

Report on Consultations for Toronto's Sustainable Energy Plan

June 2007



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Executive Summary

Public consultations and informal surveys were conducted in April and May 2007 in connection with the preparation of the City of Toronto Sustainable Energy Plan. Results support a number of recommendations:

- ❖ A public education and information campaign is necessary to reduce electricity demand;
- ❖ Renewable energy has to be supported both to meet future demand and to mitigate greenhouse gas emissions;
- ❖ A combination of incentives and regulations is necessary to reduce energy use and to support renewable energy; and
- ❖ The City of Toronto and other stakeholders must lead and serve as models of energy conservation

A. Introduction

This report describes the processes followed and presents the highlights of findings of the consultation series conducted in April and May 2007 in connection with the preparation of the City of Toronto Sustainable Energy Plan. There were three face-to-face consultations conducted targeting internal stakeholders, external stakeholders and the community in general. Two informal surveys were also conducted to obtain more data: one, through self-accomplished questionnaire and another, through the internet. The procedures and highlights of findings of these surveys are also described.

B. Internal Stakeholder Consultation

The internal stakeholder consultation included 35 participants who are staff members of the City of Toronto Divisions and Agencies, Boards, Commissions and Corporations and who are involved in policy decisions and/or operations that may have direct impact on the adoption of energy conservation measures in their respective work areas. The objective of the session was to gather ideas and suggestions as to how the City of Toronto could respond to the need to manage its own energy demand. The session was conducted on April 19, 2007 at City Hall and was staffed by an experienced facilitator and two note-takers.

Process

The three-hour session devoted a period for informing about the recent research findings relevant to the energy plan. The discussions centred on measures being taken and programs currently in operation to reduce the City's demand for energy. In addition, new ideas and suggestions for more energy conservation strategies were discussed (Appendix A). Responses were content-analyzed and tabulated based on thematic groupings.

Highlights of Findings

- ❖ Among the initiatives to reduce energy are TRCA geothermal retrofit and natural gas operator, Toronto Water pumping strategy, Toronto Community Housing extensive low flow program and Toronto Zoo green roof project. In the absence of a central registry, all demand management projects currently in operation in City facilities and work areas are undocumented.
- ❖ New opportunities for demand reduction initiatives are not immediately perceived by the participants.
- ❖ No partnerships with external stakeholders are reported. Possible partnerships for funding with the Federation of Canadian Municipalities, Enbridge and OPA are being considered.

- ❖ Divisional/agency challenges and barriers in connection with reducing energy usage in the City include:
 - low priority for green initiatives within the City
 - access to capital is competitive
 - need for overarching leadership role from the City

- ❖ Energy challenges facing Toronto
 - zoning by-laws do not support small scale energy generation
 - paralysis in operation (inability to make decisions)
 - rising cost of electricity
 - need for key initiatives among many possibilities
 - need to educate the public
 - disparity between low income and high income residential population does not justify a single solution
 - distributed energy (small scale generation) may lead to NYMBYism
 - need to mitigate increasing heat island effect

- ❖ To help the community reduce energy use, the City must initiate a public education program, label the energy efficiency rating of buildings, include energy efficiency as a criterion for granting permits to renovate and educate people on building code on energy efficiency and insulation.

Analysis

Overall, participation in the internal stakeholder consultation was not as widely shared by those who attended. The fact that only a handful of energy conservation projects were identified and no input was received in terms of opportunities is proof that many attendees were there to observe more than participate. Request to provide additional information after the consultation was not followed with adequate appropriate responses. Nevertheless, the session provided meaningful comments on the energy challenges facing Toronto, and suggestions on how the City and other stakeholders can help.

C. External Stakeholder Consultations

A total of 117 invitations went out to representatives of the building and construction industry, provincial government agencies, businesses, non-profit organizations and community-based groups which have a direct interest in energy management. Of these, 39 attended the external stakeholder consultation sessions. Three session schedules were offered to divide the participants into three manageable group sizes. The objective of the session was to gather the external stakeholders' ideas and suggestions as to how the Energy Plan for the City of Toronto should be designed. All the three sessions were conducted on April 30, 2007, two at the St. Lawrence Hall and one at Metro Hall. The sessions were staffed by an experienced facilitator and note-takers.

Process

Each session lasted for approximately three hours, which was divided into informing the participants about the recent research findings relevant to the energy plan; actual group discussions and a 'dotmocracy' exercise.

