Creating the future together

Annual report 2024

nwmo

NUCLEAR WASTE MANAGEMENT ORGANIZATION
SOCIÉTÉ DE GESTION DES DÉCHETS NUCLÉAIRES

Land acknowledgment

The Nuclear Waste Management Organization acknowledges that we have worked in many different Indigenous territories since the inception of the organization. We are grateful to the Indigenous and municipal communities that have worked with us for more than 20 years.

In 2024, we selected Wabigoon Lake Ojibway Nation and the Township of Ignace as the hosts for the site for a deep geological repository for used nuclear fuel. With this context, we acknowledge that today and moving forward, we are working in northwestern Ontario with the communities of Wabigoon Lake Ojibway Nation and the Township of Ignace, as well as neighbouring communities.

Throughout 2024, in southern Ontario, we worked with Saugeen Ojibway Nation and the Municipality of South Bruce. We want to acknowledge the Saugeen Ojibway Nation communities and Municipality of South Bruce for their dedication to the siting process.

We also acknowledge that we have the privilege of working with other First Nations and organizations, with Métis communities and the Métis Nation of Ontario, and many municipal communities that have all expressed an interest in learning about our work.

As part of our commitment to Reconciliation, we recognize both the historic and current injustices far too many Indigenous communities endure. We commit to doing our part to support well-being in the communities with which we work.

NUCLEAR WASTE MANAGEMENT ORGANIZATION
SOCIÉTÉ DE GESTION DES DÉCHETS NUCLÉAIRES

The Honourable Jonathan Wilkinson
Minister, Energy and Natural Resources Canada
Ottawa, ON K1A 0A6

March 2025

Dear Minister,

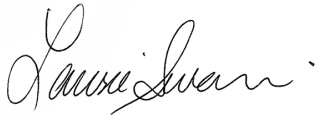
We are pleased to submit to you the Nuclear Waste Management Organization (NWMO) annual report for the fiscal year 2024.

We submit this report in compliance with sections 16(1), 16(2) and 23(1) of the *Nuclear Fuel Waste Act*.

In fulfilling our obligations under section 24 of the Act, we are also making this report available to the public.

Respectfully submitted,

Glenn Jager
Board Chair



Laurie Swami
President and CEO

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Message from Glenn Jager, NWMO Board Chair

In 2024, the Nuclear Waste Management Organization (NWMO), together with Wabigoon Lake Ojibway Nation and the Township of Ignace, made history.

As we continue to see demand for nuclear energy growing to help reach our climate goals, the progress that the NWMO has demonstrated in building a model of responsible environmental stewardship is an inspiration.

Following years of technical study and a community-driven site selection process, the NWMO was able to confidently select Wabigoon Lake Ojibway Nation and the Township of Ignace in northwestern Ontario as the hosts for the future site for Canada's deep geological repository for used nuclear fuel.

From the beginning, the NWMO has said that to succeed, nuclear waste solutions must not only be technically sound, but also reflect what we have heard through dialogue with the public. The outcome of the consent-based siting process shows this is possible — and it was *only* possible because of these communities demonstrating their willingness to move forward.

This entire project has been defined by the courage to think differently and take an approach that is unique in major infrastructure projects. Reaching this milestone demonstrates the power of open dialogue with host communities, who shared their insights, challenged assumptions, and envisioned a brighter future for their regions.

This includes forging one of the most significant agreements between an organization leading infrastructure development and a First Nation in Canada's history. Wabigoon Lake Ojibway Nation has defined what Reconciliation means for its community and the role this project will play in its future. Notably, it will also be developing and implementing an Indigenous-led RAAP (Regulatory Assessment and Approval Process), an important way to ensure the protection of Wabigoon Lake Ojibway Nation's Anishinaabe Values and Laws. The NWMO is committed to working with Wabigoon Lake Ojibway Nation on its sovereign and historic process.

The Board also wishes to express our gratitude to Saugeen Ojibway Nation and the Municipality of South Bruce, the communities in the other siting area that was still under consideration throughout 2024. We thank them for their collaborative spirit and dedication to learning more about the project over a period spanning more than a decade.

By demonstrating thoughtful leadership, the siting area communities have allowed Canada to strengthen its position as a world leader in nuclear waste management. This, combined with the NWMO's technical expertise and commitment to safety from a social perspective, gives the Board confidence that this historic site selection milestone is a resilient one.

The preparation the NWMO has done in 2024 has ensured that it is ready for the regulatory decision-making process, which will see the project's safety independently confirmed both by the Canadian Nuclear Safety Commission and through the Government of Canada's impact assessment process. This multi-year process will once again give Canadians and Indigenous Peoples the opportunity to share their voices on a project that will progress across generations.

The same can be said for the plan to safely manage intermediate-level and non-fuel high-level radioactive waste in a deep geological repository, an important new responsibility for the NWMO. In 2024, the NWMO has been building on its previous experience to develop a process to find a safe location with informed and willing hosts for this repository. This siting process will be validated through public engagement and will evolve based on what the NWMO hears from Canadians and Indigenous Peoples. Although it is still early days, the progress so far is encouraging and helps to demonstrate that Canada has a plan for all its nuclear waste.

This past year shows that the NWMO is continuing to build on its strengths, while demonstrating its leadership as a knowledge-driven organization committed to excellence and with a real commitment to its shared purpose of protecting people and the environment.

This is reflected in the new vision, mission and values, which are shared in this annual report. These pillars of the organization ensure the NWMO is well placed for strong decision-making and a culture that will allow it to fulfil its responsibility to Canadians and Indigenous Peoples.

Its refreshed vision in particular — "Leading the way in nuclear waste solutions that create a safe and clean future" — perfectly sets the stage for the chapter ahead. If you were working in the nuclear industry even a decade ago, you likely could not have pictured just how far we have come today in creating solutions for the byproducts of nuclear innovation.

Today, we now know that by working together, not only progress is possible, but also there is much more to come.

Glenn Jager
Board Chair

Message from Laurie Swami, NWMO President and CEO

At the Nuclear Waste Management Organization (NWMO), we have an important responsibility to Canadians and Indigenous Peoples. We must work together to steward solutions to a complex and multi-generational challenge: safely managing radioactive waste for the long term.

It is a privilege to say that in every year I have been with the NWMO, I have witnessed this story of environmental stewardship advance. In 2024, we experienced a chapter like no other.

We made significant progress over the course of the year, from advancing our engineering and technical work in close collaboration with our international partners, to engaging with the public to strengthen the social safety case for our work. Along the way, we continued to answer tough questions, listen to feedback and share knowledge.

Then, in November, we reached the most significant milestone to date on our ongoing journey to protect people and the environment: selecting Wabigoon Lake Ojibway Nation and the Township of Ignace as the host communities for Canada's deep geological repository for used nuclear fuel.

From the beginning, the bar was set high. We needed to find an area that is safe from a technical point of view and where used nuclear fuel can be safely transported. Just as importantly, it had to be located in an area with host communities that understand the project and support moving forward. The site we selected meets all those requirements, and we are moving ahead confidently to the next phase of the project.

We want to express our gratitude to Saugeen Ojibway Nation and the Municipality of South Bruce for their commitment to the siting process, including throughout 2024 when they were one of the two remaining siting areas under consideration. We are grateful for the collaborative relationship we share with the communities in this area.

Reaching this momentous milestone was only possible because of the dedication and leadership of communities that participated in the site selection process over more than a decade, who made thoughtful decisions about the future of the places they call home. This included working closely with us in 2024 to finalize hosting agreements and develop their own unique processes for demonstrating willingness to host the project, in a way that reflects their vision for their communities.

Our hosting agreement and collaboration with Wabigoon Lake Ojibway Nation is part of the commitment to walking a Reconciliation journey we have made as an organization, recognizing both the historic and current injustices Indigenous communities have endured. In addition, our hosting agreement with the Township of Ignace will bring multi-generational benefits to the area, including opportunities for youth.

This commitment to collaboration, community-driven decision-making and Reconciliation will continue to be central to our work.

As we close this chapter, we are opening another. We will now enter the rigorous regulatory decision-making process, which is designed to ensure that our understanding of the safety of the repository is independently confirmed. Alongside this federally regulated process, we will also be subject to Wabigoon Lake Ojibway Nation's sovereign regulatory process.

What I look forward to most is that these processes will create another opportunity for Canadians and Indigenous Peoples to have their voices heard on this important project. While the site selection process ensured that the host communities could consider and express their willingness to proceed with the regulatory decision-making process, this next phase will offer new opportunities for people to ask questions, share knowledge and shape what the future looks like.

Similarly, we spent 2024 planning for how we will hear from the public about our newest responsibility: advancing Canada's deep geological repository for intermediate-level and non-fuel high-level radioactive waste, and potentially used fuel from new nuclear projects.

As a first step, we are developing the draft process to select a safe site with informed and willing hosts, then sharing it with the public for input beginning in 2025. I am confident that our technical excellence and more than 20 years of experience engaging with people will inform the development of a strong path forward.

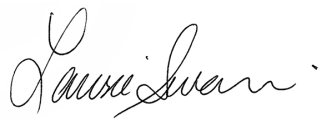
This commitment to listening, learning and creating solutions together is core to who we are at the NWMO. That will not change, even as our organization evolves. As we prepare to mobilize to the site and our work on the second repository project progresses, our culture of shared purpose, excellence and camaraderie will endure.

I can say this because change, however challenging, is easier when you have strong values guiding your decisions. Our renewed set of organizational values, published in this annual report, build on our strengths and reflect our ambitions for what is ahead.

