Public Engagement on Draft Transportation Planning Framework

NWMO-REP-06310-0205 August 2021

Hill + Knowlton Strategies

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ABSTRACT

Title: **Public Engagement on Draft Transportation Planning Framework**
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Abstract
In 2020, the NWMO commissioned Hill + Knowlton Strategies to lead Public Attitude Research and engagement activities to support NWMO's engagement on a draft Transportation Planning Framework.

The primary objective of this project was to engage with a cross-section of stakeholders, including the public, to elicit and gather feedback on a draft transportation planning framework for the movement of used nuclear fuel.

The engagement methodology consisted of two separate online deliberative surveys, one based on a random sample of 1,000 Ontarians and a second survey that was open to everyone. The surveys were complemented by a series of seven workshops: four with residents of Ignace Ontario, one with first responders from the Ignace area, one with representatives of current and former siting communities and a final one with members of the Ontario Good Roads Association (OGRA).

All engagement participants received fact-based information about the transportation of used nuclear fuel, along with key parts of the draft framework for review and comment.

The **Public Engagement on Draft Transportation Planning Framework** presents findings from the workshops and surveys.

These research findings as well as ongoing conversations with communities involved in the siting process and others that are interested, will be used to refine the NWMO's draft transportation planning framework for the APM process.

Public Engagement on Draft Transportation Planning Framework

Final Report

August 30, 2020

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Executive Summary

Objective and Methodology

The primary objective of this project was to engage with a cross-section of stakeholders, including the public, to elicit and gather feedback on a draft transportation planning framework for the movement of used nuclear fuel.

The engagement methodology consisted of two separate online deliberative surveys, one based on a random sample of 1,000 Ontarians and a second survey that was open to everyone. The surveys were complemented by a series of seven workshops: four with residents of Ignace Ontario, one with first responders from the Ignace area, one with representatives of current and former siting communities and a final one with members of the Ontario Good Roads Association (OGRA).

All engagement participants received fact-based information about the transportation of used nuclear fuel, along with key parts of the draft framework for review and comment.

Key Findings

The results of the engagement strongly suggest that the draft version of the planning framework is very well aligned with what participants think is important in planning the transportation of used nuclear fuel. There is much commonality in the views of participants, with differences being more a matter of emphasis and interest:

- Compared to others, Northern Ontario participants tend to focus on infrastructure, especially roads.
- First Responders are interested in their roles and responsibilities under various scenarios.
- Participants from current and former sitting communities are keen to hear about community engagement.
- Representatives of OGRA also highlight the importance of the NWMO engaging with municipal governments and recommend that resources be provided for doing so.
- Members of the public tend to focus on issues associated with the day-to-day transportation of used nuclear fuel (e.g., responsibilities, hiring, vetting, training, accountability).

Planning Requirements and Priorities

Feedback on the framework's 11 requirements was obtained from both surveys and all workshops. Taken together, the input strongly suggests that participant priorities and values are well reflected in these requirements. Most notably, all 11 requirements were rated as being important by a large majority of survey participants (i.e., importance ratings of 79% to 98% across the 11 items in the "open" survey and 86% to 93% in the general public survey). In addition, the very small percentage of "don't know" responses in both surveys, coupled with analysis of comments to open-ended questions and from the workshop participants, indicate that all the requirements are clear/easy to understand. A few suggestions for improvement were provided. These are discussed in the last section of this summary.

Objectives and principles

Overall, there is strong alignment between the draft framework's objectives and principles and engagement participants' thinking about what should guide used fuel transportation planning. In the surveys all seven items were rated as important by at least 79% of participants. Feedback from the workshops was also very positive, with many participants emphasizing the importance of community engagement. Indeed, several suggested that community engagement be more explicitly recognized in various sections of the framework, including as part of the objectives.

Other framework elements

Feedback on three other framework elements (i.e., protecting the environment, being inclusive and selecting modes and routes) was obtained in the "open" survey, and to some extent, from the workshops. In all cases, the feedback was qualitative (in the form or written or verbal comments):

- **Protecting the environment**: Overall, the draft framework responds directly to the environmental concerns that participants raised throughout the surveys and workshops. Use of the word "minimize" in two of the items, however, is problematic for several people because it suggests the inevitability of harm to the environment. In response some suggested that the possibility of using mitigation strategies to achieve net zero environmental impact.
- **Being inclusive**: Most of the comments from the "open" survey reinforced the importance of engaging with people, particularly communities along the route, Indigenous peoples, and given the multi-generational nature of the project, young people.
- **Technical considerations for the selections of modes and routes**: Many participants raised questions about this aspect of transportation planning and/or indicated a preference for a particular mode (most often rail). Quite a few reiterated earlier comments about the importance of keeping shipments away form population centers.

Framework implementation

Workshop participants were invited to provide feedback on three aspects of framework implementation: 1) collaboration and shared decision-making, a readiness checklist, and 3) key milestones and steps. A summary of key findings follows:

- **Collaborative and shared decision-making**: There was consensus on the appropriateness and wisdom of continuing to involve the public and other stakeholders (e.g., Indigenous communities, communities along the route) in shaping transportation planning over the next two decades. Drawing on their own experiences in learning about the project, several participants suggested that the methods of engagement should be "creative", especially where youth are concerned (e.g., virtual learning).

Some participants, notably those in the current and former siting community workshop, recommend the NWMO engage with communities along the route now rather than waiting for the conclusion of site selection. Similarly, some OGRA workshop participants highlighted the importance of engaging with municipal public servants, as well as elected officials.

On the question of ongoing reporting and continuous improvement, many felt that the most important aspect to monitor pertains to incidents, impacts and mitigations. Some also suggested that the NWMO monitor and report on community engagement.

- **Readiness checklist:** Overall, the feedback offered by workshop participants was very positive. The concept of a checklist has intuitive appeal as it responds to the questions and concerns raised earlier in the sessions (e.g., awareness and education program, first responder training, emergency response planning). The "safety audit" received the most attention as it responds to a key concern, particularly among Northern Ontarians.

- **Key milestones and steps:** The chart included in the framework is effective in conveying the long-term nature of the planning process and highlighting the sequence of events. Workshop participants agreed that Steps 2 and 4 provide opportunity for the transportation plan to be shaped by the public/affected communities, but some also suggested that more detail be added to the community engagement sections.

  There was some surprise, including among first responders, that the NWMO's capacity building program for first responders is scheduled to begin only two years prior to the start of used fuel transportation. It is clear some participants had assumed that their community would benefit earlier from improved first responder training, resources, equipment, etc.

In sum, the engagement results indicate that the transportation planning framework requires only minor refinements and clarifications. The most obvious need is for it to provide more emphasis and detail with respect to community engagement.

1.0 Background, objectives and methodology

1.1 Background and objectives

The used fuel transportation program is a major part of Adaptive Phased Management (APM), Canada's plan for the safe, long-term management of used nuclear fuel. Within the next 25 years, the Nuclear Waste Management Organization (NWMO) will start to move Canada's used nuclear fuel from licensed interim storage facilities to a deep geological repository (DGR).

The draft planning framework for the transportation of used nuclear fuel is founded on several years of dialogue involving interested Canadians, Indigenous peoples and organizations. Based on the identification of common ground, this evergreen document embodies the objectives, principles and expectations that should inform decision-making around transportation planning. It also outlines an approach to implementation (e.g., for continued public involvement in shaping the framework).

The emerging panning framework consists of the following six elements:

The primary objective of this project was to engage with a cross-section of stakeholders to gather input on the draft planning framework. The feedback contained in this report will be used by the NWMO to refine the draft document. The results will also help guide the development of related communications.

1.2 Methodology

The methodology consisted of two separate online deliberative surveys, complemented by a series of seven workshops. A common set of issues was examined across engagement methods, albeit with some variation in emphasis and slight differences in the materials on which the participants provided feedback.

The engagement methods, including a profile of participants, are described below. All materials used to gather feedback are appended to this report, including questionnaires, the workshop facilitation deck and participant workbook.

1.2.1 Online deliberative survey (open to all)

This survey, which we refer to as the "open" survey throughout the report, gathered feedback on five elements of the planning framework, using both closed and open-ended questions. The survey is called "deliberative" because it began by asking participants to first consider a significant amount of fact-based information about the transportation of used nuclear fuel and APM, including answers to basic questions such as:

- What is used nuclear fuel?
- How is used nuclear fuel managed now?
- Is there a plan for dealing permanently with Canada's used nuclear fuel?
- How will the used fuel be transported to the repository location?
- Has there even been an accident involving the transportation of used nuclear fuel?

A modular approach allowed participants to give feedback on as many of the five elements as they wanted to (see Appendix A for the questionnaire).

This survey, launched on August 18, 2020 was accessed through the NWMO website. It was open to all. A total of 339 people provided feedback through the survey.[1]

1.2.2 Online deliberative survey (random sample of 1,000 residents of Ontario)

A second deliberative survey was conducted with a random sample of 1,000 residents of Ontario to provide: 1) an additional source of feedback on the draft planning framework, and 2) a point of comparison to the results of the "open" survey.

The survey questionnaire was essentially identical to the "open" survey questionnaire. The only differences were that it was shorter and focused on obtaining feedback on only two framework elements: requirements and objectives and principles (see Appendix B for the questionnaire).

This survey was conducted from August 31 to September 8, 2020. The data was weighted to ensure representativeness by age, gender and region of Ontario. An associated margin of error for a probability-based sample of n=1,000 is ±3.1%, 19 times out of 20. The sample was provided by Leger Inc., which Canada's leading supplier of survey samples and a trusted Hill + Knowlton Strategies (H+K) partner.

1.2.3 Workshops

A third source of feedback on the framework came from seven workshops conducted from September 2020 to February 2021. Each workshop lasted between two hours and two hours and 30 minutes. A common facilitator's presentation deck was used (see Appendix C), along with a workbook containing five worksheets (see Appendix D).

As with the surveys, and consistent with past Public Attitudes Research (PAR), prior to delving into the transportation planning framework workshop participants were provided with fact-based information about APM and the transportation of used nuclear fuel. The sessions were facilitated by one or more H+K consultants and one or more NWMO officials served as technical expert(s), providing points of clarification and additional information, as needed. Three workshops were conducted in-person, three were held virtually, and one workshop utilized a hybrid in-person/virtual approach.

The workshops generated feedback on two framework elements: requirements and objectives and principles. Potential approaches to framework implementation were also examined, including:

[1] 339 provided feedback to at least one aspect of the draft framework.

- Collaborative decision-making;
- A readiness checklist, to regularly assess preparations to initiate the transportation program; and
- A roadmap of key milestones and steps.

Approximately 80 people participated in the workshops. The NWMO identified and invited participants. H+K provided logistical support (i. e. scheduling the session, confirming attendance, sending workshop materials to participants, technical support during the sessions).

The number, location and composition of the workshops is as follows:

- Three in-person workshops and one virtual workshop held with residents of Ignace Ontario. These sessions included four to seven participants.
- One hybrid in-person/virtual workshop held with 17 first responders from the Ignace area.
- One virtual workshop held with 24 representatives of current and former siting communities.
- One virtual workshop with about 20 representatives of the Ontario Good Roads Association (OGRA).

Workshop participants' level of familiarity with the transportation of used nuclear fuel and APM varied from moderate (i.e., in the case of some first responders and members of the public) to high (i.e., with respect to some elected official and current/former CLC members).

1.2.4 A profile of deliberative survey participants

Several survey questions were aimed at understanding ***who*** responded to the surveys (e.g., demographics, level of familiarity with the transportation of used nuclear fuel and APM).

Demographic characteristics

Exhibits 1 and 2 provide an indication of who responded to the two surveys. As noted earlier, the Ontario public sample was stratified and then weighted to ensure representativeness by age, gender, and region of Ontario.

Almost all respondents to the "open" survey are residents Ontario, with overrepresentation from Southwestern and Northern Ontario. Exhibit 2 also reveals that a significant number of respondents (36%) work in the nuclear industry.

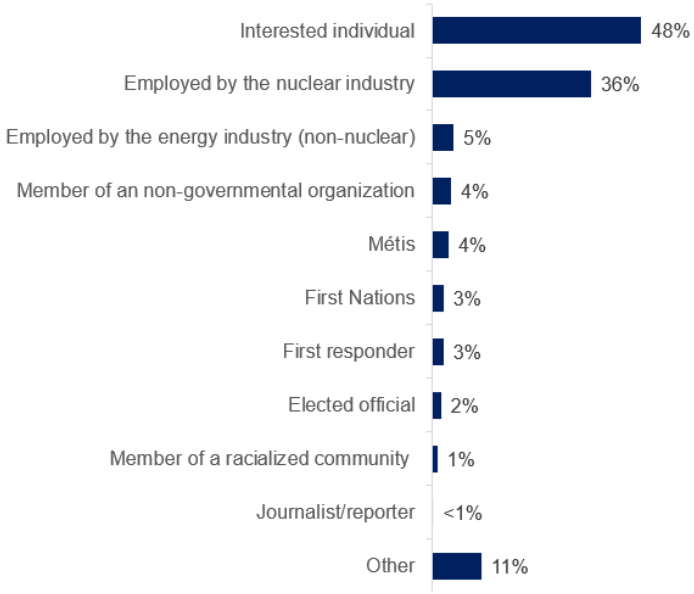
Exhibit 1 - Respondent Profile of Ontario Public Survey Participants

48% 52%

Age	18-24	25-34	35-44	45-54	55-64	65+
	11%	16%	16%	19%	17%	21%

Region (Ontario)	Eastern	Central	GTA (non-Toronto)	Toronto	Southwestern	Northern
	15%	22%	25%	11%	20%	7%

Exhibit 2 - Respondent Profile of Open Survey Participants



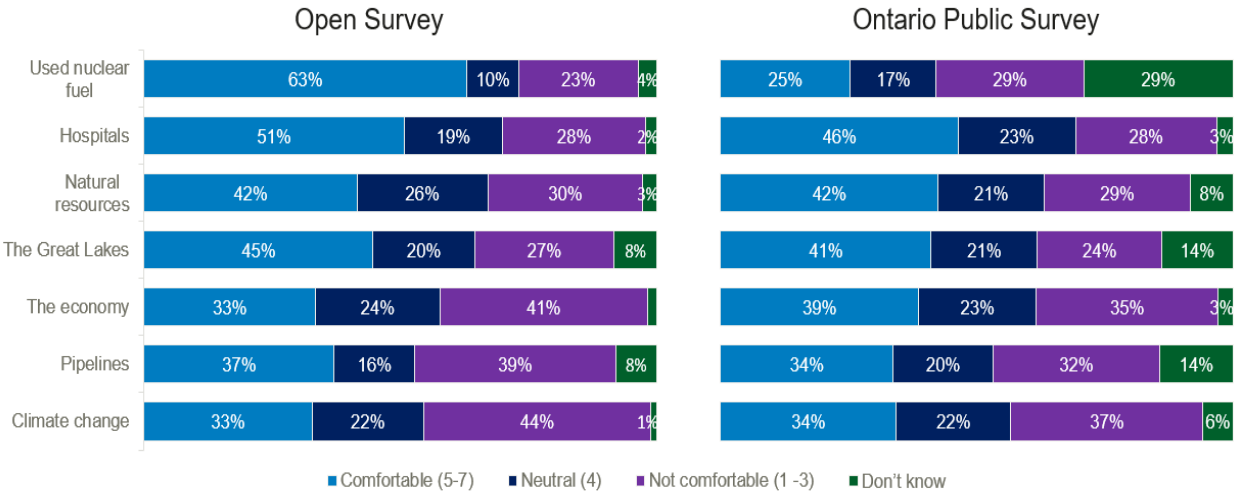
Region (Ontario)	
Eastern	11%
Central	10%
GTA	25%
Southwestern	27%
Northern	22%
Outside Ontario	4%

Q. Which of the following best describe you? Base= All Respondents, n=339

Overall, respondents to the "open" survey have much more definitive and positive views about the current management of used nuclear fuel compared to "sampled" members of the Ontario public. They also appear to be much more familiar with the issues.

As shown in Exhibit 3, we see that collectively, sampled Ontarians express various levels of comfort with the way in which used nuclear fuel is being managed in Canada, including a relatively high proportion (29%) indicating "don't know". In contrast, most (63%) of respondents to the "open" survey are comfortable with the way used nuclear fuel is being managed, while 23% are not comfortable. We also note that only 4% opt for "don't know".

Exhibit 3 - Comfort with how used nuclear fuel is being managed



Q. Which of the following best describe you? Base= All Respondents, Open survey, n=339, Ontario public survey, n=1,000

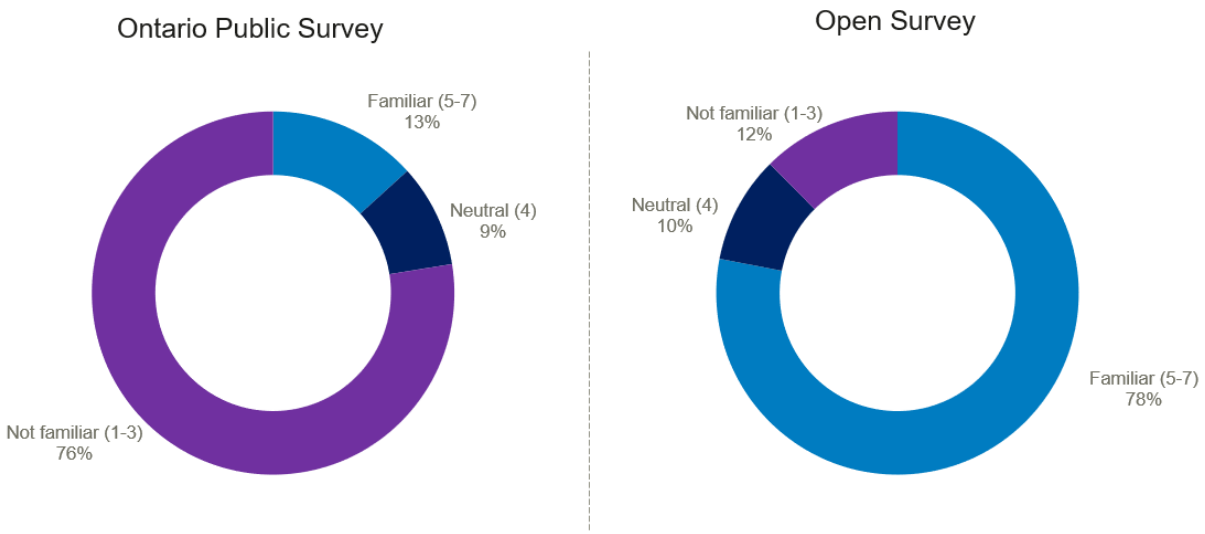
This same question was asked in a random sample survey of the Ontario public conducted for the NWMO in March of 2019. Comfort with the way in which used nuclear fuel is being managed is unchanged: in both surveys, 25% said they were comfortable. In 2019, 34% rated themselves as being uncomfortable, compared to 29% in 2020, while the proportion of "neutral" views and "don't know" responses are also essentially the same (14% and 27% respectively in 2019 compared to 17% and 29% in September 2020).

This question was also replicated at the end of the 2020 Ontario public survey. In other words, it was asked twice – once at the very beginning and a second time at the very end. This allowed NWMO to assess the impact of exposure to fact-based information and key parts of the framework on the public's level of comfort. The results of this simple yet compelling experiment are presented in the final section of the next chapter.

After respondents had the opportunity to review fact-based information about the transportation of used nuclear fuel and APM, they were asked to rate their prior level of familiarity (i.e., "before today") with Canada's plan for the long-term management of used nuclear fuel. Once again, there is a significant

contrast between the two sets of respondents; in fact, the results are mirror images. Only 13% of the sampled Ontario public respondents describe themselves as familiar, compared to 78% of the respondents to the "open" survey (see Exhibit 4).

Exhibit 4 - Familiarity with the issues



Q. Before today, how familiar were you with Canada's plan for the safe long-term management of used nuclear fuel? Base= All Respondents, Open survey, n=339, Ontario public survey, n=1,000.

1.3 Organization of this report

The detailed engagement findings are discussed in Chapter 2. Feedback on the emerging framework's elements are presented sequentially, each in its own section. As noted earlier, two framework elements: principles/requirements and objectives were examined across all the engagement methods, including both surveys and the workshops. Input on three other framework elements (i.e., protecting the environment, being inclusive and selecting modes and routes) was obtained from the "open" survey. Feedback on potential approaches to framework implementation, which only came from workshop participants, is discussed in the final sections of Chapter 2.

The third and final chapter is devoted to conclusions and suggestions for refining the draft framework. Implications for outreach/communications are also discussed.

2.0 Detailed engagement findings

Overall, there is much more commonality than differences in the views of participants. The values expressed, the questions raised, and the suggestions offered cover much of the same ground. Differences lay mainly in the level of detail that participants provide, which reflect their varying depth of familiarity with the NWMO, APM and the transportation of used nuclear fuel.

In terms of differences – which are differences in emphasis/interest – Northern Ontario participants tend to focus on infrastructure, especially roads. First Responders are most interested in roles and responsibilities (i.e. what will be expected of them in various scenarios). Participants from current and former sitting communities are keen to hear about how and when the NWMO will engage with communities along the transportation route. Representatives of OGRA highlight the importance of engaging with municipal governments throughout the planning and implementation process and provided suggestions to help the NWMO do so. Members of the public often wonder about the day-to-day transportation of used nuclear fuel (e.g., responsibilities, hiring, vetting, training, accountability). They also are curious about routes.

Overall reaction to the draft transportation planning framework is very positive. It was apparent that the information is clear and understandable to participants, and that core elements resonate with them: the primacy of safety, commitment to transparency and engagement, adaptiveness, drawing on the best available knowledge.

Notwithstanding the framework's alignment with what participants deem to be important in planning the transportation of used nuclear fuel, several questions were asked, and suggestions offered. As discussed below, these pertain mostly to community engagement, environmental protection (e.g., "minimising" impacts), and the state of transportation infrastructure (and prospects for improvement). There were also questions about roles and responsibilities in several areas (e.g., emergency response, monitoring and repairing transportation infrastructure, day-to-day transportation of used fuel).

Several participants, notably in the "open" survey, expressed strong opposition to the transportation of used nuclear fuel, or more often, to APM, and/or nuclear power in general. For most of these participants, it was not a question of making changes to the framework because they rejected its premise.

2.2 Initial key questions and concerns

As noted in the engagement methodology description, survey and workshop participants were provided with fact-based information about the transportation of used nuclear fuel and APM. As seen in Exhibit 4, most respondents to the Ontario public survey indicated that they were not familiar with this information, while most of those who responded to the "open" survey indicated the opposite. Familiarity with the issues among workshop participants varied, but almost everyone appeared to be at least somewhat familiar with the issues.

All engagement participants were invited to pose questions and/or voice concerns about the transportation of used nuclear fuel and related issues ***before*** proceeding to a consideration of the framework elements. The most common questions and concerns are elaborated below.

Will improvements to transportation infrastructure be made?

One of the main themes to emerge from the "open" survey and the workshops is the connection people see between the state of transportation infrastructure and the safety of used fuel shipments. The main concern is that current infrastructure -- especially roads, but also rail lines -- is not sufficiently robust. Thus, most of the questions asked focused on the prospects of infrastructure improvement, and the role that the NWMO and various levels of government might play in making improvements:

- "Would the Province be able to work with NWMO to twin highways (e.g., from Sault Ste Marie to Ignace?"
- "Specifically, for the Northwestern Ontario location for consideration, there have been a number of fatal semi truck accidents (4-5 people died in the past 2 weeks). I think the highway should be twinned to offer passing lanes and reduce # accidents there for lowering risk of accidents involved with nuclear fuel."
- "The current state of our roads and the amount of traffic is a main concern."
- "Has there been a study done? It is a pretty treacherous highway, between even Sault Ste. Marie to Ignace because it's not like the 401, so a feasibility study done on the risk of transport on the highway?"

Will transportation planning and package design and testing take extreme weather conditions into account?

For many people, the issue of weather is closely related to transportation infrastructure, especially among workshop participants living in Northern Ontario (e.g., driving in winter conditions, frequent road closures). This led some to ask if extreme weather conditions had been considered in the design and testing of used fuel transportation packages:

- "In cold weather metal breaks."
- "-20 to -50 is a big temperature gap."
- "Travelling from southern Ontario to northern Ontario is a big temperature difference (snowing here – sunny there)."

Other questions about the design and testing of the transportation package included:

- "Is there any testing being done to see how much it takes to actually open the transportation package up?"
- "Have these tests ever been done simultaneously? What would happen if there is an explosion and then it becomes crushed?"
- "I noticed the drop tests are only done at nine meters. Well, when you are driving on the highway near Nipigon, the drop off the highway is much more than nine meters. Why is it only done at this height?"

How will affected communities learn about transportation and other aspects of the project?

The importance of proactive, clear and regular education and communications is a consistent theme. In the initial stages of the surveys and workshops, some participants wondered whether communities along potential routes had been made aware of the project, and if not, when and how would communications take place?

In a similar vein, some participants, notably among those who responded to the "open" survey, had questions about whether communities or groups could delay, alter, or even stop transportation.

- "When this happens, do they let the public know? Also, there's not a lot of info available today for the public to understand this issue better."

- "Will any updates or changes to the plan be shared with the public, particularly the communities that come into the most contact with nuclear power at the production or transportation stages?"

- "I fear that uninformed and misinformed Canadians will be convinced by their own prejudices, or more worrisomely, by misguided activist agendas, to oppose any transportation plan regardless of its safety."

- "Will the Municipalities that the waste will be transported through have a referendum to vote if the community is willing to allow the waste to be moved through it. Can a Municipality prevent the transportation of fuel through their borders?"

- "The information that is given out on this matter is one-sided, using only 'your' experts. I demand to see information, data, and 'other' experts that are not biased and paid by NWMO to say what the unbiased truth is. Also, consultation does not constitute consent. As an Indigenous person with personal and professional interests in both locations, I am fully aware that the only consultation going on is with 'elected band council members' who do not speak for me, nor do they speak for 90 per cent of Indigenous People who live and work on these lands."

Participants in the current and former siting communities workshop , as well as those participating in the OGRA workshop, also enquired as to how and when NWMO would communicate with communities. More specifically, they had questions and suggestions about engagement mechanisms and approaches to collaboration/working together. Some also asked about funding, specifically: Is it possible that local governments would have to bear some costs related to the transportation of used fuel?.

Who will be responsible for the day-to-day transportation of used nuclear fuel?

There were several questions about who would be responsible for transporting the used fuel, including how drivers/conductors would be hired, vetted and trained. There were also questions about whether the organization tasked with transporting the used fuel would be private sector, public sector, or a combination. It is fair to say that participant expectations are high the accountability, quality and sophistication of the transportation planning, logistics and execution.

- "Transport drivers will need better training when it comes to transporting used nuclear fuel."

- "They need elite-level training."

Other transportation planning-related questions and concerns

Other questions and concerns came primarily from participants in the Ontario public survey. In essence, they wondered how the transportation planning and implementation would protect the safety and security of people and the environment, and how the selection of modes and routes would reflect those concerns.

- "I'm more concerned about ensuring security from outside interference during transport than the physical security in case of accidents."
- "What transportation mode will be used?"
- "I would be concerned if used nuclear fuel had to be transported on busy highways or pass through heavily populated areas like the 401 in Toronto. I think regular car and truck traffic should be blocked while nuclear fuel is passing through the areas, to minimize accidents. If transported by train, I would also be concerned because it would likely pass through populated areas and would be too close to passenger trains."
- "Are transports made during times of the least amount of interaction with the public and are transports clearly marked and escorted to dump sites? Are transports made during times of the least amount of interaction with the public and are transports clearly marked and escorted to dump sites?

Questions and concern pertaining to broader aspects of APM/DGRs, the sitting process and the use of nuclear power past, present and future.

Several questions and concerns pertained to broader issues, such as use of a DGR for the long-term management of used nuclear fuel and the rationale for eliminating potential siting communities. Most of these comments came from participants in the "open" survey:

- "NWMO needs to rethink its whole plan and stop calling it Canada's plan. It's a dinosaur of an idea. We should not be burying this waste."
- "It's not necessarily the transport of the nuclear fuel, although I am concerned. I'm not a supporter of the DGR."
- "The plan is excellent. The issue is settling on a site."
- "I continue to believe strongly that the NWMO has eliminated Elliot Lake as a feasible site for storing nuclear waste without examining all relevant issues regarding this matter." Are there alternative approaches for managing used fuel, such as recycling?

2.3 Feedback on basic requirements – what needs to be considered in transportation planning

Over the course of several years of dialogue (2017-2020), the NWMO has observed that engagement and research participants share common objectives, principles and expectations when thinking about a planning framework for transportation of used nuclear fuel. From these observations, a series of

potential basic requirements were developed and refined. The draft planning framework includes the following 11 basic requirements.

- **Safety is the primary consideration:** Safety needs to be the first consideration.
- **Protecting the environment:** We need to ensure that the plan minimizes impact on the environment.
- **Security:** We need to plan for and address possible threats.
- **Emergency response planning:** Planning and preparation for potential emergency scenarios.
- **Drawing on international lessons learned:** Informed by the best available knowledge and expertise.
- **Ensuring that the plan is adaptive:** The plan needs to be able to accommodate changes in science and technology.
- **Training:** The highest standards must be met in areas such as employee qualifications, security screening, training and certification.
- **Monitoring, tracking and auditing:** Keeping track of containers, evaluating and auditing procedures and processes, and holding people accountable.
- **Communication, education and engagement**: People, particularly those living in communities along the route, have a "right to know" about the project.
- **Respectful relations with First Nation and Métis communities:** Working positively and respectfully with First Nation and Métis communities is of utmost importance.
- **Ensuring program sustainability:** The program must be on a solid financial and political foundation.

Feedback on these 11 requirements (sometimes referred to as "priorities") was obtained from both surveys and all workshops.

Survey participants were asked to read a definition of each requirement and then rate what they considered to be its importance for planning the transportation of used nuclear fuel. A subsequent open-ended question allowed them to provide feedback on individual requirements. A last open-ended survey question asked participants if they could think of any other planning requirements or considerations that should be addressed. In other words, was anything missing?

The approach used to gather feedback from workshop participants was similar but was solely qualitative in nature. Using a common workbook, participants reviewed the 11 requirements and then provided feedback based on the following questions:

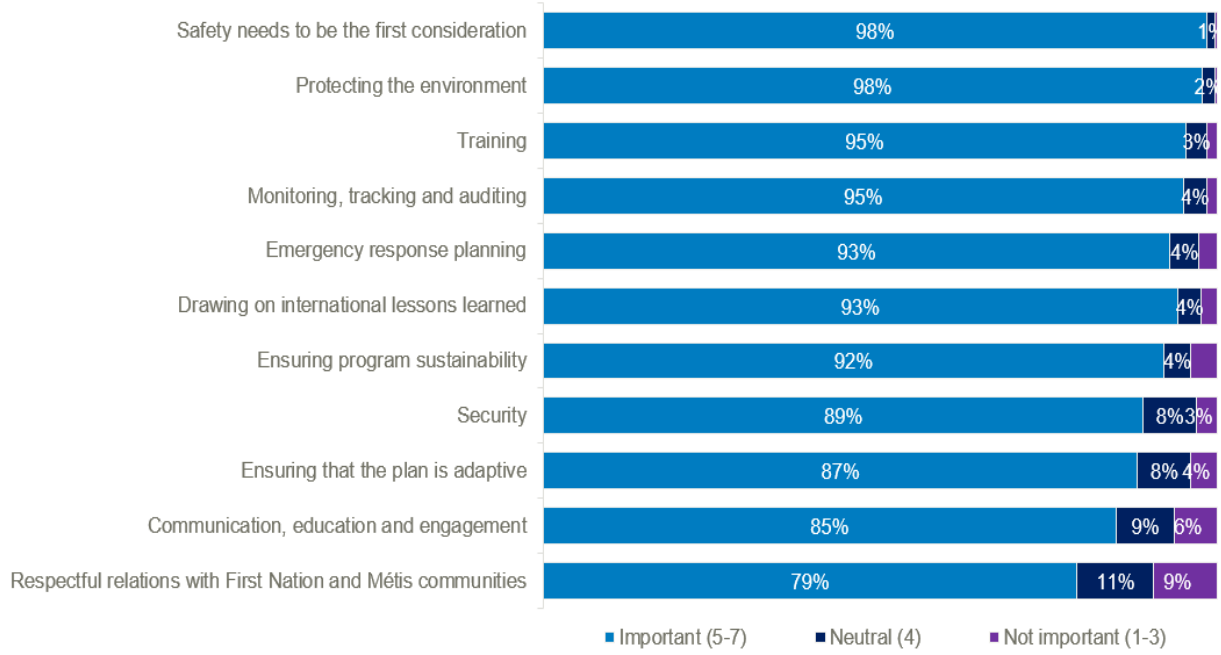
- Are these the considerations that are most important to you?
- Is anything missing?
- What questions come to mind?

Taken together, participants' feedback strongly suggests that the 11 requirements reflect their thinking about what should be considered in planning the transportation of used nuclear fuel. Detailed results, including suggestions for improvement, are presented below, beginning with the quantitative survey results.

An analysis of importance ratings

The results presented in Exhibit 5 show that all 11 requirements were rated as being important by the vast majority of people who participated in the "open" survey (i.e., importance ratings of 79% to 98% across the 11 items). In addition, the very small percentage of "don't know" responses suggest that all the requirements are clear/easy to understand.

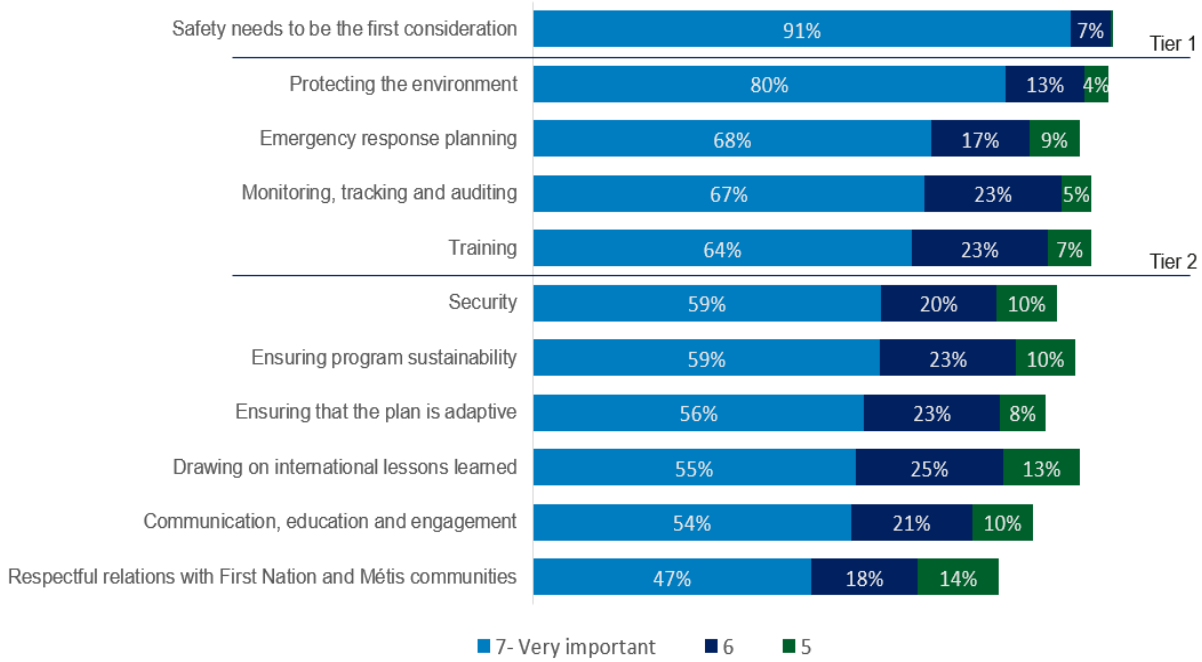
Exhibit 5- Relative importance of 11 transportation requirements (Open Survey)



Q. Thinking about what is important in planning the long-term transportation of used nuclear fuel, how important is it that the transportation plan addresses each of the following. Base: All Respondents, n=339

A more detailed analysis based on points 5, 6 and 7 of the 7-point scale (presented in Exhibit 6), reveals a three-tiered hierarchy of importance. ***Safety*** stands alone in the top tier, followed by a second grouping consisting of four requirements, including ***Protecting the environment*** and ***Emergency response planning*** at the top. Other than ***Security***, the third tier includes requirements that focus on communications and engagement, as well as less tangible aspects of planning (i.e., adaptability and sustainability).

Exhibit 6- Relative importance of 11 transportation requirements (Open Survey)



Q. Thinking about what is important in planning the long-term transportation of used nuclear fuel, how important is it that the transportation plan addresses each of the following. Base: All Respondents, n=339

Results from the comparative survey of Ontarians are very consistent with those produced by the "open" survey:

- All 11 requirements were deemed important by almost all participants, with ratings ranging from 86% to 93%.
- More tellingly, detailed analysis produces almost the exact same three tiers of relative importance that emerged from the "open" survey, with ***Safety*** in a top tier of its own and requirements pertaining to engagement, communications and less tangible aspects of planning occupying the third tier.

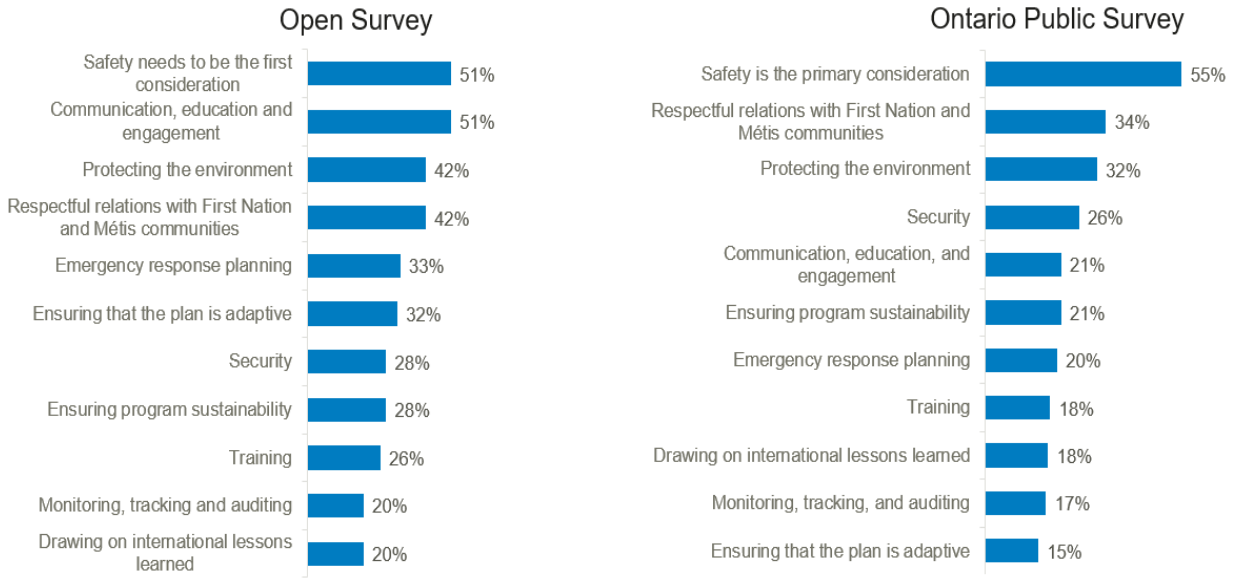
An analysis of qualitative feedback obtained for each of the 11 requirements

Participants in both surveys were given the opportunity to comment on as many requirements as they wished. Most participants chose not to provide feedback, while at the other end of the spectrum (I am not clear what you mean by "at the other end of the spectrum" – others may have the same reaction), others commented on several requirements.