The group discussions centred on four questions about, energy challenges facing Toronto; how the City can help community overcome these challenges; how the City can help community reduce demand; and, the roles that stakeholders can take in all of these (Appendix B). Responses to these were content-analyzed and tabulated based on thematic groupings.

The 'dotmocracy' exercise provided five response categories, namely, lead, encourage, advocate, develop capacity, educate and regulate. The task was to provide suggestions under each category and to arrive at the most agreeable ones.

Highlights of Findings

Group Discussions

- ❖ Energy challenges facing the City of Toronto include:
 - rising cost of electricity

- energy security, need to reduce dependence on fossil fuels, need to educate the public
 - increasing the demand for renewable energy
 - environmental challenges, e.g., greenhouse gas emissions, climate change, air pollution
 - structural issues met in implementing energy management initiatives, e.g., leadership structure, competition and absence of deeper solutions to the problem
 - strategic issues, e.g., how to find the best solution given different sectoral needs
- ❖ External stakeholders expect the City to help community met these challenges through:
- public education
 - incentives for efforts leading to energy efficiency, adoption of renewable energy and other green initiatives.
 - more renewable energy
 - regulations to increase building energy efficiency standards and increase adoption of renewable energy solutions
 - a more integrative and co-operative approach
- ❖ When asked how the City is also expected to help the community reduce demand, suggestions revolved around four main themes:
- provide incentives
 - promote renewable energy
 - initiate energy conservation programs
 - provide leadership
- ❖ When asked what roles stakeholders could play in overcoming the energy challenges and reducing energy consumption, consensus is apparently lacking in the responses. There were suggestions on the need for mortgage for green buildings, tax incentives to support renewable energy, leadership at the municipal level, involvement of the health sector, emphasis on process in the building/architectural sector, more focus on the industrial sector, public-level discussions and alignment of strategies across stakeholders.

Dotmocracy Exercise

- ❖ In order to lead, structural changes, both regulatory and organizational, were suggested along with adoption of renewable technologies, public education, benchmarking/best practices formulation, and specific approaches to reducing demand
- ❖ To encourage, suggestions centred on incentives and grants, competitions, and behavioural changes, e.g., real time consumption and true cost of utilities.
- ❖ To advocate, systems to support incentives, e.g., facilitate local improvement charges, multi-government level renewable incentives, etc., and setting an example were mentioned.
- ❖ To develop capacity, suggestions are expand/protect capacity to meet demand, must be done at community level and specific innovative approaches and enablers.
- ❖ In order to educate, many strategies, approaches and content were suggested.
- ❖ To regulate, suggestions were around facilitation of renewable energy, demand reduction and a few specific other concerns.

Analysis

External stakeholders provided the most creative and diverse input. This may be due to the wide representation achieved for this set of consultations as well as the additional 'dotmocracy' exercise employed to enrich results. The presence of policy-makers from government agencies and leaders in various fields and specializations including the academe garnered a range of suggestions towards many possible solutions to the challenges faced by the City. The weakness remains to be the lack of consensus, however, as nearly each representative has his/her own interest to promote.

D. *Change is in the Air* Public Engagement

On April 29, 2007, a public engagement called *Change is in the Air* was held at the Direct Energy Centre, Exhibition Place to gather public reaction and input to the draft climate change framework for the City of Toronto. The session provided the opportunity for 225 participants to comment on issues pertaining to energy conservation as a component of the City's climate change framework.

Process

The draft *Change is in the Air* framework document was presented to the public engagement participants to comment on during the facilitated, small group discussions. Furthermore, comments and suggestions were also received by telephone, email and the City's online comment card. Smaller forums were also held with various community residents and stakeholders.

Two main questions were asked:

- ❖ Thinking about the 27 potential actions outlined in *Change is in the Air*, what do you like? Is something missing? Should anything be changed?
- ❖ How can the City of Toronto help you to live a more environmentally friendly lifestyle?

In addition, those who attended the forums were asked to select the single best idea that they felt had been suggested during the event.

