



AGENDA

ENVIRONMENTAL ADVISORY COMMITTEE

THE CORPORATION OF THE CITY OF MISSISSAUGA

www.mississauga.ca

TUESDAY, MARCH 6, 2012 – 9 A.M.

COUNCIL CHAMBER

SECOND FLOOR, CIVIC CENTRE

300 CITY CENTRE DRIVE, MISSISSAUGA, ONTARIO, L5B 3C1

www.mississauga.ca

Members

Councillor George Carlson, Ward 11 (CHAIR)
Michael DeWit, Citizen Member (VICE-CHAIR)
Councillor Jim Tovey, Ward 1
Councillor Frank Dale, Ward 4
Hassaan Basit, Citizen Member
Dr. Brad Bass, Citizen Member
Sophia Chalaidopoulos, Citizen Member
Peter Orphanos, Citizen Member
Maureen Ricker, Citizen Member

Agency Liaisons

Elaine Hanson, Sheridan College, Hazel McCallion Campus
Lucia Hlasna, University of Toronto at Mississauga
Lucas Krist, Peel Environmental Youth Alliance
Lea Ann Mallett, EcoSource

CONTACT PERSON: Julie Lavertu, Legislative Coordinator
Office of the City Clerk, Telephone: 905-615-3200, ext. 5471; Fax 905-615-4181
Julie.Lavertu@mississauga.ca

CALL TO ORDERAPPROVAL OF AGENDADECLARATIONS OF DIRECT (OR INDIRECT) PECUNIARY INTERESTPRESENTATIONS/DEPUTATIONS

- A. Ella Basic, Public Affairs Consultant, with respect to Earth Days 2012.
- B. Jane Darragh, Planner, Park Planning Section, and Gavin Longmuir, Manager, Forestry, with respect to the proposed amendments to Tree Permit By-Law 475-05.
- C. Item 2 Rajan Balchandani, Manager, Energy Management, and Samina Mehar, Energy Management Coordinator, with respect to energy benchmarking, energy awareness, and retro-commissioning (EBEAR) program.

MATTERS TO BE CONSIDERED

- 1. Approval of Minutes of Previous Meeting

Minutes of the meeting held February 7, 2012.

RECOMMEND APPROVAL

- 2. Energy Benchmarking, Energy Awareness, and Retro-Commissioning (EBEAR) Program

Corporate Report dated February 21, 2012 from the Commissioner of Corporate Services and Treasurer with respect to energy benchmarking, energy awareness, and retro-commissioning (EBEAR) program.

RECOMMENDATION

That the Corporate Report dated February 21, 2012 from the Commissioner of Corporate Services and Treasurer entitled "Energy Benchmarking, Energy Awareness, and Retro-Commissioning (EBEAR) Program" be received and that a deputation on this matter be made to General Committee in the near future.

RECOMMEND APPROVAL

3. Approval of Drive-Throughs in the City of Mississauga

Memorandum dated February 21, 2012 from Mayor Hazel McCallion with respect to the approval of drive-throughs in the City of Mississauga.

DIRECTION REQUIRED4. DRAFT Upcoming Agenda Items and Environmental Advisory Committee (EAC) Role

Chart from Environmental Management staff with respect to DRAFT upcoming agenda items and Environmental Advisory Committee (EAC) role.

DIRECTION REQUIRED5. Status of Outstanding Issues from the Environmental Advisory Committee (EAC)

Chart dated March 6, 2012 from Julie Lavertu, Legislative Coordinator, Environmental Advisory Committee, with respect to the status of outstanding issues from the Environmental Advisory Committee (EAC).

RECOMMEND RECEIPTINFORMATION ITEMS6. Resignation from Sophia Chalaidopoulos, Environmental Advisory Committee Citizen Member

Email message dated February 10, 2012 from Sophia Chalaidopoulos, Environmental Advisory Committee Citizen Member, advising Julie Lavertu, Legislative Coordinator, Environmental Advisory Committee, of her resignation from the Environmental Advisory Committee, effective March 7, 2012.

RECOMMEND RECEIPT

DATE OF NEXT MEETING – Tuesday, April 10, 2012 at 9 a.m., Council Chamber

OTHER BUSINESSADJOURNMENT

MAR 06 2012



Minutes

ENVIRONMENTAL ADVISORY COMMITTEE

THE CORPORATION OF THE CITY OF MISSISSAUGA
www.mississauga.ca

TUESDAY, FEBRUARY 7, 2012 – 9:03 AM

COUNCIL CHAMBERS
SECOND FLOOR, CIVIC CENTRE
 300 CITY CENTRE DRIVE, MISSISSAUGA, ONTARIO, L5B 3C1
www.mississauga.ca

Members Present: Councillor George Carlson, Ward 11 (CHAIR)
 Michael DeWit, Citizen Member (VICE-CHAIR)
 Councillor Frank Dale, Ward 4
 Dr. Brad Bass, Citizen Member
 Sophia Chalaidopoulos, Citizen Member
 Maureen Ricker, Citizen Member

Members Absent: Councillor Jim Tovey, Ward 1
 Hassaan Basit, Citizen Member
 Peter Orphanos, Citizen Member
 Elaine Hanson, Sheridan College (Mississauga Campus)
 Lea Ann Mallett, Executive Director, EcoSource

Agency Liaisons Present: Lucia Hlasna, University of Toronto at Mississauga
 Lucas Krist, Peel Environmental Youth Alliance
 Diana Yoon, Peel Environmental Youth Alliance

Staff Liaisons: Brenda Osborne, Manager, Environmental Management
 Andrea J. McLeod, Environmental Coordinator
 Mary Bracken, Project Lead, Living Green Master Plan
 Carmela Radice, Legislative Coordinator

CALL TO ORDER -9:03 a.m.APPROVAL OF AGENDA

That the minutes of February 7, 2012 be approved as presented.

