



CANADIAN ENVIRONMENTAL LAW ASSOCIATION
L'ASSOCIATION CANADIENNE DU DROIT DE L'ENVIRONNEMENT

SUBMISSIONS TO STANDING COMMITTEE ON NATURAL RESOURCES

By the Canadian Environmental Law Association
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RE: BILL C-20, 40th Parliament

PROPOSED NUCLEAR LIABILITY AND COMPENSATION ACT

November 16, 2009

Introduction

Thank you for inviting the Canadian Environmental Law Association to appear before you today to speak to the proposed Nuclear Liability and Compensation Act. CELA is a non-profit public interest legal clinic, established in 1970 to use existing laws to protect the environment and to advocate environmental law reforms.

CELA has three main submissions to make with respect to Bill C-20.

1. Firstly, the Bill should be amended to remove the cap on liability and to remove the exemption on third party liability.
2. Secondly, the minimum amount of insurance and financial assurance required to be carried by operators should be amended to so as to substantially increase the available resources and provide for the consequences of a catastrophic accident with off-site impacts.
3. Thirdly, the Bill should be modernized to accord with principles of sustainability.

Submission 1 – Remove the Cap on Liability and remove the Elimination of Third Party Liability

Dealing firstly with the cap on liability. Many modern post-industrial nations have already or are in the process of removing any liability caps they may have provided for nuclear power generation. The original argument that nuclear power generation would not be pursued for “peaceful purposes” without such a cap is long out of date and inapplicable, decades after nuclear power generation was commissioned in Canada. There is certainly no rationale today for the continuation of such a cap.

In Germany and in Japan¹, there is no cap on liability nor on the ability of those suffering harm from a serious nuclear power accident to seek redress from the operators of those plants. Reasons for removal of the caps on liability in those countries included to “normalize” nuclear power plant operation in conformity with other fields of industrial activity; and because of the confidence of the host governments in the safety of their reactors.

In the United States, under the *Price Anderson Act*, each nuclear generation facility maintains a minimum amount of insurance with the facilities pooling that insurance in the event of an accident. There are three layers of protection to amount to a resulting coverage of approximately 9 billion dollars U.S. which is available in the event of a serious nuclear power accident just on the other side of the Canadian border in the U.S.². This is a far cry from the current Canadian situation with a cap and minimum insurance amount both of \$75 million Canadian in total for a serious accident. And it is still a far cry from the proposed cap in Bill C-20 of \$650 million.

The provision of a cap on liability effectively provides a subsidy to that single form of electricity generation, namely, nuclear power generation, that no other power generation obtains. The subsidy amounts to the cost that the operators would otherwise incur to either insure or pay the real costs of a³ severe nuclear power plant accident. And those who bear those costs are the public, whose damages and claims would not be compensated except to the potentially very limited amount provided by the cap under the existing Act and under the proposed Act. Furthermore, the public bearing this “residual” risk has little to no control nor knowledge as to those risks.

A serious accident in which radioactive materials escape the containment systems of the nuclear power plant is a credible scenario which must be considered if we are going to

¹ Report of the Commissioner of the Environment and Sustainable Development – 2005, Chapter 8, page 10, Exhibit 8.4 (reviewing Petitions by Mr. Siegfried Kleinau submitted in 2002 and 2003 in which ‘he stated, among other things, that the amount of insurance coverage required under the *Nuclear Liability Act* is insufficient.

² Price Anderson Act 42 USC Sec 2210 01/08/2008 In the event of an accident at any one of the nuclear generating plants in the United States, each of the facilities contributes \$10 million per year per incident for up to 10 years; ... (also see Faieta et al p. 200, f.n. 32)

³ That the lack of a Nuclear Liability Act protecting the operators against damages beyond the liability limit would increase costs of operation of nuclear generating plants was acknowledged by Ontario Hydro as it then was in its 1994-1996 Business Plan, while the constitutional validity of the Act was before the Courts: “The *Nuclear Liability Act* (NLA) is now before the courts. Should the NLA be struck down, the lack of statutory protection could result in higher costs.” Ontario Hydro Nuclear Business Plan 1994-1996 as Submitted November 1993, at p. 3, and further in the Plan, “The challenge to the Nuclear Liability Act could result in the loss of indemnity for OH and its suppliers in the event of a nuclear accident, potentially increasing costs,” *ibid* at page 15.

