Five Year Business Plan
(2014-2018)

Who we are

Core Objectives
- Reduce Emissions to the Environment
- Realize Savings through Energy Conservation & Demand Management
- Energy Security & Supply
- A Resilient City

Context

Our Initiatives

In the News

October 23, 2013

Parks & Environment Committee
Five Year Business Plan
(2014-2018)

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Parks & Environment Committee
Who we are

Merger

Toronto Environment Office + Energy & Strategic Initiatives = Environment & Energy Division

Vision
lead the development and implementation of innovative environmental and energy policies and programs, and inspire citizens, businesses, organizations and other stakeholders to work with City staff to make Toronto North America's most environmentally sustainable city.

Mission

Who we are
Implement energy efficiency options in industrial, commercial, institutional and multi-residential buildings, demand response, district energy, energy efficiency standards and financing program implementation.

Design and implementation of energy efficiency retrofits in City facilities, track and report on the City's energy use, procurement of energy for City operations; implementation of waste management programs in City facilities.

Develop and implement environmental and energy policies, programs, and major community and corporate strategic plans.

Develop partnerships with a variety of stakeholders, to deliver programs that engage Toronto residents, community groups and businesses in taking action to green our city.

Design, implement, maintain, monitor and report on the installation of renewable energy systems in City facilities.

Conduct research to inform the development of policies and programs. Coordinate all mandatory Federal, Provincial and Municipal regulatory reporting on all emissions to land, air and water.
Key strategies include:

• Climate Change Action Plan
• Sustainable Energy Strategy
• Climate Adaptation Strategy
Merger

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lead the development and implementation of innovative environmental and energy policies and programs, and inspire citizens, businesses, organizations and other stakeholders to work with City staff to make Toronto North America's most environmentally sustainable city.
Mission

provide corporate leadership, coordination and accountability for environment and energy sustainability outcomes
Deliver Results
Our initiatives will deliver tangible, measurable results.

Innovate
We will recognize opportunities and challenges and embrace change.

Add value
Our initiatives will contribute to achieving the long term vision for Toronto.

Be Professional
We will provide knowledgeable, unbiased advice to senior management and Council.

Be Rigorous
Our recommendations will be based on detailed business cases and extensive measurement, verification, research and analysis.

Engage the community
Our activities will be informed by dialogue with the citizens and businesses of Toronto.
Context

In the News
Downtown Toronto's pace of population growth triples, outpacing suburbs as Echo Boomers flock towards urban centre report

Megan O'Toole | Jan 22, 2013 3:55 AM ET | Last Updated: Jan 24, 2013 1:51 PM ET
More from Megan O'Toole | @megan_otoole
Six Canadian cities are among the top 10 in North America for the number of high-rises and skyscrapers being built, a finding that illustrates just how far the construction markets in Canada and the United States have diverged.

Toronto tops the list by a margin that has widened over the past year. Canada’s most populous city now...
can’t imagine in a modern society how we’re not able to keep our power network running. Why haven’t we made it a priority?”

The city’s budget chief, councillor Mike Del Grande, says he has had two transformers stolen through street. Anticipating trouble with the grid, he bought a gas-run generator for his home, which he uses to power his personal computer and laptop. He says he can’t rely on the electricity grid for his work, and has been forced to pay for the generator’s fuel and maintenance cost out of pocket.
Ontario smart meter. (Dave Abel/Toronto Sun files)

TORONTO - Get ready to get zapped. Again.

Ontario hydro prices as of Nov. 1 — a move expected to add $4 to the average consumer’s monthly electricity cost and 3% to the total bill.
No new nuclear planned for Ontario, Liberals say

BY ANTONELLA ARTUSO, QUEEN'S PARK BUREAU CHIEF

FIRST POSTED: THURSDAY, OCTOBER 10, 2013 02:56 PM EDT | UPDATED: THURSDAY, OCTOBER 10, 2013 03:02 PM EDT
Cities can plan now for serious climate change impact

City infrastructure is the most vulnerable element of our economy and communities.

By: Jason Thistlethwaite Published on Mon Nov 19 2012

Toronto’s infrastructure is the city’s first line of defence but also its greatest vulnerability to
Toronto’s July flood listed as Ontario’s most costly natural disaster

Insurance Bureau of Canada says property damage caused by storm that swamped the GTA on July 8 is more than $850 million.
Mayor Ford urges conservation with power grid ‘hanging on by a thread’

A woman wades through flood water on Lakeshore West during a storm in Toronto.

Torontonians weren’t able to conserve enough power in the wake of the storm to prevent Toronto Hydro from cutting off their power.
Air pollution causes cancer, says World Health Organization

Hamilton Spectator
LONDON What many commuters choking on smog have long suspected has finally been scientifically validated: Air pollution causes lung cancer.

The International Agency for Research on Cancer declared late last week that air pollution is a carcinogen, alongside known dangers such as asbestos, tobacco and ultraviolet radiation. The decision came after a consultation by an expert panel organized by IARC, the cancer agency of the World Health Organization, which is based in Lyon, France.

"We consider this to be the most important environmental carcinogen, more so than passive smoking," said Kurt Straif, head of the IARC department that evaluates cancer-causing substances.

IARC had previously deemed some of the components in air pollution such as diesel fumes to be carcinogens, but this is the first time it has classified air pollution in its entirety as cancer causing.

The risk to the individual is low, but Straif said the main sources of pollution are widespread, including transportation, power plants, and industrial and agricultural emissions.

Air pollution is a complex mixture that includes gases and particulate matter, and IARC said one of its primary risks is the fine particles that can be deposited deep in the lungs.