Approved (Councillor F. Dale)

DECLARATIONS OF DIRECT (OR INDIRECT) PECUNIARY INTEREST NilPRESENTATIONS/DEPUTATIONS

Note: Brian Crombie, Co-chair of the Mississauga Summit combined the Five Big Ideas from the Mississauga Summit and A Meeting of Minds: Charting a Brave Bold Future into one presentation.

- A. Brian Crombie, Co-chair of the Mississauga Summit provided information on the Five Big Ideas from the Mississauga Summit which was Waterfront, Human Services, Diversity and Inclusion, Post Secondary Education and Jobs.

Brian Crombie provided a brief description of the five "asks" that came out of the Mississauga Summit:

- Establish and fund a waterfront development
- Establish and support a Mississauga Innovation Leadership Alliance (MILA)
- Financially support a go-to hub innovation Centre
- Support the neighbourhood
- Diversity/Inclusion initiatives

Mr. Crombie also outlined the outcomes of the Neighbourhood Innovation, Diversity and Inclusion Post Secondary Education and Jobs:

- Local resident leadership will be identified, developed and supported
- Residents will be more connected with each other to create supportive networks of common interests
- Increase and promote capacity and opportunities for social inclusion and cohesion
- Neighbourhoods will be vibrant and resilient
- Improve access to services
- Diminish racism
- Civic participation and leadership
- Improve quality of life
- Promoting post secondary education; University, college and apprenticeships

- Other municipalities around the world are in the competitive market because they are investing in post secondary education
- Making sure that people are being trained for the jobs of tomorrow
- To have a “Go-to” place for mentoring support, funding support, talent support, networking opportunities and educational workshops
- “Concierge” for accessing numerous diverse resources
- Connect innovators to first customers, implementation partners and global markets
- Monitor emerging master plans to ensure viability and avoid a future tax burden on the Waterfront plan
- Acquire, control or assemble the land necessary for the Waterfront plan
- Manage other’s land to ensure viable outcomes for those landowners within the Waterfront plan goals
- Ensure that a balance of public benefit and private fairness is maintained in the Waterfront pan goals
- Measure the success of each outcome as a whole

Members of the Committee asked questions about the presentation concerning the environmental aspect to the five big ideas.

Mr. Crombie responded to the questions on the environmental aspects of the ideas specifically to the waterfront plans.

EAC-0001-2012

That the deputation given by Brian Crombie, Co-Chair, Mississauga Summit, with respect to Mississauga Summit Big Ideas and A Meeting of Minds: Charting a Brave Bold Future be received.

(EAC-0001-2012)

- B. Mary Bracken, Project Lead, Living Green Master Plan provided an update of the Living Green Master Plan and presented a video from the event held on November 23, 2011.

EAC-0002-2012

That the deputation given by Mary Bracken, Project Lead, Living Green Master Plan with respect to a DVD presentation and an update of the Living Green Master Plan on November 23, 2011 be received.

(EAC-0002-2012)

MATTERS TO BE CONSIDERED1. Approval of Minutes of Previous Meeting

That the minutes of November 29, 2011 be approved as presented.

Approved (Dr. B. Bass)

2. Mississauga Summit Big Ideas, A Meeting of Minds: Charting a Brave Bold Future

Brian Crombie, Co-Chair, Mississauga spoke to the Mississauga Summit Big Ideas, A Meeting of Minds: Charting a Brave Bold Future.

The vision of the waterfront is to have a vibrant place to integrated diverse spaces celebrated for its groundbreaking contribution to the environmental, economic, social and physical wellbeing of all residents. Waterfront redevelopment sites as Brownfield sites converted to mixed use which would conform to community environmental priorities. It is to restore and preserve water quality, access to the waterfront, air quality, culture, natural heritage and to have residents feel inclusive.

In the future the waterfront development would like for residents to touch, hear, feel and see the water by a greener waterfront, waterside trails, more bicycle lanes, new parks, and public transit closer to the waterfront and possibly using the marine to support tourism.

Dr. Brad Bass, citizen member indicated that the neighbourhood innovation has more of an environmental benefit then the waterfront plan as many residents live in neighbourhoods and it will decrease private transportation.

Mr. Crombie responded by indicating that there is an Innovation Leadership Alliance meeting on Friday and maybe a member of the Environmental Advisory Committee could attend that meeting.

Mary Bracken indicated that she attended the Partners in Project Green steering committee meeting and the Committee is also looking at the idea.

Members of the committee thanked Mr. Crombie for his presentation.

