

CITY OF TORONTO
NEW AND EMERGING TECHNOLOGIES, POLICIES AND PRACTICES
ADVISORY GROUP

FINAL REPORT

Submitted to Works Committee, City of Toronto

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City of Toronto
New and Emerging Technologies, Policies and Practices Advisory Group

Final Report

Executive Summary

In 2001, Toronto City Council established goals of 30% diversion of waste from landfill by 2003, 60% by 2006 and 100% by 2010. To achieve these goals, Task Force 2010 made a number of recommendations for programs to further reduce, reuse and recycle materials and for the use of new technologies to process and dispose of the remaining wastes. Many of these recommendations have been and are being implemented and will enable the City to achieve approximately 40% diversion by 2006.

In 2002, to further assist the City in meeting its goals, City Council authorized Works Committee to establish a joint citizens and experts group to review and provide advice on the adoption of new and emerging technologies, policies and practices. The New and Emerging Technologies, Policies and Practices Advisory Group (AG), consisting of seven citizens, four experts, and five official observers was established in February 2003.

The Advisory Group had three key strategic issues to address:

1. Whether 100% diversion from landfill is an achievable objective;
2. Whether the current 60% – 40% split between traditional source reduction, reuse, recycling and composting on the one hand and the introduction of new and emerging technologies, policies and practices on the other hand is a reasonable approach or requires modification;
3. Identify the next steps regarding the implementation of new and emerging technologies, policies and practices that the City should take in order to achieve its diversion objectives.

Over 22 months, the Advisory Group held 57 meetings and passed over 30 recommendations and resolutions. These concerned new policies and practices to increase diversion, the use of new and emerging technologies to process residual wastes, and the need to carry out an environmental assessment on long-term solutions to manage the City's solid wastes. The Group also advised the City on the drafting of a Request for Expressions of Interest for technologies, a Request for Qualifications for new and emerging technologies, and a Request for Proposals for an EA consultant. The Advisory Group's work is summarized in this Final Report.

The following is a summary of the Advisory Group's conclusions and recommendations regarding the three strategic issues:

Issue 1: Is 100% diversion from landfill by 2010 achievable through the use of new and emerging technologies, policies and practices?

The goal of 100% diversion from landfill by 2010 is not achievable. A diversion rate of approximately 88% could potentially be achieved using a mix of new and emerging mechanical and advanced thermal technologies together with source-based diversion programs, or approximately 96% if provincial environmental regulations are revised to permit the use of bottom ash from gasification or char from pyrolysis operations. A diversion rate of approximately 86% could be achieved using mechanical and biological processes if provincial environmental regulations are revised to permit the routine use of low quality compost. Any decision on the adoption of such technologies for processing Toronto's residual waste must be based on their environmental performance, reliability and cost through a full environmental assessment.

There was an understanding by the AG that it would take approximately 7 - 10 years to plan, develop, and construct a new solid waste processing facility. This would consist of 5 - 8 years for completing an Environmental Assessment and 2 years for constructing the facility.

Issue 2: Is the 60%- 40% split reasonable?

With the full and aggressive implementation of the policies and practices currently being implemented by the City and new policies and practices recommended by the Advisory Group, the City should be able to achieve source-based diversion from landfill of between 50 and 60%, and quite possibly higher, by 2010.

Regardless of the exact level of diversion that will be achieved, which will only be known once new policies and practices are fully implemented, there will be a continuing need to process and/or dispose of a significant amount of remaining materials.

Issue 3: What should be the next steps?

In order to move beyond the expected 40% diversion rate by 2006 with currently approved diversion programs, the Advisory Group recommends that:

1. The City should fully and aggressively implement new policies and practices, such as those recommended by the Advisory Group and City staff, to significantly increase source-based diversion from landfilling. These should include strong promotion of existing and new diversion programs.
2. The City should immediately establish a Waste Diversion Working Group to oversee the planning, design, implementation, promotion and monitoring of source-based diversion programs. This group should report directly to Works Committee and

include members of the public, City staff, frontline collection workers, and possibly Works Committee members.

3. The City should move ahead expeditiously with a full environmental assessment, including the formation of a public advisory committee to direct the EA process. This committee should report directly to Works Committee. Given the significant public concerns about various potential solutions to the City's waste management problems, the EA process needs to be innovative, thoughtful, well managed and fully transparent.

Final Report

1.0 Introduction

1.1 Establishment of the Advisory Group

The June 2001 report by Task Force 2010 set forth a plan to achieve targets for diversion from landfill of 30 percent by 2003, 60 percent by 2006 and 100 percent by 2010. The report stated that in order to meet these diversion targets, new and emerging technologies, policies and practices would need to be implemented. The Commissioner of Works & Emergency Services submitted a report to Works Committee, which included the recommendation adopted by Council at its April 2002 meeting that:

"A citizen and expert advisory group be established, including citizens from potential 'host' communities and environmental experts, that will guide the review of technologies, policies and practices, and the community consultation process."

The New and Emerging Technologies, Policies and Practices Advisory Group (AG) was created in February 2003 to assist the City of Toronto in determining how best to manage the City's municipal solid wastes.