I could not be prouder of our people, who continue to embody the spirit of openness and collaboration that define this organization. It is because of them, working closely with colleagues and communities, that we achieved an unprecedented milestone in 2024 and can take on new work with confidence.

By creating tangible solutions for complex challenges together today, we are creating a better tomorrow, including for those who will come long after us. That was what Canadians and Indigenous Peoples told us they wanted when our work first began, and it is where we will continue to focus our efforts.

I am humbled by the people, communities and industry partners who continue to put their trust in us to lead the way. And I am confident that we can continue to create a safe future together — one that protects people and the environment.



Laurie Swami
President and CEO

Introduction to the NWMO

The deep geological repository for used nuclear fuel is a safe, long-term management solution that will protect people and the environment.

The Nuclear Waste Management Organization (NWMO) is a not-for-profit organization tasked with the safe, long-term management of used nuclear fuel in a deep geological repository, in a manner that protects people and the environment for generations to come.

We are also beginning planning for the safe, long-term management of intermediate-level waste, non-fuel high-level waste and potentially used nuclear fuel from new nuclear projects in a second deep geological repository.

Our annual report provides an overview of our activities to implement this important work over the past year and an update on our financial position.

We have made significant progress implementing Canada's plan for the used nuclear fuel repository throughout 2024. We continued to collaborate with Indigenous Peoples, communities, industry experts, government decision-makers, international counterparts and others to prepare for the milestone of selecting a site for the repository and the steps that will follow.

In November 2024, we selected Wabigoon Lake Ojibway Nation and the Township of Ignace as the hosts for the repository.

This is what making history looks like. Canada will now take another step forward on this important project that will protect people and the environment, including water, while supporting its goals around energy security and climate change.

While the site selection announcement represented a historic moment for the NWMO, Canadians and Indigenous Peoples, it is by no means the end of the journey.

We are closing one chapter and beginning another — the regulatory decision-making process.

This rigorous process will ensure that the NWMO's understanding of the safety of the repository is independently confirmed and will create new opportunities for the public to continue to have their voice heard on this important project. We are committed to meeting all applicable regulatory standards and requirements for protecting the health, safety and security of people and the environment. To learn more about how our work is regulated, visit nwmo.ca/regulatory.

In parallel, the NWMO will undertake Wabigoon Lake Ojibway Nation's Regulatory Assessment and Approval Process (RAAP). The process will evaluate the project based on Wabigoon Lake Ojibway Nation's Anishinaabe Values using Anishinaabe processes.

We look forward to hearing from Canadians and Indigenous Peoples as we move forward with implementing Canada's plan for the safe, long-term management of used nuclear fuel.

In addition to advancing Canada's plan for used nuclear fuel, we made progress on our new responsibility to safely manage intermediate-level and non-fuel high-level radioactive waste over the long term. This important responsibility builds on more than 20 years of engagement experience and technical expertise. In 2024, we continued to develop the site selection process for this second repository project, a document that will be published for public input in 2025.

Being adaptive is core to our organization. Just in case we need additional capacity in the future, we are also exploring the potential to include any future used fuel from small modular reactors or other new nuclear projects in the same repository that we will use to manage the intermediate-level and non-fuel high-level waste. In 2024, we continued collaborating with both current waste owners and new nuclear proponents to better understand waste volumes and types from potential new projects.

As we move forward, we remain committed to co-creating a shared future built on rights, equity and well-being for Indigenous Peoples. We are doing this through continued Reconciliation training with the NWMO staff and external partners, as well as through continuing to align with Indigenous Knowledge in our technical and engagement work. From transportation planning to creating the site selection process for this repository, Indigenous Knowledge and worldviews will continue to shape our work.

I express my deep gratitude to the communities of Wabigoon Lake Ojibway Nation and the Township of Ignace, as well as the many other communities that were involved in the site selection process, for their thoughtful leadership and active engagement. I also commend the NWMO for its long, hard work and for the progress it is continuing to make in advancing a safe, responsible and informed plan. Thanks to our commitment to health, safety and responsible regulation, Canadian nuclear energy will continue to power communities at home and allies around the world – providing Canadians jobs and opportunities for generations.

— The Honourable Jonathan Wilkinson
Minister of Energy and Natural Resources

I extend my thanks to the leaders of Wabigoon Lake Ojibway Nation and the Township of Ignace for their leadership and willingness to host this vital project. As our government expands our zero-emissions nuclear fleet to meet rising energy demand, Ontario is cementing its position as a world leader in all parts of the nuclear lifecycle – this achievement by NWMO is just the latest example.

— The Honourable Stephen Lecce
Ontario's Minister of Energy and Electrification

INFORMING AND GUIDING OUR WORK

The NWMO's vision, mission and values are fundamental elements that guide strategy, decision-making and culture.

In 2024, we began transforming as we made progress on our responsibilities to safely manage used nuclear fuel, as well as intermediate-level and non-fuel high-level radioactive waste. It marked an important moment to reimagine the pillars of our organization.

The refreshed statements published here build on the strengths that have allowed us to make progress so far, while also demonstrating our ambitions for the future.

Even as our organization changes, our purpose will always be to protect people and the environment. We look forward to using this new vision, mission and values to guide our work in the years to come.

VISION

Leading the way in nuclear waste solutions that create a safe and clean future.

MISSION

Taking action today to safely manage Canada's nuclear waste in deep geological repositories for generations to come, working in collaboration with Canadians and Indigenous Peoples.

VALUES

GROUNDED IN SHARED PURPOSE

Safety guides everything we do. We have a responsibility to keep future generations and the environment safe, including water.

ACTING WITH OPENNESS

We are lifelong learners, unafraid to ask hard questions, seek answers and listen to feedback, and hold ourselves accountable as we move forward with our work. We work alongside Canadians, Indigenous Peoples and international partners to share what we learn and create a better future together.

WALKING A RECONCILIATION JOURNEY

We strive to respect the rights, equity and well-being of Indigenous Peoples, and their spiritual connection to the land, in every action we take. We are grateful for the opportunity to learn from the expertise and lived experiences of Indigenous Peoples.

AN ETHICAL AND SOCIAL FRAMEWORK

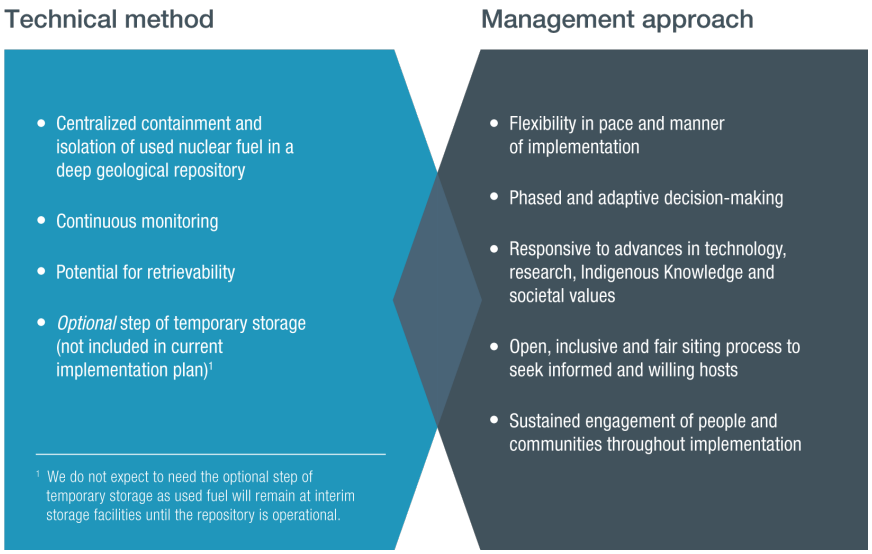
We are guided by an Ethical and Social Framework that was first published in 2004. It was developed with the involvement of leading Canadian ethicists and Indigenous thought leaders during the study phase of our work. We continue to build on this framework as the project moves forward.

The Ethical and Social Framework incorporates the following principles:

- Respect for life in all its forms, including minimization of harm to human beings and other sentient creatures;
- Respect for future generations of human beings, other species, and the biosphere as a whole;
- Respect for peoples and cultures;
- Justice across groups, regions and generations;
- Fairness to everyone affected, particularly minorities and marginalized groups; and
- Sensitivity to the differences in values and interpretation that different individuals and groups bring to the dialogue.

ADAPTIVE PHASED MANAGEMENT

Canada's plan for the safe, long-term management of used nuclear fuel, known as Adaptive Phased Management, involves a technical plan and a phased and flexible implementation strategy. It is both a technical method (what we plan to build) and a management approach (how we will work with people to get it done). The technical method involves developing a deep geological repository in a suitable rock formation to safely contain and isolate used nuclear fuel. The management approach involves phased and adaptive decision-making, supported by public engagement and continuous learning.



Initially, 22 communities expressed interest in learning more and exploring their potential to host the project. We gradually narrowed our focus through increasingly intensive technical studies and engagement with those communities, their neighbours and Indigenous Peoples.

In November 2024, we selected Wabigoon Lake Ojibway Nation and the Township of Ignace as the hosts for the future site for Canada's deep geological repository for used nuclear fuel.

After extensive technical study and community engagement, the site we selected to take into the regulatory decision-making process achieves the priorities we identified at the outset: it can safely contain and isolate Canada's used nuclear fuel, used nuclear fuel can be safely transported to the site, and the municipal and First Nation hosts have confirmed at a grassroots level they support moving forward with the project in their area.

