



HITACHI

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s.19(1)

May 28, 2012

Mr. David McCauley
Director, Uranium and Radioactive Waste Division
Natural Resources Canada
17-B9-2 - 580 Booth Street
Ottawa, ON K1A 0E4

*Re: Consultation Paper on the Modernization of
Canada's Nuclear Liability Regime*

Dear Mr. McCauley:

GE-Hitachi Nuclear Energy Canada (GEH Canada) appreciates this opportunity to present its views on the *Consultation Paper on the Modernization of Canada's Nuclear Liability Regime* recently sent by Natural Resources Canada (NRCan) to stakeholders for written comments and recommendations.

Introduction

GEH Canada strongly supports early enactment of the bill entitled the "*Nuclear Liability and Compensation Act*" (NLCA) introduced in four previous Parliaments to replace the 1970 *Nuclear Liability Act* (NLA). We also submit that the NLCA should be amended before reintroduction to enable Canada to ratify the Convention on Supplementary Compensation for Nuclear Damage (CSC) at the time the NLCA is enacted.

Interest of GEH Canada

General Electric Company (GE) is a large, diversified, global company, headquartered in Fairfield, Connecticut, with businesses ranging from light bulbs to locomotives, from wind turbines to medical diagnostic imaging equipment, from commercial finance to specialized equipment for oil and gas exploration. GE has been in Canada since 1892, when Thomas Edison bought the plant in Peterborough, Ontario, which is still the head office and main production facility for our Motors and Nuclear businesses, and where GE is still one of the largest private-sector employers. All GE's businesses are represented in Canada in one-way or another. We have 7,000 employees in this

country, and annual revenues of almost \$5 billion. Canada is one of GE's most important markets and manufacturing bases outside the United States.

One of the largest of GE's global business units is GE Energy, which includes all forms of power generation - gas, steam, wind, solar, biogas -- and nuclear. We are one of the major players in the global nuclear power market. GE-Hitachi Nuclear Energy (GEH), a global nuclear alliance between GE and Hitachi Ltd. of Japan, is one of the top three builders and sellers of nuclear reactors in the world - along with Toshiba/Westinghouse and Areva, the company owned by the French Government. Here in Canada, GEH Canada is a major supplier to CANDU reactors. We provide fuel bundles, robotic fuel-handling machines, and other components and services in support of the CANDU fleet. Other GE businesses - GE Motors, for instance - provide non-nuclear components which are essential for the CANDU's safe and efficient operation. While there have been no new orders for CANDU reactors in the last few years, GEH Canada has been doing good business in the servicing and refurbishment of the existing CANDU fleet at Darlington and Bruce.

But all the nuclear business that GEH Canada does in Canada is inhibited - and could be jeopardized - by Canada's inadequate nuclear liability regime. The business we do now - or most if it - we can only do because we are able to secure from our customers an indemnification from nuclear liability. We have generally been able to do that with Ontario Power Generation and Bruce Power, but we have had more difficulty with Quebec Hydro and New Brunswick Power, the two other operators of nuclear reactors in Canada.

Liability issues may not matter as much to government-owned companies, which have the backing of the public purse in the event of a nuclear incident for which they are found liable. But liability does matter a great deal to shareholder-owned companies like GEH Canada, Babcock and Wilcox, and Westinghouse, particularly those that have substantial assets across the border in the United States.

In the event of a nuclear accident involving one of Canada's reactors - all of which are along the U.S. border - there would likely be a flurry of legal actions against several parties, particularly those with deep pockets like GEH Canada, or even GE Canada. If GE Canada were found liable, and if a U.S. court were to determine that Canada's liability protection regime was deficient and unable to provide adequate compensation to U.S. victims, legal action might conceivably be taken in a U.S. court against GE, and all GE's assets in the U.S. would be vulnerable. That is exactly what happened in 1984 when an accident at a chemical plant in Bhopal, India, resulted in multiple lawsuits in U.S. courts against Union Carbide, the parent of the Indian company where the accident occurred.

As we stated in our November 9, 2007 submission to the House of Commons Standing Committee on Natural Resources on the NLCA (then Bill C-5), GEH Canada cannot accept that risk. Nor can many other U.S. companies that could potentially supply equipment and services to the Canadian nuclear industry. This situation means that Canada can be deprived of technologies and competitive alternatives that could lower costs and improve performance of Canadian reactors.

The NLCA is an important step in addressing the liability problem.

Like the 1970 NLA, the NLCA generally conforms to the standards established by the International Atomic Energy Agency (IAEA) in 1997, after several years of negotiation in which Canada played an active part. For instance, this bill reconfirms the channeling of liability through the operator of a nuclear facility, putting a cap on that liability, and requiring the operator to carry insurance or other financial security to cover the liability. While there are some technical amendments to the NLA, the

one significant change introduced by the NLCA is to increase the operator's liability limit from \$75 million to \$650 million.

That moves Canada to the international standard - indeed, beyond the international standard - and is an important and appropriate change to make. It will position Canada to then ratify the IAEA's CSC, which is a key part of the global legal regime for the regulation of nuclear power. Canada's ratification, with one other country, would have the effect of finally bringing the Convention into force. Among other things, the Convention clearly establishes the jurisdiction where responsibility lies in the event of a nuclear accident and - by doing so - makes compensation for victims more rapid and more certain.

The establishment of a global legal and regulatory framework for nuclear power will not only benefit companies like GEH Canada that do nuclear work in Canada. It will create greater certainty for Candu Energy and other members of the Canadian nuclear industry when they sell reactor technology and services in other countries that adhere to the Convention.

So the enactment of the NLCA and ratification of the CSC will not only benefit the public by providing strengthened and more certain compensation of victims in the event of a nuclear incident, but it would also benefit the Canadian nuclear industry by reducing the risk that exports might embroil them in unanticipated and financially unacceptable liability.

Comparison of NLCA and CSC

Like the NLA, the NLCA generally incorporates the basic principles of the CSC Annex (and other international nuclear liability conventions), including legal channeling of liability exclusively to the nuclear installation licensee, a liability limit, absolute liability, time limits on claims, a single competent tribunal, and mandatory financial security. GEH Canada agrees with the statement in the *Consultation Paper* (at page 10) that "...the simplest method to join the CSC would be for Canada to make its national nuclear civil liability law comply with the provisions of the CSC Annex." As of now, as outlined in the attachment GEH Canada prepared in consultation with other stakeholders, a few provisions of the NLCA are not fully consistent with the CSC Annex. The *Consultation Paper* (at page 10) lists three such items. However, there are a few additional technical changes that should be made before the bill's reintroduction. It would be preferable for the NLCA be revised to be as consistent as possible with the CSC Annex, rather than for Canada to make any reservation(s) when ratifying the CSC.