Highlights of Findings

- ❖ Regulations to stop wasting energy, e.g.,
 - Green Building Code for all new buildings and renovations
 - turned off light in office towers at night
 - use of timers or motion sensors for lights in office and apartment buildings
 - enforcement of an appropriate indoor air temperature in office buildings and retail businesses
 - energy efficiency retrofits for all rental properties

- ❖ Incentives, e.g.,
 - loans, subsidies, green mortgages for home retrofits and purchase of energy efficient appliances
 - reduced or no property tax increases for those who have made energy efficiency improvements
- ❖ Information and financial assistance from the City for more energy efficient homes and clean energy production. Specifically,
 - low-interest or interest-free loans or subsidies and no resulting property tax increases
 - rebates for purchase energy efficient appliances
 - public education and information on how to improve home energy efficiency, appropriate renewable energy system, applicable regulations, and experienced contractors
 - facilitated permitting process for green buildings and renewable energy installations
 - support for renewable energy co-ops

Analysis

As the energy plan was only a component of a larger public engagement, the procedures were not consistent with the procedures used in the other public consultations conducted specifically for the Energy Plan. Only two questions guided the discussion (instead of four) and results are, therefore, limited.

E. Survey Research

Another attempt to gather more input to the Energy Plan was through a survey, specifically, responding to a structured questionnaire. The survey was conducted on April 27-29, 2007 at the Direct Energy Centre, Exhibition Place with attendees to the *Green Living Show* and participants in the *Change is in the Air* public consultation as target respondents. The objective behind the choice of venue was to obtain more knowledgeable opinions and suggestions about the subject of energy conservation from an already environmentally aware 'universe' of respondents. A sample of 94 respondents participated in the survey.

Procedure

Using a structured questionnaire (Appendix C), potential respondents were asked if they were willing to provide their opinion about the on-going process of designing an Energy Plan for the City of Toronto. Those who agreed were asked to accomplish the questionnaire by staff members of the Energy Efficiency Office. The questionnaire had a section to get a sense of the respondents' energy conservation awareness and current practices, a portion where they rated the importance of a number of energy conservation issues against a five-point semantic differential, and a portion containing the usual open-ended questions pertaining to the Energy Plan. Responses were reviewed and clarified when necessary. Results were manually tabulated.

Results

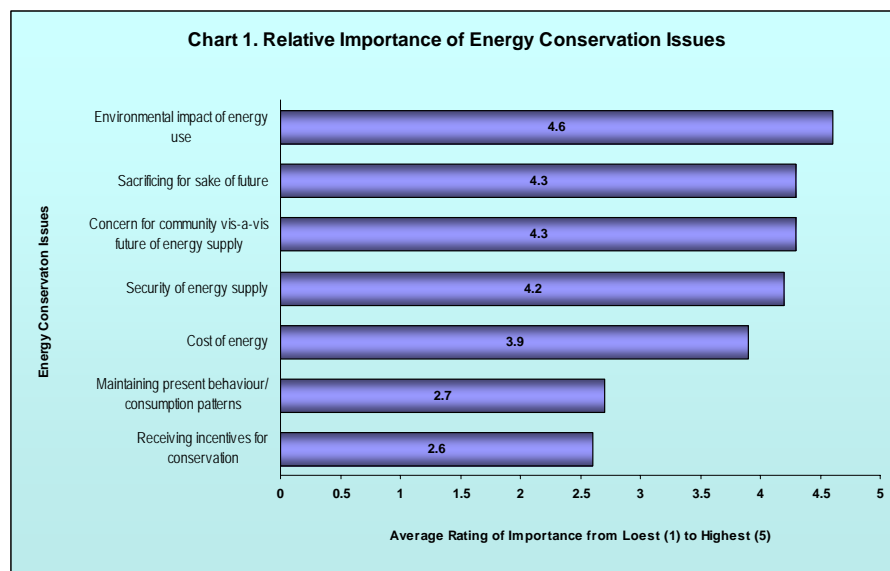
Energy Conservation Awareness/Practice

The majority of the respondents have done at least one measure in an effort to save energy. The most popular energy-saving action taken is changing incandescent bulbs to compact fluorescent (88%), followed by choosing Energy Star rated appliances (60%) and unplugging appliances that still consume electricity when not "On".

Relative Importance of Energy Conservation Issues

Seven energy conservation issues were rated by the respondents in terms of importance. Using weighted average to summarize findings, results indicate that the environmental impact of energy use is the most important

consideration. Following closely are the issues of the need to sacrifice for the sake of the future and concern for the wider community. Security of energy supply is also rated to be highly important and to a lesser degree, the cost of energy. Of all issues, rated lowest are the need for incentives in order to conserve energy and the importance of maintaining present behaviour or consumption patterns.



