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REMOVING THE BARRIERS

A STUDY OF THE MEANS OF REMOVING SELECTED ECONOMIC AND  
LEGISLATIVE BARRIERS TO INDUSTRIAL WASTE REDUCTION AND RECYCLING

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Removing The Barriers : A Study of the Means  
of Removing Selected Economic and Legislative**

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A Joint Project by the  
Pollution Probe Foundation  
and the Canadian Environmental  
Law Research Foundation

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## REMOVING THE BARRIERS

### A STUDY OF THE MEANS OF REMOVING SELECTED ECONOMIC AND LEGISLATIVE BARRIERS TO INDUSTRIAL WASTE REDUCTION AND RECYCLING

#### 1. Introduction

There is widespread public support for concerted effort by both provincial and federal government agencies to promote waste reduction and recovery as the preferred option to destruction or land disposal of industrial wastes.

At present, Canada's research dollars and engineering talent are oriented toward making advances in waste disposal technologies. With stockpiles of wastes growing rapidly, authorities have understandably focussed on the specific issue of seeking better waste disposal methods. Unfortunately, however, although the deployment of better waste disposal technologies may result in more sound management of our wastes, it does little to shrink the total volume of waste being generated.

Furthermore, despite major improvements in land disposal practices, there remain serious concerns about the long-term security of even the most modern and sophisticated landfill sites.

Although most businesses would agree that waste reduction and recycling is an excellent concept, only a small fraction believe that it is an affordable reality in their plant. By and large business has operated on the premise that it costs more to recover wastes and re-use them than it does to purchase virgin materials.

In an era of cheap resources, low energy costs and few regulations governing landfilling, business was quite correct in this assumption. Inexpensive waste disposal took preference over waste prevention because it was the waste management option of least cost. In many instances, even today, economic factors favour less expensive disposal in a landfill despite the technical feasibility of recycling.

Waste streams vary in their economic value and in the costs associated with recovering them. High-value wastes such as silver have been recovered for years. The challenge is to recycle those wastes of low to moderate value for which the feasibility of recovery has been marginal in the past.

In the absence of external pressures and incentives, the degree of recycling activity will continue to be a function of market conditions. Two of the most significant factors detrimental to past recycling efforts were (1) the cheap cost of land disposal of wastes and (2) the low cost of material and energy resources. Although these factors are being reversed, it is unlikely that these changing economic factors alone can ensure satisfactory implementation of pollution prevention technologies.

This project proposal is based upon the premise that there exist a number of economic and legislative barriers to increased industrial waste reduction and recycling which can be removed by government action. The purpose of the project is to present to government specific and viable recommendations as to how that can best be done.

2. Background

This project is submitted jointly by Pollution Probe and the Canadian Environmental Law Research Foundation. In preparing its recently published book Profit from Pollution Prevention: A Guide to Industrial Waste Reduction and Recycling, Probe researchers identified more than 50 companies throughout North America that have implemented innovative and cost-effective low-waste technology.

Yet for each success story identified, there are many companies still using conventional processing methods which generate unnecessarily large volumes of waste. The Probe researchers quickly realized that despite the technological potential to reduce and recycle wastes, there are a number of economic and legislative barriers which prevent this potential from being fully reached.

There is a need to both examine these barriers, identify those which can be removed most easily and with the greatest resulting benefit, and to propose practical suggestions as to how these specific barriers can be removed and replaced with economic and legislative mechanisms that allow industry to achieve greater waste reduction.

In the expectation of drawing upon its experience in the area of environmental legislation, Pollution Probe approached the Canadian Environmental Law Research Foundation to discuss the possibility of a joint project. The result has been this project proposal, which is intended to combine Pollution Probe's extensive first-hand knowledge of industrial waste reduction possibilities with the Foundation's experience in environmental law reform.

3. Objectives

The objectives of the proposed project are as follows:

1. To investigate the barriers to the adoption of low-waste technology in Canada.
2. To identify for detailed study a limited number of barriers, being those which can be most easily removed with the greatest resulting benefit.
3. To identify practical models that may exist in Canada, the United States or in Europe which may assist in designing strategies for removal of the specific barriers which have been chosen for detailed study.
4. To identify specific actions which can be taken by Canadian government agencies to remove these barriers. The types of actions proposed will likely be a mix of economic incentives and regulatory changes.
5. To present the study findings to appropriate decision-makers in government and industry.