The Advisory Group initially consisted of the following voting members: seven citizens; four experts; and a representative from each of the Ontario Waste Management Association, the Greater Toronto Apartment Association (GTAA), and the Toronto Area Business Improvement Association (TABIA). (Note: A fifth expert member was added in May 2004.) The representatives from the GTAA and TABIA, however, did not attend meetings. Official, non-voting participants represented the following:

- Solid Waste Management Services,
- Toronto Public Health,
- Toronto District School Board,
- CUPE Local 416, and
- Ministry of the Environment.

Meetings were also attended by other City staff and on occasion by City Councillors representing Works Committee. Appendix 1 lists members, observers and staff.

1.2 Terms of Reference

The AG's first task was the development of its Terms of Reference (Appendix 2). These state that the AG would assist the City by providing recommendations on the following three strategic issues:

1. "Whether 100% diversion from landfill is an achievable objective.

2. Whether the current 60% - 40% split between traditional source reduction, reuse, recycling and composting on the one hand and the introduction of new and emerging technologies, policies and practices on the other hand, is a reasonable approach or requires modification.
3. Identify the next steps regarding the implementation of new and emerging technologies, policies and practices that the City should take in order to achieve its diversion objectives.”

To address these three strategic questions, the Advisory Group determined that it would undertake the following:

- i. “Identify criteria for screening and criteria for evaluation of new and emerging technologies, policies, practices and facility siting.
- ii. Facilitate communications between community, industry and City of Toronto with respect to new and emerging technologies, policies and practices and facility siting for the diversion of solid waste from landfill.
- iii. Conduct research on new and emerging technologies, policies, practices and facility siting including direct and on-site research within the parameters of the budget and the availability of Advisory Group members.
- iv. Utilize the project database of new and emerging technologies, policies and practices.
- v. Provide direct input into the development of a Request for Expressions of Interest, Request for Qualifications and Request for Proposals from the marketplace including, but not limited to, public/private partnership/ownership to provide new and emerging technology capacity.
- vi. Write a report that catalogues the work undertaken by the Advisory Group, including research, its responses to the three strategic questions, and recommendations to reach the goal of 100 percent diversion if deemed achievable.”

During the 22 months of its work, the Advisory Group fulfilled most of its mandate. As set out in task vi. above, this report summarizes that work.

1.3 Organization of the Advisory Group

The Advisory Group, as a whole, met on average every two weeks at either City or Metro Hall. Fifty-seven AG meetings were held over the twenty-two month mandate.

The group had two co-chairs, one selected by and from the citizen members, and one selected by and from the expert members, as shown in Appendix 1. The Co-chairs set agendas and organized and ran the meetings. Administrative procedures (Appendix 3) developed and approved by the AG, including quorum requirements and approval of resolutions, guided the running of meetings and other work.

In addition, four subcommittees were formed to work on specific topics: Technologies; Policies and Practices; Environmental Assessment; and 100% Diversion. The work of the subcommittees was brought back to the full AG for discussion and action.

All meetings of the AG were open to the public. Several members of the public attended regularly and contributed to the AG's work. There were also advertised opportunities for the public to depute to the AG on specific issues. Deputation notices were placed on the AG web site and mailed, by the City, to people who had expressed an interest in waste issues.

There were six calls for deputations:

1. April 2, 2003: General comments from the public
2. May 14, 2003: Request for Expressions of Interest (REOI) process
3. June 25, 2003: Timing of the Environmental Assessment process.
4. Aug 20, 2003: REOI submissions
5. Nov 12, 2003: Draft Request for Qualifications (RFQL) and definition of incineration.
6. Nov 23, 2003: Draft recommendations for policies and practices

The public could keep informed about the work of the AG, including meeting locations, agendas and minutes of each meeting; opportunities for deputations; resolutions; and reports and presentations to the AG, through the City's website <http://www.toronto.ca/wes/techservices/involved/swm/net/about.htm>

There was also interest and reporting by the media in some of the work of the Advisory Group, particularly as it related to environmental assessment and incineration.

In order to plan its mandated work, the Advisory Group established, and regularly updated, a work plan and corresponding time lines.

The AG also established a "learning plan" consisting of guest speakers and tours of several City waste management facilities to help the members better understand waste issues related to the AG's mandate. Appendix 4 lists the presentations and tours.

Throughout its work, the AG was assisted by various City staff. They provided advice and supplied documents and other information as required, including regular updates on the City's waste activities, presentations on specific topics, and information on waste quantities and characteristics obtained through waste audits carried out by the City. The

Advisory Group wishes to gratefully acknowledge the considerable contribution made by City staff.

2. Summary of Work: Accomplishments and Issues

Over its twenty-two month mandate, the Advisory Group addressed a number of matters related to the three strategic issues identified above. The AG passed over 50 resolutions and made recommendations on topics including a Request for Expressions of Interest (REOI) for new and emerging technologies; decision making on a small scale research facility; new policies and practices to increase diversion; the achievability of the 60% and 100% diversion targets; and the need for an environmental assessment for the management of the City's residual solid waste. Resolutions and recommendations approved by the AG went to the Works Committee and were presented in writing, and occasionally in person, by one or both co-chairs to Works Committee.

