

NWMO e-Dialogues Report

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Community Research Connections

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NUCLEAR WASTE
MANAGEMENT
ORGANIZATION

SOCIÉTÉ DE GESTION
DES DÉCHETS
NUCLÉAIRES



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Nuclear Waste Management Organization

The Nuclear Waste Management Organization (NWMO) was established in 2002 by Ontario Power Generation Inc., Hydro- Québec and New Brunswick Power Corporation in accordance with the *Nuclear Fuel Waste Act (NFWA)* to assume responsibility for the long-term management of Canada's used nuclear fuel.

NWMO's first mandate was to study options for the long-term management of used nuclear fuel. On June 14, 2007, the Government of Canada selected the NWMO's recommendation for Adaptive Phased Management (APM). The NWMO now has the mandate to implement the Government's decision.

Technically, Adaptive Phased Management (APM) has as its end-point the isolation and containment of used nuclear fuel in a deep repository constructed in a suitable rock formation. Collaboration, continuous learning and adaptability will underpin our implementation of the plan which will unfold over many decades, subject to extensive oversight and regulatory approvals.

NWMO Dialogue Reports

The work of the NWMO is premised on the understanding that citizens have the right to know about and participate in discussions and decisions that affect their quality of life, including the long-term management of used nuclear fuel. Citizens bring special insight and expertise which result in better decisions. Decisions about safety and risk are properly societal decisions and for this reason the priorities and concerns of a broad diversity of citizens, particularly those most affected, need to be taken into account throughout the process. A critical component of APM is the inclusive and collaborative process of dialogue and decision-making through the phases of implementation.

In order to ensure that the implementation of APM reflects the values, concerns and expectations of citizens at each step along the way, the NWMO plans to initiate a broad range of activities. For each of these activities, reports are prepared by those who designed and conducted the work. This document is one such report. The nature and conduct of our activities is expected to change over time, as best practices evolve and the needs and preferences of citizens with respect to dialogue on nuclear waste management questions is better understood.

Disclaimer:

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Nuclear Waste Management Organization (NWMO) e-Dialogues Report

Moving Forward Together: Designing the Process for Selecting a Site

www.crcresearch.org

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Following the first phase of the Nuclear Waste Management Organization's (NWMO) mandate, the organization moved into the second phase which is to implement Canada's management plan for used nuclear fuel as decided by the Government of Canada. One of the first key activities in its work as implementer was the collaborative design of the site selection process.

In August 2008, a discussion document inviting input to the design of a site selection process for the long term management of used nuclear fuel was released and Royal Roads University was asked to lead a series of on-line real-time (synchronous) e-Dialogues deliberatively designed to increase Canadian literacy around this critical issue and to engage as many Canadians as possible.

Methodology

Two e-Dialogues were convened and led by Dr. Ann Dale, Canada Research Chair in Sustainable Community Development; the first one was held on December 2, 2008, designed particularly to target young people; this dialogue included 10 experts who had various expertise in community engagement, either as an academic or a practitioner, including two international experts. This first dialogue was private in order to engage people who were not necessarily in favour of nuclear energy, but who brought a unique perspective integral to understanding community dynamics.

The second e-Dialogue was conducted on December 17, 2008, and included three experts—Dr. Nola-Kate Seymoar, President and Chief Executive Officer, International Centre for Sustainable Cities; Dr. William Leiss, Scientist, McLaughlin Center for Population Health Risk Assessment, University of Ottawa, and Dr. Joanne Tippett, Lecturer, Discipline of Planning and Landscape, University of Manchester. NWMO experts were invited to participate wherever appropriate when asked a specific question, or to correct errors of fact.

The December 17, 2008 e-Dialogue archive is available at www.e-dialogue.ca.

All participants were given a copy of the discussion document prior to the e-Dialogues and advised that they would be asked the following three questions, taken from the draft document,

plus additional ones posed by the moderator, Dr. Ann Dale.

1. What are the practical steps that should be taken to ensure that the process for selecting a site is fair?
2. Who should be involved in the process for selecting a site, and what should be their role?
3. Do you know of any information and tools that would facilitate greater community engagement?

Both e-Dialogues were one and a half hours in duration, and the December 17th real-time conversation was widely advertised through the RRU network, which includes alumni, staff and associate faculty, as well as a research database of over 2500 individuals, policy-makers, decision-makers, researchers and political staff from across the country. In addition, it was advertised on the NWMO website, and individual Canadians were invited to participate in the e-audience opened for this dialogue. The last half hour of the second e-Dialogue was devoted to answering questions from the e-audience. Further, both e-Dialogues introduced the NWMO principles of excellence, accountability and transparency, and that Canadians during the first phase of its mandate, through forums, on-line and face-to-face workshops and dialogues have told the organization that safety, security and fairness are paramount in the selection of a site for used nuclear waste. In addition, panelists were reminded that there are four provinces involved in the nuclear fuel cycle in Canada: Saskatchewan, Ontario, Quebec and New Brunswick.

