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**CANADIAN INSTITUTE FOR ENVIRONMENTAL LAW & POLICY**

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**Sustainable Development: Its Implications for the Power Corporation Act**

A Brief with respect to Bill 204, An Act to Amend the Power Corporation Act, and the Memorandum of Understanding Between Ontario Hydro and the Minister of Energy

prepared by

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for

The Select Committee on Energy of the Ontario Legislature

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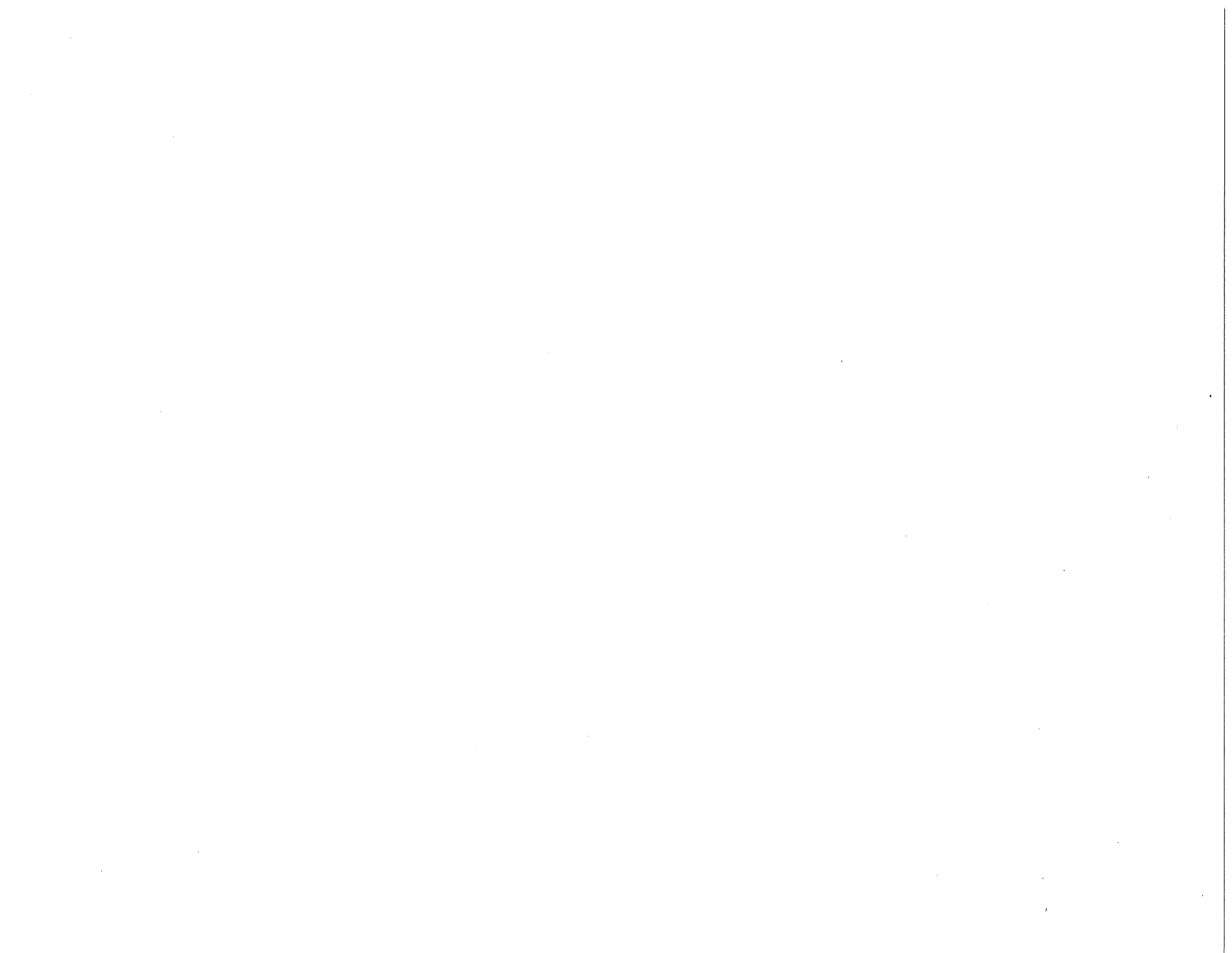
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## Introduction

