



## REPORT FOR ACTION

# Building Emissions Performance Standards (BEPS): Design Principles and Development Plan

**Date:** June 24, 2024

**To:** Infrastructure and Environment Committee

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

**Wards:** All

## SUMMARY

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The City is proposing to establish Building Emissions Performance Standards (BEPS) that would set greenhouse gas (GHG) emissions performance targets for existing buildings in Toronto and that would enhance and /or create supporting policies, programs and resources and facilitate access to incentives to enable building owners, tenants and occupants to address upfront cost and affordability challenges.

Given the unique local context for the different building sectors/typologies and the distinct starting points in their building decarbonization process, the development of BEPS will explore the most suitable approach (i.e., mandatory vs. voluntary) for each typology to enable GHG emissions reductions and access to additional benefits across Toronto's building sector. The City's work on BEPS will provide Torontonians with reasonable and achievable pathways to decarbonize their buildings, enabling them to make improvements over time, and to realize co-benefits related to health, comfort and the local economy.

The purpose of this report is to provide City Council with an overview of the Design Principles that will guide the development and implementation of BEPS to achieve goals related to climate action, as well as an update on the BEPS By-law development process for the mandatory standards that may be established.

The need to reduce GHG emissions in Toronto's building stock and mitigate climate change has never been greater. Toronto is experiencing weather that is hotter, wetter, and more extreme and these conditions are expected to worsen. At the same time, Toronto is in the midst of a housing crisis resulting in a lack of affordable and adequate

housing options, rising rental costs, inflation and an increased cost of living.<sup>1</sup> The development plan for BEPS will consider and respond to the social and economic conditions that building owners and occupants are currently facing.

The building sector is the primary source of GHG emissions in Toronto, contributing 56% of the city-wide total. The City Council-endorsed Net Zero Existing Buildings Strategy (the Strategy) ([2021.IE26.16](#)) sets out a number of critical actions for the City to consider in order to reduce building sector emissions. The Strategy identifies Building Emissions Performance Standards as the most effective means of enabling city-wide emissions reductions.

To develop the overall design principles of BEPS City staff relied on the foundational work that went into the Strategy, the initial results from the engagement and technical work conducted and the best practices and lessons learned from other jurisdictions with existing BEPS regulations. Based on the outcomes of this work, staff recommend the following BEPS design principles:

1. Cross-cutting equity and affordability considerations
2. Broad and inclusive engagement and consultation
3. Attainable Standards
4. Supportive programs and policies
5. Data driven

In addition to the recommended BEPS design principles, this report provides an update on the development process of the associated By-law for the mandatory standards that may be proposed, the engagement and consultation strategy, and an overview of the planned technical analyses that will inform the development of BEPS.

## **RECOMMENDATIONS**

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The Executive Director, Environment & Climate Division, recommends that:

1. The Infrastructure and Environment Committee receives this report for information.

## **FINANCIAL IMPACT**

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There are no immediate financial implications resulting from this report.

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<sup>1</sup> [City of Toronto Housing Data Book, March 2023](#)

Financial impacts related to BEPS development and implementation will be assessed and presented along with a proposed BEPS By-law, which is projected to be presented to Council in Q3 2025.

The Chief Financial Officer and Treasurer has reviewed this report and agrees with the financial impact information.

## **EQUITY IMPACT**

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In addition to having been identified as the most critical action to support Toronto's reduction of GHG emissions, mandatory BEPS for existing buildings present significant opportunities for building owners to improve energy and water use efficiency and maintain or reduce a building's operational costs.

City staff recognize that, depending on its design, BEPS may require a property owner to implement building improvements to achieve emissions targets. For example, a key challenge in the residential sector is to prevent or minimize upfront capital costs for building improvements being passed down to tenants, which could exacerbate housing affordability challenges in Toronto, while addressing challenges that building owners may experience from initial capital costs. Similar affordability challenges can impact business tenants who are typically responsible for utility and some improvement costs under commercial leases. These affordability challenges are often felt most by Toronto's equity-deserving groups. Consideration will be given to affordability concerns of property owners of both commercial and residential buildings during development of BEPS.

The BEPS will be developed with a lens on equity to address cost impacts for low-income communities and tenants, and other sectors that may face challenges related to affordability.