RECEIVED (Councillor F. Dale)

3. Earth Hour 2012

Andrea J. McLeod Environmental Coordinator provided a background of last years Earth Hour and indicating that they will be building off of last years great success. Ms. McLeod indicated that there will be cross promotion with the City of Mississauga Earth Day's campaign.

Lucas Krist, Peel Environmental Youth Alliance (PEYA) suggested to promote Earth Hour 2012 on City bus signs.

RECEIVED (L. Krist)

EAC-0003-2012

That the memorandum dated January 20, 2012 from Andrea J. McLeod, Environmental Coordinator with respect to 2012 Earth Hour be received.
(EAC-0003-2012)

4. Responses to Inquiries Raised at 2011 Environmental Advisory Committee Meetings

Memorandum dated December 19, 2011 from Brenda E. Osborne, Manager, Environment, responded to inquiries raised at 2011 Environmental Advisory Committee meetings.

There was no discussion regarding this matter.

RECEIVED (M. Ricker)

EAC-0004-2012

That the memorandum dated December 19, 2011 from Brenda E. Osborne, Manager of Environment with respect to Responses to Inquiries Raised at 2011 Environmental Advisory Committee meetings be received.
(EAC-0004-2012)

INFORMATION ITEMS

5. Use of Recycled Materials within the Transportation and Works Department

This Corporate Report was considered by General Committee at its meeting on November 16, 2011 and its recommendation was adopted by Council. It is included on the Environmental Advisory Committee's agenda for information.

There was no discussion regarding this matter.

RECEIVED (Councillor F. Dale)

EAC-0005-2012

That Corporate Report dated October 27, 2011, from the Commissioner of Transportation and Works with respect to the Use of Recycled Materials within the Transportation and Works Department, be received for information.
(EAC-0005-2012)

OTHER BUSINESS(a) Idling By-law

Brenda E. Osborne , Manager of Environment spoke to the Idling By-law and indicated that it is being proactively enforced.

(b) Cancellation of Route 33 & 33a

Luas Krist, PEYA spoke to the petition going to Council on February 8, 2012 for the cancellation of route 33-33A. He indicated that he went through the bus ridership and it does not make any sense from an environmental stand point to keep route 33 and 33a going. Chair Carlson indicated that transit twice a year reviews their routes and makes minor changes.

(c) Agenda Items

Michael DeWit, Vice Chair asked what is being mapped out for agenda items from now until summer time. He indicated that a presentation on the transportation strategy would be beneficial to the Committee. Chair Carlson indicated that transportation is always willing to come in and make a presentation.

Brenda E. Osborne, Manager of Environment indicated that the Living Green Master Plan work plan will be the focus for the Environmental Advisory Committee.

(d) Nuisance Weeds and Plants

Dr. Brad Bass, citizen member spoke to developing policies on the nuisance weeds and plants to encourage residents to develop ecosystems on their properties.

Mary Bracken, Project Lead for the Living Green Master Plan indicated that the City has a Nuisance Weed and Tall Grass Control by-law and she also indicated that the by-law is scheduled to be revised as per the Living Green Master Plan.

Maureen Ricker, citizen member indicated that she is chair of the Streetscape Mississauga offering a garden contest throughout the City of Mississauga. Streetscape is hoping to raise public awareness and profile about the contest.

(e) Fertilizer

Lucas Krist, PEYA asked if the City can limit the use of cosmetic fertilizer for residential or commercial lawns.

Dr. Brad Bass, citizen member indicated that the Conservation authorities, Province and Federal government have a stronger role on having input, discussion and implementation of the new Act. Chair Carlson indicated that getting the message out there is important maybe we can inquire if the new Act is concentrating on the cosmetic use or the licence use of fertilizer. Brenda E. Osborne, Manager of Environment indicated that they will look into the issue. Michael DeWit, Vice Chair spoke to the more regulatory point of view and how it is not being enforced but the practical point of view which is the more important view is educating the residents on the use of fertilization. Dr. Brad Bass, citizen member asked if staff could clarify what the Committee's options are and what powers the Committee has under the *Municipal Act*.

Andrea J. McLeod, Environmental Coordinator indicated that there is a Storm Sewer by-law that deals with phosphate and that a group could present to the Committee at a future meeting on how to educate residents on the use of fertilizers. Chair Carlson indicated that educating the residents is a great starting point in these situations and requested a report back.

Brenda E. Osborne, Manager indicated that they would report back on the issue with either a presentation or a report back with comments. Ms. Osborne suggested that staff would prepare a calendar of agenda items.

DATE OF NEXT MEETING -- Tuesday, March 6, 2012 at 9 a.m., Council Chambers

ADJOURNMENT - 10:26 a.m.
(L. Hlasna)



Corporate Report

Clerk's Files

Originator's
FilesEnvironmental Advisory
Committee

MAR 06 2012

DATE: February 21, 2012

TO: Environmental Advisory Committee (EAC)
Meeting Date: March 6, 2012

FROM: Brenda R. Breault, CMA, MBA
Commissioner of Corporate Services and Treasurer

SUBJECT: **Energy Benchmarking, Energy Awareness and
Retro-commissioning (EBEAR) Program**

RECOMMENDATION: That the Corporate Report dated February 21, 2012 from the Commissioner of Corporate Services and Treasurer entitled "Energy Benchmarking, Energy Awareness, and Retro-Commissioning (EBEAR) Program" be received and that a deputation on this matter be made to General Committee in the near future.