The Canadian Institute for Environmental Law and Policy (formerly the Canadian Environmental Law Research Foundation) is an independent, non-profit research institute, founded in 1970. The goal of the Institute is the development and implementation of environmental law and policy which will ensure the protection of human health and the natural environment in a manner complementary to the achievement of other social and economic goals. As such the focus of the Institute includes such issues as the implications of energy law and policy on the environment and the economy.

On February 2, 1989 the Legislature of Ontario passed a motion that requires the Government of Ontario to apply the principles of sustainable development to all areas of government decision making. The motion directed the Government to:

"Conduct a thorough review of its programs, policies and practices to ensure that the concept of sustainable development is applied within all areas of Ontario government decision-making;"<sup>1</sup>

Thus Bill 204 and the Memorandum of Understanding Between Ontario Hydro and the Minister of Energy must be evaluated in terms of their compatibility with the principles of sustainable development.

In this brief we will:

1. discuss the implications of sustainable development for Ontario's energy sector; and

2. discuss how the Power Corporation Act and the Memorandum of Understanding could be amended to make them more compatible with the principles of sustainable development.

### Sustainable Development

According to the report of the United Nation's World Commission on Environment and Development, Our Common Future (the Brundtland Report), sustainable development is:

"development that meets the needs of the present without compromising the ability of future generations to meet their own needs."<sup>2</sup>

The Brundtland Report states that our present patterns of production and consumption are unsustainable. For instead of consuming only the income or "interest" of our environmental capital we are also consuming the capital itself. According to the Brundtland Report the cost of our spendthrift ways will be paid by future generations in terms of acid precipitation, global warming, ozone depletion and species loss.

"Many present efforts to guard and maintain human progress, to meet human needs, and to realize human ambitions are simply unsustainable - in both the rich and poor nations. They draw too heavily, too quickly, on already overdrawn environmental resource accounts to be affordable far into the future without bankrupting those accounts. They may show profits on the balance sheets of our generation, but our children will inherit the losses. We borrow environmental capital from future generations with no intention or prospect of repaying. They may damn us for our spendthrift

ways, but they can never collect on our debt to them. We act as we do because we can get away with it: future generations do not vote; they have no political or financial power; they cannot challenge our decisions.

But the results of the present profligacy are rapidly closing the options for future generations. Most of today's decision makers will be dead before the planet feels the heavier effects of acid precipitation, global warming, ozone depletion, or widespread desertification and species loss."<sup>3</sup>

The Brundtland Report has two important conclusions with respect to the implications of sustainable development for the energy sector. First, the generation of nuclear power is only justifiable if "there are solid solutions to the unsolved problems to which it gives rise"<sup>4</sup> Second, the world's industrialized nations must substantially reduce their consumption of fossil energy.<sup>5</sup>

The June 1988 Toronto conference on "The Changing Atmosphere: Implications for Global Security" quantified the implications of sustainable development for carbon dioxide emissions and hence fossil fuel consumption. According to the Toronto conference, stabilizing the atmospheric concentrations of carbon dioxide will require a cut in global carbon dioxide emissions by more than 50%. The conference called for an initial goal of a 20% reduction in global carbon dioxide emissions by the year 2005.<sup>6</sup>

The Brundtland Report made many recommendations about ways to implement sustainable development. But the recommendations that are most relevant to this

Committee, at this time, are those with respect to institutional and legal change. To be specific, the Brundtland Report recommended that an obligation to act in accordance with the principles of sustainable development should be written into legislation such as the Power Corporation Act:

"Sustainable development objectives should be incorporated in the terms of reference of those cabinet and legislative committees dealing with national economic policy and planning as well as those dealing with key sectoral and international policies. As an extension of this, the major central economic and sectoral agencies of governments should now be made directly responsible and fully accountable for ensuring that their policies, programmes, and budgets support development that is ecologically as well as economically sustainable. (emphasis added)<sup>7</sup>