Environment & Climate Division is in the process of developing equity indicators for actions associated with TransformTO. Subsequent progress reports on TransformTO and the Strategy will include more detailed analysis about the impacts of climate actions on equity deserving groups.

## **DECISION HISTORY**

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On December 13, 14, and 15, 2023 City Council adopted the “Proposed Building Emissions Performance Reporting By-Law” (2023.IE9.5) which included the adoption of City of Toronto Municipal Code Chapter 367, Building Emissions Performance, that requires owners of buildings 929 m<sup>2</sup> and larger to report energy and water use to the City annually. Buildings 4,645 m<sup>2</sup> and larger will begin to report in 2024, and buildings 929 m<sup>2</sup> and larger will be required to report in 2025.

Link: <https://secure.toronto.ca/council/agenda-item.do?item=2023.IE9.5>

On October 11, 2023 City Council adopted the "Update on the Net Zero Buildings Strategy and Implementation of Mandatory Emissions Performance Standards" (2023.IE6.4) which included a general overview of the implementation progress of the Strategy and information on efforts underway to realign the modelling and proposed pathways in the Strategy with the accelerated net zero by 2040 TransformTO target. In adopting the report, City Council directed Environment & Climate Division to collaborate with other City divisions to incorporate existing resources, incentives, and measures to mitigate the potential impact of green renovations and retrofits on building owners and tenants to reduce greenhouse gas emissions and achieve the City’s mandatory emissions performance standards.

Link: <https://secure.toronto.ca/council/agenda-item.do?item=2023.IE6.4>

On September 6, 2023 City Council adopted the “Updated Long-Term Financial Plan” (2023.EX7.1) (LTFFP) 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 GHG emissions performance standards.

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

On May 10, 11 and 12, 2023, City Council adopted "TransformTO 2022 Annual Report: Laying the Foundation for Net Zero" (2023 IE3.3) which included an update on short-term implementation actions for the TransformTO Net Zero Strategy (TransformTO). In adopting the report, City Council directed staff to reduce the reliance on and use of methane (“natural gas”) as part of the update to the Toronto Green Standard to Version 5, develop and intergovernmental advocacy approach that identifies the scope and scale of investments needed to support implementation of the TransformTO Net Zero Strategy, and collaborate with Greater Toronto and Hamilton Area municipalities on a regional approach to intergovernmental advocacy.

Link: <https://secure.toronto.ca/council/agenda-item.do?item=2023.IE3.3>

On May 11 and 12, 2022, City Council adopted “Accountability and Management Framework for the TransformTO Net Zero Strategy” (2022.IE29.10) which provided a reporting schedule for the Strategy. The Framework identified that a TransformTO Net Zero Strategy progress report would be provided to the Infrastructure & Environment Committee in the first quarter of 2023.

Link: <https://secure.toronto.ca/council/agenda-item.do?item=2022.IE29.10>

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 GHG emissions by 2040 and interim targets.

Link: <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.

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

At its meeting of October 2 and 3, 2019, the City Council declared a Climate Emergency and endorsed a net zero GHG emissions target that aligned with keeping global average temperature rise below 1.5 degrees Celsius by adopting "Declaring a Climate Emergency and Accelerating Toronto's Climate Action Plan" (2019.MM10.3). At the meeting, City Council committed to looking for opportunities to invest in and accelerate timelines for high priority greenhouse gas emission reduction areas outlined in TransformTO, including the building sector.

Link: <https://secure.toronto.ca/council/agenda-item.do?item=2019.MM10.3>

On July 4, 5, 6 and 7, 2017, City Council adopted "TransformTO: Climate Action for a Healthy, Equitable and Prosperous Toronto – Report 2 – The Pathway to a Low Carbon Future" (2017.PE19.4) (TransformTO). TransformTO identified a pathway for Toronto to reduce city-wide GHG emissions by 80% by 2050. At the meeting City Council adopted three acceleration campaigns for reaching the City's GHG reduction targets, including the 'Building Energy Performance and Comfort' campaign which focuses on increasing the energy performance of existing buildings and ensuring new ones are built to high energy performance targets.