The work of the AG and its resolutions and recommendations are summarized in this section.

2.1 Issue 1: Is 100% diversion from landfill by 2010 achievable?

An important part of the Advisory Group's work concerned the use of new and emerging technologies. The AG:

1. Assisted the City in developing a Request for Expressions of Interest (REOI) for technologies that could process or dispose of non-diverted wastes, i.e. the residue after implementation of diversion programs, and then reviewing the submitted Expressions of Interest (EOIs).
2. Advised the City on an appropriate definition of "incineration".
3. Advised the City on staff's proposal for a small-scale research facility (SSRF).
4. Commissioned a study to estimate the quantities of waste that would require landfilling if new and emerging technologies were used, in order to answer whether 100% diversion is achievable.

The work of the AG in each of these areas is summarized below:

2.1.1 Request for Expressions of Interest (REOI)

The Task Force 2010 report defined "New and Emerging Technologies" as processes that have the potential to manage the residue that remains after the implementation of optimum source separation and recycling. The City and Advisory Group did not consider either landfilling or incineration as defined in the City's contract with Republic Services, which was responsible for landfilling the City's wastes in Michigan. In 2002, City staff developed a vendor database of companies that had provided information on

technologies theoretically capable of processing Toronto's waste. The database did not provide any indication concerning details and the nature of vendor interest.

Staff, with the support of the Advisory Group, determined that the issuance of a Request for Expressions of Interest was an appropriate way to better gauge the interest and ability of the market to meet the City's needs for processing residual solid waste. The Advisory Group reviewed documentation drafted by City staff, and on May 14, 2003, after public depositions, the AG accepted the REOI with suggested changes including the following:

- the City remove the 50,000 tonnes per annum minimum, although a preferred range may be stated and a minimum may be stated in the RFP;
- the City express its preference for a complete system while allowing REOI submissions for components of a partial system;
- the City clearly indicate its willingness to consider new and emerging technologies as well as existing and proven technologies;
- the RFQ and RFP stages include screening and evaluation criteria concerning vendors' environmental performance and business practice; and
- the City require that proponents meet or exceed environmental guidelines consistent with the Stockholm Treaty and Great Lakes Water Quality Agreement.

The REOI was issued by the City on June 2, 2003 and closed on July 14, 2003. Notification was provided to 190 vendors registered in the vendor database and the REOI was advertised in solid waste management media publications. In response, 51 expressions of interest (EOIs) were received.

Copies of these EOIs were made available to the Advisory Group to review. In addition, in Fall 2003, the Advisory Group received presentations on and copies of the following reports: "Summary of Individual Responses to Toronto's REOI on New and Emerging Waste Management Technologies" and "Technologies Review Reference Manual". The reports were prepared by MacViro Consultants Inc, in association with Earth Tech Canada Inc, who were contracted by the City to review the EOIs.

The consultant's evaluation of the REOI submissions identified four primary technology types: physical (mechanical), biological, thermal, and chemical. Physical processing is a prerequisite for any of the other three selected options. Mechanical and biological, as well as current incineration processes, are proven technologies. Advanced thermal processes are mostly in various phases of development with only a few having achieved commercial status. Chemical processes are only in the developmental stage.

The Advisory Group did not identify technologies, which might be considered preferable since significant information (e.g., full mass balances, energy balances, costs, pollution loads, marketable products) was not available, and the AG had recommended that an environmental assessment be carried out to address the choice of technologies.

There was an understanding by the AG that it would take approximately 7 – 10 years to plan, develop, and construct a new solid waste processing facility. This would consist of 5 - 8 years for completing an Environmental Assessment and 2 years for constructing the facility.

2.1.2 Small-Scale Research Facility (SSRF)

On August 13, 2003, City staff advised the AG of Council's request for a report on the issuance of a request for qualifications (RFQL) for small scale research facilities to test new and emerging technologies. At its August 20, 2003 meeting, the AG recommended

“that the timing, scale and need for a demonstration, pilot or research facility be considered as part of the current city and Advisory Group EOI evaluation. The Advisory Group does not support proceeding with a RFQL for a pilot research or demonstration scale facility before the EOI evaluations are finalized.”

At their next meetings, in August and September, Works Committee and then City Council decided to proceed with RFQL for a research facility.

Staff drafted an RFQL, and an overview was presented to the AG on October 29, 2003. On November 12, 2003, following public deputations, the Advisory Committee unanimously approved the following resolution:

“In September, City Council instructed staff to proceed with an RFQL for establishing a research facility or facilities for new and emerging technologies for the diversion of solid waste from landfill. While the Advisory Group fully appreciates the value of research, as well as development and demonstration of new and emerging technologies, it recommended at that time that it was premature to make a decision about such facilities. After further consideration, and working with the staff on the development of the RFQL, the Advisory Group strongly recommends that the new City Council not proceed with an RFQL or RFP for such a research facility at this time and that a decision on a research facility not be made until:

1. There has been a full evaluation of waste processing technologies and the implications for the need for research on any of these technologies for processing Toronto's residuals;
2. Alternative means of obtaining the needed research data have been fully considered - options such as testing representative feed samples at existing facilities located elsewhere could require much less time and cost;
3. The timeline for implementing a research facility and carrying out the research has been fully considered in relation to the timeline for the planned environmental assessment process; and

4. There has been a written legal opinion (with respect to Provincial statutes and City by-laws) on the building of such a research facility and what types of facilities might be allowed.”

