.e. reporting to the City would involve clicking on an additional reporting link). Table 2, below shows the number of buildings and property owners that would be affected by the By-law, broken down by building size.

**Table 2: Number of Buildings by Size Category**

Size category	Number of buildings in Toronto	Number of property owners
929-2,322m <sup>2</sup> (~10,000-24,999ft <sup>2</sup> )	5,400	2,300
2,323-4,645m <sup>2</sup> (~25,000-49,999ft <sup>2</sup> )	3,200	1,400
4,645-9,290m <sup>2</sup> (~50,000-99,999ft <sup>2</sup> )	2,600	1,000
9,290-23,225m <sup>2</sup> (~100,000-249,999ft <sup>2</sup> )	2,800	700
23,226m <sup>2</sup> + (~250,000ft <sup>2</sup> +)	2,100	400

### Commencement of reporting:

The proposed By-law would phase in implementation. Property owners with the largest buildings (i.e. those with gross floor area equal to or greater than 4,645 square meters (~50,000 square feet) would be required to provide their report information to the City by the first business day in July 2024 (i.e. July 2, 2024). Property owners with smaller buildings (i.e. those with gross floor area between 929 and 4,645 square meters (10,000 to 50,000 square feet) would be required to provide their report information to the City by the first business day in July 2025 (i.e. July 2, 2025).

Table 3 shows the proposed reporting deadlines for property owners with buildings of various sizes. For reference, Table 3 also shows the timeline over which the Provincial reporting requirements for the Energy and Water Reporting and Benchmarking (EWRB) program under O.Reg. 506/18 were phased in.

**Table 3: Timeline for Reporting Deadlines by Building Size under the By-law**

<b>Building Size</b>	<b>First Reporting Deadline under By-law</b>	<b>First EWRB reporting deadline (for reference)</b>
250,000ft <sup>2</sup> and larger	July 2, 2024	July 1, 2018
100,000ft <sup>2</sup> and larger	July 2, 2024	July 1, 2019
4,645m <sup>2</sup> (~50,000ft <sup>2</sup> ) and larger	First business day of July 2024 (i.e. July 2, 2024)	July 1, 2023 (Delayed from original July 1, 2020)
929m <sup>2</sup> (~10,000ft <sup>2</sup> ) and larger	First business day of July 2025 (i.e. July 2, 2025)	N/A

As reporting is already required by the Province under their Regulation for buildings equal to or greater than 4,645 square meters (50,000 square feet) and the proposed By-law will use the same reporting mechanism, the effort required from property owners for dual compliance is low. Environment & Climate Division staff recommend deferring the report deadline for property owners with buildings smaller than 4,645 square meters (~50,000 square feet) until 2025 in order to give all three utilities (water, electricity and natural gas distributors) adequate time to enable automatic direct uploading of customers' consumption data from the utility into the Energy Star Portfolio Manager (ESPM) reporting tool, recognizing that a streamlined reporting process is likely part of providing a frictionless experience, which is especially important for smaller building owners. For additional discussion of this issue, please see the "Key players impacted by the Building Emissions Performance Reporting By-law" section of *Attachment 2 – Impacted Stakeholders*.

As part of the Environment & Climate Division report back to Council in 2024 on the implementation of the By-law, it will provide an update on the status of work with utility providers to enable automatic uploading of information into Energy Star Portfolio Manager reporting tool.

The Report Information:

Under the proposed By-law the affected property owners will be required to report their buildings annual energy and water use data (the “performance information”), along with descriptive property information (the “descriptive information”) (which collectively is the “report information”) that will allow the City to identify the property and calculate each property’s appropriate performance metrics including GHG emissions. Building GHG emissions performance will be calculated by the City’s reporting platform (ESPM) from the energy and water use inputs (i.e. the performance information).

