Clarington
Leading the Way

# REPORT
## PLANNING SERVICES

**Meeting:** **GENERAL PURPOSE AND ADMINISTRATION COMMITTEE**

**Date:** Tuesday, May 22, 2007

**Report #:** PSD-070-07 **File #:** PLN 33.3.10 **By-law #:**

**Subject:** **MUNICIPAL PEER REVIEW AND OTHER STUDIES OF THE DURHAM/YORK ENERGY FROM WASTE ENVIRONMENTAL ASSESSMENT STUDY**

**RECOMMENDATIONS:**

It is respectfully recommended that the General Purpose and Administration Committee recommend to Council the following:

1. THAT Report PSD-070-07 be received;

2. THAT Staff be instructed to carry out the requirements of Resolution #C-211-07 by preparing the studies in accordance with the scope of work set out this report;

3. THAT Mr. Steven Rowe be retained to undertake the scope of work as outlined in Section 4.2 (Site Selection) and Section 4.4 (Gap Analysis) of this Report, and further to advise on the scope of work set out in Section 5.1 (Oversight of Technology Procurement Process) and 5.2 (Potential Environmental Effects) of this Report;

4. THAT SENES Consultants Limited be retained to undertake the scope of work as outlined in Section 5.1 (Oversight of Technology Procurement Process) of this Report, and further to assist with the scope of work set out in Section 5.2 (Potential Environmental Effects) of this Report;

5. THAT AMEC E&C Services Ltd. be retained to undertake the scope of work as outlined in Section 5.2 (Potential Environmental Effects) of this Report;

6. THAT C.B. Richard Ellis Ltd. be retained to undertake the scope of work set out in Section 6.1 (Impact on Clarington Energy Business Park) and Section 6.2 (Impact on Assessment Base) of this Report and further to assist with the scope of work set out in Section 6.3 (Community Stigma);

7. THAT the Director of Finance be authorized to retain a multi-disciplinary accounting firm to undertake the scope of work set out in Section 6.3 (Community Stigma) and Section 6.4 (Host Community Agreement) of this Report;

8. THAT the Municipal Solicitor and Consulting Engineer (Totten Sims Hubicki) provide information, professional opinion, estimates and advice as deemed appropriate;

9. THAT the Directors of Finance and Planning Services be instructed to strike a committee comprised of Clarington staff and consultants similar in composition to the Region of Durham's committee in order to facilitate discussions related to the Host Community Agreement;

10. THAT the Directors of Finance and Planning Services be instructed to take any additional actions or retain any additional consultants deemed necessary to ensure the Municipality has carried out its due diligence;

11. THAT the Region be requested to work in cooperation with Clarington Staff to improve the public engagement process as noted in Section 4.3 and the Air Shed Study process as noted in Section 5.2;

12. THAT the Purchasing By-Law 2006-127 be WAIVED;

13. THAT the Director of Planning Services and the Director of Finance be authorized to negotiate and approve contracts with the consultants deemed necessary to complete the due diligence for the Municipality as identified in this report;

14. THAT Council authorize the Mayor and Clerk to sign the necessary by-laws to engage the consultants and execute the contracts deemed satisfactory by the Director of Planning Services and the Director of Finance;

15. THAT the peer reviews and studies referenced in this Report be deemed to be part of the "necessary studies" to complete due diligence as referenced in the motion approved by Durham Region Council on April 18, 2007, and that the Director of Finance be directed to recover these due diligence costs from the Region of Durham as set out in their motion;

16. THAT Staff report regularly to Council on the progress and findings of the peer reviews and analyses being undertaken, and the Host Community Agreement discussions; and

17. THAT all interested parties be notified of Council’s decision including the Regions of York and Durham Councils and the Joint Waste Management Committee.

Submitted by: _____
Nancy Taylor, C.A.
Director of Finance/Treasurer

Submitted by: _____
David J. Crome, M.C.I.P., R.P.P.
Director of Planning Services

Reviewed by: _____
Franklin Wu,
Chief Administrative Officer

JAS/FL/NT/DJC/sn

## 1.0 PURPOSE OF REPORT

1.1 On March 27, 2007, the Short List of Alternative Sites for the proposed York and Durham Regions' residual waste processing facility was announced. Five of the six sites on the list are located in Clarington (see Attachment 1).