#### 4. Project Outline

##### 4.1. Investigation of Barriers and Selection for Detailed Study

In researching the book Profit from Pollution Prevention, staff at Pollution Probe gained valuable insights into many of the barriers that plague industry's attempts to implement low-waste technologies. Considerable effort in identifying barriers has already been spent through direct communication and on-site visits of waste-generating businesses in Ontario.

This study is intended to build upon the basis of research already carried out by Pollution Probe. Drawing upon that research, it will be a relatively straightforward task to identify a wide range of economic and legislative barriers which at present work against increased reduction and recycling of industrial waste.

The next task will be to then select those barriers which shall be the subject of detailed consideration during the course of the study. In the light of economic, technological and political criteria, the barriers selected for detailed study will be those which can be most easily removed, with the greatest resulting benefit.

Examples of the types of barriers which shall be considered in the initial phases of the study appear below. The barriers chosen for detailed study will be drawn from an expanded version of this list.

1. Lack of incentives that favour waste reduction and recycling above and beyond disposal.
2. Lax disposal regulations and variable effluent emission standards that fail to trigger an active search for low-waste technologies.
3. Cost discrepancy between sophisticated low-waste technologies and the cheap cost of land burial.
4. High capital costs associated with the purchase of recycling equipment and more efficient processing machinery.
5. Unfavourable market conditions such as fluctuating or low economic value of given wastestreams. Lack of markets for recycled products also hampers recycling.
6. Skepticism of leading-edge low-waste technologies based on lack of guarantees that the technology will work, or that field testing has been adequate.
7. Lack of purity standards for recycled products and subsequent lack of trust in the quality of recycled materials.



8. Lack of technical and financial resources among smaller businesses.
9. Under federal tax laws, there is a depletion allowance for raw resources such as oil in extraction operations. As more oil is removed from the ground, tax credits accrue to the resource extraction company, making resource depletion economically attractive. This is in conflict with waste recycling which gets no such tax credit.
10. There appear to be differential tariff rates between transporting virgin material and recyclables.

#### 4.2. Potential Government Actions

Although many governmental agencies in Canada are actively involved in the area of industrial waste this is generally part of a larger mandate. The concept of putting in place an administrative unit charged with the specific mandate of waste reduction and recycling will be considered in broad outline. Time and financial constraints, however, will prevent any detailed consideration.

The major focus of the study, however, will be upon the ways in which governments can remove barriers to industrial waste reduction and recycling and replace them with incentives. Until the initial phase of the study has been completed, and the specific barriers chosen for detailed study, it is impossible to say which potential government actions will be examined. The list below, however, is representative of the types of actions which might be considered.

1. Prepare a feasibility study of the waste reduction potential for each industrial sector.
2. Assess and restructure economic assistance programs.
3. Identify recyclable wastestreams and formulate legislation.
4. Establish a registry of low-waste technologies.
5. Launch a pollution prevention promotion program.
6. Expand technology transfer to industry.
7. Introduce a Waste Audit Program.

8. Make use of the waybill system to track and identify potentially recyclable wastes.
9. Finance expansion of the Canadian Waste Materials Exchange Program.
10. Encourage research on low-waste technologies.
11. Amend and enforce disposal regulation to ensure maximum environmental protection.
12. Review and upgrade emission standards for industry, particularly in those instances where waste reduction technologies have been demonstrated to be economically and technically feasible.

#### 4.3 Presentation of Study Findings

The proposed study will result in a series of practicable recommendations on how to accelerate widespread waste reduction and recycling. The concluding and perhaps most important phase of this entire project is to translate the study recommendations into government and industry action.

In the presentation phase, a summary of the study and its recommendations will be widely distributed among the appropriate decision-makers. Staff of Pollution Probe and the Canadian Environmental Law Research Foundation will meet with elected representatives and government staff to present the study findings.