Workshop feedback is consistent with the results from the surveys. Overall, there was strong agreement that the draft set of requirements was both comprehensive and clear: "They look good, I don't see anything really to comment on, it seems like most things have been considered."

Exhibit 7 shows how much feedback each requirement received from participants in the "open" survey and survey of the Ontario public. ***The percentages should be read as follows: e.g., of the Ontario public participants who provided feedback to at least one requirement, 55% wrote about safety.***

Exhibit 7 - Relative volume of comments provided on each requirement



Q. Would you like to provide feedback on any of the requirements? If so, please click on a requirement to open a comment box. You can provide feedback on as many as you wish. Base: Respondents who answered at-least one question. Open survey, n=339, Ontario Public Survey, n=1.000.

Safety received the most comments in both surveys, with slightly more than half of participants who provided feedback on at least one requirement, choosing to comment on this one. ***Protecting the environment***, as well as ***Communications, education and engagement*** and ***Respectful relations with First Nations and Métis communities***, also elicited a relatively higher level of input from participants in both surveys.

The feedback received from both surveys and the workshops is very consistent. In many instances, participants used the opportunity to voice support for the inclusion of one or more requirements. In other instances, some provided examples of what the application of a requirement would (or should) look like (i.e., in practice). A third type of feedback consisted of advice about aspects to focus and/or things to avoid.

The integrated feedback received from all participants for each of the 11 requirements is summarized below.

Safety is the primary consideration: Safety needs to be the first consideration.

Most of the comments approved of safety being the first consideration for planning the transportation of used nuclear fuel, with some indicating that they were reassured by the emphasis being placed on it.

- "This is a no-brainer and must be top priority."
- "Working with something as threatening as nuclear energy... Yes, safety needs to be the first conversation."

Participants provided several examples of what they imagined or expected the practical application of this requirement would look like. Chief among these was the link participants saw between the state/quality of transportation infrastructure and public safety, with the expectation being that infrastructure would need to be significantly improved, particularly if shipments were to pass through Northern Ontario. Similarly, some noted that it will be important to take weather into account. Others highlighted emergency planning and response as key to ensuring safety. There were also some participants who took the opportunity to express the view that rail would seem to be the safest mode.

- "As stated in previous comment, considerations must be made for transporting over winter highway."
- "You want safety? Invest in infrastructure."
- "Safest way to transport is via railways. Also provides opportunity for infrastructure investment."
- "Having an evacuation plan (and for other situations as well) and at least 2 backup plans would be ideal. Also including regular and frequent tests on the safety systems, as the world has seen plenty of safety systems not working and employees and communities suffering the consequences."
- "Truck drivers fall asleep, wheels occasionally fall off, and truck drivers cannot account for other drivers and traffic on the roads, nor the road and weather conditions... rail would be best and safest."

A few respondents stressed the importance of communicating with the public in a manner that will reassure them about the safety of transportation.

- "People are going to worry if there is nuclear waste being transported through their community."
- "People need to hear that they will be safe in all matters and have a sounding plan in place that they can count on."
- "Safety is very important, but it is even more important to demonstrate to people that is safe."

Protecting the environment: We need to ensure that the plan minimizes impact on the environment.

Most of the comments written about this requirement stressed the importance of ensuring that transportation planning aims to protect the environment. In this sense, this requirement resonates.

- "This is of utmost importance, as the health of the air, water and soil affects all humans. We are not separate from our environment, and any damage to the environment damages us as well."

- “Protecting the environment is important because we want to make sure that we don't pollute for the future generations.”
- “I would tie this with safety for #1 priority.”

Use of the term “minimizes”, however, raised some concerns, notably in the Ontario public survey and during the workshop with current and former sitting communities. Those who commented on it were worried that it meant that the NWMO saw some environmental damage as inevitable. For some, this disconcerting possibility led them to wonder if the application of mitigation strategies could allow transportation to have “net zero” impact.

- “'Minimizes Impact' - The goal should be ZERO impact. Realizing this is no doubt next to impossible 'minimize' needs to be articulated.”
- “This is a logical contradiction. If the transport and storage program is safe… It should have zero environmental impact beyond the construction of the facility.”
- “I am not sure how safe 'minimizing the impact' really is.”
- “Not merely minimize, but have NO impact on the environment.”
- “Not only should the plan minimize impacts on the environment, but it should also outline how it plans to restore the impact that it does make.”

Some participants, mainly among those who responded to the “open” survey, expressed doubts and concerns about the NWMO’s commitment and/or ability to protect the environment, either during transportation or in other parts of the project (e.g., DGR construction). For some of these participant, the protection of water, especially the Great Lakes, was identified as a salient concern.

- “If the location is South Bruce, it is much too close to the Great Lakes… The Community of South Bruce relies on aquifers for their water and we have no idea how the impact of this project will have on those freshwater sources that are very valuable to the community and farmland.”

- “This material needs to be transported as far as possible from Lake Huron so that it does not impact the lake if anything were to happen.”

Security: We need to plan for and address possible threats.

Most of the feedback on this requirement reflected expressions of support or approval for having a transportation planning framework that acknowledges potential security threats.

- “Yes, like terrorist threats.”
- “Terror threats are a possibility.”

The incorporation of security into transportation planning also sparked questions about the nature of threats and potential risks to the public and the environment.

- “What would happen if the shipment is attacked and an explosion happens?”

- “I'm not sure I completely understand the words 'security' and 'threats' in this context. Does this imply that someone (such as another country, or a domestic felon) might want to steal the used nuclear waste? Or is there a risk that it would become a target in some way?”
- “What kind of threats? Is used nuclear fuel useful in anyway, or is it just waste?”
- “WHAT IF ANY OF THE USED NUCLEAR FUEL IS STOLEN WHAT ARE THE CONSEQUENCES?”

There were a few questions about the coordination of threat assessment, security measures, and the challenges that this could pose given the array of organizations involved. A handful of participants also suggested that the security requirement should explicitly include cyber security.

- “I would be interested to learn which organizations will be involved and which government agencies.”
- “We have Nuclear Response officers, CNSC Transportation of Dangerous goods, Police, Military, etc. we will need coordination and command of these diverse security aspects. Or just one of them, the military, to cover all aspects, as an adjunct to their duties to protect our country.”

Emergency response planning: Planning and preparation for potential emergency scenarios.

The importance of emergency response planning was identified by participants at several points in the surveys and workshops, notably in the workshop with first responders. The following themes emerged from an analysis of comments.

Planning should be exhaustive; every potential accident and incident scenario should be planned for.

- “No matter how carefully things are planned, there is always the possibility of something going wrong. It is necessary to have a plan in place for unexpected events.”
- “This is the one worry I have. Planning never goes far enough. Follow through and community engagement in assistance needs addressing. Plans are more than paper or screens.”

First responders should possess the training and equipment to respond effectively and safely.

- “I was concerned about first responders responding to these types of accidents where used nuclear fuel is involved. However, I came to understand that there will be lots of training provided to them in order to safely deal with the issue at hand.”
- “Ensuring first responders in areas have proper training and funding for potential disasters.”

“Educating” communities along transportation routes about emergency response planning should reassure people and help instill confidence, particularly given that the average person’s assumptions might be more frightening than likely scenarios:

- “I think that point from earlier would be good to talk about like how, if a pellet got out, exactly how it would impact (time, distance, barriers, water). I feel a lot of people don’t know that the risk isn’t actually as bad as some may think.”

- "So we have had train derailments in the area so these small communities this might be travelling through, even though the risk is minimal, I still think we should have these discussions with these communities."
- All community members should understand this, and be able to speak about these types of things- it's their health and well-being."

For their part, first responders had questions about training and equipment, but perhaps the more common question centered on the division of roles and responsibilities between local first respondents such as themselves and others who would be involved (e.g., NWMO personnel, Canadian Transportation Emergency Center (CANUTEC)).

Some representatives of OGRA noted that municipal governments will want to know the details of emergency response planning (e.g., road closures, whether municipal bylaws would apply) given that many incident response activities fall within municipal jurisdiction.

Drawing on international lessons learned: Informed by the best available knowledge and expertise.

Consistent with past PAR, one of the first and most common questions that workshop participants had was about the nature of international experiences, and what Canada could learn from them. Also consistent with past research, there seemed to be an assumption that other countries are further along in implementing solutions for the long-term management of used nuclear fuel.

- "Given that other countries have already done this, how could one not carefully review their experiences? It's the responsible thing to do."
- "Learn from accidents that have happened in the world. Get experience from other as well."
- "Must take advise from Germany France and other Europe countries."

Several participants in the "open" survey encouraged the NWMO to learn from other countries' mistakes or lack of success. It was also apparent that these comments often pertained to APM as a whole, not specifically transportation.

- "We must look at the failures of other countries in their attempts to deal with nuclear waste. No country has had any successful plan to deal with this dilemma. This is one reason we must stop producing nuclear waste but phasing out the industry altogether."
- "Industry OPEX is absolutely essential. There are many other countries, like the US, that have been looking at this for years, and yet have made little progress. Why?"

Ensuring that the plan is adaptive: The plan needs to be able to accommodate changes in science and technology.

First, it's worth noting that the meaning of this requirement seemed clear to participants. This was not always the case during the initial iterations of PAR.

It is also fair to say that the concept of adaptive planning resonates with people. For example, workshop participants often pointed to recent changes in transportation technology (e.g., electric vehicles, use of drones for some commercial transportation) as evidence of this requirement's relevance. Some also raised the salience of adaptiveness when discussing the design of used fuel transportation containers.

- "DEFINITELY important given the longevity of the project - how would new technologies be introduced along the way = how would that impact on schedules and costs?"
- "The world could be a very different place than it is now. How will this adaptation involve these changes so future generations can understand & adapt it?"

Among participants in the "open" survey, comments often pertained to APM, and the hope that progress in science and technology would lead to the development of lower risk alternatives (e.g., recycling of used nuclear fuel).

- "We are less than 60+ years into the age of nuclear power. Although not supported by facts, it is my belief that innovative and new solutions will be found for spent fuel, such as a fuel for fast reactors. Therefore, we need to remain aware of developments for used fuel."
- "With the development of technologies like fast reactors could change how we deal with used nuclear fuel. Retrievability well into the future needs to be considered."

- **Training:** The highest standards must be met in areas such as employee qualifications, security screening, training and certification.

This requirement responds directly to the concerns and questions many participants expressed about the "human" dimension of transportation, and more specifically about what might be done to lessen the chances of human error.

Participants view transport truck drivers, and to a lesser extent, train conductors/operators as the most likely source of human error. . The hiring, vetting and training of drivers was a particularly important issue for Ignace workshop participants, many of whom felt that Northern Ontario roads are becoming increasingly dangerous, due in part to poor (unskilled or under skilled?) transport truck driving: "There is no question: the roads are getting worse, the weather is getting worse and transport drivers are getting worse."

The common theme running through almost all the comments from the surveys and workshops was an expectation that a high level of training will be provided to operators (e.g., drivers) and others employed in transportation. A few additional suggestions were made:

- "Is NWMO considering scholarships for people from hosting communities or those along transportation route that do wish to receive training and certification to aid in this endeavor? Will job opportunities be made available to these communities?"

- "A rational and coordinated training system by people who know what they are talking about, not outside contractors and flimsy computer based 'training ' exercises that don't test for anything but language acuity. Education level does not equate to ability or understanding."

In a similar vein, some respondents expected that that staff hiring requirements should far exceed the current industry standard.

- "The best, most qualified people are necessary to keep everything safe and secure while in transit."
- "Important to have the right people for the right job and that requires proper training."
- "Security – 'ensure the security of facilities, materials and infrastructure', this statement worries me because it needs to have individuals involved (e.g. employees, drivers that will be transporting the used nuclear fuel)."

Participants' comments and discussions about training, hiring and vetting often encompassed an overarching question of ***who*** will be responsible for transporting used fuel on a day-to-day basis? Would it be the NWMO, "the government", private companies/contractors, or perhaps a combination of these? While participants are not opposed to the use of private companies, (though some were) everyone does expect that special, customized approaches would be put into place.

The findings suggest that the question of who will be responsible for the day-to-day transportation of used fuel is one that the NWMO should try to answer in the next iteration of the planning framework.

Monitoring, tracking and auditing: Keeping track of containers, evaluating and auditing procedures and processes, and holding people accountable.

This requirement did not elicit many comments beyond approval of its inclusion in the framework.

- "This is extremely important, and attention must be paid to this, as well as regular monitoring of radioactivity in and around the transportation vehicles and storage facilities, in case of un-witnessed leaks or spills."
- "It is important that all of the containers make it to the storage destination and remain there to ensure that there is no accidental or deliberate use of the uranium."

A few participants approved of having accountability embedded in the requirement. At the same time, this accountability issue once more begged the question of who or what would be responsible for day-to-day transportation, as well as the broader issue of ultimate responsibility for transportation and the rest of APM.

- "Holding people accountable is important because they need to be responsible for what is going on."
- "Assumed part of the plan but what-beyond 'holding people accountable'-would be the consequences? Again considering the long timeframe - what if an investigation revealed that a problem stemmed from a 20 year old flawed design/engineering solution.....who would be held

accountable and what good would it do in the moment? It would no doubt come down to a battle over financial accountability...."

Communication, education and engagement: People, particularly those living in communities along the route, have a "right to know" about the project.

This aspect of the framework received more attention that most. NWMO's level of engagement and communications with communities along the route was highlighted as extremely important by participants in the current and former siting communities' workshop.

Consistent with past research, respondents collectively pointed to two aspects of this requirement: 1) being transparent and proactive with the public about transportation is the right thing to do, and 2) doing so should also increase the likelihood that the project will garner a sufficient level of acceptance. In other words, putting this principle into action is both the right and the strategically smart thing to do.

- "Absolutely, they need to know as much as possible about how the project will work, what are the risks, and how to mitigate them. However, once the project is running, communication/engagement should not be at the expense of security of specific shipments."
- "You'll get push back regardless. Education is key. All communities must have a full understanding."
- "I see a possibility of some nervous people setting up a strong backlash to the movement and storage. The people need to have been well prepared and informed for any activity that could Impact them."
- "There needs to be complete transparency. Nothing should be kept hidden from Canadians, but especially those who would be directly affected by this."

The personal relevance of this issue for some participants prompted questions about the current state of engagement, as well as what was being planned for the immediate future.

- "Have you informed the people along which the route might run? They need to have a say NOW . . . not after the plan has been approved. I am very close to the route along which the trucks might be running and I have not been informed by anyone."
- "'Right to know' needs to be defined, understood and agreed."

In a similar vein, participants in the Ignace workshops expressed appreciation about the information they had received about the project, including transportation (e.g., through the Learn More Center). This led some to wonder, however, whether the NWMO would be able to provide a similar level of information to other communities? If this should not be possible, they asked about what "informing and engaging" would look like elsewhere. Drawing on their experiences, suggestions for engaging with other communities included:

- "In-person sessions, particularly for seniors."
- "Use of the NWMO's 'mobile unit'."

- "Prioritizing youth engagement, given the intergenerational nature of the project. Also, the need to engage with you in creative ways (e.g., virtual education sessions, gamification)."

A few participants in the "open" survey wondered if communities would be able to "opt-out"/prevent used fuel from being transported, with some thinking they should, and others opposed to opt out clauses.

- "People in communities along the route need to agree on having waste transported not just informed. Being told under your 'right to know' is not democratic but should be enacted once there is that agreement. Otherwise the repository site should not go ahead."
- "Does everybody understand everything? some people will protest the colour of the sky. The public has the right to know that the problem is being taken care of, and that they are not in any danger. Try not to sound too smug when you are telling them. Offer tiers of information based on the level of curiosity, so that you don't seem to be talking down to people."

The question of "how" and "when" the NWMO will engage with communities along the route is another that the organization should be prepared to respond to in the next iteration of the framework.

Respectful relations with First Nation and Métis communities: Working positively and respectfully with First Nation and Métis communities is of utmost importance.

Consistent with past PAR, this requirement generated polarized reactions across the surveys and workshops.

Most of the comments in the Ontario public survey were approving/supportive, with several noting Canada's shameful history of dealing Indigenous peoples, especially over land and resources. Thus, support for this requirement was sometimes mixed with skepticism.

- "Given present attitudes towards First Nations how much faith can one put in this?"
- "All Indigenous peoples of that land, whether it be First Nations, Metis, etc., MUST BE INVOLVED IN THE PROCESS. This is very very important. Indigenous peoples have already had their land colonized and their lives controlled by the Canadian government. The government must not make any decisions without Indigenous peoples' approval on the matter since it can harm them and the natural land/environment they live in. "
- "I notice you do not say you need their agreement. Just that you will be 'respectful'. Just like the police and pipeline folks are being 'respectful' to the Wet'suwet'en people in BC?"

A few participants in the open survey who voiced approval of this requirement pointed to the example of Bruce Power's proposed DGR as an indication of what this requirement should mean in practice.

- "First nations should be a partner in this decision as they were for the low in intermediate grade waste that was going to be housed at the nuclear site in Kincardine. They were the first people here so they should have a large steak and what this decision is."

- "The SON in Bruce County had the opportunity to vote NO on the proposed DGR for low-intermediate waste slated for Kincardine ...they wisely voted against it. They will also have the last word on the one proposed for South Bruce."

Critical or negative feedback centered around two concerns (is this open survey as well or public survey or both? Need to specify. I am assuming this was a minority view – worth noting that). First, by "singling out" Indigenous communities, wasn't the NWMO conferring "special status" onto them compared to non-Indigenous communities along the route? Why not pledge to work "respectfully and positively" with all communities, some asked.

- "This concept applies to everyone."
- "They deserve no more or less consideration than any other citizen."
- "Should First Nations and other indigenous groups have a greater say than non-Indigenous? Both groups should have equal say and equal input."

A second concern, most often expressed in the "open" survey and (by a minority of participants?) some of the workshops, is that implementation of this principle could impede transportation (as well as the project as a whole) by potentially giving Indigenous communities what amounts to veto power.

- "We cannot allow a small group of Aboriginal people dictate a solution for Canada. The government of Canada represents all Canadians, hence the will of the people must come first."
- "It is very important that First Nation and Métis communities be involved. However, in my opinion, there is a caveat here. This project is one of national importance and security, and though all opinions/concerns should be seriously weighed and dealt with in a considered and timely manner, no one group, ethnic, political or otherwise, should have so much power as to be able to veto a project that is critical to the industry."

Ensuring program sustainability: The program must be on a solid financial and political foundation

This requirement generated relatively little feedback. Participants understood its meaning and they agreed with it. However, some also felt that it had more than a tinge of unreality to it, on two levels. First, some thought that it would be very difficult, if not impossible, for such a large, complex and lengthy project not to experience financial problems. And second, they were skeptical that the NWMO, nor any other project champion, could prevent politically motivated decisions from being made. The requirement also sparked a few questions about funding, including potential risks to taxpayers.

- "Make sure the people of Canada do not end up footing the bill when the producers go under. Like a lot of old mining companies."
- "Hard to manage, as politics change regularly."
- "How are you going to finance project like this with such long timelines? 100-year Bonds? Not interest rates at these levels."
- "This may be the biggest challenge given the ups and downs of our political processes."
- "All parties must agree on the program including all political parties, because you can't make such a huge investment and then have the next party in power scuttle it and propose something

else. This happens to the military all the time. There should be some kind of formal recognition that once signed onto, cannot be changed unless all parties agree that new science warrants a change in direction."

- "This proposal is basically as presented to our community a disposal/dump site estimated to cost up to $24 billion. Figuring the usual inflation of all previous nuclear projects of this scale it will be more like $38 billion. Since we are told there is about $2 billion now in trust to cover costs and since by their design landfills, dumps and DGRs do not generate any revenue I do not believe this project to be financially sustainable nor politically / socially acceptable. (See conclusions of Seaborn Panel report to Senate-1998)."

The perceived benefits of applying Indigenous and Traditional Knowledge to transportation planning

Both surveys asked participants how they thought the application of Indigenous and Traditional Knowledge could support the NWMO's commitment to protecting people and the environment as it plans for transportation.

The responses, which came mostly from the survey of the Ontario public, were almost all positive. The most common view was that the involvement of Indigenous people, in any capacity, should produce several benefits. These include achieving a higher level of acceptance of the project, and improved transportation planning and implementation, especially with respect to the environment.

- "Indigenous and Traditional Knowledge has always supported the environment. They have always respected Mother Nature. Therefore, they could have ideas that would be environmentally friendly."
- "Indigenous knowledge is the future solution to protecting our planet. Moving forward we must apply indigenous knowledge in more matters."
- "Depending on the site but the indigenous people may have traditional knowledge of where the best route (i.e., the easiest, quickest and most energy efficient route to take) and when the best time to transport would be (based on historical weather knowledge)."
- "It will be important that there is no disadvantage to our indigenous peoples and that money is not the only motivation. And that no use of their land is without their whole community being aware and on-board."

Consistent with earlier results and with past PAR, some respondents questioned the need to specifically mention Indigenous people. Similarly, a few expressed concerns that the application of Indigenous and Traditional Knowledge might not always be consistent with (mainstream/western) science:

- "I believe ALL peoples have a complex and sophisticated system of knowledge. Why is indigenous knowledge separated from the rest?"
- "I don't think it will support it at all. I think it will make it more costly and difficult to implement anything if this Indigenous Knowledge is allowed to influence real science and technology."

Suggestions for additions or improvements

In this part of the surveys and workshops, participants tended to either emphasize what they considered to be the most important priority/requirement (e.g., safety, security), or reiterated suggestions made earlier. Many also posed questions or took the opportunity to comment on what they considered to be the completeness and/or appropriateness of the framework requirements: "Everything seems to be included."

Main themes include:

- Monitoring: Conduct long-term monitoring on a range of issues, notably human health and the environment, but also other impacts (e.g., on property values) and of project finances: "Monitoring of the health of nearby citizens for any genetic or increases in health issues throughout time."

- Northern Ontario merits more attention: The NWMO should provide more information on what residents of Northern Ontario could expect regarding infrastructure improvement: "With our highways and railways in Northern Ontario it is total unsafe to transport nuclear waste via either method. There are multiple accidents on our hwys all the time regardless of the time of year. Our hwys are winding and the transports are either in the ditch or head on accidents. Rail lines have derailed 2 just this last 2 months alone. This presents a huge problem for both people and our environment."

- Nuclear waste export and import: Questions about the possibility that Canada could take radioactive waste from other countries (at a profit), or conversely, ship it out: "What about nuclear waste from other countries, does the plan provide for mechanisms to restrict nuclear waste from other countries?"

There were also comments made about broader issues, including APM and Canada's past and current and future use of nuclear power.

- "Leave the used nuclear containers at the nuclear sites. Do not put the fuel 800 metres underground. Use the money that has been collected to replace the 8 reactors at Pickering NGS with 8 enhanced CANDU-6 reactors."
- "As said before, the fuel should not be transported but remain on site. This then becomes a constant reminder of how toxic and dangerous this material is and that further use must be curtailed."
- "You must shut down every nuclear plant. Then I will start to think you care about any of this. And even then, I will be concerned for the safety of future generations."

2.4 Feedback on objective and principles

Through its ongoing dialogue, the NWMO has heard that the planning framework must be driven by objectives and a set of guiding principles that reflect the perspectives of the public and Indigenous peoples. The draft planning framework for the transportation of used nuclear fuel includes five

objectives and eight principles, which build on the 11 basic requirements discussed in the previous section.

A streamlined version of the principles, consisting of seven items, was used in the surveys. In the workshops, participants considered all five objectives and eight principles, albeit based on condensed descriptions (relative to the full document).

The approach for gathering feedback was similar to that used for collecting input on the requirements. Survey participants were asked to rate the importance of the principles for planning the transportation of used nuclear fuel. A subsequent open-ended question allowed them to provide feedback on individual items, and a last open-ended survey question invited participants to add any other issues that they felt should be addressed (i.e., was anything missing?).

Workshop participants used their workbook and group discussion to provide feedback. They were guided in this task by the same key questions they considered while reviewing the 11 requirements:

- Are these the considerations that are most important to you?
- Is anything missing?
- What questions come to mind?

Participant feedback on the objectives and principles touched on many of the same themes raised in their discussion of the 11 requirements. Overall, there is a strong alignment between the core framework elements and participants' thinking about what should be important in planning the transportation of used nuclear fuel. It is worth noting, however, that several participants, particularly workshop participants, indicated that they were looking forward to seeing more details as planning evolves: "These are all pretty high-level and they are really good as far as they go, but we're going to want to see more detail, especially once they pick a site [to host the DGR]."

An analysis of feedback on the draft framework objectives

The following draft framework objectives were discussed in the workshops:

- **Protect the public and workers**: Eliminate or minimize hazards associated with the transportation of used nuclear fuel.
- **Security:** Ensure the security of facilities, materials and infrastructure.
- **Protect the environment**: We need to understand our potential impact on the environment and put in place plans to manage, if not minimize it.
- **Relationship with First Nation and Métis communities**: Working positively and respectfully with First Nation and Métis communities.
- **Project finances**: Ensure economic sustainability of the project, without compromising safety, security and the environment.

There was consensus across the workshops that, taken together, the five objectives constitute the key ingredients of transportation planning success: “I think it’s a good list, you’ve got protecting people and the environment, security, Indigenous relations and proper management.”

As part of their feedback, several participants cautioned that setting objectives was much easier than achieving them: “You’re aiming for the right things, but whether or not you’ll hit the target, only time will tell.”

Collectively, workshop participants provided the following feedback on individual objectives:

Protect the public and workers: Eliminate or minimize hazards associated with the transportation of used nuclear fuel.

A few participants wondered about the use of the word “minimize”. They feel that it is uncomfortably open-ended and begged questions about the nature of the hazards: “I don’t know, I guess there are always going to be hazards with something like this, no matter how careful you are, but it doesn’t sound all that reassuring.”

Security: Ensure the security of facilities, materials and infrastructure.

Several participants suggested that the objective would be more “complete” if it specifically mentioned the “human” element and or “cyber security”: “… it needs to have individuals involved, employees, drivers that will be transporting the used nuclear fuel.”

Protect the environment: We need to understand our potential impact on the environment and put in place plans to manage, if not minimize it.

Similar to the concerns for “Protect the public and workers”, and as noted earlier in this report, some participants struggled with the word “minimize”. The heart of their concern is that the wording opens the possibility that the impact of transportation on the environment could be very large, in the sense that a “minimized” impact could still have devastating consequences.

At various points in the workshops, and after viewing the informational video on transportation package design and testing, some participants suggested the possibility of using mitigation or compensatory measures to achieve a net-zero impact on the environment. Their underlying logic is that if the chances of radioactive material release are essentially nil (i.e., as suggested by the video), then the only plausible impacts will be caused by release of greenhouse gases and environmental damage cause by infrastructure improvements, and these can be offset.

Relationship with First Nation and Métis communities: Working positively and respectfully with First Nation and Métis communities.

Several people, including participants in the workshop with current and former siting communities, voiced some concerns about this objective. Their issue is not that the NWMO is pledging to work positively with Indigenous communities – they are supportive of this. Rather, it was that there was no equivalent objective pertaining to the relationship the organization aims to have with non-Indigenous communities located along a transportation route: "They should be wanting to have that kind of relationship will all of our communities."

Project finances: Ensure economic sustainability of the project, without compromising safety, security and the environment.

Workshop participants did not provide feedback on this objective *per se*, though there were questions at various points of the discussions about funding, including potential impacts on municipal finances (e.g., to cover the cost of emergency response and potentially infrastructure repairs/improvements).

Identification of missing elements and other suggestions for improvement

As noted above, several participants thought that the NWMO's objectives should encompass working positively and respectfully with all affected communities. They did not see how pledging to work in this way with ***all*** communities would detract from the NWMO's commitment to Indigenous communities. Moreover, the current objective, which pertains only to Indigenous communities, led some to wonder if non-Indigenous communities (such as their own), could expect something less than respect and positivity in its dealings with the NWMO.

- "They are already working that way with us and we want to see that level of communication continue, so I don't see what they would lose by including that."

A second suggestion, which is closely related to the first, was the inclusion of an objective about engaging and communicating effectively with affected communities. Consistent with other comments noted in this report, as well as past PAR, transparency, engagement, and communications are viewed as not only the "right" thing for the NWMO to do, but also as a key to acceptance.

Participants in the OGRA workshop and the current and former siting communities workshop stressed the importance of engaging with communities along the routes. , as well as by.

An analysis of feedback on the draft framework principles

Feedback on framework principles were obtained in the surveys and the workshops. For practical reasons related to questionnaire length and overlap between the 11 requirements, the five objectives

and some principles, survey participants provided feedback on a more condensed version of the eight principles that are contained in the draft framework.

An analysis of importance ratings from the surveys

Survey participants were invited to provide feedback on the following principles:

Attention to project finances. The plan must be managed in a fiscally responsible way so that the cost of the project does not become a burden to current ratepayers or future generations.

Ensuring transparency. Information used to make decisions about transportation planning must be readily available to the public

Balancing adaptability and continuity.
The transportation plan needs to be flexible to continuously incorporate new learning, while maintaining continuity throughout changes in government.

A focus on evidence-informed decision-making. The plan must be informed by the best relevant available knowledge.

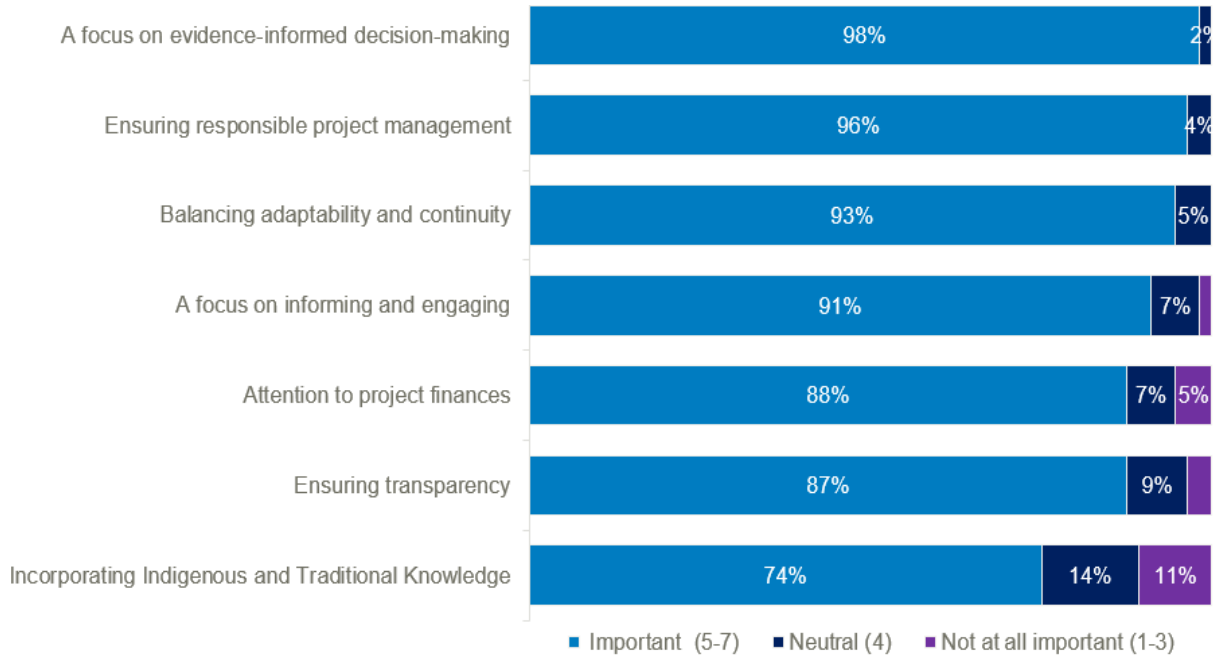
Incorporating Indigenous and Traditional Knowledge. Ensuring the insight from Indigenous Science, Traditional Knowledge and ways of life is interwoven throughout is important for a strong plan.

Ensuring responsible project management. Ensuring economic sustainability of the project, without compromising safety, security and the environment.

A focus on informing and engaging. It is important to proactively provide easily understandable information and address questions and concerns in order to proceed.

The results presented in Exhibit 8 (is there a reason you don't show a chart for the Public Survey results?) show that the vast majority of people who participated in the "open" survey rated all seven items were rated as important (i.e., importance ratings of 83% to 97% across the seven items). Similar results emerged from the survey of the Ontario public (i.e., importance ratings of 78% to 91% across the seven items).

Exhibit 8 - Relative importance of key objectives and principles (Open Survey)



Q. Thinking about what is important in planning the long-term transportation of used nuclear fuel, how important are these objectives and principles? Base: All Respondents, n=339

In both surveys, ***A focus on evidence-based decision-making*** is at the top of the list, while conversely, ***Incorporating Indigenous and Traditional Knowledge*** is seen as relatively less important, though still highly rated. ***Attention to project finances*** is also viewed as comparatively less important.

As seen with the ratings of framework requirements, the proportion of "don't know" responses is very small. This result, together with the high "importance" ratings accorded by participants across all seven items, suggest that the text is clear and easy to understand. The workshop discussions corroborate this finding.

An analysis of qualitative feedback obtained for the surveys and workshops

The principles that garnered the most attention in the survey of the Ontario public were ***Attention to project finances***, ***Ensuring transparency*** and ***Incorporating Indigenous and Traditional Knowledge***. In the open survey, the principle that generated the most feedback was ***A focus on informing and engaging.*** These same four principles also received the most attention in the workshops.

Participant feedback for each principle is summarized below. Overall, the comments were very positive. Participants think that, on the whole, the list of principles is both comprehensive and reflects their own thinking about what should guide decision-making in transportation planning. As with the framework requirements and the objectives, participants also had several questions and made suggestions.

Safety: Safety should be the overarching principle guiding all APM planning and activities.

Regulatory requirements: Meet or exceed regulatory requirements for the protection of health, safety and the security of people and the environment.

These two principles were only covered in the workshops. . Both were considered important to include. Participants had little to add to what they had previously said about safety and regulatory requirements, beyond a few questions about who will determine and enforce regulatory requirements for the transportation of used nuclear fuel.

Transparency is the key to building trust: Information used to make decisions about transportation planning must be readily available to the public.

In the survey, the item was entitled: "Ensuring transparency".

The importance of transparency was raised by participants at various points in the surveys and throughout the workshops. People agreed that it behooved the NWMO to be transparent in its communications and engagement with affected communities, given what these communities were being asked to accept (i.e., the transportation of used nuclear fuel near where they live/work). Often drawing on their own experiences, some feel transparency would inspire confidence among residents, thus increasing the probability of acceptance: "You have a lot better chance with people if you are straight with them, including about risks."

Notwithstanding a few expressions of skepticism, the comments provided by survey participants indicate strong support for the principle of transparency. Moreover, the notion of "readily available" public information resonated with many.

- "Proactively available to the public. Making it available and making it known that it is available and where to find it and actively providing the information to people is very different. Make sure that you do more than just making it available. Also, consider people that don't have access to internet, phone, etc. It needs to be accessible to every single person in Canada/territories."
- "The information has to be readable, i.e. in layperson language."
- "You can't just put information on a website and expect everybody to find it."
- "Not just sitting on a shelf where someone can go grab it, be more proactive, make sure it gets put out there."

In terms of suggestions, a few workshop participants feel that the identification of "transparency" as "the" key to trust, as opposed to one of several keys, might preclude other drivers of trust.

- "There is mutual respect and collaboration as well."
- "Says 'is the key' – change the wording – should say 'Is one of the keys'"
- "Not arguing transparency is a key factor but it's not the only key factor to building trust."

Balancing adaptability and continuity: The transportation plan needs to be flexible to continuously incorporate new learning, while maintaining continuity throughout changes in government.

It was clear from the workshops that participants understood the meaning of this principle, as well as the reasons for it. The first part of it, which pertains to the incorporation of new learning, was thought to be very important given the project's multi-generational nature:

- "Of course this cannot be a rigid plan, it must be able to adapt to changing circumstances."
- "New learning is important because it allows things to get done in a more efficient manner. You need to keep up with how things change with the times."

The second aspect of the principle, which speaks to maintaining continuity through changes in government, also made sense to participants. Of note, several workshop attendees in Ignace worry that changes in government could potentially lead to a scuttling of the project. At the same time, however, people questioned how much influence, if any, the NWMO could have in the political sphere:

- "That is really hard to control, they can change everything on you overnight."
- "We have seen the chaos inflicted by the change of government these past four years in the United States, where politics controls every decision made. I believe it is paramount that we do not emulate the behaviour of the president and his cronies: only disaster can arise from political decision-making."
- "Changes in government. That would be a concern of mine. Ensuring the plan doesn't flip-flop. Only improves, if changed at all. That's it."
- "This is the real challenge trying to avoid changes in direction based on petty politics."

Evidence-informed decision-making: The plan must be informed by the best relevant available knowledge.

This principle generated few comments, other than strong support for its inclusion in the framework. Several participants saw it as closely tied to the earlier discussed notion of adaptability.

- "This needs to be done at all times with new ideas coming forward."
- "Must be number one priority."
- "Agreed. This isn't a project where you want to cut corners."
- "Decisions based on facts not emotion."
- "Agree fully, without politically-inspired misinformation or biased communication strategies."

Incorporating Indigenous and Traditional Knowledge: Ensuring the insight from Indigenous Science, Traditional Knowledge and ways of life is interwoven throughout is important for a strong plan.

This principle tended to generate polarized comments. Those who expressed support for it, either see it as a form of inclusivity and respect or feel that the APM project could benefit from the incorporation of traditional knowledge and science, particularly where the environment is concerned.

- "Absolutely necessary to use Indigenous Knowledge and consult with them on these projects it is first and foremost their land."

Other respondents questioned or expressed concern that Indigenous and Traditional Knowledge, and especially "Indigenous Science", might be inconsistent with the principle of "evidence-based decision-making".

- "I don't know why indigenous knowledge needs to be included."
- "Traditional knowledge has nothing about atomic energy."
- "What the heck is Indigenous Science or Traditional Knowledge got to do with getting rid of something that is so dangerous it has to be transported and buried really deep?"
- "Again, I am not sure what this means. I think it is important to engage the indigenous people and hiring them to work at the facility. Employing the Native Canadians is an important step to reconciliation."

Responsible project management: The plan must be managed in a fiscally responsible way so that the cost of the project does not become a burden to current ratepayers or future generations.

In addition to the above, survey participants were asked to consider another aspect of the principle: "Ensuring economic sustainability of the project, without compromising safety, security and the environment."

Analysis of feedback strongly suggests that this principle responds directly to two concerns that people, including past PAR participants, have about project finances: 1) the possibility "cutting corners" to save money, particularly as the project matures, and 2) having the public and/or electricity ratepayers shoulder the costs of miscalculation and mismanagement.