We are grateful to Saugeen Ojibway Nation, the Municipality of South Bruce and all the communities that led the way in this site selection process for their time, commitment to learning and passion for their communities' well-being. This includes the guidance we have received from Indigenous Peoples that helps us continue learning how we can address historic and ongoing wrongs, while co-creating a better future. Thanks to the tremendous leadership of municipalities, First Nations and Métis communities over the many years of our community-driven site selection process, we have been able to identify a site that is both a safe place to build a repository and that has informed and willing hosts.

Canada's plan is adaptive by design. The next phase of our work is now underway, and we look forward to advancing this plan to protect people and the environment for generations to come.

> *[Wabigoon Lake Ojibway Nation] views our role as the potential host for Canada's used nuclear fuel as one of the most important responsibilities of our time. We cannot ignore this challenge and allow it to become a burden for future generations.*
>
> **— Chief Clayton Wetelainen**
> Wabigoon Lake Ojibway Nation

> *The Township of Ignace is honoured, humbled and delighted to have been chosen as the site of a deep geological repository to store Canada's used nuclear fuel by the Nuclear Waste Management Organization. [This] marks the beginning of the future of this community, for its residents, our youth and for generations to come. We will now begin to focus on being committed, dedicated and fully engaged in the process to establish Canada's first ever deep geological repository with a goal to build up our community, our region and the future prosperity of all of northwestern Ontario.*
>
> **— Mayor Kim Baigrie**
> Township of Ignace

INTERMEDIATE-LEVEL AND NON-FUEL HIGH-LEVEL RADIOACTIVE WASTE PLANNING

In 2024, the NWMO made progress on developing the process to find a safe location with informed and willing hosts for our second deep geological repository project. This repository will safely manage intermediate-level and non-fuel high-level waste and potentially used nuclear fuel from new nuclear projects. We plan to engage with the public on the proposed siting process beginning in 2025.

While this work is separate and distinct from planning for the used nuclear fuel repository, the proposed site selection process will be guided by the NWMO's more than 20 years of experience advancing Canada's plan for used nuclear fuel, our commitments to Reconciliation and aligning with Indigenous Knowledge, advancements in science and technology, international best practices, and listening to what is most important to Canadians and Indigenous Peoples.

In 2024, we began discussions with waste owners and waste generators to better understand their inventory of waste (how much there is), waste characterization (types of waste) and technical needs.

As we advance our work, we are maintaining flexibility and remaining ready to be adaptive. In case we need additional capacity in the future, we are also exploring the potential to include future used fuel from new nuclear projects in the same repository that we will use to manage intermediate-level and non-fuel high-level waste.

The NWMO took on the responsibility for the safe, long-term management of intermediate-level and non-fuel high-level radioactive waste in 2023, following the federal government's acceptance of our recommendations in the Integrated Strategy for Radioactive Waste (ISRW). Specifically, the strategy recommended that intermediate-level and non-fuel high-level waste be disposed of in a deep geological repository, with implementation by the NWMO.

The federal government first asked the NWMO to explore solutions beginning in 2020, given that long-term disposal plans were in place for the majority of Canada's radioactive waste, but there were some planning gaps. The ISRW was a first-of-its-kind for Canada and was the result of more than two years of engagement with Canadians, First Nations, Métis peoples, generators of radioactive waste, and waste owners, as well as studies of both technical considerations and international best practices.

The progress through this first full year of leading planning for intermediate- and high-level radioactive waste gives us even greater confidence that Canada now has tangible solutions for all radioactive waste types. We are excited to build on our technical expertise and experience engaging Canadians and Indigenous Peoples to further our purpose of protecting people and the environment.

— Sara Dolatshahi
Director of Strategic Projects at the NWMO

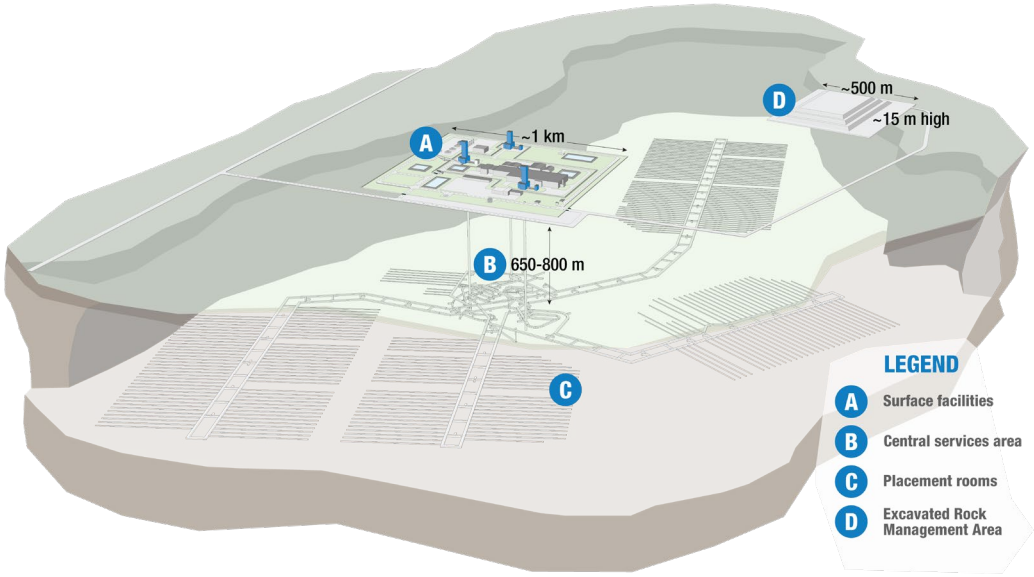
Types of radioactive waste

Low-level waste mostly comes from power plants, as well as medical, academic, industrial and other commercial uses of radioactive materials (e.g., mop heads, rags, paper towels). These items do not produce heat and contain radioactive levels that require containment and isolation for up to a few hundred years. The responsibility for disposal of such waste is with waste generators and waste owners.

Intermediate-level waste includes used components such as filters, resins and pumps from power plants, research reactors and medical isotope manufacturers. This waste produces minimal heat, but requires a higher level of containment and isolation, for longer time periods than what is needed for low-level waste.

High-level waste includes mostly used nuclear fuel, and there is a very small amount of non-fuel high-level waste that comes from other activities such as medical isotope production. This waste can generate a significant amount of heat and radioactivity and requires containment and isolation for hundreds of thousands of years in a deep geological repository.

THE DEEP GEOLOGICAL REPOSITORY FOR USED NUCLEAR FUEL



This diagram shows a conceptual layout for the surface facilities, as well as an approximate area of 1,500 acres (600 hectares) for the underground services area and placement rooms in the deep geological repository, at the proposed site with crystalline rock. This design will continue to evolve as the project progresses.

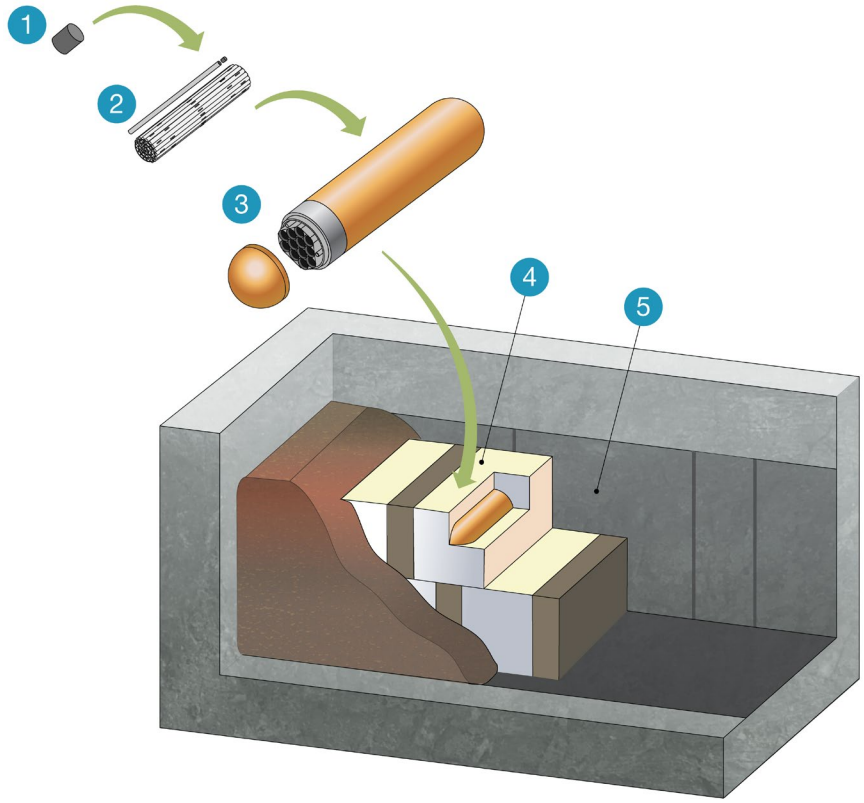
The deep geological repository uses a multiple-barrier system designed to safely contain and isolate used nuclear fuel over the very long term. Constructed 650-800 metres below ground, the repository will consist of a network of placement rooms that will store the used nuclear fuel.

At the surface, there will be facilities where the used fuel is received, inspected and repackaged into purpose-built containers that are encased in a bentonite clay buffer box, before being transferred to the main shaft for underground placement. There will also be facilities for administration, security, processing of sealing materials, quality control, and ongoing operation and monitoring of the site.

The repository will include a central services area that will allow for underground ventilation through three shafts located within a single, secure area. The layout also includes multiple access tunnel arms that will let our technical specialists situate the placement rooms in areas with the most suitable rock. The buffer boxes will be arranged in the horizontal placement rooms, and any spaces left over will be backfilled with bentonite clay pellets or chips.

