



Building Understanding and Engaging Young Adults in a Dialogue about Canada's Management of Used Nuclear Fuel

GOAL

To create aware and informed youth public who will engage in a dialogue about used nuclear fuel management with their “community” - either local, provincial or national



OBJECTIVE & AREAS OF FOCUS

OBJECTIVE

To determine how the NWMO can:

- Raise **awareness** of the issue of used nuclear fuel as well as the NWMO
- Build **interest** amongst youth in the issue
- Facilitate **participation** of youth in the dialogues and decision-making processes

AREAS OF FOCUS

The NWMO Youth Round Table has organized its youth engagement recommendations around 3 key areas:

- Key messages
- Communication channel – online & print
- Community environment – engaging youth in and out of the education system





KEY CHALLENGES FOR NWMO



CHALLENGES

- There is a low level of literacy regarding Canada's energy landscape and nuclear fuel cycle
- Awareness needs to start with the issue not the organization
- Young adults are engaged more as consumers than they are as citizens
- Communicating a technical issue that is not “sexy” to a group that is inundated with advertising and information
- Young adults are not a homogeneous group
- Young adults are distrustful of institutions & are more likely to trust peers
- Managing your message with the open source communication
- Young adults do not want to be segregated & are highly aware of tokenism



CHALLENGES

Key Challenge

- There is a low level of literacy regarding Canada's energy landscape and nuclear fuel cycle, which hinders conversations about nuclear waste

Implication

- NWMO will need to balance organizational parameters with providing enough information about nuclear power to discuss nuclear waste.



CHALLENGES

Key Challenge

- Awareness needs to start with the issue not the organization

Implication

- NWMO will need to hook people with the issue first and then work to drive trust through the organizational mandate and management processes



CHALLENGES

Key Challenge

- Young adults are engaged more as consumers than they are as citizens & have high expectations for how organizations will engage with them

Implication

- NWMO needs to modernize engagement tactics through the development of targeted messaging and interactive, multimedia experiences



CHALLENGES

Key Challenge

- Communicating a technical issue that is not “sexy” to a group that is inundated with advertising and information

Implication

- NWMO needs to update communications materials to: be more interactive, direct, provide digestible information, be free of corporate jargon, minimize technical terms, and contain visuals where appropriate



CHALLENGES

Key Challenge

- Young adults are not a homogeneous group

Implication

- NWMO will need to balance the desire for one consistent type of messaging with a more nuanced and targeted approach that hooks people into the issue based on their life-stage/demographics



CHALLENGES

Key Challenge

- Young adults are distrustful of institutions & are more likely to trust peers

Implication

- NWMO needs to consider who is connecting with young adults and encourage them to get informed on the subject or nuclear waste



CHALLENGES

Key Challenge

- Managing your message with open source communication

Implication

- NWMO will need to become more aware of and find an appropriate way to engage in the peer to peer conversations that are taking place about nuclear waste



CHALLENGES

Key Challenge

- Young adults do not want to be segregated & are highly aware of tokenism

Implication

- NWMO will need to find a way to integrate the youth engagement strategy into your general engagement outreach without creating a “youth zone”





AN OUTLINE FOR ENGAGING YOUNG ADULTS IN THE ISSUE OF USED NUCLEAR FUEL

- Targeted communication and messaging
- Online engagement
- Engaging young adults who are in and out of the education system



TARGETED COMMUNICATIONS & MESSAGING

KEY REQUIREMENTS:

- Target specific messages that communicate the issue and seize attention with a call to action
- Communication materials that are direct and free from unexplained corporate jargon & technical terms
- The integration of animation and graphical representations

THE INFORMATION YOUNG ADULTS WANT IS NOT OVERLY DIFFERENT FROM OTHER POPULATIONS

- Explain the issue / nuclear fuel cycle
- Who is the NWMO?
 - History
 - Values/Ethical standards
 - Funding
 - APM and the current stage
- Current practices & why we need a permanent solution
- DGR
 - What it is, how it works and is managed and how expansion might work
- Why a community would want to consider hosting a DGR
 - Socio economic impacts
 - Community well being
- Environmental impact
 - Complete footprint from site prep, to construction to maintenance
- Safety implications
 - Explain multi-barrier system, worst case scenario
- Suitability of site



