

Justice, Business, and the Ethics of Innovation in Canadian Nuclear Waste Management

Genevieve Fuji Johnson

Ph.D. Candidate, Department of Political Science, University of Toronto,

can be contacted at: genevieve.johnson@utoronto.ca.

Justice, Business, and the Ethics of Innovation in Canadian Nuclear Waste Management

Genevieve Fuji Johnson¹

Introduction: The Values of Justice and of Business in Nuclear Waste Management

There is a growing imperative to investigate the values underlying many contemporary public policies and the innovative service delivery models to which they give rise. More and more, governments are implementing policy to regulate aspects of science, technology, and the environment that will affect the well-being of generations to come. Often, policy decisions are based on the scientific knowledge provided by the elites of these fields and the interests of representatives of associated industries. Such decisions are made sometimes to the exclusion of a broader set of considerations. Moreover, the institutions established by such policy to manage public goods and deliver public services increasingly challenge existing means of public oversight. This raises a number of ethical issues, which can be understood and addressed in terms of distributive justice. The functions of government should be directed at achieving distributive justice, even where those functions involve the devolving of responsibilities, the creating of new entities, or the forging of public/private partnerships. The management of public goods and the delivery of public services, no matter how innovative, ought to be based on a priority of the values of distributive justice. Innovation, in this context, ought to be understood in terms of both efficiency and justice— with justice taking priority over efficiency.

Values of distributive justice can be understood to include those of accountability and transparency. These are instrumental values in that they are means to ensuring that rights to the primary social, economic, and environmental goods are upheld or, at least, not violated. For John Rawls, primary social goods are those basic rights and liberties that provide the individual with the requirements for political autonomy (Rawls, 1972). These goods, which have a use, “whatever a person’s rational plan of life,” include rights and liberties, powers and opportunities, income and wealth, and, ultimately, the basis of self-respect (Rawls, 1972: 62). Others have extended the category of primary social goods to include basic environmental goods. Thus, Brian Barry bases, in part, his argument for distributive justice across time on the vital necessities of human life including “adequate nutrition, clean drinking-water, clothing and housing, health care and education, [and] the possibility of living in a world in which nature is not utterly subordinated to the pursuit of consumer satisfaction” (Barry, 1999: 105). David Miller, arguing that theories of justice among contemporaries have largely ignored environmental issues, seeks to integrate environmental values into the theory of social justice as it applies for both existing and future peoples (Miller, 1999: 151-172). According to Miller, environmental goods, are to be understood in as “wide and loose a sense as possible to include any aspect of the environment to which a positive value may be attached,

¹ Ph.D. Candidate, Department of Political Science, University of Toronto,
genevieve.johnson@utoronto.ca .

whether a natural feature, a species of animal, a habitat, an ecosystem, or whatever” (Miller, 1999: 152). He argues that we should incorporate environmental goods into the distributive calculus for the “creation of environmental goods and bads may disturb the fair assignment of resources or other primary goods, as when the pollution you generate lowers the value of my land...” (Miller, 1999: 159).

For Rawls and others working within the distributive paradigm, primary social goods are distributed by the basic institutions of society. Principles of justice entrenched in our institutions are designed to reduce conflict around these social goods and to achieve, at a minimum, political stability. Ideally, such principles assign rights and duties in a way that enables individuals in any situation, present or future, to apprehend clearly and either to exercise or fulfill their respective entitlements and requirements. By clearly laying out the basis for either the fair, impartial, or equitable distribution of rights and obligations, a theory of justice seeks to provide stable access to the social goods needed for individuals to advance on their chosen life paths. For Rawls, a conception of justice should provide the means toward not only a just society for today, but also for tomorrow (Rawls, 1972: 284-293). The transparency and accountability of the institutions delivering our public services enable us to see if principles of justice are being upheld in the activities of government.

The basic ethical assumption of this paper is that public sector innovations based on the values of business ought to be coupled with legislative assurances that principles of distributive justice will be upheld. Where the responsibility for the management of a public good or the delivery of a public service is assigned to a private entity, it should be required by law that the entity is subject to public oversight and is publicly accountable. Where an entity is charged by government with such responsibilities, it should have institutionalized means of ensuring that the public is able to see how it is fulfilling its responsibilities and to hold that entity accountable for its actions. The management of a public good or the delivery of a public service will affect potentially the interests of members of the public. It could have consequences of distributive justice for both existing and future people. Given these implications, assurances of institutional transparency and public accountability ought to be entrenched in law.

In this paper, I examine the normative foundations of Canada’s used nuclear fuel management policy,¹ with specific reference to the waste management organization (WMO) that will be charged with the responsibility for policy implementation. This case exemplifies the ethical imperative to look at the normative basis of public policy that establishes innovative service delivery organizations designed to increase the economy and efficiency of government. Indeed, Canada’s policy on high-level radioactive waste management is typical of recent efforts aimed at streamlining the operations of government in that it embodies a tension between what are sometimes competing sets of values— i.e., those of business and those of justice. The division of responsibilities between the government and the WMO articulated in this policy can be conceptualized as representative of the “policy-operations” divide that characterizes many New Public Management reforms. This divide is designed, in part, to cut the costs of service delivery. To be sure, this is a positive aim. However, a consequence of this divide is that it raises difficult questions about the transparency and accountability of the alternative service delivery model. It serves in establishing a private, industry-based, corporation that will be charged with the

responsibility for providing the public service of managing used nuclear fuels,²ⁱⁱ but that will operate beyond the spectrum of established means of public oversight.

Drawing from numerous materials, including interviews with selected stakeholders, submissions to Natural Resources Canada (NRCan), and transcripts of parliamentary committee hearings on Bill C-27, which became the Nuclear Fuel Act in June 2002, I identify an ethically dubious relationship between the values of business— i.e., economy and efficiency— and the values of distributive justice. I trace numerous concerns raised regarding the transparency and accountability of the WMO. While forceful responses to these concerns are voiced, they do not speak to the imperative that, where a public service is delivered, the entity delivering the service ought to be required in specific legislative terms to be open and accountable to the public. The priority of business values underlying this policy is difficult to defend from an ethical perspective.