Link: <https://secure.toronto.ca/council/agenda-item.do?item=2017.PE19.4>

## COMMENTS

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### Background

The Net Zero Existing Buildings Strategy (the Strategy) identifies Building Emissions Performance Standards (BEPS) as the most impactful means to enable the scale of action necessary for the decarbonization of Toronto's building stock; this includes both, the development of a BEPS By-law for the mandatory standards that may be proposed and the development of policies, programs and resources to support GHG emissions reductions in existing buildings. BEPS is a policy tool that requires building owners to comply with an annual GHG emissions limit based on the building type and building size (also known as a "target"). Targets become stricter over time, driving continuous long-term improvements in building performance.

Through City Council's adoption of the Updated Long-Term Financial Plan (LTFP) ([2023.EX7.1](#)), staff received direction for the accelerated consideration of a BEPS By-law that would impose GHG emissions limits on buildings in Toronto.

BEPS regulations have been adopted by numerous jurisdictions in North America and around the world to drive long-term performance improvement of existing buildings that result in the reduction of GHG emissions. The Environment & Climate Division is leading the development of Toronto's BEPS, including the following:

- A proposed BEPS By-law outlining the emissions performance targets for property owners that are subject to mandatory requirements. These targets will be developed so that, where they apply, building owners would have reasonable, achievable pathways to decarbonize their buildings, making incremental improvements over time.
- The expansion and/or creation of policies, programs and resources to support the implementation and compliance with the BEPS By-law, with a focus on mitigating potential equity and affordability impacts and allowing for the realization of additional benefits.

The following sections outline the design principles for the development of BEPS for Toronto and provide an update on the BEPS By-law development process. This includes the timeline and details of the public-facing and internal engagement and consultation strategies as well as an overview of the planned technical analyses that will collectively inform the City's proposed BEPS By-law for the mandatory standards that may be established. The BEPS By-law is proposed to be presented to City Council for

consideration in Q3 2025 and, if adopted, would amend the City's existing Municipal Code Chapter 367, Building Emissions Performance.

## **Design Principles**

The underlying purpose of implementing BEPS is to advance the decarbonization of Toronto's building sector as a critical step towards the City's community-wide GHG emissions target of net zero by 2040. This will be advanced with the goal of maximizing benefits for the climate, the building sector and the community at large, while addressing any potential negative impacts of BEPS - particularly for equity-deserving groups.

To ensure that the implementation of BEPS results in meaningful reduction of GHG emissions while considering equitable outcomes related to health, comfort, protection of affordable housing and energy affordability and the local economy, Environment & Climate staff will develop a BEPS By-law along with policies, programs and resources guided by the following design principles:

1. **Cross-cutting equity and affordability considerations:** Following the guiding principles in TransformTO, the City is committed to the integration of equity and affordability considerations in the development and implementation of BEPS. Where a BEPS By-law is established, compliance options and BEPS supporting policies, programs and resources will be developed in a manner that maximizes equitable outcomes on health, comfort, protection of affordable housing and energy affordability, as well as local economic impact.
2. **Broad and inclusive engagement and consultation:** Engaging and communicating early and often through the different stages of BEPS development and the subsequent implementation phase will allow for alignment with stakeholder and community priorities for the decarbonization of existing buildings. Stakeholder input will inform the key elements of a proposed BEPS By-law as well as the supporting policies, programs and resources. Of particular importance will be to gather input from groups and communities that could be impacted by a proposed BEPS By-law, including tenants, residents, owners, industry organizations and professionals, etc., with the intent of understanding the concerns and needs of under-represented and equity-deserving groups.
3. **Attainable Standards:** Where a BEPS By-law is proposed, it will be designed to be reasonable and achievable, looking to strike a balance between pace of change and feasibility. Alternative compliance pathways will be provided, i.e.,