The vast majority of comments were supportive. Some respondents warned against the possibility of complacency setting in over the course of the project, especially given its long timeline. Others think it would be challenging to demonstrate fiscal prudence and responsibility while consistently maintaining the highest standards of safety:

- "This is the concerning part: people are by nature unable to maintain the diligence that is necessary for projects of this magnitude. Keeping complacency under wraps is going to be an ongoing issue."
- "This is a VERY long-term project, encompassing decades or even generations to be paid for by those coming after us."

This principle also sparked a few questions about who or what bore ultimate responsibility for the project. There were also some expressions of skepticism that a project of this magnitude could be managed as smoothly as the NWMO seems to anticipate.

- "Is this going to be run by a company? A branch of government? A voted-in position or an appointed one? There must be a combination of control or there will be problems."
- "Again, tell me when a government project was ever 'managed responsibly'....I'll wait...."
- "We know it will be over-budget, but it is essential to avoid corrupt or questionable practices."

Informing and engaging: People, particularly those living in communities along the route, have a 'right to know' about the project and feel confident in its safety.

Survey participants were asked to consider a different aspect of this principle: "It is important to proactively provide easily understandable information and address questions and concerns in order to proceed."

The importance of informing and engaging with the public and communities, sometimes referred to as a process of "education" by participants, was highlighted throughout the surveys and workshops. In addition to their strong support for the principle, workshop participants, many of whom had personally engaged with the NWMO over the years, had questions about what they, and other communities, could expect in terms of future engagement. Participants in the current and former siting community workshop are particularly keen to know what to expect (e.g., once the site for the DGR has been selected), with some expressing the hope that future efforts would be as positive and effective as previous ones.

Survey participants, the vast majority of whom had no direct experience with APM or the NWMO, also expressed strong support the principle:

- "Let the information out - don't hide it! We spend too long in the dark about a lot of things - this project is too important (and too dangerous) to be hidden from view."
- "Absolutely! Knowledge is the key."

The NWMO's commitment to making information accessible to a wide range of audiences (e.g., literacy levels, English/French as a second language) was noted as a good thing by several survey participants:

- "Yes. Like I said above: easy, accessible information."
- "Need to explain everything to the First Nation not forcing material on them that is not appropriate."

Suggestions for additions or improvements

Almost everyone who provided comments either indicated that the list of principles was complete or otherwise "good", or they reiterated earlier comments (e.g., the importance of transparency, the challenges of continuity through changes in government): "Great work so far with transparency and regular updates. Provide any lessons learned internationally."

2.5 Feedback on other framework elements

In addition to the framework's requirements and objectives and principles, participants in the "open" survey were invited to provide feedback on three other elements:

- Protecting the environment;

- Being inclusive; and
- Technical considerations for the selections of modes and routes.

This time, participants were not asked to provide ratings. Rather, they were invited to read a summary of the framework element (e.g., protecting the environment) and then comment on it, including suggestions for potential improvements or additions (i.e., missing aspects).

While the three elements were not explicitly covered in the survey of the Ontario public or in the workshops, participants in these two engagement streams frequently touch on these issues in the course of providing feedback on other elements of the framework. The findings presented below are based on the input of received from "open" survey participants, complemented by an analysis of relevant data from the survey of the Ontario public and the workshops.

Protecting the environment

"Open" survey participants were invited to share their feedback on the following summary list of considerations for ensuring that transportation planning protects the environment.

- Measures to prevent or minimize used fuel escaping into the environment during transportation.
- Measures to prevent or minimize greenhouse gas emissions from the vehicles, and impacts of improvements to infrastructure (e.g. widening roads, building segment of dedicated rail lines, reinforcing bridges).
- Emergency plans and local first responders trained and equipped for potential accident scenarios.
- Measures to incorporate green technologies as they become available.

Overall, the above considerations respond directly to the environmentally-related concerns that participants raised throughout the surveys and workshops. These include emergency response planning, limiting greenhouse gases (GHGs), making use of green technology as it becomes available/practicable and mitigating the environmental impacts of infrastructure improvements/repair.

Use of the word "minimize", however, continued to rankle, with some participants asking if it was possible to prevent any damage to the environment from occurring. They feel that the use of the term "minimize" is particularly disconcerting in relation to the potential escape of used nuclear fuel, the possibility of which had not been mentioned in previous descriptions of analogous (is this word necessary for clarity?) framework elements.

- "Change 'Measures to prevent or minimize used fuel escaping into the environment during transportation.' Should only be PREVENT fuel escaping. There needs to be zero release of fuel."
- "It is paramount that radiation should not escape to the environment."

There was some curiosity expressed at the type of "green technology" the NWMO envisages, with one respondent suggesting that providing examples would lend credibility to the commitment: "What green technology is being referred to? green, green washed, faux green, or ...?"

Being inclusive

As context for this framework element, participants learned that over the course of dialogue with the public, the NWMO heard that it is important to involve people in the design and implementation of transportation plans to ensure that good decisions are made.

Participants were invited to provide feedback on the following summary of principles and activities to guide further steps towards inclusive decision-making.

> Canadians should have some measure of awareness and understanding about the transportation plan. Building awareness and informing people is a primary goal and, conversely, people have a responsibility to participate in this learning.
>
> People who are more directly affected by the transportation program should have greater opportunity to understand the plan and to be heard. Informing people and communities along the route should be a primary focus.
>
> Relevant government officials, municipal leaders, first responders and scientific and technical experts should be involved. This will help to ensure good decisions are made.
>
> People have a right to be informed about the plan. Good information and a desire to be informed is important for good decision-making.
>
> Indigenous communities need to play a role in the development of the plan. They have special rights. And, given the history of continuing and past wrongs as a country, it is imperative that positive and respectful relationships be built to advance the project.

Workshop participants highlighted the relevance of community engagement and inclusive decision-making. Survey participants also stressed what they considered to be the virtue and utility of engaging with the public, particularly those living in communities along the route.

Most of the comments from the "open" survey reinforced the importance of engaging with people, particularly communities along the route, Indigenous peoples, and young people. Given the multi-generational nature of the project, the importance of sustained engagement was also noted:

- "Residents along the route will change over time, there should be a principle that acknowledges the rights of future residents to have input into the impact of the transportation of the waste."

One respondent wondered what is meant by "some measure" in the sentence: "Canadians should have some measure of awareness and understanding of the transportation plan." It may be that it is not sufficiently clear that this refers to Canadians in general (i.e., those not directly affected by used fuel transportation.

Technical considerations for the selections of modes and routes

As background, "open" survey participants were provided with information on the regulatory framework. They also learned that in addition to meeting stringent regulatory requirements, several years of public dialogue suggested to the NWMO that the process for selecting modes and routes should:

- Involve experts in decision-making to build on best practice and experience;
- Acknowledge and take into account factors important to citizens; and
- Balance multiple objectives or factors important to different people without compromising safety.

"Open" survey participants were invited to consider two aspects of this framework element, beginning with factors for selecting modes and routes.

Factors for selecting modes and routes

"Open" survey participants were asked to consider the following selection factors.

- Risk of accident (e.g. based on historical accident and operational data);
- Risk of security breach (e.g. relative ease of access);
- Adequacy of transportation infrastructure (e.g. quality of roads and tracks);
- Potential environmental impacts (e.g. on wildlife and surrounding terrain);
- Weather and the ability to adapt to seasonal changes (e.g. snow, ice, rain and floods);
- Ease of containment and access by first responders in the event of an incident;
- Analysis of the relative merits of opting for bigger loads and fewer trips versus smaller loads and more numerous trips;
- The frequency and nature of handling and transfers (particularly for worker exposure); and
- Adaptability of modes to future innovations in transportation (e.g. autonomous automobiles).

This list of route and mode selection factors include several items that respond directly to questions and concerns raised by previous engagement participants, as well as in previous PARs (e.g., adequacy of transportation infrastructure, challenges posed by weather).

Some "Open" survey respondents took the opportunity to indicate a preference for rail transportation, echoing the views of several workshop participants. Others wondered about transportation alternatives, including the use of ships/water routes, as well as the possibility of using helicopters for certain parts of routes (e.g., that will not have been built or do not meet standards/requirements). As in past research, and consistent with comments from the workshops and survey of the Ontario public, a few people suggested that used fuel shipments, should, as much as possible be "separated" from other traffic.

- "I understand that transport by water was long ago ruled out. While I realize social concerns informed this decision, transport by water may be the safest option. Is it worth establishing a 'watching brief' on it?"
- "All these are good points to consider but it is not clear to me how some of these points can be achieved if the 'roads' to the remote storage place do not exist or are not sufficiently safe."

- "I favor rail transport over road transport, rail has increased carrying capacity, less interference with general population centers, adaptable and improvable infrastructure that has been proven in other countries (China, Germany)."

Balancing objectives

The final section of the "open" survey pertained to the balancing of objectives in the selection of routes, specifically, participants were invited to provide feedback on the following proposed considerations for achieving the right balance in decision-making.

- Proximity to population centres and schools;
- Proximity to sensitive environmental areas;
- Response time for first responders/emergency response;
- Potential need to improve existing or build new infrastructure (e.g. extension of rail track);
- Conditions of the route during winter and inclement weather (e.g. days of rain and snowfall);
- Potential for traffic congestion and potential impact on commuters;
- Assessment of political and social acceptance;
- Length of the route/distance travelled; and
- Varying routes for security reasons.

There were relatively few comments provided on this aspect of the framework. Some reiterated earlier comments about the importance of keeping shipments away from population centers. Others emphasized the need to consider "ecosystem sensitivity" and first responder logistical coordination.

- "Ease of first responders would be difficult with the rock cliffs and lakes right on the edge of hwy 17. Also, if there were ever an accident, there are small communities very spaced out along hwy 17, thus creating difficulty for the appropriate people to be involved with a cleanup in a timely manner."

A few people argued that communities along the route should be given the opportunity to decide if and how used nuclear fuel would be transported close/through their community.

- "In regard to choosing routes, the human population living in the area of the routes should have a strong voice on the routes or whether we want the nuclear waste travelling through the community. I live in a small area between the CP train rail line and the Trans Canada highway in North Western Ontario. The CN rail line is also close by, so that being said feel I need a voice for route selection.

2.6 Feedback on proposed approaches to implementing the framework

Based on its years of dialogue with the public, the NWMO understands that it must take an approach that embeds the framework principles and priorities in decision-making throughout planning and implementation of the transportation program. In particular, the organization is committed to involving people at key milestones along the way.

Workshop participants were invited to provide feedback on key elements of a potential transportation plan, or management system, including:

- A plan for working together through engagement, collaboration and shared decision-making;
- A readiness checklist, to be used by the NWMO and the public together, to regularly assess preparations to initiate the transportation program; and
- A roadmap of key milestones and steps, including collaboration and shared decision-making, putting in place a strong scientific and technical foundation for the program, and meeting or exceeding regulatory requirements.

Collaboration and shared decision-making

Workshop participants were asked to ground their input on the information below. It is also important to note that these milestones are part of the roadmap of key milestones and steps, discussed later in this section.

Key milestones for continuing to shape and advance the transportation plan Canadians

1. Refine the draft framework and milestones: Dialogue and engagement to review and refine the draft framework and reflect on the proposed approach.

2. Review an early sample plan: Dialogue and engagement to review an early sample transportation plan -- prior to the selection of the repository site.

3. Review and refine site-specific transportation plan: Dialogue and engagement to review an early sample site-specific transportation plan and then continue to refine it over time. Participants could include:
   - Interested communities, individuals and groups who have questions and concerns
   - First responders along potential routes and first responder associations/organizations
   - Municipalities and municipal associations as a group with a shared interest
   - First Nation and Métis communities along potential routes and Indigenous organizations as a group with a shared interest
   - Communities that currently host interim storage

4. Build awareness and encourage dialogue about plans as they are refined: Engagement activities could include:
   - Face-to-face discussions
   - Facilitating a virtual space for learning about the plan
   - Opportunities to ask questions and hear from transportation specialists
   - The NWMO addressing frequently asked questions and concerns on an ongoing basis

5. Monitoring and adapting: Ongoing review of evolving best practices, new and emerging technologies and standards, and reflection on the need to refine and adapt the program. Monitoring to include ongoing review of experience in implementing the transportation program once it begins, including impacts and mitigations, to support reflection and adaption of the program during implementation.

Ongoing reporting and continuous improvement might include the following:

1. Monitoring and reporting on evolving best practice: Beginning in 2023 and on a triennial basis, the NWMO publishes a report with updates on best practice, new and emerging technologies and evolving state of the art, evolving standards, and how it is adapting the program in the spirit of continuous improvement.

2. Monitoring and reporting on ongoing impacts and mitigations: Once used fuel transportation begins, the NWMO monitors and regularly reports on public and environmental impacts, reportable events, and action taken in a manner that is understandable and accessible to the public.

3. Monitoring and reporting on project finances: Beginning in 2023 and on a triennial basis, the NWMO publishes a report of the status of finances for the transportation program including the project's cost and sources of funding.

Feedback on key milestones for continuing to shape and advance the transportation plan for Canadians

There was clear consensus on the appropriateness and wisdom of continuing to involve the public and other stakeholders (e.g., Indigenous communities, communities along the route) in shaping transportation planning over the next two decades.

- "We need to ensure public knows how to get involved in the process. NWMO is doing a fantastic job of that. Concerning for my future grandchildren."

Consideration of the identification of potential audiences to engage prompted participants to recommend the inclusion of experts/scientists, transportation experts and regulators, international experts, and, in particular, youth

Drawing on their own experiences in learning about the project, several participants suggested that the methods of engagement should be "creative", especially where youth are concerned (e.g., virtual learning).

- "Facilitating virtual space for learning opposed to reading boring pamphlets – may be more drawn to something like that."
- "Incorporate crafts/activities."
- "Technology is prevalent so perhaps something virtual?"
- "Cool virtual things."

Some participants, notably in the current and former siting community workshop, suggested that the NWMO should engage with communities along the possible routes now, and not wait until site selection. Part of the rationale motivating this advice is that it adheres tothe NWMO's commitment to transparency and open communications, as well as the organization's view that communities have a "right to know". More practically, these participants feel that community reaction to the transportation of used nuclear fuel could influence the selection of modes and route(s), and potentially even site

selection (e.g., in the case of strong opposition). In short, engaging now, could provide the NWMO with more flexibility.

- "I'd like to discuss site-specific transportation planning…. [Why] wait till we are decided on a municipality? Central Huron and Clinton as location for rail. Otherwise, NWMO wouldn't go near there for used fuel. For us looking at impacts in hosting this – there will be impacts so I can identify for them… however if we use rail then it goes through Central Huron and that changes the impact -- who the partnership is with."

- "I'm thinking of if the preferred site is Ignace. No matter which transport method is used – it will come through Northern Ontario. It is concerning. Needs to be addressed. So that people can engage and provide solutions. I trust the repository but see this as a pitfall for Northern Ontario."

Several participants in the OGRA workshop suggested the NWMO engage with both municipal public servants and elected officials. The significance of engaging with public servants stems from their expertise, knowledge, and responsibility for day-to-day operations: "It's important to keep the right portfolios engaged." A few also noted that municipalities had a "responsibility" to know about policies, developments or anything else that could affect their communities: "If we're not aware of this, we're not doing our job." Echoing the First Responders, some OGRA representatives stressed the importance of sustained engagement to mitigate the natural process of staff turnover.

Feedback on proposed approach for ongoing reporting and continuous improvement

One of the themes to emerge from the last PAR, and which also surfaced in workshops and surveys, is the view that true transparency requires robust outreach and proactivity on the part of the NWMO. More specifically, that the organization must make information widely available, and also "understandable" to all segments of the population. In this vein, "triannual" reporting seemed inadequate, depending on what was being reported.

- "So who are they reporting to and who is going to be seeing it? Is it just going to be thrown up on a website and we have to find it or do they bring it here?"

- "Only a few people will pay attention to it. How does it relate to principle of NWMO saying people have a right to information? I don't know if you fulfill by putting out a triennial report. I think you set a high standard."

Among the potential issues to monitor and report on, the most relevant to participants were impacts and mitigations: "I would definitely want to know about reportable events, like if something went wrong even, how it was dealt with and how we use that to move forward."

In terms of suggestions, a few participants think that the NWMO should also report on successes and not limit itself to incidences, in part to foster public confidence:

- "We are taking this product, moving it thousands of kilometers, which is extremely impressive. Especially if we do it safely and I think the public should know about that like 'Oh! Five packages were moved today, and so on."

Some also suggested that the NWMO report on the results of its engagement with affected communities: “I don’t see any feedback on dialogue.”

Feedback on the readiness checklist

Through dialogue, the NWMO has understood a broad range of factors need to be addressed before the transportation of used nuclear fuel can begin. These factors were presented to workshop participants in the form of a “readiness checklist”.

Participants also heard that the NWMO would use the checklist to regularly track and report on its progress in putting necessary conditions in place, thereby allowing the organization and the public to collectively gauge program readiness.

Readiness Checklist

- A site-specific transportation plan;
- A broad-based awareness and education program for the general public and communities along the transportation route;
- An ongoing engagement and dialogue with First Nation and Métis communities along the transportation route;
- Questions received about transportation are acknowledged, addressed and shared broadly;
- Awareness and training program for first responders along the transportation route;
- A tested and certified transportation package;
- Accident scenarios specific to transportation routes, including those that align with the lived experience of people in the area, have been covered by transportation package testing and safety has been demonstrated;
- A transportation security plan that takes into account threats of sabotage and terrorism;
- An emergency response plan that explicitly describes resources available along the route and roles and responsibilities in the event of an accident;
- An environmental management or protection plan that takes into account the carbon footprint of the transportation program and environmental response and remediation in the event of an accident;
- A confirmed plan to meet commercial vehicle and railroad safety and security requirements;
- A program for hiring high-quality and well-trained workers and vehicle operators; Procedures for safe and secure operations;

- A plan for periodic reviews of all required plans, certifications and procedures;
- A 'safety audit' program involving ongoing physical assessment of the roads, bridges, etc. of the route, to identify structural weakness; required repairs to the infrastructure of the selected route; and
- A program of reporting with updates on best practice, technologies and evolving state of the art, and ongoing activities to adapt the program in the spirit of continuous improvement.

Overall, workshop participants' feedback was very positive. It was apparent that the concept of a checklist has intuitive appeal. Similarly, the idea of having a range of conditions in place, before transportation could begin, made sense. Notwithstanding their support for the checklist concept and content, participants had several questions, concerns and suggestions.

A plan for periodic reviews of all required plans, certifications and procedures

A few participants stumbled over the word "periodic", which to them connoted "infrequency" or even "haphazardness": "This needs to be reviewed on an annual basis. It needs to be regulated. Be proactive." The replacement of 'periodic' with the term "regular" would likely alleviate this concern.

The item also prompted a few questions about who would conduct reviews, and whether their findings would be shared with the public.

- "I think what this is referring to is governance and oversight, will there be like a safety and compliance officer to oversee things?"
- "How will this be monitored?"

An ongoing engagement and dialogue with First Nation and Metis communities along the transportation route

Consistent with previous comments on the other parts of the framework that address relations with Indigenous communities, some participants wondered why NWMO's seems to have more of a commitment to engage with Indigenous communities than non-Indigenous ones.

- "Why is it that there seems to be more dialogue with First Nations, and with the general public it is more of the NWMO telling them what they are planning on doing?"
- "Why are municipalities not mentioned?" This was a theme in some of the sessions with former siting communities."

A broad-based education and awareness program

There was some concern that "broad-based" would mean "generic", "mass", or "one-size-fits-all". As noted earlier, participants agreed that effective communications would be tailored to the needs of various population segments (e.g., seniors, youth, elders, people with lower literacy levels).

- "Make sure there is means of communication for all demographics."

- "Seniors are not good with technology. Ensure everyone is being informed."

A 'safety audit' program involving ongoing physical assessment of the roads, bridges, etc. of the route, to identify structural weakness; required repairs to the infrastructure of the selected route

This checklist item received the most feedback. Participants are glad to see it included, as it responds directly to one of their chief concerns: the inadequate state of some parts of the transportation infrastructure, particularly Northern Ontario roads.

Drawing on personal and/or professional experience, some participants wondered how various bodies with responsibilities for infrastructure would coordinate with each other, and, more specifically, about the role that the NWMO might play. Several participants, including some in the first responders' workshop, emphasized that the challenge is less about identifying infrastructure damage and weaknesses, and much more about moving swiftly to effect repairs: "There's always a gap, sometimes for months, maybe a year, between acknowledging a problem and fixing it."

Some also restated their view that the federal and/or provincial governments should use the opportunity created by the project to improve infrastructure, and that the NWMO should be championing this.

A program for hiring high-quality and well-training workers and vehicle operators

This checklist item responded to a major source of questions, but it still left some participants asking about the type of organization that would be responsible for transportation.

- "Hiring well trained workers is important. I believe it would be beneficial for NWMO to have their own training for the drivers who will be transporting the used nuclear fuel. This ensures that they are getting proper training and it is standardized."

Accident scenarios specific to transportation routes, including those that align with the lived experience of people in the area, have been covered by transportation package testing and safety has been demonstrated

This item is seen to respond very well to earlier suggestions made about the importance of local knowledge, and of the benefits of communicating proactively with communities about risk and potential accident scenarios. In short, participants who commented on it think that this type of information would be reassuring to people.

- "I think that point from earlier would be good to talk about, like how if a pellet got out, exactly how it would impact (e.g., time, distance, barriers, water). I feel a lot of people don't know that the risk isn't actually as bad as some may think."

- "So, we have had train derailments in the area so these small communities this might be travelling through, even though the risk is minimal, I still think we should have these discussions with these communities."

Potential addition to the checklist

Some participants in OGRA workshop would like the checklist to include a plan or some indication of readiness to deploy post-incident "monitoring".

Feedback on key milestones and steps

Workshop participants were invited to review a chart describing nine key milestones and steps from the development of the transportation framework to the first shipment of used nuclear fuel to the DGR site; a timeline spanning over 20 years (See Appendix D). The following questions guided feedback:

- Do these steps represent collaborative decision-making?
- Is anything missing?
- Can you suggest a few enhancements? What details could be added as the document evolves over the next 20 years?

From participants' reactions, it was apparent that the chart helped to convey the long-term nature of the planning process, and to highlight the required sequence of events. Participants agreed that steps 2 and 4 provide opportunity for the transportation plan to be shaped by the public/affected communities on a regular basis. The following specific feedback was provided by participants:

- **Steps 2 to 4:** As noted earlier, some current and former siting communities workshop participants suggested that it might be beneficial to start communicating about potential modes and routes before a site is selected. Such an approach would be consistent with the principle of "transparency" and the NWMO's view that communities have a "right to know". More practically, it was felt that the feedback received from communities could help determine modes and routes.

  Some participants in the OGRA workshop suggested that Step 4 specifically include community focussed outreach and engagement to help ensure that communities will have opportunities to shape transportation planning.

- **Step 7**: There was some surprise, including among first responders, that the NWMO's capacity building program for first responders is scheduled to begin only two years prior to the start of used fuel transportation. It was clear that some participants had assumed that their community would benefit from improved first responder training, resources, equipment, etc. at an earlier stage in the roadmap.

2.7 The impact of fact-based information of the public's level of comfort with the management of used nuclear fuel

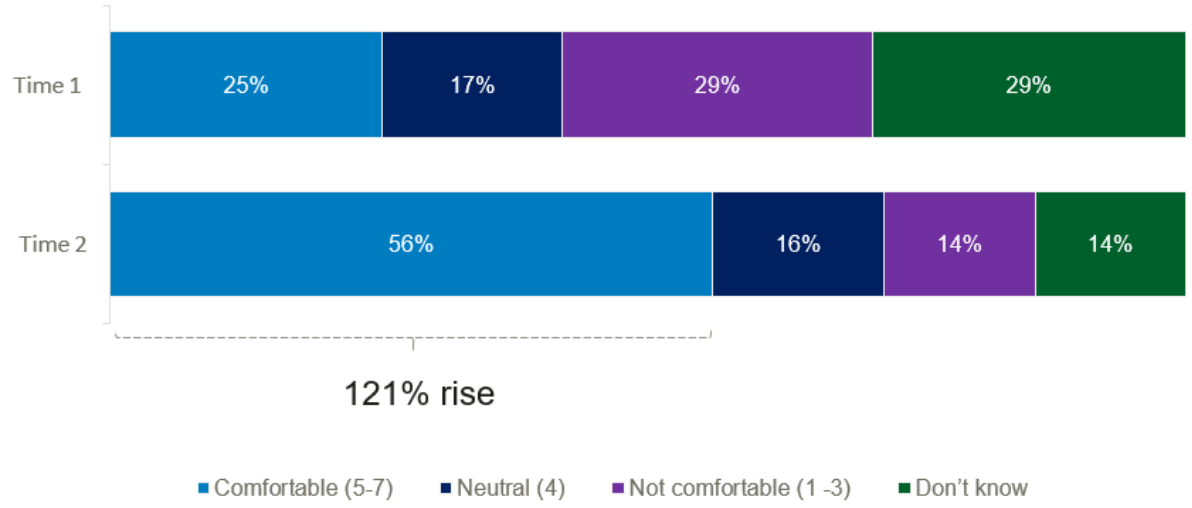
Past public attitude research has shown that fact-based information about the NWMO's transportation plan, and APM more generally, has a net positive impact of participants' comfort level with what the NWMO is proposing. It leads to higher levels of pragmatism and acceptance.

The survey of the Ontario public included a simple experiment designed to re-test the hypothesis that public openness and pragmatism significantly increase after fact-based information about the issues is absorbed. This was done by asking participants the question "How comfortable are you with the way in which the used nuclear fuel is being managed in Canada?" at the very beginning (Time 1) and at the very end (Time 2) of the questionnaire.

The results of the experiment are presented in Exhibit 9. Consistent with past research, they show that participants' level of comfort with the way in which used nuclear fuel is being managed in Canada increased significantly; more than doubling, from 25% who were comfortable at the outset to 56% who were comfortable by the end of the survey.

Exhibit 9- The impact of fact-based information on comfort with the management of used nuclear fuel

(Ontario Public Survey)



Q: How comfortable are you with the way in which the used nuclear fuel is being managed in Canada? Base: All Respondents, n=1,000

3.0 Conclusions and implications for the refinement of the draft transportation planning framework

3.1 Conclusions

The results of the engagement strongly suggest that the draft version of the planning framework is very well aligned with what a relatively informed (given exposure to fact-based information and framework itself) public and some key stakeholders think is important in planning the transportation of used nuclear fuel. The framework reflects core values and addresses most key questions and concerns. The document also appears to be reassuring, as evidenced by the results of the experiment embedded in the Ontario public survey (and corroborated by the workshop results).

It is also reasonable to conclude that, compared to initial versions of framework elements examined in previous PAR, the current iteration is easier for people to understand. Even complex concepts, such as adaptability, are graspable now.

The above conclusions lead to a third: that the transportation planning framework requires mainly minor refinements and clarifications. The most obvious need is for the framework to provide more detail with respect to community engagement and roles and responsibilities for the transportation of used nuclear fuel.

3.2 Implications

Collectively, participants put forward several suggestions for improvement. Some of these can be easily addressed now (see Section 3.3. below), while others may not be implementable given scientific, technological and planning realities and constraints. All suggestions and criticisms about the framework, however, should inform the development of outreach and communications-related transportation planning, and well as subsequent versions of this evergreen document. The key stumbling blocks or flags in the draft framework are as follows:

- The emphasis placed on engaging with Indigenous communities strikes some people as imbalanced relative to non-Indigenous communities. The objection is not to engaging with Indigenous communities but rather not engaging with non-Indigenous communities.
- Related to the above point, some feel that the framework document needs to more explicitly commit to engaging with communities/“municipalities” along the route, including more detailed information about timing and approaches.
- Commitments to “minimizing” the impacts of transportation on the environment is concerning to some, particularly when this applies to “used fuel escaping”.
- That first responder capacity-building is scheduled to begin as late as two years prior to the start of transportation is surprising to some, including first responders. It seems that people are hoping to have their communities benefit earlier from what they assume will be an ***overall*** increase in capacity (e.g., training, resources, equipment). One can reasonably conclude that some see this, along with transportation infrastructure improvements, as projects dividends for their community.

The design of the research encouraged participants to raise concerns and ask questions. Some of these are already addressed in the draft framework but it may be difficult for people to notice or absorb the information. Other questions can be addressed through minor revisions to the current draft.

Perhaps most of key questions listed below, however, can only be addressed in a later version of the framework, as planning evolves. These questions can also inform the present development of transportation-related communications.

- When will communications/engagement with communities along the route begin? And, what will this look like?
- Will transportation infrastructure improvements be made? Where and when?
- Who will be responsible for the "actual", day-to-day transportation of used nuclear fuel? And, how will employees / workers be selected, vetted and trained?
- What roles and responsibilities will local first responders have compared to other potential responding organization? What type of training and equipment can they expect to receive?

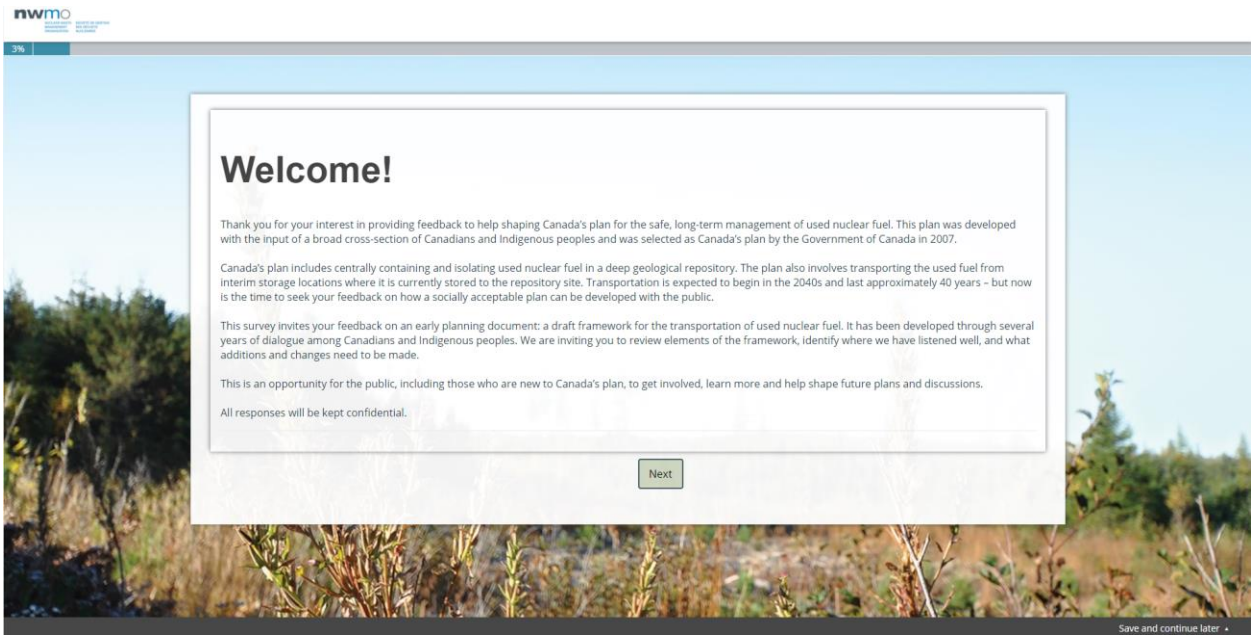
3.3 Specific Insights

We recommend that the draft transportation framework be reviewed and refined considering the following insights from our research.

Issue
Minimizing impacts In several instances, the framework refers to **"minimizing" impacts** (i.e., on the environment, the public and workers). This raised concerns among several participants who worried that this means that the NWMO is acknowledging that negative impacts are inevitable. It also begs the question about the potential serious of impacts.
Security: Ensure the security of facilities, materials and infrastructure. Some thought that cybersecurity should be acknowledged as an explicit threat given the nature of geopolitical conflicts over the last few years.
Transparency is the key to building trust. A few felt this was narrow and precluded other ways of building trust (e.g., community engagement).
Inadequacy of transportation infrastructure Concern about the **adequacy of transportation infrastructure**, particularly in Northern Ontario, and a hope that the project will provide an impetus to improvement.
Engagement with communities along the route The NWMO's level of **engagement and communications with communities along the route was highlighted as extremely important**, especially in the workshops with current and former siting communities, as well as in the workshop with representatives of OGRA. They suggested that the framework more explicitly address this issue, particularly in light of the fact that the document highlights the NWMO's commitment to engaging with Indigenous communities.

Issue
Program sustainability **Ensuring program sustainability:** The program must be on a solid financial and **political foundation**. Participants understood why this is important, but they also thought that the NWMO would be little influence over political decision-making, thus making the organization seem naive to some.
A plan for periodic reviews of all required plans, certifications and procedures A few participants stumbled over the word “periodic”, which to them connoted “infrequency” or even “haphazardness”
A broad-based education and awareness program There was some concern that “broad-based” would mean “generic”, “mass”, or “one-size-fits-all”.
Ongoing reporting and monitoring Some participants felt the section on **ongoing reporting and continuous improvement** could be strengthen by increasing the frequency of reporting and by reporting on community engagement activities.

Appendix A – Open Survey Questionnaire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Welcome!
Thank you for your interest in providing feedback to help shaping Canada's plan for the safe, long-term management of used nuclear fuel. This plan was developed with the input of a broad cross-section of Canadians and Indigenous peoples and was selected as Canada's plan by the Government of Canada in 2007.
Canada's plan includes centrally containing and isolating used nuclear fuel in a deep geological repository. The plan also involves transporting the used fuel from interim storage locations where it is currently stored to the repository site. Transportation is expected to begin in the 2040s and last approximately 40 years – but now is the time to seek your feedback on how a socially acceptable plan can be developed with the public.
This survey invites your feedback on an early planning document: a draft framework for the transportation of used nuclear fuel. It has been developed through several years of dialogue among Canadians and Indigenous peoples. We are inviting you to review elements of the framework, identify where we have listened well, and what additions and changes need to be made.
This is an opportunity for the public, including those who are new to Canada's plan, to get involved, learn more and help shape future plans and discussions.
All responses will be kept confidential.
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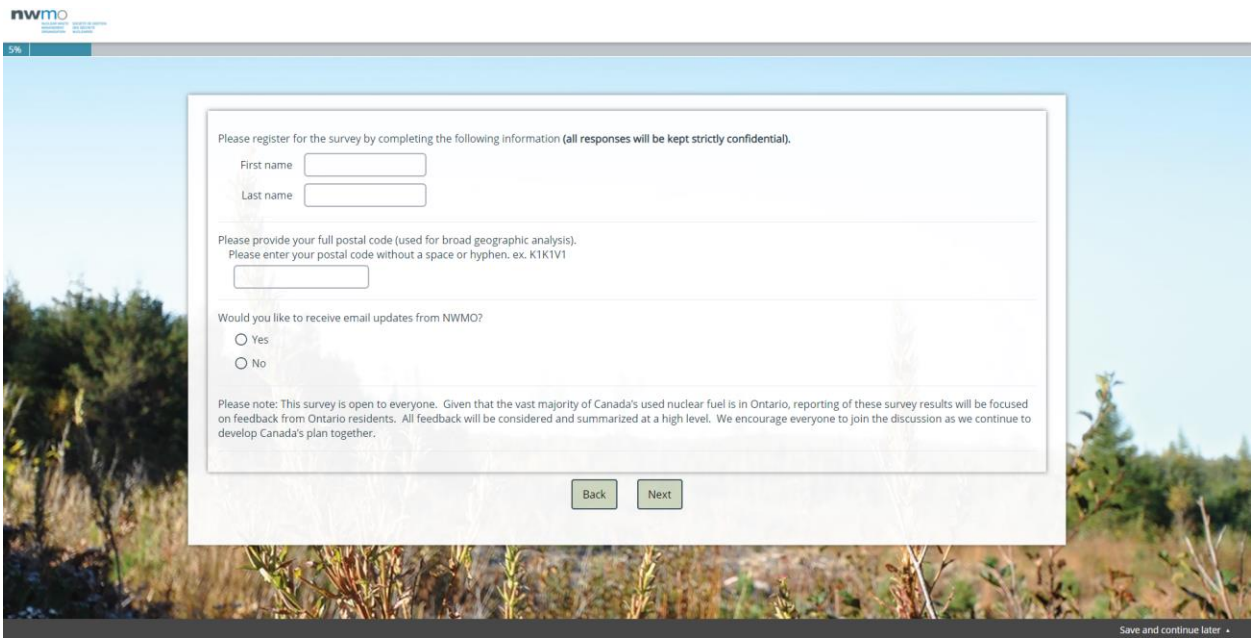
nwmo
5%
Please register for the survey by completing the following information (all responses will be kept strictly confidential).
First name
Last name
Please provide your full postal code (used for broad geographic analysis).
Please enter your postal code without a space or hyphen. ex. K1K1V1
Would you like to receive email updates from NWMO?
Yes
No
Please note: This survey is open to everyone. Given that the vast majority of Canada's used nuclear fuel is in Ontario, reporting of these survey results will be focused on feedback from Ontario residents. All feedback will be considered and summarized at a high level. We encourage everyone to join the discussion as we continue to develop Canada's plan together.
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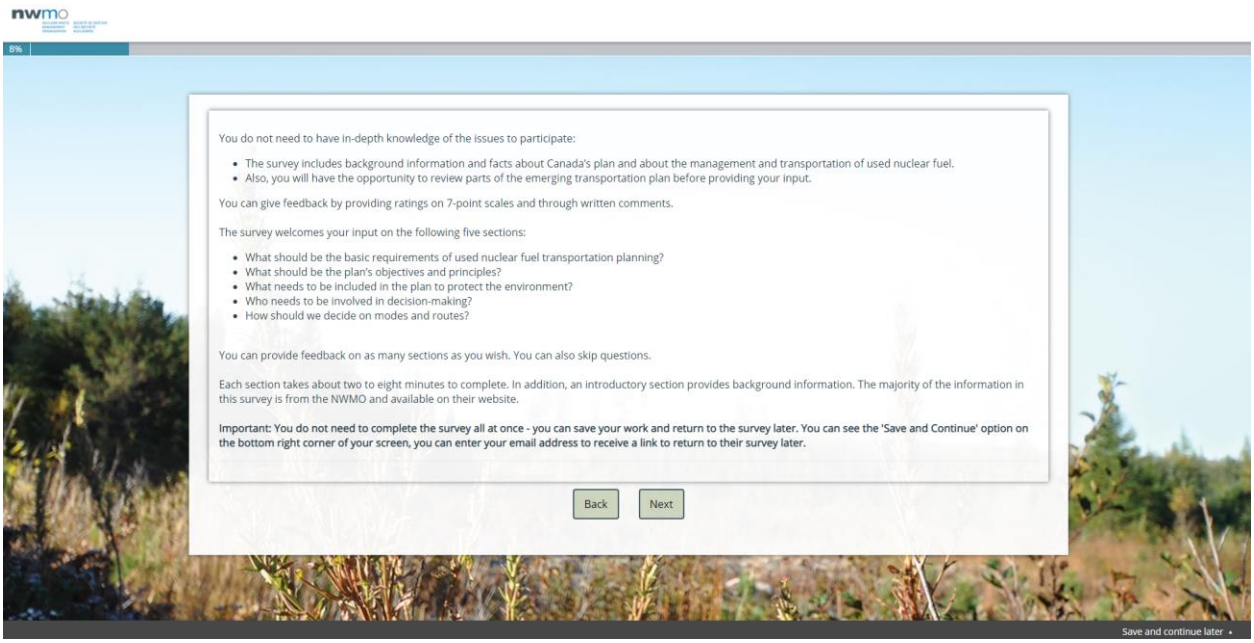
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You do not need to have in-depth knowledge of the issues to participate:
• The survey includes background information and facts about Canada's plan and about the management and transportation of used nuclear fuel.
• Also, you will have the opportunity to review parts of the emerging transportation plan before providing your input.
You can give feedback by providing ratings on 7-point scales and through written comments.
The survey welcomes your input on the following five sections:
• What should be the basic requirements of used nuclear fuel transportation planning?
• What should be the plan's objectives and principles?
• What needs to be included in the plan to protect the environment?
• Who needs to be involved in decision-making?
• How should we decide on modes and routes?
You can provide feedback on as many sections as you wish. You can also skip questions.
Each section takes about two to eight minutes to complete. In addition, an introductory section provides background information. The majority of the information in this survey is from the NWMO and available on their website.
Important: You do not need to complete the survey all at once - you can save your work and return to the survey later. You can see the 'Save and Continue' option on the bottom right corner of your screen, you can enter your email address to receive a link to return to their survey later.
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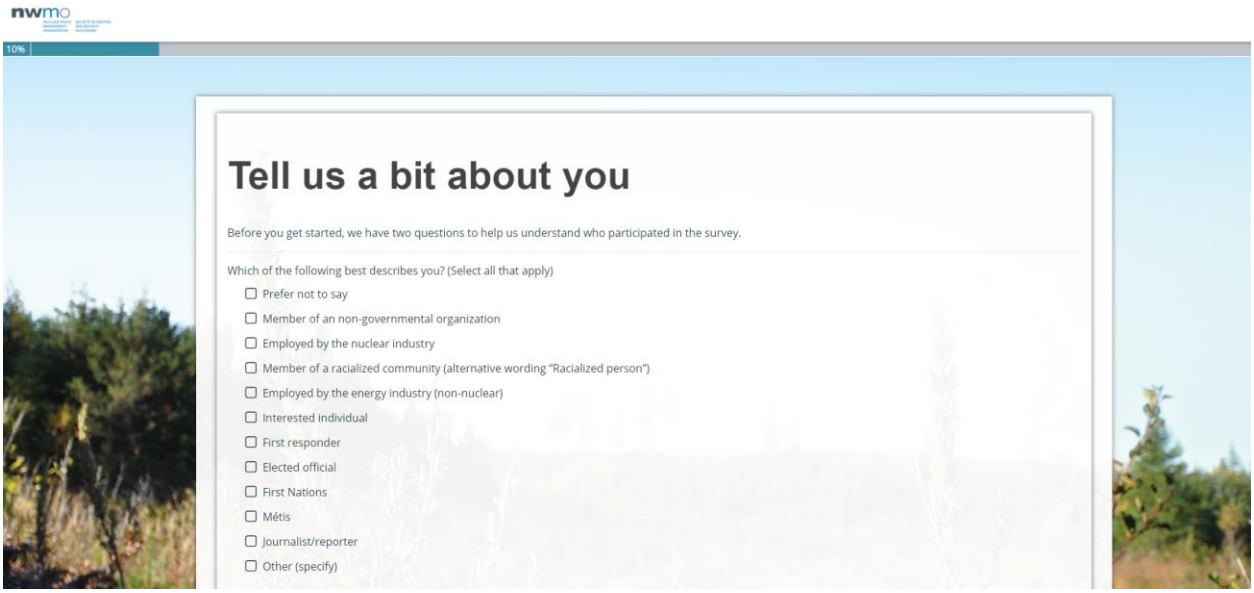
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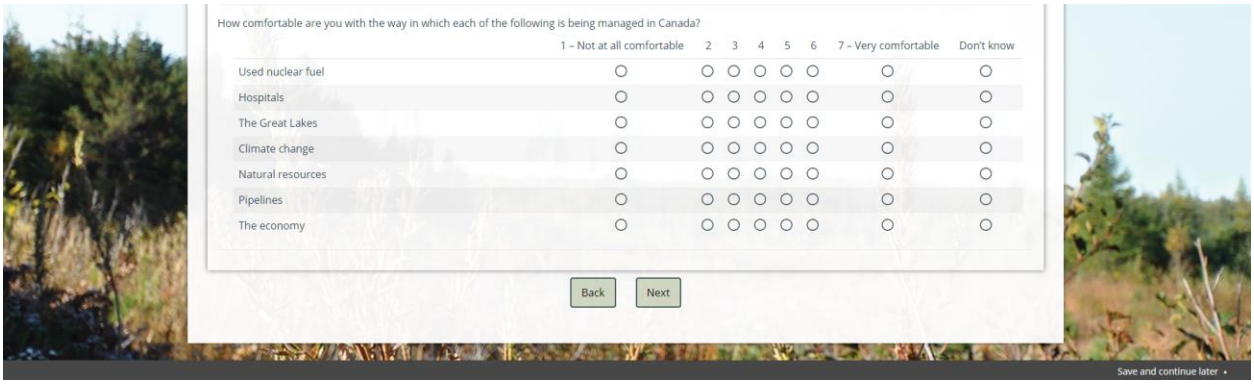
10%
Tell us a bit about you
Before you get started, we have two questions to help us understand who participated in the survey.
Which of the following best describes you? (Select all that apply)
Prefer not to say
Member of an non-governmental organization
Employed by the nuclear industry
Member of a racialized community (alternative wording "Racialized person")
Employed by the energy industry (non-nuclear)
Interested individual
First responder
Elected official
First Nations
Métis
Journalist/reporter
Other (specify)