Additionally, it would be beneficial if the NLCA also included a provision indicating that a purpose of the NLCA is to fulfill Canada's commitments under the CSC Annex. As noted in the *Consultation Paper* (at page 11), "...this could be helpful in ensuring that, in case of doubt, a court would interpret the NLCA in a manner consistent with the CSC...." It is proposed the NLCA should include a provision such as the following: "This Act should be interpreted to implement and be consistent with the provisions of the Convention on Supplementary Compensation for Nuclear Damage when that treaty enters into force for Canada."

The key change in the current Canadian law (NLCA, Section 21(1)) to bring it more in line with current international nuclear liability standards would be to increase the operator's liability limit from \$75 million to \$650 million (about 422.5 million Special Drawing Rights (SDRs)¹). This would be in excess of the 300 million SDR minimum under the CSC and the 1997 Vienna Convention on Civil Liability for Nuclear Damage. GEH Canada notes that, if the new limit is phased in over some period of time, the

¹ 1 SDR = \$1.55194, as of May, 17, 2012.

limit should be at least 300 million SDRs (about \$461 million) at the time the CSC enters into force for Canada.

Funding Canada's CSC Contingent Contribution

The CSC does not require that Canada identify in advance the source of its contribution to the CSC international supplementary fund. This is a contingent liability that never may be needed. The international fund would not even be called upon until the minimum national compensation amount (300 million SDRs) in the accident country had been exceeded. Because funds may never be needed, Parliament does not need to attempt to establish a funding mechanism in advance of an accident that may never happen or before it is better known how many other countries will participate in the supplementary fund. As originally conceived, the obligations of Member States to support the fund are intended to be sovereign obligations, namely Member States recognizing the importance of supporting the global utilization of peaceful nuclear energy and the national interests of States to join together to provide aid to another Member State in the unlikely event that a nuclear accident occurs. The CSC contribution mechanism is a kind of foreign disaster assistance, and not some kind of mutual insurance scheme. It is modeled on the Brussels Supplementary Convention whereby twelve Western European governments provide an additional tier of nuclear liability coverage for each other.

In any case, it would not be appropriate to assess "nuclear suppliers," as *Consultation Paper* (at page 11) suggests is an option for Canada. As the United States has found, it would be extremely difficult to allocate Canada's contingent cost among "nuclear suppliers." While there currently is little or no data now available for guidance on risk and no clear way to identify entities that have or are furnishing goods and services to foreign nuclear installations, as many as 300 to 1,800 types of goods and services go into constructing and operating a nuclear power plant. To be equitable, any requirement for suppliers would have to capture all companies that may have supplied goods and services to foreign installations, with an appropriate "look back" period. Given the critical difficulties presented by the lack of data on the extent of and risk associated with the export of nuclear goods and services from the United States, the U.S. Department of Energy has not yet been able to offer a specific CSC cost allocation formula for U.S. suppliers, as the U.S. Congress said it should do by rulemaking not later than December 19, 2010. Suppliers may not have had any involvement with the foreign plant that had an accident, and do not benefit from the operation of plants. Thus, if Parliament wants to identify in advance how Canada's contingent CSC liability would be funded, it should allocate it among nuclear operators, which would themselves benefit from the CSC international fund in the event of an accident in Canada. In fact, depending upon the number of CSC Member States, Canadian operators would have the benefit of at least about 59 million SDRs (\$91 million), while the total share for a foreign accident for all Canadian operators would be about 14 million SDRs (\$22 million).

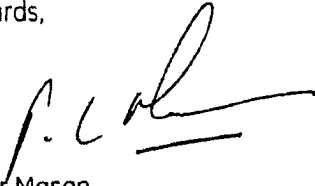
Conclusions

In summary, Parliament promptly should adopt NLCA; and, at the same time, Canada should ratify the CSC, which is an important IAEA-sponsored initiative that would commit the international community to common standards for handling nuclear facility accident claims. It is a multilateral treaty that will enhance important Canadian policies in regard to nuclear commerce.

Thank you again for the opportunity to make this submission on NRCan's *Consultation Paper on the Modernization of Canada's Nuclear Liability Regime*.

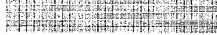
If you have any questions, please do not hesitate to contact me at [REDACTED] or [REDACTED] at [REDACTED]

Regards,

A handwritten signature in black ink, appearing to read 'P. Mason', with a horizontal line underneath.

Peter Mason
President & CEO

cc Mr. Jacques Henault

A rectangular area of the document that has been redacted with a dense grid of small black squares.

Attachment

s.19(1)

Attachment

**Comparison of
Nuclear Liability and Compensation Act, Bill C-15, 40th Parliament, 3d Session
And
Convention on Supplementary Compensation for Nuclear Damage**

To join the Convention on Supplementary Compensation for Nuclear Damage (CSC), a State that is not a Party to the Paris or Vienna Convention must declare that its national nuclear liability law complies with the Annex to the CSC, and provide the International Atomic Energy Agency (IAEA) with a copy of that national law. CSC, Articles XIX.1 and -3.

Like the 1970 Nuclear Liability Act, the Nuclear Liability and Compensation Act (NLCA or Bill C-15) generally incorporates the basic principles of the CSC Annex (and other international nuclear liability conventions), including legal channeling of liability exclusively to the nuclear installation licensee, a liability limit, absolute liability, time limits on claims, a single competent tribunal, and mandatory financial security. The *Consultation Paper on the Modernization of Canada's Nuclear Liability Regime* at page 10 notes that, for Canada to join the CSC, three items on court jurisdiction (Items 4 and 9, *infra*), the limitation period for stolen or lost nuclear material (Item 10, *infra*), and liability during transport must be added to the existing version of the NLCA (Item 3, *infra*). However, there are other provisions of Bill C-15 described *infra* that are not fully consistent with the CSC Annex. All of these should be modified to enable Canada to join the CSC as an Annex State.

Additionally, it would be beneficial if the NLCA also included a provision indicating that a purpose of the NLCA is to fulfill Canada's commitments under the CSC Annex. As noted in the *Consultation Paper* (at page 11), "...this could be helpful in ensuring that, in case of doubt, a court would interpret the NLCA in a manner consistent with the CSC...." It is proposed the NLCA should include a provision such as the following: "This Act should be interpreted to implement and be consistent with the provisions of the Convention on Supplementary Compensation for Nuclear Damage when that treaty enters into force for Canada."