Canadian Nuclear Waste Management Policy, New Public Management, and the Values of Business

The Nuclear Fuel Waste Act is the culmination of many years of scientific research and development, public environmental assessment hearings, and political negotiations among government and nuclear industry representatives. In 1977, the Federal Department of Energy, Mines, and Resources released a report entitled “The Management of Canada’s Nuclear Wastes” (Aikin, et al., 1977). This report was intended as a contribution to the development of high-level radioactive waste management policy, “and in particular, as a means of ensuring the input of advice and opinion from the private sector and the general public” (Aikin, 1977: 1). Its mandate was to describe alternative disposal options for these wastes, to examine public concerns regarding waste management, and to recommend the appropriate option to be pursued by Canada. Having surveyed various disposal options, including disposal in ice sheets, outer space, ocean plains, and geological formations, the report concluded that deep geological disposal was the most promising for detailed investigation (Aikin, 1977: 6). The following year, the governments of Canada and Ontario formally accepted the report’s recommendations, and directed AECL and Ontario Hydro to develop a concept for deep geological disposal.

After more than 10 years of research and development, AECL’s concept of deep geological disposal was put to a public environmental assessment. In October of 1989, the federal Minister of Environment appointed an independent environmental assessment panel, that would be chaired by Blair Seaborn, to conduct a public review of the concept. The mandate of the panel was to conduct a public review of AECL’s concept in order to make recommendations “to assist the governments of Canada and Ontario in reaching decisions on the acceptability of the disposal concept and on the steps that must be taken to ensure the safe long-term management of nuclear fuel wastes in Canada” (CEAA, 1998: 84). The Panel held public scoping meetings to develop guidelines for AECL’s environmental impact statement (EIS) in the autumn of 1990 in the provinces of Ontario, New Brunswick, Quebec, Saskatchewan, and Manitoba— that is, in the provinces that have constituents with interests in some aspect of the nuclear fuel cycle (e.g., uranium mining, uranium processing, fuel fabrication, or the nuclear generation of energy). The Panel finalized the guidelines and issued them to AECL in March of 1992. In October 1994, AECL submitted its EIS (AECL, 1994), along with nine primary reference documents, to the Seaborn Panel. The public hearings themselves took place in 1996/97.

During these hearings, the Minister of Natural Resources Canada received and acted upon cabinet authority to develop a framework for all forthcoming policy on radioactive waste management. NRCan thus launched its own consultations with a group of selected stakeholders. In 1995, NRCan released a discussion paper on the development of a federal policy framework for the disposal of radioactive wastes in Canada to what it identified as the major stakeholders. These were representatives of governmental departments and agencies in the five provinces that have interests in aspects of the nuclear fuel cycle, the three nuclear utilities, uranium mining companies, nuclear fuel processing and fabrication companies, and nuclear interest groups. Of the 77 stakeholders consulted, the vast majority were representatives of government agencies and departments, 20 were representatives of the nuclear industry, and two were academics.³ⁱⁱⁱ These consultations would provide the foundations for the Policy Framework for Radioactive Waste Management of July 1996. The Framework's basic financial and institutional principles would heavily inform future nuclear fuel waste management policy, including the Government Response to the Seaborn Panel Report of 1998 and the Nuclear Fuel Waste Act.

The Policy Framework's three basic principles are typical of the New Public Management genre. They are based on the assumption that the most effective way to secure economy, efficiency, and service quality in public sector management is to ensure that those primarily involved in the operational tasks of government are assigned explicit responsibilities and granted the necessary authority to fulfil these responsibilities. The Framework establishes the overarching policy objective of ensuring that radioactive waste disposal is carried out in a safe, environmentally sound, comprehensive, cost-effective and integrated manner (NRCan, 1998a). It then goes on to outline the division of responsibilities between the government and the waste producers and owners. It holds that the federal government has the responsibility to develop policy, to regulate, and to oversee the activities of waste producers and owners, while the waste producers and owners are responsible for the funding, organization, management, and operation of a waste facility. Put more simply, the federal government is responsible for policy, while the waste producers and owners are responsible for operations.

What the Framework effectively accomplishes is a balance between demonstrating federal leadership in a socially and politically sensitive policy area, and minimizing its direct financial responsibility for the management of a long-term solution to nuclear waste. The Framework sets federal policy objectives, while holding the producers and owners directly responsible for the management of their nuclear waste and, by extension, associated financial liabilities. The articulation of policy objectives enables the government to assert a leadership role in the area of nuclear fuel waste management. Without such an articulation, the government would be limited in its role to the regulation by the Canadian Nuclear Safety Commission (CNSC) of the health and safety aspects of the future WMO's activities. This regulation, moreover, would be effective only after the WMO became a licensee of the CNSC, i.e., only after it had conducted a study of options for waste management, chosen an option, set forth an implementing time frame, and received a license with which to implement its chosen option. In other words, with no policy objectives set by the federal government, it would be "out of the loop," so to speak, on important policy decisions. Indeed, the WMO would be left to make important policy decisions about the preferred option for used nuclear fuels and about the timing of the implementation of this option.

Beyond providing for this leadership role, however, the Framework limits the direct responsibilities of the federal government for nuclear fuel waste management. While entrenching its responsibilities for the development of policy, the regulation of health and safety, and the oversight of a waste management entity, it also ensures that the government will not be directly responsible for any combination of siting, designing, constructing, and operating Canada's facilities for nuclear fuel wastes. The division of responsibilities implies that waste producers and owners will be responsible for these tasks. This division thus serves to minimize the risk of the federal government having to assume financial liability for any mishap in the management of these wastes (interview 050, 2001). According to the results of consultations with major stakeholders on the development of the Policy Framework, there was consensus that federal liabilities could "only be minimized by ensuring that a comprehensive disposal policy framework is established within which the roles and responsibilities of producers and owners are clearly stated" (NRCan, 1995: 7). As one representative of a waste-producing and waste-owning corporation put it, the analogy is letting a contract to a construction firm (interview 043, 2001). If one provides the firm not with the detailed specifications of the building under contract, but with basic requirements that it must meet, one will not be held responsible for any faults in the building's specific design. If the firm designs it, and its designs are faulty, then it bears the financial responsibility for these faults. Establishing a division of responsibilities between the federal government and the waste producers and waste owners, and granting the latter the responsibility for implementing options, the Policy Framework serves in establishing a relationship in which the federal government has reduced risks of being held financially responsible for liabilities that may be incurred in the management of used nuclear fuels.