BACKGROUND: The City has been implementing energy conservation measures since the early 1990's. A city-wide energy audit of major facilities completed in 2007 provided comprehensive recommendations to reduce electricity, gas and water consumption in the City. Most of the recommendations have either been implemented or are in the process of completion. Reliable records of energy conservation projects implemented since 2004 indicate an electricity saving of 4,400 megawatt hours and natural gas saving of 410,000 cubic metres resulting in utility savings of \$577,000/yr and green house gas reduction of 2500 tonnes/yr.

The new Provincial *Green Energy Act* (2009) requires municipalities to provide corporate energy conservation plans for all municipally owned and operated buildings and to report annually on actual performance against plans. The first report will be due on 1 July 2013 using 2012 energy consumption data. In addition, the City will be required to develop and implement 5 year energy conservation plans for designated facilities (excludes parks and sports-fields) along with a forecast of expected results. The first 5 year energy conservation plan will be due on July 1, 2014.

The new Act will also require the City to update an Energy Consumption and GHG Emission Template on an annual basis to demonstrate the impact of the City's energy conservation plan. Updates are to include information on why these factors have increased or decreased and what measures the City plans to undertake to address increases.

PRESENT STATUS:

Although the City has been able to limit the growth in energy and water consumption, a net increase has been experienced due to new facilities and growth in City services. From 2004 to 2011, electricity consumption increased by 15%, natural gas by 19% and GHG emissions from buildings by 9%.

COMMENTS:

Going forward the City needs an aggressive energy conservation strategy that will help in achieving the ambitious goals for greenhouse gas reduction required by the Living Green Pillar of the Strategic Plan, Peel Climate Change Strategy and the Provincial Green Energy Act. We can no longer rely solely on technology based solutions. It requires a cultural and behavioural shift on behalf of building occupants and operators that will take considerable communication and persuasion.

A proposed new Energy Benchmarking, Energy Awareness and Retro-commissioning (EBEAR) Program was developed late in 2011. The Program highlights are provided in Appendix 1.

The EBEAR Program encompasses three components with a common objective to increase energy performance of city facilities:

- 1) Energy Consumption Benchmarking - A system that benchmarks and sets goals for energy consumption and energy cost reduction over time;
- 2) Energy Awareness - communication and training campaign for building occupants and operations and maintenance staff, promoting energy conservation best practices in their facilities;
- 3) Retro-commissioning (RCx) - A systematic process for identifying less-than-optimal performance in a facility's existing equipment and control systems and making necessary adjustments or enhancements to save energy and cost.

The EBEAR Program along with newer technologies and renewable energy projects will form the basis of future energy conservation plans required by the Green Energy Act.

Successful implementation of this program will require the active support and participation of all City leaders, staff and community members using City facilities. To begin the extensive communication that will be key to achieving this, presentation of the program to the Council is recommended in early 2012. Simultaneously, we also plan to present the Program to divisional leadership teams to encourage active participation at a staff level.

STRATEGIC PLAN: The EBEAR Program supports achievement of the Green Pillar of Mississauga's Strategic Plan long term goal of a "Zero Carbon" City.

FINANCIAL IMPACT: The EBEAR Program is estimated to cost \$110,000 in 2012. No additional funding for this program is required in 2012 as it will be financed through under expenditures in the Energy Management capital budget resulting from grants amounting to \$112,500 that have been received for energy efficiency projects completed in 2010/11.

CONCLUSION:

The EBEAR Program is a step forward in lowering the City's utility costs, improving operational efficiency and contributing to greenhouse gas emission reduction targets.

In addition to technology based solutions, this program provides an integrated approach that will aim to fundamentally change the energy culture and behaviour of facility occupants and staff.

ATTACHMENTS:

Appendix 1: Energy Benchmarking, Energy Awareness and Retro commissioning Program dated December 14, 2011.