How comfortable are you with the way in which each of the following is being managed in Canada?
1 – Not at all comfortable
2
3
4
5
6
7 – Very comfortable
Don't know
Used nuclear fuel
Hospitals
The Great Lakes
Climate change
Natural resources
Pipelines
The economy
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Background on the issues

The Nuclear Waste Management Organization (NWMO) was created through federal legislation in 2002. It is funded by Canada's nuclear energy corporations and operates on a not-for-profit basis. The NWMO's mission is to develop and implement Canada's plan, including transportation of used nuclear fuel.

There is a strong international track record for the transport of used fuel, which includes more than 50 years of safe shipments worldwide.

Below is a list of questions that people often ask about the management and transportation of used nuclear fuel.
Check-mark the box to see the answer.

☑ How much nuclear power does Canada use?

- Nuclear power has been used to generate electricity in Canada since the 1970s.
- Today, about 60% of Ontario's electricity comes from nuclear power (Ontario).
- New Brunswick also uses nuclear power to generate about 39% of its power (New Brunswick). Quebec stopped using nuclear power to generate electricity in 2012, after 29 years (Quebec).

☑ What is used nuclear fuel?

- Nuclear reactors in Canada are fuelled by natural uranium. Today uranium is mined in Saskatchewan.
- Used nuclear fuel is a by-product created when nuclear power plants generate electricity. It remains highly radioactive, essentially indefinitely and must be contained and isolated from people and the environment.
- Canadian used nuclear fuel is not a liquid or a gas - it is a stable solid. It is not flammable or explosive.

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☑ How much used nuclear fuel does Canada have?

- At the end of 2019, Canada had approximately 2.9 million used fuel bundles in temporary storage: stacked like firewood it would be enough to fill eight hockey rinks up to the top of the boards.
- If Canada's existing reactors operate to the end of their planned lives, the inventory of used fuel could be about 5.5 million bundles.
- The vast majority of Canada's used nuclear fuel (more than 90%) is in Ontario. There is also used fuel in temporary storage in New Brunswick (~5%) and Quebec (~5%), with a small amount (~1%) stored in Manitoba.

☑ How is used nuclear fuel managed now?

- Canada's used nuclear fuel is currently safely managed in facilities licensed for interim storage. These facilities are located at nuclear reactor sites in Ontario, Quebec, and New Brunswick, and at Atomic Energy of Canada Limited's sites in Manitoba and Chalk River Laboratories in Ontario.
- This storage is interim and requires constant monitoring and maintenance.

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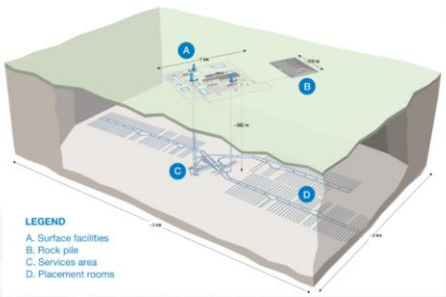
☑ Is there a plan for dealing permanently with Canada's used nuclear fuel?

- Yes. Adaptive Phased Management (APM) is Canada's plan for the safe long-term management of used nuclear fuel. It involves centralized containment and isolation of Canada's used fuel in a deep geological repository in an area with suitable geology and an informed and willing host. The repository will be constructed at a depth of about 500 meters below the ground's surface, depending on rock characteristics at the site.
- The repository design uses a multiple-barrier system – a series of engineered and natural barriers that work together to contain and isolate used nuclear fuel from people and the environment.
- The plan is consistent with long-term management best practices adopted by other countries with nuclear power programs, such as Finland, France, Sweden, Switzerland, and the United Kingdom.
- The federal government selected APM as Canada's plan in June 2007. The NWMO is now responsible for implementing APM, subject to all necessary regulatory approvals.
- The repository should be ready to accept used nuclear fuel by the 2040s.



☑ Where will the used nuclear fuel repository be located?

- Since 2010, the NWMO has been working collaboratively with interested communities to identify a single site where Canada's used nuclear fuel can be contained and isolated over the long-term. Municipal, First Nation and Métis communities are involved.
- Twenty-two communities initially came forward to learn about the project and explore their potential to host it. A series of increasingly detailed studies to assess potential to meet the project's rigorous technical, safety and social requirements have narrowed the list to two Ontario communities: South Bruce and Ignace. First Nation and Métis communities in these areas are also involved in discussions and studies.
- We are on track to identify a single, preferred site by 2023, in an area with informed and willing hosts. The project will only proceed with the interested community. First Nation and Métis communities in the area, and surrounding communities working in partnership to implement it.

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☑ How will the used fuel be transported to the repository location?

- Placing all of Canada's used nuclear fuel in a centralized location will require transportation from interim storage facilities to the deep geological repository.
- Transportation will involve placing these solid used fuel bundles in a transportation package that is specially designed to protect people and the environment, including in accident conditions.
- The packages will be transported by road and/or rail, depending on the location chosen for the deep geological repository.
- Transportation of used nuclear fuel is expected to begin in the 2040s and take about 40 years to complete.

☑ Has there ever been an accident involving the transportation of used nuclear fuel?

- Transportation of used nuclear fuel is subject to stringent regulation and oversight. In Canada, transportation is jointly regulated by the Canadian Nuclear Safety Commission and Transport Canada. Stringent regulatory requirements based on international standards must be met before used nuclear fuel can be transported.
- In over 50 years, there have been more than 20,000 shipments worldwide of used nuclear fuel using road, rail and water transport. These shipments have all been completed safely without serious injuries, health impacts, fatalities or environmental consequences attributable to the radiological nature of the shipments.

☑ Who is the NWMO again?

- The NWMO is a not-for profit organization established in 2002 by Canada's nuclear electricity producers in accordance with the Nuclear Fuel Waste Act (NFWA).
- The founding members of the NWMO are Ontario Power Generation (OPG), New Brunswick Power Corporation, and Hydro-Québec (HQ). These organizations, along with Atomic Energy of Canada Limited (AECL), are required to fund our operations.
- The NWMO is responsible for implementing, collaboratively with Canadians and Indigenous peoples, Canada's plan for the safe, long-term management of used nuclear fuel, in a manner that protects people and the environment.
- For more information on Canada's plan for the safe, long-term management of used nuclear fuel, please see the NWMO website.