Similarly, the financial responsibilities outlined in the Policy Framework provide additional assurance that the waste producers and owners do not by default transfer their liabilities to the federal government. The CNSC's regulatory authority to require a fund to finance fully all operations of the WMO is effective, again, only after the WMO receives a licence. Thus, were it not for the financial responsibilities outlined in the Policy Framework, the WMO, prior to becoming a CNSC licensee, would be under no obligation to set aside money for future waste management activities. The Framework clearly establishes the responsibility of the waste producers and owners to fund waste management and/or disposal activities, in accordance with the "polluter pays" principle (NRCan, 1996). As Peter Brown of NRCan states, "From a policy point of view, we feel that we want to make sure that those monies are indeed put away appropriately so that when disposal occurs...there are indeed funds available to do's." (Brown, 1996). He goes on: "What we are trying to avoid is the tax-payer having to pick up the tab because somebody goes bankrupt and all of a sudden there is a waste problem" (Brown, 1996). Thus, in two ways— i.e., first, by ensuring that the government is not responsible for the organization, management, and operation of disposal facilities and, second, by ensuring that the government is not responsible for funding these facilities— the Policy Framework serves in minimizing financial liabilities defaulting to the federal government.

The division of responsibilities may also be an effort to provide for the most cost-efficient way of managing high-level wastes, delegating management responsibility to a private, industry-formed and funded, organization. With efficiency in mind, certain stakeholders point to international experiences with institutional and financial arrangements for waste management. They point, for example, to the mismanagement by the Federal Department of Environment (DOE) of

funds for waste management and decommissioning in the U.S. The U.S. Nuclear Waste Policy Act of 1982 deems the DOE the department responsible for the management of radioactive waste, from national weapons-production facilities and from U.S. commercial facilities, using funds from general revenues. Certain stakeholders see these institutional arrangements as inefficient. As one employee of a Canadian nuclear utility put it, for examples of inefficiency, “you don’t have to look very far. Just south of the border, you’ve got a government agency who is spending massive amounts of money [on waste management]” (interview 054, 2001). According to Colin Hunt, the director of policy for the Canadian Nuclear Association, the basic problem in the U.S. is that “the people paying for waste disposal are not the ones charged with doing it” (interview 046, 2001). As per the consultations with selected stakeholders on the development of the Policy Framework, most held that there are “existing private sector organizations with the knowledge and experience that could provide the services to the federal government, and there was little support for the suggestion that the federal government be involved in organizing and managing disposal facilities” (NRCan, 1995: 5). It is thus arguable that the division of responsibility in the Policy Framework is based, in part, on the belief that “the waste owners have a vested interest in [managing their wastes] efficiently” (interview 054, 2001).

The assumptions of New Public Management carry from the Policy Framework into ensuing policy statements on high-level radioactive waste management and disposal. Echoing the Framework, the Government Response to the Seaborn Panel holds that the federal government’s objective is to “ensure that the preferred approach for the long-term management, including disposal, of nuclear fuel waste is carried out in a comprehensive, cost-effective and integrated manner” (NRCan, 1998c: 5). In addition, it lays out expectations that the future WMO will “report to the Government of Canada setting out its preferred approach for the long-term management, including disposal, of nuclear fuel waste, with justification” (NRCan, 1998c: 5). Other expectations articulated in the Government Response bear upon the WMO’s implementation of the chosen waste management option. Also echoing the Framework, the Nuclear Fuel Waste Act states that its purpose “is to provide a framework to enable the Governor in Council to make, from the proposals of the waste management organization, a decision on the management of nuclear fuel waste that is based on a comprehensive, integrated and economically sound approach for Canada.” It then outlines these policy objectives in more specific terms with reference to the financing of the WMO and its activities, the study by the WMO of waste management options to be proposed to government, and the reporting of the WMO on its study’s findings, and on its finances and operations in the long-term management of the chosen option. If the future WMO fails to fulfill these objectives, it stands to be punished. The Act then lays out the details of the offences and punishment for falling short of these policy objectives.

With reference to the division of responsibilities in the Framework, the Government Response holds that the future WMO will be formed not as an agent of the Crown, nor at arm’s length from the nuclear utilities (NRCan, 1998c: 7), as recommended by the Seaborn Panel (CEAA, 1998: 66-68). It will instead be formed by the utilities, as a private entity, likely under general corporations law. And, as per the Act, “the waste management organization is not an agent of Her Majesty in right of Canada.” Instead, the Act states, it will be established by the nuclear energy corporations. The Government Response to the Seaborn Panel also holds that the waste management organization will be responsible for the appointing of its Board of Directors and its

Advisory Council, which is contrary to what was recommended by the Panel. Not surprisingly, the Act is silent on the Board, and puts forth only minimal requirements for the WMO's Advisory Council. With reference to financial responsibilities, furthermore, detailed requirements are put forth in the Act. For example, it states that the nuclear energy corporations and AECL will deposit specific amounts in the waste management fund "no later than 10 days after the day on which this Act comes into force." The Act then goes on to specify the yearly financial contributions required of the nuclear energy corporations. Thus, echoing the Policy Framework, the Government Response and the Nuclear Fuel Waste Act are based on assumptions specific to New Public Management.

In addition to the policy-operations divide, the policy statements are characterized by a further quality common among reforms aimed at increasing the economy and efficiency of service delivery and the management of public goods. The quality is flexibility. Indeed, these policy statements provide the WMO with flexibility in terms of how their objectives are to be met. As Grand Chief Matthew Coon Come of the Assembly of First Nations (AFN) remarks "comprehensive, integrated, and economically sound,' can be interpreted in many ways" (Coon Come, 2001). He goes on: "The phrase is sufficiently broad and general to mean all things to all people, depending on the perspective one brings to the issue" (Coon Come, 2001). First nations, for example, might understand comprehensive and integrated to refer to the impact on "societies, cultures, and human health, the potential disruption of animal habitat" such that an approach to waste management is "holistic, environmentally sound, and sustainable" (Coon Come, 2001). Senior management officials of the future WMO might not interpret these objectives in this holistic way, and might thus put forth different waste management and disposal options.