Brenda R. Breault, CMA, MBA
Commissioner of Corporate Services and Treasurer

*Prepared By: Samina Mehar, MSc., LEED AP BD+C,
Energy Management Coordinator*

Energy Benchmarking, Energy Awareness & Retro-Commissioning Program

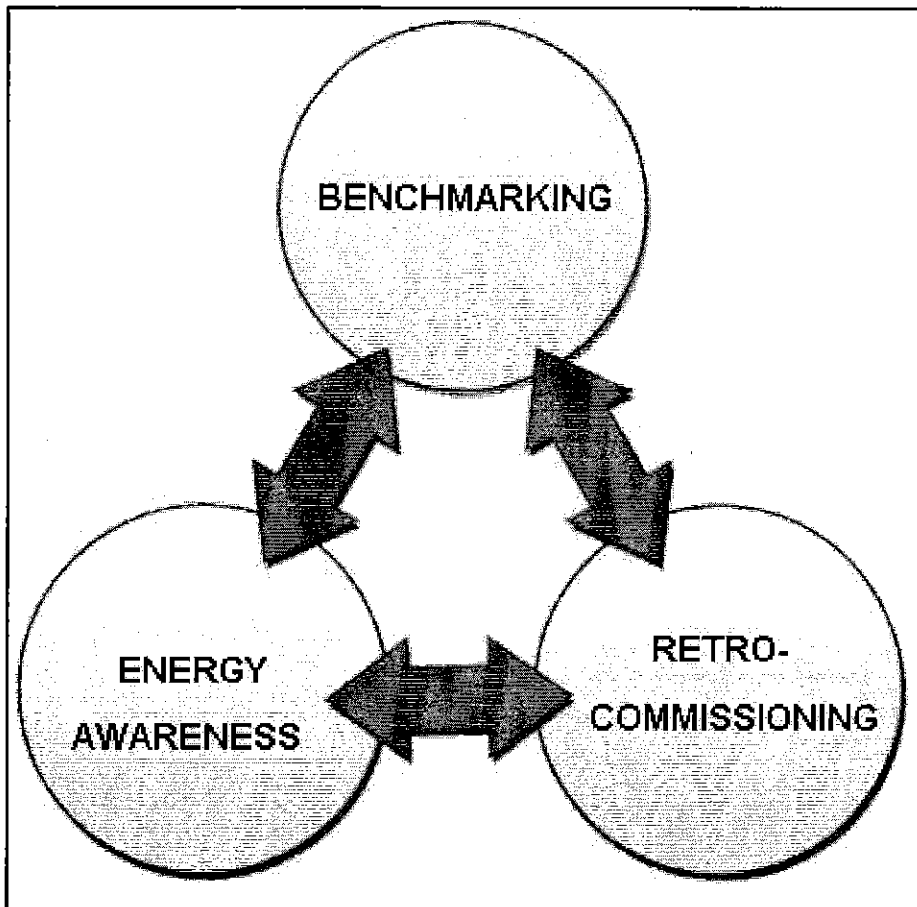


Fig 1: Program Framework

PREPARED BY

Samina Mehar, MSc. Building Science, LEED AP BD+C

**Energy Management Coordinator
Facilities and Property Management**

Dated: 14^h December 2011

Executive Summary

This Energy Benchmarking, Energy Awareness and Retro commissioning Program aim to increase energy performance of city facilities and thereby contribute to the City's Energy Management Plan. The Program outlined here encompasses following three components with a common objective to lower utility costs, improve operational efficiency and contribute to greenhouse gas emission reduction targets.

1. **Energy Consumption Benchmarking** - A system that benchmarks and set goals for energy consumption and reduce energy costs over time
2. **Energy Awareness** - An energy awareness communication and training campaign for building occupants and Operations & Maintenance staff, promoting energy conservation best practices in their facilities
3. **Retro-Commissioning (RCx)** - A systematic process for identifying less-than-optimal performance in a facility's existing equipment and control systems and making necessary repairs or enhancements to save energy and cost.

These components represent ways to further improve energy consumption in City of Mississauga facilities. Figure 1 depicts that Benchmarking, Energy Awareness and Retro-Commissioning Programs are interconnected in their goals and objectives and are foundation steps to an enhanced Energy Management Plan.

The Benchmarking component will compare all facilities and will act as an effective tool to evaluate the outcome of energy awareness and retro commissioning programs as reflected in energy use reduction. The Energy Awareness component has two parts, one is facility staff training and the other is city wide facilities energy awareness campaign using newsletters, website articles and other similar communication methodologies for building occupants and users.

Benchmarking and Retro-Commissioning (RCx) components have similar relationships such that benchmarking will help in identifying and tracking energy saving activities for facility operations as an ongoing outcome of RCx. The results/outcome will help in verifying and updating the Benchmarking component.

Energy Awareness and Retro-Commissioning (RCx) components are connected through facility staff engagement and recognition of energy efficiency efforts. Communicating importance of retro-commissioning and training O&M staff about the best O&M practices will build technical capacity and confidence in operations management.

The Energy Benchmarking, Energy Awareness and Retrocommissioning program plan is developed in a way that these three main components are to be completed concurrently. The established benchmark in component one will help in selecting facility staff for the energy awareness training and buildings for Retro-Commissioning (RCx) program's multi phased implementation. It is proposed that, initially ten buildings will be selected as the program's first phase of buildings. These buildings will be closely monitored for energy consumption improvement and O&M efficiency after both facility staff energy awareness training and RCx programs have been completed for the selected initial scope.

Once lessons are learned from the first phase RCx and Training program implementation, benchmarked facilities will be reviewed to identify other lower benchmarked facilities to replicate RCx and training programs. This program along with energy efficiency improvements with newer technologies and renewable energy projects will form basis of the Energy Conservation Plan from 2013 to 2015 required under the Green Energy Act.

COMPONENT 1: DEVELOP AND IMPLEMENT ENERGY CONSUMPTION BENCHMARKING**General**

Benchmarking City facilities energy consumption compared to each other (with similar facility operations) will help in identifying opportunities for improving energy efficiency of buildings.