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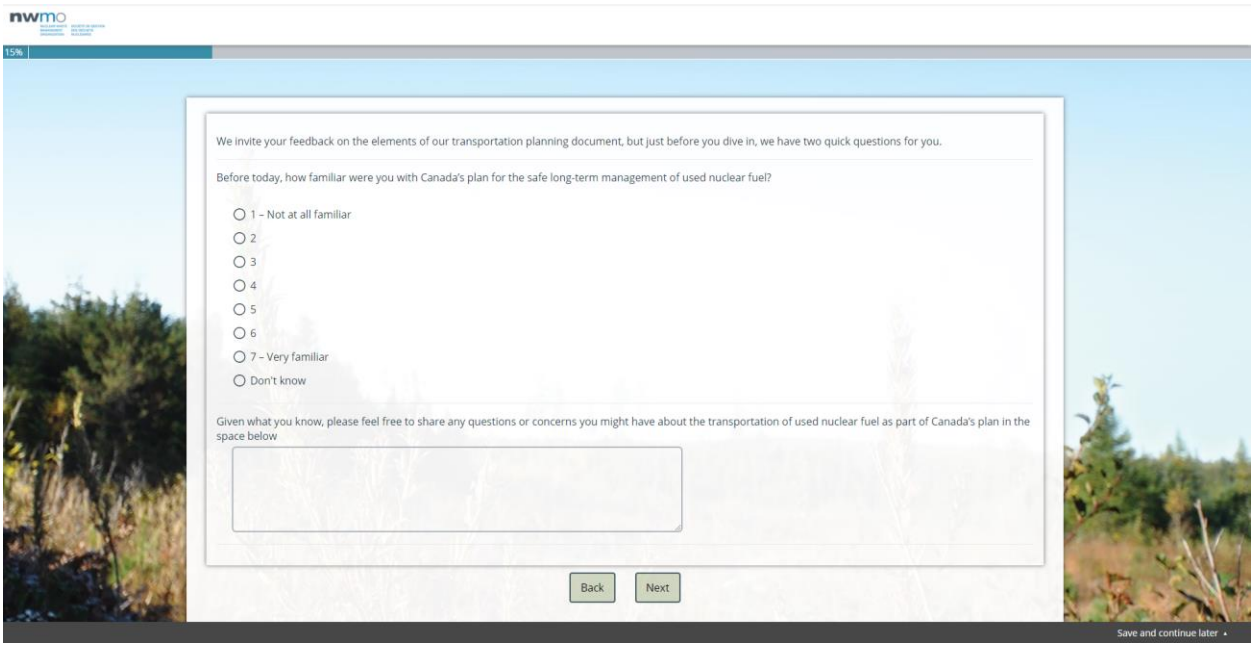
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We invite your feedback on the elements of our transportation planning document, but just before you dive in, we have two quick questions for you.
Before today, how familiar were you with Canada's plan for the safe long-term management of used nuclear fuel?
1 – Not at all familiar
2
3
4
5
6
7 – Very familiar
Don't know
Given what you know, please feel free to share any questions or concerns you might have about the transportation of used nuclear fuel as part of Canada's plan in the space below
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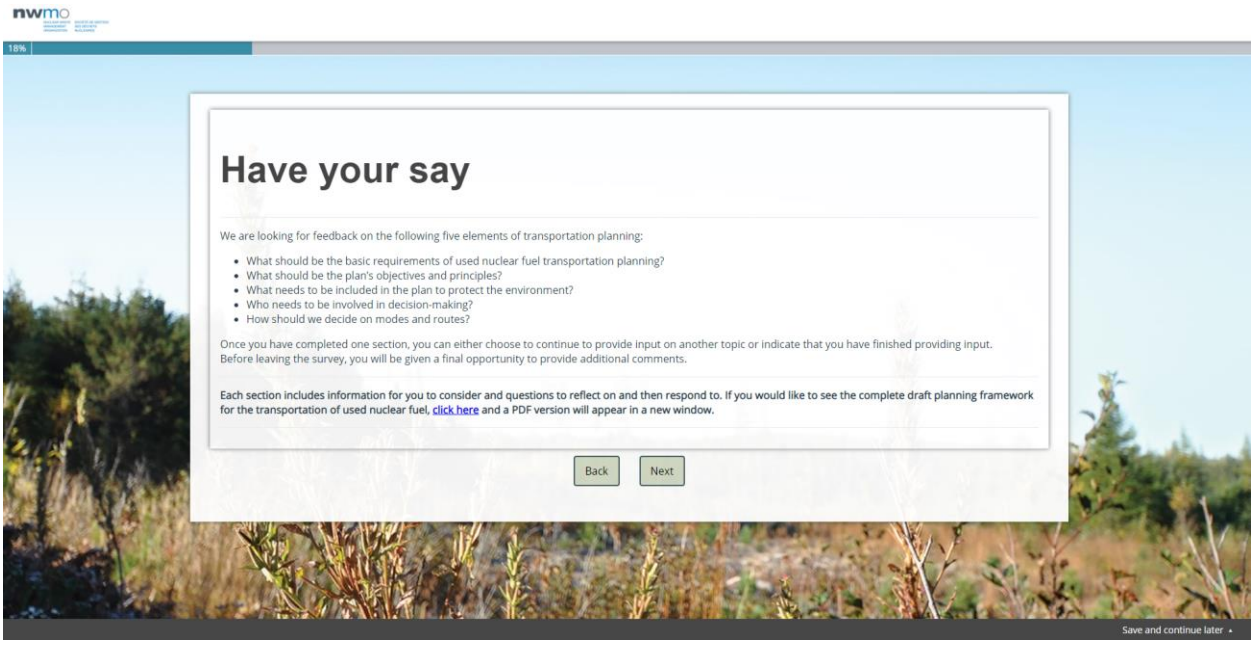
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Have your say
We are looking for feedback on the following five elements of transportation planning:
What should be the basic requirements of used nuclear fuel transportation planning?
What should be the plan's objectives and principles?
What needs to be included in the plan to protect the environment?
Who needs to be involved in decision-making?
How should we decide on modes and routes?
Once you have completed one section, you can either choose to continue to provide input on another topic or indicate that you have finished providing input. Before leaving the survey, you will be given a final opportunity to provide additional comments.
Each section includes information for you to consider and questions to reflect on and then respond to. If you would like to see the complete draft planning framework for the transportation of used nuclear fuel, click here and a PDF version will appear in a new window.
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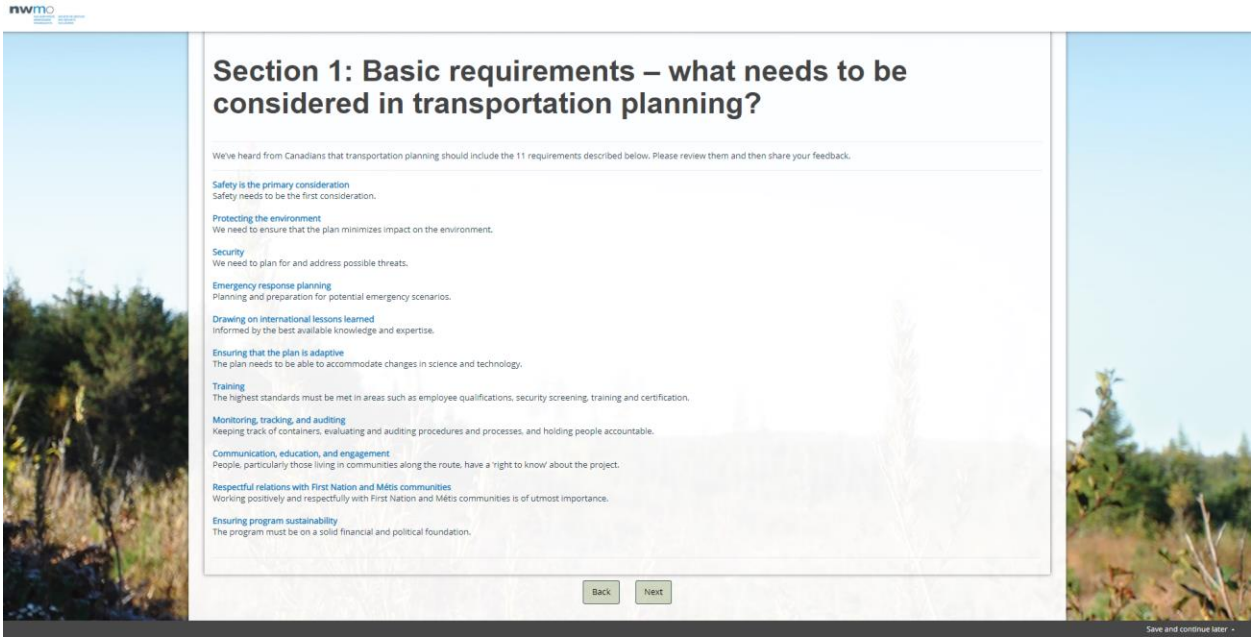
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Section 1: Basic requirements – what needs to be considered in transportation planning?
We've heard from Canadians that transportation planning should include the 11 requirements described below. Please review them and then share your feedback.
Safety is the primary consideration
Safety needs to be the first consideration.
Protecting the environment
We need to ensure that the plan minimizes impact on the environment.
Security
We need to plan for and address possible threats.
Emergency response planning
Planning and preparation for potential emergency scenarios.
Drawing on international lessons learned
Informed by the best available knowledge and expertise.
Ensuring that the plan is adaptive
The plan needs to be able to accommodate changes in science and technology.
Training
The highest standards must be met in areas such as employee qualifications, security screening, training and certification.
Monitoring, tracking, and auditing
Keeping track of containers, evaluating and auditing procedures and processes, and holding people accountable.
Communication, education, and engagement
People, particularly those living in communities along the route, have a 'right to know' about the project.
Respectful relations with First Nation and Métis communities
Working positively and respectfully with First Nation and Métis communities is of utmost importance.
Ensuring program sustainability
The program must be on a solid financial and political foundation.
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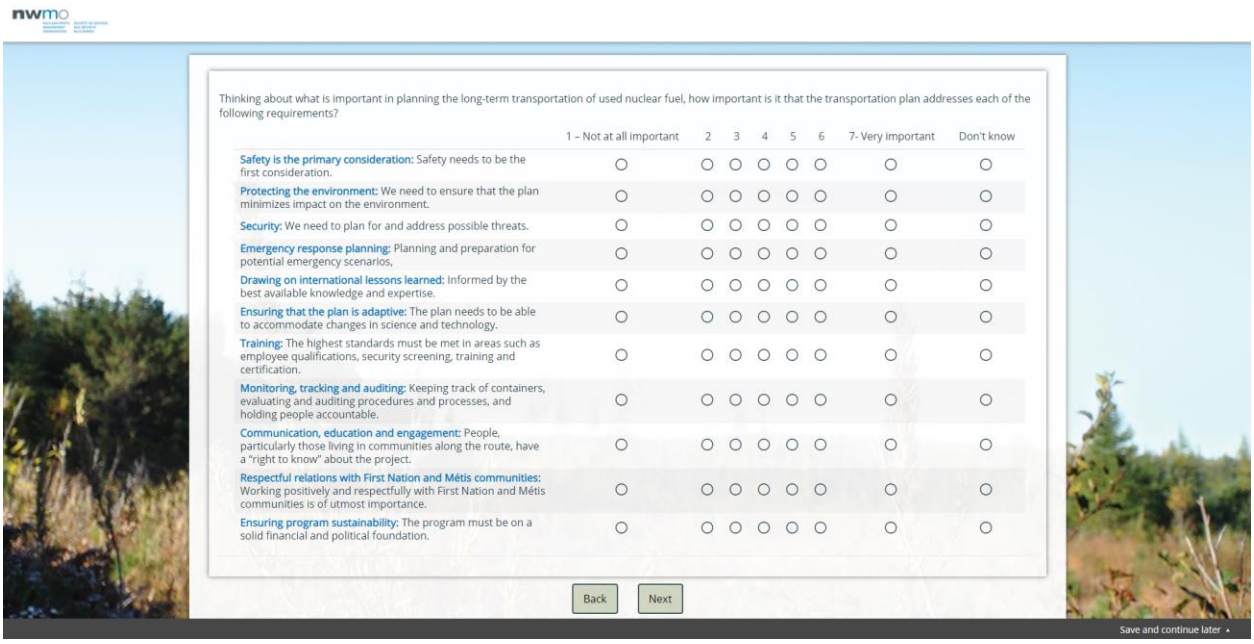
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Thinking about what is important in planning the long-term transportation of used nuclear fuel, how important is it that the transportation plan addresses each of the following requirements?
1 – Not at all important
2
3
4
5
6
7- Very important
Don't know
Safety is the primary consideration: Safety needs to be the first consideration.
Protecting the environment: We need to ensure that the plan minimizes impact on the environment.
Security: We need to plan for and address possible threats.
Emergency response planning: Planning and preparation for potential emergency scenarios,
Drawing on international lessons learned: Informed by the best available knowledge and expertise.
Ensuring that the plan is adaptive: The plan needs to be able to accommodate changes in science and technology.
Training: The highest standards must be met in areas such as employee qualifications, security screening, training and certification.
Monitoring, tracking and auditing: Keeping track of containers, evaluating and auditing procedures and processes, and holding people accountable.
Communication, education and engagement: People, particularly those living in communities along the route, have a "right to know" about the project.
Respectful relations with First Nation and Métis communities: Working positively and respectfully with First Nation and Métis communities is of utmost importance.
Ensuring program sustainability: The program must be on a solid financial and political foundation.
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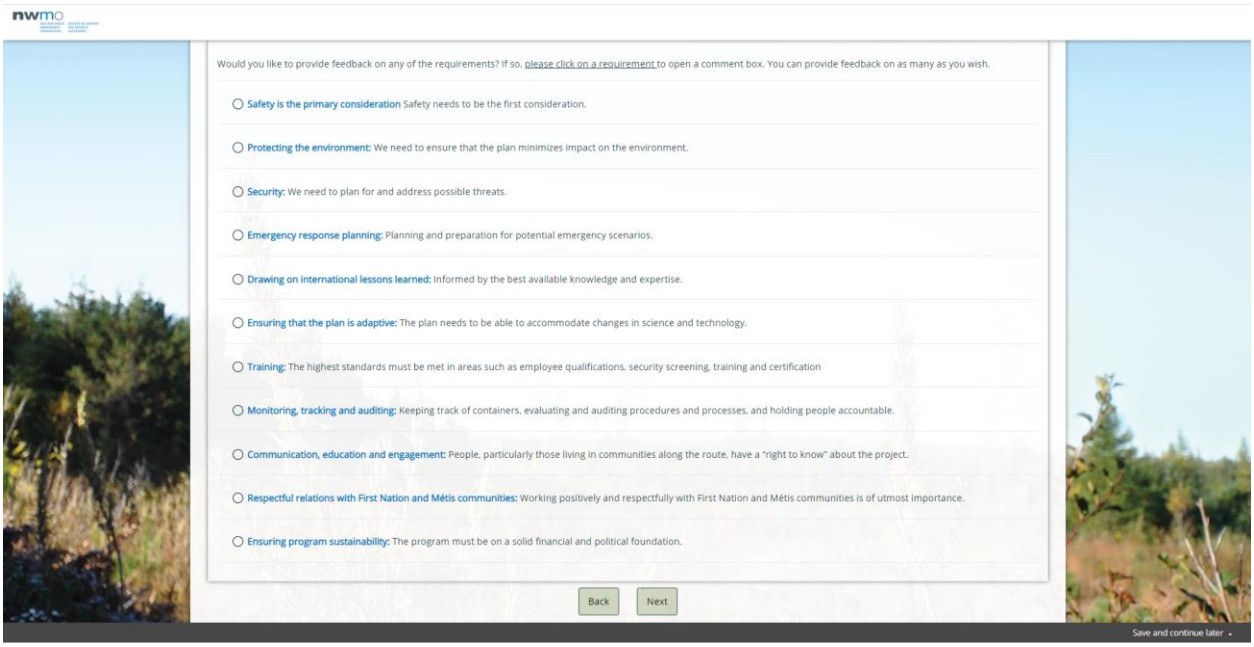
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Would you like to provide feedback on any of the requirements? If so, please click on a requirement to open a comment box. You can provide feedback on as many as you wish.
Safety is the primary consideration Safety needs to be the first consideration.
Protecting the environment: We need to ensure that the plan minimizes impact on the environment.
Security: We need to plan for and address possible threats.
Emergency response planning: Planning and preparation for potential emergency scenarios.
Drawing on international lessons learned: Informed by the best available knowledge and expertise.
Ensuring that the plan is adaptive: The plan needs to be able to accommodate changes in science and technology.
Training: The highest standards must be met in areas such as employee qualifications, security screening, training and certification
Monitoring, tracking and auditing: Keeping track of containers, evaluating and auditing procedures and processes, and holding people accountable.
Communication, education and engagement: People, particularly those living in communities along the route, have a "right to know" about the project.
Respectful relations with First Nation and Métis communities: Working positively and respectfully with First Nation and Métis communities is of utmost importance.
Ensuring program sustainability: The program must be on a solid financial and political foundation.
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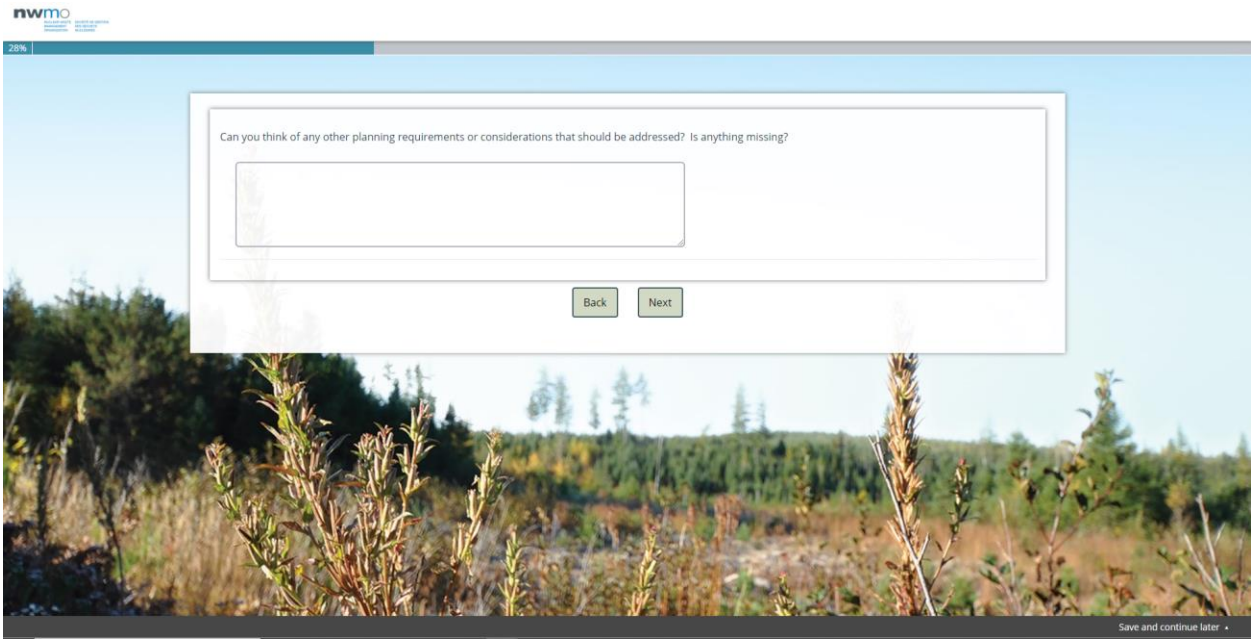
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Can you think of any other planning requirements or considerations that should be addressed? Is anything missing?
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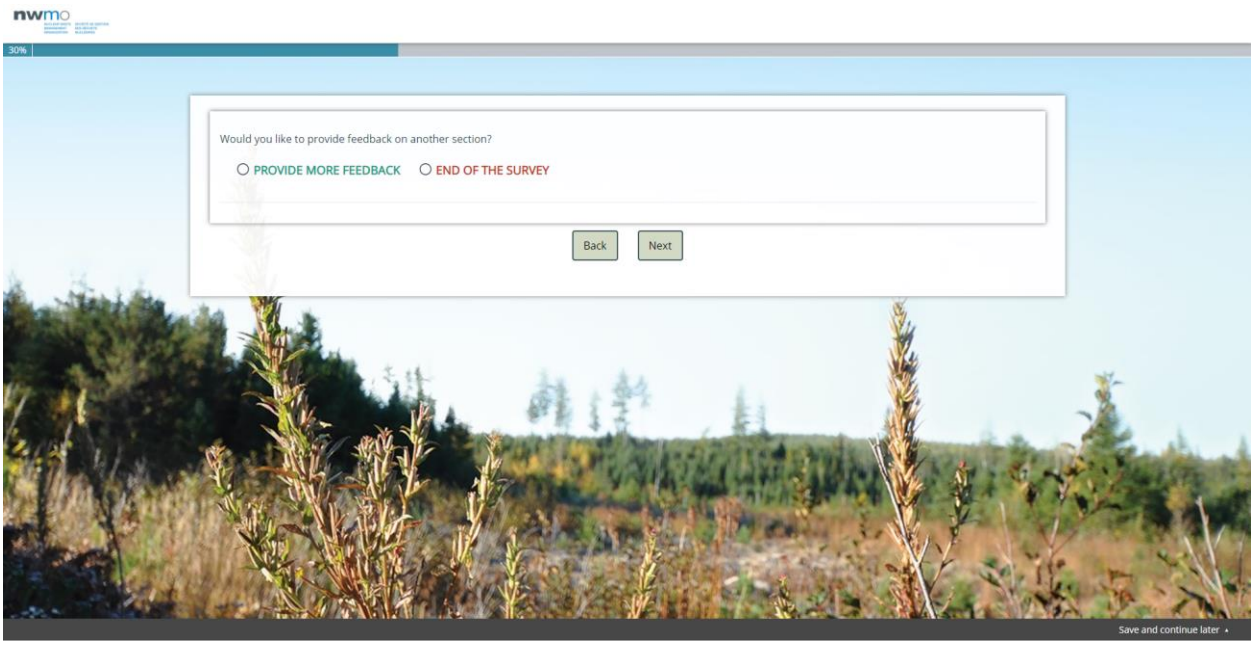
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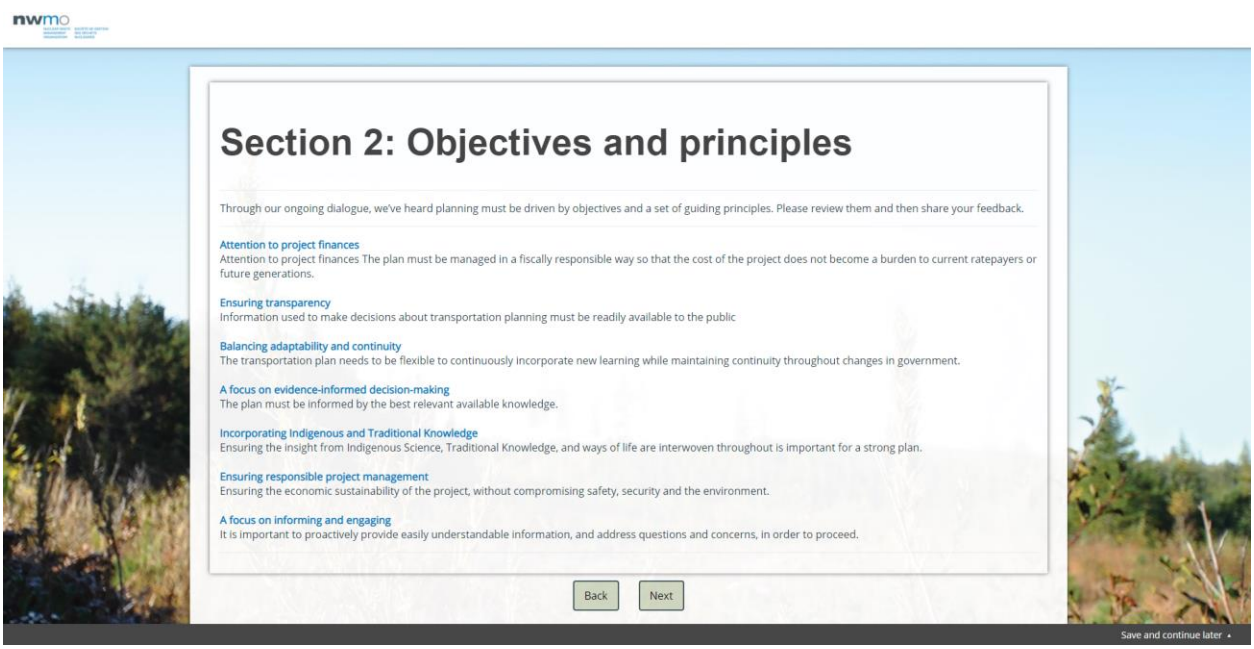
nwmo
Section 2: Objectives and principles
Through our ongoing dialogue, we've heard planning must be driven by objectives and a set of guiding principles. Please review them and then share your feedback.
Attention to project finances
Attention to project finances The plan must be managed in a fiscally responsible way so that the cost of the project does not become a burden to current ratepayers or future generations.
Ensuring transparency
Information used to make decisions about transportation planning must be readily available to the public
Balancing adaptability and continuity
The transportation plan needs to be flexible to continuously incorporate new learning while maintaining continuity throughout changes in government.
A focus on evidence-informed decision-making
The plan must be informed by the best relevant available knowledge.
Incorporating Indigenous and Traditional Knowledge
Ensuring the insight from Indigenous Science, Traditional Knowledge, and ways of life are interwoven throughout is important for a strong plan.
Ensuring responsible project management
Ensuring the economic sustainability of the project, without compromising safety, security and the environment.
A focus on informing and engaging
It is important to proactively provide easily understandable information, and address questions and concerns, in order to proceed.
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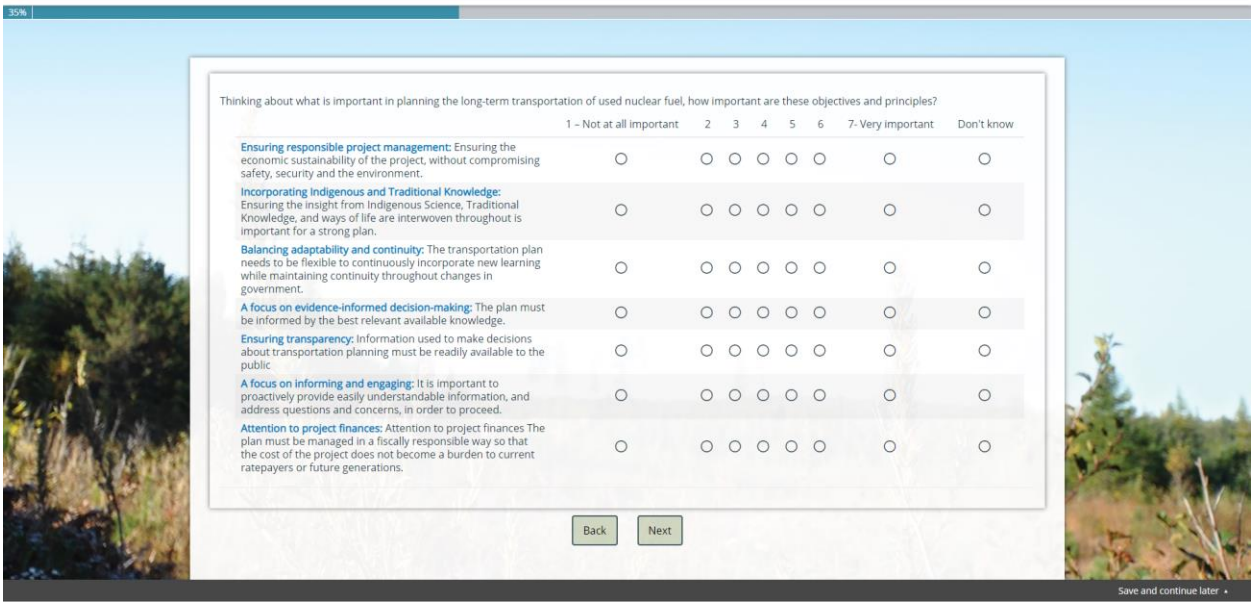
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35%
Thinking about what is important in planning the long-term transportation of used nuclear fuel, how important are these objectives and principles?
1 – Not at all important
2
3
4
5
6
7- Very important
Don't know
Ensuring responsible project management: Ensuring the economic sustainability of the project, without compromising safety, security and the environment.
Incorporating Indigenous and Traditional Knowledge: Ensuring the insight from Indigenous Science, Traditional Knowledge, and ways of life are interwoven throughout is important for a strong plan.
Balancing adaptability and continuity: The transportation plan needs to be flexible to continuously incorporate new learning while maintaining continuity throughout changes in government.
A focus on evidence-informed decision-making: The plan must be informed by the best relevant available knowledge.
Ensuring transparency: Information used to make decisions about transportation planning must be readily available to the public
A focus on informing and engaging: It is important to proactively provide easily understandable information, and address questions and concerns, in order to proceed.
Attention to project finances: Attention to project finances The plan must be managed in a fiscally responsible way so that the cost of the project does not become a burden to current ratepayers or future generations.
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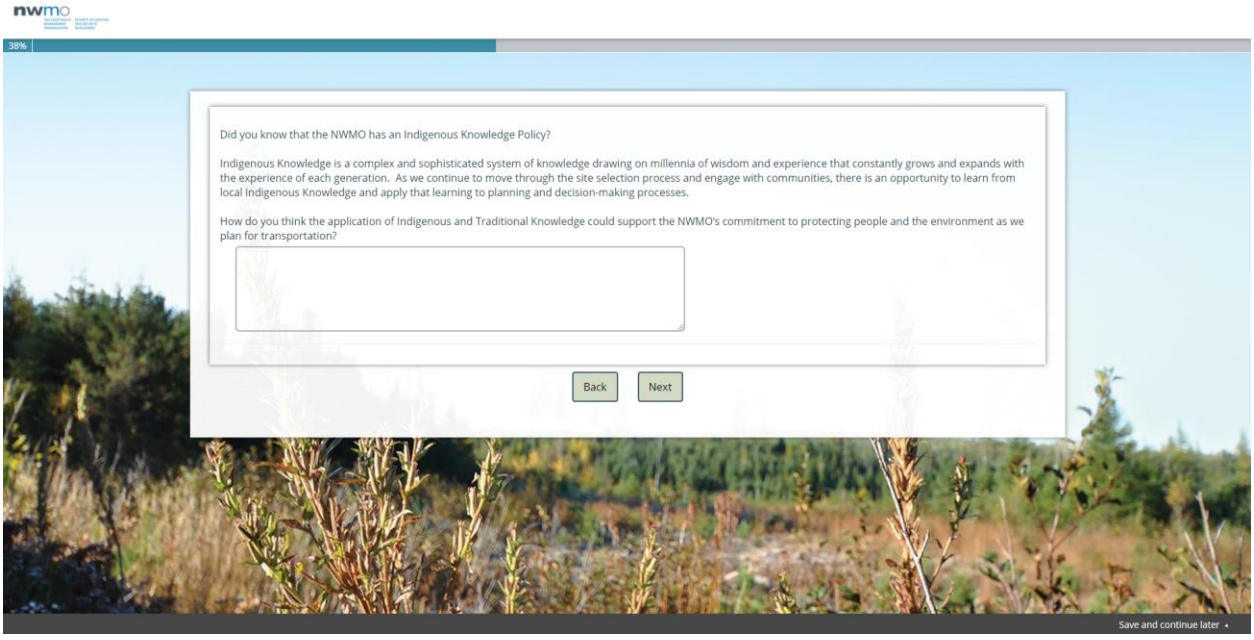
nwmo
38%
Did you know that the NWMO has an Indigenous Knowledge Policy?
Indigenous Knowledge is a complex and sophisticated system of knowledge drawing on millennia of wisdom and experience that constantly grows and expands with the experience of each generation. As we continue to move through the site selection process and engage with communities, there is an opportunity to learn from local Indigenous Knowledge and apply that learning to planning and decision-making processes.
How do you think the application of Indigenous and Traditional Knowledge could support the NWMO's commitment to protecting people and the environment as we plan for transportation?
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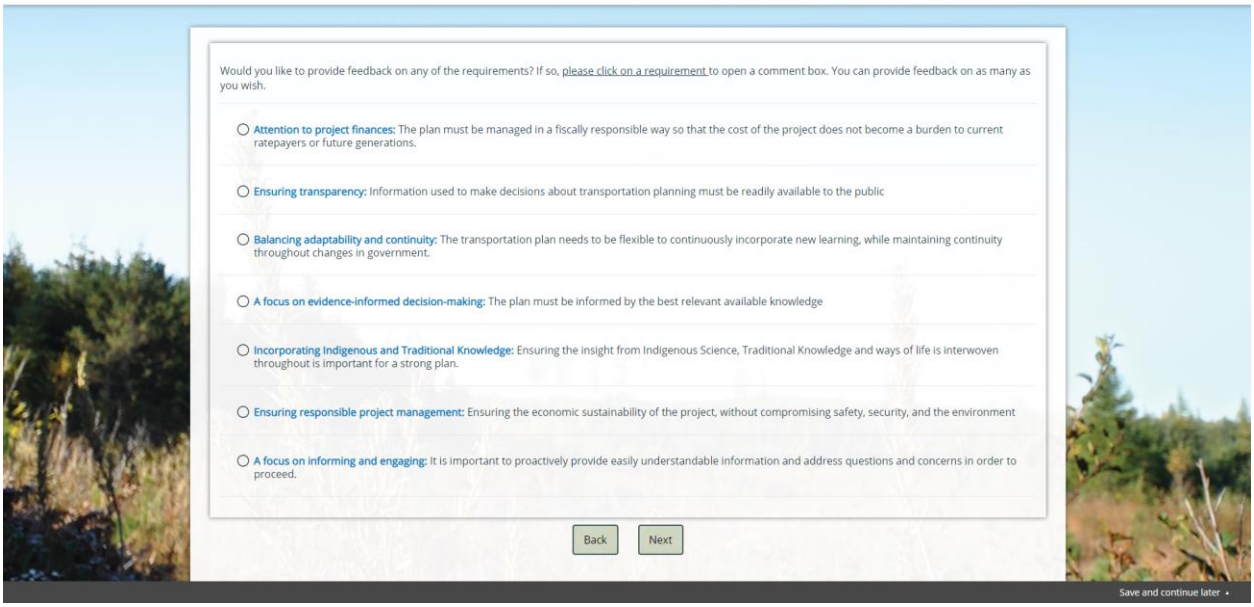
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Would you like to provide feedback on any of the requirements? If so, please click on a requirement to open a comment box. You can provide feedback on as many as you wish.
Attention to project finances: The plan must be managed in a fiscally responsible way so that the cost of the project does not become a burden to current ratepayers or future generations.
Ensuring transparency: Information used to make decisions about transportation planning must be readily available to the public
Balancing adaptability and continuity: The transportation plan needs to be flexible to continuously incorporate new learning, while maintaining continuity throughout changes in government.
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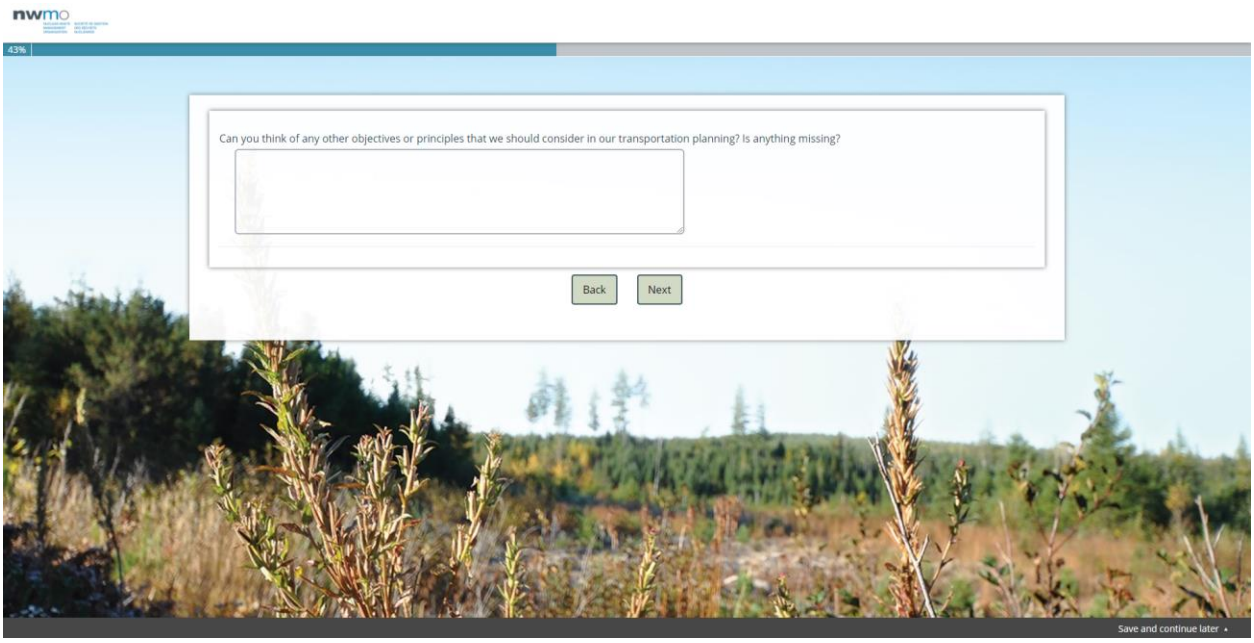
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Can you think of any other objectives or principles that we should consider in our transportation planning? Is anything missing?
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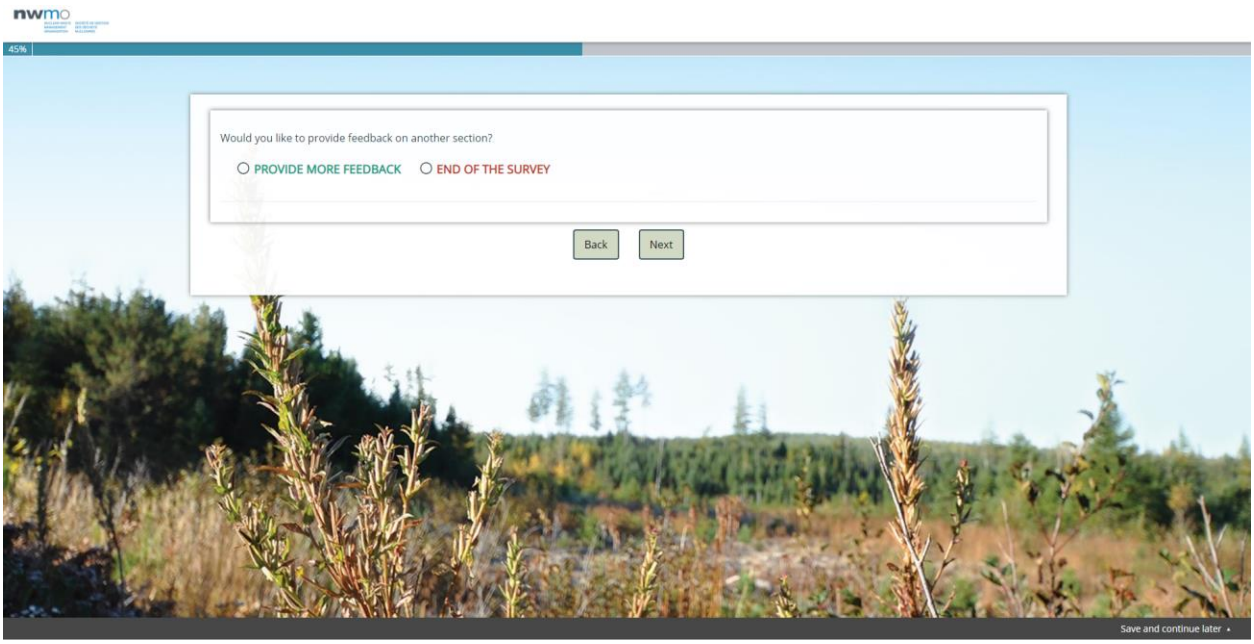
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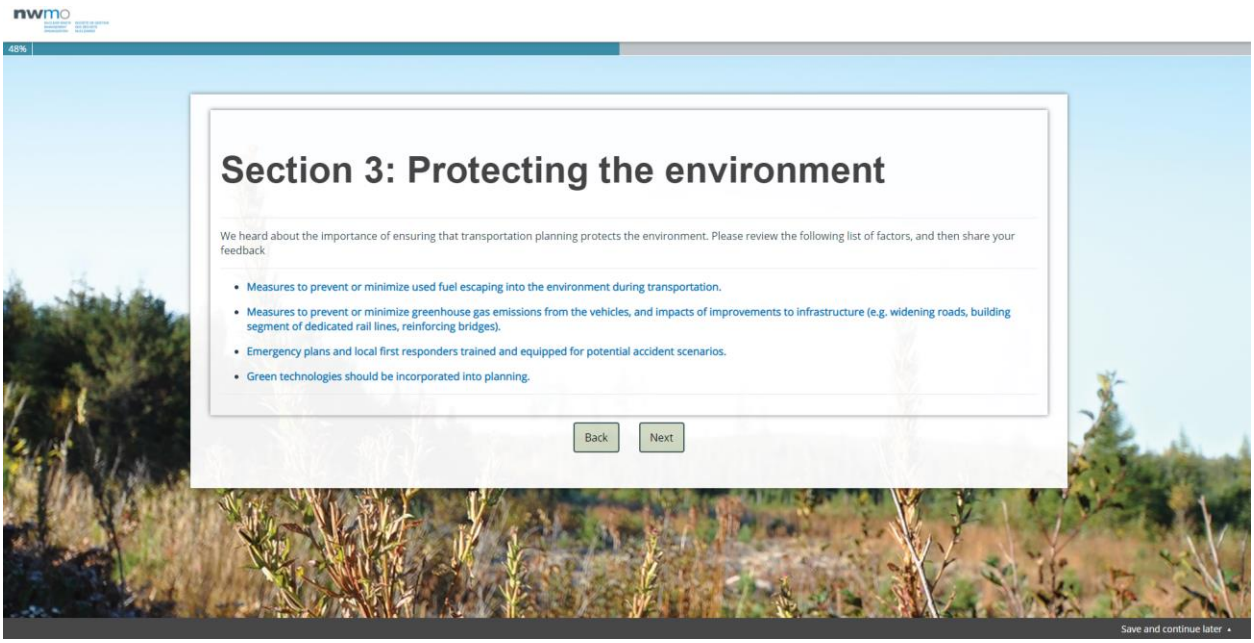
nwmo
48%
Section 3: Protecting the environment
We heard about the importance of ensuring that transportation planning protects the environment. Please review the following list of factors, and then share your feedback
Measures to prevent or minimize used fuel escaping into the environment during transportation.
Measures to prevent or minimize greenhouse gas emissions from the vehicles, and impacts of improvements to infrastructure (e.g. widening roads, building segment of dedicated rail lines, reinforcing bridges).
Emergency plans and local first responders trained and equipped for potential accident scenarios.
Green technologies should be incorporated into planning.
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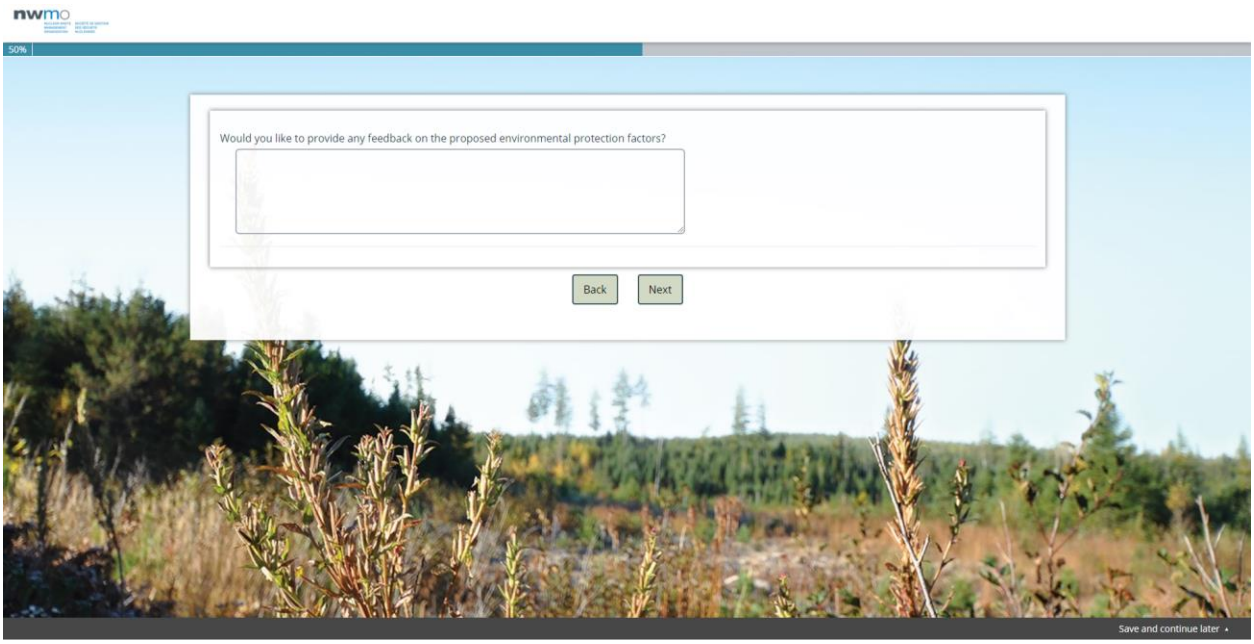
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Would you like to provide any feedback on the proposed environmental protection factors?
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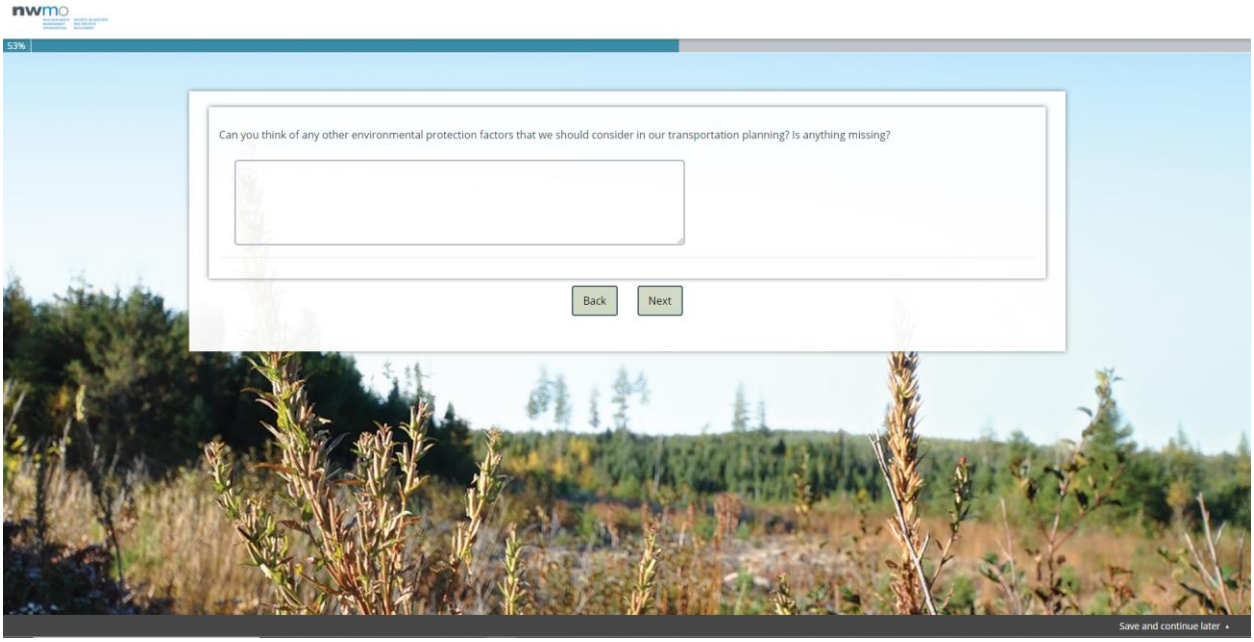
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Can you think of any other environmental protection factors that we should consider in our transportation planning? Is anything missing?
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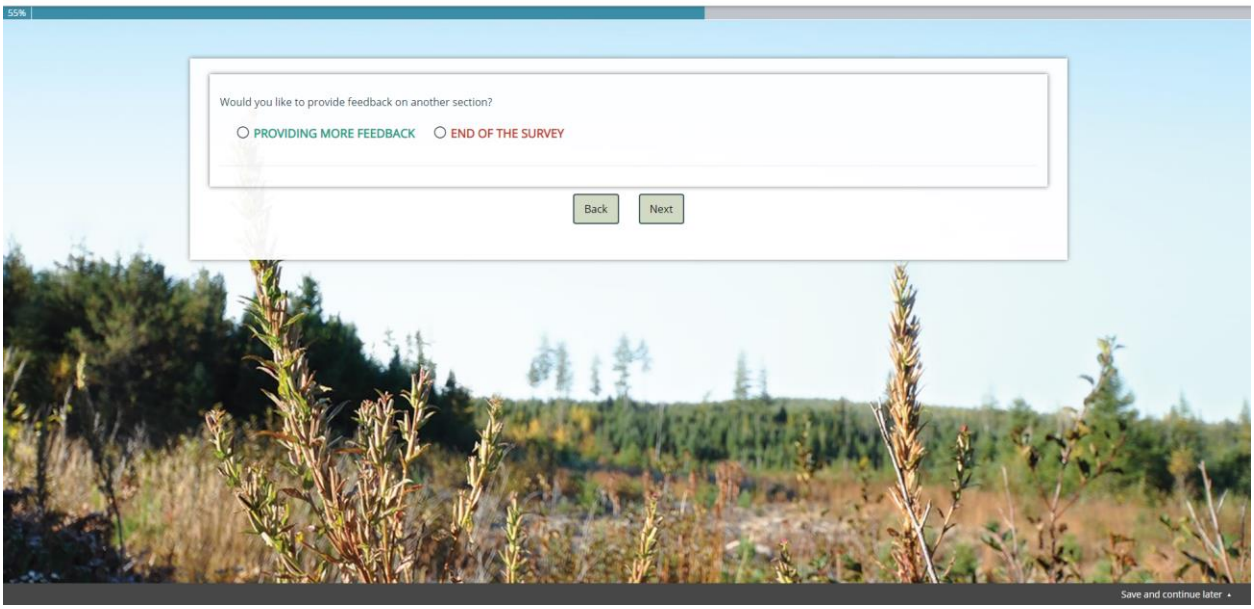
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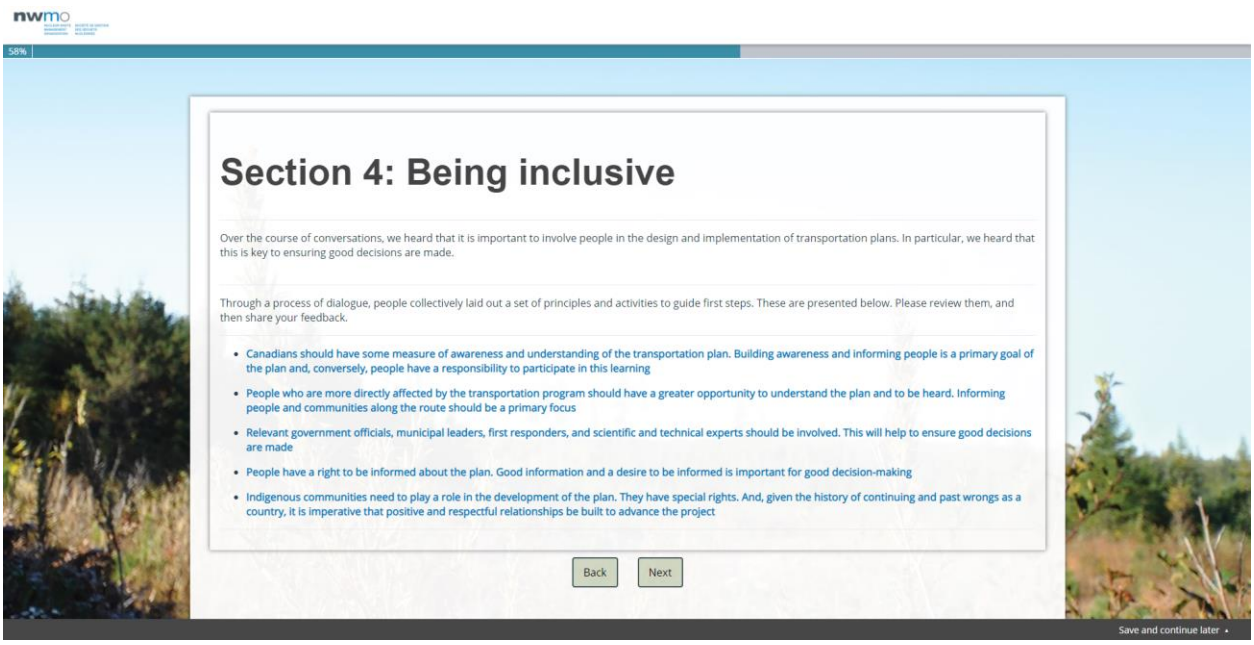
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58%
Section 4: Being inclusive
Over the course of conversations, we heard that it is important to involve people in the design and implementation of transportation plans. In particular, we heard that this is key to ensuring good decisions are made.
Through a process of dialogue, people collectively laid out a set of principles and activities to guide first steps. These are presented below. Please review them, and then share your feedback.
Canadians should have some measure of awareness and understanding of the transportation plan. Building awareness and informing people is a primary goal of the plan and, conversely, people have a responsibility to participate in this learning
People who are more directly affected by the transportation program should have a greater opportunity to understand the plan and to be heard. Informing people and communities along the route should be a primary focus
Relevant government officials, municipal leaders, first responders, and scientific and technical experts should be involved. This will help to ensure good decisions are made
People have a right to be informed about the plan. Good information and a desire to be informed is important for good decision-making
Indigenous communities need to play a role in the development of the plan. They have special rights. And, given the history of continuing and past wrongs as a country, it is imperative that positive and respectful relationships be built to advance the project
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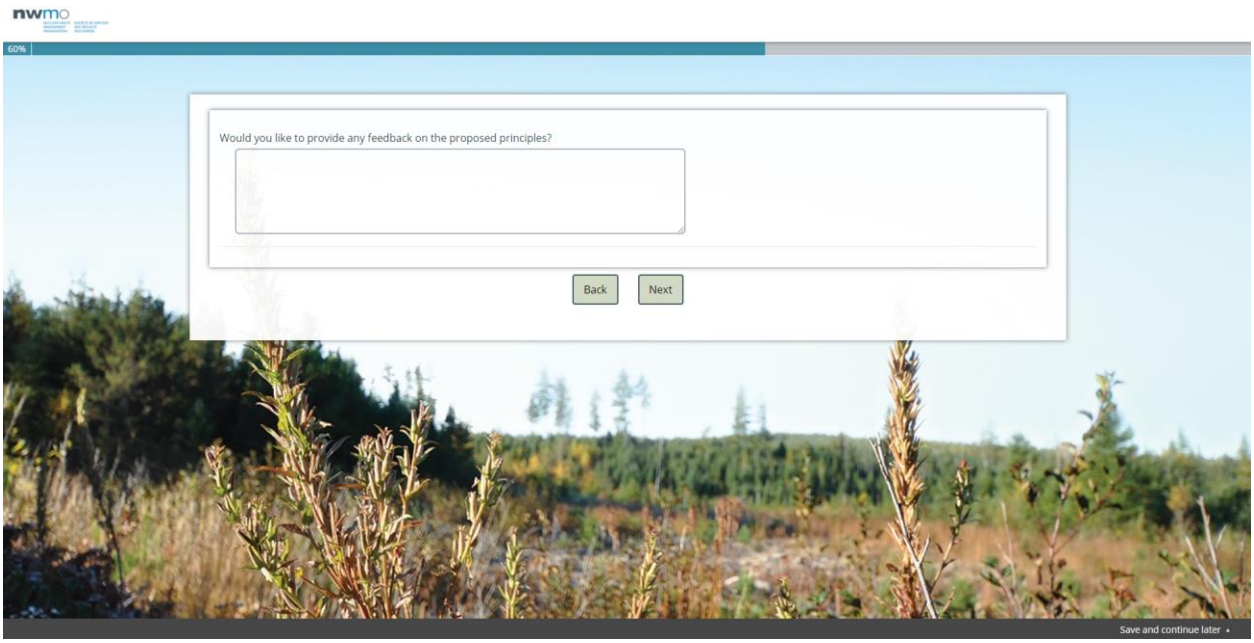
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Would you like to provide any feedback on the proposed principles?
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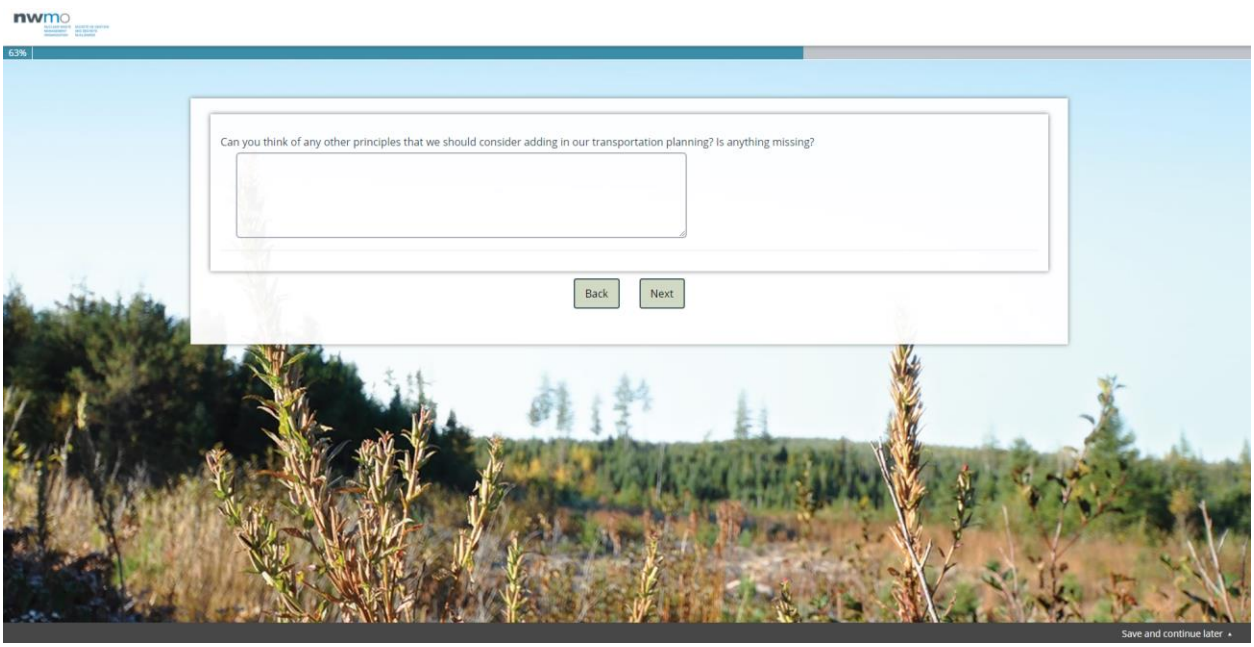
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Can you think of any other principles that we should consider adding in our transportation planning? Is anything missing?
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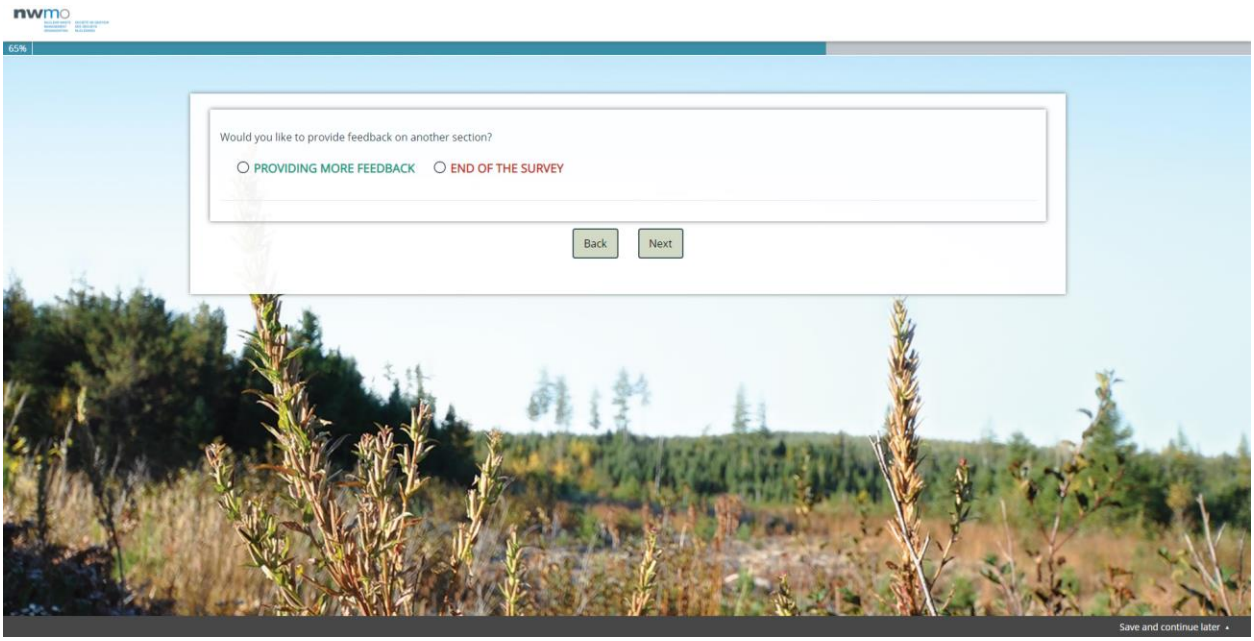
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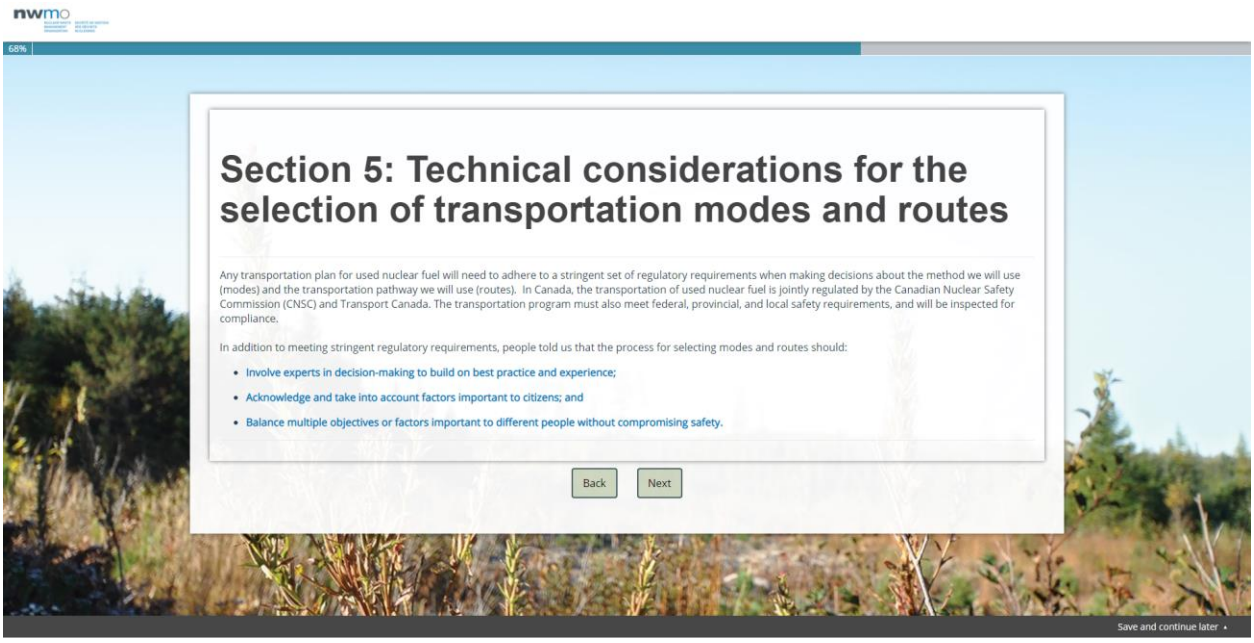
nwmo
68%
Section 5: Technical considerations for the selection of transportation modes and routes
Any transportation plan for used nuclear fuel will need to adhere to a stringent set of regulatory requirements when making decisions about the method we will use (modes) and the transportation pathway we will use (routes). In Canada, the transportation of used nuclear fuel is jointly regulated by the Canadian Nuclear Safety Commission (CNSC) and Transport Canada. The transportation program must also meet federal, provincial, and local safety requirements, and will be inspected for compliance.
In addition to meeting stringent regulatory requirements, people told us that the process for selecting modes and routes should:
Involve experts in decision-making to build on best practice and experience;
Acknowledge and take into account factors important to citizens; and
Balance multiple objectives or factors important to different people without compromising safety.
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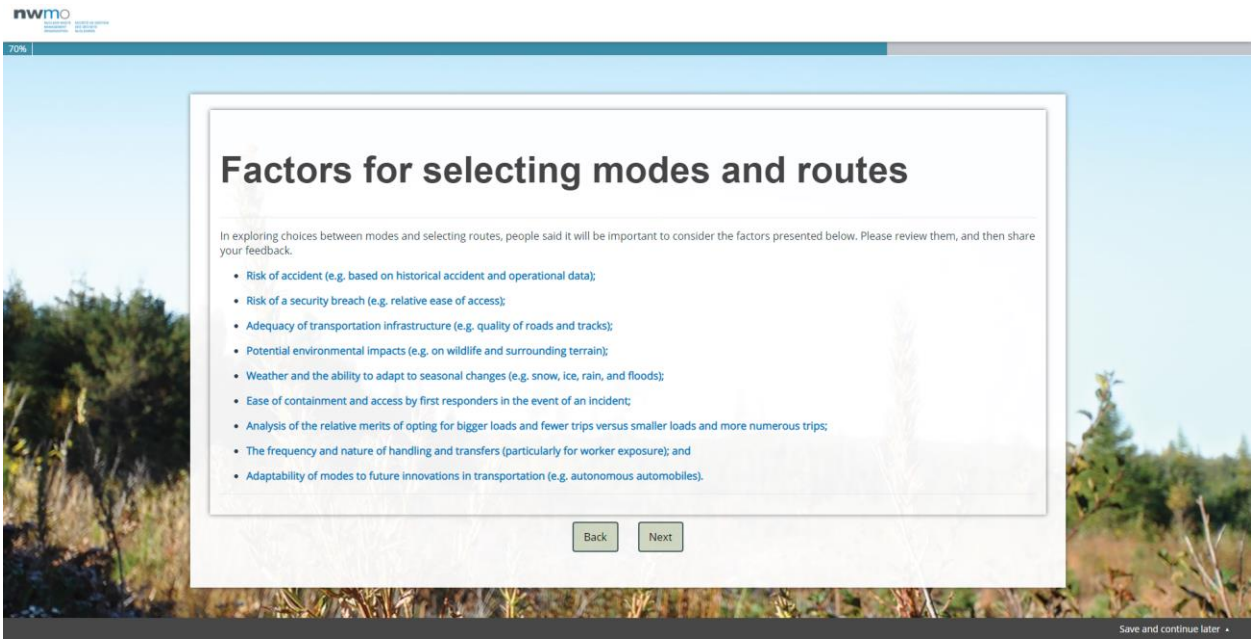
nwmo
70%
Factors for selecting modes and routes
In exploring choices between modes and selecting routes, people said it will be important to consider the factors presented below. Please review them, and then share your feedback.
• Risk of accident (e.g. based on historical accident and operational data);
• Risk of a security breach (e.g. relative ease of access);
• Adequacy of transportation infrastructure (e.g. quality of roads and tracks);
• Potential environmental impacts (e.g. on wildlife and surrounding terrain);
• Weather and the ability to adapt to seasonal changes (e.g. snow, ice, rain, and floods);
• Ease of containment and access by first responders in the event of an incident;
• Analysis of the relative merits of opting for bigger loads and fewer trips versus smaller loads and more numerous trips;
• The frequency and nature of handling and transfers (particularly for worker exposure); and
• Adaptability of modes to future innovations in transportation (e.g. autonomous automobiles).
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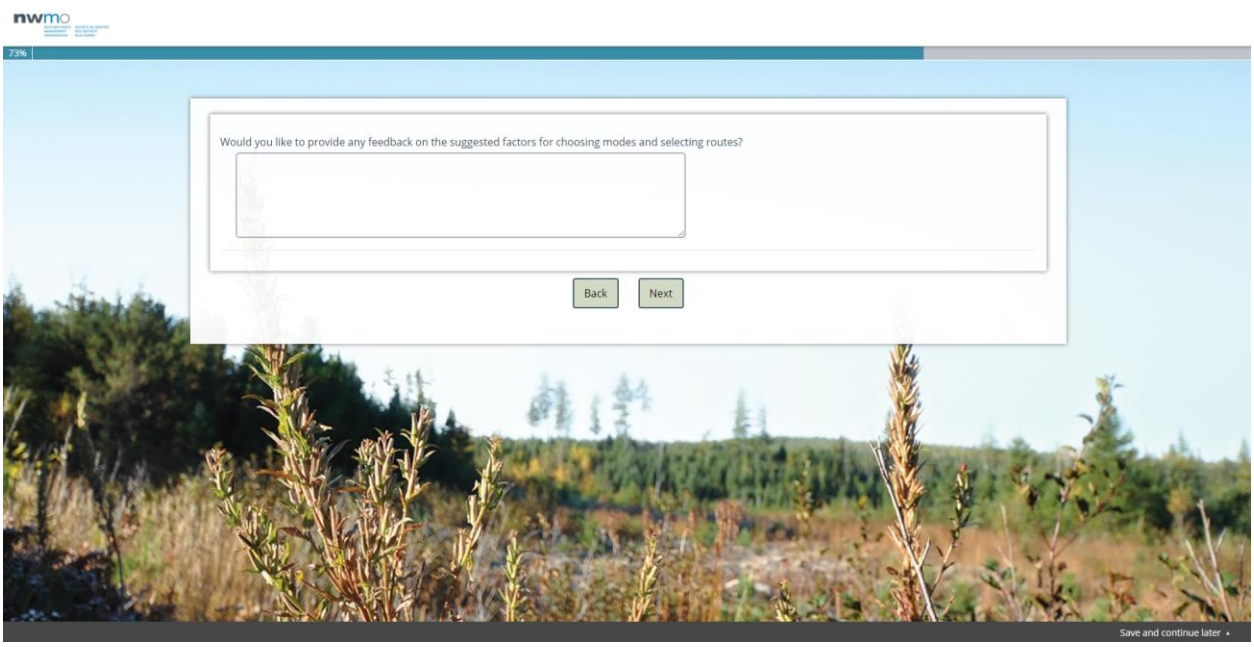
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Would you like to provide any feedback on the suggested factors for choosing modes and selecting routes?
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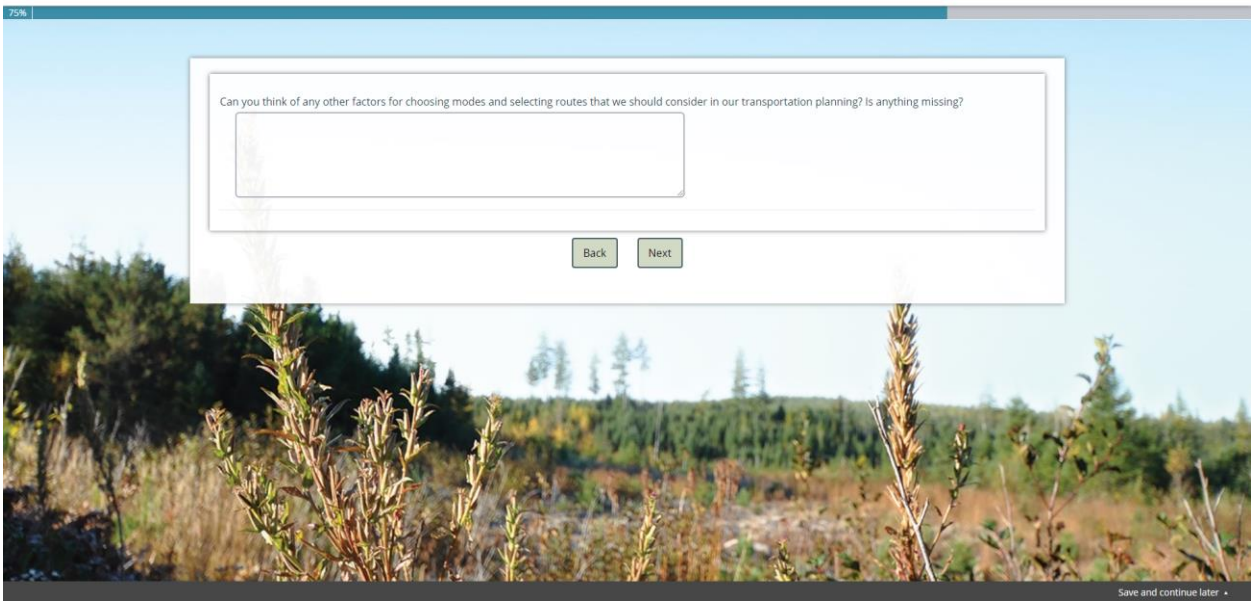
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Can you think of any other factors for choosing modes and selecting routes that we should consider in our transportation planning? Is anything missing?
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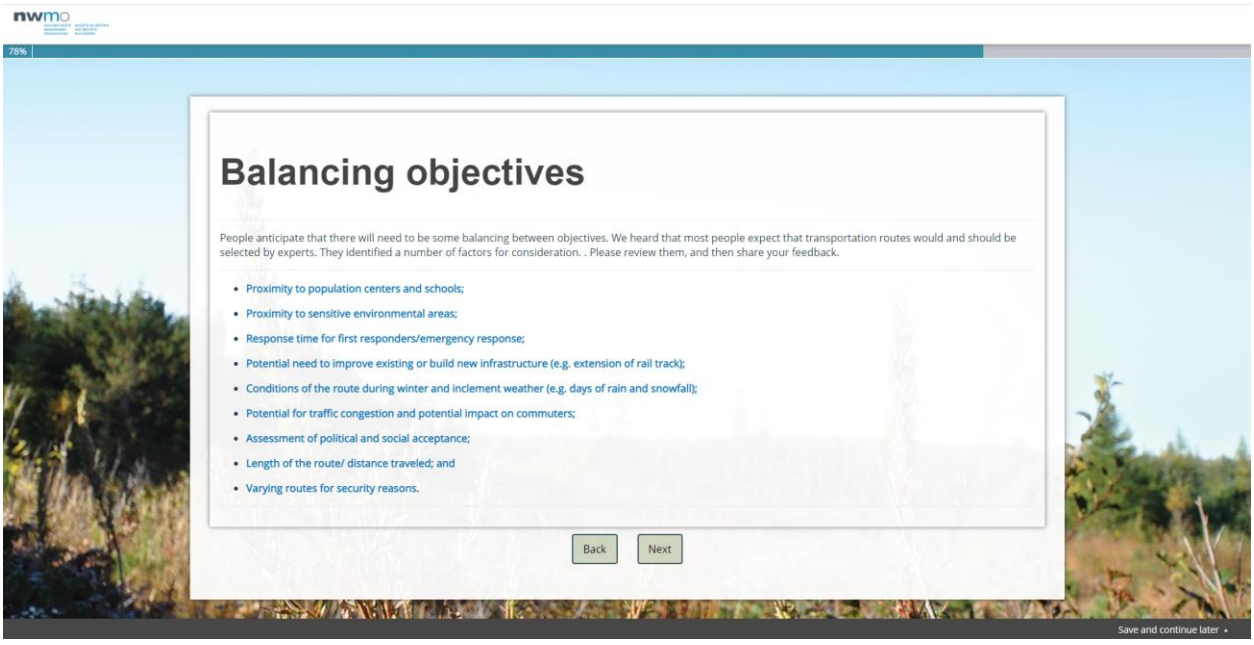
nwmo
78%
Balancing objectives
People anticipate that there will need to be some balancing between objectives. We heard that most people expect that transportation routes would and should be selected by experts. They identified a number of factors for consideration. . Please review them, and then share your feedback.
Proximity to population centers and schools;
Proximity to sensitive environmental areas;
Response time for first responders/emergency response;
Potential need to improve existing or build new infrastructure (e.g. extension of rail track);
Conditions of the route during winter and inclement weather (e.g. days of rain and snowfall);
Potential for traffic congestion and potential impact on commuters;
Assessment of political and social acceptance;
Length of the route/ distance traveled; and
Varying routes for security reasons.
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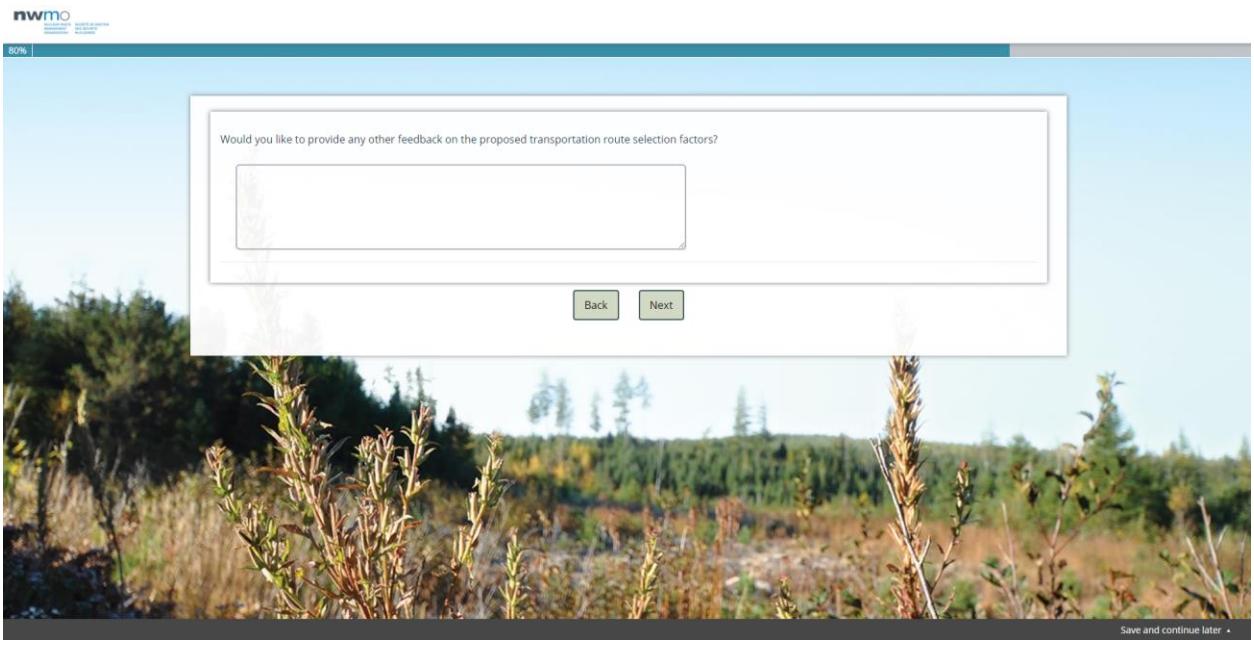
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Would you like to provide any other feedback on the proposed transportation route selection factors?
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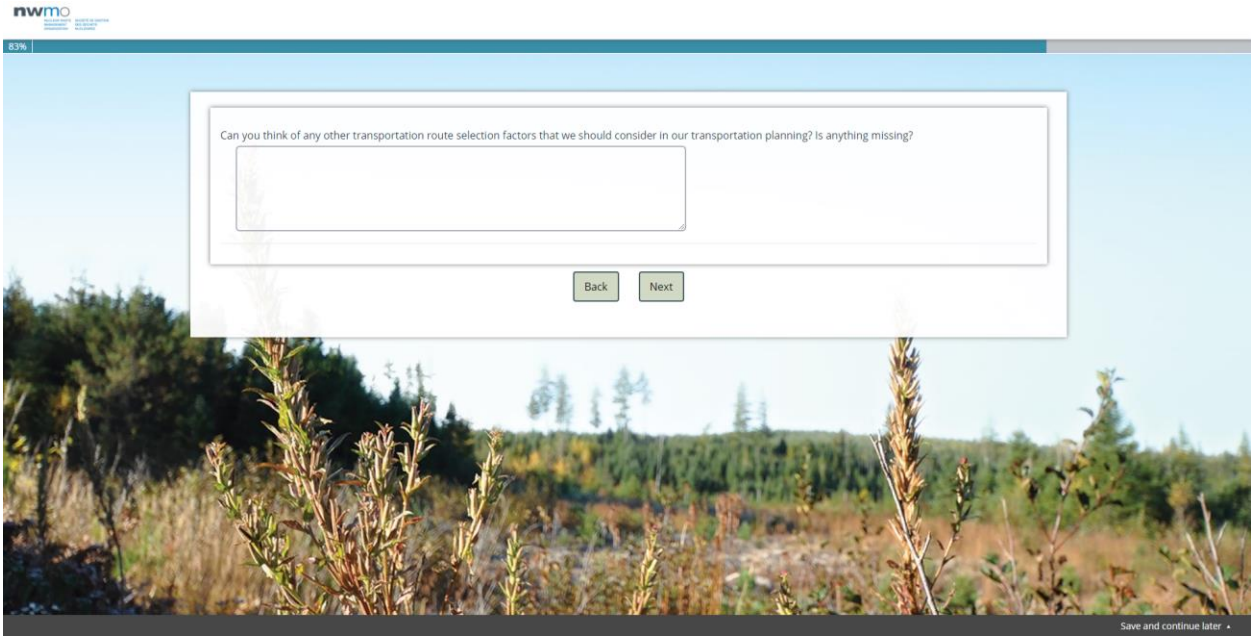
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Can you think of any other transportation route selection factors that we should consider in our transportation planning? Is anything missing?
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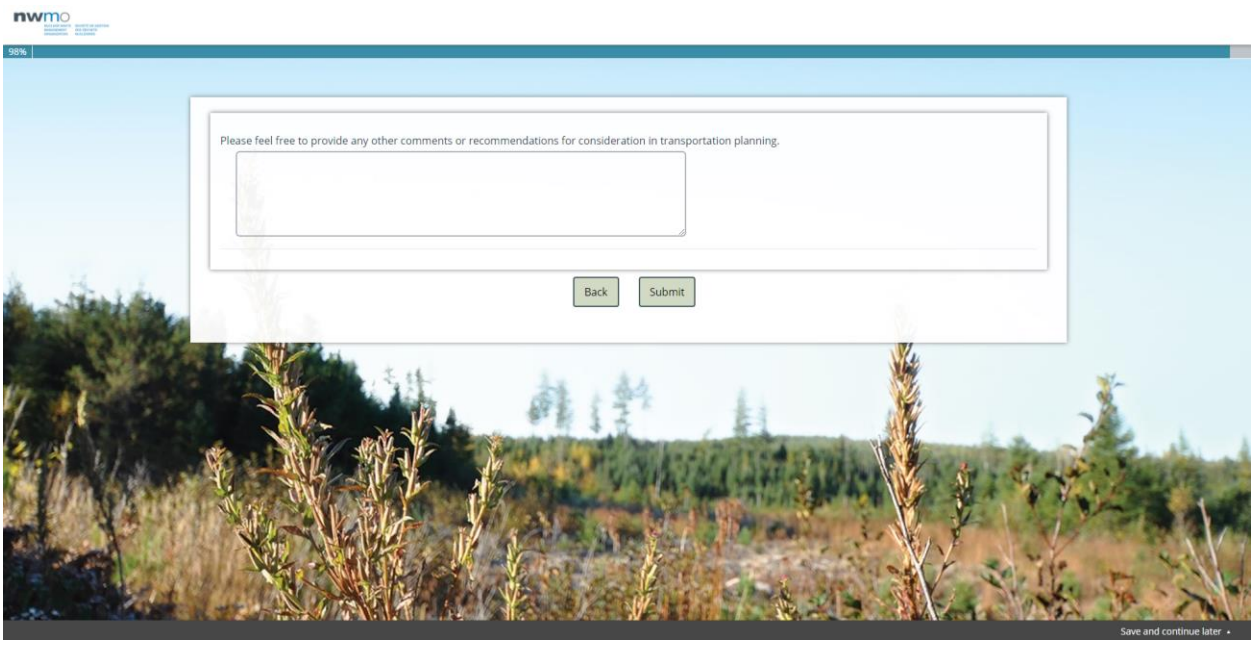
nwmo
98%
Please feel free to provide any other comments or recommendations for consideration in transportation planning.
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Submit
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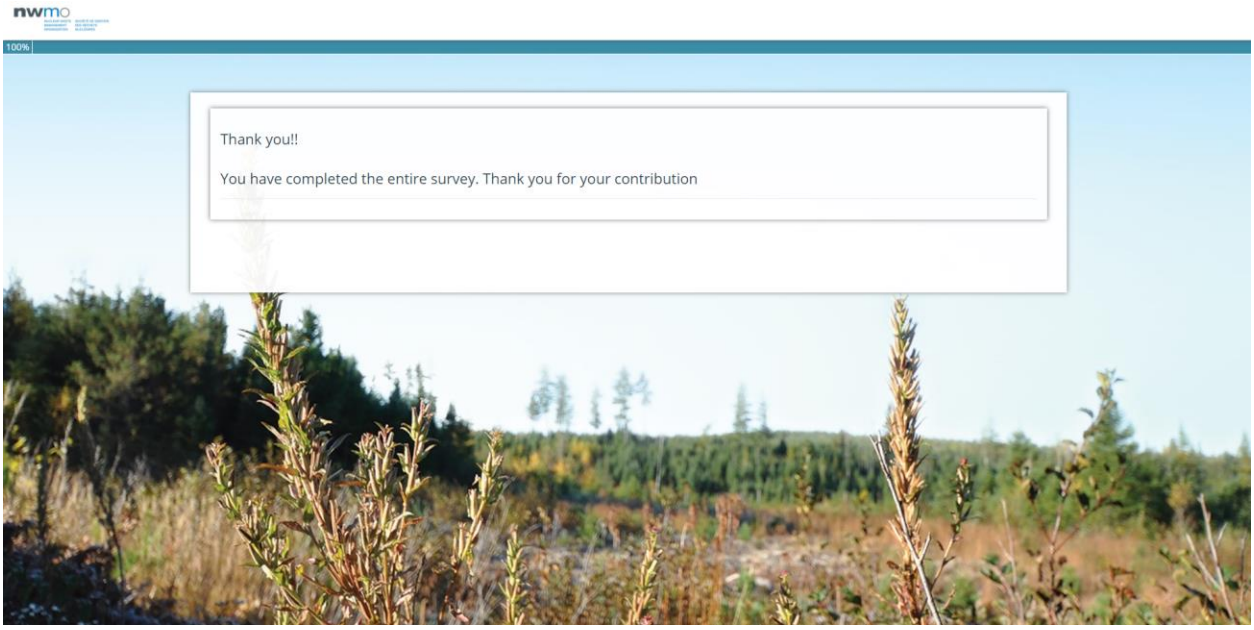
nwmo
100%
Thank you!!
You have completed the entire survey. Thank you for your contribution