1.2 On April 16, 2007, Council adopted the Resolution # C-211-07, as follows (in part):

> "THAT Staff be directed to examine comprehensively all the documentation prepared to date, the adequacy of the public consultation process and to report on alternatives available to the Municipality;
>
> THAT Staff investigate the implications of a proposed waste-to-energy facility on the Energy Business Park including the ability to attract prestige uses including offices and research facilities;
>
> THAT the Regions of York and Durham commit to design a waste-to-energy facility that will not impact the health of present and future residents;
>
> THAT Region of Durham provide the staff of the Municipality of Clarington, a reasonable opportunity to review and comment on Report 2007-J-14;
>
> THAT the Region of Durham agree to pay the reasonable expenses of the Municipality of Clarington incurred with respect to all necessary studies and legal advice required in order for the Municipality to determine its position on the proposals."

1.3 The purpose of this report is to define the scope of the studies and peer reviews that the Municipality will undertake to assist Council in determining its position with respect to the proposed York/Durham Energy From Waste (EFW) facility to ensure that the interests of the Municipality and its residents are protected.

## 2.0 OVERVIEW OF ENVIRONMENTAL ASSESSMENT PROCESS

2.1 The Regions of Durham and York are currently conducting an Environmental Assessment (EA) Study to determine how to manage the residual solid waste remaining after blue box and green box diversion efforts. The purpose of the undertaking, as set out in the approved Terms of Reference is:

- To process – physically, biologically and/or thermally – the waste that remains after the application of both Regions' at-source waste programs in order to recover resources – both material and energy – and to minimize the amount of material requiring landfill disposal. In proceeding with this undertaking, only those approaches that will meet or exceed all regulatory requirements will be considered.

- The waste proposed to be managed will be Municipal Solid Waste (MSW) from residential sources generated within Durham and York Regions remaining after at-source diversion, a portion of post-diversion Industrial, Commercial and Institutional (IC&I) waste traditionally managed by the Regions at their waste disposal facilities; and Municipal post-diversion residual waste from neighbouring non-Greater Toronto Area (GTA) municipalities that may provide disposal capacity for processing residues.

2.2 A description of the proposed undertaking was developed for the purpose of initiating the EA Study. The undertaking would be a residual waste processing facility(ies) that would be capable of managing the minimum 316,000 tonnes/year of residual wastes projected to remain after the achievement of the Regions' diversion objectives. This amount includes the receipt of a quantity of additional post-diversion waste from other sources. Over the 35-year planning period (2011 – 2045), it is projected that a minimum of 13.3 million tonnes of residual waste will require management.

2.3 Through the EA Study, four functionally different systems to process the waste and recover materials and energy were examined ("Alternatives To"). These four approaches are summarized on Attachment 2. In June 2006, Durham and York Region Councils resolved to pursue a waste management system using the "Thermal Treatment of Mixed Solid Waste and Recovery of Energy followed by Recovery of Materials from Ash/Char" (System 2a). However, because new technologies may offer additional benefits, the Councils also resolved to consider "Thermal Treatment of Solid Recovered Fuel" (System 2b).

2.4 The EA study identified advantages of thermal treatment as being the lowest potential impacts to water, land, sensitive habitats and the social environment of the host community, plus the greatest energy generation. Disadvantages identified included the highest potential impact on the atmosphere, less flexibility to changes in waste quantities and composition, and the need to manage hazardous residues (fly ash and flue gases).

2.5 The next step in the EA involves the identification of a preferred site for the construction and operation of the new thermal treatment facility ("Alternative Methods"). A site with an area of 10 to 12 hectares was determined to be required, although a smaller site could be considered if off-site infrastructure was shared with other sites. The site search was limited to lands within York and Durham Regions. Criteria used to eliminate lands considered unsuitable included:

- Lands protected by Provincial/Federal legislation (including the Oak Ridges Moraine and Greenbelt lands)
- Designated residential areas
- Natural heritage features
- Prime agricultural areas
- Designated parks and recreation areas
- Existing and designated institutional facilities
- Federally regulated airport lands.

2.6 Following the identification of potentially suitable areas, a long list of potential sites was identified through the identification of publicly owned sites and willing seller sites. The Regions undertook two calls for willing sellers, in November 2006 through a "Call for Willing Sellers", and in February 2007 through the release of a "Request for Expressions of Interest". This process resulted in 12 potential sites:

Publicly Owned Sites
- 2 in Clarington (owned by Durham Region)
- 1 in East Gwillimbury (owned by York Region)

Willing Seller Sites
- 1 in York Region (Vaughan)

- 8 in Durham Region (1 each in Pickering, Whitby, and Brock Township, 2 in Oshawa and 3 in Clarington).