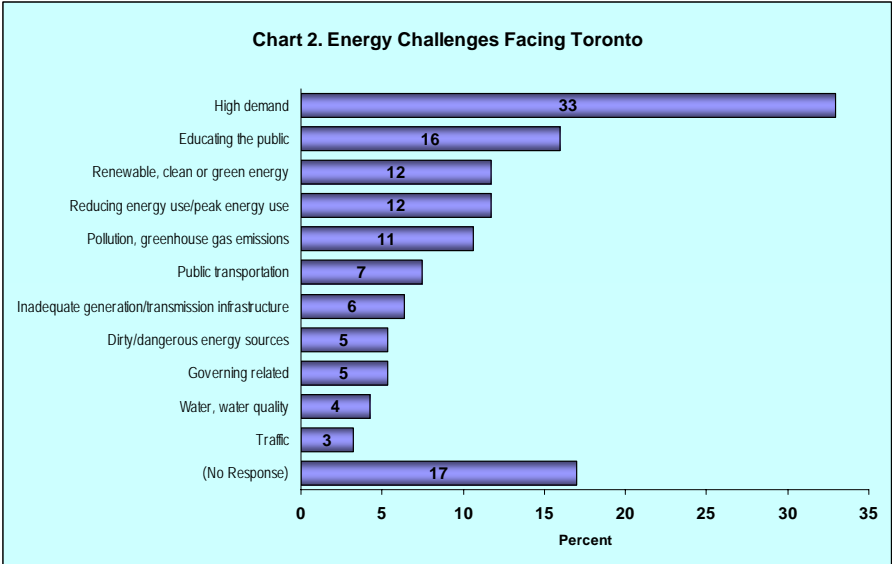
Opinion About Energy Prices

Nearly all respondents believe that energy prices will increase in the future, however, opinions vary as to the rate of increase. Predicted price increase is generally modest with the highest number of respondents predicting a 10%-20% increase. When asked how much more they are willing to pay for energy price increases, the majority is willing to pay up to 15% more. No respondent admitted non-willingness to pay more.

Energy Challenges Facing Toronto

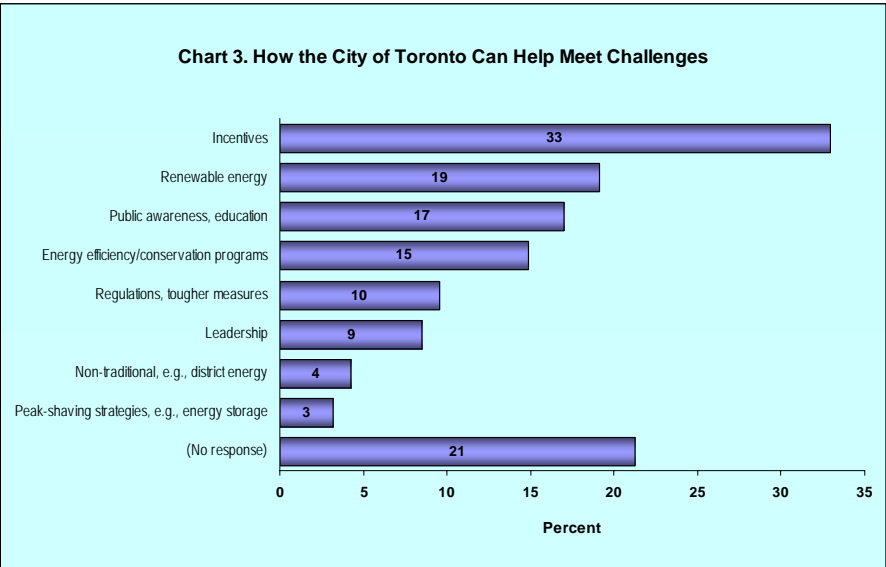
When asked what energy challenges are facing Toronto in the future, the most frequent references made were on the high demand for energy and the problem of meeting that (33%), having to deal with the need to educate the public accordingly (16%), the importance of renewable energy (12%), reducing the demand (12%), and the escalating greenhouse gas emissions (7%). (See Chart 2.)

The comment “providing enough energy for growing consumption” from a respondent captures the concern on the future challenge of meeting the growing demand and the need to mitigate this.