#### The Power Corporation Act Promotes Excessive Electricity Consumption

The Power Corporation Act, Bill 204, and the proposed Memorandum of Understanding between the Minister of Energy and Ontario Hydro fail to incorporate the principles of sustainable development. Rather, the Power Corporation Act promotes a level of electricity consumption that is economically and environmentally unsustainable. Ontario's level of electricity consumption is economically excessive because it is sold at less than its economic cost. As the federal government's Energy Options Advisory Committee Report (the Kierans Report) has noted:



" - To the extent that regulated prices understate the real market costs of energy, they encourage excessive energy use."<sup>8</sup>

### The Electricity Subsidies

It is ironic that Ontario's electricity is sold at less than cost since section 75 of the Power Corporation Act specifically instructs Ontario Hydro to sell its power at cost. Nevertheless, as a result of government subsidies and policies<sup>9</sup> and Ontario Hydro's interpretation of the meaning of "power at cost"<sup>10</sup>, electricity is sold at less than cost.

To be specific, Ontario Hydro receives the following indirect subsidies:

1. it is not required to pay dividends to its owner, the Government of Ontario;
2. it is not required to pay federal and provincial corporate income tax;
3. its debt is guaranteed by the Province of Ontario;<sup>11</sup>
4. the hydro rental rate (the royalty Ontario Hydro pays for the use of the Province's water to generate power) is set below its market value;<sup>12</sup>
5. the Nuclear Liability Act limits Ontario Hydro's liability in the event of a nuclear accident to \$75 million.

If these subsidies were removed and Ontario Hydro was required to earn a rate of return on its capital equal to that of an equivalent private sector corporation then its rates would rise by at least \$3 billion or 50%.<sup>13</sup>

## Creating A Level Economic Playing Field

Ontario's electricity subsidies should be eliminated in order to create a level economic playing field between Ontario Hydro and the municipal utilities on the one hand, and the natural gas utilities (Consumers' Gas, ICG Utilities, Union Gas), the oil companies (e.g., Esso, Shell, Petro-Canada) and energy efficiency investments on the other hand. This could be achieved by amending the Power Corporation Act to require Ontario Hydro and the municipal electric utilities to earn a rate of return on their assets equal to the pre-tax rate of return of equivalent private sector corporations. The resulting profits should be used to finance dividend payments to their owners, the Province of Ontario and the municipalities of Ontario.

It is worth noting that the Ontario Energy Board is also in favour of Ontario Hydro paying a dividend to the Treasurer of Ontario:

"As optimal equity levels are approached, Hydro should begin to pay a dividend and this Board believes that the legislation should be changed to permit Hydro to do so."<sup>14</sup>

If the Government of Ontario or a municipality believes that the resulting rise in electricity rates would be too large or too sudden then they can provide a direct taxpayer-financed subsidy to Ontario Hydro, a municipal utility or a specific group of

electricity customers. The advantages of direct as opposed to hidden subsidies are twofold. First, the public is aware of the existence and the magnitude of the subsidy it is providing. Second, the onus of proof is on the subsidy recipients to show that they are worthy of the subsidy.

Creating a level playing economic playing field in the energy sector is a win-win proposition. First, it will increase the efficiency of Ontario's economy and raise our standard of living. Second, by reducing the demand for electricity it will reduce acid rain, global warming and nuclear wastes. As numerous energy studies have shown, we can have our cake and eat it too.<sup>15</sup>

#### Balancing Economic and Environmental Priorities

Creating a level economic playing field in the energy sector is one step in the direction of sustainable development. Nevertheless, economic rationality is only one component of sustainable development. Sustainable development means that environmental priorities must have the same weight in decision making as economic priorities. However, the Power Corporation Act does not establish a parity between environmental and economic considerations. On the contrary, sections 56 and 75 of the Act require Ontario Hydro to produce power at cost; where cost is restricted to Ontario Hydro's financial or monetary costs. In other words, the Power Corporation Act

requires Ontario Hydro to produce power in the way that will minimize its financial costs, not the total cost to the public and the environment. That is, sections 56 & 75 of the Power Corporation Act are directly contrary to the principles of sustainable development.