The willing seller sites in Vaughan, Pickering, Oshawa and Brock were subsequently removed as they did not meet the criteria set out in the proposal call, leaving a long list of 7 potential sites.

2.7 These long list of sites was further evaluated using the following criteria:

- Proximity to required infrastructure
- Potential impacts of haul routes
- Site size
- Land use compatibility
- Site availability
- Potential impacts on unregulated airports.

As a result of this evaluation, the site in Whitby was eliminated.

2.8 The final Short List of Sites includes 6 sites, 5 of which are located in Clarington, with the remaining site located in East Gwillimbury (see Attachment 1). It is the Regions' intention to have a preferred site recommended by September 2007. The Short List of Sites will now be evaluated using the criteria set out in the EA Terms of Reference which may result in the elimination of additional sites.

## 3.0 REQUIREMENTS FOR MUNICIPAL REVIEW AND STUDY

3.1 A great deal of documentation has been produced through the EA Study to date. This documentation relates primarily to the development of the EA Terms of Reference, the identification of the recommended residuals processing system (Alternatives To), and the identification of the short list of alternative sites (Alternative Methods). As well, the consultation with the public and various agencies, including responses to public and agency comments, have been documented. All of these documents are available on the Study website (www.durhamyorkwaste.ca).

3.2 Clarington's efforts will largely focus on reviewing the EA Study documentation that will have the greatest potential effect on the Municipality and its residents, and providing Council with the information required to make informed decisions. For the most part, the recommendations of this report do not propose to undertake new studies for the EA process. Rather, Staff are recommending that the Municipality undertake a peer review of the appropriate documents that have been or will be prepared for the EA Study, as follows:

- Verify that the work undertaken for the EA Study adheres to the approved Terms of Reference and the Environmental Assessment Act and its Regulations, with a particular focus on the adequacy of the public consultation process and the site selection process (both are discussed later in this report);
- Review current and emerging EFW thermal technologies that are available to the Regions through their Request for Proposals and procurement process and provide comments on ways in which this could be improved;

- Review the health effects and risk assessment study that the Region is undertaking, and obtain independent advice on the environmental standards for the facility including air and water quality monitoring recommendations; and
- Explore the alternatives available to the Municipality to influence and improve the EA process as it continues to a conclusion.

3.3 In addition to the peer reviews of various EA documents, it is also recommended that the Municipality undertake an independent financial and economic analysis to ensure that its interests are protected, as follows:

- Undertake an economic impact study that focuses on the Municipality's ability to attract the uses to the Clarington Energy Business Park (Energy Park) as envisioned by the Secondary Plan should the EFW facility be sited there, and the potential cumulative stigma on the Municipality's image created by the location of a number of waste, energy and industrial facilities along the lakeshore;
- Determine the financial impacts on the Municipality of hosting an EFW facility should it be sited here, including the potential impact on property assessment and municipal taxation;
- Determine the infrastructure costs to the transportation network as a result of the increased truck traffic; and
- Determine the benefit(s) that could be obtained through the proposed Host Community Agreement.

3.4 This report also identifies the specific consulting assistance that the Municipality will require to ensure that the interests of the Municipality and its residents are protected throughout the process. In this regard, it is important to note that the consultants hired by Durham and York Regions are responsible for delivering the best solution for the two Regions, and not to defend Clarington's interests. Therefore, while the Municipality can assist the Regions by providing comments and suggestions regarding the Terms of Reference, study methodology, and by identifying gaps in their research and studies, the Municipality cannot rely on the Regions' consultants to provide advice to Clarington.

3.5 Clarington’s consultants will be retained to undertake the scope of work identified in this report. More specifically defined Proposals are being prepared by the consultants based on direction provided by staff. The tight timeframe set out by the Region in their EA process for undertaking the necessary work does not allow for a competitive bid process. Rather, the consultants being recommended by staff were identified through references by professional colleagues, and through discussions with the consultants to ensure that they possess the necessary expertise and knowledge and do not have any conflicts of interest (see Attachment 3).

3.6 Based on the above, staff are requesting that Council waive the Purchasing By-law for competitive proposals. Due to time constraints, it may be advantageous for staff to be authorized to review and select the consultants based on the proposals negotiated with the preferred consultants. Alternatively if Council wants to review the specifics, it would be appropriate for staff to report back; however this will delay the work and could jeopardize the Municipality’s review given the aggressive timeframe being pursued by the Regions.