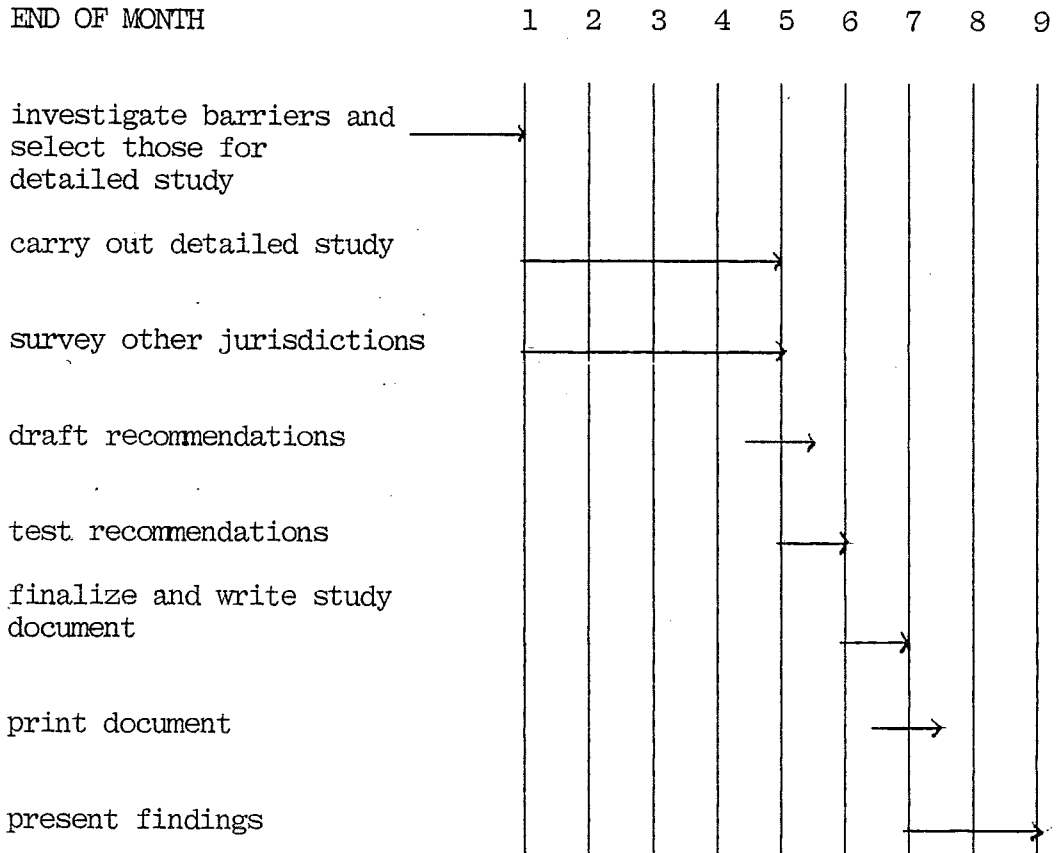
The concept of increased industrial waste reduction and recycling will be promoted through the popular and trade press and the report itself will be made available through the existing distribution channels of Pollution Probe and the Foundation.

Finally, it is intended to hold a one-day symposium to allow detailed discussion of the study findings.

5. Work Plan

1. Investigate barriers.
2. Select those for detailed study.
3. Survey other jurisdictions.
4. Carry out study of barriers and potential government actions to remove them.
5. Draft recommendations.
6. Test recommendations.
  - . present to political, academic and industry representatives for comment
  - . present to advisory committee
7. Finalize recommendations
8. Present study findings
  - . provide study report to waste management officials in provinces and federal government
  - . provide to municipal associations such as Association of Municipalities of Ontario, Federation of Canadian Mayors
  - . provide to key elected representatives
  - . promote through the popular and trade press
  - . sponsor a one-day symposium

6. Time Line



7. Budget

Salaries

Researcher	\$20,000
Secretarial	2,000

Expenses

Telephone (long distance)	1,000
Publications and reports	500
Photocopying	500
Travel	1,000
Printing	2,000