Beyond providing flexibility to the future WMO in terms of interpreting policy objectives, the Act provides flexibility with respect to many of the waste management organization's responsibilities. The Act, while heavily prescriptive on issues relating to the finances of the future WMO, provides for few prescriptions regarding how the study of waste management and disposal options is to be conducted. It does specify that each proposed approach to either waste management or disposal "must include a comparison of the benefits, risks and costs of that approach with those of the other approaches, taking into account the economic region in which that approach would be implemented, as well as ethical, social and economic considerations associated with that approach." But, it does not specify either the technical or the social and ethical requirements to be met by these approaches. Establishing the technical comparison criteria, formulating a social and ethical framework, and designing a public consultation plan, for example, are left to the future WMO. As stated in a secret memorandum to the cabinet from the Minister of Natural Resources, leaked to the press in late-1998, the more detailed and prescriptive the legislation, the higher the risk of federal financial liabilities (NRCan, 1998b). Again, in line with assumptions associated with New Public Management, the current policy on used nuclear fuel waste establishes broad policy objectives, but is flexible on ways to meet these objectives.

Stakeholder Concerns, Distributive Justice, and the Values of Transparency and Accountability

What is established by the Policy Framework, the Response to the Seaborn Panel, and the Nuclear Fuel Waste Act is an innovative entity that is charged with the responsibility of delivering a public service— i.e., delivering a safe and acceptable option for the long-term management of irradiated fuel— but that is a private company. It will be a private, noncommercial, corporation that is formed, funded, and staffed by the nuclear utilities, established to interpret and meet broad policy objectives set by the federal government. While innovative, this model is potentially ethically problematic. The priority of the values of economy and efficiency, upon which it is based, serve to push the operations of a used nuclear fuel facility and the delivery of management services beyond the realms of government. This raises somewhat novel questions about the institutional transparency and public accountability of the future entity. According to a range of stakeholders in Canadian nuclear waste management, the problem with the current institutional arrangements for the WMO is that it is not legislatively required to submit to adequate means of public oversight, nor is it directly accountable to a minister or Parliament.

The activities of the WMO will have implications that could run counter to the just distribution of rights to basic primary goods. As an implementing organization, the WMO will play a role in distributing benefits and burdens associated with nuclear energy and its irradiated fuel. It is possible that the WMO could implement policy in a way that effectively unjustly burdens certain people, extant or not yet extant. For example, the basic concern of mayors of communities currently hosting nuclear facilities is that the socio-economic well-being of host communities could be affected unjustly by waste management decisions made without their involvement (interview 061, 2002; interview 062, 2002; and interview 063, 2002). Hosting a nuclear facility involves the costs of developing and having in place an emergency plan, and maintaining a well-trained emergency response team and emergency measures office. It also involves costs associated with the devaluation of property and the subsequent decrease in revenues from property taxes. Although the nuclear energy corporations have compensated and continue to compensate them, host municipalities are at “a socio-economic and financial disadvantage” (Arthurs, 2001). If the WMO decides to recommend to the federal government continued on-site storage of high-level radioactive waste, depending on how this decision is made, it could serve effectively unjustly to saddle the host municipalities with additional burdens. It is indeed likely that the government will accept the recommendations of the waste management organization. As Wayne Arthurs, Mayor of Pickering, Ontario, states:

For as long as 40 years, the municipalities [of Clarington and Kincardine, and the City of Pickering] have served as so-called interim storage sites. With the legislation currently before us, there’s every likelihood we would continue to serve as stop-gap storage sites for decades more. In effect, we would become the *de facto* permanent storage sites for nuclear waste without adequate scrutiny, consideration, or preparation for what that means in the longer term (Arthurs, 2001).

While the Act provides for policy oversight, i.e., oversight to ensure that the WMO meets broad policy objectives, and while the CNSC will provide regulatory oversight on health and safety requirements once the WMO is a licensee of the Commission, this policy provides for little direct public oversight to provide additional assurance that the activities of the WMO do not run counter

to principles of distributive justice. Indeed, stakeholders express the concern that the WMO is not sufficiently transparent, nor clearly accountable to the Canadian public. Again, these facets of public oversight will not necessarily ensure that the formation and implementation of policy will be just; but, they would provide us with the means of seeing if such processes are just.

The major concerns expressed during parliamentary committee hearings on the Nuclear Fuel Waste Act, which was then Bill C-27, by the Assembly of First Nations (AFN), the Sierra Club of Canada, the Association of Nuclear Host Communities (ANHC), and federal opposition MPs bear upon the lack of transparency and accountability of the WMO. Some argued that these lapses could have been addressed by establishing the waste management entity as an agent of the Crown instead of as a private company formed by the nuclear energy corporations. Participants in the public consultations on the federal oversight options for the WMO, which took place in February 1999, argued that oversight objectives would be most effectively met if the government were to establish a Canadian Waste Management Agency as a federal Crown corporation (NRCan, 10 February 1999). The general sentiment was that the “Crown Corporation would be responsible for managing nuclear fuel waste activities in an independent and impartial manner, would provide a vehicle for the management of other radioactive wastes, and would help to preserve and build on the assets that remain from the Canadian Nuclear Fuel Waste Management Program”(NRCan, 10 February 1999). It would be a public body, appointed by the federal government and existing to serve in the public good. It would report either directly to Parliament or indirectly to Parliament through a designated minister. As Grand Chief Coon Come voiced to the Parliamentary Committee reviewing Bill C-27, “we need to have some kind of public body, a public agency...because they’re not representing an industry, they’re not there to maximize the return on investment, they’re not there to represent their shareholders, they’re there to represent the public as a whole” (Coon Come, 2001).