THE MULTIPLE-BARRIER SYSTEM

A series of engineered and natural barriers will work together to safely contain and isolate used nuclear fuel within the repository. Each barrier will provide a unique and stand-alone level of protection, while serving as a backstop to the last barrier. If any of these barriers were to fail or not perform as expected, there is redundancy such that the other barriers would be there to ensure materials remain contained or isolated.



This diagram shows the multiple-barrier system that will contain and isolate the used nuclear fuel.

1. The first barrier is the fuel pellet. Fuel pellets are a very stable, solid ceramic, made from highly durable baked uranium dioxide powder. They are stored end-to-end in long tubes made of a strong, corrosion-resistant metal.
2. The second barrier is the fuel bundle, made from a highly corrosion-resistant material called Zircaloy, which contains a number of these tubes.
3. The third barrier is a copper-coated steel container. These containers are engineered to resist corrosion and are strong enough to keep the used nuclear fuel completely contained until its radioactivity decreases to safe levels. They are designed to survive underneath 3,000 metres of snow, ice and meltwater, in addition to up to 800 metres of rock and dirt, groundwater and pressure from the surrounding clay.
4. The fourth barrier is a buffer box made of highly compacted bentonite clay that encases each container. Bentonite clay is a natural material proven to be a powerful barrier to water flow. It is very stable, as observed in natural formations that are hundreds of millions of years old. It also naturally prevents microbial growth, which will help maintain the integrity of the container over a long time.
5. The fifth barrier is the rock itself, which will protect the repository from disruptive natural events, water flow and human intrusion.

OUR PLANNING TIMELINES

The NWMO continued to progress work on Canada's plan for used nuclear fuel (Adaptive Phased Management) in 2024 by working collaboratively with communities, Indigenous Peoples, universities and research institutions, regulatory bodies, international waste management organizations and the nuclear industry.

As we prepare to begin the regulatory decision-making process for this project, the NWMO also remains on track to meet our assumed construction and operations timeline. As we advance plans for the second repository project, we will publish planning timelines accordingly.

Developing Canada's plan	2002	The NWMO is created.
	2005	As required by the *Nuclear Fuel Waste Act*, the NWMO completes ***Choosing a way forward***, a three-year study of the alternatives for the safe, long-term management of Canada's used nuclear fuel. The study involved interested individuals, leading scientists and other experts, Indigenous Peoples and the Canadian public.
	2007	Government of Canada selects Adaptive Phased Management and mandates the NWMO to begin implementation.
Developing the siting process	2008-09	Work takes place with citizens to design a process for selecting a central, preferred site for the deep geological repository and Centre of Expertise.
Identifying a site using the siting process	2010	The siting process is initiated.
	2010-15	Twenty-two communities initially express interest.
		In collaboration with interested communities, the NWMO conducts initial screenings, followed by preliminary assessment desktop studies and community engagement.
		Areas with less potential to meet project requirements are eliminated from further consideration.
	2015-24	The NWMO expands assessment to include field investigations. Areas with less potential are eliminated from further consideration as the narrowing down process continues.
	2022	The Government of Canada reaffirms that a deep geological repository is the best solution for Canada's used nuclear fuel (via the *Report of the Standing Committee on Environment and Sustainable Development on Canada and Radioactive Waste Management*).
	2024	The potential host communities determine willingness. A single, preferred site is identified.
Towards construction	2025	Additional site characterization activities are initiated at selected site.
		The NWMO begins the regulatory decision-making process.
		An updated transportation planning framework is issued (updated every three years).
	2028	Studies are submitted as part of the regulatory decision-making process.
		The grand opening of the Centre of Expertise is held.
	2030	Regulatory approval is granted (estimate).
		Initial licence is granted (estimate).
	2031	The Licence to Construct application is submitted to the Canadian Nuclear Safety Commission.
	2033	The Licence to Construct is granted (estimate).
		Construction begins.
Beginning operations	2040-45	Operations of the deep geological repository begin.
		Transportation of used nuclear fuel to the repository begins.
Extended monitoring	Post-operations	Decades of monitoring are initiated.

In addition to entering the rigorous regulatory decision-making process, the NWMO will be subject to Wabigoon Lake Ojibway Nation's (WLON) RAAP (Regulatory Assessment and Approval Process), which is its sovereign regulatory process that will be developed and implemented by WLON.

WLON will design the process to ensure that potential impacts of the project are assessed against its Anishinaabe Values. Conditions to mitigate any impacts will be designed by WLON and complied with by the NWMO. This approach aligns with the NWMO's Reconciliation commitments, and the NWMO looks forward to working with WLON as it implements its sovereign process.

SITE SELECTION
BY THE NUMBERS

27,000

kilograms of gapfill material was used in the testing and demonstration of the engineered-barrier system.

20,000

Canadians and Indigenous Peoples were engaged to develop the plan for used nuclear fuel.

8,000

metres of boreholes were drilled to evaluate geology at potential sites.

22

communities expressed interest in learning about the project and exploring their potential to host it.

14

years were spent on technical study and learning together whether the project might be a fit.

3

communities confirmed they were willing hosts through grassroots decision-making processes.

1

site was selected with a suitable rock formation and informed, willing hosts.

Aligning with Indigenous perspectives

The NWMO is committed to co-creating a shared future built on rights, equity and well-being for Indigenous Peoples.

The NWMO is on a continuous learning pathway towards Reconciliation. Aligning our technical and engagement work with Indigenous worldview is central to fulfilling our purpose to protect people and the environment for generations to come, while also respecting the sophistication and value of Indigenous Knowledge passed down from generations past.

ADVANCING OUR CULTURE OF RECONCILIATION

This year marked the five-year anniversary of the NWMO's *Reconciliation Policy* (2019), a governing document that was brought to life through a traditional sunrise ceremony, led and guided by the Council of Elders and Youth. To hold ourselves accountable to that policy, we measure and publicly report on the implementation of our Reconciliation commitments, including through annual reporting. Activities tracked include mandatory staff training and continuous learning opportunities, informal training opportunities, staff support systems and community-driven work plans.

In 2024, we strengthened that data collection and tracking. We collected data related to the implementation of the *Reconciliation Policy* from staff, members of the Council of Elders and Youth, external partners (such as academics and industry) and community members in both remaining siting regions under consideration for hosting the deep geological repository for used nuclear fuel.

In 2024, we also began looking at the implementation and limitations of policy commitments on Indigenous Knowledge and Reconciliation within the NWMO, which are included in our annual Reconciliation reporting. This supports a more holistic, transparent and accountable view of Reconciliation work being done across the organization. It is also informing our planning for intermediate-level and non-fuel high-level radioactive waste, including the development of the site selection process for that deep geological repository.

Throughout the year, we focused on creating learning opportunities for the NWMO staff on Reconciliation, Indigenous Knowledge and a deeper awareness of First Nations and Métis communities in the site selection process.

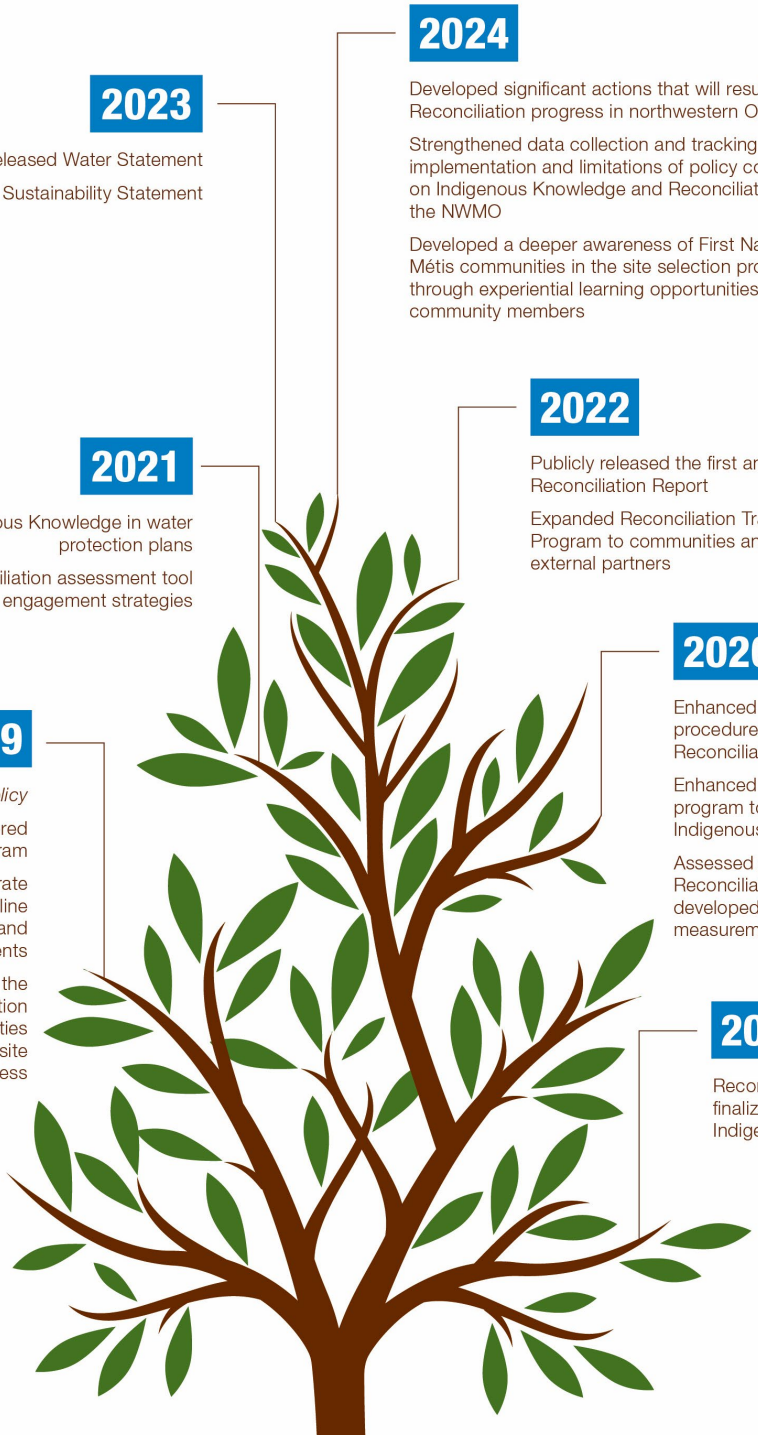
Our work also focuses on advancing Reconciliation with our external partners, including through industry partnerships and learning opportunities with local governments. We have supported municipalities in the siting regions to develop a deeper understanding of local Indigenous history, to support sustainable relationship building with First Nations and Métis communities in surrounding areas.