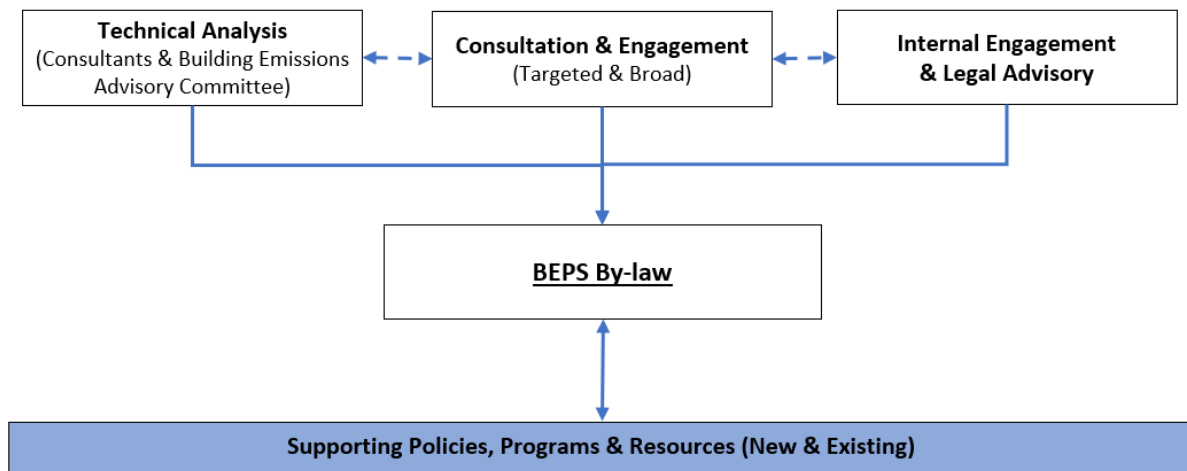
modified, or delayed options, to allow for equity, affordability or special use considerations to be accommodated. Identifying alternative compliance accommodations to the proposed By-law and additional supports to encourage compliance will also enable building owners, tenants and occupants to realize available co-benefits.

4. **Supportive programs and policies:** Identify the required ancillary support policies, programs and resources to motivate and aid building owners in reducing GHG emissions and, where applicable, achieving compliance with a BEPS By-law and to enable occupants and/or tenants to realize co-benefits of health, comfort, and affordability in their buildings. The expansion and/or creation of tools to support awareness, education, and training, in addition to technical and financial resources and programs will be fundamental to enable emissions reductions and successful compliance with a BEPS By-law. This will require coordination and collaboration with other stakeholders, including other levels of government.
5. **Data driven:** Utilize actual building performance and cost data to continuously inform target setting and recalibration and policies, programs and resources. Integrating the most up-to-date data, including the energy and water data that is being reported by property owners under the City's Municipal Code Chapter 367, Building Emissions Performance, will help the City establish a continuous improvement process that allows for BEPS target updates to be informed by an ongoing assessment of their pace, feasibility and impact.

### **Development Process**

The Environment & Climate Division has structured the development of BEPS into three primary workstreams: technical analyses, consultation and engagement and internal engagement and legal advisory (see **Figure 1**). Outputs from the various workstreams are interconnected and ultimately feed into the overall development of a BEPS By-law and the expansion or creation of policies, programs and resources. For the latter, staff are undertaking a review of the supporting programs and resources that are required to aid building owners' compliance with a BEPS By-law, enable the realization of co-benefits and ensure the desired outcomes of the BEPS are met. As part of City staff's review of existing programs and resources, it may be determined that they may need to be expanded and/or new programs may need to be developed with the support of external stakeholders, including other levels of government.