continue to allow such generation and therefore make the rules governing its operation⁴. In such a scenario, one case which I litigated in the early 1990's involving the current *Nuclear Liability Act* heard evidence that the damages could amount to between \$375 million and \$30 billion dollars (in 1990 dollars) (see below). In such a case, \$75 million or even \$650 million in aggregate compensation would be far from adequate to provide reasonable compensation to those impacted and suffering personal injury or property damage.

Similarly, an accident involving the transportation of fuel or waste to or from the nuclear power generation plants is intended to be covered by this Bill C-20⁵. Again, I litigated a case almost ten years ago involving the proposed transportation of mixed oxide plutonium from Russian and U.S. facilities to be tested as fuel in the Chalk River plan. Transportation by air was one of the modes considered, and a point of contention in the evidence led in that case was whether design of the fuel containers and safety measures being utilized had not been meant to withstand the potential of a serious accident involving aircraft and that type of already highly radioactive fuel⁶. In some accident scenarios, again the adequacy of the proposed caps to properly compensate those who suffered injury or property damage would be highly insufficient.

Accordingly, it is the public bearing the risk and essentially giving this form of power generation its "insurance". And it is essential to recognize when considering this legislation that there are two different questions. The question of requiring minimum levels of insurance and financial security to provide compensation is one thing. We agree that should be done, albeit at much higher levels. The question of whether to legislate a cap or limit on total liability to all accident victims is an entirely different question and this practice should not be continued in Canada. As noted at the outset, this is now not done in Germany or Japan. Plant operators here should be similarly required to consider the risks of and plan for accident scenarios in which the damages

⁴ Auditor General's Report, Sept. 29, 1992 at page 575: "The years of successful accident-free operation that are the hallmark of the Canadian nuclear program are not by themselves, proof of adequate safety. CANDU plants cannot be said to be either more or less safe than other types of nuclear plants. It is now recognized that, through the combination of a series of comparatively common failures that, on their own, are of little consequence, accidents can develop in myriad ways." See also Mosey, David, *Reactor Accidents – Nuclear Safety and the Role of Institutional Failure*, Nuclear Engineering International Special Publications in Conjunction with Butterworth Scientific Ltd, 1990, in which he reviewed the institutional factors and multiple systems failures leading to seven of the most significant nuclear generating plant accidents which had occurred in the decades prior to 1990.

⁵ i.e. if it contains ionizing radiation emitted from nuclear or radioactive material being transported from or to a nuclear power generator or other operator's installation - Bill C-20, section 8 (1).

⁶ *Sierra Club of Canada, Association of Iroquois and Allied Indians and others v. Canada*. The case was a judicial review of the public consultation process and was settled prior to a hearing on the basis that the public consultation process would be redone by the federal government in certain respects in particular regarding the modes of transportation.

would exceed the mandated insurance. In other words, they should remain liable beyond their insurance just as you and I are for any actionable harm that we might cause to others.

It may be argued that the federal government might decide in the event of a serious accident to step in and provide additional compensation to accident victims. This is mentioned in section 62 of the proposed Act. But it is not mandatory for the federal government to do so. We remain in the same position that the judge hearing the challenge to the *Nuclear Liability Act* stated in dismissing the challenge:

A federal government which in its wisdom decided to harness nuclear energy for the purpose of generating electricity, and which in its wisdom enacted the N.L.A. placing limits on liability, and in its wisdom left the door open so it could decide to pay amounts above \$75 million, would in its wisdom pay out reasonable amounts beyond the \$75 million limit. As plaintiffs' counsel remarked, it would be 'outrageous' if the government did not compensate beyond the \$75 million.⁷