## 4.0 PEER REVIEW OF EA DOCUMENTS AND PROCESS

### 4.1 "Alternatives To" Draft Report

4.1.1 In June 2006, the Regions received the consultants report on alternative treatments for disposal of residual waste. At that point in time, both Regions resolved to pursue thermal treatment through alternatives 2a or possibly 2b (see Attachment 2).

4.1.2 There are a variety of views on the alternative approaches, their costs and their environmental and social impacts. Since the Region has resolutely made the decision to pursue thermal treatment, unless Council directs otherwise, it is not proposed that the "Alternatives To" draft report be peer reviewed.

### 4.2 "Alternative Methods" Site Selection

4.2.1 The draft Terms of Reference, as prepared by the Regions and submitted to the Minister of Environment, proposed an approach for identifying a site for the new waste management facility (Alternative Methods). Council, in its comments on the draft Terms of Reference, questioned the adequacy of the site selection process and strongly objected to the focus on publicly owned lands. These comments noted that the Terms of Reference unfairly prejudiced the site search in favour of lands owned by the two Regional governments, in particular the significant area of land owned by the Region of Durham near the Courtice waterfront. The Terms of Reference for the EA Study, as approved by the Minister of Environment on March 31, 2006, were not revised to address Clarington's concerns.

4.2.2 Clarington Council, by way of Resolution #C-069-06, specifically requested that:

> "… the Durham/York Residual Waste Disposal Planning Study be amended by including in the Study Area, the Wesleyville site owned by Ontario Power Generation in the Municipality of Port Hope."

Although the Terms of Reference for the EA Study do not specifically preclude the Wesleyville site, the site selection criteria effectively eliminated all sites outside of York and Durham Regions.

4.2.3 Other deficiencies identified in the site selection process include:

- The requirement for public ownership prevented a number of potentially suitable privately owned sites, long term lease sites and EFW facilities located at an existing industry from being considered;
- Lack of opportunities for "feedback loops" within the process to allow for new sites to be considered should a new willing seller come forward;
- The addition of sites should one of the technology proposals include a specific site is included as a potential option in the Terms of Reference; however it is unclear how it could practically be considered given the other eliminating criterion; and
- If all relevant future land use designations and policies in the Durham Regional Official Plan and the Clarington Official Plan are considered, sites on the short list will be eliminated from the site selection process.

In this regard, it would appear that the site search process does not meet the intent of the Terms of Reference to identify a number of potential sites in each Region.

4.2.4 Staff recommend that the Municipality engage an environmental planner with expertise in EA processes to determine whether the site selection process has adhered to the approved Terms of Reference, and the Environmental Assessment Act and its regulations. The consultant being recommended by staff is Steven Rowe and his firm; his areas of expertise are indicated in Attachment 3A.

### 4.3 Public Consultation Process

4.3.1 The Regions and their consulting team appear to have met the minimum requirements for public consultation as set out in the Environmental Assessment Act. However, the public consultation process carried out to date has not been particularly robust or inclusive and may not meet the requirements as set out in the Terms of Reference. By way of example, the Terms of Reference call for the establishment of a public liaison or advisory committee representing a broad range of interests across the study area in order to focus public input on the EA study. In staff's opinion, this committee has yet to be established.

4.3.2 Staff recommend that Council request that the Regions capitalize on the heightened public awareness by providing a more rigorous public participation process for the remainder of the EA process. In particular, given the current focus on sites in Clarington, the public consultation process should be more inclusive of Clarington residents (eg. additional public information sessions to provide information on the different technologies, their benefits and disadvantages, and the additional studies that are being undertaken, and membership on the public liaison committee).

4.3.3 The Region will be providing the Municipality with its “go forward” communications strategy by the end of May. By separate report, staff will provide comments on how the public consultation can be improved, specifically for the residents of Clarington.

### 4.4 Gap Analysis of EA Study Process

4.4.1 The numerous technical and background studies that make up the EA process and the way in which this information has been communicated, disseminated and carried forward into the next stages of the process are all part of the Environmental Assessment process. The process is complex, multi-faceted and takes a considerable amount of time to complete to the satisfaction of all parties.

4.4.2 It is important that the Municipality and Clarington residents have confidence in the EA process. An audit of the compliance with which the Region has been following the approved EA Terms of Reference, the EA Act and its regulations will strengthen public confidence in the decisions reached at the conclusion. If gaps are identified the consulting team can address the concerns by revisiting these areas and provide additional analysis and information to address the gaps.

