In July 2017, City Council set the following goals

1) 100% of new buildings are designed and built to be near zero greenhouse gas (GHG) emissions by 2030.

2) 100% of existing buildings are retrofitted to the highest emission reduction technically feasible, on average achieving a 40% energy performance improvement over 2017 levels, while limiting affordability impacts to residents, by 2050.

3) Design and build all new City-owned facilities to be near zero GHG emissions by 2026.
SUSTAINABILITY REQUIREMENTS FOR NEW DEVELOPMENT IN TORONTO
Since 2010, TGS is patterned to address the City’s “Environmental Drivers”:

1. Air Quality
2. Green House Gas Emissions, Energy Efficiency and Climate Change
3. Water Quality and Efficiency
4. Urban Ecology
5. Solid Waste
Toronto Green Standard Overview

**Since 2010:**

- 1300 developments
- 20 certified Tier 2 through DC refund program
- 63 performance measures
- Market transformation tool - raised bar for energy efficiency targets in OBC
- Internal Partners: City Planning with Environment & Energy, Toronto Water, Parks Forestry & Recreation, Solid Waste Services
- External Partners: CaGBC, BILD, IBPSE, PHI
Zero Emissions Buildings Framework


• Shift from reference building approach to absolute performance targets (TEUI, TEDI, GHI)

• New 4-Tier approach to get to near zero by 2030

• Aligns with provincial and national emerging codes
The City of Toronto is one of the fastest growing cities in North America, and faces the challenge of providing for a growing population while reducing carbon and improving resilience. The City has completed a two-part study and a proposed Zero Emissions Buildings Framework that provides a performance pathway to 2030.

**The proposed framework would help Toronto reduce its emissions by 30.6 megatonnes by 2050!**

### Priorities
- **01** Improve building energy efficiency to reduce energy costs and stresses on the electrical grid
- **02** Enhance resilience to the impacts of climate change, including heat waves, power outages, and flooding
- **03** Decrease GHG emissions by 80% below 1990 levels, increasing local renewable and district energy generation

### New Targets
- **TEUI** Total Energy Use Intensity targets lower overall energy use and utility costs
- **TEDI** Thermal Energy Demand Intensity targets ensure buildings have better envelopes that save energy and improve resilience
- **GHGI** GHG Intensity targets encourage low-carbon fuel choices and reduce building emissions

### Building Better Buildings
- Benchmarking and submetering requirements ensure energy performance can be tracked
- Renewable energy targets increase low-carbon energy generation and safeguard against power outages
- A resilience checklist improves the safety and security of buildings during extreme events
- Air tightness testing ensures building envelopes keep indoor temperatures comfortable
- Building commissioning ensures that buildings are constructed and operated properly

### Pathway to Zero Emissions
- 2018
- 2022
- 2026
- 2030
- **Zero Emissions**
Toronto Green Standard Version 3

- **Tier 1**: required through planning process
- **Tier 2**: voluntary higher performance incented through DC refund.
- **New Tier 3**: energy, water, waste
- **New Tier 4**: energy & GHG targets
- Zero Carbon Building Standard or Passive House certification

Aqualina, Tridel
Toronto Green Standard Version 3

City Leadership

- Separate consolidated standard for Agencies, Corporations and Divisions
- Tier 2 for City ACD approved March 2017
- Includes Low carbon pathway – EV50%
  T3 or T4 EUI/TEDI/GHGI
- Zero Carbon Building Standard or Passive House certification
Response to the 2017 Ontario Building Code Consultation

- Continue to expand the list of environmental measures in which the City can require, where there are technical requirements in the Code:
  - Recommended step code for increased energy efficiency

- Support increased requirements for energy efficiency in Renovation
  - Address issues of underground economy

- Undertake a review to better understand how future, projected climate and weather should be accounted for in future code updates.
The Toronto Green Standard and the Ontario Building Code are key components of our ability to deliver TransformTO.

TGS helps the City of Toronto continue to be a leader in reducing the environmental impact of the building sector, driving market transformation and regulatory change.
Report timing: October 12 Planning & Growth Management
November 7, 8, 9 City Council
Effective date: May 1, 2018 for new planning applications

Lisa King
Lisa.m.king@toronto.ca
416-392-9698

Shayna Stott
Sstott@toronto.ca
416-392-0171
Toronto Green Standard Tier 2, Development Charge Refund Incentive

- Incorporated into the 2009 and 2013 DC Bylaw 1347-2013
- Eligible uses are residential and non-residential uses that pay DCs and are third party certified as having met Tier 2 requirements of the TGS program (up to 20% or Tier 2 cap, whichever is less)
- >15% of residential developments strive for Tier 2; 20 certified projects; 130 participating