

PLW/PW
SWMC
Feb. 25/87

THE REGIONAL MUNICIPALITY OF HALTON

Report to Chairman and Members of The Solid Waste Management Committee

From John E. Fleming, Chief Administrative Officer

Date 1987 02 19

Report No. CAO 35/87

Re: Revised Strategy for Energy from Waste

RECOMMENDATIONS:

1. THAT the goal for the Energy from Waste Project be to ensure that Halton lives up to its commitment in the Environmental Assessment for Halton's new landfill site of incinerating the equivalent of 50% of its municipal solid waste for at least 12 of the 20 years in which the new landfill will be operating (equivalent to a minimum of 1.35 million tonnes of MSF being diverted from the new landfill site).
2. THAT Halton proceed in an expeditious manner with Phase I of a strategy for implementing Energy from Waste in Halton, Phase I being an evaluation of available Energy from Waste options capable of achieving the goal as set out in Recommendation 1 to C.A.O. 35/87.
3. THAT the following options be included in the comparison:
 - ° St. Lawrence Cement, Mississauga
 - ° Occidental Chemical Corporation, Niagara Falls, N.Y.
 - ° Hamilton-Wentworth SWARU
 - ° Electricity Producing Plant in Halton
 - ° Steam Producing Plant in Halton
 - ° Inter-Regional Projects with Ontario Hydro as the Energy Customer

4. THAT the results of Phase I be reported to Council at the earliest date possible, along with recommendations for Phase 2, that being the preparation of a specific implementation action plan for Energy from Waste including a site selection process for any recommended options which include the construction of a new plant in or near Halton.
5. THAT responsibility for the EFW studies and projects rest with the Public Works Department and a permanent position known as the Senior Approvals Coordinator be created with the understanding that the person hired has a clear mandate to expedite the process for the implementation of EFW.
6. THAT a permanent position known as the Approvals Clerk be created to assist the Coordinator.
7. THAT the budget for Phase I, the Evaluation of Energy from Waste Options as set out in Appendix "A" to CAO Report 35/87, be approved.
8. THAT the Ministry of Energy be requested to provide 50% funding for any consultants required to assist with the evaluation of Options.

Report

In April of 1986, the Citizens' Solid Waste Advisory Committee (SWAC) submitted its final report entitled "Energy from Waste - A Citizen's Perspective". Coinciding with the release of this report, a special meeting of the Solid Waste Management Committee was held to discuss the report and the strategy for the implementation of Energy from Waste. At that meeting, CAO Report 149/86 was presented. It included a number of policy statements that were intended to support and/or implement SWAC's recommendations. In addition, CAO Report 159/86 was also presented. This report was a strategy for Energy from Waste. The two main features of the strategy were;

1. It recommended that a site selection study be undertaken for the construction of an electricity producing plant in Halton. As part of this project, inter-Regional projects involving Ontario Hydro, were also to be considered.
2. A new, permanent position known as the Supervisor of Resource Recovery was to be created. It would provide a longterm commitment and proper resources to successfully implement both the Energy from Waste and Separation at Source Programs.

In the fall of 1986, shortly after the Clay Mill proposal was submitted, it became apparent that little progress had been made with regards to the implementation of the strategy. As a result, as part of CAO Report 277/86, it was requested that the new C.A.O. and staff be given until February of 1987 to evaluate the reasons for the difficulties, formulate a new approach and develop a strategy for assessing the various options.

The following report is a result of numerous discussions with key senior managers involved in the evaluation and implementation of the Energy from Waste Project. Although it has been prepared by the Office of the Chief Administrative Officer, it has the support of the Director of Public Works, Treasurer, Director of Planning and Development Medical Officer of Health and Regional Solicitor.

The additional time it has taken to develop the strategy has resulted in the following changes:

1. A renewed commitment to Energy from Waste as a Corporate priority;
2. The identification of goals and objectives for the project;
3. The clarification of roles and responsibilities within the Corporation;
4. The development of a budget.
5. A recommendation that Halton undertake an evaluation and update of available options within and outside the Region. This will constitute Phase 1 of the recommended approach and should be completed by late 1987. The evaluation is necessary to determine if entering into longterm contracts with existing or planned facilities, would be better for Halton than the construction of a new EFW plant.