In order to incorporate the principles of sustainable development into the Power Corporation Act, section 56 should be amended to read:

"The purposes and business of the Corporation include the generation, transmission, distribution, supply, sale, purchase and use of power in a manner compatible with sustainable development..." (proposed amendments are underlined)

In addition, section 56a(1) should be amended to read:

"The purposes and business of the Corporation include the provision of energy conservation programs in a manner compatible with sustainable development." (proposed amendments are underlined)<sup>16</sup>

The Power Corporation Act's bias in favour of minimizing financial costs at the expense of environmental costs is reinforced by the proposed Memorandum of Understanding between Ontario Hydro and the Minister of Energy. The Memorandum like the Power Corporation Act puts prime emphasis on minimizing the financial cost of electricity. According to the Memorandum:

"The Minister and the Hydro Board agree that the business and affairs of Ontario Hydro will be conducted on the principles of commercially sound business practices and power at cost." (page 3, section 4)

"The Government and the Hydro Board agree that the primary objective for the supply, distribution and use of electricity in Ontario is to ensure that Ontario's electricity consumers are provided with a secure and reliable supply of electricity at the lowest feasible cost over the long-term."(original emphasis) (page 3, section 8)

The Memorandum's focus on minimizing Hydro's financial costs, not the total cost to the public and the environment, is inconsistent with the Government's substantial commitment to environmental protection (e.g., The Clean Air Program, Countdown Acid Rain, and The Municipal Industrial Strategy for Abatement). The Memorandum of Understanding needs to be amended to incorporate the principles of sustainable development by:

1. requiring Ontario Hydro to minimize the total economic and environmental costs of its operations, not just its financial costs; and
2. requiring Ontario Hydro to minimize energy costs, not electricity rates.

To incorporate these principles it is recommended that the above noted sections from the Memorandum of Understanding be amended as follows:

- 1. "The Minister and the Hydro Board agree that the business and affairs of Ontario Hydro will be conducted on the principles of commercially and environmentally sound business practices and power at the lowest economic and environmental cost."

2. "The Government and the Hydro Board agree that the primary objective for the supply, distribution and use of electricity in Ontario is to ensure that Ontario's electricity consumers are provided with a secure and reliable supply of energy services at the lowest feasible economic and environmental cost over the long-term..." (proposed amendments are underlined)

With respect to the second proposed change to the Memorandum, it is important to note that there is a significant difference between providing electricity consumers with "energy services" as opposed to "electricity". In the former case the emphasis is on minimizing the customer's electricity bill, which implies encouraging or financing the efficient use of electricity; whereas in the latter case the emphasis is on reducing electricity rates and hence encouraging electricity supply.

A complete list of our proposed amendments to the Memorandum of Understanding is provided in Appendix A.

### Parallel Generation

Bill 204 includes the "encouragement of parallel generation" as one of the purposes of Ontario Hydro. This is a step in the right direction since municipal utilities and private sector corporations can often produce electricity at a lower economic and environmental cost than Ontario Hydro.

At present the buy-back or purchase rates for independent or parallel generation is unilaterally determined by Ontario Hydro. There is a widespread belief that the buy-back rates are set below Ontario Hydro's avoided cost. In the opinion of the Ontario Energy Board (O.E.B.), if Ontario Hydro's buy-back rates equalled its avoided cost then the supply of parallel generation would increase significantly:

"Avoided cost and buy-back rates also directly affect the amount of NUG [non-utility generation] Hydro can secure by the year 2000, and the rate of development between now and that year. The Board's view is that, given appropriate purchase rates based on realistic avoided cost, and the removal of remaining barriers of access to the system, Hydro could secure considerably more economic NUG by the year 2000."<sup>17</sup>

The Board went on to state that:

"The Board is of the view that buy-back rates and rate structures must be the primary method of securing economic NUG projects."<sup>18</sup>

Thus, in order to promote sustainable development and establish a level playing field between Ontario Hydro and independent generation, the Institute recommends that the following section be added to the Power Corporation Act:

"The buy-back rate for parallel generation shall equal the Corporation's avoided economic and environmental cost."