On November 26, 2003 City staff advised the AG that two Councillors, including the Chair of Works Committee, who liaise with the AG had considered the AG resolution but felt strongly that the City should proceed with the RFQL. At the same meeting, the AG voted by a narrow margin “not to discuss the RFQL further at this stage given its previous recommendation to not have an RFQL.” However, at its next meeting, after an informal vote, the majority of the AG decided that it would provide further input into the RFQL.

The RFQL was issued on January 21, 2004 with responses due by March 11, 2004. The City received 13 responses with the following breakdown in technologies: 1 chemical/biological, 2 biological, and 10 thermal.

Because of continuing concerns about proceeding with an SSRF at this time, on April 7, 2004 the AG again overwhelmingly adopted a resolution almost identical to its November 12, 2003 resolution. It stated that “the Advisory Group strongly recommends that City Council delay the decision on issuing an RFP for such a research facility” until the four items listed on the November 12 resolution are completed.

Despite these concerns, the AG was willing to assist in the development of the RFP if it were to go ahead. However, at its May 3, 2004 meeting, Works Committee recommended that no further action be taken with regard to the proposed SSRF until determined by the EA process. On May 12, the AG passed a resolution that “Staff’s responses have not satisfactorily addressed the AG concerns that were expressed in the April 7 motion.” In late June, City Council decided not to proceed with the SSRF.

2.1.3 Definition of Incineration

City Council had directed that “incineration” not be considered as a means of diverting solid waste from landfill, in part because the contract with Republic Services contains a clause that precludes Toronto from using incineration as it is defined in the contract. The Advisory Group concurred with City staff that a definition of incineration was required in order to determine which technologies were and which were not “incineration.”

The Technologies Subcommittee took primary responsibility for drafting a definition. To assist this process, City staff organized a meeting of experts from the AG and various organizations in October 2003 to define incineration in scientific/technological terms and to provide a definition that could be incorporated as screening criteria in future procurement processes. The AG considered a draft definition of incineration. Following further discussions by the full AG and the Technical Subcommittee, it was decided on November 12 that the definition of incineration was not adequate for inclusion in the

RFQL process and a legal perspective on the definition was necessary. In view of the AG's position of not supporting the SSRF, no further work was undertaken on the definition.

2.1.4 Possibility of Achieving 100% Diversion

In June 2004, the Advisory Group commissioned two of its expert members to study how much diversion can be achieved through the use of various types of technologies to write a report with their findings to be presented to the AG. These experts, together with City staff and the AG's citizen co-chair, formed the 100% Diversion Subcommittee. Their report, which has not yet been finalized, will be submitted to City staff in the near future. The AG, at its last meeting, was presented and discussed the nearly finalized draft version of the report. Based on this draft, the AG concluded that:

The goal of 100% diversion from landfill by 2010 is not achievable. A diversion rate of approximately 88% could potentially be achieved using a mix of new and emerging mechanical and advanced thermal technologies together with source-based diversion programs, or approximately 96% if provincial environmental regulations are revised to permit the use of bottom ash from gasification or char from pyrolysis operations. A diversion rate of approximately 86% could be achieved using mechanical and biological processes if provincial environmental regulations are revised to permit the routine use of low quality compost. Any decision on the adoption of such technologies for processing Toronto's residual waste must be based on their environmental performance, reliability and cost through a full environmental assessment.

There was an understanding by the AG that it would take approximately 7 - 10 years to plan, develop, and construct a new solid waste processing facility. This would consist of 5 - 8 years for completing an Environmental Assessment and 2 years for constructing the facility.

2.2 Issue 2: Is the 60% - 40% split reasonable?

The main work of the AG on whether it is reasonable for the City to seek 60% diversion was to review the City's currently planned diversion initiatives, based on the Task Force 2010 recommendations, and recommend additional policies and practices to increase diversion rates. Based on the implementation of these recommended policies and practices, the AG was then able to comment on the level of diversion that is reasonably achievable.

2.2.1 Recommendations on Policies and Practices for Increased Diversion from Landfilling of Toronto's Municipal Solid Waste

The Policies and Practices (P&P) subcommittee met between June and October 2003 to develop a set of recommendations that were considered at various meetings of the AG, including public depositions held on November 12. The subcommittee determined that with presently approved programs, the City could only achieve 38% diversion by 2006.

To significantly increase diversion, on January 28, 2004, the AG voted overwhelmingly to recommend that Works Committee and City Council approve a set of "Recommendations on Policies & Practices for increased diversion from landfilling of Toronto's Municipal Solid Waste" (Appendix 5).