The proposed By-law will require property owners to submit the report information listed in Table 4 for each of their buildings:

**Table 4: Report information under the By-law**

Descriptive Information	Performance Information
<ul style="list-style-type: none"> <li>• Property address</li> <li>• Primary property type</li> <li>• Secondary property types</li> <li>• Total gross floor area of building</li> <li>• Total gross floor area of heated parking area and loading area</li> <li>• Total gross floor area of unheated parking area and loading area</li> <li>• Year of construction</li> <li>• Number of suites</li> <li>• City of Toronto Property Tax Assessment Roll Number</li> </ul>	<ul style="list-style-type: none"> <li>• Electricity consumption (kWh)</li> <li>• Natural gas consumption (m<sup>3</sup>)</li> <li>• District steam heating consumption (GJ)</li> <li>• District hot water heating consumption (GJ)</li> <li>• District cooling consumption (GJ)</li> <li>• Name of utility provider for district heating</li> <li>• Name of utility provider for district cooling</li> <li>• Water use (m<sup>3</sup>)</li> <li>• Total amount of each other fuels consumed (i.e. diesel, propane, gasoline, #2 fuel oil, wood, etc.)</li> </ul> <p>If electricity is produced and used on location at the property, the</p> <ul style="list-style-type: none"> <li>• renewable electricity generation consumption (kWh);</li> <li>• non-renewable electricity generation consumption (kWh);</li> <li>• total amount of each fuel consumed to produce the renewable electricity generation produced and consumed on location;</li> <li>• total amount of each fuel consumed to produce the non-renewable electricity generation produced and consumed on location</li> </ul>

The “descriptive information” required to be submitted by property owners under the proposed By-law is needed by the City for the purposes of identifying the property for which building information is being reported, for appropriately classifying and grouping buildings in order to identify trends in data (e.g. how emissions performance varies by

property type, and building age), and for calculating performance metrics in a manner that relevant to the property type of a building. For example, for multi-residential buildings, it is often helpful to calculate energy and emissions performance intensity metrics relative to the number of suites (e.g. kgCO<sub>2e</sub>/suite) in addition to intensity metrics calculated relative to gross floor area (e.g. kgCO<sub>2e</sub>/m<sup>2</sup>).

The “performance information” required to be submitted by property owners under the proposed By-law is needed by the City in order to fully capture the GHG emissions that are produced as a result of buildings’ energy and water use.

#### Method of reporting information to the City under the By-law:

The proposed By-law would require affected property owners to submit the report information to the City annually. Environment & Climate Division is proposing that property owners submit the report information for each building through Energy Star Portfolio Manager (ESPM). ESPM is a free online benchmarking application developed by the United States of America’s Environmental Protection Agency (EPA) and modified for use in Canada by Natural Resources Canada (NRCan). ESPM is a widely used tool for benchmarking energy performance in the building industry and is used to comply with mandatory reporting requirements in multiple jurisdictions across North America. ESPM is the same online reporting platform that property owners of buildings larger than 4,645 square meters (50,000 square feet) are currently required to use to report energy and water consumption data to the Province as required under both O.Reg. 506/18: Reporting of Energy Consumption and Water Use under the Electricity Act, 1998 and O. Reg 507/18: Broader Public Sector: Energy Reporting and Conservation and Demand Management Plans under the Electricity Act, 1998. Additionally, the platform is also used by property owners and managers for such voluntary programs as LEED Existing Buildings, Energy Star Label and Civic Action's Race to Reduce.

Beneficial features of ESPM include:

- Consistency for property owners already reporting building data to the Province;
- Free, on-line tool providing additional benefits for property owners/managers;
- Ability to enter aggregated utility data for sub-metered buildings, including functionality for automatic data uploading for utility providers;
- Energy use intensity and emissions factors are automatically calculated with ability to compare results across a database of various property types; and
- Ability to generate an *energy performance rating*, or score, from “1” to “100” for select property types, as well as other metrics such as greenhouse gas emissions intensity, and other building performance metrics.

As compliance requirements expand to smaller buildings (i.e. those 929 square meters and larger, but smaller than 4,645 square meters) under the proposed By-law, Environment & Climate Division will work with utilities (such as Toronto Hydro and Enbridge Gas) to automate processes in order to streamline the reporting process.

## Dual Reporting with Energy & Water Reporting and Benchmarking

Property owners that will be required to submit report information under the proposed By-law and the Province's Energy and Water Reporting and Benchmarking (EWRB) program will be able to do so with minimal additional effort. Rather than entering the report information for their building multiple times, a property owner will simply create a single profile for their building in the Energy Star Portfolio Manager reporting tool, and then click on one link to report their information to the Province, and another link to report their information to the City. As such, reporting to the City of Toronto adds negligible additional burden to property owners who are already required to report their information for their buildings under EWRB.