Administration

Co-ordination and supervision by CELRF and Pollution Probe staff: salaries and office overheads	<u>6,000</u>
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Subtotal	33,000
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Presentation of study findings

Mailings and travel	5,000
Symposium	<u>10,000</u>
	15,000

<u>TOTAL PROJECT COST</u>	<u>\$48,000</u>
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8. Who Will Do the Study

The proposed study will be carried out jointly by the Canadian Environmental Law Research Foundation and Pollution Probe. This partnership will allow a productive combination of the Foundation's experience in the area of environmental law and regulation and Probe's experience in the area of industrial waste recycling, in particular that gained during research done for Profits from Pollution Prevention. Both organizations are described in more detail in the next section. Project co-ordination will be done jointly by Mr. Colin Isaacs, Executive Director, Pollution Probe, and Mr. Doug Macdonald, Executive Director, Canadian Environmental Law Research Foundation.

Ms. Monica Campbell, a staff member of Pollution Probe and co-author of Profits from Pollution Prevention, has been actively involved in design of the project and will act as an advisor to the project throughout its execution. Ms. Toby Vigod, Counsel to the Canadian Environmental Law Association, will act as legal advisor to the project.

The project has been designed with the assistance of an advisory committee made up of Mr. Michael Berkowitz, Department of Economics, University of Toronto, Mr. Brian Felske of Brian Felske and Associates, and Mr. Robert Laughlin, Assistant Director, Department of Environmental Chemistry, Ontario Research Foundation. The advisory committee will continue to provide advice and guidance during the course of the research study and will review the final study report before its release.

Selection of staff to carry out the study on a contract basis will be made by Probe and Foundation staff after consultation with the advisory committee.

## 9. The Organizations

### 9.1 Pollution Probe

The Pollution Probe Foundation was founded in 1969 in response to growing public concern over the deteriorating quality of the Canadian environment. Since that early beginning, hundreds of staff members and volunteers have tackled a host of pollution problems with solid investigation, public education and positive policy advocacy, so that today, Pollution Probe is one of this country's most effective public interest groups.

The organization has been responsible for significant steps forward in alleviating air and water pollution, curbing the generation of solid waste, promoting recycling, adopting better food, and implementing stricture noise controls. Despite past successes, Pollution Probe has always attempted to recognize emerging environmental hazards. It is currently working to develop an effective regulatory programme that will solve the problems of drinking water quality, acid rain, pesticide safety, hazardous waste management, and toxic substances control.

Effective pollution abatement is impossible without an informed public. To this end, Pollution Probe has published books and briefs on a wide range of environmental problems and laternative approaches that will ensure their control. The Probe Post, which addresses current environmental and energy topics, is emerging as one of this country's most respected news magazines in the field.

In 1982 Pollution Probe published Profits from Pollution Prevention, a book which provides detailed information to industry on the economic benefits which may be obtained from waste reduction and recycling. Probe will also draw upon the experience gained during preparation of the book during the course of the proposed project.

### 9.2 The Canadian Environmental Law Research Foundation

The Canadian Environmental Law Research Foundation is a registered charitable organization, founded in 1970. The Foundation carries out research in a wide variety of environmental law areas and disseminates products of that research by means of its publishing and conference programs.

The Foundation's best known publication is Environment on Trial (CELRF, 1978), a comprehensive guide to Ontario environmental law. Others include Poisons in Public (Lorimer, 1980), Acid Rain: The North American Forecast (Anansi, 1980), Environmental Rights in Canada (Butterworths, 1981), and, most recently, Canadian Occupational Health and Safety Law (CCH, 1983). The Foundation is also the publisher of the Canadian Environmental Law Reports, the only environmental law reporter in Canada.

The past experience and present capabilities of the Foundation make it well suited to carry out the project described here. Examples of research projects done on a similar scale include a major study of legislative reforms required in Canada and the United States to control acid precipitation, done for Environment Canada, and compilation of an index of all federal, provincial and territorial statutes, regulations and court decisions respecting accidental discharges into the environment, done for the Petroleum Association for the Conservation of the Environment.

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