4.4.3 It is prudent for the Municipality and beneficial for the Region that a review be undertaken during the EA process. A third party independent review of the Region’s compliance with the approved EA Terms of Reference, the EA Act and regulations will strengthen the study results. Staff is recommending that the Municipality engage Steven

Rowe, an environmental planner with expertise in EA processes, to determine whether any gaps have occurred during the EA study process. The same consultant is being recommended to undertake the Site Selection review in Section 4.2 so that this analysis can be carried out at the same time.

## 5.0 REVIEW OF ENERGY FROM WASTE THERMAL TREATMENT TECHNOLOGIES

### 5.1 Oversight of Technology Procurement Process

Throughout the public information sessions and as the selection process has evolved, there has been discussion by the public on the various technologies that could be considered for thermal treatment. Given that the Region is proceeding with the selection of a thermal treatment technology, Clarington should have independent advice on the options under consideration and the best course of action for Council on behalf of our residents.

5.1.1 The Regions intend to follow a two-step process for procuring the appropriate technology to thermally treat residual waste and generate energy. The first step will be the issuance of a Request for Qualifications (RFQ) to vendors of thermal waste treatment technologies. The second step will be the issuance of a Request for Proposals (RFP) that will seek specific proposals for the construction of a facility, including financial commitments and technical requirements.

5.1.2 A number of different EFW technologies currently exist or are in the development stage. These range from well-established technologies such as conventional combustion/ incineration to emerging technologies such as plasma arc reactors. These technologies exhibit a wide range of advantages and disadvantages, and a number of factors will be used to evaluate the various systems and identify a preferred system (see Attachment 2). It is important to note that the factors the Regions may favour (eg. optimum energy generation) may not necessarily coincide with those factors that would be most favourable to Clarington (eg. lowest air emissions).

5.1.3 Accordingly, the Municipality will require consulting expertise in thermal treatment technologies in order to ensure that the interests of the Municipality and its residents are protected throughout the technology procurement process. The consultant would peer review the work undertaken to date to determine any gaps in the analysis, and assist in municipal oversight of the procurement process to ensure that the evaluation of the various technologies addresses the issues that are of greatest importance to the Municipality.

5.1.4 Staff recommend that the Municipality have input into the preparation of the specifications for the Regions RFP for technology and provide comments on the proposed technology vendors. Staff recommend that SENES Consultants Limited, who have expertise in waste treatment technology as indicated in Attachment 3B, be engaged to assist the Municipality with our comments.

### 5.2 Potential Environmental Effects

5.2.1 There will be environmental impacts associated with all of the thermal treatment technologies being considered. Of particular concern to the Municipality is the cumulative impact on the atmospheric environment resulting from an additional source of

contamination within the Clarington air shed. The emissions will not be known until a specific technology is selected. It is therefore crucial that the Municipality receive expert advice on the potential adverse health effects and risks associated with each thermal technology.

5.2.2 The Regions are intending to prepare a generic air shed study and undertake a more specific air shed study once a technology and site are selected. Staff are recommending that the air quality and environmental issues need to be addressed during the evaluation of the short list of alternative sites, rather than at a later stage of the EA process as is currently proposed. Clarington Council can request the Region to adjust their work program for this study to take into consideration the specific requirements of Clarington.

5.2.3 On April 18, 2007, Durham Region Council approved the following motion (in part):

> "THAT an Environmental Consultant be jointly retained by the Region of Durham and the Region of York, with the selection participation from the Municipality of Clarington and the Township of East Gwillimbury, for the following purposes:
>
> i) to satisfy the Councils of both Durham and Clarington that a state of the art EFW facility will not impact the health of present and future residents of the host community;
>
> ii) to confirm that, on the basis of current scientific evidence, a state of the art EFW facility is an environmentally responsible solution to waste disposal in Durham".

5.2.4 Staff concur that the Municipality should work with the Region and their consultants to ensure that an air quality, health effects and risk analysis is carried out to our satisfaction. However, it is prudent for Clarington to obtain independent scientific advice on the issues of air quality and the cumulative environmental effects of an EFW facility. The scope of work would include a peer review of the Terms of Reference and methodology for the Air Quality and Health Risk Assessment and the generic air shed study. In addition, this consultant could provide advice regarding the air quality monitoring program and the appropriateness of various regulatory standards. It should be noted that the Regions in the EA Terms of Reference committed to meeting or exceeding all regulatory requirements in proceeding with this undertaking.

