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CANADIAN

Energy Efficiency Alliance



SUBMISSION TO
THE ADVISORY COMMITTEE ON COMPETITION
IN ONTARIO'S ELECTRICITY SYSTEM

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Founding Members

*Canadian Association of
Energy Service Companies*

Canada Trust

*Consumers Association
of Canada*

Falconbridge Ltd.

GE Canada

*Independent Power
Producers Society
of Ontario*

*Municipal Electric
Association*

*National Energy
Conservation Association*

Ontario Hydro

Pollution Probe

Sierra Club of Canada

BY

THE CANADIAN ENERGY EFFICIENCY ALLIANCE

JANUARY 26, 1996

1. INTRODUCTION

The Canadian Energy Efficiency Alliance (The Alliance) is a not for profit corporation that was formed in 1995 to promote the efficient use of energy in Canada. It grew out of a successful eighteen month multi-stakeholder report of the Ontario Energy Efficiency Consortium, "Accelerating Energy Efficiency in Ontario". This report identified the major barriers to increased energy efficiency and developed a series of 30 detailed action plan recommendations for accelerating energy efficiency. The first recommendation of this report was that an Energy Efficiency Alliance be formed to advocate for increased energy efficiency, coordinate energy efficiency activities and monitor and expand the work of the Consortium.

The Alliance works in partnership with the leading industry, environmental and consumer leaders to promote energy efficiency programs and policies. The founding members of the Alliance are:

- Canadian Association of Energy Service Companies
- Canada Trust
- Consumers' Association of Canada
- Falconbridge Canada
- GE Canada
- Independent Power Producers Society of Ontario
- Municipal Electric Association
- National Energy Conservation Association
- Ontario Hydro
- Pollution Probe
- Sierra Club of Canada

Having recently hired its first Executive Director, the Alliance has now identified its priorities and has embarked upon an active membership development program. The Alliance will be pursuing several other activities this year, including; the development of a National Energy Efficiency Centre to be located in Toronto and work on energy efficiency codes and standards for buildings and appliances.

2. IMPORTANCE OF ENERGY EFFICIENCY TO THE ECONOMY AND THE ENVIRONMENT

By its very nature, there are number of distinct advantages of energy efficiency from an economic and environmental perspective. The principal advantages include the following:

1. *Increased competitiveness* - The positive linkage between resource productivity, environmental performance, innovation and competitiveness have been identified by a number of companies; this relationship was presented in a recent article by Michael Porter in the Harvard Business Review¹. Energy efficiency is one component of a more competitive business. As more Ontario companies look to compete on a global basis, it becomes critical that their costs of production are in line with those of their competitors. This also applies to the commercial and institutional sectors where increased efficiency results in lower costs for consumers and/or taxpayers.
2. *Reduced environmental impacts* - All forms of electricity generation result in environmental impacts. Although some of these impacts can and are being reduced through a variety of pollution control technologies, these impacts can be eliminated completely if the electricity is not required. For example, the most effective strategy to reduce CO₂ emissions is to reduce the use of fossil fuels as a fuel source.
3. *Reduced resource consumption* - Since 75% of Ontario electricity is generated from non-renewable resources, energy efficiency results in reduced consumption of these resources, thus resulting in a more sustainable electricity system.

As a byproduct of the above, energy efficiency investments result in increased local employment and other economic benefits. The production, installation and maintenance of energy efficiency products and services results in higher levels of employment in the provincial economy than does the production and distribution of electricity. In New York the Department of Public Service found that their energy conservation programs have generated benefits that exceed costs by a margin of three to one.²

Energy efficiency attitudes and practices need to be ingrained into everyday practices, they are not something that can be turned on and off as energy supply conditions change. Thus, even during periods of surplus generation, it is important to consistently promote energy conservation.

3. BARRIERS TO ENERGY EFFICIENCY

Energy efficiency programs are not as wide-spread in the Ontario economy as they might be. This is because there are a number of major barriers to energy efficiency in the Ontario economy. These barriers consist of the following:

1. *Lack of information/limited energy efficiency infrastructure* - Many consumers and businesses are unaware of the opportunities that exist for increasing energy efficiency.
2. *Inadequate financing* - The lack of a mature market for energy efficiency financing has resulted in limited availability and high financing cost. Lenders are generally unfamiliar with the risks and benefits of energy efficiency projects and proponents and are reluctant to finance them.
3. *Split incentives* - Existing market structures often create split incentives between the developer or owner of buildings and the owners or tenants of buildings, who pay the energy bills. The incentive for the builder is to install the lowest cost product which is typically the least energy efficient, rather than installing a cost-effective energy efficient product, because these savings are realized by someone else (ie their tenant).
4. *Emphasis on first cost* - Energy conservation is hindered because many businesses, governments and, particularly residential consumers, base purchase decisions on first cost (purchase price) rather than life-cycle cost (purchase and operating costs).
5. *External costs* - Significant external environmental and social costs are not included in the price of energy, therefore undervaluing the benefit to society of conservation measures.
6. *Regulatory and governmental policies* - A number of identified barriers concern regulatory policies which have an impact on energy efficiency. These include the absence of a regulatory regime which requires that electricity planning include the full environmental and social costs of producing and distributing electricity. They also include any requirement that utilities include appropriate funds for energy efficiency in their operational plans and budgets.