The following is a comparison of key provisions of Bill C-15 *vis-à-vis* the CSC Annex:

1. The definition of "nuclear material" in Section 2 of Bill C-15, which includes only nuclear fuel or radioactive material mixed with nuclear fuel, is not as broad as that in CSC Annex, Article 1.1(c). The CSC definition also would cover some damages arising from radioactive waste materials.
2. Section 4(1) of Bill C-15 provides that the Act does not apply to an incident that results from "an act of war [emphasis added], hostilities, civil war or insurrection, other than [emphasis added] terrorist activity as defined in subsection 83.01(1) of the *Criminal Code*." This may not be fully consistent with CSC Annex, Article 3.5(a). First, the CSC Annex exoneration provision states that it applies to an incident "directly due" to the enumerated acts. While the Bill refers to "an act of war," CSC Annex, Article 3.5(a), uses the presumably broader term "an act of armed conflict." More problematic could be the Bill's reference to the

definition of "terrorist activity" in the Canadian *Criminal Code*. While that definition is broad, it may not be all inclusive, e.g. the Canadian operator might not be liable for some type of terrorist activity that the CSC would make an operator liable for.

3. The transport provisions of Section 8(1) of Bill C-15 are not as comprehensive as those of CSC Annex, Article 3. The Bill makes an operator liable only for nuclear material being transported from the operator's nuclear installation until it is placed in a facility licensed under the Nuclear Safety and Control Act (Bill C-15, Section 8(1)(b)) and for nuclear material in the process of being transported to the operator's installation from outside Canada (Bill C-15, Section 8(1)(c)), provided damage is caused on Canadian territory, including its EEZ. CSC Annex, Articles 3.1(b) and -c) provide that the operator shall be liable for transport in more circumstances, i.e. the CSC Annex extends liability for damage suffered in at least any CSC Contracting State and its EEZ in relation to incidents caused during transport, unless the sending or receiving operator has provided otherwise by written contract. Furthermore, in case of transport to or from operators of nuclear installations in non-Contracting States, liability for damage will lie with the sending or receiving operator of a Contracting State, which cannot be set aside by contract.

4. Sections 8(3) and 64 of Bill C-15 (like the 1970 Nuclear Liability Act) provide the operator can be liable for transboundary damage as a result of an accident at an installation in Canada on the basis of reciprocity (e.g., with the United States). Bill C-15 thus addresses only damage occurring in Canadian territory, including the EEZ. It does not cover damage occurring outside such territory, except on the basis of reciprocity. Under the CSC, geographical scope is not extended to damage wherever suffered, but covers damage suffered in all CSC States,¹ including their maritime zones, regardless of where the incident occurs.²

5. Sections 13 *et seq.* of Bill C-15 providing for what damages are compensable under the Act may not be as broad as the definition of "nuclear damage" under Article I(f) of the CSC.³

¹ The CSC provides that the supplementary international funds apply to nuclear damage suffered in the territory of CSC Contracting Parties, in or above their maritime areas beyond the territorial sea by a national of a Contracting Party or on board of ship, aircraft or artificial structure under its jurisdiction; or in or above its EEZ or continental shelf in connection with the exploitation or the exploration of the natural resources. CSC, Article V.1. The CSC Annex has no specific requirement on transboundary damage for the first tier (national compensation amount); it only covers it in the second tier CSC funds (international compensation fund).

² CSC Annex, Article 3 requires incidents to be covered both in the installation and outside it during transport to and from the installation (except, in case of transport to or from operators of nuclear installations in non-Contracting States, liability for damage will lie with the sending or receiving operator of a Contracting State). Furthermore, in case of jurisdiction, while the Bill excludes any liability outside Canada and its EEZ, incidents occurring during transport in the EEZ of a CSC Contracting State will give jurisdiction involving any such incident to that CSC State's court. See CSC Article XIII. In that situation, the law of the competent court would determine the extent of damages covered and other aspects. *Id.* Section 64(3) of the Bill appears inconsistent with these CSC provisions.

³ The definition of "nuclear damage" is explicitly extended under the 1997 IAEA Conventions to include: (a) economic loss resulting from personal injury or property damage, (b) costs of measures of reinstatement of impaired environment if actually taken or to be taken (unless such impairment is insignificant), (c) certain loss of income resulting from an economic interest in any use or enjoyment of the environment resulting from a significant impairment of the environment, (d) costs of preventive measures and further loss or damage caused by such

6. Section 13 of Bill C-15 refers to "bodily injury," while the definition of "nuclear damage" in CSC, Article I(f)(i) includes "loss of life or *personal* [emphasis added] injury." The term "personal injury" generally is considered to be broader than "bodily injury," because it includes such injury as nonphysical, psychological injury. Section 14 of Bill C-15 separately includes as compensable damage certain "psychological trauma," if it results from bodily injury or damage to property of that person that was caused by a nuclear incident or preventive measures referred to in Section 18 that were taken by that person. Coverage for psychological trauma under the Bill thus appears to require some bodily injury or damage to property. The result of these provisions in Bill C-15 may be almost the same, but the difference in the language between the Bill and the CSC leaves some room for doubt. It would be more simple if Bill C-15 referred to "personal injury."

7. Section 15 of Bill C-15 includes as compensable damage "[e]conomic loss incurred by a person as a result of their bodily injury or damage to their property..." As noted, "economic loss" in the definition of "nuclear damage" in the 1997 IAEA Conventions is somewhat broader, in that such Conventions cover economic loss arising from "loss of life or *personal* [emphasis added] injury." The 1997 IAEA Conventions also cover certain loss of income deriving from an economic interest in any use or enjoyment of the environment.

8. Sections 17 and 18 of Bill C-15 includes as compensable damage "[r]easonable costs of remedial measures taken to repair, reduce or mitigate environmental damage caused by a nuclear incident if the measures were ordered by an authority acting under federal or provincial legislation relating to environmental protection." The CSC also does not require that remedial measures be ordered by a federal or provincial authority, as Bill C-15, Sections 17 and 18 would.

9. The reciprocity provisions of Section 64 of Bill C-15 are not fully consistent with the CSC Annex. Section 64 gives the Governor in Council considerable discretion to determine that another country provides "satisfactory arrangements" for providing compensation in that country and in Canada for nuclear damage, in which case Canadian tribunals have no jurisdiction to entertain actions. Article XIII of the CSC, on the other hand, provides that jurisdiction over actions concerning nuclear damage shall lie *only* with the courts of the CSC Contracting Party within whose territory or EEZ the nuclear incident occurs. The exception is where the nuclear incident does not occur within the territory of any CSC Contracting Party or its EEZ. In that case, jurisdiction lies only with the courts of the Installation State.