Appendix B – Ontario Public Survey Questionnaire

Perspectives
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Welcome!

Thank you for agreeing to participate in this survey.

This research is being undertaken by Hill+Knowlton Strategies' research group Perspectives+.

The survey will take about 10 minutes and your responses will be anonymous. Your decision to participate is completely voluntary.

Press "next" to begin.

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Perspectives
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8%

Please provide your full postal code (used for broad geographic analysis).
Please enter your postal code without a space or hyphen. ex. K1K1V1

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Please provide your age:

Gender

○ Male ○ Female ○ Non-binary ○ Prefer not to say

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Perspectives
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To start, how comfortable are you with the way in which each of the following is being managed in Canada?

	1 – Not at all comfortable	2	3	4	5	6	7 – Very comfortable	Don't know
The Great Lakes	○	○	○	○	○	○	○	○
Hospitals	○	○	○	○	○	○	○	○
Climate change	○	○	○	○	○	○	○	○
The economy	○	○	○	○	○	○	○	○
Used nuclear fuel	○	○	○	○	○	○	○	○
Natural resources	○	○	○	○	○	○	○	○
Pipelines	○	○	○	○	○	○	○	○

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Perspectives
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This survey asks for your feedback on Canada's plan for the safe, long-term management of used nuclear fuel. This plan was developed by the Nuclear Waste Management Organization (NWMO) with the input of a broad cross-section of Canadians and Indigenous peoples and was selected as Canada's plan by the Government of Canada in 2007.

Canada's plan includes centrally containing and isolating used nuclear fuel in a deep geological repository. The plan also involves transporting the used fuel from interim storage locations where it is currently stored to the repository site. Transportation is expected to begin in the 2040s and last approximately 40 years – but now is the time to seek your feedback on how a socially acceptable plan can be developed with the public.

We are inviting you to review elements of an early planning document: a draft framework for the transportation of used nuclear fuel, identify where we have listened well, and what additions and changes need to be made.

This is an opportunity for the public, including those who are new to Canada's plan, to get involved, learn more, and help shape future plans and discussions.

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Perspectives
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You do not need to have in-depth knowledge of the issues to participate:

- The survey includes background information and facts about Canada's plan and about the management and transportation of used nuclear fuel.
- Also, you will have the opportunity to review parts of the emerging transportation plan before providing your input.

Important: You do not need to complete the survey all at once - you can save your work and return to the survey later. You can see the 'Save and Continue' option on the bottom right corner of your screen, you can enter your email address to receive a link to return to their survey later.

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Background on the issues

The Nuclear Waste Management Organization (NWMO) was created through federal legislation in 2002. It is funded by Canada's nuclear energy corporations and operates on a not-for-profit basis. The NWMO's mission is to develop and implement Canada's plan, including transportation of used nuclear fuel.

There is a strong international track record for the transport of used fuel, which includes more than 50 years of safe shipments worldwide.

Below is a list of questions that people often ask about the management and transportation of used nuclear fuel.
Check-mark the box to see the answer.

☑ How much nuclear power does Canada use?

- Nuclear power has been used to generate electricity in Canada since the 1970s.
- Today, about 60% of Ontario's electricity comes from nuclear power. (Ontario).
- New Brunswick also uses nuclear power to generate about 39% of its power (New Brunswick). Quebec stopped using nuclear power to generate electricity in 2012, after 29 years (Quebec).

☑ What is used nuclear fuel?

- Nuclear reactors in Canada are fuelled by natural uranium. Today uranium is mined in Saskatchewan.
- Used nuclear fuel is a by-product created when nuclear power plants generate electricity. It remains highly radioactive, essentially indefinitely and must be contained and isolated from people and the environment.
- Canadian used nuclear fuel is not a liquid or a gas - it is a stable solid. It is not flammable or explosive.

Save and continue later

☑ How much used nuclear fuel does Canada have?

- At the end of 2019, Canada had approximately 2.9 million used fuel bundles in temporary storage; stacked like firewood it would be enough to fill eight hockey rinks up to the top of the boards.
- If Canada's existing reactors operate to the end of their planned lives, the inventory of used fuel could be about 5.5 million bundles.
- The vast majority of Canada's used nuclear fuel (more than 90%) is in Ontario. There is also used fuel in temporary storage in New Brunswick (~5%) and Quebec (~5%), with a small amount (~1%) stored in Manitoba.

☑ How is used nuclear fuel managed now?

- Canada's used nuclear fuel is currently safely managed in facilities licensed for interim storage. These facilities are located at nuclear reactor sites in Ontario, Quebec, and New Brunswick, and at Atomic Energy of Canada Limited's sites in Manitoba and Chalk River Laboratories in Ontario.
- This storage is interim and requires constant monitoring and maintenance.

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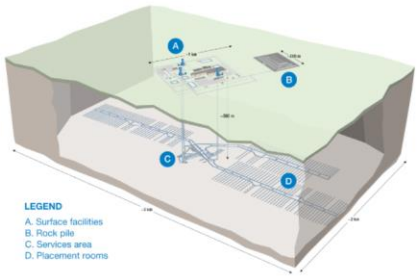
Perspectives

☑ Is there a plan for dealing permanently with Canada's used nuclear fuel?

- Yes. Adaptive Phased Management (APM) is Canada's plan for the safe long-term management of used nuclear fuel. It involves centralized containment and isolation of Canada's used fuel in a deep geological repository in an area with suitable geology and an informed and willing host. The repository will be constructed at a depth of about 500 meters below the ground's surface, depending on rock characteristics at the site.
- The repository design uses a multiple-barrier system – a series of engineered and natural barriers that work together to contain and isolate used nuclear fuel from people and the environment.
- The plan is consistent with long-term management best practices adopted by other countries with nuclear power programs, such as Finland, France, Sweden, Switzerland, and the United Kingdom.
- The federal government selected APM as Canada's plan in June 2007. The NWMO is now responsible for implementing APM, subject to all necessary regulatory approvals.
- The repository should be ready to accept used nuclear fuel by the 2040s.



☑ Where will the used nuclear fuel repository be located?

- Since 2010, the NWMO has been working collaboratively with interested communities to identify a single site where Canada's used nuclear fuel can be contained and isolated over the long-term. Municipal, First Nation and Métis communities are involved.
- Twenty-two communities initially came forward to learn about the project and explore their potential to host it. A series of increasingly detailed studies to assess potential to meet the project's rigorous technical, safety and social requirements have narrowed the list to two Ontario communities: South Bruce and Ignace. First Nation and Métis communities in these areas are also involved in discussions and studies.
- We are on track to identify a single, preferred site by 2023, in an area with informed and willing hosts. The project will only proceed with the interested community, First Nation and Métis communities in the area, and surrounding communities working in partnership to implement it.

☑ How will the used fuel be transported to the repository location?

- Placing all of Canada's used nuclear fuel in a centralized location will require transportation from interim storage facilities to the deep geological repository.
- Transportation will involve placing these solid used fuel bundles in a transportation package that is specially designed to protect people and the environment, including in accident conditions.
- The packages will be transported by road and/or rail, depending on the location chosen for the deep geological repository.
- Transportation of used nuclear fuel is expected to begin in the 2040s and take about 40 years to complete.

☑ Has there ever been an accident involving the transportation of used nuclear fuel?

- Transportation of used nuclear fuel is subject to stringent regulation and oversight. In Canada, transportation is jointly regulated by the Canadian Nuclear Safety Commission and Transport Canada. Stringent regulatory requirements based on international standards must be met before used nuclear fuel can be transported.
- In over 50 years, there have been more than 20,000 shipments worldwide of used nuclear fuel using road, rail and water transport. These shipments have all been completed safely without serious injuries, health impacts, fatalities or environmental consequences attributable to the radiological nature of the shipments.

☑ Who is the NWMO again?

- The NWMO is a not-for profit organization established in 2002 by Canada's nuclear electricity producers in accordance with the Nuclear Fuel Waste Act (NFWA).
- The founding members of the NWMO are Ontario Power Generation (OPG), New Brunswick Power Corporation, and Hydro-Québec (HQ). These organizations, along with Atomic Energy of Canada Limited (AECL), are required to fund our operations.
- The NWMO is responsible for implementing, collaboratively with Canadians and Indigenous peoples, Canada's plan for the safe, long-term management of used nuclear fuel, in a manner that protects people and the environment.
- For more information on Canada's plan for the safe, long-term management of used nuclear fuel, please see the NWMO website.

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We invite your feedback on the elements of our transportation planning document, but just before you dive in, we have two quick questions for you.

Before today, how familiar were you with Canada's plan for the safe long-term management of used nuclear fuel?

- ○ 1 – Not at all familiar
- ○ 2
- ○ 3
- ○ 4
- ○ 5
- ○ 6
- ○ 7 – Very familiar
- ○ Don't know

Given what you know, please feel free to share any questions or concerns you might have about the transportation of used nuclear fuel as part of Canada's plan in the space below

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Have your say

Each section includes information for you to consider and questions to reflect on and then respond to. If you would like to see the complete draft planning framework for the transportation of used nuclear fuel, click here and a PDF version will appear in a new window.

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Section 1: Basic requirements – what needs to be considered in transportation planning?

The NWMO has heard from Canadians that transportation planning should include the 11 requirements described below. Please review them and then share your feedback.

Safety is the primary consideration
Safety needs to be the first consideration.

Protecting the environment
The NWMO needs to ensure that the plan minimizes impact on the environment.

Security
The NWMO needs to plan for and address possible threats.

Emergency response planning
Planning and preparation for potential emergency scenarios.

Drawing on international lessons learned
Informed by the best available knowledge and expertise.

Ensuring that the plan is adaptive
The plan needs to be able to accommodate changes in science and technology.

Training
The highest standards must be met in areas such as employee qualifications, security screening, training and certification.

Monitoring, tracking, and auditing
Keeping track of containers, evaluating and auditing procedures and processes, and holding people accountable.

Communication, education, and engagement
People, particularly those living in communities along the route, have a 'right to know' about the project.

Respectful relations with First Nation and Métis communities
Working positively and respectfully with First Nation and Métis communities is of utmost importance.

Ensuring program sustainability
The program must be on a solid financial and political foundation.

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Thinking about what is important in planning the long-term transportation of used nuclear fuel, how important is it that the transportation plan addresses each of the following requirements?

	1 – Not at all important	2	3	4	5	6	7- Very important	Don't know
Safety is the primary consideration: Safety needs to be the first consideration.	○	○	○	○	○	○	○	○
Protecting the environment: The NWMO needs to ensure that the plan minimizes impact on the environment.	○	○	○	○	○	○	○	○
Security: The NWMO needs to plan for and address possible threats.	○	○	○	○	○	○	○	○
Emergency response planning: Planning and preparation for potential emergency scenarios,	○	○	○	○	○	○	○	○
Drawing on international lessons learned: Informed by the best available knowledge and expertise.	○	○	○	○	○	○	○	○
Ensuring that the plan is adaptive: The plan needs to be able to accommodate changes in science and technology.	○	○	○	○	○	○	○	○
Training: The highest standards must be met in areas such as employee qualifications, security screening, training and certification.	○	○	○	○	○	○	○	○
Monitoring, tracking and auditing: Keeping track of containers, evaluating and auditing procedures and processes, and holding people accountable.	○	○	○	○	○	○	○	○
Communication, education and engagement: People, particularly those living in communities along the route, have a "right to know" about the project.	○	○	○	○	○	○	○	○
Respectful relations with First Nation and Métis communities: Working positively and respectfully with First Nation and Métis communities is of utmost importance.	○	○	○	○	○	○	○	○
Ensuring program sustainability: The program must be on a solid financial and political foundation.	○	○	○	○	○	○	○	○

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Would you like to provide feedback on any of the requirements? If so, please click on a requirement to open a comment box. You can provide feedback on as many as you wish.

- ○ **Safety is the primary consideration** Safety needs to be the first consideration.
- ○ **Protecting the environment:** The NWMO needs to ensure that the plan minimizes impact on the environment.
- ○ **Security:** The NWMO needs to plan for and address possible threats.
- ○ **Emergency response planning:** Planning and preparation for potential emergency scenarios.
- ○ **Drawing on international lessons learned:** Informed by the best available knowledge and expertise.
- ○ **Ensuring that the plan is adaptive:** The plan needs to be able to accommodate changes in science and technology.
- ○ **Training:** The highest standards must be met in areas such as employee qualifications, security screening, training and certification
- ○ **Monitoring, tracking and auditing:** Keeping track of containers, evaluating and auditing procedures and processes, and holding people accountable.
- ○ **Communication, education and engagement:** People, particularly those living in communities along the route, have a "right to know" about the project.
- ○ **Respectful relations with First Nation and Métis communities:** Working positively and respectfully with First Nation and Métis communities is of utmost importance.
- ○ **Ensuring program sustainability:** The program must be on a solid financial and political foundation.

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Can you think of any other planning requirements or considerations that should be addressed? Is anything missing?

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Section 2: Objectives and principles

Through our ongoing dialogue, the NWMO heard planning must be driven by objectives and a set of guiding principles. Please review them and then share your feedback.

Attention to project finances
Attention to project finances The plan must be managed in a fiscally responsible way so that the cost of the project does not become a burden to current ratepayers or future generations.

Ensuring transparency
Information used to make decisions about transportation planning must be readily available to the public

Balancing adaptability and continuity
The transportation plan needs to be flexible to continuously incorporate new learning while maintaining continuity throughout changes in government.

A focus on evidence-informed decision-making
The plan must be informed by the best relevant available knowledge.

Incorporating Indigenous and Traditional Knowledge
Ensuring the insight from Indigenous Science, Traditional Knowledge, and ways of life are interwoven throughout is important for a strong plan.

Ensuring responsible project management
Ensuring the economic sustainability of the project, without compromising safety, security and the environment.

A focus on informing and engaging
It is important to proactively provide easily understandable information, and address questions and concerns, in order to proceed.

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Thinking about what is important in planning the long-term transportation of used nuclear fuel, how important are these objectives and principles?

	1 – Not at all important	2	3	4	5	6	7- Very important	Don't know
Attention to project finances: Attention to project finances The plan must be managed in a fiscally responsible way so that the cost of the project does not become a burden to current ratepayers or future generations.	○	○	○	○	○	○	○	○
Ensuring transparency: Information used to make decisions about transportation planning must be readily available to the public	○	○	○	○	○	○	○	○
Balancing adaptability and continuity: The transportation plan needs to be flexible to continuously incorporate new learning while maintaining continuity throughout changes in government.	○	○	○	○	○	○	○	○
A focus on evidence-informed decision-making: The plan must be informed by the best relevant available knowledge.	○	○	○	○	○	○	○	○
Incorporating Indigenous and Traditional Knowledge: Ensuring the insight from Indigenous Science, Traditional Knowledge, and ways of life are interwoven throughout is important for a strong plan.	○	○	○	○	○	○	○	○
Ensuring responsible project management: Ensuring the economic sustainability of the project, without compromising safety, security and the environment.	○	○	○	○	○	○	○	○
A focus on informing and engaging: It is important to proactively provide easily understandable information, and address questions and concerns, in order to proceed.	○	○	○	○	○	○	○	○

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Did you know that the NWMO has an Indigenous Knowledge Policy?

Indigenous Knowledge is a complex and sophisticated system of knowledge drawing on millennia of wisdom and experience that constantly grows and expands with the experience of each generation. As the NWMO continues to move through the site selection process and engage with communities, there is an opportunity to learn from local Indigenous Knowledge and apply that learning to planning and decision-making processes.

How do you think the application of Indigenous and Traditional Knowledge could support the NWMO's commitment to protecting people and the environment as we plan for transportation?

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71%

Would you like to provide feedback on any of the requirements? If so, please click on a requirement to open a comment box. You can provide feedback on as many as you wish.

- ○ **Attention to project finances:** The plan must be managed in a fiscally responsible way so that the cost of the project does not become a burden to current ratepayers or future generations.
- ○ **Ensuring transparency:** Information used to make decisions about transportation planning must be readily available to the public
- ○ **Balancing adaptability and continuity:** The transportation plan needs to be flexible to continuously incorporate new learning, while maintaining continuity throughout changes in government.
- ○ **A focus on evidence-informed decision-making:** The plan must be informed by the best relevant available knowledge
- ○ **Incorporating Indigenous and Traditional Knowledge:** Ensuring the insight from Indigenous Science, Traditional Knowledge and ways of life is interwoven throughout is important for a strong plan.
- ○ **Ensuring responsible project management:** Ensuring the economic sustainability of the project, without compromising safety, security, and the environment
- ○ **A focus on informing and engaging:** It is important to proactively provide easily understandable information and address questions and concerns in order to proceed.

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75%

Can you think of any other objectives or principles that the NWMO should consider in our transportation planning? Is anything missing?

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79%

Please feel free to provide any other comments or recommendations for consideration in transportation planning.

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83%

How comfortable are you with the way in which the used nuclear fuel is being managed in Canada?

- 1 - Not at all comfortable
- 2
- 3
- 4
- 5
- 6
- 7 - Very comfortable
- Don't know

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We have just a few more questions that we will use to analyze the survey responses.

What is the highest level of education you have completed?

- ○ Less than high school
- ○ High school
- ○ Some college or university
- ○ College graduate or CEGEP
- ○ Bachelor's degree
- ○ Master's or professional degree
- ○ Doctorate
- ○ Prefer to not say

What is your current employment status?

- ○ Work for an employer full-time
- ○ Work for an employer part time
- ○ Self-employed
- ○ Unemployed
- ○ Student
- ○ Homemaker
- ○ Retired
- ○ Other (please specify)
- ○ Prefer to not say

Annual household income (from all sources before taxes):

- ○ Less than $20,000
- ○ $20,000 –$39,999
- ○ $40,000 –$69,999
- ○ $70,000 –$99,999
- ○ $100,000 –$119,999
- ○ $120,000 or more
- ○ Prefer to not say

Which of the following best describes your housing tenure?

- ○ Rent
- ○ Own
- ○ Prefer not to say

Were you born in Canada?

- ○ Yes
- ○ No
- ○ Prefer not to say

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100%

Thank you!!