## Exemptions from and extension to reporting:

The proposed By-law would allow buildings to apply to the Executive Director, Environment & Climate Division for an exemption from or extension to submitting all or some of the report information for a particular reporting year on a case-by-case basis. Some examples of circumstances where exemptions may be appropriate include the following:

- Properties that contain newly constructed unoccupied buildings
- Properties that contain unoccupied buildings scheduled for demolition

Automatic exemptions would also be provided for property owners if their buildings did not consume any water and energy at any point during the calendar year for which consumption is supposed to be reported.

As part of the Environment & Climate Division report back to Council in 2024 on the implementation of the By-law, it will provide an update on the policy and procedure developed for reporting exemptions and extensions.

## Use of the report information collected under the By-law:

The full set of the report information will be used by the City internally to inform the design of additional by-laws, programs and policies aimed at reducing GHG emissions from Toronto's building sector. For example, reported performance information can be used to target City programs and supports to poorly performing buildings and to eventually assess a property owners' compliance with future emissions performance standards.

The proposed By-law also includes a section that would allow the City to make parts of the report information submitted to the City by a property owner a part of the public record (see Attachment 1, §367-7). The disclosure of certain report information to the public (public disclosure) can increase transparency about emissions and energy use and encourage property owners to pursue both emissions reductions and energy efficient upgrades in order to make their buildings stand out in the market. Public disclosure of emissions and energy performance data can provide valuable background information to parties considering buying or leasing properties, and can also be a valuable resource for academic and industry researchers looking to better understand the emissions performance of buildings and properties in Toronto, as well as utility

providers looking to better target the design and implementation of their energy conservation programs – activities that help contribute to reducing GHG emissions from buildings.

Public disclosure can take many forms, such as building labelling, online mapping of building performance data, or publishing downloadable data sets online. There are also various possible options with respect to the type and extent of the information that is publicly disclosed under a public disclosure policy that the City adopts: reported information can be aggregated or not, anonymized or non-anonymized and could include many reported data points or a select sub-set of the report information.

Environment & Climate Division staff propose that Council adopt *Attachment 3 – Building Emissions Performance – Public Disclosure of Report Information Policy* that outlines how the City will disclose publicly the report information submitted to the City under the By-law. Environment & Climate Division staff propose that as an initial policy, report information will only be disclosed publicly via aggregated annual performance data sets, as well as semi-anonymized building-level data sets reported by property owners in Toronto. This is similar to how the Province currently discloses anonymized EWRB data reported by property owners on their buildings in Ontario. Environment & Climate Division staff propose that this semi-anonymized subset of specific report information – e.g. performance information metrics and descriptive information – will be disclosed to the public as a downloadable spreadsheet. Personal information (e.g. names of property owners or Property Tax Assessment Roll Number) will not be disclosed publicly. Publishing this semi-anonymized subset of report information online will make it available to utilities, academic institutions, and other interested parties for research and program design purposes. Publishing an annual summary of the report information aggregated results will allow property owners and the public to see how buildings and properties in Toronto are performing as a whole and by sector, and how GHG emissions performance is changing over time, motivating property owners to reduce emissions from their own buildings so as not to fall behind.

Environment & Climate Division staff recognize that there is additional value in disclosing a more detailed non-anonymized data set of the report information – not only to provide enhanced motivation to property owners to improve their buildings' emissions performance, but also to better enable academic institutions, industry, and utilities to engage in the activities mentioned above that support GHG reduction in buildings. As such, Environment & Climate Division staff will engage in additional consultation with stakeholders, including the City's Privacy Office, to ensure appropriate mechanisms for the potential more detailed disclosure of non-anonymized data in future years. For example, Environment & Climate Division staff will consider the advantages and disadvantages of sharing the non-anonymized data set with Toronto Hydro, Enbridge Gas, and Enwave, which could enable the utilities to better target their customer engagement for efficiency and conservation programs. Environment & Climate Division staff will also explore the option to publish key performance metrics using an online map of reporting buildings.