5.2.5 The consultants being recommended by staff for air quality and health risk assessment are AMEC E&C Services Ltd. as indicated in Attachment 3C. They will work with SENES, the consultant with expertise in EFW technologies, as indicated in Attachment 3B, as a team to provide ongoing advice to Council on issues related to the health impacts and well being of Clarington residents.

## 6.0 FINANCIAL IMPACTS AND HOST COMMUNITY AGREEMENT STUDIES

### 6.1 Impact on Clarington Energy Business Park

6.1.1 The Energy Park contains two of the potential locations of the EFW facility that meet the siting criterion as set out in the EA Terms of Reference, while a third site sits immediately adjacent to the Park. Sites 1 and 2 as identified on Attachment 2 are owned by the Region of Durham, while Site 5 is a “willing seller” site.

6.1.2 The Energy Park is 129 hectares (318 acres) and is an appropriate location for prestige and light industrial employment uses that can benefit from the emerging energy cluster in Durham, close proximity to the Darlington Nuclear Generating Station, the hydro-electric transmission grid, the University of Ontario Institute of Technology, and/or major employers that would be attracted to a campus that could provide synergy to the energy and environment sectors of the regional economy. The Secondary Plan and zoning for the Energy Park were adopted by Clarington Council on February 28, 2006 and Regional Council on April 10, 2006. The frontage of the energy park has been designated for prestige employment uses with signature buildings. The interior and rear portions of the Energy Park are designated for light industrial use.

6.1.3 The future development of the Energy Park, as set out in the Secondary Plan, is to be guided by the following over-arching principles: Innovation, Conservation, Efficiency, Integration, Diversity and Design Excellence. The goals and objectives set out in the Secondary Plan reinforce the guiding principles and aim to develop a focal point for research and development and related industrial activity, and to facilitate cooperation among businesses within the Durham Region energy cluster. The purpose of the Energy Park is to provide a unique industrial location that attracts industry related to the energy sector. The Energy Park targets energy innovations and related companies that engage in research and development, demonstration, commercialization, and sale of existing and new energy source technologies.

6.1.4 The marketing and economic studies carried out during the background stages of the Secondary Plan determined that an excellent opportunity exists for Clarington to attract prestige research and office uses and alternative energy innovation firms. These new businesses would improve the Municipality's long term financial stability by increasing its industrial tax base. As well, the highly skilled individuals that would be employed at

6.1.5 Regardless of the thermal waste treatment determined during the proposal call, the EFW facility envisioned by the Regions is a large industrial facility (3-4 storeys in height) with a highly visible smokestack. In addition, it is anticipated that there will be a significant volume of trucks hauling waste to the new facility.

6.1.6 Although the Energy Park planning contemplated that there may be some alternative power generation, there were concerns about the impact of an energy from waste facility. The Municipality, as part of its due diligence, needs to determine if the siting of an EFW facility of the magnitude envisioned by the Regions (250,000 to 400,000 tonnes/year) will create a measurable impact on the marketability and development of the Energy Park as envisioned by the Secondary Plan.

6.1.7 C.B. Richard Ellis Limited are being recommended by staff for the economic analysis as indicated in Attachment 3D. They will work with the consultants that developed the energy park urban design basis and the emerging energy market analysts that helped develop the marketing strategy for the energy park. These consultants are Urban Strategies, Delphi Group and Gartner Lee and will only provide minor assistance and clarification as to the intent of the Energy Park studies.

6.2 **Impact on Assessment Base**

6.2.1 As mentioned in Section 6.1.4, one of the major opportunities that the Energy Park represents is the anticipated improvement in the Municipality's tax base and ratio. Not only would the development of the Energy Park create a new stream of taxation income,

it would help move the Residential/Commercial-Industrial ratio from the existing 91/9 towards the 75/25 target set out in the Official Plan.

6.2.2 The Municipality has waited a considerable length of time for sanitary sewer and municipal water services to be provided to industrial areas to increase their marketability. By providing serviced industrial areas, Clarington can begin the process of attracting more employers and providing a better live/work lifestyle for residents.