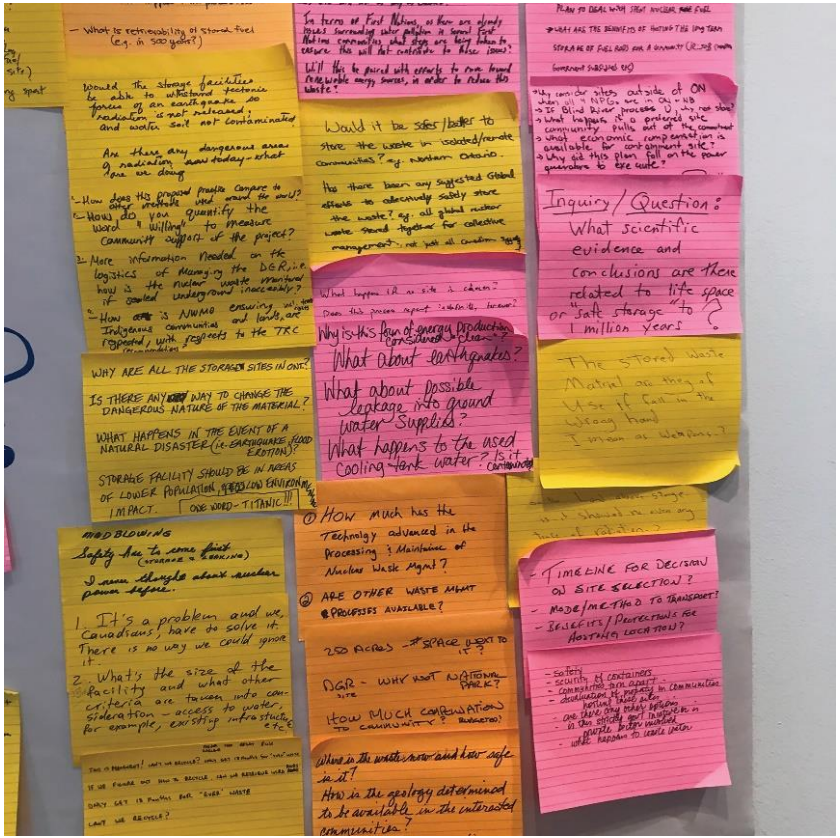
You have completed the entire survey. Thank you for your contribution

Appendix C – Workshop Facilitation Deck

Workshop Facilitation Deck

09/2020

WELCOME: Why are we here tonight?



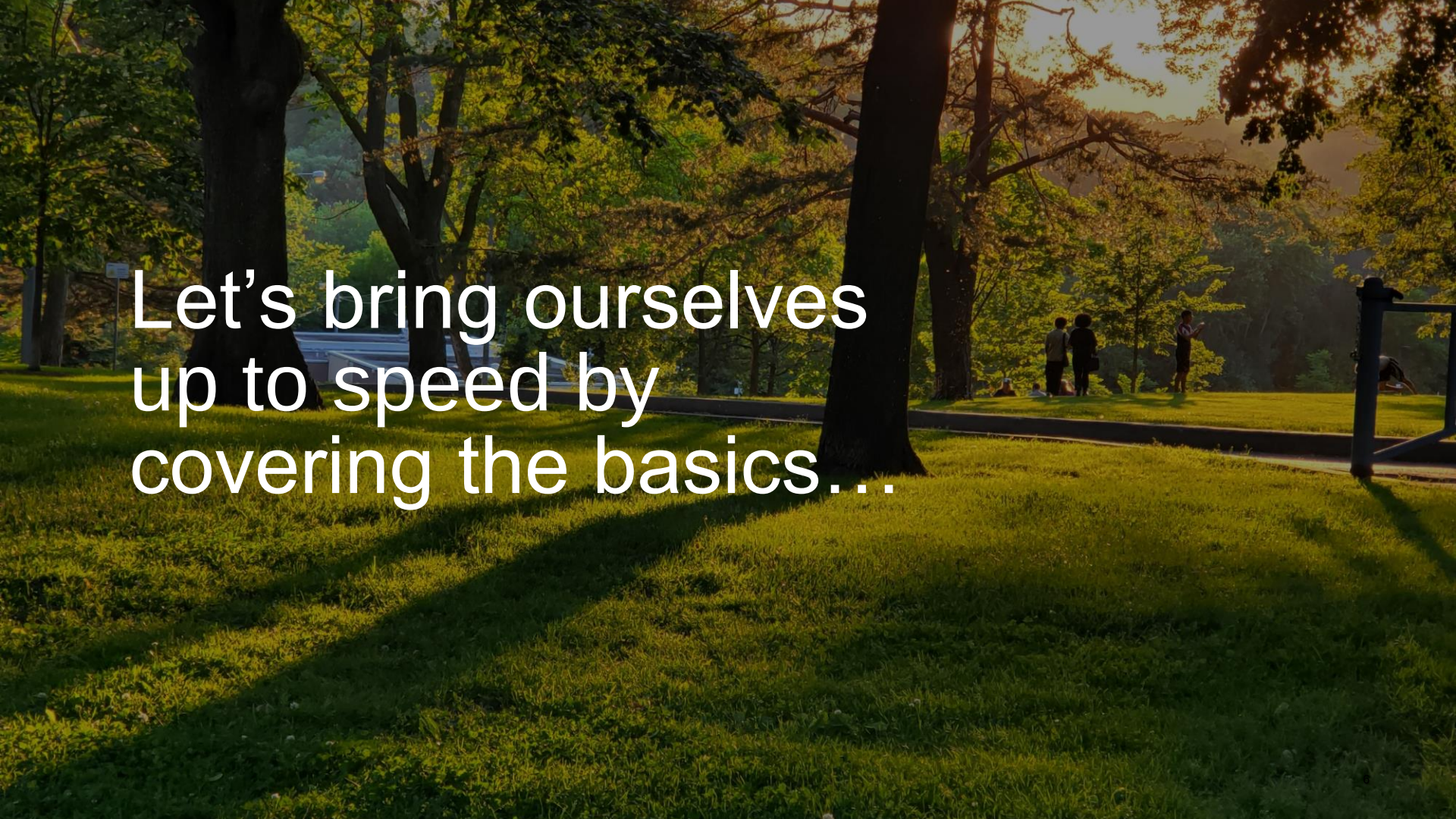
How we'll work together

- It's an informal conversation.
- We have information, a video and questions for your consideration.
- If you are at home (using Teams) use the "raise your hand" function to make a point or ask a question, and we'll also be "going around the table" to get everyone involved.
- Your views are confidential.

There are no bad ideas.

Quick introductions

- First name
- What you do for a living/involvement in community
- Best part of living in Northern Ontario

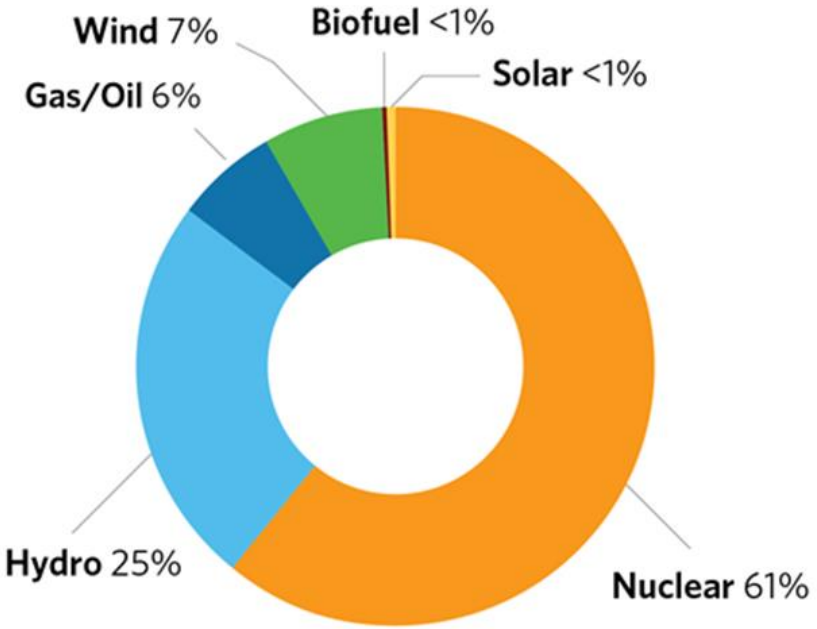

Let’s bring ourselves
up to speed by
covering the basics…

What do you know about…

- Used nuclear fuel?
- The NWMO?
- Transportation of used nuclear fuel (aka NWMO's "Transportation Program")?

- Did anyone have time to look at the draft planning framework?

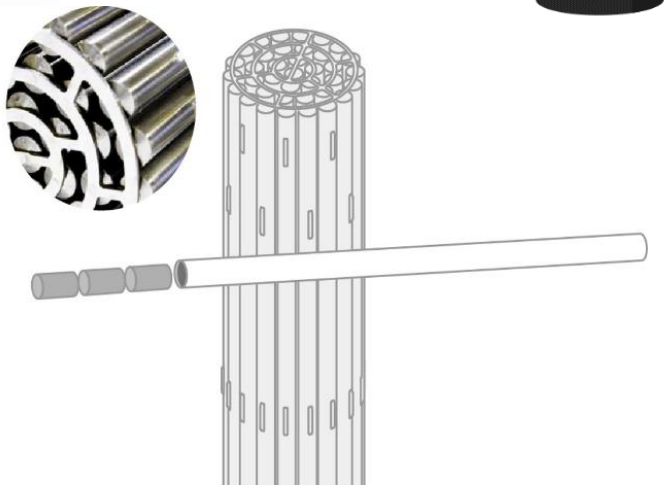
Nuclear energy in Ontario



Nuclear	90.4 TWh or 61%
Hydro	36.4 TWh or 25%
Gas/Oil	9.5 TWh or 6%
Wind	11.0 TWh or 7%
Biofuel	0.4 TWh or <1%
Solar	0.7 TWh or <1%

Image Credit: Independent Electricity System Operator (IESO), Reliability Outlook, released June 2020, updated quarterly

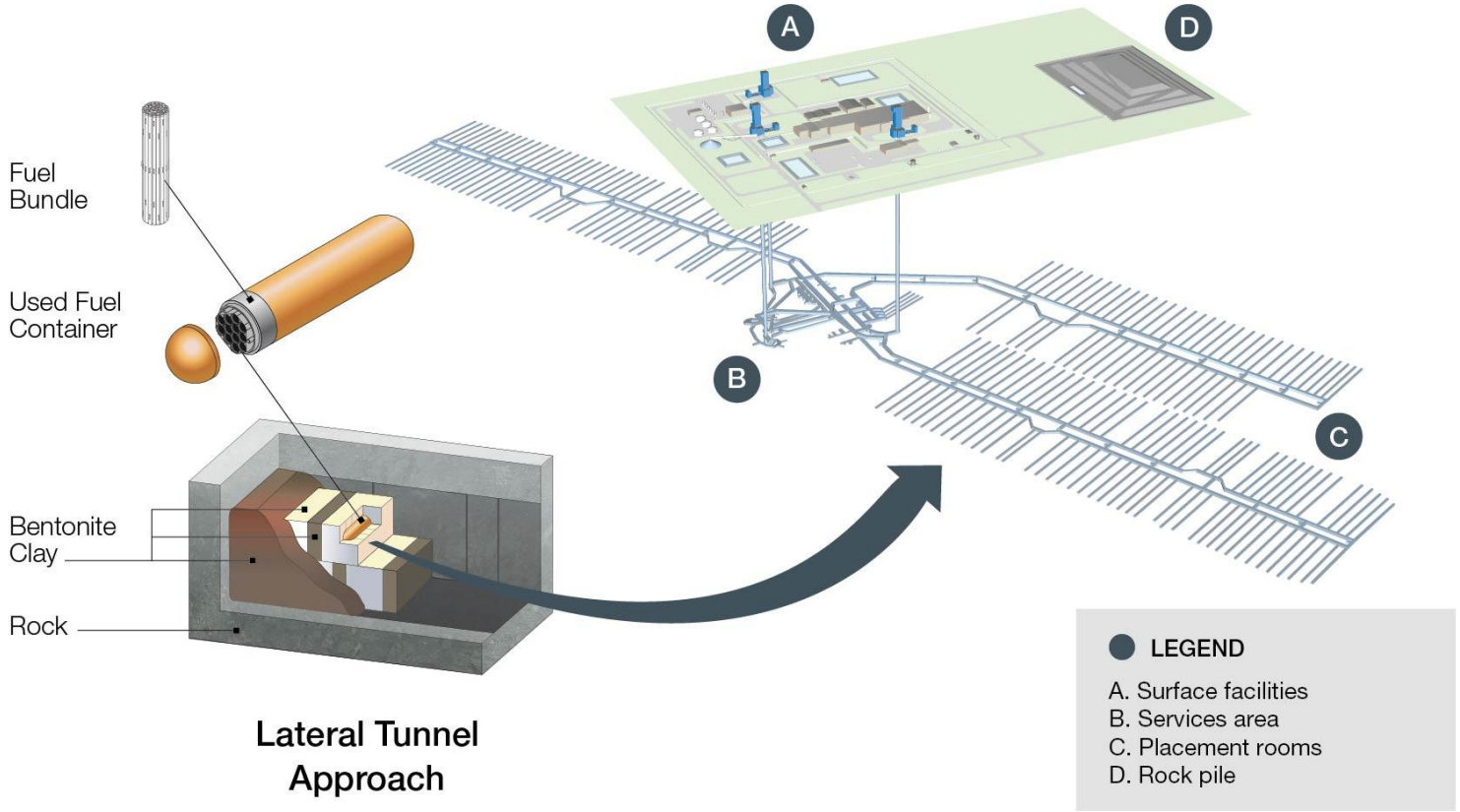
What is used nuclear fuel?



Interim storage versus…

Image: Ontario Power Generation dry storage facility

Long-term management



The NWMO

Their mandate is to develop and implement collaboratively with Canadians, a management approach for the long-term care of Canada's used nuclear fuel that is socially acceptable, technically sound, environmentally responsible, and economically feasible.

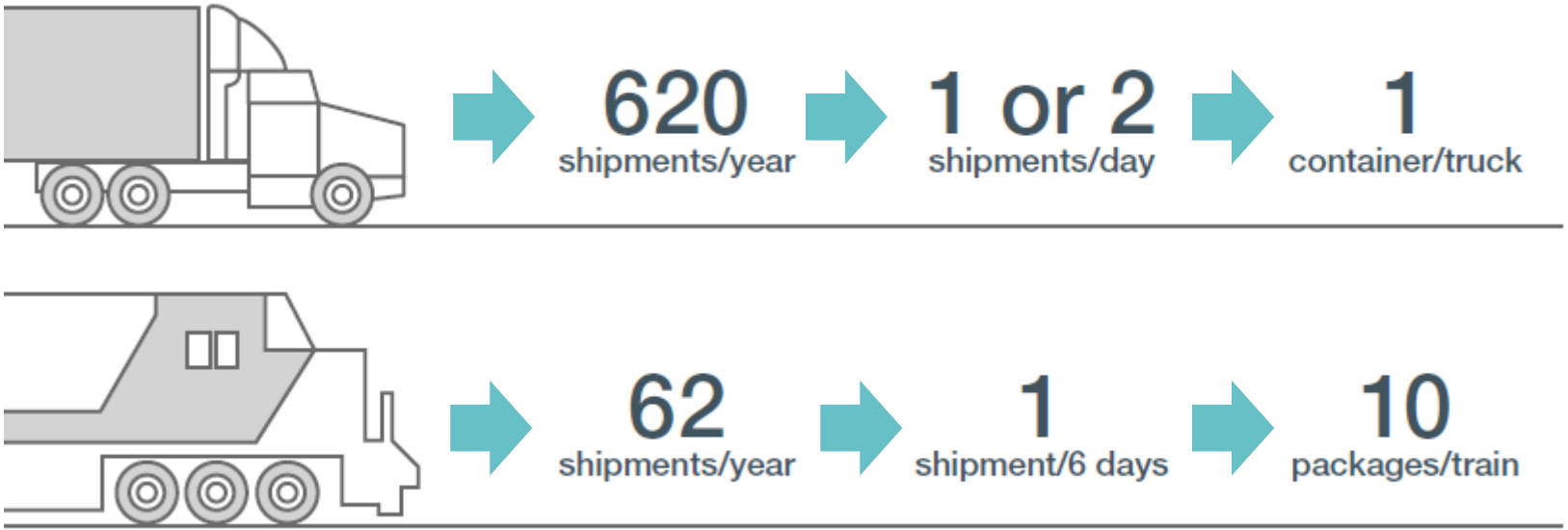
● **Interim Storage Facilities**

1. Whiteshell Laboratories, Manitoba
2. Bruce Nuclear Generating Station, Ontario
3. Pickering Nuclear Generating Station, Ontario
4. Darlington Nuclear Generating Station, Ontario
5. Chalk River Laboratories, Ontario
6. Gentilly Nuclear Generating Station, Quebec
7. Point Lepreau Nuclear Generating Station, New Brunswick

■ **Assessments underway in the area**

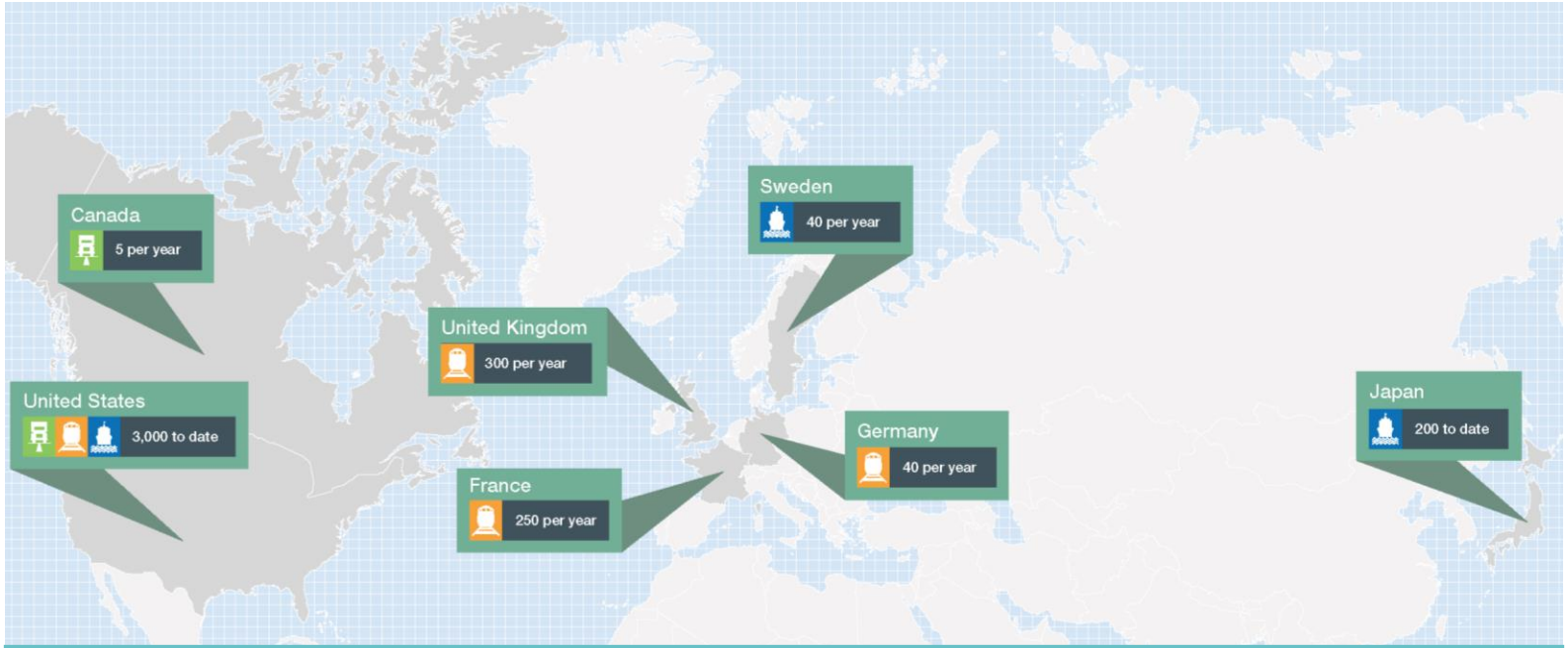
1. Ignace, Ontario
2. South Bruce, Ontario

Average number of shipments per year



The transportation program is expected to extend over approximately 40 years, based on current anticipated volumes from existing nuclear facilities.

International collaboration



A demonstrated history of safe shipments of used nuclear fuel in Canada and other countries

The regulatory framework

Canada has a stringent framework of regulation and oversight to review and approve the transportation of used nuclear fuel.

Requirements focus on the transportation package and include:

- Strength of the package
- Radiological safety
- Emergency response & training
- Security

Package testing and certification

Play VIDEO

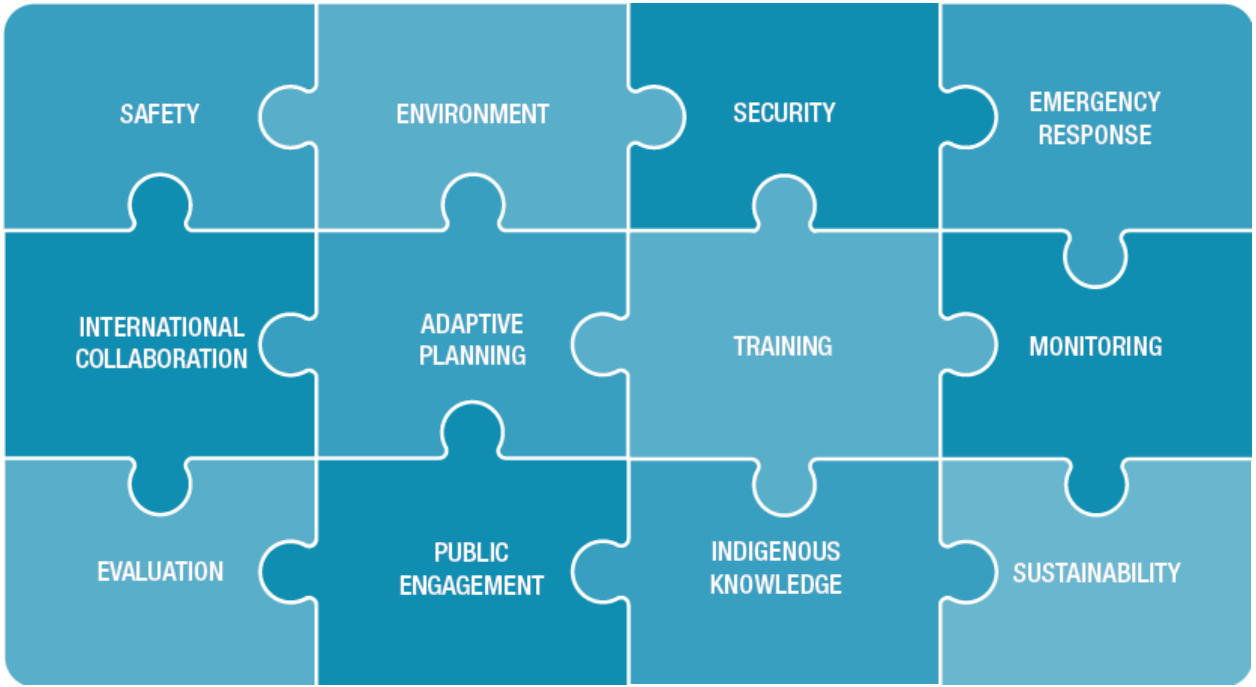

Let’s look at the transportation planning framework…

There are two aspects to planning transportation

1. The framework, which is emerging from dialogue with the public and Indigenous peoples
2. The proposed approach for implementing the framework

An emerging framework

Planning requirements



Basic requirements: what needs to be considered in transportation planning

Have a look at Handout #1 and think about:

1. Are these the considerations that are most important to you?
2. Is anything missing?
3. What questions come to mind?

Planning objectives & principles

Objectives:

- Protect the public and workers
- Ensure security
- Protect the environment
- Build respectful relationships with First Nation and Métis communities
- Economic feasibility

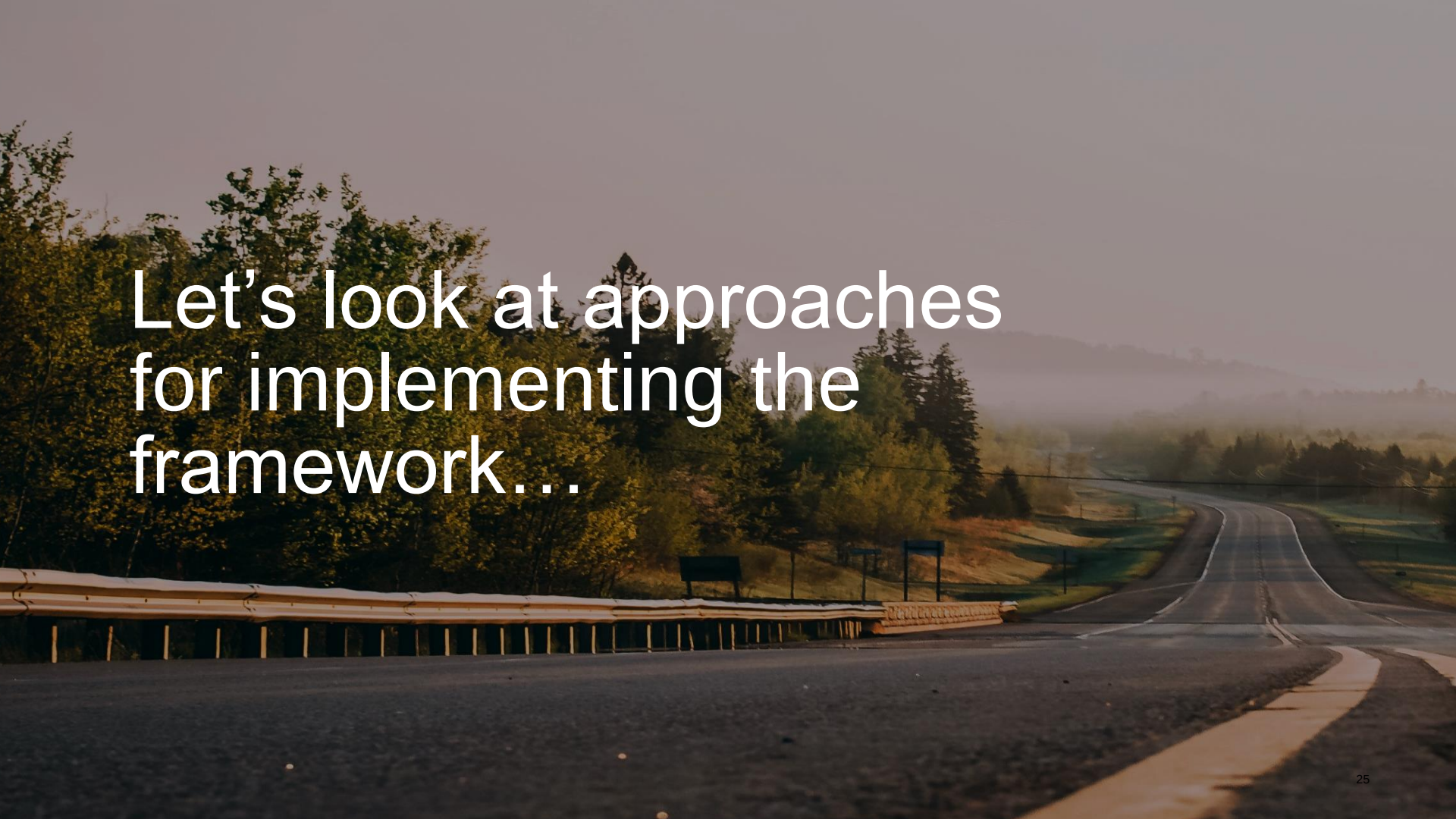
Principles:

- Safety as priority
- Meet or exceed regulatory requirements
- Transparency as a key to building trust
- Balancing adaptability and continuity
- Evidence-informed decision-making to guide planning
- Importance of Indigenous Knowledge
- Responsible project management
- Public engagement and dialogue

Planning objectives & principles

Have a look at Handout #2 and think about:

1. Are these the objectives & principles that are most important to you?
2. Is anything missing?
3. What questions come to mind?


Let’s look at approaches for implementing the framework…

Looking ahead: framework implementation

The NWMO is proposing the following approach to implementation:

- Collaborative decision-making
- A readiness checklist, to regularly assess preparations to initiate the transportation program
- A roadmap of key milestones and steps

A plan for collaboration & shared decision-making

Key Milestones

1. Refine the draft framework and milestones
2. Review an early sample plan
3. Review and refine site-specific transportation plan
4. Build awareness and encourage dialogue about plans as they are refined
5. Monitoring and adapting

A plan for collaboration & shared decision-making

Ongoing Reporting

1. Monitoring and reporting **on evolving basis**
2. Monitoring and reporting on **ongoing impacts and mitigations**
3. Monitoring and reporting on **project finances**

A plan for collaboration & shared decision-making

Have a look at Handout #3 and think about:

1. Is this what shared decision-making through engagement looks like?
2. Are these the sort of things the NWMO should be monitoring?
3. Is anything missing?
4. What questions come to mind?

A readiness checklist

- ✓ A **site-specific** transportation plan
- ✓ A broad-based **awareness and education program** for the general public and communities along the transportation route
- ✓ An ongoing engagement and dialogue with **First Nation and Métis communities**
- ✓ **Questions** received about transportation are acknowledged, addressed and shared broadly
- ✓ **Awareness and training program** for first responders along the route
- ✓ **Accident scenarios** specific to transportation routes

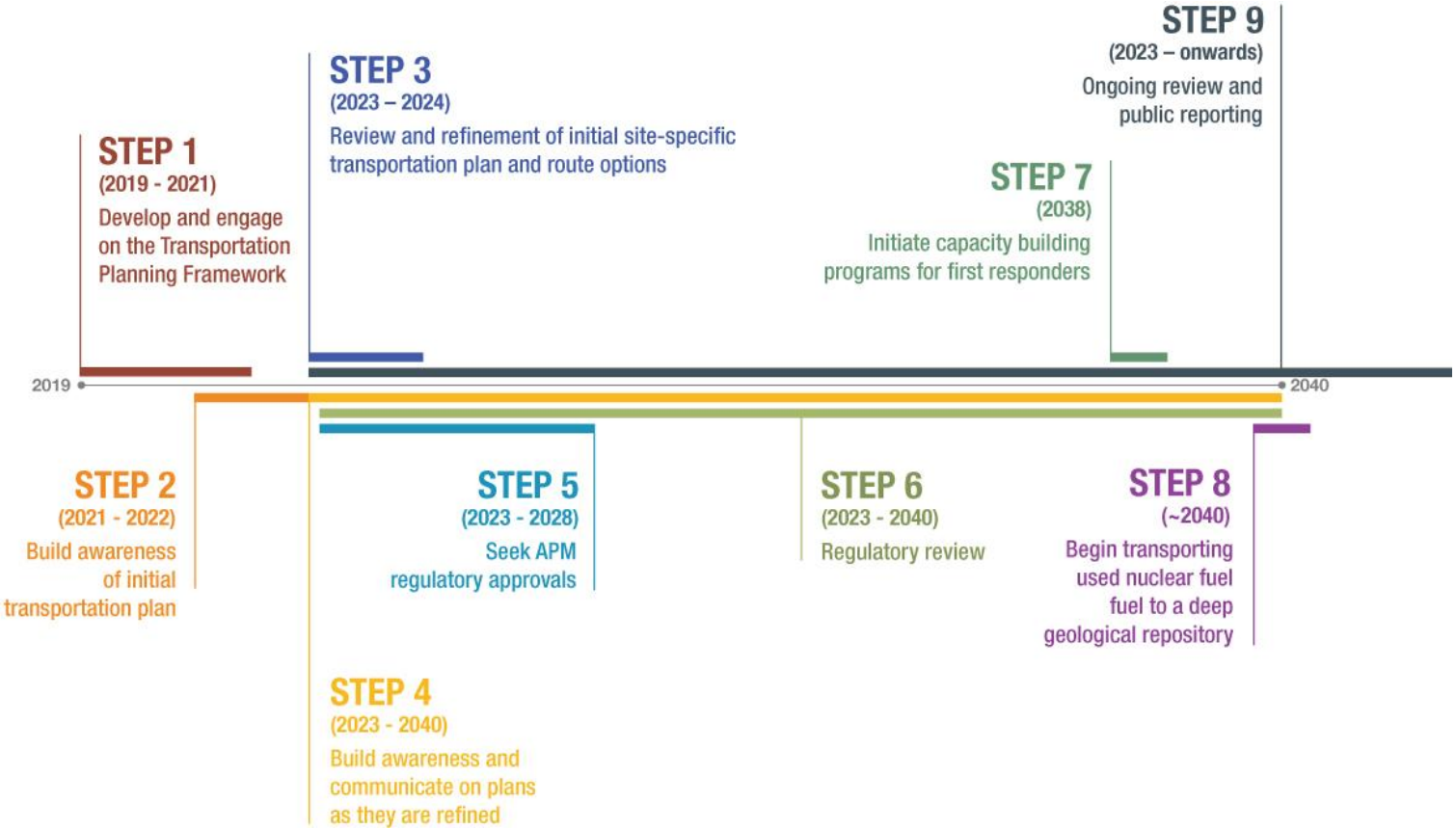
- ✓ A **transportation security plan**
- ✓ An **environmental** management or protection plan
- ✓ A confirmed plan to meet **commercial vehicle and railroad** safety and security requirements
- ✓ A program hiring **high-quality and well-trained workers** and vehicle operators
- ✓ A plan for **period reviews** of all required plans, certifications and procedures
- ✓ A **'safety audit' program**
- ✓ A **program of reporting**

A readiness checklist

Have a look at Handout #4 and think about:

1. Is this what you would want to see before transportation starts?
2. Is anything missing?
3. Do any items standout? How?
4. What questions come to mind?

Key milestones & steps



A roadmap of milestones & steps

Have a look at Handout #5 and think about:

1. Do these steps represent collaborative decision-making?
2. Is anything missing?
3. What questions come to mind?


Final thoughts and advice…

Please reflect on and discuss the following:

1. From what you have seen, is NWMO's transportation planning on the right track?

2. What advice do you have for the NWMO as it moves forward with transportation planning?

3. Do you have any questions that remain unanswered and that you feel should be addressed in the planning?

Appendix D – Workshop Workbook

Handout 1: Requirements

Are these the considerations that are most important to you?

Is anything missing?

What questions come to mind?

Do you have any other suggestions?

- **Safety is the primary consideration:** Safety needs to be the first consideration.

- **Protecting the environment:** We need to ensure that the plan minimizes impact on the environment.

- **Security:** We need to plan for and address possible threats.

- **Emergency response planning:** Planning and preparation for potential emergency scenarios.

- **Drawing on international lessons learned:** Informed by the best available knowledge and expertise.

- **Ensuring that the plan is adaptive:** The plan needs to be able to accommodate changes in science and technology.

- **Training:** The highest standards must be met in areas such as employee qualifications, security screening, training and certification.

- **Monitoring, tracking and auditing:** Keeping track of containers, evaluating and auditing procedures and processes, and holding people accountable.

- **Communication, education and engagement**: People, particularly those living in communities along the route, have a “right to know” about the project.

- **Respectful relations with First Nation and Métis communities:** Working positively and respectfully with First Nation and Métis communities is of utmost importance.

- **Ensuring program sustainability:** The program must be on a solid financial and political foundation.

Are these the considerations that are most important to you?

Is anything missing?

What questions come to mind?

Do you have any other suggestions?

Handout 2: Planning Objectives and Principles

Are these the objectives & principles that are most important to you?

Is anything missing?

What questions come to mind?

Do you have any other suggestions?

Objectives

- **Protect the public and workers**: Eliminate or minimize hazards associated with the transportation of used nuclear fuel.
- **Security**: Ensure the security of facilities, materials and infrastructure.
- **Protect the environment**: We need to understand our potential impact on the environment and put in place plans to manage, if not minimize it.
- **Relationship with First Nation and Métis communities**: Working positively and respectfully with First Nation and Métis communities.
- **Project finances**: Ensure economic sustainability of the project, without compromising safety, security and the environment.

Are these the objectives & principles that are most important to you?

Is anything missing?

What questions come to mind?

Do you have any other suggestions?

Principles

- **Safety**: Safety should be the overarching principle guiding all APM planning and activities.
- **Regulatory requirements**: Meet or exceed regulatory requirements for the protection of health, safety and the security of people and the environment.
- **Transparency is the key to building trust**: Information used to make decisions about transportation planning must be readily available to the public.
- **Balancing adaptability and continuity**: The transportation plan needs to be flexible to continuously incorporate new learning, while maintaining continuity throughout changes in government.
- **Evidence-informed decision-making**: The plan must be informed by the best relevant available knowledge.
- **Incorporating Indigenous and Traditional Knowledge**: Ensuring the insight from Indigenous Science, Traditional Knowledge and ways of life is interwoven throughout is important for a strong plan.
- **Responsible project management**: The plan must be managed in a fiscally responsible way so that the cost of the project does not become a burden to current ratepayers or future generations.
- **Informing and engaging**: People, particularly those living in communities along the route, have a ‘right to know’ about the project and feel confident in its safety.

Are these the objectives & principles that are most important to you?

Is anything missing?

What questions come to mind?

Do you have any other suggestions?

Handout 3: Collaboration and Shared Decision-Making

Key milestones for continuing to shape and advance the transportation plan Canadians.

1. **Refine the draft framework and milestones**: Dialogue and engagement to review and refine the draft framework and reflect on the proposed approach.

2. **Review an early sample plan**: Dialogue and engagement to review an early sample transportation plan -- prior to the selection of the repository site.

3. **Review and refine site-specific transportation plan**: Dialogue and engagement to review an early sample site-specific transportation plan and then continue to refine it over time. Participants could include:

- Interested communities, individuals and groups who have questions and concerns
- First responders along potential routes and first responder associations/organizations
- Municipalities and municipal associations as a group with a shared interest
- First Nation and Métis communities along potential routes and Indigenous organizations as a group with a shared interest
- Communities that currently host interim storage

4. **Build awareness and encourage dialogue about plans as they are refined**: Engagement activities could include:

- Face-to-face discussions
- Facilitating a virtual space for learning about the plan
- Opportunities to ask questions and hear from transportation specialists
- The NWMO addressing frequently asked questions and concerns on an ongoing basis

5. **Monitoring and adapting**: Ongoing review of evolving best practices, new and emerging technologies and standards, and reflection on the need to refine and adapt the program. Monitoring to include ongoing review of experience in implementing the transportation program once it begins, including impacts and mitigations, to support reflection and adaption of the program during implementation.

Is this what shared decision-making through engagement looks like?

Are these the sort of things the NWMO should be monitoring?

Is anything missing?

What questions come to mind?

Do you have any other suggestions?

Ongoing reporting and continuous improvement might include the following:

1. **Monitoring and reporting on evolving best practice**: Beginning in 2023 and on a triennial basis, the NWMO publishes a report with updates on best practice, new and emerging technologies and evolving state of the art, evolving standards, and how it is adapting the program in the spirit of continuous improvement.

2. **Monitoring and reporting on ongoing impacts and mitigations**: Once used fuel transportation begins, the NWMO monitors and regularly reports on public and environmental impacts, reportable events, and action taken in a manner that is understandable and accessible to the public.

3. **Monitoring and reporting on project finances**: Beginning in 2023 and on a triennial basis, the NWMO publishes a report of the status of finances for the transportation program including the project's cost and sources of funding.

Is this what shared decision-making through engagement looks like?

Are these the sort of things the NWMO should be monitoring?

Is anything missing?

What questions come to mind?

Do you have any other suggestions?

Handout 4: Readiness Checklist

Is this what you would want to see before transportation starts?

Is anything missing?

Do any items standout? How?

What questions come to mind?

Do you have any other suggestions?