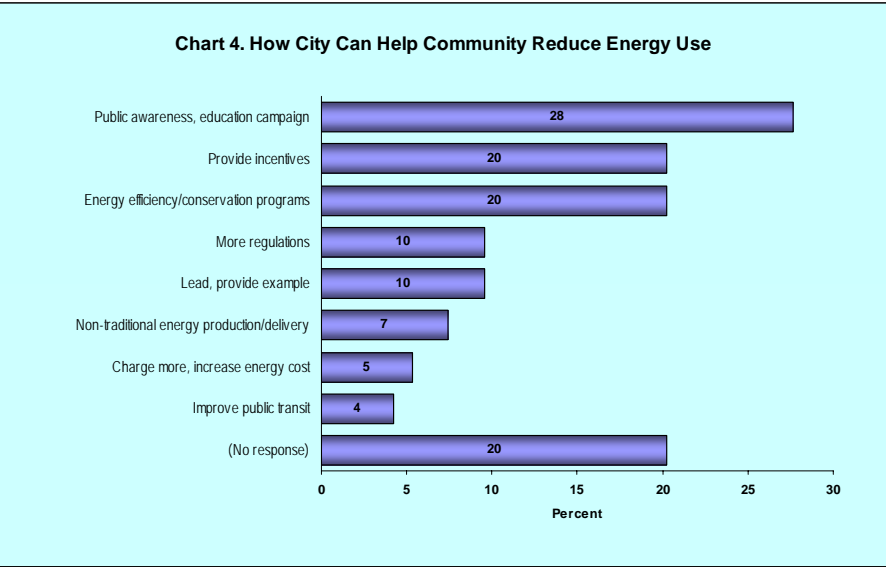
How the City Can Help Meet Energy Challenges

Given the challenges identified by the respondents, the City is expected to help the community meet them by providing various incentives (33%), supporting renewable energy (19%), public awareness and information campaign (17%), energy efficiency and conservation initiatives (16%), more regulations (10%), leadership (9%), support for non-traditional energy sources (4%) and peak-shaving strategies (3%). (See Chart 3.)



How the City Can Help Community Reduce Energy Use

Given the direct question of how the City can help the community reduce energy use, the majority of suggestions from the respondents were nothing more than the familiar and what is mostly being done and said already, namely, public education campaign, incentives, energy conservation programs, more regulations and leadership. A few respondents mentioned support for non-traditional energy and/or delivery, charging more for energy and improving public transit.



Role of Stakeholders

As to the role of stakeholders in meeting the future energy challenges and helping reduce energy consumption, respondents were not certain on what to say as evident in the 53% of them who had no answer. Those who provided suggestions would like to see them leading or providing good example (18%) and getting involved or sharing responsibility (15%), among others. An insignificant number of suggestions would like to see a harmonized overall strategy and more public involvement.

Other Comments

Additional comments were made by 35 respondents most of which are reiterating what have been said already and others providing specific and interesting suggestions such as electricity-powered taxis, energy rationing, imposition of carbon tax and use of more LED (light emitting diode) lights.

Analysis

The survey targeted a sample of respondents within the venue of the Green Living Show and the *Change is in the Air* public engagement and the expectation was that this crowd should be more aware or concerned about the environment than the general public. The expected responses were, therefore, not reflective of those of the general population. This was a desired outcome, not a study limitation. The rationale is the same as in the stakeholder consultations – generally informed opinions, suggestions and comments that could provide bases for government policies. Responses to earlier questions to gauge the respondents' energy conservation actions in the past and the general expectations of energy price increases confirmed the higher baseline knowledge of the respondents.

Responses to all questions are consistent as in the recurring suggestions for the importance of renewable energy, incentives, more regulations, public information and education and the inescapable role of the City as leader and provider of good examples of how respond to the energy and environmental challenges facing the city. Individual suggestions with low frequencies of mention reflect awareness level and overall concern of respondents about the environment and can provide insights and specific suggestions.

F. Interactive Website

To reach the general public, ads were placed in community newspapers across Toronto to invite interested Toronto residents to respond to a survey through an interactive website, ordinary mail or by e-mail. The survey was held on May 9-30, 2007. A total of 40 Toronto residents responded, 32 of which through the interactive website.

Process

The questions asked centred on the four usual topics of energy challenges facing Toronto; how the City can help community overcome these challenges; how the City can help community reduce demand; and, the roles that stakeholders can take in all of these. Because the mention of renewable energy was frequent in the previous survey research and consultations, a separate question that asked how the City can increase the use of renewable energy was added (Appendix D). Responses were content-analyzed and tabulated based on thematic groupings.