10. Unlike the CSC Annex, Bill C-15 does not specifically address compensation time limits for stolen or lost nuclear material. CSC Annex, Article 9.2 provides:

Where nuclear damage is caused by a nuclear incident involving nuclear material which at the time of the nuclear incident was stolen, lost, jettisoned or abandoned, the period established pursuant to paragraph 1 shall be computed from the date of

measures, and (e) any other economic loss. However, the extent of recovery for such damage is again to be determined by the law of the competent court. CSC, Articles I(f-h) and -(l); and 1997 Vienna Convention, Articles 2(2) and -(4).

that nuclear incident, but the period shall in no case, subject to legislation pursuant to paragraph 1, exceed a period of twenty years from the date of the theft, loss, jettison or abandonment.

However, this already may be covered by the "absolute limit" of 10 years as fixed in Section 30(2)(b) of the Bill.

May 2012



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Toronto Brookfield Place
161 Bay St.
Suite 2700
Toronto, ON M5J 2S1

May 30, 2012

Mr. David McCauley
Director, Uranium and Radioactive Waste Division
Natural Resources Canada
580 Booth Street
Ottawa, Ontario K1A 0E4

Re: *Consultation Paper on the Modernization of
Canada's Nuclear Liability Regime*

Dear Mr. McCauley:

Westinghouse Electric Canada, Inc., ("Westinghouse Canada") appreciates this opportunity to present its views on the *Consultation Paper on the Modernization of Canada's Nuclear Liability Regime* recently sent by Natural Resources Canada (NRCan) to stakeholders for written comments and recommendations.

Introduction

Westinghouse Canada strongly supports early enactment of the bill entitled the "*Nuclear Liability and Compensation Act*" (NLCA) introduced in four previous Parliaments to replace the 1970 *Nuclear Liability Act* (NLA). We also submit that the NLCA should be amended before reintroduction to enable Canada to ratify the Convention on Supplementary Compensation for Nuclear Damage (CSC) at the time the NLCA is enacted.

Interest of Westinghouse Canada

Westinghouse Canada, together with its global parent, Westinghouse Electric Company LLC, is a leading supplier of nuclear plant products and light water reactor (LWR) technologies to customers throughout the world, with expertise and capability in new plant development, services to existing facilities, nuclear fuel, and automation systems and services. Westinghouse technology is the basis for approximately half of the world's operating nuclear power plants. From the first commercial nuclear power reactor built in 1957 in Shippingport, Pennsylvania, USA, to the largest number of next-generation reactors being constructed globally, Westinghouse continues to demonstrate the ability to deliver safe, reliable, and economically viable clean-energy solutions to satisfy the growing need for electricity throughout the world. Westinghouse's products support the mission to pioneer engineering and services which create success for our customers in their increasingly demanding markets. Westinghouse Canada is excited about having an opportunity to participate in the Canadian civil nuclear market.

Importance of CSC

We view Canadian ratification of the CSC as an urgent priority, and therefore concentrate our comments on the *Consultation Paper's* request (at page 4) for views on the consideration of Canadian membership in a nuclear civil liability international convention to address trans-boundary and transportation issues.

The CSC is an important International Atomic Energy Agency (IAEA)-sponsored initiative that would commit the international community to common standards for handling nuclear facility accident claims. It was adopted by the IAEA in 1997 after five years of negotiations in which Canada was an active participant. The IAEA's September 2011 *Action Plan on Nuclear Safety*, GOV/2011/59-GC(55)/14 at page 4, called on the Agency's Member States to work towards establishing a global nuclear liability regime that addresses the concerns of all States that might be affected by a nuclear accident with a view to providing appropriate compensation for nuclear damage. Member States were urged to give due consideration to the possibility of joining the international nuclear liability instruments as a step to achieving such a global regime. This can be accomplished only by the CSC, since it is the only nuclear liability treaty the United States is eligible to join. The CSC thus is the only vehicle for creating a truly *global* nuclear liability regime.

Comparison of NLCA and CSC

Like the NLA, the NLCA generally incorporates the basic principles of the CSC Annex (and other international nuclear liability conventions), including legal channeling of liability exclusively to the nuclear installation licensee, a liability limit, absolute liability, time limits on claims, a single competent tribunal, and mandatory financial security. Westinghouse Canada agrees with the statement in the *Consultation Paper* (at page 10) that "...the simplest method to join the CSC would be for Canada to make its national nuclear civil liability law comply with the provisions of the CSC Annex." As of now, as outlined in the attachment Westinghouse Canada prepared in consultation with other stakeholders, a few provisions of the NLCA are not fully consistent with the CSC Annex. The *Consultation Paper* (at page 10) lists three such items. However, there are a few additional technical changes that should be made before the bill's reintroduction. It would be preferable for the NLCA be revised to be consistent with the CSC Annex, rather than for Canada to make any reservation(s) when ratifying the CSC.

Additionally, it would be beneficial if the NLCA also included a provision indicating that a purpose of the NLCA is to fulfill Canada's commitments under the CSC Annex. As noted in the *Consultation Paper* (at page 11), "...this could be helpful in ensuring that, in case of doubt, a court would interpret the NLCA in a manner consistent with the CSC..." It is proposed the NLCA should include a provision such as the following: "This Act should be interpreted to implement and be consistent with the provisions of the Convention on Supplementary Compensation for Nuclear Damage when that treaty enters into force for Canada."

The key change in the current Canadian law (NLCA, Section 21(1)) to bring it more in line with current international nuclear liability standards would be to increase the operator's liability limit from \$75 million to \$650 million (about 422.5 million Special Drawing Rights (SDRs)¹). This would be in excess of the 300 million SDR minimum under the CSC and the 1997 Vienna Convention on Civil Liability for Nuclear Damage. Westinghouse Canada notes that, if the new limit is phased in over some period of time, the limit should be at least 300 million SDRs (about \$461 million) at the time the CSC enters into force for Canada.

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Funding Canada's CSC Contingent Contribution

The CSC does not require that Canada identify in advance the source of its contribution to the CSC international supplementary fund. This is a contingent liability that never may be needed. The international fund would not even be called upon until the minimum national compensation amount (300 million SDRs) in the accident country had been exceeded. Because funds may never be needed, Parliament does not need to attempt to establish a funding mechanism in advance of an accident that may never happen or before it is better known how many other countries will participate in the supplementary fund. As originally conceived, the obligations of Member States to support the fund are intended to be sovereign obligations, namely Member States recognizing the importance of supporting the global utilization of peaceful nuclear energy and the national interests of States to join together to provide aid to another Member State in the unlikely event that a nuclear accident occurs. The CSC contribution mechanism is a kind of foreign disaster assistance, and not some kind of mutual insurance scheme. It is modeled on the Brussels Supplementary Convention whereby twelve Western European governments provide an additional tier of nuclear liability coverage for each other.