This included equipping staff with the knowledge and competence that allowed them to directly engage with First Nations and Métis communities on topics such as transportation, sustainability, the regulatory decision-making process, safety assessment, water protection, engineering and planning for intermediate- and high-level radioactive waste. For example, our transportation planning engagement strives to align with the Anishinaabe Seven Sacred Teachings of love, bravery, honesty, respect, truth, humility and wisdom.

Our employees also participated in Metuaptmumk (All Around Seeing). We were invited to this year-long journey alongside the Turtle Island Institute to implement the practical application of Indigenous Knowledge systems and science into our work. We built a traditional birch bark jimaan (canoe) with the seasons. This process took place over 13 moons (months), beginning in spring 2023. This work saw many of our employees step bravely out of their comfort zones, culminating in a ceremonial birthing of the jimaan (canoe) in May 2024. The canoe will continue to journey with the NWMO as we explore new and innovative ways to align our work with Indigenous perspectives.

As we prepare to advance our technical work and prepare for regulatory decision-making, we are doing so with Reconciliation in mind. In 2024, we applied our Reconciliation assessment process to governance documents, scopes of work and communications plans for safety assessments, the regulatory decision-making process and site selection.

NWMO RECONCILIATION JOURNEY



2024

Developed significant actions that will result in economic Reconciliation progress in northwestern Ontario

Strengthened data collection and tracking of the implementation and limitations of policy commitments on Indigenous Knowledge and Reconciliation within the NWMO

Developed a deeper awareness of First Nations and Métis communities in the site selection process through experiential learning opportunities alongside community members

2023

Released Water Statement

Released Sustainability Statement

2022

Publicly released the first annual Reconciliation Report

Expanded Reconciliation Training Program to communities and external partners

2021

Included Indigenous Knowledge in water protection plans

Applied the Reconciliation assessment tool to regional engagement strategies

2020

Enhanced policies and procedures to address Reconciliation

Enhanced procurement program to include an Indigenous strategy

Assessed corporate Reconciliation baseline and developed a Reconciliation measurement matrix

2019

Published *Reconciliation Policy*

Developed and delivered Reconciliation Training Program

Developed a corporate Reconciliation baseline assessment tool and began assessments

Continued to communicate the NWMO's Reconciliation program with communities involved in the site selection process

2018

Reconciliation Statement finalized through Indigenous ceremony

ALIGNING WITH INDIGENOUS KNOWLEDGE

In 2024, the NWMO hosted a Water Symposium for the Saugeen Ojibway Nation communities, as an opportunity to learn about the importance of protecting water from both western science and Indigenous Knowledge perspectives.

The NWMO understands the importance of water and the need to protect it for generations to come. It is at the core of what we do and a shared commitment with Canadians and Indigenous Peoples.

Throughout 2024, we advanced this shared commitment. In collaboration with the Council of Elders and Youth, we developed an implementation plan related to our Water Statement (released in 2023), inclusive of Indigenous Knowledge and sustainability.

We also hosted a Water Symposium for the Saugeen Ojibway Nation communities in October 2024. This engagement event focused on understanding the relationship between the NWMO's work and water, and how water protection is being prioritized in all aspects. Over 200 people, including families and off-reserve members, attended and participated in ceremony led by Knowledge Holders.

In addition to this focus on water, we also held our seventh annual Indigenous Knowledge and Western Science Workshop in 2024, which built on the momentum of our work to create meaningful alignment of Indigenous Knowledge and western science systems. These workshops create a space where Indigenous Knowledge Holders, Elders, scientists, industry professionals and the NWMO's employees can continue to explore new perspectives on the beings that are part of our work (water, copper, clay and rock) through exploration and the co-creation of experiments that incorporate both knowledge systems.

The participation in hands-on, immersive, Indigenous science-centred projects have shown value in helping us better understand the alignment of Indigenous Knowledge within our work programs, while also supporting relationship building with Indigenous communities and collaborative working models for cross-functional work.

By fostering opportunities to listen and learn, we can help ensure that any progress we make to protect people and the environment also advances Reconciliation in a meaningful way. As we continue to evolve as an organization, we will continue to walk this journey, holding ourselves and our partners accountable, and remaining focused on learning, action, relationship and healing.

— Rebekah Wilson
Manager of Indigenous Knowledge and Reconciliation at the NWMO

Community engagement

Throughout 2024, the NWMO continued to create opportunities for the public to learn about Canada's plan for used nuclear fuel and ask important questions, including about how people and the environment will be protected.

Creating opportunities for the public to learn about our work and share their voices is an important part of how we lead with our values — and how we are leading the way in nuclear waste solutions that create a safe and clean future.

Our focus in 2024 was on maintaining and strengthening engagement in the two remaining siting areas for Canada's deep geological repository for used nuclear fuel.

This engagement allowed us to conclude the development and signing of hosting agreements with the Township of Ignace, the Municipality of South Bruce and Wabigoon Lake Ojibway Nation.

The signings of these hosting agreements were important milestones. They reflect the unique characteristics and goals of each community and outline the financial and other benefits the host communities will experience over several decades, benefiting many generations of people living and working in the area.

This commitment to community well-being has been an important guiding principle of the site selection process from the very beginning. That principle committed us to implementing the project in a manner that fosters the long-term well-being and quality of life of the communities and region in which the project is hosted.

In addition, a cornerstone of ensuring safety from a social perspective has been our commitment to only move forward in a siting area where communities have confirmed their willingness to host the project at a grassroots level. Our approach to determining willingness for siting the project has always been community driven. Communities developed their own processes for defining willingness and determining how to express it. This year marked the conclusion of those processes, which were carried out independently by the communities.

As a result of this strong engagement and collaboration with communities, the NWMO was able to select a site in 2024 where the host communities — Wabigoon Lake Ojibway Nation and the Township of Ignace — had both confirmed willingness to move forward with the project in their area.

This major milestone was preceded by more than a decade of community engagement, including substantial engagement efforts throughout 2024, marked by activities to inform communities about the project and to support community well-being goals.

In all siting areas, over the course of site selection (2010-24), the NWMO had been gradually expanding our circle of engagement beyond the community that first expressed interest in learning more to include nearby municipalities, regional municipalities, local services boards, First Nations, Métis communities and Indigenous organizations.

Having narrowed down to two potential siting areas, in 2024, we regularly engaged with nearby communities, First Nations and Métis peoples so that they were aware of siting activities, and able to ask questions about the NWMO and Adaptive Phased Management.

Over the course of the year, we continued our focus on supporting community learning and building capacity to meet future opportunities. The NWMO hosted and participated in a broad range of community events. Examples of this community-wide engagement included working with communities on the Northwest Nuclear Exploration Event in April and the South Bruce Nuclear Exploration Forum in May.

We also continued using our travelling Mobile Learn More Centre (MLMC) to provide the public with information about the technical and social aspects of Canada’s plan for used nuclear fuel, within and beyond potential siting areas. In 2024, the MLMC made more than 30 stops at community-based events, where staff answered questions and guided community members, including young people, through the exhibit.

YOUTH ENGAGEMENT

In 2024, the NWMO led geography students from the Sacred Heart High School's GENESIS program in southern Ontario through a borehole site tour. It was an opportunity to learn from our specialists about local geology and an example of our ongoing commitment to youth.

Given the multi-generational nature of our work, engaging young people continued to be a priority in 2024. Our youth engagement activities focused on both siting areas that were still under consideration for hosting the deep geological repository for used nuclear fuel.

This included building awareness about the project and supporting youth capacity to learn about potential career paths. In both siting areas, we continued to support science, technology, engineering and mathematics (STEM) learning in schools, extracurricular programming in mathematics, environmental workshops for youth, as well as sports and recreational activities.

For example, a presentation about our work with a particular emphasis on local geology was delivered to all four of the Grade 9 geography classes at Sacred Heart High School in Walkerton, Ont. Geography students also participated in an off-site borehole tour led by one of the NWMO's geology specialists.

Other science and hands-on learning programs this year included working with local water authorities and NWMO scientists to enable Grade 9 students to experience water sampling techniques (through the South Bruce school GENESIS program). There were also bat monitoring workshops presented to community youth, including Indigenous youth, in both siting areas in partnership with Toronto Zoo environmental scientists.

Throughout 2024, we also connected specifically with Indigenous youth, including members of the First Nations in both remaining siting areas.

In northwestern Ontario, the Wabigoon Lake Ojibway Nation Youth Gathering hosted about 70 young people from four Indigenous communities, who took part in a two-day workshop to learn about the project and about career paths and opportunities.