Highlights of Findings

- ❖ The energy challenges facing the city have to do with
 - ability to meet energy demand
 - need for more renewable energy sources
 - need to conserve/reduce demand
 - sustainability/environmental issues
 - lack of leadership/political will
- ❖ Toronto Government can help community meet these energy challenges by
 - supporting renewable energy through regulations, incentives, etc.
 - providing leadership/good examples
 - educating/informing the public
 - raising buildings codes
 - providing incentives and contests for energy efficiency efforts
 - improving public transit/reduce private vehicles on the road
- ❖ Toronto can help community reduce energy use by

- addressing the transportation issue, e.g., less cars on the road, more public transit, clean energy, increased parking fees, highway tolls, etc,
 - incentives for energy efficiency efforts, renewable energy
 - conducting public education, information campaign
 - more regulations, specifically, pertaining to billboards, power down day, white roof, higher energy efficiency standards for appliances and buildings, deter wasteful energy use, etc.
 - encouraging more renewable energy
- ❖ Toronto government can increase the use of renewable energy through
- incentives for homes/individuals
 - leading by examples
 - City's investment in renewable energy generation facilities
 - support to green energy producing companies
 - encouragement of building of renewable energy ready homes
- ❖ Stakeholders are expected to
- share the stake, get involved and/or take action
 - lead by example – 6
 - encourage/Focus on renewable energy
 - provide incentives
 - assist in public education, energy conservation programs
 - lead in innovating, deliver innovative technologies
 - not subsidize wasteful behaviour, reflect true cost of electricity, adopt a pro-rated billing

Analysis

Low level of control on sample selection and verification and control for quality of responses make the data from this survey less reliable than those from other methods. Nevertheless, with only a few exceptions, responses were equally insightful and largely consistent with results from previous consultations and survey.

G. Conclusions

There is common perception that the city is facing increasing demand for energy in the immediate future which could be a challenge to meet if current supply situation remains unchanged. Based on this, there are concerns that security of energy supply will decline and cost of electricity will rise leading to other problems. Concern for the environmental concerns, specifically the greenhouse gas emissions, is also high in the list of energy challenges facing the City.

The City can help the community meet energy challenges through public education and information, supporting renewable energy, increasing building code standards on energy efficiency, and acting as lead or model of energy conservation. In addition, the City can help the community reduce its energy use through various incentives, regulations, energy conservation programs, and improved public transit.

Although not many are clear as to what to expect from the stakeholders, the trend is for them to provide incentives, support renewable energy and act as lead or model.

H. Recommendations

The following constitute the recommendations based on the conclusions from the public consultations and informal surveys conducted for the Energy Plan:

A public education and information campaign is necessary to reduce electricity demand;

Renewable energy has to be supported both to meet future demand and to mitigate greenhouse gas emissions;

A combination of incentives and regulations is necessary to reduce energy use and to support renewable energy; and

The City of Toronto and other stakeholders must lead and serve as models of energy conservation.

APPENDICES

Appendix A.

Internal Stakeholder Consultation: Agenda



ENERGY PLAN FOR TORONTO

INTERNAL STAKEHOLDER CONSULTATION

April 19, 2007, 1:00 – 4:00 PM
Committee Room #3, Toronto City Hall, 100 Queen St. W.

Agenda

- | | |
|--|--------------------|
| 1. Introductions | 1:00 – 1:10 |
| 2. Energy in Toronto – Challenges and Opportunities | 1:10 – 1:30 |
| <i>a) The Process to Develop the Energy Plan</i> | |
| <i>b) City of Toronto 90-MW Program</i> | |
| <i>c) Key Energy Challenges that Toronto is Facing</i> | |
| 3. Development of the Energy Plan – Key Findings | 1:30 – 2:10 |
| <i>a) Presentation by PricewaterhouseCoopers</i> | |
| 4. Questions on Key Findings | 2:10 – 2:30 |
| 5. Health Break | 2:30 – 2:40 |
| 6. Roundtable Discussion | 2:40 – 3:40 |
| <i>a) What programs are you currently implementing that should be considered as part of the development of the Energy Plan for Toronto?</i> | |
| <i>b) What opportunities does your division unit have to reduce energy usage in your operations?</i> | |
| <i>c) What partnerships exist or should exist between your division unit and the community to reduce energy usage in your operations?</i> | |
| <i>d) What challenges and barriers does your division face with regards to reducing energy usage? (consider fiscal, policy and operational issues)</i> | |
| <i>e) What would you consider to be the greatest energy challenges that the city of Toronto (community) will face in the coming years?</i> | |
| <i>f) How can the city government help the community overcome future energy challenges and to reduce energy usage throughout the city?</i> | |
| 7. Wrap Up and Next Steps | 3:40 - 4:00 |

This event has been supplied with 100% green electricity through Bullfrog Power.