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In summary, Parliament promptly should adopt NLCA; and, at the same time, Canada should ratify the CSC, which is an important IAEA-sponsored initiative that would commit the international community to common standards for handling nuclear facility accident claims. It is a multilateral treaty that will enhance important Canadian policies in regard to nuclear commerce.

Thank you again for the opportunity to make this submission on NRCan's *Consultation Paper on the Modernization of Canada's Nuclear Liability Regime*.

If you have any questions, please contact myself or [REDACTED] at 412-374-5383 and [REDACTED] respectively.

s.19(1)

Very truly yours,



Bruce Bevilacqua
Chairman of the Board
Westinghouse Electric Canada, Inc.

Attachment

Cc:

[REDACTED]

Confidential/Attorney-Client Privileged

Attachment

**Comparison of
 Nuclear Liability and Compensation Act, Bill C-15, 40th Parliament, 3d Session
 And
 Convention on Supplementary Compensation for Nuclear Damage**

To join the Convention on Supplementary Compensation for Nuclear Damage (CSC), a State that is not a Party to the Paris or Vienna Convention must declare that its national nuclear liability law complies with the Annex to the CSC, and provide the International Atomic Energy Agency (IAEA) with a copy of that national law. CSC, Articles XIX.1 and -3.

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The following is a comparison of key provisions of Bill C-15 *vis-à-vis* the CSC Annex:

1. The definition of "nuclear material" in Section 2 of Bill C-15, which includes only nuclear fuel or radioactive material mixed with nuclear fuel, is not as broad as that in CSC Annex, Article 1.1(c). The CSC definition also would cover some damages arising from radioactive waste materials.

2. Section 4(1) of Bill C-15 provides that the Act does not apply to an incident that results from "an *act of war* [emphasis added], hostilities, civil war or insurrection, *other than* [emphasis added] terrorist activity as defined in subsection 83.01(1) of the *Criminal Code*." This may not be fully consistent with CSC Annex, Article 3.5(a). First, the CSC Annex exoneration provision states that it applies to an incident "directly due" to the enumerated acts. While the Bill refers to "an act of war," CSC Annex, Article 3.5(a), uses the presumably broader term "an act of armed conflict." More problematic could be the Bill's reference to the definition of "terrorist activity" in the Canadian *Criminal Code*. While that definition is broad, it may not be all inclusive, *e.g.* the Canadian operator might not be liable for some type of terrorist activity that the CSC would make an operator liable for.

3. The transport provisions of Section 8(1) of Bill C-15 are not as comprehensive as those of CSC Annex, Article 3. The Bill makes an operator liable only for nuclear material being transported from the operator's nuclear installation until it is placed in a facility licensed under the Nuclear Safety and Control Act (Bill C-15, Section 8(1)(b)) and for nuclear material in the process of being transported to the operator's installation from *outside* Canada (Bill C-15, Section 8(1)(c)), provided damage is caused on Canadian territory, including its EEZ. CSC Annex, Articles 3.1(b) and -(c) provide that the operator shall be liable for transport in more circumstances, *i.e.* the CSC Annex extends liability for damage suffered in at least any CSC Contracting State and its EEZ in relation to incidents caused during transport, unless the sending or receiving operator has provided otherwise by written contract. Furthermore, in case of transport to or from operators of nuclear installations in non-Contracting States, liability for damage will lie with the sending or receiving operator of a Contracting State, which cannot be set aside by contract.

4. Sections 8(3) and 64 of Bill C-15 (like the 1970 Nuclear Liability Act) provide the operator can be liable for transboundary damage as a result of an accident at an installation in Canada on the basis of reciprocity (*e.g.*, with the United States). Bill C-15 thus addresses only damage occurring in Canadian territory, including the EEZ. It does not cover damage occurring outside such territory, except on the basis of reciprocity. Under the CSC, geographical scope is not extended to damage wherever suffered, but covers damage suffered in all CSC States,¹ including their maritime zones, regardless of where the incident occurs.²

¹ The CSC provides that the supplementary international funds apply to nuclear damage suffered in the territory of CSC Contracting Parties, in or above their maritime areas beyond the territorial sea by a national of a Contracting Party or on board of ship, aircraft or artificial structure under its jurisdiction; or in or above its EEZ or continental shelf in connection with the exploitation or the exploration of the natural resources. CSC, Article V.1. The CSC Annex has no specific requirement on transboundary damage for the first tier (national compensation amount); it only covers it in the second tier CSC funds (international compensation fund).

² CSC Annex, Article 3 requires incidents to be covered both in the installation and outside it during transport to and from the installation (except, in case of transport to or from operators of nuclear installations in non-Contracting States, liability for damage will lie with the sending or receiving operator of a Contracting State). Furthermore, in case of jurisdiction, while the Bill excludes any liability outside Canada and its EEZ, incidents occurring during transport in the EEZ of a CSC Contracting State will give jurisdiction involving any such incident to that CSC State's court. *See* CSC Article XIII. In that situation, the law of the competent court would determine the extent of damages covered and other aspects. *Id.* Section 64(3) of the Bill appears inconsistent with these CSC provisions.

5. Sections 13 *et seq.* of Bill C-15 providing for what damages are compensable under the Act may not be as broad as the definition of "nuclear damage" under Article I(f) of the CSC.³

6. Section 13 of Bill C-15 refers to "bodily injury," while the definition of "nuclear damage" in CSC, Article I(f)(i) includes "loss of life or *personal* [emphasis added] injury." The term "personal injury" generally is considered to be broader than "bodily injury," because it includes such injury as nonphysical, psychological injury. Section 14 of Bill C-15 separately includes as compensable damage certain "psychological trauma," *if* it results from bodily injury or damage to property of that person that was caused by a nuclear incident or preventive measures referred to in Section 18 that were taken by that person. Coverage for psychological trauma under the Bill thus appears to require some bodily injury or damage to property. The result of these provisions in Bill C-15 may be almost the same, but the difference in the language between the Bill and the CSC leaves some room for doubt. It would be more simple if Bill C-15 referred to "personal injury."