Over fifteen years later, the legislation before you today still does not address this problem. It continues to require faith by the public that in the event of a catastrophic nuclear power accident, a future government will decide in its discretion to properly compensate all of the damages as *ex gratia* payments. It does not require that those costs be planned for today, nor imposed by the government on the operator beyond the relatively minimal insurance requirements. The legislation assures the operators that in any event they will not have to bear those potential costs and thus do not have to include any aspect of those potential costs in their rate structures or otherwise, and their shareholders and owners, public or private do not have to bear any of those costs risks. On the contrary, in the United States, in addition to the far greater pool of insurance resources available in the event of an accident (\$9 billion U.S.), "the Congress has made an express statutory commitment to take whatever action is deemed necessary and appropriate to protect the public from the consequences of a nuclear accident."⁸

Turning to the issue of the Act's removal of liability from third parties, note that in both the current Act and in the proposed Act, all of the other parties in the supply chain are exempted from any liability whatsoever by this legislation. Originally these parties obtained indemnities from the operators such as AECL or Ontario Hydro. Subsequently with the passage of the current *Nuclear Liability Act*, protection from liability for third parties has continued for all of the decades that they have been supplying to the nuclear power generation industry. No other supply chain for any other type of electrical power generation obtains this type of protection from liability for accidents. While arguments were made for the original "protection" that suppliers obtained in supplying parts and services to the early nuclear power generation projects in Canada by way of contractual

⁷ Energy Probe, Bertell and City of Toronto v. Attorney General of Canada, Ontario Court General Division, March 23, 1994 per Wright, J. at 71.

⁸ *Duke Power v. Carolina Environmental Study Group* 438 U.S. 59 at 90, 91

indemnities in order to encourage the development of “peaceful” uses of nuclear power⁹, there is no continuing present need for this elimination of third party liability to be imposed by statute and to remove the right of potential accident victims to seek redress from those parties. For example, in Germany, even after the removal of the limitation on third party liability, nuclear power plants continued to operate.

2. Increase the Minimum Insurance Requirements, and seek pooling and other arrangements so as to increase the available coverage.

That the existing insurance requirements of up to \$75 million and the proposed insurance requirements of up to \$650 million are inadequate is demonstrated by the fifteen year old evidence led during litigation regarding the present Act. Depending upon the location and scenario, and depending upon the assumptions as to acceptable levels of exposure, the evidence was that the damages in 1993 dollars would range from \$375 million to \$30 billion or more; health consequences would potentially include thousands to hundreds of thousands of excess cancers; and early fatalities among other things¹⁰. While the question of the potential quantification of damages from a severe accident at a CANDU operating in Canada was contentious, the Canadian nuclear industry’s own estimates of off-site damages for the Darlington plant done in the late 1980’s and early 1990’s relied on United States studies to arrive at estimates ranging up to \$10 billion.¹¹ (They had to rely on the U.S. studies since no Ontario – specific studies had been done by the industry.)

Assessing how inadequate the current and proposed amounts of required financial assurance are, we might consider that at \$3.5 million compensation value per life lost, the existing amount of \$75 million would compensate twenty fatalities; the proposed amount of \$650 million would compensate one hundred and eighty-five lives. If there were one thousand fatalities from a severe accident, recovery would be limited to two to three cents on the dollar under the current Act, and still be limited to less than twenty cents on the dollar under the proposed Act. And that would suppose no compensation at all for anyone who was personally harmed short of a fatality nor for property damage. This illustration indicates the inadequacy of the financial assurance requirements in the event of a very severe accident that escaped containment.¹²

For several years, the federal government has been committing to amend the *Nuclear Liability Act* given that it has neither kept up with international norms nor even with inflation. As the Commissioner of the Environment and Sustainable Development of the

⁹ Energy Probe et al, *ibid*, per Wright J. at 3-4

¹⁰ Energy Probe et al v. Attorney General of Canada, Appellants’ Factum at p. 3 (case settled prior to hearing by Ontario Court of Appeal), evidence of Dr. R. Goble and Arthur Murray

¹¹ *Ibid*, Factum at p. 4; Evidence of K. Dinnie; Report titled Probabilistic Safety Assessment at Ontario Hydro, Nuclear Safety Analysis Department, Ontario Hydro, May 1993, at page 29.