## Conservation

According to section 56 of the Power Corporation Act the purpose of Ontario Hydro includes the provision of energy conservation programmes. However, section 56b(3) of the Act prevents Ontario Hydro from loaning money to assist in the conversion of an electrically heated home to natural gas. This is economically and environmentally irrational since natural gas can heat a typical house at a lower cost, in terms of dollars and carbon dioxide emissions, than electricity.<sup>19</sup>

It is recommended that section 56b(3) of the Act be repealed.

Another idiosyncrasy of the Power Corporation Act is section 95a which states that the cost of an energy conservation program to a municipal utility must be deemed to be a current operating expense of the municipal utility. This requirement is contrary to a basic principle of accounting, namely, that it is appropriate to recover the costs of a capital investment over its useful life. Ontario Hydro would never have been able to build any generation stations or transmission lines if it had to recover their costs in one year.

It is recommended that section 95a of the Act be repealed.

## Accountability



In order for our proposed changes to the Power Corporation Act to be effective there is a need for a mechanism to make Ontario Hydro accountable to the Ontario Legislature and the people of Ontario. There is no such mechanism at the present time. Despite the fact that Ontario Hydro is a monopoly and the largest corporation in Canada, it is virtually unregulated.<sup>20</sup>

According to section 37 of the Ontario Energy Board Act (O.E.B. Act), Ontario Hydro cannot raise its rates before its proposal has been reviewed by the O.E.B. However, after the O.E.B. has held its review and issued its recommendations, Ontario Hydro can ignore all of the Board's recommendations and set its rates at whatever level it pleases. This state of affairs has led the O.E.B. to question the value of the review process. It has noted:

"In recent times the Hydro hearings have involved in excess of 8,000 person-hours by this Board and its staff alone, and aggregate costs in excess of \$3,000,000 including the direct and indirect costs of Hydro and the intervenors.

In recent Reports the Board has made important recommendations concerning, among other things, the inappropriateness of Hydro's pricing policies, in particular: its failure to include the full cost of equity in net income and its propensity to defer recovery of other costs; its inability to control costs generally, the inappropriateness of the moratorium on rate design; and its tardiness in making public its system development plans.

Hydro has, in the main, rejected these recommendations and, as a consequence, the Board is seriously concerned whether the hearings are any longer cost effective."<sup>21</sup> (emphasis added)

Furthermore, in every review hearing but one, the O.E.B. has been directed, by the Minister of Energy under section 37(2) of the O.E.B. Act, not to examine the main cause of Hydro's rising rates, that is, its system expansion program. The Board in its September 1987 Report with respect to Hydro's rate proposal for the year 1988 stated that this restriction may be ultra vires:

"The Board's concern is that a reference under subsection 37(2) containing restrictions by the Minister may invalidate, in law, the Board's Report in that the directions of the Minister may be ultra vires."<sup>22</sup>

The lack of a regulator with teeth has the potential to be a barrier to sustainable development if Ontario Hydro's management is biased against the options which are most consistent with sustainable development, namely, energy conservation and parallel generation. Unfortunately this appears to be the case. As the O.E.B. has noted with respect to Hydro's conservation program:

"The external evidence is not consistent with Hydro's claim to a commitment to conservation."<sup>23</sup>

Hydro's very limited commitment to energy conservation is revealed by its capital budget for 1990. Proposed electricity supply expenditures are 130 times greater than

its proposed energy conservation expenditures. That is, the capital budget for electricity supply investments is \$2.9 billion versus \$22 million for energy conservation.<sup>24</sup>

With respect to parallel generation the O.E.B. has repeatedly noted that Hydro appears to be biased against non-utility and gas-fired co-generation:

"The Board considers that the Corporation's policy with respect to natural-gas-fired NUG [non-utility generation] and cogeneration is inconsistent with maximum economic development of this type of generation. The Corporation itself proposes to use natural gas for reactivating the Hearn GS, and yet appears to the Board to be discriminating against natural-gas-fired cogeneration in its avoided cost calculation and buy back rates."<sup>25</sup>