In its preamble to the recommendations, the AG stated that it had

"considered a range of policies and practices to significantly increase the diversion of the City's municipal solid wastes beyond 38%. To do so, and again become a leader in waste diversion, the City must adopt and implement more aggressive policies and practices that will: maximize the effectiveness of the currently approved diversion programs; and expand diversion programs to capture additional recyclables. It will be necessary to ensure effective planning, design and implementation of new policies and practices. The AG emphasizes that in order for the City to significantly increase its diversion from landfilling there is a need for increased commitment by both the City and its residents to more aggressive reduction, reuse and recycling of wastes, and a need for other levels of governments to assist the City by passing regulations to encourage the reduction and reuse of materials."

The AG's recommended policies and practices include recommendations to

- Increase participation in diversion programs including promotion and education; diversion from multi-family residences, diversion at agencies, boards, commission and departments and schools; public space waste; recycling containers; By-law enforcement; and waste limits and user fees;
- Expand materials captured in source separated diversion programs including recyclable materials; and expansion of non-curb side reuse and recycling programs;
- Ensure effective implementation of new policies and practices. These addressed the need for a working group, costs estimates, funding, contracts, and city staff; and
- Secure assistance from the Provincial and Federal governments.

The AG stated that

“the combined effect of implementation of all of the recommendations would be to increase diversion from 38% to approximately 50% to 60% by 2010, based on estimates by City staff. A higher level of diversion should be achievable with even more aggressive implementation of the recommendations.”

In order to clearly state its view on the reasonableness of the 60% - 40% split, on February 11, 2004, the AG passed the following resolution:

“With the full and aggressive implementation of the policies and practices recommended by the Advisory Group on January 28, the City should achieve a total rate of diversion from landfilling of between 50 and 60%, and quite possibly higher, by 2010. Regardless of the exact level of diversion that will be achieved, which will only be known once new policies and practices are implemented, there will be a continuing need to process and/or dispose of a significant amount of remaining materials.”

Because the AG had some concerns about the accuracy of the diversion estimates, it also recommended that

“City staff, with the possible assistance of an outside consultant, provide its estimates of the effects of each of the Advisory Group’s Policies and Practices recommendations on diversion targets, as part of its report to the April 28, 2004 Works Committee meeting.”

In the Spring of 2004, City staff was also developing a report, “Getting to 60% Diversion and Beyond” with its set of recommendations for achieving 60% or more diversion, for consideration by Works Committee. In order to compare the staff draft recommendations with those of the AG, an in-camera meeting was held on April 13, 2004 with the AG co-chairs, Policies and Practices subcommittee chair, City staff, and selected Works Committee members. Those who attended the meeting found that staff’s draft recommendations were generally consistent with the AG’s Policies and Practices recommendations, but that the full AG needed to read the Commissioner’s final report to make a judgment on this. Staff’s final 25 recommendations were submitted to Works Committee in the Commissioner’s “Getting to 60% Diversion and Beyond” report, dated April 21, 2004.

The AG’s recommendations, together with recommendations by the Commissioner, were considered by Works Committee at its May 3, 2004 meeting, postponed from April 28. At the May 3 meeting, the AG co-chairs and chair of the Policies and Practices Subcommittee presented the AG’s Policies & Practices recommendations and generally supported the Commissioner’s recommendations. Works Committee recommended to Council “that;

1. Council approve the principle that the initiatives in the attached Getting to 60% Diversion and Beyond report will need to be approved if the City is to achieve 60% waste diversion, before new and emerging technologies are employed; and

2. Staff use the recommendations in the Getting to 60% Diversion and Beyond report as a guideline to report further requesting specific approvals including the financial commitments necessary to implement the individual initiatives.”

Over the next month, the AG reviewed in more detail the Commissioner’s 25 recommendations, and on June 16, the AG finalized and forwarded to staff and Works Committee comments (Appendix 6) on each of the recommendations together with the following statement:

“We believe that the City must adopt and implement more aggressive policies and practices that will: 1) maximize the effectiveness of the currently approved diversion programs; and 2) expand diversion programs to capture additional recyclables. It will also be necessary to ensure effective planning, design and implementation of new policies and practices.

It is on this premise that the Advisory Group has compared these 25 staff recommendations with our recommendations entitled ‘Policies and Practices for Increased Diversion from Landfilling of Toronto’s Municipal Solid Waste’ dated January 28, 2004. We support these 25 recommendations with the following comments in the attached comparison report.

Finally, we believe the City must now develop a strategic plan for the multi family component involving diversion objectives consistent with the 2010 report, milestones and performance measurements supported by a comprehensive promotional and educational framework as this sector of the City’s overall diversion program is critical to its ultimate success.”

While the AG generally agreed with most of the Commissioner’s recommendations, it had some areas of specific concerns as detailed in Appendix 7.