This report recommends Council adopt the attached disclosure policy that requires staff to seek City Council approval to set and update the disclosure policy to ensure that

stakeholders are given adequate opportunity to comment through engagements and the deputation process to provide feedback and shape future disclosure policy.

Environment & Climate Division will report back to Council in 2024 on the potential of amending the Building Emissions Performance – Public Disclosure of Report Information Policy to include the public disclosure of non-anonymous data sets.

## **Implementation of By-law:**

### Outreach and Education

Environment & Climate Division outreach and education related to the By-law will be founded on the work it has already done to inform and support Toronto property owners with regard to their reporting obligations under the Province's EWRB since 2018. Environment & Climate Division staff have engaged in email and telephone outreach campaigns to affected property owners, have hosted informational webinars, have answered questions and provided 1-to-1 support via email, telephone, and online meetings, and have produced helpful resources like summary documents and a series of instructional videos on how to report under the Regulation. These efforts have historically resulted in a higher EWRB compliance rate by property owners with buildings within the Toronto compared to the rest of Ontario, indicating that outreach efforts strongly impact the rate of reporting compliance.

To date, the Environment & Climate Division has leveraged grant funding and existing resources to support outreach and activities aimed at EWRB reporters, including the use of temporary seasonal staff (Research Trainees) to call and email property owners of affected buildings to let them know about their EWRB reporting obligations and to provide support by answering questions by email and telephone, and even booking 1-on-1 online meetings with property owners who were having difficulty entering data for their buildings into the online reporting tool.

The number of property owners affected (including number of buildings) required to submit their report information under the proposed By-law will be double that which are required to currently report under the EWRB program. In order to provide consistent support to the significantly increased number of property owners who will be affected by the Building Emissions Performance Reporting By-law, Environment & Climate Division staff recommend transitioning support and assistance away from using existing Environment & Climate Division staff and temporary summer students, and instead move to a dedicated Help Centre model, where an external third party would be engaged to provide support services from February 1<sup>st</sup> to the report deadline (the first business day in July) each year, including responding to phone and email inquiries and providing 1-on-1 online support to property owners having difficulty reporting. Estimated costing for this service is provided in the Financial Impacts section of this report.

Similarly, although past telephone call campaigns have been successful in boosting awareness of a property owners reporting obligation under EWRB in Toronto, given the significant increase in number of affected property owners, Environment & Climate Division will have to explore alternative, less effort-intensive approaches to outreach – for example, using property tax billing contact information to mail property owners

official notifications of their obligations under the By-law, and following up with email reminders.

Between the need to increase outreach and education efforts, the need to manage the relationship with the Help Centre, and all of the coordination required to administer the reporting requirements under the By-law, the Environment & Climate Division staff anticipate requiring an increase in staff capacity equivalent to one full-time Project Lead Environment position starting in 2025.

If Council approves the proposed By-law, Environment & Climate Division staff will communicate the By-law requirements to affected property owners by hosting informational webinars, by using social media sites like LinkedIn, and by leveraging the City's network of contacts among associations and organizations that represent property owners, property managers and other relevant stakeholders.

Where possible, communications will direct property owners to resources already available on the City's existing [EWRB web site](#), which will be transitioned for the proposed By-law, that can provide support and information without requiring one-on-one interaction with Environment & Climate Division staff. For example, the City has created a series of [step-by-step instructional videos](#) showing property owners how to gather data from utilities and enter it into ESPM. Because the process for reporting data to the City will be nearly identical to the process for reporting data to the Province, these resources will be useful and relevant to property owners whose buildings are subject to the Building Emissions Performance Reporting By-law.

#### Responding to requests for aggregated whole-building water use data

Based on the large number of buildings for which property owners are expected to report emissions performance information in 2025 (16,100), staff from the Environment & Climate Division, Toronto Water, and Revenue Services do not feel that manually processing requests for aggregated water consumption data (as has been done in the past for property owners reporting EWRB data to the Province) will be a feasible approach. Staff from these divisions, and Technology Services, are all supportive of automating the aggregation of whole-building water consumption data, and a recommendation to prioritize this project has been included in the Recommendations section of this report. In the absence of an automated solution for aggregating whole-building water consumption data, including in the interim while an automated solution is being developed, Toronto Water staff capacity will need to be increased in order to address requests from property owners for their water use information.