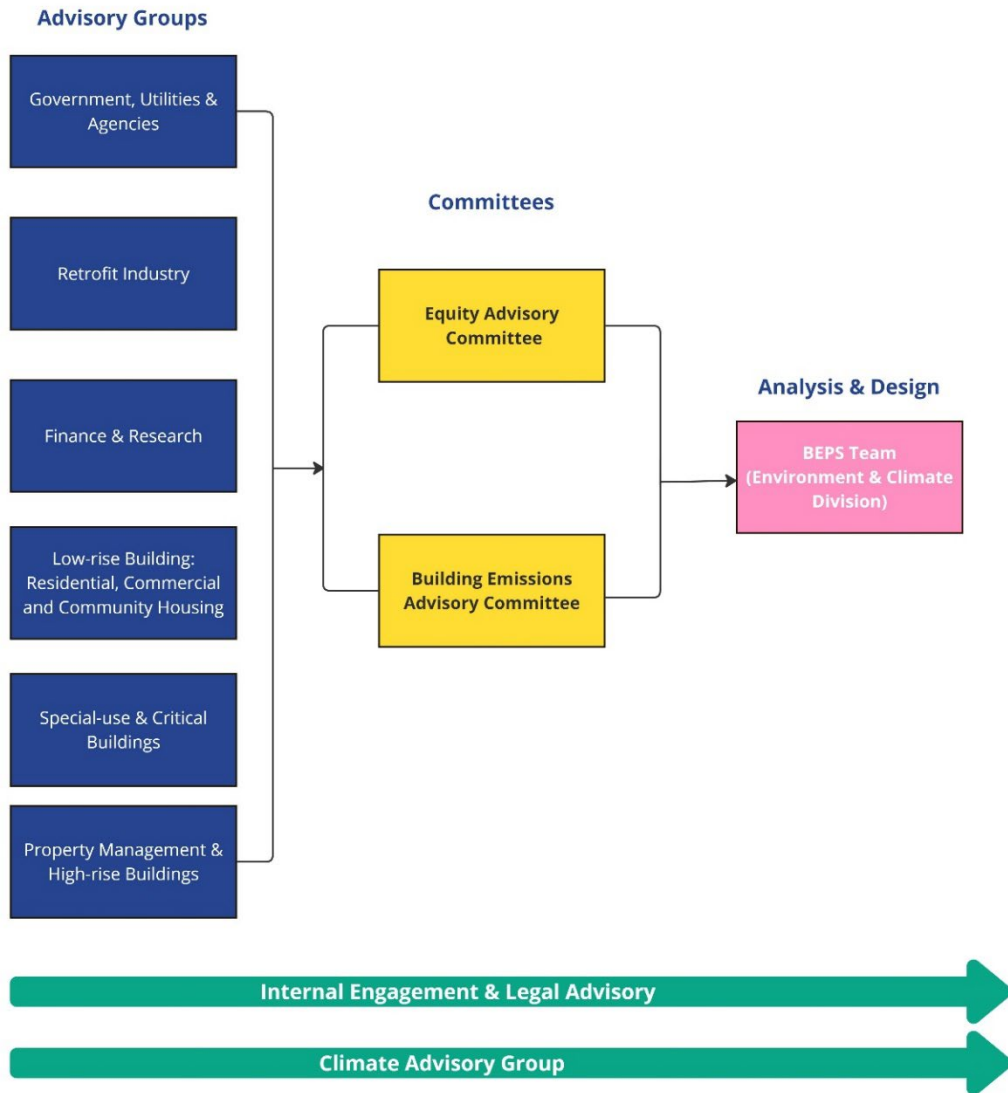


**Figure 1 - BEPS Development Process**

The Environment & Climate Division has established a participatory process that will be used to determine the mandatory requirements of a proposed BEPS By-law and to design and develop the implementation plan, if adopted by Council (see **Figure 2**). Six Advisory Groups have been established to represent the perspectives of key groups and stakeholders during the BEPS targeted engagement phase. Targeted engagement includes consultation with key organizations, associations, and individuals from diverse sectors to participate in advisory focused groups and committees. The Advisory Groups will identify important considerations that will be put before the members of two Committees, namely, the ‘Equity Advisory Committee’ and the ‘Building Emissions Advisory Committee’. The Committees will examine broader considerations to help shape BEPS in a way that integrates the unique challenges and perspectives of each Advisory Group.

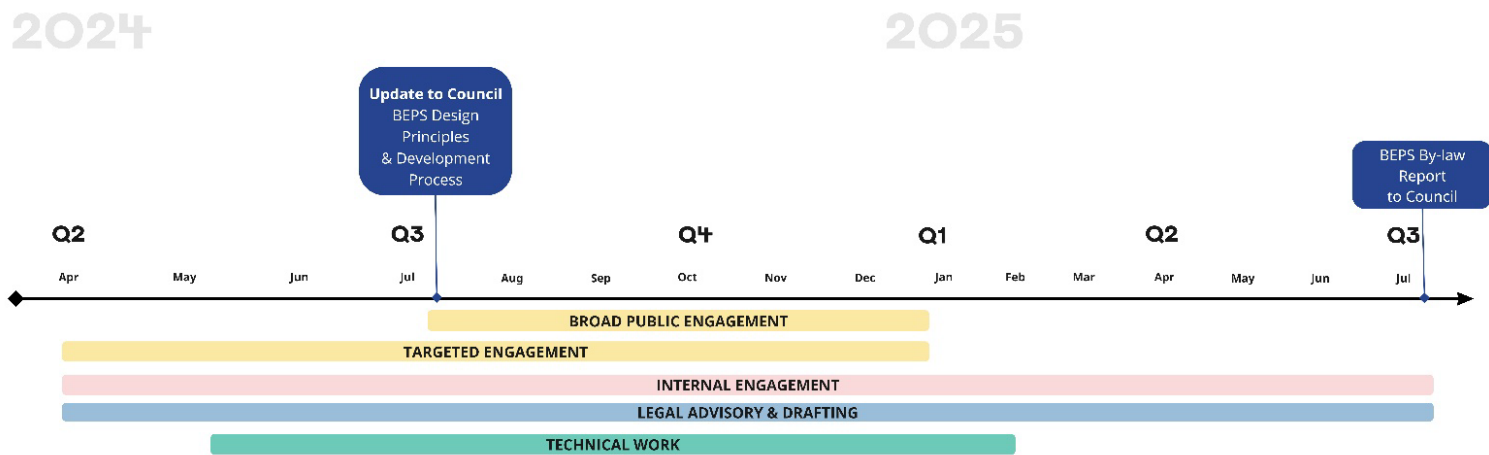
Internal engagement includes key stakeholders from City Divisions, Agencies and partners. The existing Climate Advisory Group and internal stakeholders will be consulted throughout the BEPS development process and implementation phase. These groups may participate in Advisory Groups and Committees, or be consulted by the Environment & Climate Division directly.