In addition, the AG felt that the Commissioner’s recommendations and report did not adequately address several recommendations of the AG, including promotion and education (AG recommendation 1.1), diversion programs in ABCDs and schools (AG recommendation 1.3), and public space waste (AG recommendation 1.4), though there is mention of these issues in the text of the report. The AG believed that attention should be paid to these issues and particularly pointed out the need to implement an aggressive and creative education and promotion program to increase participation and capture rates in diversion programs.

The AG also commented that the City needs to develop a strategic plan for managing multi-family waste “to ensure it is assessed through problem resolution processes, contingency plans, accountability, performance measures and marketing framework”. The City should also “demonstrate leadership by identifying all the components of municipal solid waste, and plan for those commodities that can manifest into successful diversion processes that are efficient and financially sustainable”.

In its recommendations on policies and practices, the AG stated that there is a “need for other levels of government to assist the City by passing regulations to encourage the reduction and reuse of materials.” To address this, the AG recommended (recommendation 4.1 in Appendix 5) that “The City should proactively lobby and work with the Provincial and Federal governments and Waste Diversion Ontario (WDO) for laws, regulations, policies and practices, and funding that would aid in the reduction and diversion of waste.” In addition, on several occasions, members of the public brought the issue of excessive packaging to the attention of the AG. To follow up on this, on September 29, 2004 the AG unanimously approved a resolution (Appendix 7) calling on City Council to adopt and send to the Provincial and Federal governments a request to “take action ... on the problem of excess packaging” as detailed in the AG resolution. Works Committee recommended that City Council adopt the AG’s recommendation. At its October 26-28 meeting, City Council adopted the resolution and added “that the Mayor be requested to consider, as part of the New Deal negotiations, the ability of the City of Toronto to have the authority to levy an environmental tax on goods and materials that exceed municipally established packaging standards.”

2.3 Issue 3: What should be the next steps?

In addition to actions noted above, the Advisory Group identified and made recommendations for the proper planning and implementation of activities to increase diversion and processing and disposal technologies for residual waste. These include carrying out an individual environmental assessment under the Ontario Environmental Assessment Act, and establishing a Waste Diversion Working Group. These are discussed below.

2.3.1 Environmental Assessment Process

The Advisory Group began discussions on the role of the environmental assessment (EA) process early in its work. This was in part in response to an AG Work Plan document that was put on the AG’s web site in March 2003 by City staff, unknown to the AG, stating that the City should seek an exemption from the EA Act for an advanced thermal technology (ATT) project arising out of the work of the AG. This resulted in significant press coverage and public concerns that were expressed in deputations to the AG on April 2, 2003. As a result, the AG, which had not discussed the issue of an exemption, adopted the following resolution on that date:

“The Advisory Group recommends that City staff not hold any discussions with the Ministry of the Environment concerning an exemption for the EA Act for a waste processing or disposal facility that may result from the work of the Group, until the Group has provided a recommendation on whether an exemption should be sought.”

Between April and June 2003, the AG had a series of presentations and discussions, as well as public deputations on June 25, 2003, on the role of an environmental assessment.

On June 11, 2003, the AG adopted the following resolution on the same issue:

“The Advisory Group approves of one or more meetings between City of Toronto staff and EA staff, for the purposes of ensuring that timing and the definition of the undertaking are acceptable. The purpose of the meeting is to discuss the application of the EA Act and not to discuss an exemption. Staff should report back on the results of each meeting.”

On June 25, 2003, the AG passed the following resolution:

“Preamble:

The City of Toronto (the 'City') has established a goal of 100 percent diversion from landfill by the year 2010. Current recycling and composting programs, including the Green Bin program to process household organics and other Task Force 2010 initiatives, will increase the City's diversion rate from landfill to approximately 43% by 2005. As a means to achieve its diversion objectives of 60 percent from landfill by 2006 and the 100 percent objective by 2010, the City is reviewing the potential adoption of new and emerging technologies, policies and practices.

Recommendations:

1. There be an individual EA, as set out under the requirements of the Ontario EA Act, for the management of Toronto's residual solid waste.
2. The City be the proponent of the EA.
3. The EA should address all phases of planning and decision-making, including: (i) need; (ii) the choice of policies and practices and technology(ies) (i.e. 'alternatives to'), and (iii) the siting of facilities (i.e. "alternative methods"). The City should begin the development of Terms of Reference for the EA as required by the EA Act as soon as possible.”

Then, on August 20, 2003, when addressing the staff's draft report to Works Committee concerning the work plan and timeframe for an EA, the Advisory Group adopted the following resolution:

“The Advisory Group reiterates the importance of the City beginning immediately an individual EA for the management of Toronto's residual solid waste as adopted at the June 25, 2003 Advisory Group meeting.”

In September, Works Committee and City Council approved undertaking an individual EA as recommended by the AG and the Commissioner, and authorized the Commissioner to hire a consultant for this purpose.

Between October 2003 and March 2004, three AG members of the EA subcommittee, with the approval of the full AG, worked with City staff to develop the RFP and assist in the selection of the consultant to carry out the development of the required Terms of Reference (ToR) for the EA. The RFP was issued in March and an evaluation team, including the three AG members, recommended hiring a consulting team led by MacViro Consultants Inc. Works Committee and City Council approved this in May 2004.