HOW NWMO COMMUNICATES INFORMATION NEEDS TO BE REFINED

Print Material

Thermal-mechanical analyses of a deep geological repository in sedimentary rock using a horizontal tunnel placement method for used fuel containers were completed. Microbial studies under various buffer densities and intermediate groundwater salinity values suggest limited microbial viability in a deep geological repository at lower groundwater salinities compared to previous studies.

In the geoscience field, the NWMO prepared preliminary geoscientific criteria for initial evaluations of potential candidate sites for a deep repository. Geoscientific data were collected and site characterization methods developed.

Practical knowledge and experience in sedimentary rock environments are being acquired through our involvement in Ontario Power Generation's site characterization program for its proposed Low and Intermediate Level Waste Deep Geologic Repository. The program includes: field operations, borehole drilling in sedimentary rock, groundwater sampling, rock core mineralogy, geophysical logging, deep hydraulic testing, geo-mechanical testing, borehole instrumentation, site characterization quality assurance procedures and multi-dimensional scientific visualization.

Ongoing research for the development of geoscientific characterization tools, techniques and protocols, in collaboration with universities and consultants, cover a wide range of geoscientific characteristics such as seismicity, geology, geostatistics, geochemistry, matrix pore water extraction and characterization techniques, diffusion coefficients, permeability and sorption. The NWMO also issued a research grant with the University of Toronto to expand Canadian expertise in Glacial Systems Modelling.

The repository safety program initiated research projects to conduct coupled thermal-hydraulic-mechanical modelling to support safety assessment, and to review and assess safety assessment software quality assurance.

Current NWMO Approach:

- Pamphlets with dense text + heavy technical/corporate terms



CURRENT NWMO MESSAGE

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. On June 14, 2002, the Government of Canada selected the NWMO's recommendation for Adaptive Phased Management (APM). APM moves towards a goal that Canadians themselves identified: safe and secure long-term containment and isolation of used nuclear fuel produced in Canada, with flexibility for future generations to act in their own best interests. The NWMO now has the mandate to implement the recommendation.

The current message is:

- Looooong
- Full of unexplained corporate jargon
- Forefronts the organization before the issue



CORE MESSAGING

Nuclear Waste exists. It's ours to deal with. Now.

Canadians made a decision to have nuclear waste safely stored deep underground. It's time to take the next step forward.

The **Nuclear Waste Management Organization** is a not-for-profit ready to work with a willing and informed community that may be interested in hosting used nuclear fuel underground. It could be your community.

Have an opinion. Make it educated. **Voice it.**

Find out more.

www.nwmo.ca or 1-866-xxx-xxxx



EVOLVING NWMO MULTI-MEDIA MATERIALS TO CONNECT WITH YOUNG ADULTS

NWMO Video

Moving Forward Together – Watch the new NWMO video



Current NWMO Approach:

- Overly scripted “cheesy corporate” videos filled with corporate jargon and technical terms