In southern Ontario, the Water Symposium organized by the NWMO was one of many engagement opportunities for Indigenous youth to learn more about the project and share their own knowledge.

Finally, we continued to support community youth endeavours through the NWMO's Early Investments in Education and Skills (EIES) programming and our sponsorships and donations program. Additional youth engagement efforts are documented in our annual youth engagement report, which details the community initiatives the NWMO has led or supported.

Ignace resident and NWMO Associate Scientist Daila Delescaille speaks during a youth engagement presentation at the Northwest Nuclear Exploration Event in April 2024.

Site assessment

Site assessment work advanced our understanding of geology and the environment in the potential siting areas for a deep geological repository for used nuclear fuel, building confidence in project safety.

Robust site assessment has been an essential pillar of the community-driven siting process for Canada's deep geological repository for used nuclear fuel.

In 2024, we made strides to support confidence in the safety of the repository. In turn, this work supported engagement efforts and historic willingness decisions by Wabigoon Lake Ojibway Nation and the Township of Ignace, in the selected siting area. We are also well set up to enter the next chapter of the project, as we move closer to the eventual construction of the repository.

Our technical understanding of site safety was captured in updated *Confidence in Safety* reports shared with the public in early 2024. The new reports reinforced our conclusion that a deep geological repository to safely manage Canada's used nuclear fuel for the long term can be constructed at either of the sites that were under consideration.

The reports provide a comprehensive summary of our understanding of each potential siting area based on years of research, highlighting the strength of geological features in each location, which ensure the site can safely contain and isolate used nuclear fuel. They also include initial site-specific safety assessment results and additional research on the geology and engineering for both sites. We used these reports to support continuing dialogue with Canadians and Indigenous Peoples about the project and to help inform the potential host communities ahead of their willingness decisions.

In addition to the work supporting our technical understanding and community willingness decisions, a key focus in 2024 was also on preparing for the work that will begin now that a site has been selected. Further site characterization activities at the selected site will support the robust regulatory decision-making process, during which we will encourage Canadians and Indigenous Peoples to continue to ask questions and share their input on the project.

Continuing to learn and adapt is an important part of preparing for the eventual construction and operations of the deep geological repository, and our activities in 2024 have ensured we are ready for the next phase.

Our site assessment efforts, including technical work and community engagement, have played an important role in a world-leading consent-based siting process and ensuring our readiness for the next chapter. We are grateful to all the people and communities, inside the siting areas and more widely, for their willingness to ask questions, listen and learn with us.

— Dr. Sarah Hirschorn
Senior Director of Projects at the NWMO

Engineering, safety and technical research

The NWMO's Dr. Erik Kremer discusses site safety with a member of the public. In 2024, our geoscientific research and technical studies continued to support our confidence that the deep geological repository for used nuclear fuel can be constructed and operated safely.

A major priority in 2024 was continuing to gather and share evidence that the used nuclear fuel repository will be safe from both a technical and a social perspective for generations to come.

In 2024, we made new progress on planning for surface and underground facilities, excavated rock management areas and Used Fuel Packaging Plant operations.

We also worked closely with our peers in Finland, where a similar repository has already been constructed and is undergoing preparation to begin operations. We gained a strong understanding of their approach to fuel handling and encapsulation, an experience that is now being applied to our designs to continue to strengthen safety, efficiency and reliability.

Touring Finland's deep geological repository and learning centre allowed the NWMO to gain further insight into facility design and apply those learnings to work in Canada.

Given this project will span generations, it also remained important to advance our understanding of how both sites may evolve, including their geology.

In both siting areas under consideration in 2024, we completed comprehensive geoscientific testing to better understand rock properties and support assessment of long-term stability, to ensure the project is safe for the very long term.

Alongside this geoscientific work, we advanced our assessments for both pre-closure (the period when we are constructing and operating the deep geological repository and associated facilities) and post-closure (the period after the repository has been sealed and closed) to include more site-specific information and updated scenarios for natural and human-caused external hazards.

These advancements will be included in the site-specific safety assessments during the regulatory decision-making period. In addition, we initiated work on defining the biosphere representation that will be used in the post-closure safety assessment during regulatory decision-making. Its development will consider both western and Indigenous worldviews, bringing together national and international experts from the NWMO and our partners, as well as Indigenous Relations advisors.

We also expanded our studies on potential climate change effects on the repository to help evaluate potential mitigations that could be required. This work will build on regional studies completed between 2020 and 2022, and will consider recent advancements in methodologies and understanding of input data applicable to the siting area.

Finally, we spent this year developing the preliminary criteria we will need for future safety assessments that will be part of the regulatory decision-making process. These criteria have been shared with the Canadian Nuclear Safety Commission for its review. By doing so, we can enter the regulatory decision-making process with a common understanding of how the safety case for the project will be assessed.

By continuing to prioritize our engineering, safety and technical research, and working with international peers, we are entering 2025 well-prepared as we move through regulatory decision-making and towards repository construction.

— Chris Boyle
Vice-President and Chief Engineer at the NWMO

International collaboration

The 2024 International Conference on Geological Repositories in Busan, Korea, brought together global experts on nuclear waste management, including the NWMO. (Source: Nuclear Energy Agency)

Collaboration outside Canada is central to our work. Sharing our experiences and staying informed about developments in safe nuclear waste management methods from around the world, including repository design, is an important part of delivering on our responsibility to Canadians and Indigenous Peoples.

We further strengthened our global relationships in May, when we signed co-operation agreements with several other national waste management organizations. At the International Conference on Geological Repositories (ICGR) in Busan, Korea, the NWMO solidified partnerships with Finland's Posiva Oy and Posiva Solutions, South Korea's Korea Atomic Energy Research Institute (KAERI), the Korea Radioactive Waste Agency (KORAD) and the National Atomic Research Institute (NARI) of Taiwan. Shortly before this event, we renewed our agreement with the United Kingdom's Nuclear Decommissioning Authority (NDA), and later in the year, we developed a new partnership with the Australian Radioactive Waste Agency (ARWA).

These agreements enable the sharing of knowledge, expertise and best practices. By continuing to work with these organizations, we can also foster international co-operation on the development and demonstration of technology for nuclear waste management.

Collaboration with international peers in 2024 also supported our scientific, technical and engineering work. The NWMO participated in the initial Trial Run of Final Disposal workshop at the Olkiluoto facility in Finland, operated by Posiva. There, the NWMO observed and discussed the facility commissioning, gaining practical experience that will help us adapt our own design and safety analyses.

The NWMO also continued to participate in various international working groups and joint programs to advance global understanding of repository designs throughout 2024. One example is EDRAM, the International Association for Environmentally Safe Disposal of Radioactive Materials, which is comprised of participants from several countries, including France, Japan, the United Kingdom and the United States, among others.

Our technical excellence continues to be acknowledged by other waste organizations around the world, who regularly request support from NWMO subject-matter experts. Several international partners invited the NWMO's technical experts to deliver lectures to their staff in 2024, including the keynote address at the 40th anniversary of the Grimsel Test Site in Switzerland.

In Canada, we hosted or engaged peers from the United States, Finland, Sweden, the United Kingdom and Kenya, providing an opportunity for them to learn from our experience. The Township of Ignace hosted staff from the United Kingdom's Nuclear Waste Services for one such learning experience related to geoscience and site characterization.

During her visit to Korea, the NWMO's President and CEO Laurie Swami shared some of the NWMO's key learnings about our community-driven siting process for the deep geological repository for used nuclear fuel, reinforcing Canada's position as a leader in nuclear waste management. (Source: Nuclear Energy Agency)

Canada now has new progress that our international peers can learn from as they advance their own projects. While Canada is not the first in the world to implement a repository project, by announcing the selected site in 2024, we have firmly placed ourselves among those at the front of the pack. Working together with communities, we have demonstrated a world-leading, community-driven model for building infrastructure projects that our international partners are looking to now.

In 2024, the NWMO signed or renewed a number of collaboration agreements with international organizations focused on radioactive materials, including our first-ever agreement with the Australian Radioactive Waste Agency. With that agreement, we seek to build a partnership with an international peer that is also committed to Reconciliation with Indigenous Peoples. The co-operation with our international peers extends into many technical fields as well, as we exchange information on geoscience, safety, engineering and topics such as the engineered barriers each organization is exploring. With support from our international peers and funding from Natural Resources Canada, the NWMO has begun exploring engineered barriers for alternative fuel types.

Along with continuing to connect with industry and our international peers, we supported approximately 10 journal papers in 2024, reinforcing our leadership in safety, engineering, and scientific and technical research.

It is encouraging that we have continued to foster relationships beyond our borders in 2024. The learnings we have gained, as well as the strong co-operation we continue to experience, give us confidence as we continue to transform as an organization. And we are proud that together with the host communities for Canada's repository for used nuclear fuel, we can serve as an inspiration for others embarking on siting processes.

— Dr. Peter Keech
Manager of Research and Collaboration
at the NWMO

Transportation planning

The safe transportation of used nuclear fuel continues to be a topic of interest to many Canadians and Indigenous Peoples. At community events, the NWMO builds a greater understanding of the Used Fuel Transportation Package and how it will protect people and the environment when used nuclear fuel is moved from interim storage locations to the repository site.

A safe transportation plan is an essential part of implementing Canada's plan for used nuclear fuel. As with all our work, our transportation plan must protect people and the environment.