In his address to the Select Committee on Energy (August 1, 1989) the then Minister of Energy, Mr. Wong, noted that one of the Government's next steps will be to review the O.E.B. Act. In order to make Ontario Hydro accountable to the Legislature and the people of Ontario the O.E.B. must be given binding regulatory control over Ontario Hydro. In particular, the Institute recommends that the O.E.B. be given authority to:

1. set Ontario Hydro's rates, including its buy-back rates;
2. control Ontario Hydro's system expansion program; and
3. control Ontario Hydro's borrowing program.

In short, the O.E.B. must be given the same regulatory powers with respect to Ontario Hydro as it already possesses with respect to Ontario's natural gas utilities (Consumers' Gas, ICG Utilities, Union Gas).

In addition, to make Ontario Hydro and the O.E.B. more accountable to the Legislature, the Power Corporation Act and the O.E.B. Act should be amended to require ratification by the Select Committee on Energy of appointments to the boards of Ontario Hydro and the O.E.B.

### The Municipal Utilities

Ontario's electricity is retailed by over 300 municipal electric utilities. Ironically, despite the fact that Ontario Hydro is essentially unregulated, the Power Corporation Act gives Ontario Hydro regulatory control over the municipal utilities. In particular:

1. the municipal utilities' rates are set by Ontario Hydro (section 95);
2. the municipal utilities' borrowing programs are subject to Ontario Hydro approval (section 94);
3. surplus funds of the municipal utilities must be disposed of according to Ontario Hydro's directions (sections 101 and 102); and
4. Ontario Hydro appoints one member to each municipal electric utility commission (section 107).

In order to promote sustainable development and to give municipalities greater control over their municipal utilities the following amendments should be made to the

Power Corporation Act:

1. the municipal utilities should be required to conduct their operations in a manner compatible with sustainable development;
2. the municipal utilities should be required to earn a rate of return on their capital equal to that of comparable private sector corporations;
3. all of Ontario Hydro's regulatory control with respect to the municipal utilities should be abolished;
4. the municipal utilities should be permitted to capitalize energy conservation expenditures; and
5. the O.E.B. should have the right to review the budgets and rates of the municipal electric utilities.

Electricity Exports

According to section 30 of Bill 204 the price of electricity exports must recover the appropriate share of costs incurred in Ontario:

"(b) the price to be charged for that supply of power will recover the appropriate share of the costs incurred in Ontario and be more than the price charged to customers in Canada for equivalent service."

This section is symbolic of the fundamental flaw of the Power Corporation Act, Bill 204 and the Memorandum of Understanding. Why does it not say "economic and

environmental costs"? Why is Bill 204 only concerned about costs incurred in Ontario? Ontario Hydro's carbon dioxide and sulphur dioxide emissions do not stop at the Ontario border.

Section 30 of Bill 204 should be amended to read:

"the price to be charged for the supply of power will recover the economic and environmental costs incurred." (proposed amendment underlined).

### Conclusion

In 1906 Ontario Hydro was created to foster economic growth by developing our abundant hydraulic resources, such as Niagara Falls. Ontario Hydro accomplished its original mission with great success. It is now 1989 and times have changed. Ontario's primary economic policy goal for the 1990s and beyond should be the achievement of sustainable development. As a consequence the Power Corporation Act should be amended, to incorporate the principles of sustainable development, so that Ontario Hydro can once again make a major contribution towards the fulfilment of human needs.