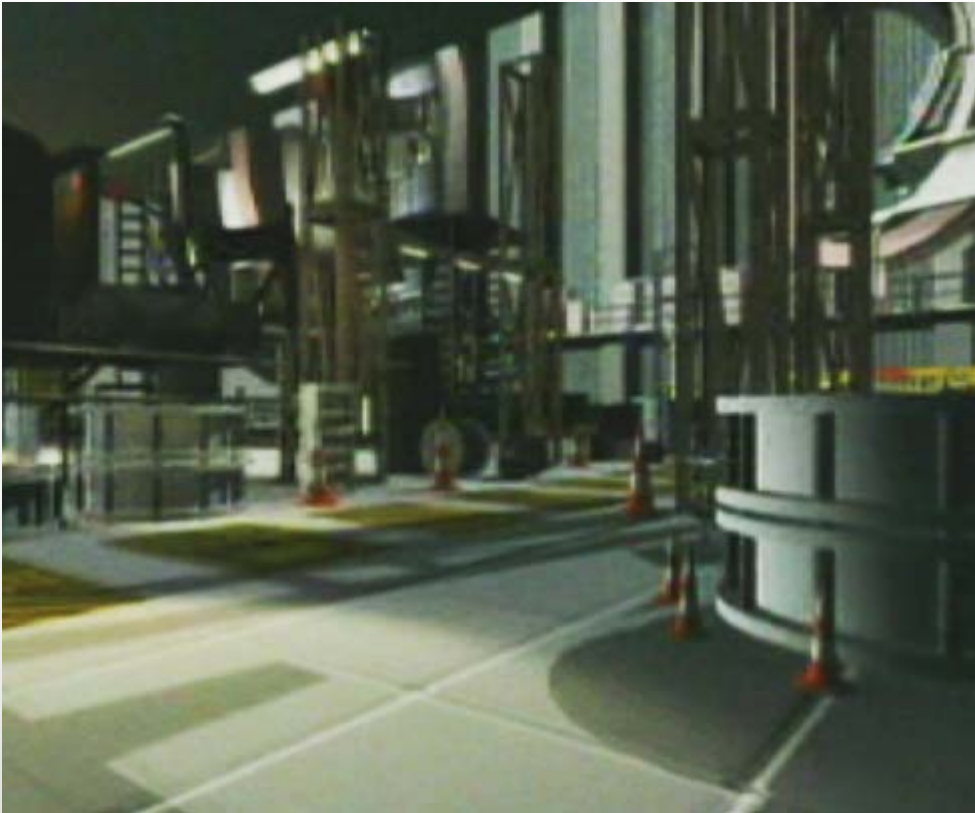
SUPPORT FOR ANIMATION/GRAPHICAL REPRESENTATION

Animation is:

- A common & sophisticated medium that can be used to raise awareness of the issue of used nuclear fuel and the NWMO's mandate
- Able to cross boundaries and avoids association of one 'live' face & voice with the project
- Able to simplify complicated message/concept without “dumbing it down” and establish a common baseline of knowledge
- Easy to share and transmit and can be pushed across multiple channels



EXAMPLES OF ANIMATION



OPPORTUNITIES

- Animation can tell the story of the nuclear fuel cycle and can be uploaded to popular sites to increase access
- You can produce visually stimulating and interactive 3D exhibits that showcase a time-lapse construction of the DGR
- Imagery for educational materials, posters, pamphlets





ONLINE ENGAGEMENT

Key Requirements:

- Increase interactivity & provide fresh content on NWMO site
- Refine navigation to be more intuitive
- Harness social media



CURRENT REALITY

- Static sites are no longer accepted
- Youth are used to content that is constantly updated
- Young adults are suspicious of information and demand multiple sources
- Young adults will not dig for information
- Young adults are used to consuming information online which demands a different way of reading material
- Social, interactive peer-to-peer media is part of their everyday existence: Shift from website to webspace



MANAGING YOUR MESSAGE IS DIFFICULT WHEN ALMOST 450 FACEBOOK GROUPS ON NUCLEAR WASTE ALREADY EXIST

The screenshot shows the Facebook search interface. At the top, the navigation bar includes 'facebook', 'Home', 'Profile', 'Friends', 'Inbox 37', 'Shauna Houlton', 'Settings', and 'Logout'. A search bar contains the text 'nuclear waste' with a search icon and the text 'Search'. Below the search bar, there are tabs for 'All Results', 'People', 'Groups', 'Events', and 'Applications'. A dropdown menu shows 'Show results from All Networks'. The results section displays 'Displaying 1 - 10 out of 430 results for: nuclear waste' with pagination links '1 2 3 Next'. Two group results are visible:

- Group:** Nuclear Waste
Size: 200 members
Type: Music - Metal
[Join Group](#)
- Group:** Nuclear Waste
Size: 66 members
Type: Common Interest - Beliefs & Causes
New: 1 Fewer Member
[Join Group](#)



HOW NWMO CAN TACKLE SOCIAL NETWORKING SITES & BE THE DEFINITIVE SOURCE OF INFORMATION

- NWMO needs a social media presence to direct people to the NWMO webspace, failure to do so is a lost opportunity to educate
- NWMO needs to expand its' webspace to include an NWMO facebook page
- To maintain the quality and integrity of information sharing, NWMO will encourage all discussion to occur on NWMO webspace
- Using social media provides an opportunity for NWMO to build long- term relationships with individuals already interested in the topic



OPPORTUNITIES

- Personal content from NWMO staff
- Document the progress of the process
- Bring forward links to independent/international research on nuclear waste management
- Organize content around subject clusters and use key words and search terms that are more intuitive to the public
- Be aware of how nuclear waste is being discussed on social media and explore how to drive traffic to its info on the NWMO site
- Harness an active applications like wikipedia to allow more interaction with the content.



NWMO IS ALREADY ON WIKIPEDIA, NOW ALL YOU NEED TO DO IS EXPAND THE FORMAT TO YOUR MATERIAL

Your continued donations keep Wikipedia running!

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Nuclear Waste Management Organization (Canada)

From Wikipedia, the free encyclopedia
(Redirected from NWMO)

The **Nuclear Waste Management Organization** (NWMO) of [Canada](#) was established in 2002 under the Nuclear Fuel Waste Act (NFWA) ^[1] to investigate approaches for managing Canada's [used nuclear fuel](#). Currently, [nuclear power plants](#) are operating in Ontario, Quebec and New Brunswick.

The Act required Canadian electricity generating companies which produce used nuclear fuel to establish a waste management organization to provide recommendations to the Government of Canada on the long-term management of used nuclear fuel. The legislation also required the waste owners to establish segregated trust funds to finance the long term management of the used fuel. The Act further authorized the [Government of Canada](#) to decide on the approach. The government's choice will then be implemented by the NWMO, subject to all of the necessary regulatory approvals.

In 2005, after a three-year study, the NWMO recommended Adaptive Phased Management (APM).^[2] In 2007, the Canadian government accepted NWMO's recommendation.^[3]

Adaptive Phased Management is both a technical method and a management system, with an emphasis on adaptability.^[4] Technically, it is centralized containment and isolation of used nuclear fuel in a deep geological repository. The management system involves realistic, manageable phases – each marked by explicit decision points with continuing participation by interested Canadians. It is flexible, allowing for go, no-go decisions at each stage to take advantage of new knowledge or changing societal priorities. Adaptive Phased Management provides an option for shallow underground storage at the central site if some or all of the used fuel needs to be moved before the deep repository is available. It also provides for continuous monitoring throughout implementation and for retrievability for an extended period.

Nuclear Waste Management Organization

Abbreviation	NWMO
Formation	2002
Type	Non-profit Canadian organization
Purpose/focus	Long-term management of Canada's used nuclear fuel
Headquarters	Toronto, Ontario, Canada
Region served	Canada
Official languages	English, French
President	Ken Nash, P. Eng.
Website	http://www.nwmo.ca

Designing the Process for Selecting a Site

On May 4, 2009 the NWMO issued a discussion document outlining a proposed process for identifying an informed and willing community to host the deep geological repository. The \$16 to \$24-billion national infrastructure project will involve development of the repository and will include the creation of a centre of expertise.

The *Proposed Process for Selecting a Site* is designed to be responsive to direction provided by Canadians who participated in dialogues with the NWMO during 2008. These interested individuals and organizations said they wanted to be sure, above all, that the selected site is safe and secure for people and the environment, now and in the future – and that the process for choosing the site is grounded in values and objectives that Canadians hold important.