The perspectives, input and key learnings from public and internal engagement activities will inform the BEPS By-law and policy making processes, as well as program and resource expansion and creation.



**Figure 2 - BEPS Engagement and Consultation Structure**

The BEPS By-law development timeline reflects the above engagement and consultation process, along with staff's proposed report back to City Council. As shown in **Figure 3**, the proposed BEPS By-law, to be added as an amendment to the existing Municipal Code Chapter 367, Building Emissions Performance, will be presented to City Council for its consideration in Q3 2025.



**Figure 3 - BEPS By-law Development Timeline**

### ***Technical Analyses***

Informed by the design principles outlined above, the Environment & Climate Division will build on the technical analyses developed for the Net Zero Existing Buildings Strategy with the support of an external technical consultant that will advise on the key elements that will be included in a BEPS By-law and on the development/expansion of policies, programs and resources to support GHG emissions reductions in existing buildings. Technical analyses will include:

- Analysis of baseline emissions performance for specific building types and sizes
- Building categorization
- Target setting approach (i.e., a trajectory approach based on a building's baseline performance year versus an absolute target setting approach)
- City-wide target-setting modelling allowing exploration of various policy options including pace of change and feasibility
- Setting GHG emissions targets for different building typologies and sizes, including GHG and cost implications
- Compliance timelines
- Alternative compliance options (delayed or modified compliance), such as varying timelines, building portfolio level compliance options, other pathways to achieve compliance (e.g., renewable energy credits or carbon offsets), etc.

- Enforcement for non-compliance (e.g., fees, penalties)

The technical analyses will also include the development of a scenario modelling tool to assess the interactions of the key elements of a BEPS By-law, as described above. For example, the modelling tool will illustrate how a modified compliance timeline for a specific building type will impact city-wide GHG emissions reductions. Additionally, the modeling tool will assess the costs and benefits of compliance for a range of retrofit pathways, from minimum intervention to deep electrification retrofits. The outputs of this analysis will ultimately inform the elements of the proposed BEPS By-law.

Integrating the results from the technical analyses, the City will develop clear and user-friendly materials that will help various stakeholders better understand how the proposed BEPS would impact them and the short, medium and long-term actions required in order to meet the targets. Building improvement actions may include re-commissioning, operational changes or retrofits of building systems including enclosure or mechanical systems.

This technical work will also be informed by jurisdictional scans and best practice research, as well as the findings and feedback from the other BEPS development workstreams, namely, engagement and consultation and internal engagement and legal advisory.

### ***Stakeholder Engagement and Consultation***

The scope and scale of BEPS requires meaningful consultation and engagement with various externally impacted groups, such as other levels of government, utilities, the building sector, property owners and building managers and residents. City staff have developed a multi-stakeholder engagement approach that creates multiple opportunities to facilitate productive conversations between staff and all impacted stakeholders and communities on equity, technical, and implementation aspects.

In the early development phase, the City will commence with a 'targeted' engagement approach, which includes inviting organizations, associations, and/or individuals from diverse sectors to participate in one of the following advisory-focused groups:

#### ***Equity Advisory Committee***

The mandate of the Equity Advisory Committee (EAC) is to help shape the equity components of BEPS and an implementation strategy to ensure there is appropriate representation from all communities, particularly equity-deserving ones, in its development. This includes highlighting potential negative impacts of BEPS and

working together to inform tangible solutions such as supporting policies and programs to enable the realization of co-benefits.