- ✓ A site-specific transportation plan;
- ✓ A broad-based awareness and education program for the general public and communities along the transportation route;
- ✓ An ongoing engagement and dialogue with First Nation and Métis communities along the transportation route;
- ✓ Questions received about transportation are acknowledged, addressed and shared broadly;
- ✓ Awareness and training program for first responders along the transportation route;
- ✓ A tested and certified transportation package;
- ✓ Accident scenarios specific to transportation routes, including those that align with the lived experience of people in the area, have been covered by transportation package testing and safety has been demonstrated;
- ✓ A transportation security plan that takes into account threats of sabotage and terrorism;
- ✓ An emergency response plan that explicitly describes resources available along the route and roles and responsibilities in the event of an accident;
- ✓ An environmental management or protection plan that takes into account the carbon footprint of the transportation program and environmental response and remediation in the event of an accident;
- ✓ A confirmed plan to meet commercial vehicle and railroad safety and security requirements;
- ✓ A program for hiring high-quality and well-trained workers and vehicle operators; Procedures for safe and secure operations;

- ✓ A plan for periodic reviews of all required plans, certifications and procedures;
- ✓ A ‘safety audit’ program involving ongoing physical assessment of the roads, bridges, etc. of the route, to identify structural weakness; required repairs to the infrastructure of the selected route; and
- ✓ A program of reporting with updates on best practice, technologies and evolving state of the art, and ongoing activities to adapt the program in the spirit of continuous improvement.

Is this what you would want to see before transportation starts?

Is anything missing?

Do any items standout, and why?

What questions come to mind?

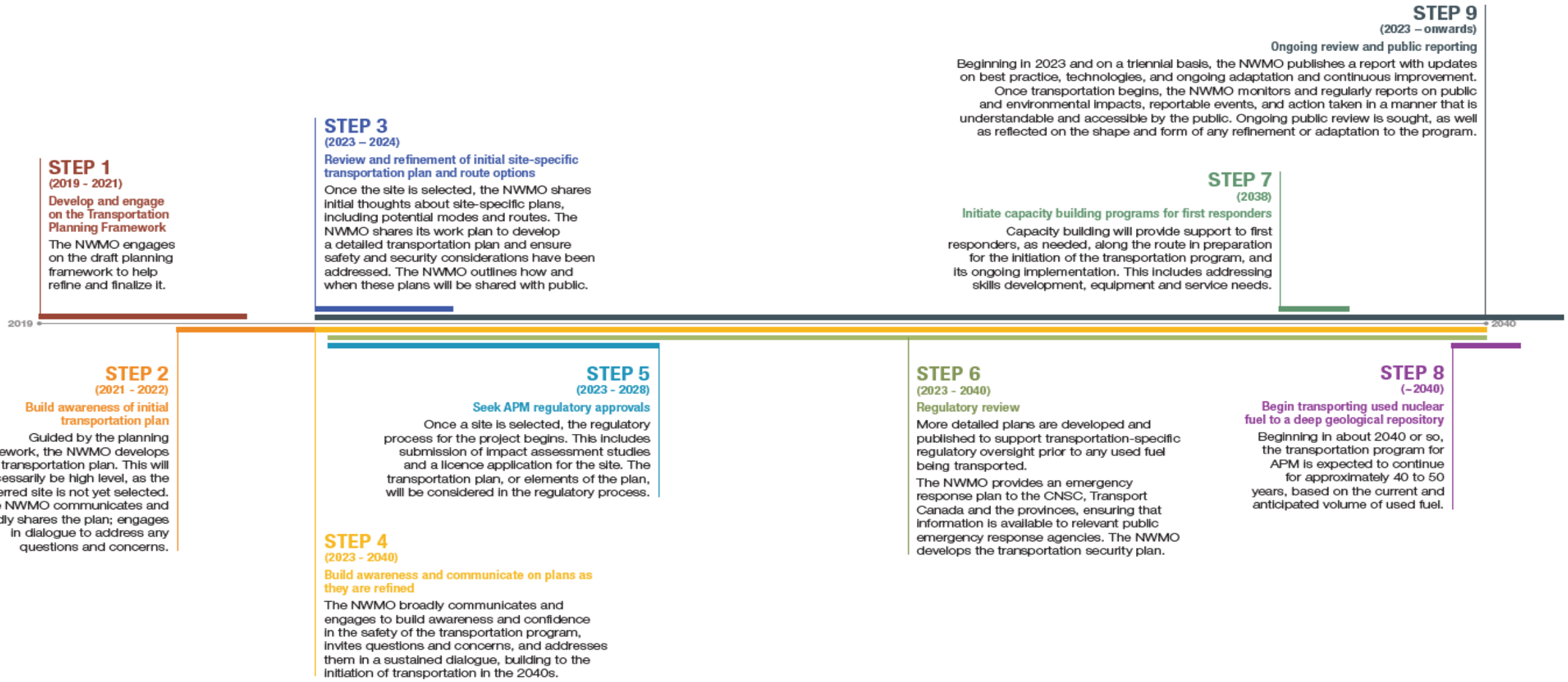
Do you have any other suggestions?

Handout #5: Key Milestones and Steps

Do these steps represent collaborative decision-making?

Is anything missing?

Can you suggest a few enhancements? What details could be added as the document evolves over the next 20 years?



Appendix E – Data Tables

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Crosstabs

BANNER 1	%
Total	100%↑
Which of the following areas of Ontario would that be?	
Eastern Ontario	11%↓
Central Ontario	10%↓
Greater Toronto Area (GTA)	25%
Southwestern Ontario	27%
Northern Ontario	22%↓
Outside Ontario	4%↓

Total sample; Unweighted; base n = from 377 to 648; total n = 648; 271 missing
Multiple comparison correction: False Discovery Rate (FDR) (p = 0.05)

	BANNER 1						
		Which of the following areas of Ontario would that be?					
Urban/Rural indicator	Total	Eastern Ontario	Central Ontario	Greater Toro-nto Ar-ea (GT-A)	South... Ontario	North-ern Ontario	Outside Ontario
	%	%	%	%	%	%	%
Urban	78%	62%	87%↑	100%↑	25%↓	58%	80%
Rural	22%	38%	13%↓	0%↓	75%↑	42%	20%
NET	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Total sample; Unweighted; base n = from 377 to 648; total n = 648; 271 missing
Multiple comparison correction: False Discovery Rate (FDR) (p = 0.05)

Q1 Which of the following best describes you? (Select all that apply)	BANNER 1						
		Which of the following areas of Ontario would that be?					
	Total	Eastern Ontario	Central Ontario	Greater Toro-nto Ar-ea (GT-A)	South... Ontario	North-ern Ontario	Outside Ontario
	%	%	%	%	%	%	%
First Nations	3%	0%	0%	1%	2%	8%↑	0%
Métis	4%	5%	5%	2%	0%	9%↑	0%
Member of a racialized community (alternative wording “Racialized person”)	1%	3%	3%	1%	1%	0%	0%
Elected official	2%	0%	0%	0%	1%	8%↑	0%
Journalist/reporter	0%	0%	0%	0%	1%	0%	0%
Member of an non-governmental organization	4%	3%	0%	6%	1%	4%	36%↑
First responder	3%	0%	3%	0%	4%	4%	7%
Interested individual	48%	40%	38%	33%↓	55%	61%	57%
Employed by the nuclear industry	36%	35%	62%↑	70%↑	30%	1%↓	14%
Employed by the energy industry (non-nuclear)	5%	10%	8%	2%	1%	8%	7%
Other (specify)	11%	13%	5%	9%	18%	5%	21%
Prefer not to say	7%	10%	8%	6%	4%	8%	7%
NET	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Total sample; Unweighted; base n = from 345 to 347; total n = 648; 303 missing
Multiple comparison correction: False Discovery Rate (FDR) (p = 0.05)

Used nuclear fuel:Q2 How comfortable are you with the way in which each of the following is being managed in Canada?	BANNER 1						
		Which of the following areas of Ontario would that be?					
	Total	Eastern Ontario	Central Ontario	Greater Toronto Area (GTA)	South... Ontario	Northern Ontario	Outside Ontario
	%	%	%	%	%	%	%
7 – Very comfortable	30%	32%	38%	31%	33%	21%	21%
6	20%	13%	32%	29%	20%	10%	7%
5	13%	21%	11%	15%	10%	11%	14%
4	10%	11%	8%	13%	9%	10%	7%
3	6%	8%	3%	9%	4%	6%	0%
2	4%	8%	0%	1%	5%	6%	0%
1 – Not at all comfortable	14%	5%	8%	3%↓	15%	30%↑	36%
Don't know	4%	3%	0%	0%	3%	7%	14%
7 – Very comfortable + 6 + 5	63%	66%	81%	75%	64%	42%↓	43%
3 + 2 + 1 – Not at all comfortable	23%	21%	11%	13%	24%	41%↑	36%
NET	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Total sample; Unweighted; base n = from 336 to 338; total n = 648; 312 missing
Multiple comparison correction: False Discovery Rate (FDR) (p = 0.05)

Hospitals :Q2 How comfortable are you with the way in which each of the following is being managed in Canada?	BANNER 1						
		Which of the following areas of Ontario would that be?					
	Total	Eastern Ontario	Central Ontario	Greater Toronto Area (GTA)	Sout... Ontario	Northern Ontario	Outside Ontario
	%	%	%	%	%	%	%
7 – Very comfortable	6%	8%	0%	6%	10%	4%	7%
6	14%	18%	8%	6%	23%	8%	29%
5	30%	18%	30%	34%	27%	39%	14%
4	19%	21%	24%	16%	20%	23%	0%
3	12%	13%	19%	16%	8%	8%	21%
2	9%	13%	11%	11%	5%	11%	7%
1 – Not at all comfortable	6%	3%	5%	9%	6%	4%	14%
Don’t know	2%	5%	3%	1%	1%	1%	7%
7 – Very comfortable + 6 + 5	51%	45%	38%	46%	60%	52%	50%
3 + 2 + 1 – Not at all comfortable	28%	29%	35%	36%	20%	24%	43%
NET	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Total sample; Unweighted; base n = from 337 to 339; total n = 648; 311 missing
Multiple comparison correction: False Discovery Rate (FDR) (p = 0.05)

Climate change:Q2 How comfortable are you with the way in which each of the following is being managed in Canada?	BANNER 1						
		Which of the following areas of Ontario would that be?					
	Total	Eastern Ontario	Central Ontario	Greater Toronto Area (GTA)	Sout... Ontario	Northern Ontario	Outside Ontario
	%	%	%	%	%	%	%
7 – Very comfortable	5%	0%	3%	10%	3%	3%	7%
6	8%	13%	5%	6%	8%	7%	0%
5	20%	26%	14%	18%	23%	18%	36%
4	22%	13%	30%	26%	20%	24%	7%
3	17%	13%	27%	14%	22%	17%	0%
2	15%	18%	8%	19%	11%	18%	7%
1 – Not at all comfortable	12%	13%	14%	6%	12%	13%	36%
Don’t know	1%	3%	0%	1%	1%	0%	7%
7 – Very comfortable + 6 + 5	33%	39%	22%	34%	34%	28%	43%
3 + 2 + 1 – Not at all comfortable	44%	45%	49%	39%	45%	48%	43%
NET	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Total sample; Unweighted; base n = from 337 to 339; total n = 648; 311 missing
Multiple comparison correction: False Discovery Rate (FDR) (p = 0.05)

	BANNER 1						
		Which of the following areas of Ontario would that be?					
The economy:Q2 How comfortable are you with the way in which each of the following is being managed in Canada?	Total	Eastern Ontario	Central Ontario	Greater Toronto Area (GTA)	Sout... Ontario	Northern Ontario	Outside Ontario
	%	%	%	%	%	%	%
7 – Very comfortable	6%	0%	3%	9%	6%	7%	14%
6	7%	8%	3%	6%	10%	6%	7%
5	20%	21%	22%	16%	22%	23%	7%
4	24%	18%	24%	25%	26%	25%	14%
3	16%	11%	16%	21%	16%	14%	14%
2	12%	24%	11%	14%	8%	13%	7%
1 – Not at all comfortable	12%	16%	22%	8%	10%	10%	29%
Don’t know	2%	3%	0%	1%	1%	3%	7%
7 – Very comfortable + 6 + 5	33%	29%	27%	31%	39%	35%	29%
3 + 2 + 1 – Not at all comfortable	41%	50%	49%	43%	34%	37%	50%
NET	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Total sample; Unweighted; base n = from 336 to 338; total n = 648; 312 missing
Multiple comparison correction: False Discovery Rate (FDR) (p = 0.05)

	BANNER 1						
		Which of the following areas of Ontario would that be?					
Natural resources:Q2 How comfortable are you with the way in which each of the following is being managed in Canada?	Total	Eastern Ontario	Central Ontario	Greater Toronto Area (GTA)	Sout... Ontario	Northern Ontario	Outside Ontario
	%	%	%	%	%	%	%
7 – Very comfortable	8%	13%	5%	8%	8%	4%	7%
6	14%	18%	14%	13%	14%	14%	7%
5	20%	21%	19%	16%	24%	18%	21%
4	26%	26%	22%	25%	22%	35%	14%
3	12%	11%	16%	14%	11%	10%	0%
2	10%	3%	11%	11%	11%	8%	14%
1 – Not at all comfortable	9%	5%	11%	8%	7%	10%	29%
Don’t know	3%	3%	3%	5%	2%	0%	7%
7 – Very comfortable + 6 + 5	42%	53%	38%	37%	46%	37%	36%
3 + 2 + 1 – Not at all comfortable	30%	18%	38%	33%	30%	28%	43%
NET	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Total sample; Unweighted; base n = from 335 to 337; total n = 648; 313 missing
Multiple comparison correction: False Discovery Rate (FDR) (p = 0.05)

	BANNER 1						
		Which of the following areas of Ontario would that be?					
Pipelines:Q2 How comfortable are you with the way in which each of the following is being managed in Canada?	Total	Eastern Ontario	Central Ontario	Greater Toronto Area (GTA)	Sout... Ontario	Northern Ontario	Outside Ontario
	%	%	%	%	%	%	%
7 – Very comfortable	9%	11%	11%	8%	8%	11%	7%
6	12%	8%	16%	10%	11%	10%	14%
5	16%	5%	19%	19%	15%	23%	7%
4	16%	21%	14%	18%	18%	11%	7%
3	16%	32%	5%	11%	19%	15%	21%
2	9%	5%	8%	10%	10%	8%	0%
1 – Not at all comfortable	14%	11%	19%	15%	10%	14%	36%
Don’t know	8%	8%	8%	9%	8%	7%	7%
7 – Very comfortable + 6 + 5	37%	24%	46%	37%	34%	44%	29%
3 + 2 + 1 – Not at all comfortable	39%	47%	32%	37%	40%	38%	57%
NET	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Total sample; Unweighted; base n = from 335 to 337; total n = 648; 313 missing
Multiple comparison correction: False Discovery Rate (FDR) (p = 0.05)

The Great Lakes:Q2 How comfortable are you with the way in which each of the following is being managed in Canada?	BANNER 1						
		Which of the following areas of Ontario would that be?					
	Total	Eastern Ontario	Central Ontario	Greater Toronto Area (GTA)	Sout... Ontario	Northern Ontario	Outside Ontario
	%	%	%	%	%	%	%
7 – Very comfortable	9%	5%	8%	15%	9%	4%	14%
6	17%	24%	19%	11%	21%	18%	0%
5	18%	16%	19%	19%	20%	17%	7%
4	20%	18%	24%	18%	18%	24%	21%
3	13%	13%	11%	15%	14%	11%	14%
2	7%	8%	3%	8%	5%	10%	0%
1 – Not at all comfortable	7%	5%	8%	5%	7%	7%	29%
Don’t know	8%	11%	8%	9%	6%	8%	14%
7 – Very comfortable + 6 + 5	45%	45%	46%	46%	49%	39%	21%
3 + 2 + 1 – Not at all comfortable	27%	26%	22%	28%	27%	28%	43%
NET	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Total sample; Unweighted; base n = from 336 to 338; total n = 648; 312 missing
Multiple comparison correction: False Discovery Rate (FDR) (p = 0.05)

Q3 Before today, how familiar were you with Canada's plan for the safe long-term management of used nuclear fuel?	BANNER 1						
	Which of the following areas of Ontario would that be?						
	Total	Eastern Ontario	Central Ontario	Greater Toronto Area (GTA)	South... Ontario	Northern Ontario	Outside Ontario
	%	%	%	%	%	%	%
7 – Very familiar + 6 + 5	78%	66%	86%	79%	93%↑	62%↓	77%
7 – Very familiar	36%	26%	42%	32%	43%	35%	38%
6	27%	23%	31%	29%	31%	18%	31%
5	15%	17%	14%	18%	19%	8%	8%
4	10%	11%	8%	13%	5%	13%	0%
3	5%	11%	3%	6%	1%	8%	8%
2	3%	3%	0%	0%	1%	7%	0%
1 – Not at all familiar	4%	9%	3%	3%	0%	8%	15%
3 + 2 + 1 – Not at all familiar	12%	23%	6%	8%	2%	24%↑	23%
Dont know	0%	0%	0%	0%	0%	1%	0%
NET	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Total sample; Unweighted; base n = from 313 to 315; total n = 648; 335 missing
Multiple comparison correction: False Discovery Rate (FDR) (p = 0.05)

Safety is the primary consideration.. How important is it that the transportation plan addresses each of the following requirements?	BANNER 1						
		Which of the following areas of Ontario would that be?					
	Total	Eastern Ontario	Central Ontario	Greater Toronto Area (GTA)	Sout... Ontario	Northern Ontario	Outside Ontario
	%	%	%	%	%	%	%
7- Very important	91%	81%	77%	93%	94%	97%	100%
6	7%	15%	17%	4%	6%	3%	0%
5	0%	4%	0%	0%	0%	0%	0%
4	1%	0%	3%	4%	0%	0%	0%
3	0%	0%	3%	0%	0%	0%	0%
2	0%	0%	0%	0%	0%	0%	0%
1 – Not at all important	0%	0%	0%	0%	0%	0%	0%
Dont know	0%	0%	0%	0%	0%	0%	0%
7- Very important + 6 + 5	98%	100%	93%	96%	100%	100%	100%
3 + 2 + 1 – Not at all important	0%	0%	3%	0%	0%	0%	0%
NET	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Total sample; Unweighted; base n = from 254 to 256; total n = 648; 394 missing
Multiple comparison correction: False Discovery Rate (FDR) (p = 0.05)

Protecting the environment: We need to ensure that the plan minimizes impact on the environment.How important is it that the transportation plan addresses each of the following requirements?	**BANNER 1**						
	Which of the following areas of Ontario would that be?						
	Total	Eastern Ontario	Central Ontario	Greater Toronto Area (GTA)	South... Ontario	Northern Ontario	Outside Ontario
	%	%	%	%	%	%	%
7- Very important	80%	74%	60%▼	77%	88%	88%	78%
6	13%	15%	23%	13%	13%	9%	22%
5	4%	7%	7%	9%	0%	2%	0%
4	2%	4%	10%▲	2%	0%	0%	0%
3	0%	0%	0%	0%	0%	2%	0%
2	0%	0%	0%	0%	0%	0%	0%
1 – Not at all important	0%	0%	0%	0%	0%	0%	0%
Dont know	0%	0%	0%	0%	0%	0%	0%
7- Very important + 6 + 5	98%	96%	90%	98%	100%	98%	100%
3 + 2 + 1 – Not at all important	0%	0%	0%	0%	0%	2%	0%
NET	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Total sample; Unweighted; base n = from 252 to 254; total n = 648; 396 missing
Multiple comparison correction: False Discovery Rate (FDR) (p = 0.05)

Security: We need to plan for and address possible threats. How important is it that the transportation plan addresses each of the following requirements?	BANNER 1						
		Which of the following areas of Ontario would that be?					
	Total	Eastern Ontario	Central Ontario	Greater Toronto Area (GTA)	Sout... Ontario	Northern Ontario	Outside Ontario
	%	%	%	%	%	%	%
7- Very important	59%	52%	40%	50%	63%	73%	78%
6	20%	19%	23%	20%	18%	20%	22%
5	10%	15%	20%	14%	10%	2%	0%
4	8%	7%	10%	14%	6%	3%	0%
3	2%	7%	3%	0%	3%	0%	0%
2	1%	0%	3%	0%	0%	2%	0%
1 – Not at all important	0%	0%	0%	2%	0%	0%	0%
Dont know	0%	0%	0%	0%	0%	0%	0%
7- Very important + 6 + 5	89%	85%	83%	84%	92%	95%	100%
3 + 2 + 1 – Not at all important	3%	7%	7%	2%	3%	2%	0%
NET	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Total sample; Unweighted; base n = from 252 to 254; total n = 648; 396 missing
Multiple comparison correction: False Discovery Rate (FDR) (p = 0.05)

Emergency response planning: Planning and preparation for potential emergency scenarios. How important is it that the transportation plan addresses each of the following requirements?	BANNER 1						
		Which of the following areas of Ontario would that be?					
	Total	Eastern Ontario	Central Ontario	Greater Toronto Area (GTA)	Sout... Ontario	Northern Ontario	Outside Ontario
	%	%	%	%	%	%	%
7- Very important	68%	56%	55%	59%	71%	78%	100%
6	17%	30%	21%	14%	12%	19%	0%
5	9%	4%	10%	11%	15%	2%	0%
4	4%	4%	7%	11%	1%	2%	0%
3	2%	7%	3%	2%	0%	0%	0%
2	1%	0%	3%	2%	0%	0%	0%
1 – Not at all important	0%	0%	0%	2%	0%	0%	0%
Dont know	0%	0%	0%	0%	0%	0%	0%
7- Very important + 6 + 5	93%	89%	86%	84%	99%	98%	100%
3 + 2 + 1 – Not at all important	3%	7%	7%	5%	0%	0%	0%
NET	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Total sample; Unweighted; base n = from 252 to 254; total n = 648; 396 missing
Multiple comparison correction: False Discovery Rate (FDR) (p = 0.05)

Drawing on international lessons learned: Informed by the best available knowledge and expertise. How important is it that the transportation plan addresses each of the following requirements?	BANNER 1						
		Which of the following areas of Ontario would that be?					
	Total	Eastern Ontario	Central Ontario	Greater Toronto Area (GTA)	Sout... Ontario	Northern Ontario	Outside Ontario
	%	%	%	%	%	%	%
7- Very important	55%	37%	34%	45%	64%	66%	78%
6	25%	48%	28%	27%	18%	22%	22%
5	13%	11%	24%	15%	14%	8%	0%
4	4%	0%	3%	9%	1%	2%	0%
3	2%	0%	7%	4%	1%	0%	0%
2	0%	0%	0%	0%	1%	0%	0%
1 – Not at all important	0%	0%	0%	0%	0%	0%	0%
Dont know	1%	4%	3%	0%	0%	2%	0%
7- Very important + 6 + 5	93%	96%	86%	87%	96%	97%	100%
3 + 2 + 1 – Not at all important	2%	0%	7%	4%	3%	0%	0%
NET	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Total sample; Unweighted; base n = from 252 to 254; total n = 648; 396 missing
Multiple comparison correction: False Discovery Rate (FDR) (p = 0.05)

Ensuring that the plan is adaptive: The plan needs to be able to accommodate changes in science and technology.How important is it that the transportation plan addresses each of the following requirements?	**BANNER 1**						
	Which of the following areas of Ontario would that be?						
	Total	Eastern Ontario	Central Ontario	Greater Toro-nto Ar-ea (GT-A)	South... Ontario	North-ern Ontario	Outside Ontario
	%	%	%	%	%	%	%
7- Very important	56%	41%	43%	46%	56%	80%↑	56%
6	23%	30%	13%	23%	32%	12%	33%
5	8%	7%	13%	11%	5%	5%	11%
4	8%	19%	13%	13%	3%	3%	0%
3	1%	0%	3%	0%	1%	0%	0%
2	2%	4%	3%	4%	3%	0%	0%
1 – Not at all important	1%	0%	3%	2%	0%	0%	0%
Dont know	1%	0%	7%	2%	0%	0%	0%
7- Very important + 6 + 5	87%	78%	70%	80%	93%	97%	100%
3 + 2 + 1 – Not at all important	4%	4%	10%	5%	4%	0%	0%
NET	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Total sample; Unweighted; base n = from 254 to 256; total n = 648; 394 missing
Multiple comparison correction: False Discovery Rate (FDR) (p = 0.05)

Training: The highest standards must be met in areas such as employee qualifications, security screening, training and certification.How important is it that the transportation plan addresses each of the following requirements?	**BANNER 1**						
		Which of the following areas of Ontario would that be?					
	Total	Eastern Ontario	Central Ontario	Greater Toronto Area (GTA)	South... Ontario	Northern Ontario	Outside Ontario
	%	%	%	%	%	%	%
7- Very important	64%	37%↓	50%	55%	68%	86%↑	78%
6	23%	37%	30%	25%	22%	14%	11%
5	7%	22%↑	7%	11%	6%	0%	11%
4	3%	0%	7%	7%	3%	0%	0%
3	0%	0%	3%	0%	0%	0%	0%
2	1%	4%	0%	2%	1%	0%	0%
1 – Not at all important	0%	0%	0%	0%	0%	0%	0%
Dont know	0%	0%	3%	0%	0%	0%	0%
7- Very important + 6 + 5	95%	96%	87%	91%	96%	100%	100%
3 + 2 + 1 – Not at all important	2%	4%	3%	2%	1%	0%	0%
NET	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Total sample; Unweighted; base n = from 253 to 255; total n = 648; 395 missing
Multiple comparison correction: False Discovery Rate (FDR) (p = 0.05)

Monitoring, tracking and auditing: Keeping track of containers, evaluating and auditing procedures and processes, and holding people accountable.How important is it that the transportation plan addresses each of the following requirements?	**BANNER 1**						
		Which of the following areas of Ontario would that be?					
	Total	Eastern Ontario	Central Ontario	Greater Toronto Area (GTA)	South... Ontario	Northern Ontario	Outside Ontario
	%	%	%	%	%	%	%
7- Very important	67%	52%	40%▼	64%	71%	81%	89%
6	23%	26%	37%	22%	22%	19%	11%
5	5%	11%	10%	9%	3%	0%	0%
4	4%	7%	7%	5%	3%	0%	0%
3	1%	0%	3%	0%	1%	0%	0%
2	1%	4%	3%	0%	0%	0%	0%
1 – Not at all important	0%	0%	0%	0%	0%	0%	0%
Dont know	0%	0%	0%	0%	0%	0%	0%
7- Very important + 6 + 5	95%	89%	87%	95%	96%	100%	100%
3 + 2 + 1 – Not at all important	2%	4%	7%	0%	1%	0%	0%
NET	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Total sample; Unweighted; base n = from 252 to 254; total n = 648; 396 missing
Multiple comparison correction: False Discovery Rate (FDR) (p = 0.05)

Communication, education and engagement: People, particularly those living in communities along the route, have a "right to know" about the project.How important is it that the transportation plan addresses each of the following requirements?	**BANNER 1**						
	Which of the following areas of Ontario would that be?						
	Total	Eastern Ontario	Central Ontario	Greater Toro-nto Ar-ea (GT-A)	South... Ontario	North-ern Ontario	Outside Ontario
	%	%	%	%	%	%	%
7- Very important	54%	37%	40%	43%	56%	78%↑	44%
6	21%	33%	10%	28%	19%	17%	11%
5	10%	7%	20%	13%	8%	3%	33%
4	9%	15%	7%	13%	11%	2%	0%
3	4%	4%	17%↑	2%	3%	0%	11%
2	2%	4%	3%	2%	3%	0%	0%
1 – Not at all important	0%	0%	3%	0%	0%	0%	0%
Dont know	0%	0%	0%	0%	0%	0%	0%
7- Very important + 6 + 5	85%	78%	70%	83%	83%	98%↑	89%
3 + 2 + 1 – Not at all important	6%	7%	23%↑	4%	6%	0%	11%
NET	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Total sample; Unweighted; base n = from 250 to 252; total n = 648; 398 missing
Multiple comparison correction: False Discovery Rate (FDR) (p = 0.05)

Respectful relations with First Nation and Métis communities: Working positively and respectfully with First Nation and Métis communities is of utmost importance.How important is it that the transportation plan addresses each of the following requirements?	BANNER 1						
	Which of the following areas of Ontario would that be?						
	Total	Eastern Ontario	Central Ontario	Greater Toro-nto Ar-ea (GT-A)	South... Ontario	North-ern Ontario	Outside Ontario
	%	%	%	%	%	%	%
7- Very important	47%	44%	27%	50%	42%	64%	33%
6	18%	26%	23%	13%	17%	19%	22%
5	14%	11%	10%	14%	17%	14%	11%
4	11%	15%	17%	14%	14%	3%	0%
3	3%	0%	7%	0%	6%	0%	0%
2	4%	4%	10%	5%	3%	0%	11%
1 – Not at all important	3%	0%	7%	4%	1%	0%	22%↑
Dont know	0%	0%	0%	0%	0%	0%	0%
7- Very important + 6 + 5	79%	81%	60%	77%	76%	97%↑	67%
3 + 2 + 1 – Not at all important	9%	4%	23%	9%	10%	0%	33%
NET	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Total sample; Unweighted; base n = from 252 to 254; total n = 648; 396 missing
Multiple comparison correction: False Discovery Rate (FDR) (p = 0.05)

Ensuring program sustainability: The program must be on a solid financial and political foundation.How important is it that the transportation plan addresses each of the following requirements?	BANNER 1						
		Which of the following areas of Ontario would that be?					
	Total	Eastern Ontario	Central Ontario	Greater Toronto Area (GTA)	South... Ontario	Northern Ontario	Outside Ontario
	%	%	%	%	%	%	%
7- Very important	59%	41%	50%	52%	61%	79%↑	44%
6	23%	30%	27%	25%	23%	16%	33%
5	10%	22%	10%	11%	9%	3%	22%
4	4%	7%	7%	5%	3%	2%	0%
3	2%	0%	3%	2%	3%	0%	0%
2	2%	0%	3%	4%	0%	0%	0%
1 – Not at all important	1%	0%	0%	2%	1%	0%	0%
Dont know	0%	0%	0%	0%	0%	0%	0%
7- Very important + 6 + 5	92%	93%	87%	88%	93%	98%	100%
3 + 2 + 1 – Not at all important	4%	0%	7%	7%	4%	0%	0%
NET	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Total sample; Unweighted; base n = from 249 to 251; total n = 648; 399 missing
Multiple comparison correction: False Discovery Rate (FDR) (p = 0.05)

Attention to project finances: The plan must be managed in a fiscally responsible way so that the cost of the project does not become a burden to current ratepayers or future generations. Thinking about what is important in planning the long-term transportation of used nuclear fuel, how important are these objectives and principles?	**BANNER 1**						
	Which of the following areas of Ontario would that be?						
	Total	Eastern Ontario	Central Ontario	Greater Toronto Area (GTA)	Sout... Ontario	Northern Ontario	Outside Ontario
	%	%	%	%	%	%	%
7- Very important	52%	33%	64%	60%	36%	64%	50%
6	25%	67%	9%	20%	18%	29%	50%
5	11%	0%	9%	10%	18%	0%	0%
4	7%	0%	9%	10%	9%	7%	0%
3	2%	0%	0%	0%	9%	0%	0%
2	0%	0%	0%	0%	0%	0%	0%
1 – Not at all important	4%	0%	9%	0%	9%	0%	0%
Dont know	0%	0%	0%	0%	0%	0%	0%
7- Very important + 6 + 5	88%	100%	82%	90%	73%	93%	100%
3 + 2 + 1 – Not at all important	5%	0%	9%	0%	18%	0%	0%
NET	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Total sample; Unweighted; base n = from 54 to 56; total n = 648; 594 missing
Multiple comparison correction: False Discovery Rate (FDR) (p = 0.05)

Ensuring transparency: Information used to make decisions about transportation planning must be readily available to the public.Thinking about what is important in planning the long-term transportation of used nuclear fuel, how important are these objectives and principles?	BANNER 1						
		Which of the following areas of Ontario would that be?					
	Total	Eastern Ontario	Central Ontario	Greater Toronto Area (GTA)	Sout... Ontario	Northern Ontario	Outside Ontario
	%	%	%	%	%	%	%
7- Very important	66%	67%	64%	50%	70%	80%	50%
6	14%	0%	9%	20%	10%	20%	50%
5	7%	17%	18%	10%	0%	0%	0%
4	9%	17%	0%	10%	20%	0%	0%
3	2%	0%	0%	10%	0%	0%	0%
2	2%	0%	9%	0%	0%	0%	0%
1 – Not at all important	0%	0%	0%	0%	0%	0%	0%
Dont know	0%	0%	0%	0%	0%	0%	0%
7- Very important + 6 + 5	88%	83%	91%	80%	80%	100%	100%
3 + 2 + 1 – Not at all important	4%	0%	9%	10%	0%	0%	0%
NET	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Total sample; Unweighted; base n = from 54 to 56; total n = 648; 594 missing
Multiple comparison correction: False Discovery Rate (FDR) (p = 0.05)

Balancing adaptability and continuity: The transportation plan needs to be flexible to continuously incorporate new learning while maintaining continuity throughout changes in government. Thinking about what is important in planning the long-term transportation of used nuclear fuel, how important are these objectives and principles?	BANNER 1						
	Which of the following areas of Ontario would that be?						
	Total	Eastern Ontario	Central Ontario	Greater Toronto Area (GTA)	Sout... Ontario	Northern Ontario	Outside Ontario
	%	%	%	%	%	%	%
7- Very important	55%	33%	45%	50%	45%	79%	100%
6	25%	33%	18%	30%	36%	14%	0%
5	13%	33%	18%	10%	18%	0%	0%
4	5%	0%	9%	10%	0%	7%	0%
3	0%	0%	0%	0%	0%	0%	0%
2	0%	0%	0%	0%	0%	0%	0%
1 – Not at all important	0%	0%	0%	0%	0%	0%	0%
Dont know	2%	0%	9%	0%	0%	0%	0%
7- Very important + 6 + 5	93%	100%	82%	90%	100%	93%	100%
3 + 2 + 1 – Not at all important	0%	0%	0%	0%	0%	0%	0%
NET	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Total sample; Unweighted; base n = from 54 to 56; total n = 648; 594 missing
Multiple comparison correction: False Discovery Rate (FDR) (p = 0.05)

A focus on evidence-informed decision-making: The plan must be informed by the best relevant available knowledge. Thinking about what is important in planning the long-term transportation of used nuclear fuel, how important are these objectives and principles?	**BANNER 1**						
		Which of the following areas of Ontario would that be?					
	Total	Eastern Ontario	Central Ontario	Greater Toronto Area (GTA)	Sout... Ontario	Northern Ontario	Outside Ontario
	%	%	%	%	%	%	%
7- Very important	86%	100%	64%	90%	100%	93%	50%
6	9%	0%	27%	0%	0%	7%	50%
5	4%	0%	9%	0%	0%	0%	0%
4	2%	0%	0%	10%	0%	0%	0%
3	0%	0%	0%	0%	0%	0%	0%
2	0%	0%	0%	0%	0%	0%	0%
1 – Not at all important	0%	0%	0%	0%	0%	0%	0%
Dont know	0%	0%	0%	0%	0%	0%	0%
7- Very important + 6 + 5	98%	100%	100%	90%	100%	100%	100%
3 + 2 + 1 – Not at all important	0%	0%	0%	0%	0%	0%	0%
NET	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Total sample; Unweighted; base n = from 54 to 56; total n = 648; 594 missing
Multiple comparison correction: False Discovery Rate (FDR) (p = 0.05)

Incorporating Indigenous and Traditional Knowledge: Ensuring the insight from Indigenous Science, Traditional Knowledge, and ways of life are interwoven throughout is important for a strong plan.Thinking about what is important in planning the long-term transportation of used nuclear fuel, how important are these objectives and principles?	BANNER 1						
		Which of the following areas of Ontario would that be?					
	Total	Eastern Ontario	Central Ontario	Greater Toronto Area (GTA)	Sout... Ontario	Northern Ontario	Outside Ontario
	%	%	%	%	%	%	%
7- Very important	39%	50%	36%	30%	27%	47%	50%
6	21%	17%	18%	20%	27%	27%	0%
5	14%	17%	0%	10%	18%	20%	50%
4	14%	0%	27%	30%	18%	0%	0%
3	0%	0%	0%	0%	0%	0%	0%
2	4%	0%	0%	0%	0%	7%	0%
1 – Not at all important	7%	17%	9%	10%	9%	0%	0%
Dont know	2%	0%	9%	0%	0%	0%	0%
7- Very important + 6 + 5	74%	83%	55%	60%	73%	93%	100%
3 + 2 + 1 – Not at all important	11%	17%	9%	10%	9%	7%	0%
NET	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Total sample; Unweighted; base n = from 55 to 57; total n = 648; 593 missing
Multiple comparison correction: False Discovery Rate (FDR) (p = 0.05)

Ensuring responsible project management: Ensuring the economic sustainability of the project, without compromising safety, security and the environment.Thinking about what is important in planning the long-term transportation of used nuclear fuel, how important are these objectives and principles?	**BANNER 1**						
		Which of the following areas of Ontario would that be?					
	Total	Eastern Ontario	Central Ontario	Greater Toro-nto Ar-ea (GT-A)	South... Ontario	North-ern Ontario	Outside Ontario
	%	%	%	%	%	%	%
7- Very important	64%	17%	82%	60%	55%	86%	100%
6	25%	83%↑	18%	30%	18%	0%	0%
5	7%	0%	0%	0%	18%	14%	0%
4	4%	0%	0%	10%	9%	0%	0%
3	0%	0%	0%	0%	0%	0%	0%
2	0%	0%	0%	0%	0%	0%	0%
1 – Not at all important	0%	0%	0%	0%	0%	0%	0%
Dont know	0%	0%	0%	0%	0%	0%	0%
7- Very important + 6 + 5	96%	100%	100%	90%	91%	100%	100%
3 + 2 + 1 – Not at all important	0%	0%	0%	0%	0%	0%	0%
NET	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Total sample; Unweighted; base n = from 54 to 56; total n = 648; 594 missing
Multiple comparison correction: False Discovery Rate (FDR) (p = 0.05)

	BANNER 1						
A focus on informing and engaging: It is important to proactively provide easily understandable information, and address questions and concerns, in order to proceed.Thinking about what is important in planning the long-term transportation of used nuclear fuel, how important are these objectives and principles?	Which of the following areas of Ontario would that be?						
	Total	Eastern Ontario	Central Ontario	Greater Toronto Area (GTA)	Sout... Ontario	Northern Ontario	Outside Ontario
	%	%	%	%	%	%	%
7- Very important	59%	67%	45%	60%	45%	71%	100%
6	23%	33%	36%	10%	27%	21%	0%
5	9%	0%	9%	10%	18%	7%	0%
4	7%	0%	0%	20%	9%	0%	0%
3	2%	0%	9%	0%	0%	0%	0%
2	0%	0%	0%	0%	0%	0%	0%
1 – Not at all important	0%	0%	0%	0%	0%	0%	0%
Dont know	0%	0%	0%	0%	0%	0%	0%
7- Very important + 6 + 5	91%	100%	91%	80%	91%	100%	100%
3 + 2 + 1 – Not at all important	2%	0%	9%	0%	0%	0%	0%
NET	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Total sample; Unweighted; base n = from 54 to 56; total n = 648; 594 missing
Multiple comparison correction: False Discovery Rate (FDR) (p = 0.05)