¹² *Ibid*, Factum at p. 34, evidence of Professor M. Trebilcock

Office of the Auditor General of Canada reported to the House of Commons in her 2005 report,

Canada's nuclear liability limits are lower than 12 other major industrialized nations with nuclear facilities. These countries have some combination of operator insurance, public funds, and/or industry pool that substantially exceeds what is required of Canadian operators.¹³

For example, as the Commissioner noted, as of that date, Japan and Germany had unlimited liability, having removed any applicable caps. With the combination of industry nuclear insurance pools and States' pools under the Brussels Convention and / or public funds and operator insurance, the U.S. plants had \$12.6 billion (Canadian \$ in 2003) available for a severe accident to compensate victims, and the Netherlands had \$3.2 billion (Canadian \$ 2003). Germany and Japan of course exceeded that with unlimited liability. Even countries only operating research reactors such as Italy, Norway and Denmark had approximately \$600 million available.

3. Modernize the Bill to accord with current principles of Sustainability

The current *Nuclear Liability Act* was passed in 1970 and proclaimed in force in 1976, long before many of the present day international agreements and subsequent federal legislation began to develop and implement in domestic and international law the principles of sustainability and sustainable development. Accordingly it is appropriate that any revision to the *Nuclear Liability Act* be conducted with a view to ensuring compliance with international agreements to which Canada has committed, and with Canada's other federal sustainability laws.

The Rio Declaration was reached in June 1992 by the United Nations Conference on Environment and Development.¹⁴ While broadly applicable to the subject of operation of nuclear electrical generation, several of its Principles are specifically applicable and merit consideration with respect to the *Nuclear Liability Act*.

Principle 3 states that "The right to development must be fulfilled so as to equitably meet developmental and environmental needs of present and future generations."

The *NLA* should provide that all decisions made pursuant to the *NLA* be made in accordance with the principle of inter-generational equity.

¹³ Report of the Commissioner of the Environment and Sustainable Development – 2005, Chapter 8, page 10, Exhibit 8.4 (reviewing Petitions by Mr. Siegfried Kleinau submitted in 2002 and 2003 in which 'he stated, among other things, that the amount of insurance coverage required under the *Nuclear Liability Act* is insufficient.')

¹⁴ *Report of the United Nations Conference on Environment and Development (Rio de Janeiro 3-14 June 1992)*, UNEP, 1992, UN Doc. A CONF.151 26(Vol.I).

Principle 15 states that “In order to protect the environment, the precautionary approach shall be widely applied by States according to their capabilities. Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation.”

The precautionary principle has been noted by the Supreme Court of Canada which quoted the Bergen Ministerial Declaration on Sustainable Development (1990):

In order to achieve sustainable development, policies must be based on the precautionary principle. Environmental measures must anticipate, prevent and attach the causes of environmental degradation. Where there are threats of serious or irreversible damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation.

The Supreme Court noted that Canada advocated inclusion of the precautionary principle during the Bergen Conference negotiations; that the precautionary principle is codified in several items of domestic legislation; and that “Scholars have documented the precautionary principle’s inclusion in `virtually every recently adopted treaty and policy document related to the protection and preservation of the environment.”¹⁵

The application of the precautionary principle to the *Nuclear Liability Act* is particularly apt given that consequences of a severe accident with escape of radioactive materials from the containment facilities at the plant into the surrounding environment may cause extensive personal injury and property damage as noted earlier. In such a scenario that damage would certainly be “serious” and for all intents and purposes may even be irreversible for any reasonable time frame that we might consider.

The *NLA* should include a statement of the precautionary principle and should provide that all decisions made pursuant to the *NLA* be made in accordance with the precautionary principle.

Rio Principle 16 states that “National authorities should endeavour to promote the internalization of environmental costs and the use of economic instruments, taking into account the approach that the polluter should, in principle, bear the cost of pollution, with due regard to the public interest and without distorting international trade and investment”.