6.2.3 Part of the economic analysis that the Municipality should be carrying out is to determine the comparative tax revenues with and without the EFW facility. By developing an understanding of any delays this facility may have on developing the Energy Park lands, as well as the type and quality of other employers that can be attracted, the Municipality will be able to determine if it should be compensated for lost opportunities should the facility locate in the Energy Park. The thermal treatment facility poses a high risk to the Municipality's plans for the Energy Park.

6.2.4 There is another aspect to the impact on the tax base which could potentially have a larger impact (which is discussed in Section 6.3 below).

6.2.5 C.B. Richards Ellis Ltd. are recommended by staff for the economic analysis of the potential impact on the Energy Park, they can partially address the scope of work outlined in this section. The Director of Finance is recommending that a large multi-disciplinary accounting firm with expertise in a number of areas be retained to work in concert with the other economic analysts. The firm to be retained to undertake this work has yet to be determined.

6.3 **Community Stigma**

6.3.1 There is a potential stigma to be borne by Clarington as the host of a number of facilities perceived by the public and prospective businesses to be undesirable. By adding an EFW facility, the perception of industry, residents and the general public could be tipped negatively towards an image that Clarington does not wish to be known for. Clarington has worked very hard to create an image of leading the way in environmental sustainability that could be lost.

6.3.2 Should Council wish staff to investigate the potential stigma effect of an EFW facility, the consultants retained for the economic analysis of the Energy Park (Attachment 3D) and the accounting firm with expertise in royalty payments and power purchase agreements could undertake this scope of work.

6.4 **Host Community Agreement**

6.4.1 Given the strong possibility that the EFW facility could be located in Clarington with or without the Municipality's consent, the Municipality should determine what it would want included in a Host Community Agreement. The Regions have already approved a set of General Principles for the Host Community Agreement as "a starting point for the commencement of EFW host municipality negotiations". To protect the financial interests of Clarington taxpayers, Council will need a better understanding of the implications of what is currently being proposed by the Regions for inclusion in the Host Community Agreement.

6.4.2 Staff are proposing that a review of the Municipality's requirements for a Host Community Agreement be undertaken in concert with financial and legal expertise

familiar with similar agreements. Such a review will allow the Municipality to better understand the full financial impact of hosting such a facility and ensure that the Municipality derives the maximum possible benefit under such an Agreement. This review and analysis will require knowledge of, among other matters, the industry standard for waste royalties, a review of similar host community agreements, infrastructure requirements, and knowledge of the standard purchase of power agreements that have just been issued by the Ontario Power Authority. As well, an analysis of different payment-in-lieu-of-taxes scenarios will need to be undertaken to determine the potential financial impact on the Municipality's tax base.

6.4.3 It is anticipated that the consultants that have been recommended in Attachment 3D and the multi-disciplinary accounting firm, along with input from Staff, the Municipal Solicitor and Totten Sims Hubicki will be able to provide sufficient breadth to develop an appropriate Municipal position with respect to the Host Community Agreement to ensure that the interests of the Municipality are protected.

## 7.0 DUE DILIGENCE FUNDING

7.1 On April 18 and 19, 2007, the Councils of Durham and York respectively approved the following motion (in part):

> "That each respective Region shall provide adequate funding to any of the potential host communities located within their respective Region. And further, that such adequate funding shall include the costs of all necessary studies and legal advice incurred by the potential host community to investigate and complete its due diligence in arriving at its decision whether or not it will become a host community for the EFW facility. And further, the total of such costs shall be deducted from the combined royalty fee, if any, and not otherwise."

7.2 The Director of Finance has been in contact with the Commissioner of Finance for the Region of Durham to determine how the logistics of the funding will work. In accordance with Regional Council's motion above, it is recommended that the peer reviews and studies outlined in this report be deemed to be "necessary studies" by Council in order to undertake its appropriate due diligence. Therefore, it is staff's recommendation that the Municipality proceed with retaining the consultants because of the compressed time frame in which the studies have to be carried out, in order to allow the consultants to commence their work.

## 8.0 CONCLUSION

8.1 The Consultants (as outlined in Attachments 3A, 3B, 3C and 3D) have been requested to submit proposals based on the scope of work outlined in this Report. Should Council direct Staff to reduce or increase the scope of work, the proposals will be revised to reflect Council's intent. It is recommended that, due to the restricted timeframe, the meeting schedule and anticipated summer recess, Council delegate the responsibility of retaining the consultants jointly to the Directors of Finance and Planning Services. As noted in Section 3.6 above, the recommendation to waive the Purchasing By-Law would also be necessary to allow the Directors to retain the consultants.