Other stakeholders argued in concert with the recommendations of the Seaborn Panel that the future WMO should be, if not a Crown corporation, then at least, an entity existing at arm’s length from the utilities. The argument here is similar to that in favor of a Crown corporation: An independent agency would better serve the public interest. The nuclear utilities and AECL have a history of secrecy and have historically sought to advance narrowly defined interests, so the argument goes (interview 050, 2001 and interview 056). Indeed, Lois Wilson, who was a member of the Seaborn Panel, stated that “after a decade of hearings it became obvious to us that neither the utilities nor AECL enjoyed public confidence... We felt a higher degree of trust [was] necessary for any agency charged with a management function” (Wilson, 2001). She went on to state that the nuclear energy utilities and AECL “received criticism for a lack of openness and transparency, insensitivity to a wide range of stakeholders, and failure to ensure adequate public participation in the process” (Wilson, 2001). The Seaborn Panel thus recommended that “a fresh start be made in the form of a new agency,” and Wilson argued that Bill C-27 did not do so (Wilson, 2001). Brennain Lloyd of Northwatch, moreover, argued that the industry-based WMO likely established by Bill C-27 “can only be problematic, in terms of...the ability to look more broadly at the issues, and the ability to engender public trust and engagement” (Lloyd, 2001). She stated that the waste management entity “must be an independent agency, and not an industry-only agency” (Lloyd, 2001).

Stakeholders voiced more specific concerns regarding the lack of legislative requirements in Bill C-27 to ensure the institutional transparency and public accountability of the WMO. Thus, concerns were expressed with reference to its discretion in appointing its Board of Directors and its Advisory Council. The Seaborn Panel recommended that these bodies be appointed by the federal government; however, the Policy Framework, the Government Response to the Seaborn Panel, and Bill C-27 make it clear that they are to be appointed by the shareholders, i.e., the nuclear energy corporations. Such concerns were raised at all of the public consultations on options for federal oversight. According to an NRCan document, entitled “Synopsis of Views on Options for Federal Oversight,” participants “felt strongly that the Board of Directors of the waste management organization should be expanded to include the public in order to ensure transparency in decision-making and help to foster public trust” (NRCan, 15 February 1999). “This point,” it states, “was made at all of the other public sessions” (NRCan, 15 February 1999). During the hearings on the bill, moreover, all federal opposition critics articulated similar concerns. They claimed that, without legislative requirements, the nuclear energy corporations would not necessarily appoint a wide range of representatives to sit on these bodies, but would appoint mainly those sympathetic to their interests. David Chatters, MP for the Canadian Alliance, thus noted it would only “seem reasonable, that if the producers of the waste are establishing an advisory council, they would appoint people with the right expertise, but also people who would have some sympathy for the position of the industry” (Chatters, 2001).

Such concerns were also expressed during these hearings by the AFN, the ANHC, Northwatch, and the Sierra Club. For example, in his submission to the Committee, Mayor Arthurs noted that the bill allows the WMO to have a board composed of “representatives exclusively from the nuclear industry” (Arthurs, 2001). He noted that there are no provisions requiring that seats be allocated to third parties such as municipalities presently hosting nuclear waste. Thus, he argued, “...we are directly representative of our constituency, [and] it’s important in the public interest that there be representation at the highest possible level in an organization this complex and with such profound implications for our communities” (Arthurs, 2001). Arthurs went on: “It’s very important for those who are so directly impacted to be able to influence a process and bring their point of view as close to the decision-making as possible” (Arthurs, 2001). As Gerald Keddy, MP for the Progressive Conservative Party, concluded, there are “some general concerns, certainly, on this side of the committee table, as to the municipalities, the regions, and the aboriginal communities— and the bill pays a certain amount of lip service to them— but there’s absolutely nothing in the bill to ensure that they have some input...” (Keddy, 2001). He stated that there is “way too much corporate [and] ministerial power involved in this piece of legislation” (Keddy, 2001).

A response to such claims is that the shareholders of the WMO should have the discretion to make its appointments. As shareholders in a private company, they will have right to do so. The argument is that a private entity is entitled to be self-directing within the limits of the laws regulating the market. Exercising this right makes good business sense, for it ensures the accountability of the WMO to the shareholders who will be financing it. It is also argued that the bill does not preclude a wide representation of interests on both the Board and the Advisory Council (interview 059, 2001). Senior management in the nuclear energy corporations are well aware of the fact that, if the WMO is to be successful in implementing a chosen waste management option, it will have to be just and seen to be just (interview 059, 2001). Wide representation in the future

WMO, they note, would demonstrate this quality. However, these responses do not address the ethical imperative that the management of a public good and the delivery of a public service entails responsibilities to the public, including having a wide representation in the managing entity of affected interests—responsibilities that stand independently of the requirements of business success. These responses leave the appointments to the discretion of the future WMO, which will likely make its decisions according to what will be conducive to its economy and efficiency. The demands of economy and efficiency could run counter to the demands of justice. Indeed, one participant in the public consultations on the oversight role of the federal government argued that a wide representation of interests in the WMO would introduce “politics” into the activities of implementation (NRCan, 9 February 1999). In this view, “anti-nuclear advocacy groups should not be represented since their presence is inherently political and the purpose of the [WMO] will be to implement, not debate... To bring them into implementation would...present an unworkable situation for the implementation group” (NRCan, 9 February 1999).

Concerns about institutional transparency and public accountability extend beyond the appointment of the Board of Directors and the Advisory Council. Many concerns were voiced during the parliamentary hearings about the insufficiency of public consultations and the lack of public participation required by Bill C-27. The bill requires the waste management organization to consult the general public on each of its proposed approaches to nuclear fuel waste. However, it does not require on-going consultations once the option for waste management has been selected and is being implemented. Moreover, while the Seaborn Report held that there should be “thorough public participation in all aspects of managing nuclear fuel wastes” (CEAA, 1998), the bill is silent on the role of public participation. Other concerns bore upon the future WMO not being subject to the federal Access to Information Act (ATIA). Several participants in the public consultations on federal oversight options argued that the WMO should be subject to the ATIA (NRCan, 15 February 1999 and 17 February 1999). As Wilson noted in her submission to the Parliamentary Committee reviewing Bill C-27, “We’re also a little upset that the agency will not be open to federal access to information... ..the main problem we met in all our hearings was the secrecy surrounding this subject and the problem of getting accurate information from both the opponents and the proponents” (Wilson, 2001). Still other concerns related to the WMO not being subject to the reporting of the Auditor General (NRCan, 9 February, NRCan, 11 February 1999, NRCan, 17 February). Joe Comartin of the NDP put forth an amendment to Bill C-27 to ensure that the WMO would be audited by the Auditor General. He stated:

...the purpose of adding this amendment...is to have the Auditor General, who...is the person who traditionally would conduct these types of audits... Perhaps it goes back to what our responsibility is, so we know what’s happening. It would give us one aspect of knowledge that this bill as it is now is lacking, because we don’t get any particular information on how the trust fund is being managed...”
(Comartin, 2001).