This latter principle, often referred to as the “polluter pays” principle has been upheld in Canadian law by the Supreme Court of Canada in a recent decision. The court found that “the polluter pay principle... has become firmly entrenched in environmental law in Canada. It is found in almost all federal and provincial environmental legislation¹⁶.” The Supreme Court also noted its recognition in the 16th principle of the *Rio Declaration*.

¹⁵ *Crop Life Canada v. Hudson* 2001 2 S.C.R. 241 at para. 31

¹⁶ *Imperial Oil v. Quebec (Minister of the Environment)* ^2003,2 S.C.R. 624 at para. 23

In order to accord with the “polluter pays” principle, the *NLA* should be amended to remove the cap on liability and to remove the exemption from liability that is accorded to third parties, as well as to increase substantially the resources available by way of minimum insurance and pooled resources and other mechanisms so as to better internalize the potential costs of severe accidents which escape containment.

The current *NLA* and the proposed Bill C-20 also do not accord with principles of sustainability or sustainable development as set out in the recently passed *Federal Sustainable Development Act*.¹⁷ That Act provides that it is binding on Her Majesty in Right of Canada and requires the preparation of a Federal Sustainable Development Strategy based on the precautionary principle, and that Ministers are to prepare sustainable development strategies complying with or contributing to the overall strategy as appropriate to the mandate of the departments and agencies which they oversee; the strategies are to be laid before the House of Commons.

Bill C-20 and its operations will not be in compliance with the definitions of sustainability and sustainable development under that *Act* in its current form.

Conclusion

The Act in its present form is not needed. Any legitimate objectives can be pursued without imposing a cap on total liability, shielding third party suppliers from any liability, or providing for highly inadequate minimums for insurance and financial assurances.

For example,

- If the objective is to provide for compulsory insurance, this can be done without liability exemptions and limitations.
- If the objective is to provide a special duty, such as this Act does by imposing absolute liability, this can also be done without completely exempting non-operators and without caps on liability.
- If the objective is to expedite compensation in the event of a severe accident, this can be done without liability limitations and without exempting suppliers’ liability.
- If the objective is to provide some level of protection to suppliers by operators, this can be done with indemnity agreements without a statutory removal of plaintiffs’ or claimants’ rights against any of the parties.

¹⁷ *Federal Sustainable Development Act* 2008, c. 33 F-8.6, Assented to June 26th, 2008

- If the objective is to promote nuclear power generation, it must be recognized that the mechanism of a cap on total liability and exemption of third party supplier liability provides an enormous subsidy to this form of energy generation which no other form of energy generation receives. And it does so by imposing the risks of a severe accident which exceeds the liability limits, on the public.
- I would conclude by repeating the statement made by the highly respected high energy physicist Dr. Robert Goble in speaking about Canada's current *Nuclear Liability Act*,

To argue at length that accidents with significant off-site consequences are essentially “incredible” and that nevertheless a very low liability limit is vital appears incoherent; it also gives the impression of trying to convert a question about appropriate and effective measures for protecting a complex of public interests to a question about hypothetical risk magnitudes.¹⁸

- In other words, as legislators I would submit that you view the question of amending the *Nuclear Liability Act* as a question of what system of compensation should be in place in the event that a serious accident should occur. I would submit that you not view the *Act* primarily as a mechanism to expedite the operation of nuclear power generation facilities. In my submission the system we would want in place in the event of a real accident would not consist of historical legislative protection to the industry from the consequences of accident; rather we would want a much more significant amount of minimum insurance and pooled resources to assist accident victims; a removal of the cap on total liability; and a removal of the exemption from liability to third parties. There are also elements in the proposed Bill that we would want to retain such as absolute liability of the operator; extended limitations periods; retention of the jurisdiction of the Courts; and the potential for a specialized tribunal if necessary.
- Although the submissions today are focussed on the *Nuclear Liability Act* which is before this Committee, the system we would want in place would also include other essential elements including appropriate

¹⁸ Robert L. Goble, Research Professor of Physics and of Environment, Technology and Society, Clark University, Mass., ‘Potential Consequences of Severe Accidents at Canadian Nuclear Power Plants: Implications for the Nuclear Liability Act’, April 30, 1993, report submitted for litigation regarding the *Nuclear Liability Act*, p. 4

emergency planning, a stringent independent regulator, serious consideration of the full range of severe off accidents which could occur, and thorough transparency and public participation in decision making pertaining to nuclear power generation in Canada.