### Summary of Recommendations

1. That the Power Corporation Act and the Memorandum of Understanding Between Ontario Hydro and the Minister of Energy be amended to incorporate the principles of sustainable development;

2. That the Government of Ontario's \$3 billion subsidy to Ontario Hydro be eliminated. Ontario Hydro's rates should be raised by 50% in order to make its rate of return on its assets comparable to that of a private sector utility (e.g., Consumers' Gas). The resulting rise in Ontario Hydro's revenues should be used to finance an annual \$3 billion dividend payment to the Treasurer of Ontario.
3. That the buy-back rate for parallel (non-utility) generation equal Ontario Hydro's avoided economic and environmental cost;
4. That Ontario Hydro be permitted to finance the conversion of electrically heated homes to natural gas;
5. That the Ontario Energy Board be given binding regulatory control over Ontario Hydro;
6. That appointments to the boards of Ontario Hydro and the Ontario Energy Board be ratified by the Select Committee on Energy;
7. That Ontario's municipal electric utilities be required to operate in accordance with the principles of sustainable development;
8. That the municipal electric utilities be required to earn a rate of return on their assets equal to that of comparable private sector corporations;
9. That Ontario Hydro's regulatory control with respect to the municipal electric utilities be abolished;

10. That the municipal utilities be permitted to capitalize energy conservation expenditures;
11. That the Ontario Energy Board have the right to review the budgets and rates of the municipal electric utilities;
12. That the price of electricity exports includes their full economic and environmental costs.



## NOTES

1. Legislative Assembly of Ontario, Hansard Official Report of Debates, (February 2, 1989), pp. 7850, 7860.
2. World Commission on Environment and Development, Our Common Future, (Oxford: Oxford University Press; 1987), p. 43.
3. *ibid.*, p. 8.
4. *ibid.*, p. 14.
5. *ibid.*, pp. 173, 174.
6. World Meteorological Organization, CONFERENCE PROCEEDINGS The Changing Atmosphere: Implications for Global Security, (Geneva, 1988), pp. 296, 297.
7. Our Common Future, p. 314.
8. Energy Options Advisory Committee, Energy and Canadians: Into the 21st Century, (Ottawa: Minister of Supply and Services; 1988), p. 67.
9. In his letter of reference to the Ontario Energy Board, with respect to its review of Ontario Hydro's 1990 rate proposal, the Minister of Energy instructed the Board to report on how Ontario Hydro's rates could be kept "as low as feasible". O.E.B., H.R. 18, Report of the Board, Appendix 15.1.
10. O.E.B., H.R. 16, Report of the Board, pp. 11/40 to 11/54.
11. The benefit to Ontario Hydro of the debt guarantee has been reduced by the May 17, 1989 Ontario Budget which levied an annual debt guarantee fee, equal to one-half of one per cent of Hydro's total outstanding debt, on Ontario Hydro.
12. Ontario Hydro's water power rental charge for 1990 is \$106 million. However, it has been estimated that the true market value of this charge was \$753 million in 1979. O.E.B., H.R. 18, Report of the Board, p. 24; Richard Zucker and Glenn Jenkins, Blue

Gold: Hydro-Electric Rents in Canada, (Ottawa: Minister of Supply and Services; 1984), p.32.

13. If Ontario Hydro was required to earn a rate of return on its assets comparable to that of a similar privately-owned utility, then its rate of return on capital would be at least as great as that of Consumers' Gas. In its most recent decision with respect to rates for Consumers' Gas, the Ontario Energy Board awarded Consumers' Gas a pre-tax rate of return on capital of 14.8%. The Board's recommended return on capital for Ontario Hydro for 1990 is \$2.646 billion or 6.7%. If Ontario Hydro's rate of return on capital were equal to that of Consumers' Gas then its return on capital would be \$5.834 billion (\$39.418 billion x 14.8%). That is, \$3.188 billion (\$5.834 billion - \$2.646 billion) more than the Ontario Energy Board's recommended return. A \$3.188 billion rise in Ontario Hydro's revenue requirement would raise its rates 48% (\$3.188 billion/\$6.579 billion) above the Ontario Energy Board's recommended level for 1990. O.E.B., E.B.R.O. 452 Decision With Reasons, Schedules 1, 2 & 4; O.E.B., H.R. 18 Report of the Board, pp. 24, 249.

14. O.E.B., H.R. 16, Report of the Board, p. 11/44.

15. See for example: The DPA Group Inc., Study on The Reduction of Energy-Related Greenhouse Gas Emissions, (March, 1989); Passmore Associates International, Electrical Efficiency Opportunities for Ontario, (Ottawa: July, 1989); Ontario Ministry of Energy, Electricity Conservation and Acid Rain in Ontario, (Toronto: March, 1989).