It is argued, in response to these claims, that the ATIA and the Auditor General are neither the only means, nor the most effective means, of public oversight. As one individual employed by a utility put it, the WMO could opt for any number of auditing procedures (interview 059, 2001). She notes that many private companies in which the management believes in being ethical and

subscribes to principles of environmental and social responsibility are developing processes of social auditing. These processes are said to be traceable and open. She asserts that there are “many different ways that a company can choose to operate if it wants to be perceived and to be ethical, open, and honest” (interview 059, 2001). However, this response does not address the ethical claims for an institutionalized regime of transparency and accountability designed to protect public interests. Too much discretion is left to the private entity. While legislative requirements are not the only means to ensure the transparency and accountability of an organization, they rightfully minimize the discretion of the private entity responsible for a public service in making decisions as to how to be transparent and accountable.

Some stakeholders put forth additional concerns relating to the institutional transparency and public accountability of the future WMO, as per Bill C-27. These have to do with the reporting relationship between the organization and the federal government. As noted above, the waste management organization is required by the bill to report to the Minister of Natural Resources once a year on financial matters and once every three years on operational plans. Stakeholders claim that this reporting relationship may be insufficient to ensure adequate public oversight. Indeed, according to NRCan, many participants in the public consultations on federal oversight options “suggested that annual reports of the waste management organization be reviewed by Parliament and the public” (NRCan 17 February 2001). During the hearings of the

Standing Committee on Bill C-27, moreover, the AFN, the ANHC, the Sierra Club, and Northwatch argued that the WMO should report to Parliament. As Senator Louis Wilson remarked in her submission to the Standing Committee: “I’ve been in the Senate long enough to know that this is not an adequate way to review anything. You get a statement by the minister, and maybe there are some questions. It needs to go to committees...for careful study” (Wilson, 2001). All of the opposition members of the Committee put forth amendments in these regards. As Keddy proposed: “Instead of everything being under ministerial control, the minister would certainly have the same access to it that he should have as minister in charge of the natural resources department, but parliamentarians actually would have access to it, too” (Keddy, 2001). The WMO, he continued, “would table in both houses of Parliament a report of its activities, ensuring that we get the information” (Keddy, 2001). According to Keddy, the intent is

that not just the minister should be allowed access to the report. Parliament should be allowed access to the report. This will therefore ensure that the public has access to the report, because there’s absolutely no provision that the minister does or does not have to make a report on this. There is some question, at least in my mind, as to how soon— or even if— the minister would have to report to Parliament. If the waste management organization reports to Parliament, it’s done (Keddy, 2001).^{4iv}

In response to these kinds of arguments, several points are made. For example, it is claimed that, since the WMO will be committed to and responsible for specific outcomes— i.e., the studying of high-level radioactive waste management options and the implementing of the chosen option— it will not be in its interest to be secretive. Thus, Richard Dicerri of Ontario Power Generation (OPG) states in his submission to the Parliamentary Committee on Bill C-27, “We have no problem with

providing reports to the minister, to the government, and keeping the public informed. If we don't do that, we will not get there [i.e., to our intended outcome]" (Dicerni, 2001). However, he goes on to invoke the values of economy and efficiency in a way that trumps the values of transparency and accountability, noting that "we're spending \$100 million a year on this" and that

if you do annual reports on a process for which other countries take seven, ten, fifteen years, these reports become sitting targets for charges of not enough consultation, inadequate involvement, superficiality, and you spend three months out of the 12 months writing a report and another three months defending it (Dicerni, 2001).

More generally, it is held that the bill contains a sufficiently stringent public oversight mechanism. Thus, Dicerni notes the following:

First, the Bill requires the WMO to carry out public consultations before formulating a plan. Second, the WMO must also establish an Advisory Council, whose comments on the WMO's study and triennial reports are to be made public. Third, upon receipt of the WMO report, the Minister of Natural Resources may also undertake consultations. Fourth, the WMO's study and reports to the Minister must also be made public. Fifth, the option for managing used fuel waste selected by the Governor in Council will be subject to a federal environmental assessment required by the Canadian Environmental Assessment Act. The EA will involve public consultations. And, sixth, if the EA is accepted, then the waste management plan will require construction and operating licenses under the Nuclear Safety and Control Act. This process will also involve public consultations (Dicerni, 2001).

However impressive this list may appear, its content does not address the ethical imperative that, where an entity manages a public good or delivers a public service, it should be institutionally transparent and publicly accountable. Indeed, while the Nuclear Fuel Act calls for a certain degree of public consultation, it does not specify the nature of this consultation. Consultation is a concept that can be put into operation in different ways resulting in different outcomes. Taking counsel could involve a range of activity with a range of significance, from collecting responses to a questionnaire to extensively discussing a given issue. The WMO is left a great deal of discretion in deciding upon what constitutes consultation. Although the WMO must establish an Advisory Council, moreover, its deliberations will not be binding on the work of the organization. Furthermore, while reports to the designated minister must be made public, there are no guarantees that these will be debated in a public and publicly visible forum, let alone in Parliament.

Dicerni notes that the ultimate decision as to the waste management option will be made by the Governor in Council, but what is not stated is the great influence the WMO will have in this decision. The WMO will have at least three years, and extensive technical expertise, to study and put forth its preferred option. It is thus likely that government will go with the recommendations of the WMO. Although there will be an environmental assessment of the chosen option, and while the WMO will have to become a licensee of the CNSC in order to implement the option, public involvement at these stages could range from the meaningful to the meaningless. The key decision

as to the waste management option will have been taken, and local municipalities and Aboriginal nations will likely not have a veto in consultations following this decision. So, it is difficult to see how this list addresses directly the imperatives associated with distributive justice in the implementation of public policy, the management of a public good, and the delivery of a public service. Canadian nuclear fuel waste management policy is based on a priority of business values over the instrumental values of distributive justice, such as transparency and accountability.