The existence of these market barriers are the reasons justifying various public policy actions in support of cost-effective energy efficiency.

4. THE ROLE OF ENERGY EFFICIENCY IN A COMPETITIVE ELECTRICITY SYSTEM

The Advisory Committee has the opportunity to play a significant role in increasing the level of energy efficiency in the economy and thereby increase Ontario's ability to compete in the global economy.

The following sections summarize the Alliance's comments and suggestions regarding the reform of Ontario's electricity system.

4.1 Effect of Competition/Industry Restructuring on Energy Efficiency

The Alliance supports the comment in the Committee's Work Plan that "competition is a means of disciplining costs and investment decisions". The Alliance further believes that there are benefits to competition in the generation of electricity and that it is not a natural monopoly. The Alliance is therefore in favour of seeing competition introduced into Ontario's electricity system. It is even more important for the entire Ontario economy to be as competitive as possible in the global marketplace. Although the Advisory Committee's prime role is to investigate competition in the electricity industry, the Committee should also consider the overall competitiveness of Ontario's economy.

In a competitive and private environment, regulatory controls or planning processes may be required to ensure that unnecessary generating capacity is not constructed, particularly since the existence of excess capacity is a strong deterrent to making investments in energy efficiency. Left unregulated, public or private generation companies might be motivated to increase revenues through increased sales.

The Alliance does, however, see that retail competition in some form may occur in Ontario. As with competition in the generation of electricity, unregulated retail competition could result in competing retail companies motivated to sell as much electricity as possible with no interest in DSM or energy efficiency measures. On the other hand, there may also be opportunities for specialized retail companies to emerge which specialize in selling efficient, renewable electricity.

4.2 Effect of Ownership on Energy Efficiency

In response to the Committee's question regarding whether there are consequences to private ownership, the Alliance is of the opinion that the ownership of electricity assets in the province is not an important issue with respect to the achievement of energy efficiency. There will need to be an effective and accountable regulator regardless of whether the electricity company is a private or Crown corporation. An effective regulator can help ensure, in response to the Committee's question on this subject, that a private electricity industry can serve public policy initiatives such as energy efficiency.

4.3 Regulations and Mechanisms Required to Promote Energy Efficiency

As presented in sections 4.1 and 4.2, the Alliance supports the need for an effective regulator to ensure that energy efficiency initiatives are maintained and encouraged. The following summarizes the three main activities where regulatory oversight is recommended:

1. *Structure of Transmission Charges* - It will be important that transmission charges are structured in a manner that they do not encourage greater utilization. Under the initial restructuring in the UK and Wales, the price for transmission was tied to the volume of electricity sold which resulted in an incentive to increase sales. The regulatory body, Office of Electricity Regulation (Offer), later amended this mechanism to reduce this volume incentive³.
2. *Least Cost System Planning* - Long range least cost system planning and local integrated resource planning will be required to ensure that the least cost mix of supply and demand side resources are employed and that other mechanisms (such as the System Benefits Fund) are being administered effectively. Such a process should include the following principles:
 - a) includes public input;
 - b) covers all material resource additions, including rehabilitation of existing plants;
 - c) considers externalities;
 - d) develops a methodology for comparing the risks associated with various resource options;
 - e) focuses on electric resources, but is consistent with other processes in the province;
 - f) accommodates the increasingly competitive nature of the electricity industry; and,
 - g) develops a method for giving preference to renewable resources.

3. *System Benefits Fund* - In order to ensure that the benefits associated with increased levels of energy efficiency are realized, the Alliance recommends that a special fund be created. This concept, known as a System Benefits Fund, ensures that the mutual benefits which can be derived from energy efficiency are promoted and made available to electricity consumers in Ontario. Funds of this kind are being proposed and/or used in many jurisdictions (see Section 5).

A System Benefits Fund should therefore be established and be based on the following principles:

- be funded by a non-bypassable, non-discriminatory System Benefits Charge;
- the charge could be based on a percentage of each kWh sold in the range of 1 percent to 4 percent of total electricity sales in the province (see following Section 5);
- the proceeds used to fund education and approved energy efficiency projects;
- in order to avoid duplication and increase efficiency, the fund could be managed by an independent, multi-stakeholder organization; and,
- the funded projects be delivered through existing local infrastructure, where possible.

In addition to these regulatory mechanisms, energy efficiency codes and standards for buildings and appliances must continue to increase in order to ensure that cost-effective measures are adopted, providing lower operating costs to electricity users and thereby increasing competitiveness of businesses and providing more disposable income to residents. Attempts should also be made to have consistent, uniform codes and standardize across the country.

5. SYSTEM BENEFITS FUNDS IN OTHER JURISDICTIONS

Many jurisdictions that have restructured their electricity industry, or are in the process of restructuring it, have investigated ways to ensure energy efficiency is maintained and promoted. The following is a brief summary of the mechanisms that have either been put in place or under consideration in various other jurisdictions.