"These are difficult things for the individual to avoid," he said, observing the worrying dark clouds from nearby factories that he could see from his office window in Lyon. "When I walk on a street where there's heavy pollution from diesel exhaust, I try
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- A Resilient City
Our Initiatives

Engaging Residents & Businesses
Environment & Energy Leadership
Outreach and Education
Policy Development & Implementation
Coordination & Strategic Planning
Reporting & Evaluation
Service Delivery & People Management
Engaging Residents & Businesses
Conservation & Demand Management Program

Results (cumulative)

- 2,114 Projects completed
- 31,000 Person years of employment
- $268 Million utility cost savings
- 91 MW Electrical demand reduction
- 510,000 Tonnes of CO₂ emissions reduced
Projects

Legend
- Municipal (137)
- Academic (171)
- Social (51)
- Health Care (67)

Estimated (kW)
- 0 - 100
- 101 - 250
- 251 - 500
- 501 - 1000
- 1001 - 10000

City_Wards

ABCDS
- City Hall
- EX Place
- Facilities Management
- TCHC
- TTC
- Toronto Water
- District Energy potential locations

Sector
- ACAD
- HEALTH
- MFRB-NFP
- MFRB-PUB
- MUN
- SOC

Diameter
- 0.5 km
- 1.0 km
- 1.5 km

BBP-NC

Estimated facilities management project locations.
• 4,000 hours of service provided by Live Green Toronto volunteers in 2013
• 150 public outreach events each year
• 30,000 residents and 450 businesses participate in the Membership Card program
• 80 partners/businesses, representing 250,000+ commuters

• Delivered in partnership with Metrolinx
• 65 person years of employment

• 240,000 square meters of roof space retrofitted (about 44 football fields)
A few of our Partners

- TD
- One Queen Street East
- Bay Adelaide Centre
- Evergreen
- The Hudson's Bay Centre
- Top Drawer Creative Inc.
- Exhibition Place
- Green
- Gistex Inc.
- Toronto Hydro
- University Health Network
- FCP
- OPA
- Queen's Quay Terminal
- Ontario Power Authority
- Redefining First
- Ontario Power Generation
- Liberty Village
- SickKids
- Urban Space
- CBC Radio-Canada
- Manulife Financial
- Brookfield Place
- Exchange Tower
- Metrolinx
- Harbourfront Centre
Environmental & Energy Leadership by Example

Renewable Energy at City Facilities
- Joint Solar PV program with Toronto Hydro > 1 MW
  - 10 projects approved
  - Additional projects in application stage

Energy Retrofits at City Facilities
- Projects (500+ buildings)
  - Retrofits pay for themselves
- Results:
  - $5 million annual savings
  - 58 million kWh saved
  - 6,000 kW demand reduction
  - 2.2 million m³ of natural gas reduced
  - 18,000 tons GHG reduced

Resilient City Working Group
- High level evaluation of potential risks
- Actions required to mitigate and manage risks
- Present to Council in December 2013
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Outreach & Education

**Community Events**
- 150+ outreach events per year
- Live Green Toronto Festival attracts over 40,000 people

**Community Energy Plans**
- Completed: Lawrence Allen and Mimico
- In progress: Scarborough Centre, Etobicoke Centre, Lower Yonge Precinct

**YEGEN TEAM**

Engage staff at each major City building in greening their workplace.

Generate ideas and implement water conservation and solid waste diversion initiatives.
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Policy Development & Implementation

Environment & Energy Advisory Group
- A component of the City Manager's Corporate Strategic Plan
- Advises CCO on key environmental and energy issues

Residential Energy Retrofits through LICs
- Phase one (2014 launch)
- 2,000 residential properties (single-family, multi-residential)
- Reduce energy consumption by 20% – 50%
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Coordination & Strategic Planning

Cross-corporate coordination
- Executive Environment Team
- Resilient City Working Group
- Clean Air Council
- Civic Action

Coordinate City input to external policy/regulations
- Regional Electricity Plan
- Ontario’s Long Term Energy Plan
- Conservation First consultation
- Regional Energy Planning consultation
- Ontario Feed-in-Tariff
Cross-corporate coordination

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Reporting & Evaluation

Regulatory Reporting
Where the Environment & Energy Division is the lead, ensure that the City complies with all mandatory Federal, Provincial, and Municipal regulatory reporting requirements.

Sustainable Neighbourhoods & Local Air Quality Improvement Initiative
- Local Air Quality Studies completed for Wards 30 & 32
- Wards 5 & 6 will be completed in 2013
- 12 to 15 additional Wards will be completed in 2014

Assessment of Energy Needs
On Nov 1, 2012 City Council requested the City Manager to report on the energy and electricity needs associated with:
- City's Official Plan
- Economic Growth Plan
Regulatory Reporting

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Service Delivery & People Management

Establish service and reporting standards

Rigour
- Business cases
- Critical thinking

People Plan
- Diverse workforce
- Talent management
- Internships/Urban fellows
Establish service and reporting standards
Rigour

- Business cases
- Critical thinking

Business Case: District Energy System at Exhibition Place

- Leadership in local energy solutions: converting challenges into opportunities
- Realize full potential of existing under-utilized energy assets
- Stay ahead of new development
- Advance City objectives in preparation for 2015 Pan AM Games
- Generate attractive rate of return on capital investment

Overview
The project is to interconnect two existing isolated energy plants; the steam plant at the Coliseum Complex and the...
People Plan

• Diverse workforce
• Talent management
• Internships/urban fellows
Measuring Our Success

- Environmental performance
- Energy performance
- Economic and financial performance
- Community engagement performance
- Operational Performance
Our Approach

• Lead by example
• Incorporate local energy & environmental solutions
• Seek partnerships
• Create value for the City
Create Value for the City

- Economic benefit
- Energy security
- Environmental benefit
“The trouble with our times is that the future is not what it used to be.”

Paul Valery (French Poet, Essayist and Critic, 1871-1945)