### *Building Emissions Advisory Committee*

The Building Emissions Advisory Committee (BEAC) is comprised of members from a broad range of building industries and is tasked with contributing their insights and expertise to help guide the development of the City's BEPS. Members of the BEAC will provide their unique perspectives and input on the associated research, analysis, and broader sectoral engagement. Specifically, BEAC members will provide strategic guidance and oversight on the development of a proposed BEPS By-law, its implementation strategy, and any policies, programs and resources to be enhanced or developed to support compliance.

### *Advisory Groups*

The Advisory Groups are tasked with identifying key considerations and offering input to the City on the development of a BEPS that accurately represents the interests of stakeholders across Toronto. The following six (6) thematic Advisory Groups have been established to convene subject matter experts from various sectors to collaboratively address concerns, highlight opportunities and help address the realization of co-benefits related to the development and implementation of BEPS:

- Retrofit Industry (e.g., energy advisors, trades, suppliers, architects)
- Property Management and High-rise Buildings (e.g., commercial and multi-unit residential apartment or condominium owners and property managers)
- Government, Utilities and Agencies (e.g., utility providers, provincial or federal government representatives.)
- Finance & Research (e.g., financial institutions, academia, research institutes)
- Low-rise Buildings: Residential, Commercial, and Community Housing (e.g., business improvement areas, community land trusts, affordable or community housing providers.)
- Special-use Buildings and Critical Infrastructure (e.g., hospitals, food/beverage industry, data centers)

Once the input provided by the Advisory Committees and Advisory Groups outlined above is integrated into the BEPS technical analyses, the City will commence 'broader' engagement and consultation initiatives in Fall 2024. Broad engagement will provide opportunities to expand the dialogue to all residents in Toronto and gain a better understanding of the public's perspectives and attitudes on the proposed BEPS elements. Feedback and recommendations gathered during this broad engagement and consultation process will be used to inform both, the mandatory elements of BEPS, and

the supporting policies, programs and resources needed to enable successful compliance. The following are the proposed broad engagement methods that City staff plan to undertake:

- **Delegated Discussion Kits:** Accessible digital discussion guides that support organizations and City Council members to host their own consultations and collect feedback from the community members they represent at no cost.
- **Online Survey:** To be made available online for approximately eight weeks and promoted widely through a range of the City's communications channels and external networks. The survey will gauge the attitudes and assumptions of the broader public on BEPS.
- **Public Town Halls:** Four town halls open to members of the public to allow for broad input and feedback on the elements of the BEPS. It is proposed that each Public Town Hall would be ninety (90) minutes long and include a mix of presentation and discussion/feedback. The Public Town Halls will be held across the city in the following communities:
  - Scarborough/ East Toronto
  - Downtown
  - North York
  - Etobicoke
- **Additional engagement methods:** Additional engagement methods such as residents' reference panels and Indigenous talking circles will be explored, as conversations with impacted communities and technical analyses continues. City staff will expand and adapt its broad engagement methods to respond to the communities' needs and to ensure consultations are done in an inclusive manner.

The Environment & Climate Division is also advancing comprehensive consultation and engagement with key City Divisions, Agencies and governance tables to ensure alignment with other City priorities, existing policies and regulations.

## Next Steps

Environment & Climate staff will continue to advance the three BEPS workstreams identified in this report, including the following next steps:

- Continue to advance targeted public engagement in Q3/Q4 2024, through the six BEPS Advisory Groups and two Advisory Committees.
- Finalize the broad engagement and consultation plan to be launched in Fall 2024, supported by continued engagement of Councillor offices.

- Complete the technical analyses that will inform the elements of the proposed BEPS By-law and supplementary policies, programs and resources.
- Continue to leverage collaboration with internal stakeholders to inform the development of BEPS and the governance and administration of the proposed BEPS By-law.

In addition, staff will target a report back to City Council in Q3 2025 with a draft proposed BEPS By-law and recommended next steps, including:

- Details about complementary support policies, programs and resources for building owners and occupiers.
- The associated financial and resourcing impacts for the City.

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## **SIGNATURE**

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