Objective

The main objectives of Energy Consumption Benchmarking are to:

- Establish energy use targets in consultation with operations staff
- Review energy improvement progress periodically and refine targets if necessary
- Identify facilities for retro-commissioning that are below benchmark and offer greater opportunity for improvement

Goals		Target
1.1	Establish Baseline	1st Qtr. 2012
	A baseline will be established on the basis of collected and analyzed energy data. This baseline will provide a starting point for setting goals, evaluating future efforts to enhance overall performance. Energy use data will be retrieved from the city's existing energy data management system. Data from AMO benchmarking report and "Mayor's Megawatt Challenge" will be reviewed and compared for best practices energy conservation guidelines development.	
	1.1.1 Set Performance Metrics, Normalize Data and Establish Base Year	
	<ul style="list-style-type: none"> • Total Energy Consumption (ekWh) per square foot of facility space used per year or ekWh/Sq.ft/year is identified as an effective and appropriate metric to express energy performance for the city facilities. • The available energy specific and operational data for all city facilities will be normalized for operating hours, weather, etc so that energy performance of similar facilities and operations can be compared. • The base year or an average of several historical years with most complete and relevant sets of data available will be established for benchmarking. 	
1.2	Analyze Data & Select Scope of Work for the program's first phase	1st Qtr. 2012
	1.2.1 Analyze Data	
	The building function, operations and energy use data collected will be analyzed, compared and categorized for facility energy use patterns and trends.	
	1.2.2 Select first phase Scope of Work	
	Initially ten buildings will be selected for the first phase of buildings for Retro-Commissioning and Energy Awareness training program. They will be selected on the basis of utility data analysis and energy consumption patterns.	
1.3	Establish Benchmarks	1st Qtr. 2012

	<ul style="list-style-type: none"> • Benchmarking will provide a yardstick for evaluating improvement opportunities. Benchmarks will be established on the basis of energy data analysis and energy use trending from earlier steps of this component. • Facility performance will be benchmarked to Past Performance which means comparing current facility energy performance versus its historical performance. • Best Practices guidelines for energy performance will be developed by conducting a qualitative comparison against certain, established practices which are considered to be the best in the industry. Venues for such information are BOMA, Association of Municipalities of Ontario (AMO) and "Mayor's Megawatt Challenge". 	
1.4	Develop Energy Performance Tracking Plan, Set Goals and Establish Agreement on Energy Consumption Benchmarks	2 nd Qtr. 2012
	<ul style="list-style-type: none"> • The energy performance tracking plan will describe baseline of energy performance as well as goals set for the following year and established energy consumption benchmarks. • Potential for improvement will be estimated as a starting point for identifying energy conservation opportunities. • Energy performance goals will be established in consultation with stakeholders and can vary on the basis of specific facility requirements. • Established energy consumption benchmarks will be conveyed to facilities operations staff and other key stakeholders in the organization. 	

COMPONENT 2: DEVELOP AND IMPLEMENT ENERGY AWARENESS TRAINING AND COMMUNICATION PROGRAM

General

Gaining the support and cooperation of key building occupants as well as operations & maintenance staff is an important factor for successful implementation of energy conservation in facilities. Reaching energy improvement goals depends on the awareness, commitment, and capability of people who operate, maintain and use these facilities.

Objective

The main objective of the Energy Awareness Training and Communication Component is to support and reinforce the Corporate Energy Management Plan.

The key objectives are to:

- Help facilities occupants and O&M staff better understand the importance of energy efficiency in terms of reduced operating costs and improved maintenance practices
- Promote the idea that actions of individuals can make a difference
- Encourage facility occupants and staff to develop, sustain and adopt energy-efficient behaviour

Goals		Target
2.1	Plan Energy Awareness Training and Communication Strategy	1 st Qtr. 2012
	<ul style="list-style-type: none"> • The goals of the Energy Awareness Training and Communication Strategy are to have well informed facility operations staff as well as develop communication message to increase citywide energy awareness of facility occupants. • Major training strategies are energy use related operational training and 	

	<p>specialized training on operation and maintenance of building equipment and controls.</p> <ul style="list-style-type: none"> • New communications tools like inter facility competitions and challenges, special events, award programs, information sessions and print materials including newsletters, website updates, pamphlets and brochures, bulletins, posters, signs or stickers and best practice manuals. 	
2.1.1	Establish Training Course Outline & Syllabus	
	<ul style="list-style-type: none"> • Training program outline and course syllabus will be established on the basis of similar training programs conducted by other organizations for improving energy efficiency through facility operations & maintenance best practices. • Roadmap for building occupants energy awareness will also be developed at this stage 	
2.1.2	Assemble a Working Team	
	<p>Members of this working team will include representatives from the following:</p> <ul style="list-style-type: none"> • Energy Management Coordination staff • Facilities Operations and Maintenance staff • Personnel from Communications Division for awareness, public relations and special event planning. • Individuals who have a wide range of skills, knowledge and interests will be appointed as Energy Champions at each facility and will be members of the working team for the facility. These Energy Champions will act as spokespersons for a range of specialized as well as general training/information sessions program. 	
2.1.3	Develop a Communications Plan	2nd Qtr. 2012
	<p>A communications plan will be developed in consultation with the City's Communication Division on the basis of the program objectives and will include</p> <ul style="list-style-type: none"> • List of anticipated social, technical and logistic challenges for the program implementation • Inventory of existing lines of communication and available communication resources. 	
2.1.4	Develop Training Material and Schedules	
	<ul style="list-style-type: none"> • Once an understanding is reached as to what the targeted audience needs to know, training/communication material and delivery schedules will be developed in consultation with existing training facilities within the city. • External training expertise specializing in energy conservation will be hired for specialized training. 	
2.2	Implement Energy Awareness and Training Program	3rd Qtr. 2012
	<ul style="list-style-type: none"> • Energy Awareness Communication Program will be implemented through the tools and activities as planned in the communication plan. • A group of ten facilities will be initially selected for energy conservation training as part of the first phase of the program. The training program will be fine tuned based on the results of this first phase of trainings program and then offered city wide. 	