Since 2007, 41





COMMUNITY ENGAGEMENT

Engaging young adults who are in and out of the education system



ENGAGING YOUTH IN EDUCATIONAL INSTITUTIONS

Key Requirements:

- Use existing networks & audiences
- Recognize the influence of peers
- Increase local presence once a community comes forward



ENGAGEMENT OPPORTUNITIES EXIST AT BOTH THE SECONDARY AND POST-SECONDARY LEVELS

CURRENT REALITY

- School is where youth learn about and engage in subjects that they are most likely to ignore in their personal lives
- Youth are most open to information from their peers
- A number of networks (clubs and societies) exist within and across educational institutions



POST-SECONDARY SCHOOLS

Opportunities

- Use existing networks to provide presentations
- Engage relevant departments and disciplines in targeted activities
- Provide scholarships & grants
- Participate in job fairs to promote the organization and the work you are doing
- Organize relevant panel discussions and symposia for students in Canada and from other countries



SECONDARY SCHOOLS

Opportunities

- Help establish and support after school science clubs, fairs, camps
- Develop a digital teachers tool kit
- Interactive traveling road show facilitated by younger NWMO staff





ACCESSING YOUNG ADULTS IN NON-SCHOOL BASED POPULATIONS

Key Requirements:

- Participate in existing events & sub-communities to extend reach
- Providing tactile, interactive and multi-media opportunities



ACCESSING NON-SCHOOL BASED YOUNG ADULT POPULATIONS

CURRENT REALITY

- 50% of the youth population do not attend post-secondary school
- To engage a geographical community it is important to engage the sub-communities within it
- Young adults do not participate in traditional engagement activities such as town hall meetings
- Young adults are pulled in a number of directions and have limited time



ACCESSING NON-SCHOOL BASED YOUNG ADULT POPULATIONS

OPPORTUNITIES

- Participate in local community activities and popular events
- Tactile activities which include multi-media components
 - A mobile/interactive trailer that allows individuals to follow & experience the fuel cycle
 - Virtual tour of a DGR
 - Allow people to see and touch a bundle
 - Panel discussions
- Engage larger networks
- Help to explore and foster community well-being by sponsoring local projects





ABORIGINAL CONSIDERATIONS



ABORIGINAL CONSIDERATIONS

- Not all Aboriginals identify as Canadian
- Aboriginal communities place the focus on the group not the individual
- NWMO needs to put in the mechanism for Aboriginal youth to engage with the organization on this issue
- The process for engaging Aboriginal youth will need to be culturally sensitive and follow traditional learning
 - NWMO will need to engage Aboriginal elders to speak to Aboriginal youth
 - NWMO will require different tactics for accessing on and off reserve youth
 - Any tactics will need to take into account the demographics of Aboriginal youth e.g. young families
- NWMO needs to set up a forum to engage Aboriginal youth to develop a specific Aboriginal youth strategy & message





SUMMARY RECOMMENDATIONS

KEY RECOMMENDATIONS

Recommendation:

- Revise communications materials to be more young adult friendly
- Use animation to help to bring to life the more technical aspects
- Increase the interactive capabilities of the NWMO site and harness social networking
- Ensure community engagement plans includes strategies to engage youth in and out of the education system



FUTURE PARTICIPATION OF THE YOUTH ROUNDTABLE

Bring the group back together

- Involve youth in existing NWMO activities e.g. multi-party dialogues, citizen panels
- Bring the group back together annually to review implementation of our strategy
- Identify opportunities to link “Roundtable Aboriginal” youth with other Aboriginal initiatives

Engage the group in revising the communications material/webpace

- Help to revise communication materials/move into a review board capacity
- Become a member of a Facebook group and invite friends to participate
- Write for an online blog

Engage the group in community outreach

- Involve youth in on-going information sessions & assist with local planning of info sessions
- Link to other youth in a province considering hosting a DGR
- Engage community organizations to distribute NWMO info packs & be available as a contact person
- Start to work in our community on a peer to peer model and interact with youth on behalf of NWMO