8.2 It is staff's understanding that the Region wishes to begin Host Community Agreement discussions with the Municipality. Staff recommend that a committee comprised of Clarington staff and consultants similar in composition to the Region's committee be established to facilitate such discussions.

8.3 An information report shall be provided at a later date outlining the consultants retained to assist Clarington in carrying out its due diligence.

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Attachments:

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| Attachment 1 | Map – Short List of Alternative Sites in Clarington |
| Attachment 2 | Summary of “Alternatives To” |
| Attachment 3A | Consultant Recommended for Peer Review of Site Selection and Public Consultation |
| Attachment 3B | Consultant Recommended for Peer Review of EFW Technologies and Environmental Standards |
| Attachment 3C | Consultant Recommended for Peer Review of Human Health and Risk Assessment and Environmental Standards |
| Attachment 3D | Consultant Recommended for Real Estate Review and Economic Analysis of Taxation Impacts |
| Attachment 4 | Glossary of Terms |

Interested parties to be notified of Council’s decision:

# DURHAM/YORK RESIDUAL WASTE EA
# "ALTERNATIVES TO" CONSIDERED

| DESCRIPTION | ADVANTAGES (As identified by EA) | DISADVANTAGES (As identified by EA) |
|---|---|---|
| **1: Mechanical, Biological Treatment with Recovery of Biogas** | | |
| o Mechanical processing to recover recyclable material<br>o Anaerobic digestion of organic fraction to recover small amount of biogas<br>o Landfilling of residue (77% of waste stream)<br>o Essentially stabilized landfill system | o Lowest potential impact on air environment<br>o More flexible to changes in waste quantities and composition<br>o Potential lower overall systems costs provided low cost landfill capacity can be obtained from third party | o Greatest potential impacts to water and land<br>o Greatest potential to disrupt sensitive habitat<br>o Lowest energy generation<br>o Greatest potential social impact on landfill host community<br>o Least reliable due to dependence on export landfill contracts |
| **2a): Thermal Treatment of Mixed Waste with Recovery of Materials from Ash/Char** | | |
| o Thermal treatment to convert hydrocarbons in waste to energy either as heat or synthetic gas<br>o Eg. Conventional combustion (incineration) - burning with oxygen to create heat energy<br>o Eg. Gasification and pyrolysis – burning with limited oxygen to create synthetic gas<br>o Recyclable materials recovered from residue<br>o Bottom ash requires landfilling; fly ash managed as solid hazardous waste | o Lowest potential impacts to water and land<br>o Lowest potential to disrupt sensitive habitats<br>o Greatest energy generation (renewable and total)<br>o Lowest potential social impact on landfill host community<br>o Highest reliability due to minimum dependence on export landfill<br>o High cost, but comparable to System 1 and lower than System 2b)<br>o Proven and reliable technology | o Highest potential impact on air environment<br>o Less flexible to changes in waste quantities and composition<br>o Need to manage hazardous residues |
| **2b): Thermal Treatment of Solid Recovered Fuel (SRF)** | | |
| o Recyclable materials are recovered and moisture in organic fraction reduced (bio-drying) to create SRF<br>o SRF thermally treated to create energy<br>o Bottom ash requires landfilling; fly ash managed as solid hazardous waste | o Same as 2a)<br>o Potential to recover more recylables (plastics as well as metals)<br>o Potential to make beneficial use of post-diversion waste stream<br>o Potential improvements to air emissions, energy conversion efficiency and costs may be provided by new technologies presently development (eg. plasma arc gasification, pyrolysis) | o Same as 2a)<br>o More expensive than 2a) |
| **2c): Thermal Treatment of Solid Recovered Fuel (SRF) with Biogas Recovery** | | |
| o Similar to System 1, except waste is mechanically treated to create SRF<br>o Biological treatment (anaerobic digestion) of organic fraction in waste to recover biogas<br>o Both SRF and biogas treated to produce energy<br>o Residues require landfilling | o Potential to increase diversion through recovery of additional recylables<br>o Potential to make beneficial use of post-diversion waste stream | o Complex process<br>o Highest cost<br>o Low technical reliability |

## GLOSSARY OF TERMS

| | |
|---|---|
| **EA** | Environmental Assessment |
| **EFW** | Energy from Waste – another term for Waste to Energy (WTE) |
| **RFP** | Request for Proposals |
| **RFQ** | request for Qualifications |
| **WTE** | Waste to Energy – another term for Energy from Waste (EFW) |

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