7. Section 15 of Bill C-15 includes as compensable damage "[e]conomic loss incurred by a person as a result of their bodily injury or damage to their property...." As noted, "economic loss" in the definition of "nuclear damage" in the 1997 IAEA Conventions is somewhat broader, in that such Conventions cover economic loss arising from "loss of life or *personal* [emphasis added] injury." The 1997 IAEA Conventions also cover certain loss of income deriving from an economic interest in any use or enjoyment of the environment.

8. Sections 17 and 18 of Bill C-15 includes as compensable damage "[r]easonable costs of remedial measures taken to repair, reduce or mitigate environmental damage caused by a nuclear incident if the measures were ordered by an authority acting under federal or provincial legislation relating to environmental protection." The CSC also does not require that environmental remedial measures be ordered by a federal or provincial authority, as Bill C-15, Sections 17 and 18 would.

9. The reciprocity provisions of Section 64 of Bill C-15 are not fully consistent with the CSC Annex. Section 64 gives the Governor in Council considerable discretion to determine that another country provides "satisfactory arrangements" for providing compensation in that country and in Canada for nuclear damage, in which case Canadian tribunals have no jurisdiction to entertain actions. Article XIII of the CSC, on the other hand, provides that jurisdiction over actions concerning nuclear damage shall lie *only* with the courts of the CSC Contracting Party within whose territory or EEZ the nuclear incident occurs. The exception is where the nuclear incident does not occur within the territory of any CSC Contracting Party or its EEZ. In that case, jurisdiction lies only with the courts of the Installation State.

³ The definition of "nuclear damage" is explicitly extended under the 1997 IAEA Conventions to include: (a) economic loss resulting from personal injury or property damage, (b) costs of measures of reinstatement of impaired environment if actually taken or to be taken (unless such impairment is insignificant), (c) certain loss of income resulting from an economic interest in any use or enjoyment of the environment resulting from a significant impairment of the environment, (d) costs of preventive measures and further loss or damage caused by such measures, and (e) any other economic loss. However, the extent of recovery for such damage is again to be determined by the law of the competent court. CSC, Articles I(f-h) and -(l); and 1997 Vienna Convention, Articles 2(2) and -(4).

10. Unlike the CSC Annex, Bill C-15 does not specifically address compensation time limits for stolen or lost nuclear material. CSC Annex, Article 9.2 provides:

Where nuclear damage is caused by a nuclear incident involving nuclear material which at the time of the nuclear incident was stolen, lost, jettisoned or abandoned, the period established pursuant to paragraph 1 shall be computed from the date of that nuclear incident, but the period shall in no case, subject to legislation pursuant to paragraph 1, exceed a period of twenty years from the date of the theft, loss, jettison or abandonment.

However, this already may be covered by the "absolute limit" of 10 years as fixed in Section 30(2)(b) of the Bill.



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Michael D. Lees
President

May 25, 2012

Mr. David McCauley
Director, Uranium and Radioactive Waste Division
Natural Resources Canada
580 Booth Street
Ottawa, Ontario K1A 0E4

Re: *Consultation Paper on the Modernization of
Canada's Nuclear Liability Regime*

Dear Mr. McCauley:

Babcock & Wilcox Canada Ltd. (B&W Canada) appreciates this opportunity to present its views on the *Consultation Paper on the Modernization of Canada's Nuclear Liability Regime* recently sent by Natural Resources Canada (NRCAN) to stakeholders for written comments and recommendations.

Introduction

B&W Canada strongly supports early enactment of the bill entitled the "*Nuclear Liability and Compensation Act*" (NLCA) introduced in four previous Parliaments to replace the 1970 *Nuclear Liability Act* (NLA). We also submit that the NLCA should be amended before reintroduction to enable Canada to ratify the Convention on Supplementary Compensation for Nuclear Damage (CSC) at the time the NLCA is enacted.

Interest of B&W Canada

As we stated in our November 9, 2007 submission to the House of Commons Standing Committee on Natural Resources on the NLCA (then Bill C-5), B&W Canada has a keen interest in seeing Canada's nuclear liability regime conform to international standards. B&W Canada has been on the forefront of the North American nuclear steam generator market for more than 40 years as a supplier of over 200 CANDU and PWR steam generators worldwide, as well as other major plant components. B&W Canada has manufacturing facilities in Cambridge, Ontario and Melville, Saskatchewan and employs approximately 1000 people.

Importance of CSC

We view Canadian ratification of the CSC as an urgent priority, and therefore concentrate our comments on the *Consultation Paper's* request (at page 4) for views on the consideration of

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Director, Uranium and Radioactive Waste Division
Natural Resources Canada

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Canadian membership in a nuclear civil liability international convention to address trans-boundary and transportation issues.

The CSC is an important International Atomic Energy Agency (IAEA)-sponsored initiative that would commit the international community to common standards for handling nuclear facility accident claims. It was adopted by the IAEA in 1997 after five years of negotiations in which Canada was an active participant. The IAEA's September 2011 *Action Plan on Nuclear Safety*, GOV/2011/59-GC(55)/14 at page 4, called on the Agency's Member States to work towards establishing a global nuclear liability regime that addresses the concerns of all States that might be affected by a nuclear accident with a view to providing appropriate compensation for nuclear damage. Member States were urged to give due consideration to the possibility of joining the international nuclear liability instruments as a step to achieving such a global regime. This can be accomplished only by the CSC, since it is the only nuclear liability treaty the United States is eligible to join. The CSC thus is the only vehicle for creating a truly *global* nuclear liability regime.

Prompt CSC ratification by Canada is important for a number of reasons:

First, addressing nuclear liability issues should be a key component of Canadian policy on nuclear power and nonproliferation, including the role of the IAEA.

Second, nuclear trade serves important Canadian national interests: Where Canada is the exporter of nuclear products, the requirements of Canadian law give Canada some control over the recipient country's use of Canadian source technology and equipment, a control that does not exist when nuclear products are purchased from other countries. Also, Canadian nuclear exports inevitably improve safety conditions in other countries. The Canadian nuclear industry would benefit from the CSC by reducing the risk that exports might embroil them in unanticipated and financially unacceptable liabilities, while the public would benefit from strengthened financial protection of victims in the event of an international nuclear accident.

Third, Canadian nuclear exports contribute to our balance of trade and create jobs in Canada.

Fourth, Canadian nuclear exports help preserve the Canadian nuclear infrastructure: Much is being written about the potential for a renaissance to deploy advanced nuclear technologies in Canada and elsewhere. New nuclear materials, equipment and services sold to other countries would be repatriated for use in Canada, with a substantial portion of the "first-of-a-kind engineering" and development costs already absorbed by the world market. Critical engineering jobs could be absorbed in the manufacturing and service sectors as first-of-a-kind engineering for new plant development is completed to perpetuate the continued cycle for improved manufactured products and services.