Appendix B.

External Stakeholder Consultation: Agenda



**Workshop on the Development of the
Energy Plan for Toronto (EP4T)
Monday April 30, 2007**

1. Introductions (10 minutes)
2. Energy In Toronto – Challenges and Opportunities (20 minutes)
 - The Process to Develop the Energy Plan
 - Key Energy Challenges that Toronto is Facing
3. Development of the Energy Plan – Key Findings (20 minutes)
 - Energy Forecast – Business as Usual
 - Energy Opportunities - Sustainable Energy Potential
4. Four Key Questions (30 minutes)
5. Building Toronto's Sustainable Energy LEADERship (30 minutes)
6. Wrap Up and Next Steps (10 minutes)

Appendix C.

Energy Plan Public Consultation: Survey Questionnaire

ENERGY IN TORONTO

Survey of Toronto residents on Attitudes and Opportunities

Please complete and hand back at the Energy Efficiency Office Table.

1. Which ones of the following energy improvements have you done in the last 2 years?

- ☐ Replaced incandescent light bulbs with compact fluorescents
- ☐ Weather-stripping of windows/doors
- ☐ Bought Energy Star-rated appliances
- ☐ Replaced furnace or water heater with high efficiency unit
- ☐ Replaced washer with front-loading one
- ☐ Retired an old refrigerator
- ☐ Retired old air-conditioner
- ☐ Began unplugging appliances that still consume electricity when not "On"
- ☐ Switched to solar thermal water heating
- ☐ Planted trees for shade or shield
- ☐ Others (please specify as many) _____

2. Do you use a set back (or programmable) thermostat?

- ☐ Yes. ☐ No ☐ Not applicable (no access to the thermostat)

2a. If yes, Is it programmed to power down when nobody is at home?

- ☐ Yes ☐ No

3. Do you use compact fluorescents for most of your lighting needs?

- ☐ Yes ☐ No

4. How important is each of the following to you:

	Extremely Not Important (1)	Not Important (2)	So-so (3)	Important (4)	Extremely Important (5)
• Cost of energy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
• Security of energy supply (no blackouts)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
• Environmental impact of energy use	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
• Maintaining present behaviour and consumption patterns	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
• Receiving incentives for conservation effort	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
• Concern for community vis-à-vis future of energy supply	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
• Sacrificing for the sake of future generations	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

5. Where do you think energy prices are heading in the next 5 years?

- ☐ No change in price ☐ Dropping ☐ Rising by 1- 5%
☐ Rising by 5-10% ☐ Rising by 10-20% ☐ Rising by over 20%

6. If Toronto's electricity were to come from green power sources (i.e., wind and solar, geothermal, etc.) how much *more* would you be willing to pay?

- ☐ 0 - Not willing to pay more ☐ Willing to pay 1-5% more
☐ Willing to pay 5-10% more ☐ Willing to pay 10-15% more
☐ Willing to pay over 15% more

7. What would you consider to be the greatest energy challenges that Toronto will face in the coming years?

8. How can the city government help the community overcome future energy challenges?

9. How can the city government help the community reduce the use of energy in the City?

10. What is the role of other stakeholders in overcoming the energy challenges and reducing energy consumption?

11. Any other comments on what needs to be done in Toronto on energy?

Thank you!

Appendix D.

Energy Plan Public Consultation: Internet Survey Questions

Internet Survey Question

Question One:

What are the greatest energy challenges Toronto faces in the future?

Question Two:

How can the Toronto Government help you overcome these challenges?

Question Three:

How can the Toronto Government help the community reduce energy use?

Question Four:

How can the Toronto Government increase the use of renewable energy (solar, geothermal, wind)?

Question Five:

What is the role of stakeholders (those with an interest in energy such as Toronto Hydro) in overcoming the energy challenges and reducing energy consumption?

Question Six:

Are you a Toronto resident?

☐ Yes

☐ No