



## Policy Direction Highlights - Booklet 7

# TOWARDS A RESILIENT DOWNTOWN

Our climate is changing. Planning for a liveable, competitive Downtown requires us to minimize emissions and build a resilient core that can withstand extreme weather and power outages. The City's Climate Change Action Plan (2007) outlines the City's response to climate change including a target to reduce greenhouse gas emissions by 80% by 2050.

Growth and intensification provides the city with unique opportunities to improve resilience for residents and businesses in the core. The energy and resilience policies proposed for the Downtown Secondary Plan, accompanied by an Energy Strategy, will be essential to the continued success of Toronto's Downtown.

## Downtown Resiliency

J1 J2 J3

Overland flooding can be an issue when a large amount of rain falls within a short time period. Green infrastructure (permeable paving, bioswales, green roofs, trees, green spaces) can assist with the absorption and detention of some of that rainfall, mitigating the impacts of flooding.

Recent severe weather events coupled with power outages have raised concerns about the resiliency of Downtown. Residents living in high rise buildings who rely on electricity for water supply, heating, cooling and ventilation, and elevator use are particularly vulnerable. It is proposed that new multi-unit developments be encouraged to provide back-up power for at least 72 hours.

A key part of resilience is the biodiversity of the landscape – the parks, public realm, trees, green roofs, community gardens, hydro corridors, cemeteries and backyards found within a geographic area. Greater species diversity enhances ecological health and resilience.



Green Roof at City Hall (Credit: City of Toronto)

## J POLICY DIRECTIONS

**J1:** Require the public realm to meet the Green Streets Technical Guidelines where appropriate and encourage new development to incorporate green infrastructure such as permeable paving, trees, bio-swales, and green roofs in order to absorb stormwater and reduce the urban heat island effect.

**J2:** Encourage new multi-unit residential buildings to provide additional back-up power in accordance with the 'Minimum Back-up Power Guidelines for Multi-Unit Residential Buildings' in order to improve resilience to area wide power outages.

**J3:** Encourage new development to enhance biodiversity through planting varieties of species and creating habitats at grade and on rooftops.

## Towards a Low Carbon Downtown



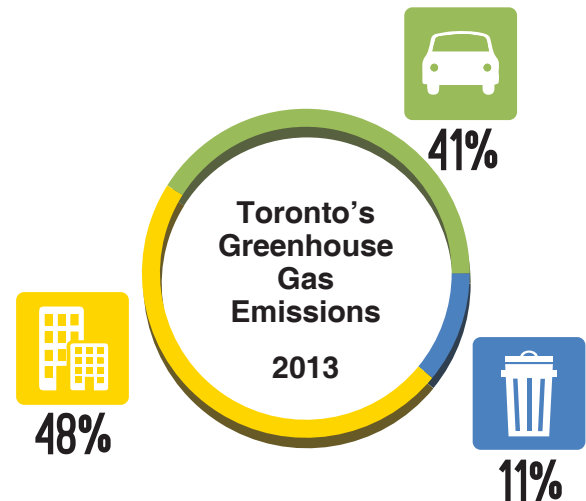
In the 2007 Climate Change Action Plan, Toronto set a greenhouse gas (GHG) emission reduction target of 30% over 1990 levels by 2020 and 80% by 2050. Getting to the 2020 target is the subject of the November 2016 report to Council entitled 'Transform TO'. Achieving this target requires innovative approaches.

Distributing low carbon energy or other renewable energy through small-scale district energy systems will produce additional efficiency while reducing GHG emissions. District energy systems also provide the ability to switch to new fuel sources over time to displace natural gas.

Downtown is currently facing an 'electricity crunch' with increased demand resulting from growth. Investments in new energy infrastructure, conservation and demand management requirements and local distributed generation projects have provided some relief. The Deep Lake Water Cooling System has been particularly successful through its

use of cold Lake Ontario water to cool 60 Downtown buildings but is at capacity. It is proposed that the Deep Lake Water Cooling system and other district energy systems be expanded in the future to help reduce electricity demand.

There is also the opportunity for new buildings to be designed to be as energy efficient as possible with net zero emissions and energy use using technology, building materials, and building positioning among others.



## J POLICY DIRECTIONS

**J4:** Identify opportunities for low-carbon energy capture/recovery/sharing from infrastructure sources such as sewers and power stations for transit.

**J5:** Encourage new buildings to be designed for connection to an existing or planned district energy system in accordance with 'Design Guideline for District Energy-Ready Buildings'.

**J6:** Expand Deep Lake Water Cooling and other existing district energy systems to help reduce electricity demand.

**J7:** Encourage new large developments to target net zero emissions and energy use.

**J8:** Encourage all new development to meet Tier 2 of the Toronto Green Standard.

## Have Your Say

- How do you think these policies will improve Downtown?
- What policies would you change? How?
- Is anything missing?

---

---

---

---

---

---

---

---

---

## Have you met our Avatars?



**Peter**

58 years old | Takes transit to work Downtown  
Owns a house | Enjoys the arts scene Downtown

"As an employee in Toronto's electricity sector, I know the pressures on our electricity grid. That's why I'm glad to see policy proposals that promote district energy and Deep Lake Water Cooling expansion as alternative power sources."