While transportation of used nuclear fuel from interim storage to the selected site will not begin until the deep geological repository is operational in the 2040s, we are already planning for it. Used nuclear fuel transport has taken place on Canada's roads since the 1960s, and the regulatory framework is comprehensive and mature. Across Canada today, about 2,000 radioactive shipments are safely made each day. When repository operations begin, it is estimated that the contribution of used fuel transports will be less than 0.3 per cent of all radioactive shipments.

Transportation is a subject of broad public interest, and we are committed to ensuring our transportation planning reflects public priorities and concerns. That is why we are taking a collaborative approach by engaging with thousands of Canadians and Indigenous Peoples to understand their perspectives, suggestions, questions and concerns. We apply a Reconciliation lens to this work, seeking guidance from those with Indigenous worldviews and exploring how we can align our work with the Anishinaabe Seven Sacred Teachings of love, bravery, honesty, respect, truth, humility and wisdom.

During the Nigigoonsiminikaaning First Nation Learn More Tour in May 2024, Chief Terry Allan, some Council members and a number of community members visited the NWMO Discovery and Demonstration Centre and nuclear facilities.

In 2024, we continued to engage with First Nations, Métis communities, municipalities, municipal organizations, first responders, students and other interested parties. Our focus this year was on sharing information related to the strong international and domestic safety record of the nuclear transport industry and how the transport of radioactive materials is much more common than most people realize.

We engaged more people than the previous year, at more than 80 events, including more than 25 with Indigenous communities. Through in-person and virtual events, including tours at our Discovery and Demonstration Centre in Oakville, Ont., we also shared information with numerous industry partners, continuing to build important relationships that will inform our approach to transportation planning.

Along with these engagement events, we published new educational articles in transportation-specific publications, to generate awareness and education among transportation experts. We also published on our website two technical reports related to the safety of used fuel transportation containers during collisions (both completed in 2023).

In 2024, we also conducted more in-depth engagement with hazmat professionals, including emergency response professionals, to help us understand what information is important to them and how the project may affect the work that they do.

These first responders are trusted community members, especially in small communities, where almost everyone knows a first responder, and residents often reach out to them with questions and concerns regarding safety in general. By reaching out to first responders, making them aware of our project and that we take safety seriously, we are building relationships that will allow them to provide informed responses to questions they may be asked about our work.

Our commitment to engagement is supported by collaboration with the Council of Elders and Youth and a Community-Based Transportation Working Group, who provide guidance on incorporating feedback from our engagement activities into new transportation engagement and technical programs.

Listening to and learning from the public is critical for our transportation planning, and we will continue to reflect the public's priorities in our work. We are grateful to the thousands of Canadians and Indigenous Peoples with whom we have engaged to date for their insights. It is because of them that we are confident we will have a transportation plan that is safe not only from a technical perspective, but also from a social perspective.

— Caitlin Burley
Director of Transportation at the NWMO

Organizational readiness

A fall family fun open house event in Ignace, Ont., was just one example of community events where the NWMO shared information, answered questions from residents and did our part to be a good neighbour.

Being ready to adapt is an important part of who we are at the NWMO. In 2024, we focused on continuing to prepare for the organizational change that will come as we begin to transition operations to the selected siting area for the used nuclear fuel repository, enter the regulatory decision-making process and prepare for construction.

Efforts to strengthen our team and operations were also made in support of implementing the plan for intermediate- and high-level radioactive waste, including non-fuel high-level waste and potentially used fuel from new nuclear projects. In 2024, we focused on building capacity and the team required to deliver on our near-term commitments, including drafting the site selection process for that deep geological repository, and the accompanying plans to engage with Canadians and Indigenous Peoples before we finalize the process.

We continued to build our internal capabilities through ongoing learning and development, strengthening our change management processes and enhancing our infrastructure, including investing in technology to create greater efficiency and cybersecurity.

TRANSITION TO SITE

Preparing to transition many of our people and operations to the selected site for the used nuclear fuel repository and nearby host communities has always been an important internal priority. This mobilization is a major task and will happen gradually to allow our workforce and host communities to prepare. We have been planning for several years to ensure qualified, competent staff are trained and available to work in the selected area.

We spent the year developing a road map to facilitate a near-seamless shift in staff and operations, including to the Centre of Expertise and the repository site.

The Centre of Expertise, which is expected to be operational in 2028, will be a multimillion-dollar investment. It will be an important landmark for local residents and visitors, serving as a hub for research and development, community engagement and knowledge sharing. This year, we advanced the preliminary conceptual design and cost estimating work for the Centre of Expertise, building on the visioning work completed with both siting areas and considering the NWMO's requirements in more detail.

An Indigenous Knowledge and Reconciliation framework will also inform planning for the Centre of Expertise. This framework is part of the NWMO's Reconciliation Action Plan and reflects our commitment to advancing Reconciliation.

As the NWMO transitions to the selected site for the used nuclear fuel repository, we will strive to maximize job opportunities in the local siting area and surrounding region, including First Nations and Métis communities, and to invest in training and education.

COLLABORATIVE CONTRACTING

While construction for the deep geological repository for used nuclear fuel will not begin for about another decade, we are putting in place the people and processes for detailed design, planning and construction.

After issuing in 2023 our Request for Supplier Qualification, in 2024 we conducted a procurement process to prepare to select the partners that will work with us to design and build the repository. We received and evaluated more than 8,000 pages of responses from potential suppliers to our request for proposals.

In anticipation of moving closer to repository construction, we spent 2024 strengthening our contract management process and training, including rolling out leadership training to build broad understanding of how our Collaborative Contracting Model will work and its key success factors.

As we move towards construction, we are investing in our internal change management processes to ensure our people are ready for what is to come.

As we look ahead to the regulatory decision-making process and move towards repository construction, close collaboration inside our walls, with our partners and with communities will continue. We know from experience that working together ensures our readiness to take on new phases of Canada's plan for used nuclear fuel and adapt to new responsibilities.

— Derek Wilson
Chief Operating Officer at the NWMO

Preparing for regulatory decision-making

Dr. Jeff Binns and Rojin Amani, members of the NWMO's regulatory team, discuss the project at an engagement event.

The regulatory decision-making process marks an important new chapter in Canada's plan for used nuclear fuel, and another opportunity for the public to share their voice on the project.

The purpose of the process is for the safety of the repository to be independently confirmed by regulators, including the Canadian Nuclear Safety Commission (CNSC) and Impact Assessment Agency of Canada. The process includes licensing and an integrated impact assessment.

In addition to this, the NWMO will be subject to Wabigoon Lake Ojibway Nation's (WLON) RAAP (Regulatory Assessment and Approval Process), its sovereign regulatory process. The process will be developed and implemented by WLON. WLON will design the process to ensure that potential impacts of the project are assessed against its Anishinaabe Values. Conditions to mitigate any impacts will be designed by WLON and complied with by the NWMO. This approach aligns with the NWMO's Reconciliation commitments, and the NWMO looks forward to working with WLON as it implements its sovereign process.

While licensing and impact assessment will begin in 2025, we are building on the knowledge that we have gained through site selection, ensuring we are well positioned to start the regulatory decision-making process. This includes strong collaboration and thorough review by the selected host communities to leave space for community voice.

In 2024, we made significant progress on developing our initial project description. This document — a requirement of the federal impact assessment process — defines the description of the project, our site characterization work to date, plans for future participation with potentially impacted communities, and the risk-informed assessment work the NWMO will be committing to undertake.

This regulatory decision-making chapter also involves ongoing dialogue with regulators. We took important steps this year, including developing a licensing plan to share with the CNSC and signing a protocol with the regulators to define our integrated licensing and impact assessment process.

Finally, the NWMO understands the importance of water and the need to protect it for generations to come. As part of this shared commitment with Canadians and Indigenous Peoples, we have established a technical water working committee as part of the regulatory decision-making process. This working group is focused on ensuring we are successful in delivering on our commitment to protect water through detailed assessments and thoughtfully developed protective measures.

The next decade of our work will be focused on navigating the robust regulatory decision-making process to deliver on our promise to sustainably protect people and the environment. We are grateful for the close collaboration we have with Canadians, Indigenous Peoples, industry and regulators, which will help ensure our success.

— Dr. Mackenzie Denyes
Director of Impact Assessment and Licensing at the NWMO

The WLON Regulatory Assessment and Approval Process (WLON-RAAP) asserts our Sovereign rights while protecting our Anishinaabe Values and Laws. This project will be under intense scrutiny by our Nation's regulatory process in addition to the regulatory oversight by the Impact Assessment Agency of Canada and the CNSC. Wabigoon will ensure that safety, environmental protection and Anishnaabe values are upheld throughout this process.

— Chief Clayton Wetelainen
Wabigoon Lake Ojibway Nation

Governance and accountability

Trust and transparency are core to how we operate. The NWMO's Board of Directors, Advisory Council, Council of Elders and Youth and other important groups help guide our work to protect people and the environment.

Canadians and Indigenous Peoples can trust that the NWMO has a strong governance structure in place.

Transparency is built into our governance structure, underscoring our commitment to communicate openly and responsibly, and to provide information about our approach, processes and decision-making. The NWMO is guided by a *Transparency Policy* that is aligned with all relevant freedom of information, access to information and privacy legislation.

The NWMO is federally mandated under the *Nuclear Fuel Waste Act* (NFWA). Our members are provincially owned corporations that produce used nuclear fuel. As a not-for-profit corporation, the NWMO falls under the *Canada Not-for-profit Corporations Act*.

We are governed by a nine-member Board of Directors that is elected by the member organizations. The Board represents a range of perspectives from within and outside the nuclear industry and takes a leadership role in developing the corporation's strategic direction.