- I might add that although the Canadian Environmental Law Association argues that nuclear power generation should not form part of our electricity generation mix in Canada and that its use should be phased out as the current operating plants close, we also argue that to proceed with this generation technology without these key systemic elements both decreases public trust and acceptability and increases real risk and hazard from the technology and its continued operation in this country. Given that nuclear generation plants are currently operating in Canada I urge you to seriously reconsider the framework of the *Nuclear Liability Act*, and follow the lead of other leading industrialized nations who have at least increased available compensation to potential accident victims, removed total liability caps and eliminated the exemption for liability of third party suppliers, and provided for much longer duration time frames in which to make claims.

Recommendations for Clause by Clause Amendments

The following is a partial list of recommendations for consideration in Clause by Clause amendments of Bill C-20.

- **Limitation of Actions.** Bill C-20 proposes to impose an ultimate limitation period of 30 years. However, solid tumour cancers may continue to manifest themselves for the remaining lifetime of exposed persons which could amount to 70 or 80 years instead of 30. The U.S. legislation, the Price Anderson Act no longer has an absolute limitation period; it only provides a three year limitation that runs from discovery of harm. This formulation was chosen because large proportion of the human health consequences of a nuclear incident might become evident so long after the accident had happened¹⁹. Bill C-20 should be amended to provide a three year limitation to run from discovery of harm and should explicitly provide that there is no ultimate limitation period otherwise.

• ¹⁹ Evidence of Attorney Daniel Meek in litigation regarding the *Nuclear Liability Act*; Evidence of Dr. R. Osborne, *ibid*; Evidence of Dr. Donnell W. Boardman, M.D., May 1, 1993, ``Medical Consequences of Nuclear Power Station Accidents`` at page 12, 13

- Extension of Incidents Covered. Amendments should be added akin to Price Anderson Act amendments made in 1988²⁰ to include coverage for nuclear incidents:
 - Arising with respect to nuclear material “which has been unlawfully diverted from its storage place or intended transportation route”; or
 - “which results from activities involving storage or disposal of radioactive waste from commercial nuclear reactor”
- Definition of harm. Bill C-20 proposes to restrict compensation to cases of “bodily harm”, property damage, or psychological trauma in very restricted cases. This is a further narrowing of the kinds of harm and damage that may be compensated. The compensable harm should revert to the standard kinds of claims recognized at common law including all damages upon which tort claims may be brought.
- The *NLA* should provide that all decisions made pursuant to the *NLA* be made in accordance with the principle of inter-generational equity.
- The *NLA* should include a statement of the precautionary principle and should provide that all decisions made pursuant to the *NLA* be made in accordance with the precautionary principle.
- In order to accord with the “polluter pays” principle, the *NLA* should be amended to remove the cap on liability and to remove the exemption from liability that is accorded to third parties, as well as to increase substantially the resources available by way of minimum insurance and pooled resources and other mechanisms so as to better internalize to nuclear plant operations the potential costs of severe accidents which escape containment.
- Bill C-20 should include definitions of “sustainability” and “sustainable development” and in addition to the amendments recommended above, should provide that all decisions made pursuant to the *NLA* be made in accordance with those definitions and principles.

All of which is respectfully submitted to the Standing Committee on Natural Resources by the Canadian Environmental Law Association

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²⁰ Price-Anderson Amendments Act of 1988, Public Law 100-408; See Meek, Daniel, ‘The Price-Anderson Act: Its Provisions and Operation’, May 3, 1993, Report prepared for litigation regarding Canada’s *Nuclear Liability Act*, at p. 13