Fifth, the CSC is important to attracting U.S. contractors for power reactor life extension and new build projects. A number of U.S. contractors presently will not do nuclear work in Canada, because of concerns about being sued in U.S. courts for a nuclear accident in Canada (as happened following the 1984 chemical plant accident in Bhopal, India). The CSC would establish treaty relations with the United States to solve this issue. This in turn would increase competition for nuclear work in Canada, which should have the effect of reducing power plant operators' costs.

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Director, Uranium and Radioactive Waste Division
Natural Resources Canada

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Sixth, as noted in the *Consultation Paper* (at page 8), because of our geographic proximity to the United States, it would be advantageous that Canada and the United States subscribe to the same international nuclear civil liability convention in order to address trans-boundary and transportation between the two countries.

Seventh, the CSC already has been ratified by Argentina and Romania, which are two countries where B&W Canada and other Canadian nuclear suppliers have done significant amounts of work. It was also ratified by the United States in 2008 following unanimous consent to such by the U.S. Senate.

Comparison of NLCA and CSC

Like the NLA, the NLCA generally incorporates the basic principles of the CSC Annex (and other international nuclear liability conventions), including legal channeling of liability exclusively to the nuclear installation licensee, a liability limit, absolute liability, time limits on claims, a single competent tribunal, and mandatory financial security. B&W Canada agrees with the statement in the *Consultation Paper* (at page 10) that "...the simplest method to join the CSC would be for Canada to make its national nuclear civil liability law comply with the provisions of the CSC Annex." As of now, as outlined in the attachment B&W Canada prepared in consultation with other stakeholders, a few provisions of the NLCA are not fully consistent with the CSC Annex. The *Consultation Paper* (at page 10) lists three such items. However, there are a few additional technical changes that should be made before the bill's reintroduction. It would be preferable for the NLCA be revised to be as consistent as possible with the CSC Annex, rather than for Canada to make any reservation(s) when ratifying the CSC.

Additionally, it would be beneficial if the NLCA also included a provision indicating that a purpose of the NLCA is to fulfill Canada's commitments under the CSC Annex. As noted in the *Consultation Paper* (at page 11), "...this could be helpful in ensuring that, in case of doubt, a court would interpret the NLCA in a manner consistent with the CSC..." It is proposed the NLCA should include a provision such as the following: "This Act should be interpreted to implement and be consistent with the provisions of the Convention on Supplementary Compensation for Nuclear Damage when that treaty enters into force for Canada."

The key change in the current Canadian law (NLCA, Section 21(1)) to bring it more in line with current international nuclear liability standards would be to increase the operator's liability limit from \$75 million to \$650 million (about 422.5 million Special Drawing Rights (SDRs)¹). This would be in excess of the 300 million SDR minimum under the CSC and the 1997 Vienna Convention on Civil Liability for Nuclear Damage. B&W Canada notes that, if the new limit is phased in over some period of time, the limit should be at least 300 million SDRs (about \$461 million) at the time the CSC enters into force for Canada.

¹ 1 SDR = \$1.55194, as of May, 17, 2012.

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Funding Canada's CSC Contingent Contribution

The CSC does not require that Canada identify in advance the source of its contribution to the CSC international supplementary fund. This is a contingent liability that may never be needed. The international fund would not even be called upon until the minimum national compensation amount (300 million SDRs) in the accident country had been exceeded. Because funds may never be needed, Parliament does not need to attempt to establish a funding mechanism in advance of an accident that may never happen or before it is better known how many other countries will participate in the supplementary fund. As originally conceived, the obligations of Member States to support the fund are intended to be sovereign obligations, namely Member States recognizing the importance of supporting the global utilization of peaceful nuclear energy and the national interests of States to join together to provide aid to another Member State in the unlikely event that a nuclear accident occurs. The CSC contribution mechanism is a kind of foreign disaster assistance, and not some kind of mutual insurance scheme. It is modeled on the Brussels Supplementary Convention whereby twelve Western European governments provide an additional tier of nuclear liability coverage for each other.

In any case, it would not be appropriate to assess "nuclear suppliers," as *Consultation Paper* (at page 11) suggests is an option for Canada. As the United States has found, it would be extremely difficult to allocate Canada's contingent cost among "nuclear suppliers." While there currently is little or no data now available for guidance on risk and no clear way to identify entities that have or are furnishing goods and services to foreign nuclear installations, as many as 300 to 1,800 types of goods and services go into constructing and operating a nuclear power plant. To be equitable, any requirement for suppliers would have to capture all companies that may have supplied goods and services to foreign installations, with an appropriate "look back" period. Given the critical difficulties presented by the lack of data on the extent of and risk associated with the export of nuclear goods and services from the United States, the U.S. Department of Energy has not yet been able to offer a specific CSC cost allocation formula for U.S. suppliers, as the U.S. Congress said it should do by rulemaking not later than December 19, 2010. Suppliers may not have had any involvement with the foreign plant that had an accident, and do not benefit from the operation of plants. Thus, if Parliament wants to identify in advance how Canada's contingent CSC liability would be funded, it should allocate it among nuclear operators, which would themselves benefit from the CSC international fund in the event of an accident in Canada. In fact, depending upon the number of CSC Member States, Canadian operators would have the benefit of at least about 59 million SDRs (\$91 million), while the total share for a foreign accident for all Canadian operators would be about 14 million SDRs (\$22 million).

Conclusions

In summary, Parliament promptly should adopt NLCA; and, at the same time, Canada should ratify the CSC, which is an important IAEA-sponsored initiative that would commit the international community to common standards for handling nuclear facility accident claims. It is a multilateral treaty that will enhance important Canadian policies in regard to nuclear commerce.

Mr. David McCauley
Director, Uranium and Radioactive Waste Division
Natural Resources Canada

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Thank you again for the opportunity to make this submission on NRCan's *Consultation Paper on the Modernization of Canada's Nuclear Liability Regime*.

If you have any questions, please contact me.

Very truly yours,
BABCOCK & WILCOX CANADA LTD.



Michael D. Lees
President

cc. Mr. Jacques Hénault
Advisor, Nuclear Liability

Attachment

Attachment
**Comparison of
 Nuclear Liability and Compensation Act, Bill C-15, 40th Parliament, 3d Session
 And
 Convention on Supplementary Compensation for Nuclear Damage**

To join the Convention on Supplementary Compensation for Nuclear Damage (CSC), a State that is not a Party to the Paris or Vienna Convention must declare that its national nuclear liability law complies with the Annex to the CSC, and provide the International Atomic Energy Agency (IAEA) with a copy of that national law. CSC, Articles XIX.1 and -3.