Key Conversation Points - *December 2, 2008*

A key point in the first e-Dialogue was the issue of transportation, which subsequently then implicated how one defines a community; is it just the site community or all the communities located near any transportation corridors and rail lines? If this is the case, will the communities in between the current location of the spent fuel and the final location have to be involved in any agreement or decision-making processes as well? One participant suggested it would obviously be preferable to minimize the distance between the nuclear reactor and the waste disposal site, and the issue of equity in terms of costs and benefits then arose. All participants felt that the waste might best remain in the province in which it was generated, and two panelists suggested it should be sited with the nuclear reactor that generated the waste, especially given the principle of fairness. Alternatively, another suggested that the fairest and most ethical option would be to dispose of the waste as far and as remotely as possible from human and animal habitation. (Note the position of NWMO is the adoption of adaptive phased management that involves centralizing the waste in a single location in one of the nuclear cycle provinces.)

One panelist noted that the most difficult challenge posed by the principle of fairness is the question of future generations, and a criticism of the process is that the question of what to do with the waste is considered in isolation of the question of the production of the waste itself. One means to compensate is to ensure that the nuclear waste is stored in a prominent location and the potential risks of the waste are explicit. Other panelists understood the scoping of the issue to site selection, and suggested that the issue of waste generation and volume be explicitly acknowledged up-front.

Panelists generally agreed that the document outlined a well thought out process, although it does not definitely provide a comprehensive risk assessment for communities. One member suggested that a toolkit be prepared for communities expressing an interest in hosting a site to facilitate their understanding of the technology, risk and potential benefits. It was pointed out that some First Nations people feel that First Nation land will be pursued as a potential site, given the geological requirements for the site. All participants argued that if there are particular locations in Canada that are preferable for deep geological repository then this information should be shared. The United Kingdom experience was described; it aimed to first ask for volunteer areas/communities and then assess the geology for suitability.

The question was asked whether the process should start with outlining geological sites first, then go to communities, or start with a national dialogue and inclusion, and then start to add in the more geo-spatial analysis. A fundamental question is; Is there a case for a particular type of decision that calls for analytical information to be prepared to rule out certain options before going to a siting process, for example, are there some locations that are preferable to others, or others that are automatically unsuitable because of geophysical characteristics. And how does one engage people while preparing that analytical information and ruling out certain options? All agreed that site selection should be citizen driven although there was no consensus on

timing of the steps, although perhaps technical pre-screening and citizen consultation could be step-wise.

All participants agreed the process would take time, should be as open, transparent and inclusive as possible, and that an essential first step was understanding the perspectives of the people with whom the NWMO needed to engage. A question was raised about the community capacity of any potential host community, both in terms of their ability to ensure a robust community engagement process and their planning ability. Should a basic requirement be that they have in place an integrated community sustainability plan, with a long-term horizon of at least 100 years, or 1000 years? Such a community plan in the case of a host community should address cross generational issues and be able to span government administrations.

Potential community benefits were discussed, and in terms of job creation, there was uncertainty about whether or not a repository would fill this gap. The idea of a fair rent or payment to the community for the use of their environment was posed, although the problem with communities' dependency on a single-resource economy was raised.

Additional key questions focused on governance and identifying accountable decision-makers, and appropriate boundaries. One panelist argued that society is in reality the guardian of the waste; others suggested it should be all the communities along the transportation route, in addition to the host community. It should also be clear who owns the waste—the community or the energy producers. Given the wide diversity of Canadian communities, perhaps any plan has to be site-specific and will have to co-evolve with the community?

The process of community engagement was considered essential, and again, there are critical public policy questions that need to be addressed. Who gets to frame the questions? Who gets to decide who the experts are? Who decides the process for community engagement, and identification of key stakeholders who at a minimum must be involved, to ensure openness and inclusion and diversity of perspectives is represented? Should there be a socio-ecological map in place, in addition to evidence of a long-term planning process and capacity for an open, transparent and inclusive community engagement process? Building trust-based relationships was considered key to the process and ensuring that people are working with facts, and that the answers to questions are part of the relationship building through open dialogue, perhaps a potential host community should have access to their own experts. A nested approach to community engagement may be useful, that provides an up-front assessment, and the use of socio-ecological mapping may serve to engender more trust and to get the facts on the table. Obviously, polarized communities would be off the map, and bundling of issues may be optimal.

Again, the issue of boundaries and scope emerged, and the panelists agreed that even though individuals may self-select as a host community, that the entire Canadian population should be made aware of the process, and that there are important educational issues here about rights and responsibilities and energy use.

Key Conversation Points - *December 17, 2008*

This e-Dialogue is archived at www.e-dialogues.ca.