Conclusion:

Justice, Business, and the Ethics of Innovation in Canadian Nuclear Waste Management

This exploration of the normative foundations of nuclear fuel waste policy in Canada reveals at play the sometimes competing values of business and of justice. Canada's current policy is based on New Public Management principles in line with values of business. Indeed, it seeks to establish a waste management organization that is based on principles of economy and efficiency. It seeks to minimize the risk of federal liabilities defaulting to the federal government, and it seeks to ensure that those with vested interests in the long-term management of high-level radioactive wastes are granted management responsibilities. These values tend to take priority over values of transparency and accountability. Indeed, stakeholders raise concerns about the discretion that the policy gives the shareholders in the WMO over appointments to its Board of Directors and its Advisory Council. Stakeholders also express concerns about the sufficiency of public consultations and lack of public participation required by the proposed legislation. The WMO, as per the Nuclear Fuel Waste Act, will be subject to neither the Access to Information Act nor to the Report of the Auditor General, and stakeholders have concerns in this regard. Other questions are raised about the adequacy of the reporting relationship between government and the waste management organization.

This survey of the normative foundation of Canadian nuclear waste management policy, and the implementing organization to which it gives rise, also reveals competing conceptions of the values of justice. A set of voices understands transparency to be facilitated by direct democratic means—i.e., by means that enable the public to get involved in waste management decisions and to access all information pertaining to waste management. Another set understands transparency to be facilitated by representative democratic means—i.e., by means that enable the minister and members of cabinet to establish policy objectives and to oversee waste management activities. Similarly, the former understands accountability in terms of the relationship between the stakeholders or, in this case, the public, and the WMO. The WMO should act in the public interest and should be accountable to the public. Thus, the WMO should report to Parliament. The latter conceptualizes accountability in terms of the shareholders and the future management organization. The WMO should act in the interest of shareholders and should be accountable to those funding it. Thus, the shareholders should appoint the Board of Directors and the Advisory Council, both of which will be accountable to them.

The argument in this paper is that, where public sector innovations serve in delegating the responsibility for the delivery of a public service or the management of a public good to a private sector organization, that organization should be legislatively required to submit to public oversight. This is especially the case where the activities of the organization could have implications for distributive justice among present and future generations. Although forceful are the responses to

concerns about the lack of the transparency and accountability of the WMO, they do not speak directly to the ethical imperatives associated with the responsibility for delivering a public service that bears the burdens of risk and uncertainty for both existing and future people. Where a public service with implications for the well-being of existing and future people is delivered, it should be assured in legislative terms that its delivery is accessible and accountable to the public. Legislative terms, at least in principle, embody a conception of the public interest. Legislatively entrenched specifics for transparency and accountability will more likely be in the public interest than steps taken by a private entity on the basis of its own interests. It is not contested that the WMO will be delivering a public service. As one representative stated, it is “the view of our industry that appropriate management and disposal of Canada’s nuclear waste is to the general advantage of all Canadians, just as the availability of nuclear technology is an advantage to all Canadians” (Submission to NRCAN on federal oversight options, 31 March 1999). What is contested in this case is the relationship between the values of business and those of justice as expressed in the current policy. In Canadian nuclear waste management policy, there tends to be a priority of business values over values of justice. From an ethical perspective, this priority is difficult to defend.

About the Author

Genevieve Fuji Johnson Ph.D. Candidate, Department of Political Science, University of Toronto, genevieve.johnson@utoronto.ca.

References:

AECL. 1994. *Environmental Impact Statement on the Concept for Disposal of Canada’s Nuclear Fuel Waste*. Chalk River, ON: AECL.

Aikin, A. M., J. M. Harrison, and F. K. Hare. *The Management of Canada’s Nuclear Wastes: Report of a study prepared under contract for the Minister of Energy, Mines and Resources Canada*. Ottawa: Government of Canada.

Arthurs, Wayne. 8 November 2001. Oral Submission to Standing Committee on Aboriginal Affairs, Northern Development and Natural Resources on Bill C-27. 37th Parliament. www.parl.gc.ca/InfoComDoc/37/1/AANR/Meetings/Evidence/aanre28-e.htm.

Barry, Brain. 1999. “Sustainability and Intergenerational Justice,” pp. in Andrew Dobson, ed. *Fairness and Futurity: Essays on Environmental Sustainability and Social Justice*. Oxford: Oxford University Press.

Brown, Peter. 21 November 1996. Presentation to Canadian Environmental Assessment Agency Nuclear Fuel Waste Management and Disposal Concept Environmental Assessment Panel. http://www.ceaa.gc.ca/0009/0001/0001/0012/0002/0030/s11_e.htm.

Canadian Environmental Assessment Agency (CEAA). 1998. *Nuclear Fuel Waste Management and Disposal Concept: Report of the Nuclear Fuel Waste Management and Disposal Concept* Ottawa: Minister of Public Works and Government Services Canada.

Chatters, David. 1 November 2001. Oral Submission to Standing Committee on Aboriginal Affairs, Northern Development and Natural Resources hearings on Bill C-27. 37th Parliament. www.parl.gc.ca/InfoComDoc/37/1/AANR/Meetings/Evidence/aanre28-e.htm.

Comartin, Joe. 20 November 2001. Oral Submission to Standing Committee on Aboriginal Affairs, Northern Development and Natural Resources hearings on Bill C-27. 37th Parliament. www.parl.gc.ca/InfoComDoc/37/1/AANR/Meetings/Evidence/aanre28-e.htm.

Coon Come, Matthew. 6 November 2001. Oral Submission to Standing Committee on Aboriginal Affairs, Northern Development and Natural Resources hearings on Bill C-27. 37th Parliament. www.parl.gc.ca/InfoComDoc/37/1/AANR/Meetings/Evidence/aanre28-e.htm.

Dicerni, Richard. 6 November 2001. Oral Submission to Standing Committee on Aboriginal Affairs, Northern Development and Natural Resources hearings on Bill C-27. 37th Parliament. www.parl.gc.ca/InfoComDoc/37/1/AANR/Meetings/Evidence/aanre28-e.htm.

Government of Canada. 2001. Bill C27, 37th Parliament. *Nuclear Fuel Waste Act*. Ottawa.

Interview 043. 14 August 2001. Chalk River.

Interview 046. 15 August 2001. Ottawa.

Interview 050. 20 August 2001. Toronto.