1. *England & Wales* - The Office of Electricity Regulation was established as the new regulator of the restructured electricity industry in England and Wales. After the initial restructuring in 1990, Offer found that there were significant opportunities to economically improve energy efficiency. Although they considered introducing a "wires charge" to fund DSM programs, this approach was rejected as it was not within their mandate. Offer did, however, implement a 1 pound/account/year fee in the franchise market (maximum demand less than 100 kW) to fund energy efficiency programs. These fees will be collected for 4 years (1994-1998) and will generate approximately 100 million pounds. Offer oversees these funds and publishes Standards of Performance which require each of the Regional Electric Companies (REC) to achieve certain energy savings levels. These REC's provide information and advice on energy efficiency through their customer advisory services on insulation, heating systems, lighting and appliances. Offer has also retained the Energy Savings Trust (a private, government guaranteed company created to propose, develop and manage energy efficient programs) to design a number of specific programs⁴.
2. *Norway* - Their 1991 Energy Act mandates that the distribution utilities undertake certain DSM activities (information, demonstration and audit programs). It is funded by a distribution charge of 0.0002 NOK/kWh which represented about 2.8% of the average electricity price in 1993 of 0.07 NOK/kWh. Although some of these funds were initially used to support various electricity marketing activities, the Norwegian Energy and Water Administration (NVE) subsequently took actions to ensure that these funds are used for their intended objectives⁵.
3. *New Zealand* - The Energy Efficiency and Conservation Authority (EECA) was established in 1992 to achieve the government's energy and environmental goals, particularly with respect to CO₂ emissions. It is being partially funded through a 0.07 cent/kWh charge to residential customers that will be used to fund energy efficiency activities in the domestic sector⁶.

4. *Massachusetts* - Like many other states, Massachusetts is currently in the process of restructuring its electricity industry. It is, however, unique in that the major utility entered into a series of negotiations with environmental groups and government agencies in a process that resulted in an agreement on a set of "Interdependent Principles" even before the state utility issued its order to commence proceedings. One of the 18 principles was that "the costs associated with ... DSM programs should be included in a non-bypassable, non-discriminatory, appropriately structured charge⁷.
5. *California* - There is considerable debate and interest being expressed in DSM programs in the restructuring debate in California. The California Assembly recently passed a bill setting funding levels for DSM, R&D and renewable energy projects at 3.6% of each state utility's total revenue requirement. This number, which does not include low-income program costs, was derived from an analysis of actual expenditures for programs covered in the previous year⁸.
6. *Wisconsin* - Three options for a non-discriminatory, non-bypassable funding mechanism have been proposed to cover energy efficiency programs in the electricity restructuring debate in Wisconsin. Drawing from the Wisconsin Public Service Commissions review of the options, in order to achieve optimum levels of energy efficiency, a fund would need to fund efficiency for all customers, have a degree of permanence (not a temporary transition fund) and be managed by an independent agency⁹.
7. *Other States* - Washington Water Power Company (serving Washington and Idaho) adopted a rate of 1.5% of utility revenue to create a fund to finance energy conservation costs. In Arizona, an Energy Efficiency and Solar energy Fund is being financed through a single surcharge factor applied to the utility's jurisdictional sales and is used to fund energy efficiency and renewable energy projects¹⁰.

6. CONCLUSION

As the only national multi-stakeholder organization in Canada whose sole objective is the promotion of energy efficiency, the Alliance is committed to playing an important role in this area. This will, of course, include working with the various government bodies and regulators where we believe regulatory controls are required.

In closing, the Canadian Energy Efficiency Alliance thanks the Advisory Committee on Competition for the opportunity to present our views. *We are strongly supportive of a more competitive Ontario and the most cost effective electricity system possible.* We trust that the Committee will seriously consider the important role that energy efficiency plays in making Ontario a more competitive economy. Specifically, we hope that the Committee will adopt the principles and measures presented in this document to ensure that energy efficiency is a priority for Ontario.

END NOTES

1. Porter, Michael and Claas van der Linde, "Green and Competitive", Harvard Business Review, September-October, 1995, Cambridge, Mass.
2. Department of Public Service Staff, New York State Public Service Commission, A Snapshot of DSM in New York, May 17, 1995.
3. King, Michael *et al*, "DSM in Restructured Markets", SRC International, 1995.
4. *ibid.*
5. *ibid.*
6. *ibid.*
7. Massachusetts Collaborative, "The Interdependent Principles", July 17, 1995.
8. Public Interest Intervenors "Initial Position Paper in the Matter of Competitive Opportunities Regarding Electric Services Before the New York State Public Service Commission", New York PSC, October 25, 1995.
9. Public Service Commission of Wisconsin, The Future of Wisconsin's Electric Power Industry, October, 1995.
10. Public Interest Intervenors "Initial Position Paper in the Matter of Competitive Opportunities Regarding Electric Services Before the New York State Public Service Commission", New York PSC, October 25, 1995.