6. Phase 2, to follow Council's consideration of the recommendations flowing from Phase 1, would be the development of a specific implementation-action plan for E.F.W. including a corresponding budget and identification of areas where outside expertise is required.
7. A recommendation that a staff position with a strong research, policy and process orientation be created. It would be known as the Senior Approvals Coordinator rather than Supervisor of Resource Recovery as mentioned in the earlier report. This change is an attempt to broaden the position's mandate for involvement in the lengthy approvals process now required for major new initiatives. As complicated environmental approvals will be required for most, if not all major construction projects undertaken by Halton, it is recommended that the resources of the Municipality be enhanced through the establishment of this permanent position.

This resource person would be used in a staff rather than line capacity and would have a strong expertise in approvals management for major engineering projects. Initially, the primary responsibility would be EFW but in the future, assistance could also be provided with regards to the establishment of Water Pollution Control Plants, Sludge Disposal, Interim Solid Waste Disposal Plans and other Public Works facilities and services governed by EPA and EAA legislation. The assistance this person will provide to the Corporation will improve Halton's ability to resolve issues with Provincial authorities in a timely manner with a minimum of assistance from outside consultants.

Goals and Objectives

Halton's Waste Management Master Plan clearly states that there is a commitment to incinerate 50% of the Region's municipal solid waste for a 12 year period beginning in 1996. Using current waste quantity projections, it has been determined that this is equivalent to 1.35 million tonnes of municipal solid waste being diverted from the new landfill site. It is recommended that the statement in the Environmental Assessment document for Halton's new landfill component be further enhanced by having Council adopt the goal as stated in Recommendation #1.

During deliberations with senior staff, it became apparent that there were a number of areas where the identification of objectives, or policy statements, would assist in determining the course of action that the project should follow. In this regard, the following objectives have been identified:

1. To maintain consistency with statements in the Environmental Assessment document.
2. To ensure that the project is environmentally sound;
3. To select a project that is affordable;
4. To ensure that the technology is reliable;
5. To complete the review of the Clay Mill Proposal and other similar tasks within a time frame that it is appropriate to Halton's commitment to the implementation of Energy from Waste.
6. To ensure that all components of the Halton Solid Waste Management System have both operator and operating reliability.

These objectives are intended to be used as a guide for staff during the development of work plans and implementation of the project.

Evaluation of EFW Options

In CAO Report 159/86, permission was granted for Halton to undertake a Site Selection Study for the construction of an electricity producing plant in Halton. After further consideration of this course of action, it is now felt that the Site Selection Study should not be undertaken until all options have been evaluated (ie. until Phase 1 is complete). The main reason for this is that Halton's involvement in such projects as St. Lawrence Cement, SWARU, and/or Occidental Chemical, may be more feasible than the construction of a new plant. Recent discussions with officials of other Regions, as well as the private sector, now indicate that there may be several external options worth further consideration.

To assist Members of Council, the recommended approach is described below. To ensure that the proposed Senior Approvals Coordinator has input into its direction, the approach should be considered preliminary and subject to further refinement although the commitment to proceed should not.

The proposed study will be an update and expansion of the information contained in the 1983 Preliminary Feasibility Study. It will have to reflect the fact that up to 25% in Federal and Provincial capital grants may no longer be available; that pollution control requirements and equipment have changed; that the Region's financial position is different; and the fact that the potential for involvement in projects outside of Halton has improved.

In evaluating such options as St. Lawrence Cement, SWARU and Occidental, it will be necessary to determine if the same quantity of waste (1.35 million tonnes) can be diverted from the landfill site. If not, the construction of a new facility in Halton may still be required. The study should also include a review of potential steam customers. This is necessary to determine if any new, large energy users have located in Halton, are considering doing so, or have changed their position on participating in the project. In addition, the comparison will require regular and high level liaison with other Regions and private sector interests to ensure that Halton is apprised of any new developments.

In evaluating the various options, the Finance Department will be assessing the impact of the various systems on the local as well as Regional Municipalities. This is necessary to ensure that total costs, including the need for transfer stations, are incorporated into the evaluation.

For those options that do not have pre-determined locations, ie. electricity producing plants, it will be necessary for the Finance Department to evaluate, at a very macro level, the impact of various locations on the waste management systems costs. A similar exercise was included in the Preliminary Feasibility Study. As the location of the new landfill site was not known, a range of possibilities were assessed. The resulting costs were then fed into the rest of the study.

As this evaluation is only attempting to identify order of magnitude differences between options, it is felt that this level of analysis will be sufficient. Additional information on the methodology and assumptions used in assessing the range of possibilities, will be included with the results of the study.