Like the 1970 Nuclear Liability Act, the Nuclear Liability and Compensation Act (NLCA or Bill C-15) generally incorporates the basic principles of the CSC Annex (and other international nuclear liability conventions), including legal channeling of liability exclusively to the nuclear installation licensee, a liability limit, absolute liability, time limits on claims, a single competent tribunal, and mandatory financial security. The *Consultation Paper on the Modernization of Canada's Nuclear Liability Regime* at page 10 notes that, for Canada to join the CSC, three items on court jurisdiction (Items 4 and 9, *infra*), the limitation period for stolen or lost nuclear material (Item 10, *infra*), and liability during transport must be added to the existing version of the NLCA (Item 3, *infra*). However, there are other provisions of Bill C-15 described *infra* that are not fully consistent with the CSC Annex. All of these should be modified to enable Canada to join the CSC as an Annex State.

Additionally, it would be beneficial if the NLCA also included a provision indicating that a purpose of the NLCA is to fulfill Canada's commitments under the CSC Annex. As noted in the *Consultation Paper* (at page 11), "...this could be helpful in ensuring that, in case of doubt, a court would interpret the NLCA in a manner consistent with the CSC..." It is proposed the NLCA should include a provision such as the following: "This Act should be interpreted to implement and be consistent with the provisions of the Convention on Supplementary Compensation for Nuclear Damage when that treaty enters into force for Canada."

The following is a comparison of key provisions of Bill C-15 *vis-à-vis* the CSC Annex:

1. The definition of "nuclear material" in Section 2 of Bill C-15, which includes only nuclear fuel or radioactive material mixed with nuclear fuel, is not as broad as that in CSC Annex, Article 1.1(c). The CSC definition also would cover some damages arising from radioactive waste materials.
2. Section 4(1) of Bill C-15 provides that the Act does not apply to an incident that results from "an *act of war* [emphasis added], hostilities, civil war or insurrection, *other than* [emphasis added] terrorist activity as defined in subsection 83.01(1) of the *Criminal Code*." This may not be fully consistent with CSC Annex, Article 3.5(a). First, the CSC Annex exoneration provision states that it applies to an incident "directly due" to the enumerated acts. While the Bill refers to "an act of war," CSC Annex, Article 3.5(a), uses the presumably broader term "an act of armed conflict." More problematic could be the Bill's reference to the definition of "terrorist activity" in the Canadian *Criminal Code*. While that definition is broad, it may not be all inclusive, *e.g.*

the Canadian operator might not be liable for some type of terrorist activity that the CSC would make an operator liable for.

3. The transport provisions of Section 8(1) of Bill C-15 are not as comprehensive as those of CSC Annex, Article 3. The Bill makes an operator liable only for nuclear material being transported from the operator's nuclear installation until it is placed in a facility licensed under the Nuclear Safety and Control Act (Bill C-15, Section 8(1)(b)) and for nuclear material in the process of being transported to the operator's installation from *outside* Canada (Bill C-15, Section 8(1)(c)), provided damage is caused on Canadian territory, including its EEZ. CSC Annex, Articles 3.1(b) and -(c) provide that the operator shall be liable for transport in more circumstances, *i.e.* the CSC Annex extends liability for damage suffered in at least any CSC Contracting State and its EEZ in relation to incidents caused during transport, unless the sending or receiving operator has provided otherwise by written contract. Furthermore, in case of transport to or from operators of nuclear installations in non-Contracting States, liability for damage will lie with the sending or receiving operator of a Contracting State, which cannot be set aside by contract.

4. Sections 8(3) and 64 of Bill C-15 (like the 1970 Nuclear Liability Act) provide the operator can be liable for transboundary damage as a result of an accident at an installation in Canada on the basis of reciprocity (*e.g.*, with the United States). Bill C-15 thus addresses only damage occurring in Canadian territory, including the EEZ. It does not cover damage occurring outside such territory, except on the basis of reciprocity. Under the CSC, geographical scope is not extended to damage wherever suffered, but covers damage suffered in all CSC States,¹ including their maritime zones, regardless of where the incident occurs.²

5. Sections 13 *et seq.* of Bill C-15 providing for what damages are compensable under the Act may not be as broad as the definition of "nuclear damage" under Article I(f) of the CSC.³

¹ The CSC provides that the supplementary international funds apply to nuclear damage suffered in the territory of CSC Contracting Parties, in or above their maritime areas beyond the territorial sea by a national of a Contracting Party or on board of ship, aircraft or artificial structure under its jurisdiction; or in or above its EEZ or continental shelf in connection with the exploitation or the exploration of the natural resources. CSC, Article V.1. The CSC Annex has no specific requirement on transboundary damage for the first tier (national compensation amount); it only covers it in the second tier CSC funds (international compensation fund).

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³ The definition of "nuclear damage" is explicitly extended under the 1997 IAEA Conventions to include: (a) economic loss resulting from personal injury or property damage, (b) costs of measures of reinstatement of impaired environment if actually taken or to be taken (unless such impairment is insignificant), (c) certain loss of income resulting from an economic interest in any use or enjoyment of the environment resulting from a significant impairment of the environment, (d) costs of preventive measures and further loss or damage caused by such measures, and (e) any other economic loss. However, the extent of recovery for such damage is again to be determined by the law of the competent court. CSC, Articles I(f-h) and -(l); and 1997 Vienna Convention, Articles 2(2) and -(4).

6. Section 13 of Bill C-15 refers to "bodily injury," while the definition of "nuclear damage" in CSC, Article I(f)(i) includes "loss of life or *personal* [emphasis added] injury." The term "personal injury" generally is considered to be broader than "bodily injury," because it includes such injury as nonphysical, psychological injury. Section 14 of Bill C-15 separately includes as compensable damage certain "psychological trauma," *if* it results from bodily injury or damage to property of that person that was caused by a nuclear incident or preventive measures referred to in Section 18 that were taken by that person. Coverage for psychological trauma under the Bill thus appears to require some bodily injury or damage to property. The result of these provisions in Bill C-15 may be almost the same, but the difference in the language between the Bill and the CSC leaves some room for doubt. It would be more simple if Bill C-15 referred to "personal injury."

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10. Unlike the CSC Annex, Bill C-15 does not specifically address compensation time limits for stolen or lost nuclear material. CSC Annex, Article 9.2 provides:

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However, this already may be covered by the "absolute limit" of 10 years as fixed in Section 30(2)(b) of the Bill.

May 2012