As planning started for the development of the Terms of Reference for the EA, including the potential role for the AG as an EA advisory body, discussions between the EA subcommittee and City staff, at a meeting on June 7, 2004, resulted in the conclusion that because of its membership and mandate, the AG was not the appropriate body for this. The EA subcommittee therefore recommended that the AG should continue to December 31, 2004 and that the City should:

“Establish an Environmental Assessment Advisory Group (EA AG) as soon as possible. All EA-related undertakings by the City and consultant should be withheld until this new EA AG is established. This Advisory Group would assist City staff and consultants draft the EA ToR and possibly continue for the duration of the EA process. The EA AG should report directly to Works Committee, not staff.

That an EA Management Committee should be constituted to provide direction and management of the EA ToR and the EA. It should be comprised of Councillors, staff and the Co-chairs (or Chair and Vice-chair) of the EA AG.”

The subcommittee also made another recommendation concerning the establishment of a Solid Waste Diversion Working Group. At its June 15, 2004 meeting, the AG adopted the following resolution:

“The AG supports the EA subgroup’s recommendation to dissolve the AG in December 2004 and form two new Advisory Groups. The first Advisory Group would provide advice on the EA. The AG will not do any further work on the EA.”

Following this, in a June 23, 2004 report to Works Committee, the Commissioner recommended the establishment of an EA Advisory Group (EA AG), an EA Steering Committee, and a Solid Waste Diversion Working Group. Contrary to what was recommended by the AG, the Commissioner recommended that the EA Advisory Group would report to the EA Steering Committee, which would report to the Commissioner, though the Chair and Vice-Chair of the EA AG would be able to depute to Works Committee. The recommended composition of the EA Advisory Group also differed significantly from what had been discussed at the EA subcommittee meeting. In a deputation to Works Committee on July 5, a member of the public raised concerns about the EA AG reporting structure and membership, and as a result, Works Committee decided to refer the Commissioner’s report to the City’s soon to be formed Roundtable on the Environment, “to provide advice on the development of a citizen

participation model for the public consultation process regarding the initiation of an individual environmental assessment” As a result, the work of the consultants has been on hold since July 2004.

Because of concerns that the referral to the Roundtable, which would not hold its first meeting until October, would likely significantly delay the start of the EA, the EA subcommittee sent a letter to Works Committee members on July 19 reiterating that “while still providing for an innovative public consultation process for the actual EA study, a separate EA Advisory Group should be established as soon as possible, as set out in our previous recommendation.”

Then, on August 25, 2004 the AG approved the following resolution to be sent to the Mayor, the Chair of the Roundtable and the Chair and members of Works Committee:

“The Advisory Group fully supports the view that the EA process for the management of Toronto’s residual solid waste must be based on broad public participation and believes that the Roundtable may have useful views on this. We believe that the Roundtable’s advice should be provided as soon as possible in order for the City to avoid significant delays in starting the environmental assessment. To assist the Roundtable, the Advisory Group is expressing its view that a new EA Advisory Group should be formed as soon as possible to assist in the development of the Terms of Reference for the EA.”

The resolution concluded with “The Advisory Group therefore recommends to the Roundtable that it expeditiously support the formation of an EA Advisory Group and a Waste Diversion Working Group.”

At its inaugural meeting on October 19, 2004, the Roundtable received and supported a 10-point proposal from Councillor Paula Fletcher and Mr. Gord Perks, Toronto Environmental Alliance, recommending a ‘Community Consultation Group’, composed of 15-25 citizens that would “ensure that broad consultation takes place.”

At its meeting of October 20, 2004, the Advisory Group received an oral report on the Roundtable’s October 19 meeting and reviewed the 10-point proposal. As a result, on October 27, the Advisory Group adopted the following resolution that was forwarded to Works Committee for consideration at its next meeting on November 9, 2004:

“The Advisory Group fully supports the 10-point proposal for a Community Consultation Group submitted to the Roundtable on the Environment, with the following clarifications and additions:

1. the Group should ensure that there is broad consultation with those potentially interested;
2. the Group will direct consultants and the EA process based on the public consultation, and with input from City staff on an ongoing (not on an only-when-asked) basis;

3. the Group will include citizens with proven experience (not only expertise) in environmental issues (preferably waste management), community engagement, and/or environmental assessment;
4. membership on the Group should be expanded to include citizens from potentially affected areas when those areas are identified; and
5. to better reflect its purpose, the Group should be named the 'Toronto Solid Waste EA Group'."

At its November 9 meeting, Works Committee recommended that City Council "approve in principle" the citizen participation model for public consultation related to solid waste recommended by the Roundtable; the Acting Commissioner of Works report to Works Committee regarding the administration, accountability and financial aspects of the model; and the Chair and Vice-Chair of Works Committee be authorized to select the Community Environmental Assessment Team (renamed from the Community Consultation Group). This is to be considered by Council at an upcoming meeting.