While undertaking this evaluation, it is necessary that the information on the decision making process and evaluation criteria be communicated to the public. In this way, there will be an opportunity for two-way communication as well as greater likelihood of acceptance of the results of the study.

It is proposed that a public information program include the preparation of newsletters and presentation material for open houses. Other components may be added at the discretion of the Senior Approvals Coordinator, depending on the type and extent of issues that arise during the study process. The program for Phase II is expected to be significantly more extensive, particularly if a site in Halton is being considered.

Some of the criteria to be used in Phase I include risk to the Corporation and community, costs, affordability, time to

implement, quantity of waste being diverted, requirements for approval, and implications on staff requirements. It is expected that most of the work will be done internally with the Senior Approvals Coordinator acting as Project Manager. The Finance Department will provide the risk and economic analysis. The Waste Disposal Division will assess available waste quantities and evaluate the impact of each option on the overall Solid Waste Disposal System.

The output of Phase 1 will be an evaluation of each option including the advantages and disadvantages associated with it. It will also include a recommended course of action for proceeding with Phase 2, that being the actual implementation-action plan for EFW in Halton. Phase 2 would address the site selection process for any recommended options which involves the construction of a new plant in or near Halton.

To ensure that the evaluation is accurate and that it will withstand scrutiny before a public hearing, it will be necessary to retain some outside expertise. These consultants will assist Halton in evaluating a number of factors. They include the following:

1. Review and Enhancement of Capital and Operating Cost Information

When the Petro-Sun Proposal was submitted in September of 1984, it threw into dispute the capital cost information contained in the Preliminary Feasibility Study. As both the Proposal and Study were produced by our Consultants, SNC, there is a need to confirm that the financial information contained in the Technical Study was the more accurate. Also, over the past couple of years there has been a great deal of additional information generated on actual projects that have been constructed in Canada. Consultants undertaking this review and update will have the benefit of actual costs from the Greater Vancouver Regional District, the Victoria Hospital Plant in London and the improvements to the SWARU plant in Hamilton. They will also have fairly well refined projected cost information for the Petro-Sun Project in Peel.

In order to complete the evaluation, it will be necessary for the Finance Department and our consultants to obtain cost estimates for projects such as SWARU, Occidental Chemical and St. Lawrence Cement that could accept waste from Halton. These costs, which will likely be in the form of tipping fees and haulage expenses, will then be used to compare the relative affordability of each Waste Management System that is being considered.

2. Private Sector Evaluation

In the Preliminary Feasibility Study, the interest of the private sector in such a project was evaluated externally by a company known as PerCor. Similar information, on rates of return and types of risks that would be acceptable, must be provided as part of this study.

3. Policy and Approvals Process Advice

This may be required to assist Regional Staff in gaining a better understanding of what the work plan and evaluation of options should include. Depending on the background and qualifications of the person who is hired to fill the proposed position of Senior Approvals Coordinator, it may not be necessary for Halton to retain a consultant to provide this advice. Due to the complexities of the Environmental Assessment Approvals Process and its implications on timing and study costs, it was felt to be appropriate that this possible need be identified for Council at this time.

Staff have taken the initiative of approaching Brian McCormick, a former member of SWAC and Manager responsible for approval processes with Ontario Hydro with a request that he provide some advice and assistance in this regard. With his unusual combination of local knowledge and technical expertise, we feel fortunate to be able to state that, if required, he is prepared to act as a resource person to us. Although the details of this arrangement have not yet been worked out, we are hopeful that Ontario Hydro will make at least a limited amount of his time available to us. This type of arrangement would not be particularly unique in that Ontario Hydro acted as a Consultant for the EFW study undertaken in Ottawa-Carleton. Mr. McCormick was a member of that team.

4. Health Risk Assessments

At the present time, it is expected that the Phase 1, Comparison of Options, will not have to include a health risk assessment. Although it is recognized that this will be a major issue in the event that a public hearing is required, it may only be necessary for Halton to become involved in evaluating it if a new plant is to be constructed. Should this position change after further consideration of the Approvals Coordinator and/or Senior Management Team, it will be necessary for Halton to retain the assistance of a Risk Assessment and/or air emissions expert.

It is estimated that Phase 1, the evaluation of options, will be completed prior to the end of 1987. If and when it is approved by Council, it is recommended that a strategy be developed for implementation of the preferred option (Phase 2).