2.3	Evaluate Energy Awareness and Training Program	4th Qtr. 2012
	<ul style="list-style-type: none"> • The Energy Awareness Communication Program will be evaluated periodically against original program goals and objectives to determine its effectiveness. The indicators to evaluate effectiveness are - what works, what doesn't and which tools and activities best encourage changes in behaviour. • Ongoing evaluations throughout the campaign will provide information needed to adapt the program and plan future activities to achieve desired results. 	
	2.3.1 Report Results	
	<p>Results will be reported citywide about the energy awareness program's progress based on the following evaluation methodologies.</p> <p>Quantitative Evaluations</p> <ul style="list-style-type: none"> • Energy use reports on decrease in the energy costs • Results of survey and awareness questionnaires that will be distributed before and after the campaign and will determine whether the facility occupants and staff have experienced change in their energy efficiency knowledge and awareness. <p>Qualitative Evaluations</p> <ul style="list-style-type: none"> • Short questionnaire and surveys distributed to participants to gauge appropriateness and quality of knowledge delivered through the communication campaign. • Set of evaluation questions asked during training sessions and encourage comments. 	
	2.3.2 Adapt Communications and Training Approach	
	<p>During the course of the campaign, program elements will be adapted if required to better respond to the needs of the target audiences and program objectives. Information collected from the evaluations and observations will help in redirecting and adapting the campaign's communication and training approach.</p>	
	2.3.3 Share Successes	
	<p>As part of the follow-up, city staff will be provided an update of the program's success. Program achievements will be celebrated and designed such that the O&M staff role in reducing energy use is recognized and appreciated. Existing "Energenius" program will be enhanced for recognition and reward.</p>	

COMPONENT 3: DEVELOP RETRO-COMMISSIONING (RCx) PROGRAM

General

Over the years buildings tend to drift away from the original design intent. Deviations from optimized operation strategies result in higher energy consumption. Existing-building commissioning, also known as Retro-Commissioning (RCx), is a process of systematic investigation process for improving or optimizing a building's operation and maintenance.

Retro-Commissioning is a collaborative process that looks at how and why a building's systems are operated and maintained as they are, and then identifies ways to improve overall building performance. As a process, rather than a set of prescriptive measures, RCx adapts to meet the specific needs of each building. Retrocommissioning is known to save up to 15% in energy consumption with a payback of less than 5 years on investment.

Objective

The main objectives of the retro-commissioning program are to:

- Identify and recommend improvements to operational strategies, equipment and maintenance procedures that will result in optimal energy performance and reduction in operating costs
- Ensure that building staff have the knowledge and documentation needed to operate and maintain the building
- Evaluate the building's environmental quality to reduce complaints about occupant comfort

Goals		Target
3.1	Plan Retro-Commissioning (RCx) Program	1 st Qtr. 2012
	The retro-commissioning program will be developed with the goal of reducing energy waste, obtaining energy cost savings, and identifying and fixing existing problems.	
3.1.1	Evaluate RCx Feasibility and Select Scope	
	<ul style="list-style-type: none"> • Retro-commissioning feasibility will be investigated by identifying deficiencies, potential improvements and investigating on the most cost effective "fixes" to implement. • Potential candidate buildings will be identified for RCx on the basis of energy use per square foot and energy consumption benchmarks generated previously in the benchmarking component. A group of ten major buildings will be selected as program's first phase scope. 	
3.1.2	Assemble a Retro-Commissioning Team	
	A retro-commissioning service provider or an in-house retro-commissioning team will be selected. This team will be responsible for achieving the goals defined for the retro-commissioning program.	
3.1.3	Investigate Facility O&M performance and Administer Diagnostic Monitoring/ Tests	
	<ul style="list-style-type: none"> • The assigned retro-commissioning team will conduct an on-site visit, communicate with O&M staff and review current operating conditions at the facility. • It will also review significant problems identified by the building O&M staff and occupants. • Comprehensive diagnostic monitoring and test plans will be developed and administered on the basis of site assessments and findings will be documented for the RCx program plan. 	
3.1.4	Develop Master List of Findings	2 nd Qtr. 2012
	The RCx team will develop a master list of deficiencies and best opportunities for optimizing the energy consuming systems and improving O&M practices. This master will act as significant decision making tool for the RCx team. All findings from the investigation phase will be documented in this master list.	