#### Facilitating reporting

In recognition that making reporting of the report information required under the proposed By-law as easy as possible is a way to both maximize compliance and minimize equity impacts, Environment & Climate Division, Toronto Water, and Technology Services staff are also supportive of enabling direct uploading of water data to ESPM via ESPM web services, and a recommendation to prioritize this project has been included. For more information about the direct uploading of data to Energy Star

Portfolio Manger, please see the “Utilities” section of *Attachment 2 – Impacted Stakeholders*.

### Data Management

For the first year of reporting in 2024, when approximately 2,100 property owners will be required to report energy and water use information to the City for approximately 7,500 buildings, the report information can be exported by the City from the Energy Star Portfolio Manager reporting tool in a spreadsheet. However, since more property owners (approximately 5,800) will be required to report energy and water use information to the City for many more buildings (approximately 16,100) in 2025, it would be prudent to begin work as soon as possible on a customer records management system that can be used to better manage the large quantities of data that will be collected, and to track compliance with the proposed By-law. Such a customer records management system could also be designed to accommodate potential use to track compliance with future by-laws related to building emissions performance (e.g. emissions performance standards), as well as participation in City programs aimed at reducing GHG emissions from buildings (e.g. Navigation Services, Green Will Initiative, Energy Retrofit Loan, etc.). Accordingly, Environment & Climate Division staff have included an estimate for the cost of such a system in the Financial Impacts section of this report.

### Rewarding property owners

Property owners can benefit as the report of energy and water use information becomes a prerequisite for a property owner to participate in City programs like Navigation & Support Services, the Green Will Initiative, the Energy Retrofit Loan program, and any other support programs for property owners and their buildings that the City develops. Property owners who have provided the report information for their buildings could also be provided with access to additional supports and recognition for performance. Potential options to be explored include building performance scorecards, and recognition as a top performer via building labelling or inclusion in a list on the City’s web site.

### **Future Plans**

The Net Zero Existing Buildings Strategy calls for emissions performance reporting to be extended to property owners with buildings smaller than 929 square meters (~10,000 square feet), which would include low-rise residential <sup>1</sup>. Although the plan is silent on what type of energy and water use information reporting and emissions performance disclosure should be implemented for commercial buildings smaller than 929 square meters (~10,000 square feet), the intent of the Net Zero Existing Buildings Strategy is to eventually require the annual report of energy and water use and public disclosure of report information and emissions performance for all existing buildings located in

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<sup>1</sup> City of Toronto (2021). Net Zero Existing Buildings Strategy, pp. 79-80, <https://www.toronto.ca/wp-content/uploads/2021/10/907c-Net-Zero-Existing-Buildings-Strategy-2021.pdf>

Toronto (i.e. homes and buildings of all types and sizes), in some form<sup>2</sup>. A key next step in realizing the expansion of reporting requirements to smaller buildings is to make reporting easier for property owners by enabling utility data to be uploaded directly into the ESPM reporting tool (or other system selected by the City).

This proposed By-law is the first in a number by-laws that will be proposed to implement key actions in the City's Net Zero Existing Buildings Strategy. More details are available in the Strategy and the *Update on the Net Zero Buildings Strategy and Implementation of Mandatory Emissions Performance Standards (2023.IE6.4)*

Future updates on the progress of the Net Zero Existing Buildings Strategy implementation will be included with regular TransformTO reports to Council.

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<sup>2</sup> City of Toronto (2021). Net Zero Existing Buildings Strategy, pp. 11, <https://www.toronto.ca/wp-content/uploads/2021/10/907c-Net-Zero-Existing-Buildings-Strategy-2021.pdf>

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## **SIGNATURE**

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James Nowlan  
Executive Director, Environment & Climate

## **ATTACHMENTS**

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Attachment 1 – Draft City of Toronto Municipal Code Chapter 367  
Attachment 2 – Impacted Stakeholders  
Attachment 3 – Building Emissions Performance – Public Disclosure of Report  
Information Policy  
Attachment 4 – Jurisdictional Scan  
Attachment 5 – Public Notice