In this e-dialogue openness was seen as a key element for the process, and an open and inclusive conversation must occur before a choice can be made. Again, boundaries were raised and it was suggested that they would have to be nested—taking the whole of the nation as the minimum outer boundary and showing the sub-sets, possibly along administrative lines, and also ecological-geological boundaries superimposed on these. Boundaries will also have to take into account, transportation routes from any nuclear plant to the host community. Communities may also have to be defined by both place and communities of interest. Including perspectives from many different communities of interest can perhaps be used as proxy for considering future generations, especially if representatives are included who look at social equity and environmental justice. Stakeholder mapping is also critical, thus, more than one way of defining boundaries is more likely to produce a fair and balanced result.

The question of satisfying specific deep geological characteristics combined with self-selection by a community and timing was again raised in this dialogue. That is, if there is information on best potential sites, as a first step should this be shared? Concern was also expressed about site location near an existing community? Since there must be professional staff and stewardship of the site over a very long period of time, it may be that an existing community can incur some considerable economic benefits and the costs of building an entirely new community neither economically nor socially desirable.

NWMO governance was raised in relationship to trust as the most significant issue. It was argued that there needs to be a multi-sectoral governing body in place, particularly for the siting process, and a potential model is the Public Private Community Partnership process. Further, it was raised that the NWMO document does not clearly communicate the risk management aspects of spent nuclear fuel and it should be more explicitly stated up-front. It was clarified that NWMO is a legal entity required by law to identify a site, but they are also a privately-controlled corporation, with control of its own Board composition. The owners of NWMO are public utilities; that is, crown corporations in three provinces, and are ultimately answerable to the provincial governments. One panelist argued that this did not preclude it defining a multi-sectoral board structure, and that NWMO needs to carefully consider issues of credibility and public accountability.

Citizen juries were discussed as a potential engagement tool. A small sample of the population would be chosen, and then hear evidence from several sides of the argument, and then come to a judgment about the issue. It is one approach to community participation that emphasizes the random nature of the sample, not stakeholder mapping to get particular viewpoints.

The e-audience dialogue was appended to the expert e-Dialogue, as it represented a wide diversity of perspectives that may reflect a microcosm of Canadian perspectives.

Conclusions

The e-Dialogue process identified a number of suggestions for conducting a site selection process. Firstly, it was suggested that the guidelines for eligible sites need to be made clear, for example geological requirements, and that eligible provinces should be identified. It should be noted the majority of participants felt that only nuclear energy or mining provinces should be eligible. It was suggested that a kit be prepared for interested communities outlining eligibility, and explicit risk management issues.

Secondly, the issue of used fuel transport was raised. Identifying needed transport infrastructure should be completed in advance of the program and a protocol developed to address issues arising with communities along the transport route. It will need to be determined how involved such communities will be in decision-making processes around site selection.

Thirdly, the decision-making process needs to be open and transparent. Establishing the decision-making boundaries around any community self-selecting for site involves complicated governance and decision-making accountabilities which should be determined ahead of time. It was stressed that risks to the host community need to be clearly and openly outlined, along with questions regarding the ownership and responsibility for the

used fuel. Participants repeatedly stressed that divided communities should not be considered given the need for long term commitment, thus open consensus processes should be encouraged. There was a general concern that if first nations sites are to be considered the process will have to be carefully constructed to ensure community agency in the decision.

Fourthly, it was suggested that host communities should be required to have a very long term sustainability plan in place. It was suggested that there is a strong potential for sustainability planning attached to the responsibility of such a long term commitment. Community capacity, both in terms of long-term planning and open and inclusive community engagement processes, is key to a successful conclusion, and tools such as integrated community sustainability plans, citizen juries and deliberative dialogue as a means of more inclusive and accountable community engagement and decision-making processes will be key, as is socio-ecological mapping in addition to satisfying geophysical safety characteristics. Timing of the steps in the entire process is key, and tandem citizen science, geo-spatial analysis, and stakeholder mapping may present a more robust framework for site selection.

Tools and additional information provided by e-Dialogue panelists

United Kingdom White Paper, *Managing Radioactive Waste Safely: A Framework for Implementing Geological Disposal*, June 12, 2008

<http://www.defra.gov.uk/environment/radioactivity/mrws/index.htm>

http://www.iap2.org/associations/4748/files/IAP2%20Spectrum_vertical.pdf

Monmonier. How to Lie with Maps and Tufte, Visual Explanations

<http://www.ppgis.manchester.ac.uk/>

Manitoba Clean Environment Commission, <http://www.cecmanitoba.ca/>

Public participatory GIS (PPGIS), <http://www.ccg.leeds.ac.uk/projects/atomic/>

Appreciative inquiry or Choice Dialogues

<http://www.cprn.org/doc.cfm?doc=647&l=en>

http://www.crcresearch.org/community_tools.html



Sustainable Communities

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