	3.1.5	Develop RCx Plan	
		The last step of this Retro-commissioning investigative phase is to develop RCx plan on the basis of master list of findings. The scope of work defined in the RCx plan will document mutually agreed outline of the RCx process to be undertaken, a schedule of activities, roles of team members, sample forms and templates. Operating and capital budgets for the RCx will be requested at this stage.	
3.2	Implement Retro-Commissioning Program		3rd Qtr. 2012
	3.2.1	Implement the RCx Program	
		Selected retro-commissioning measures and recommendations from the developed RCx plan will be implemented. RCx process will be carried out by either in-house O&M staff or the retro-commissioning provider on the basis of the facility specific RCx plan.	
	3.2.2	Conduct Final Adjustments	
		Once an improvement or "fix" is completed, retesting to confirm that the equipment is now operating properly will be done through trending, manual testing, or data logging.	
	3.2.3	Training of Operations and Maintenance Staff	
		Operations and maintenance staff will be trained on optimized and efficient operations of the facility.	
3.3	Document Outcome of the RCx Program		4th Qtr. 2012
		Develop Post RCx Documentation	
		RCx team will develop post RCx documentation logging the work completed as well as compiling following documents for ensuring continued efficient building operations: <ul style="list-style-type: none"> • Updated O&M manual, including full written sequences of operation for equipment amended as per the completed RCx activities • Preventative maintenance plan • Comprehensive training plan or recommendations for appropriate building staff to attend training in general O&M concepts and for specific equipment and systems • Guidelines and recommendations for effective use of existing Energy Monitoring System. Benchmarks for whole building energy use and primary plant equipment efficiency tracking will be included in these guidelines • List of operational strategies for facility operations to incorporate in the future 	

MAR 06 2012



Memorandum
Office of the Mayor

TO: Julie Lavertu, Co-Ordinator, Environmental
Advisory Committee FILE NO: A.04

FROM: Mayor McCallion

DATE: February 21, 2012

SUBJECT: Environmental Advisory Committee

I would appreciate having an item added on to the agenda of the Environmental Advisory Committee as to the Committee's position on the approval of drive-throughs due to our Living Green Plan and the fact that the City has an Idling By-law on the books.

Many thanks.

A handwritten signature in cursive script, appearing to read "HMcCallion".

HAZEL McCALLION, C.M., LL.D.
MAYOR

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MAR 06 2012

DRAFT Upcoming Agenda Items and Environmental Advisory Committee (EAC) Role

Month	Item	EAC Role
April	Living Green Master Plan and Regional Climate Change Strategy Public Awareness Campaign	
	Oakville-Clarkson Air Quality Advisory Committee Terms of Reference	
	Fertilizer Use	
	Credit River Parks Strategy	
May	Private Tree By-law – Public Consultation Results	
June		
September	Update on New Division/Structure	
	Mid-Year Update on Living Green Master Plan (LGMP) Progress and Indicators	
	Stormwater Quality Control Strategy Update	
October	Note: EAC Off-Site	
November		
December		

Other Anticipated Items for 2012:

- Natural Heritage System Strategy
- Green Development Standards
- Environmental Design Awards
- Nuisance Weed and Tall Grass By-law
- Corporate Environmental Policy Update
- Community Grants Program
- Research Partnerships
- Air Modelling and Monitoring
- Corporate Energy Efficiencies

STATUS OF OUTSTANDING ISSUES FROM THE ENVIRONMENTAL ADVISORY COMMITTEE (EAC)

Prepared by Julie Lavertu, Legislative Coordinator, for the March 6, 2012 EAC Agenda

EAC MEETING	ISSUE	EAC RECOMMENDATION/DIRECTION	STATUS
Feb/12	Upcoming EAC Agenda Items	Michael DeWit, Vice-Chair, asked what is being mapped out for agenda items from now until summer time ... Ms. Osborne suggested that staff would prepare a calendar of agenda items.	Please see Item 4 on the March 6th agenda.
Feb/12	Transportation Strategy Presentation	Michael DeWit, Vice-Chair, indicated that a presentation on the transportation strategy would be beneficial to the Committee.	
Feb/12	Use of Cosmetic Fertilizer for Residential or Commercial Lawns	Lucas Krist, PEYA, asked if the City can limit the use of cosmetic fertilizer for residential or commercial lawns ... Dr. Brad Bass, Citizen Member, asked if staff could clarify what the Committee's options are and what powers the Committee has under the <i>Municipal Act</i> . Brenda E. Osborne, Manager, indicated that they would report back on the issue with either a presentation or a report back with comments.	Please see Item 4 on the March 6th agenda for timing.

Environmental Advisory
Committee
MAR 06 2012

MAR 06 2012

Julie Lavertu

From: Sophia
Sent: 2012/02/10 2:11 PM
To: Julie Lavertu
Subject: EAC

Hi Julie,

I am a citizen member of the EAC. I'm contacting you at this time to inform you that I regretfully need to resign my position; I am in a new position at work and I no longer have the flexibility to attend morning meetings. Please note that I will attend March's meeting to allow you some time to fill the vacancy.

Thank you,

Sophia Chalaidopoulos