2.3.2 Waste Diversion Working Group

The Advisory Group developed and, in January 2004, recommended a set of new policies and practices for significantly increasing source-based diversion. As part of these recommendations, the Advisory Group recommended (Recommendation 3.1) the following:

Working Group: The City should establish a Waste Diversion Working Group to oversee the planning, design, implementation, promotion and monitoring of diversion programs. The Working Group should include members of the public, City staff, frontline collection workers, and possibly Works Committee members. It should also establish plans with timelines, and clear reporting structures for its work and for implementation and operation of diversion programs, and should coordinate its work with that of the working groups for apartments, ABCDs and schools.

As a follow-up to this, in June 2004, the Advisory Group recommended the following:

"On January 1, 2005, establish a Waste Diversion Working Group, whose mandate would be to advise the City on how best to implement the policies and practices recommendations in the 'Getting to 60% Diversion and Beyond' Staff Report. The Diversion Working Group should report directly to Works Committee, not staff."

The Commissioner, in his June 23, 2004 report to Works Committee recommended a Solid Waste Diversion Working Group that would report to the Commissioner. This issue was also referred to the Roundtable on the Environment.

The Advisory Group, in August 2004, passed a resolution that:

“In order to achieve the City’s ambitious goals for waste diversion, the Advisory Group believes that it is important that a Waste Diversion Working Group be in place and functioning as soon as possible and no later than January 1, 2005. At that time, the Advisory Group’s mandate ends and there will be a need for continued public input into the design and implementation of policies and practices for new diversion programs.”

The Roundtable did not address this matter at its October 19 meeting when it considered public consultation for the EA. To ensure that the establishment of the Solid Waste Diversion Working Group would not be forgotten, and consistent with its previous resolutions, the AG adopted the following resolutions on October 27, 2004:

1. “The City should establish a Waste Diversion Working Group to oversee the planning, design, implementation, promotion and monitoring of diversion programs. The Working Group should include members of the public, City staff, frontline collection workers, and possibly Works Committee members. It should also establish plans with timelines, and clear reporting structures for its work and for implementation and operation of diversion programs, and should coordinate its work with that of the working groups for apartments, ABCDs and schools.
2. The Waste Diversion Working Group should report directly to Works Committee.
3. The Waste Diversion Working Group should be established as soon as possible, and no later than April 1, 2005.”

At its November 9, 2004 meeting, Works Committee did not consider this issue, despite the AG’s resolution.

3. CONCLUSIONS AND RECOMMENDATIONS

As a result of its work, the Advisory Group has the following conclusions and recommendations regarding its three strategic issues:

Issue 1: Is 100% diversion from landfill by 2010 achievable through the use of new and emerging technologies, policies and practices?

The goal of 100% diversion from landfill by 2010 is not achievable. A diversion rate of approximately 88% could potentially be achieved using a mix of new and emerging mechanical and advanced thermal technologies together with source-based diversion programs, or approximately 96% if provincial environmental regulations are revised to permit the use of bottom ash from gasification or char from pyrolysis operations. A diversion rate of approximately 86% could be achieved using mechanical and biological processes if provincial environmental regulations are revised to permit the routine use of

low quality compost. Any decision on the adoption of such technologies for processing Toronto's residual waste must be based on their environmental performance, reliability and cost through a full environmental assessment.

There was an understanding by the AG that it would take approximately 7 - 10 years to plan, develop, and construct a new solid waste processing facility. This would consist of 5 - 8 years for completing an Environmental Assessment and 2 years for constructing the facility.

Issue 2: Is the 60%- 40% split reasonable?

With the full and aggressive implementation of the policies and practices currently being implemented by the City and new policies and practices recommended by the Advisory Group, the City should be able to achieve source-based diversion from landfill of between 50 and 60%, and quite possibly higher, by 2010.

Regardless of the exact level of diversion that will be achieved, which will only be known once new policies and practices are fully implemented, there will be a continuing need to process and/or dispose of a significant amount of remaining materials.

Issue 3: What should be the next steps?

In order to move beyond the expected 40% diversion rate by 2006 with currently approved diversion programs, the Advisory Group recommends that:

1. The City should fully and aggressively implement new policies and practices, such as those recommended by the Advisory Group and City staff, to significantly increase source-based diversion from landfilling. These should include strong promotion of existing and new diversion programs.
2. The City should immediately establish a Waste Diversion Working Group to oversee the planning, design, implementation, promotion and monitoring of source-based diversion programs. This group should report directly to Works Committee and include members of the public, City staff, frontline collection workers, and possibly Works Committee members.
3. The City should move ahead expeditiously with a full environmental assessment, including the formation of a public advisory committee to direct the EA process. This committee should report directly to Works Committee. Given the significant public concerns about various potential solutions to the City's waste management problems, the EA process needs to be innovative, thoughtful, well managed and fully transparent.

Appendices

1. List of Members, Observers, Councillors and Staff
2. Terms of Reference
3. Administration Procedures
4. Learning Plan
5. Recommendations on Policies & Practices
6. Responses to Commissioner's "Getting to 60% Diversion and Beyond" Report
7. Resolution on Packaging