16. Furthermore section 1 of the Power Corporation Act should be amended as follows: "(o) 'sustainable development' means development that meets the needs of the present without compromising the ability of future generations to meet their own needs."

17. Ontario Energy Board, H.R. 18 Report of the Board, p. 209.

18. ibid., p. 211.

19. Electricity for space heating is typically produced by coal-fired generating stations. In 1981, I estimated that the economic cost of coal-fired electricity for space heating was 2.7 to 5.8 times greater than that of natural gas. See Jack Gibbons, Electric Heating: Does It Make Sense for Ontario?, (Toronto: Energy Probe; 1981). The carbon dioxide emissions (millions of tons of carbon per exajoule) for conventional gas, conventional oil and coal are 13.8, 19.7 and 26.9 respectively. Coal-generating stations have a combustion efficiency of approximately 35% whereas gas furnaces have a

combustion efficiency of approximately 65% to 95%. Hence the relative carbon emissions per unit of space heating for electricity and gas are 77 (26.9/.35) and 15 to 21 (13.8/.95 and 13.8/.65) respectively. See Irving Mintzer, A Matter of Degrees: The The Potential for Controlling The Greenhouse Effect, (Washington, D.C.: World Resources Institute; 1987), p. 48.

20. Ontario Hydro is the largest corporation in Canada in terms of assets. See Financial Post 500, (Summer 1989), p. 84.

21. H.R. 16, Report of the Board, pp. 1/7, 1/8.

22. O.E.B., H.R. 16, Report of the Board, p. 1/6.

23. *ibid.*, p. 5/7; and H.R. 18, Report of the Board, p. 287.

24. O.E.B., H.R. 18, Report of the Board, p. 255.

25. *ibid.*, pp. 211,212; see also H.R. 16 Report of the Board, p. 6/11.

## Appendix A

### Proposed Amendments to the Memorandum of Understanding Between the Minister of Energy for Ontario and the Board of Directors of Ontario Hydro

The proposed amendments are underlined.

1. Page 3, section 4

"4. The Minister and the Hydro Board agree that the business and affairs of Ontario Hydro will be conducted on the principles of commercially and environmentally sound business practices and power at the lowest economic and environmental cost."

2. Page 3, section 8

"8. The Government and the Hydro Board agree that the primary objective for the supply, distribution and use of electricity in Ontario is to ensure that Ontario's electricity

consumers are provided with a secure and reliable supply of energy services at the lowest feasible economic and environmental cost over the long-term...

- to ensure that Ontario Hydro operates in an economically and environmentally cost-efficient manner...

- to encourage the participation of the private sector in providing for an economically and environmentally cost-effective supply of electricity;"

### 3. Page 5, Section 11.1 (a)

"(a) the purposes and business of Ontario Hydro include:

(i) the generation, transmission, distribution, supply, sale and use of electrical power and energy in a manner compatible with sustainable development...

(iii) the provision in a manner compatible with sustainable development of economically and environmentally cost effective energy conservation programs to encourage the safe and efficient use and the conservation of all forms of energy;

(iv) the encouragement of economically and environmentally cost-effective parallel generation;"

4. Page 12, Section 18.7

"18.7 Ontario Hydro shall provide the Minister reports on its programs, plans, targets and policies for encouraging the development of economically and environmentally cost-effective parallel generation and on the implementation and effectiveness of such programs, plans, targets and policies."

5. Page 13, Section 19.3

"19.3 Ontario Hydro recognizes the intrinsic economic, environmental and social benefits of conservation practices and agrees to actively advocate, pursue and promote economically and environmentally cost-effective conserving technologies within its own system and with its clients."

6. Page 13, Section 19.4

"19.4 Ontario Hydro shall provide the Minister with reports on its programs, plans, targets and policies for maximizing economically and environmentally cost-effective electricity conservation and on the implementation and effectiveness of such programs, plans, targets and policies."