Interview 054. 5 September 2001. Toronto.

Interview 056. 11 September 2001. Toronto.

Interview 059. 5 November 2001. Toronto.

Interview 061. 17 January 2002. Pickering.

Interview 062. 18 January 2002. Clarington.

Interview 063. 1 February 2002. Toronto.

Keddy, Gerald. 20 November 2001. Oral Submission to Standing Committee on Aboriginal Affairs, Northern Development and Natural Resources hearings on Bill C-27. 37th Parliament. www.parl.gc.ca/InfoComDoc/37/1/AANR/Meetings/Evidence/aanre28-e.htm.

Lloyd, Brennain. 8 November 2001. Oral Submission to Standing Committee on Aboriginal Affairs, Northern Development and Natural Resources hearings on Bill C-27. 37th Parliament. www.parl.gc.ca/InfoComDoc/37/1/AANR/Meetings/Evidence/aanre28-e.htm.

Miller, David. 1999. "Social Justice and Environmental Goods," pp. in Andrew Dobson, ed. *Fairness and Futurity: Essays on Environmental Sustainability and Social Justice*. Oxford: Oxford University Press.

Natural Resources Canada (NRCan). 1995. "The Development of a Federal Policy Framework for the Disposal of Radioactive Wastes in Canada: The Results of Consultations with Major Stakeholders." Ottawa: Government of Canada.

Natural Resources Canada (NRCan). 1996. "Press Release: McLellan Announces Policy Framework for Radioactive Waste." <http://nrn1.nrcan.gc.ca/css/imb/hqlib/9679.htm>. Ottawa: Government of Canada.

Natural Resources Canada (NRCan). 1998a. "Background: Policy Framework for Radioactive Waste," www.nrcan.gc.ca/css/imb/hqlib/9894b.htm. Ottawa: Government of Canada.

Natural Resources Canada (NRCan). 1998b. "Memorandum to Cabinet: Response to the Federal Environmental Assessment Panel on the Nuclear Fuel Waste Management and Disposal Concept," Ottawa: Government of Canada.

Natural Resources Canada (NRCan). 1998c. "Government of Canada Response to the Recommendations of the Nuclear Fuel Waste Management and Disposal Concept Environmental Assessment Panel." Ottawa: NRCan.

Natural Resources Canada (NRCan). 1999. *Quarterly Report on Canadian Nuclear Power Program*. Ottawa: Government of Canada.

Natural Resources Canada (NRCan). 9 February 1999. "Synopsis of Views on Options for Federal Oversight," Saskatoon Public Session. Ottawa: Government of Canada.

Natural Resources Canada (NRCan). 10 February 1999. "Synopsis of Views on Options for Federal Oversight." Winnipeg Public Session. Ottawa: Government of Canada.

Natural Resources Canada (NRCan). 11 February 1999. "Synopsis of Views on Options for Federal Oversight." Thunder Bay Public Session. Ottawa: Government of Canada.

Natural Resources Canada (NRCan). 15 February 1999. "Synopsis of Views on Options for Federal Oversight." St. John Public Session. Ottawa: Government of Canada.

Natural Resources Canada (NRCan). 17 February 1999. "Synopsis of Views on Options for Federal Oversight," Ottawa Public Session. Ottawa: Government of Canada.

Rawls, John. 1972. *A Theory of Justice*. Oxford: Oxford University Press.

Submission to NRCan on federal oversight options. 31 March 1999.

Wilson, Lois. 6 November 2001. Oral Submission to Standing Committee on Aboriginal Affairs, Northern Development and Natural Resources hearings on Bill C-27. 37th Parliament.

www.parl.gc.ca/InfoComDoc/37 /1/AANR/Meetings/Evidence/aanre28-e.htm.

Endnotes:

1. ⁱ Canada's policy, in its basic form, is composed of three statements: The federal Policy Framework for Radioactive Waste of 1996, the Federal Government Response of 1998 to the Recommendations of the Nuclear Fuel Waste Management and Disposal Concept Environmental Assessment Panel (Seaborn Panel), and the Nuclear Fuel Waste Act (formerly Bill C-27).

Canada has been producing nuclear energy and, by extension, high-level radioactive waste since 1962. Currently, approximately 13% of energy generated in Canada is nuclear. Forty-three percent of the electricity needs of the Province of Ontario is met by nuclear generation. New Brunswick generates 21% of its electricity from nuclear fission, while Quebec generates 3% from this source. The electric utilities, Ontario Power Generation Incorporation (OPG), New Brunswick Power Corporation (NBP), and Hydro-Québec (HQ), own the CANDU (Canadian Deuterium Uranium) reactors, as well as the radioactive waste materials produced by these reactors, in their respective provinces. The 20 reactors in Ontario have produced about 90% of Canada's used nuclear fuel, while the reactor in New Brunswick and the reactor in Quebec have produced about 8 percent. Two percent of Canada's nuclear fuel waste has come from prototype and research reactors owned by Atomic Energy of Canada Limited (AECL). About 1.3 million bundles of nuclear fuel waste have been produced to date by all 22 CANDU reactors in Canada. Tightly stacked, these would fill 3 hockey rinks up to the top of the boards (see NRCan,1999).

2. ⁱⁱ Some would argue that the WMO, as per the federal Policy Framework for Radioactive Waste of 1996 and the ensuing federal Nuclear Fuel Waste Act, will not be charged with the responsibility of managing "a public good" or delivering "a public service." Instead, they would argue, the WMO will be charged with managing the nuclear fuel wastes owned the nuclear energy corporations, such as Ontario Power Generation (OPG). My response would be that, while the federal government plays a regulatory and oversight role, which, we hope, is in the public interest, managing radioactive wastes and operating facilities required for these wastes ought to be understood as a public service. Indeed, the public benefits from the generation of nuclear energy, which creates this waste, and they benefit from the safe, sound, and cost-effective management of these wastes.

3. ⁱⁱⁱ See Appendix of NRCan, "The Development of a Federal Policy Framework for the Disposal of Radioactive Wastes in Canada: The Results of Consultations with Major Stakeholders," (October 1995) for a list of stakeholders consulted on the development of the Policy Framework.

4. ^{iv} Bill C-27 was subsequently amended so that reports are to be tabled in Parliament.