Climate Action for a Healthy, Equitable and Prosperous Toronto

Parks & Environment Committee
May 4, 2017

Re: PE19.4
Cities that collaborate with other actors are able to deliver twice as many climate actions.”

- C40 Cities/ARUP
Toronto’s Emission Sources

- Buildings: 53%
- Transportation: 35%
- Waste: 11%
- Fugitive: 1%

Toronto’s Greenhouse Gas Emissions 2014
BUSINESS-AS-PLANNED WILL MISS TORONTO’S 2050 TARGET

- 2020 target: 19 MT/year
- 2050 projection: 14.1 MT/year

TransformTO
BUSINESS-AS-PLANNED WILL MISS TORONTO’S 2050 TARGET

- **2020 target**: 19 MT/year
- **2050 projection**: 14.1 MT/year
- **GAP**: 8.7 MT/year by 2050
- **2050 target**: 5.4 MT/year
THE GOOD NEWS: WE CAN CLOSE THE GAP

Low-carbon actions can close the 8.7 MT gap

TransformTO Low-Carbon Scenario

- Improved building energy efficiency: 3.86 MT
- Electric Vehicles: 2.62 MT
- Community energy: 1.10 MT
- Increased waste diversion: 0.36 MT
- Active transportation & transit: 0.27 MT
- Others: 0.45 MT
### LONG-TERM LOW-CARBON GOALS

<table>
<thead>
<tr>
<th>Goal</th>
<th>Target</th>
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<tbody>
<tr>
<td>Reduction in GHG emissions by 2030 as an interim target</td>
<td>65%</td>
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<tr>
<td>Of new buildings are near zero GHG emissions by 2030</td>
<td>100%</td>
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<tr>
<td>Of existing buildings are retrofitted by 2050</td>
<td>100%</td>
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<tr>
<td>Of energy use from renewable or low-carbon sources by 2050</td>
<td>75%</td>
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<tr>
<td>Of total floor space uses to low-carbon thermal energy by 2050</td>
<td>30%</td>
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<tr>
<td>Of transportation uses low or zero-carbon energy by 2050</td>
<td>100%</td>
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<tr>
<td>Of trips under 5 km city-wide walked or biked by 2050</td>
<td>75%</td>
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<tr>
<td>Of waste is diverted in all sectors by 2050</td>
<td>95%</td>
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</tbody>
</table>
100% of new buildings are near zero GHG emissions by 2030

100% of existing buildings are retrofitted by 2050 where technically feasible
NEW ENERGY MIX

75% of energy use from renewable or low-carbon sources by 2050

30% of total floor space connected to low-carbon thermal energy by 2050
LOW-CARBON TRANSPORTATION

100% of transportation uses low or zero-carbon energy by 2050

75% of trips under 5 km city-wide walked or biked by 2050
95% of waste is diverted in all sectors by 2050
LOW-CARBON CITY LEADERSHIP GOALS

- All new City-owned facilities to be near zero greenhouse gas emissions by 2026
- Retrofit all City-owned buildings where technically feasible by 2040
- 24 MW of renewable energy capacity on City-owned property by 2020
- Transition 45% of City-owned fleet to low-carbon vehicles by 2030
- Achieve net zero waste at all City-owned facilities by 2030
- Generate 1.5 Gigajoules of energy annually from biogas by 2030
- Become a Canada Top 100 Greenest Employer by 2020
GUIDING PRINCIPLES OF LOW-CARBON ACTION

• Advance **social equity**
• Improve **affordability** particularly for vulnerable populations
• Contribute to **poverty reduction** and protect low-income residents and Enhance and strengthen the **local economy**
• Maintain and create **good quality local jobs**
• Improve **public health**
• Create **resilient** communities and infrastructure
EXPLORING TORONTO’S CONSUMPTION GHG EMISSIONS

Scope 3

Scope 2

Scope 1

SECTOR BASED EMISSIONS

CONSUMPTION BASED EMISSIONS
REPORTING AND IMPLEMENTATION PLANS

Every 2 years: update on TransformTO key performance indicators

Every new term of Council: Progress towards City of Toronto low-carbon leadership goals, and KPIs

Every new term of Council: Revisions and additions to implementation plan for that term
1. Implement existing low-carbon policies, plans and programs

2. Pick up the pace by implementing the TransformTO Report #1 strategies approved in 2016

3. Start three acceleration campaigns that embrace a multi-benefits approach
REPORT #1 STRATEGIES

- Supporting energy efficiency in buildings
- Leading by example
- Raising the bar for new construction & low carbon community energy planning
- Engaging and collaborating with residents stakeholders
- Advancing sustainable transportation
1. Mobilize Low-Carbon Neighbourhoods

- Advance best practices in neighbourhood-based engagement;
- Cultivate local leaders who can support climate actions;
- Identify how TransformTO initiatives could improve affordability and support the City's poverty reduction and social development strategies;
- Explore how neighbourhood-scale TransformTO initiatives could enhance community resilience;
- Take action with 3 to 5 quick start projects.
2. Prepare for Electric Mobility

- Co-develop an electric vehicle (EV) transition strategy for Toronto;
- Develop an electric vehicle charging infrastructure strategy;
- Identify best practices in EV preparedness to ensure equitable outcomes for all residents;
- Prioritize EV approaches that maximize community benefit;
- Launch quick start projects to test implications of EV use for local grid;
- Explore how EVs could enhance community resilience.
3. Develop the Workforce for High-Performance Buildings

- Create an existing buildings energy performance strategy;
- Identify priority approaches to drive community benefits, including an early focus on social housing renewal;
- Co-develop a workforce strategy to support high-performance buildings and create opportunities for people who face barriers to employment;
- Improve resilience of building stock
CONCLUSION

1. Implementing planned actions

2. Starting work immediately on approved Report 1 short-term strategies.

3. Investing in three acceleration campaigns while providing a wide range of community benefits.