In summary, should it be determined that a plant needs to be constructed in Halton, the following issues will have to be addressed:

1. Size - Halton only or inter-Regional
2. Product - Electricity or steam
3. Ownership - private and/or public
4. Selection of a suitable site (including implications of approvals process)
5. Assessment of Health Risks
6. Information required for proposal call.
7. Budget and staff requirements.

In the event that the preferred option is involvement in an existing facility outside Halton, it will be necessary to;

1. Determine the strategy for negotiating appropriate tipping fees or cost sharing arrangement.
2. Identify the nature and amount of information that will be required for the host municipality and/or proponent to obtain the necessary approvals to accept waste from Halton.
3. Determine cost sharing arrangements for approvals and/or monitoring of facility.

As the resources, timing, and approach to the two scenarios will be quite different, it is recommended that the strategy for Phase 2 not be developed until Phase 1 is completed.

Staff Resources

As mentioned earlier, it is recommended that a position known as the Senior Approvals Coordinator be created. This is quite different from the position known as the Supervisor of Resource Recovery that was approved by Council last April. The new person would not be limited to projects that involve resource recovery and would act as a resource to all Managers in the Public Works Department. Should Council approve the establishment of this position, the job description would be

finalized and the position rated. It is hoped that the position would be filled by the end of April.

Due to the nature of the projects that the person is expected to be involved with, it will be necessary that clerical support be provided. It is recommended that this support be in the form of an Approvals Clerk. The functions of this position are intended to be similar to those currently being provided by the Development Clerk in the Finance Department.

Budget

Attached as Appendix "A" to this report is the proposed budget including salaries, purchase of equipment, and consulting fees. It is recommended that the entire amount, excluding the subsidy from the Ministry of Energy, be charged to the Resource Utilization Investigation Fund (RUIF).

Once Phase 1, the comparison of options has been completed, it will be necessary for a new budget to be prepared. It will include costs associated with the implementation of the preferred option. In addition, it may also recognize that not all of the Senior Approvals Coordinator's time must be devoted to the EFW project. For this reason, it is possible that only a portion of the Coordinator's and Clerk's salary will be charged to the RUIF in 1988. The rest may be charged to other capital projects that require assistance from the Coordinator. This issue will be dealt with in more detail as part of the Public Works Department's budget for 1988.

Ongoing Commitment to EFW

As indicated earlier, Senior staff have given a renewed commitment to the implementation of Energy From Waste as a Corporate priority. This will ensure that individual departments allocate sufficient resources to the project and that unnecessary delays are avoided.

It has also been agreed that the proposed Senior Approvals Coordinator will have ample opportunity for continuing dialogue and prompt access to Department Heads on an as-required basis. This should assist in resolving issues quickly, and obtaining information without delay.

Developing a revised strategy for the Energy from Waste Project has been an interesting and sometimes difficult process for everyone involved. Out of it has come a corporate commitment to a project that will no doubt require the resourcefulness and innovativeness of every department in

the organization. Now that this exercise has been completed, staff are anxious to proceed with the comparison of options.

Respectfully submitted,

A handwritten signature in black ink, appearing to be 'John E. Fleming', with a long horizontal flourish extending to the right.

John E. Fleming
Chief Administrative Officer

VH:jmb/cc

Appendix "A" to C.A.O. Report #35/87

Budget for Phase I, the Evaluation of EFW Options (1)

Expenditures

Personnel Services (2)	\$ 47,100
Materials and Supplies (3)	2,250
Purchased Services External (4)	7,700
Interdepartmental Chargebacks (5)	25,100
Capital Expenditures (6)	3,800
Consulting Fees/Disbursements (7)	45,000
Public Information Program	5,000
Contingency	<u>14,000</u>
Total Expenditures	\$150,000

Source of Financing

Transfer from Resource Utilization	132,500
Investigation Fund	
Ministry of Energy Subsidy (8)	<u>17,500</u>
Total Revenues	\$150,000

- (1) Expenses are for approximately a seven month period
- (2) Includes Senior Approvals Coordinator, Approvals Clerk and benefits based on 15% of salary costs
- (3) Books, office supplies
- (4) Conference, travel, courier, etc.
- (5) Word processing equipment, Finance Department staff time
- (6) Office furniture and equipment
- (7) Includes update of capital and operating costs in Technical Report of Preliminary Feasibility Study; update on private sector option in Financial Report, advice on policies and approval processes for establishing a facility, estimates of haulage and transfer stations costs.
- (8) 50% of Consultants costs