The Advisory Council, an independent advisory body established under the NFWA, provides ongoing guidance to the NWMO.

Sharing information and encouraging an exchange of perspectives are fundamental to our mandate to implement Canada's plan. That is why in 2024 we also continued to seek independent review of our work through a number of external committees, including a Council of Elders and Youth, Municipal Forum, Geoscientific Review Group, Environmental Review Group and Site Selection Review Group.

ANNUAL AND TRIENNIAL REPORTING TO THE MINISTER

In accordance with the NFWA, the NWMO produces annual reports that are tabled in Parliament and published on our website. The Minister of Energy and Natural Resources issues a statement on it each year.

Every third year, the NWMO produces a triennial report as required by the NFWA. The last triennial report was for the 2020-22 period and was published in March 2023.

REPORTING TO MEMBER ORGANIZATIONS

The founding members of the NWMO are Ontario Power Generation, New Brunswick Power Corporation and Hydro-Québec. The Membership Agreement and bylaws set out member roles and responsibilities in support of the objectives of the NFWA and the NWMO's implementation mandate. The NWMO regularly briefs our member organizations and holds an annual general meeting.

INTEGRATED MANAGEMENT SYSTEM

The NWMO's integrated management system ensures we are well equipped to execute our mandates, while protecting people and the environment for generations to come. That includes meeting the requirements of the Canadian Nuclear Safety Commission. This is particularly important as we begin the regulatory decision-making process.

In 2024, we continued to enhance our management system to make sure it supports staff in executing their work in a manner that is appropriate for our evolving program and operations.

BOARD OF DIRECTORS

(As of Dec. 31, 2024)
Board Chair: Glenn Jager
President, CEO and Director: Laurie Swami
Directors: Lesley Gallinger, Sean Granville, Ronald L. Jamieson, Jason Nouwens, Josée Pilon, Subo Sinnathamby and Beth Summers.

The Board of Directors convened five formal meetings in 2024. In addition to its regular meetings, the Board holds strategy and education sessions each year with the NWMO's executive team to consider long-term challenges and opportunities.

Board of Directors (from left to right, starting with top row): Glenn Jager, Laurie Swami, Lesley Gallinger, Sean Granville, Ronald L. Jamieson, Jason Nouwens, Josée Pilon, Subo Sinnathamby and Beth Summers.

COMMITTEES OF THE BOARD

Audit, Finance and Risk committee

The Audit, Finance and Risk (AFR) committee is responsible for monitoring the integrity of the NWMO's internal control and management information systems, making recommendations to the Board for the approval of the annual financial plans, ensuring the integrity of the NWMO's reported financial performance, and providing oversight of the NWMO's pension fund. The AFR committee met four times in 2024, and had one joint AFR-Human Resources, Compensation and Governance committee meeting.

As of Dec. 31, 2024, the committee had five directors: Beth Summers (Chair), Lesley Gallinger, Glenn Jager, Ronald L. Jamieson and Josée Pilon.

Human Resources, Compensation and Governance committee

The Human Resources, Compensation and Governance (HRCG) committee is responsible for overseeing the NWMO's human resources functions, including compensation practices, human resources policies, organization design, labour relations, the pension plan and governance. The HRCG committee met four times in 2024 and had one joint AFR-HRCG committee meeting.

As of Dec. 31, 2024, the committee had five directors: Lesley Gallinger (Chair), Sean Granville, Glenn Jager, Josée Pilon and Beth Summers.

Project Oversight committee

The Project Oversight committee provides oversight of the NWMO's project planning and execution, including safety, recommending new projects for Board approval, project planning and controls, contracting strategies and contractor performance, technical matters and project risk as it relates to the implementation of Canada's plan. The Project Oversight committee met four times in 2024.

As of Dec. 31, 2024, the committee had four directors: Sean Granville (Chair), Lesley Gallinger, Jason Nouwens and Subo Sinnathamby.

Siting committee

Through the Siting committee, the Board maintained oversight of the site selection process for Canada's used nuclear fuel repository, and advised on, provided oversight and monitored identified risks associated with its execution. The committee met four times in 2024. The Siting committee achieved its mandate, and as a result, the committee was dissolved in December 2024.

Throughout 2024, the committee had five directors: Ronald L. Jamieson (Chair), Sean Granville, Glenn Jager, Jason Nouwens and Subo Sinnathamby.

EXECUTIVE COMMITTEE (AS OF DECEMBER 2024)

President and CEO:
Laurie Swami

Vice-President and Chief Engineer:
Chris Boyle

Vice-President of Communications:
Lisa Frizzell

Vice-President of Site Selection:
Lise Morton (*retired Dec. 11, 2024*)

Chief Financial and Risk Officer:
Jeff Quick

Vice-President of Human Resources, and Chief Ethics Officer:
Jennifer Spragge

Vice-President and General Counsel, and Board Secretary:
Doug Taylor

Vice-President of Indigenous Relations and Strategic Programs:
Bob Watts (*retired Dec. 31, 2024*)

Vice-President of Regulatory Approvals:
Allan Webster

Chief Operating Officer:
Derek Wilson

Executive Committee (from left to right, starting with top row): Laurie Swami, Chris Boyle, Lisa Frizzell, Lise Morton, Jeff Quick, Jennifer Spragge, Doug Taylor, Bob Watts, Allan Webster and Derek Wilson.

ADVISORY COUNCIL

The Advisory Council is an independent, arm's-length body that reviews and comments on the NWMO's work, as required by the NFWA. Its reports appear in the NWMO's triennial reports, published every three years.

The Advisory Council's role is to:

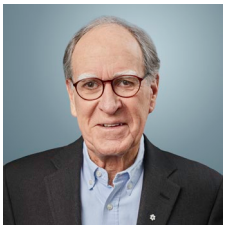
- Ensure the views of the public and communities of interest are considered and reflected in a thoughtful, balanced way in the proposed approaches and reports of the NWMO; and
- Assist the NWMO in ensuring our processes are of good quality and are open, transparent, thorough and sound.

As the NWMO's work progresses beyond site selection of Canada's deep geological repository for used nuclear fuel, the NFWA requires that representatives from affected Indigenous organizations and potential host regions be included in the Advisory Council. As the NWMO starts the regulatory decision-making process, the makeup of the Advisory Council will evolve in 2025.

COUNCIL MEMBERS

In 2024, there were nine Advisory Council members, representing a broad range of expertise, including engineering, community engagement, public affairs, environment, sustainable development, Indigenous relations, Indigenous Knowledge and community-based research.

As of Dec. 31, 2024, the members were: David R. Cameron (Chair), Donald Obonsawin (Vice-Chair), Joseph Cavalancia, Monica Gattinger, Dean Jacobs, Diane M. Kelly, Dougal McCreath, Stella Swanson and Linda Thompson.






Advisory Council (from left to right, starting with top row): David R. Cameron, Donald Obonsawin, Joseph Cavalancia, Monica Gattinger, Dean Jacobs, Diane M. Kelly, Dougal McCreath, Stella Swanson and Linda Thompson.



COUNCIL OF ELDERS AND YOUTH

The Council of Elders and Youth is an independent advisory body with members from Indigenous communities across Canada. It provides counsel to the NWMO on the application of Indigenous Knowledge in the implementation of Canada's plan, and on enhancing the development and maintenance of good relations with Indigenous communities.

Knowledge Holders have much traditional knowledge to share with others. One of their roles is to aid decision-making based on this ancient knowledge. The NWMO is honoured to have received their counsel over the past several years, including the period covered by this report.

MUNICIPAL FORUM

The Municipal Forum is an assembly of municipal leaders with experience and expertise in municipal issues and challenges. Established by the NWMO in 2009, in collaboration with the Federation of Canadian Municipalities, the Municipal Forum provided advice on municipal perspectives and processes to help guide the NWMO's engagement and outreach. It helped the NWMO incorporate best practices when communicating with local governments and associations, as well as helping us understand the needs and practices of municipalities that are considering hosting the project. This group completed its mandate in 2024.

ENVIRONMENTAL REVIEW GROUP

The Environmental Review Group (ERG) was established by the NWMO in 2018 to provide independent expert advice and guidance on environmental programs and impact assessment theory and practice, including engagement and aligning with Indigenous Knowledge. The ERG is made up of professionals from a variety of academic and cultural backgrounds. It meets four times a year to discuss strategic issues related to assessing potential impacts of the project on the natural environment.

GEOSCIENTIFIC REVIEW GROUP

The Geoscientific Review Group is a group of internationally recognized geoscientific experts from Canada, Australia, Sweden and Switzerland. The group reviews and provides advice and guidance on the NWMO's geoscience site assessment approach, methods and findings. It was established by the NWMO to ensure that site evaluations are conducted in a consistent and traceable manner that consistently meets or exceeds best international practices. The five group members combine extensive multidisciplinary experience in areas relevant to the siting of deep geological repositories in both crystalline and sedimentary rock formations.

SITE SELECTION REVIEW GROUP

The Site Selection Review Group was made up of two internationally respected members from varied professional backgrounds. These review group members have knowledge and experience in nuclear waste-related siting processes and international best practices.

The group provided independent advice and guidance on the NWMO's final site selection approach to ensure the process was reasonable, comprehensive, credible and rigorous. Its mandate was completed in 2024.

COMMUNITY-BASED TRANSPORTATION WORKING GROUP

The NWMO established the Community-Based Transportation Working Group to seek feedback from a broad range of individuals across Ontario, Québec and New Brunswick about how to implement the organization's transportation planning framework, including collaborative transportation planning and engagement and dialogue for the transportation program. The members of the working group are individuals acting as independent advisors.

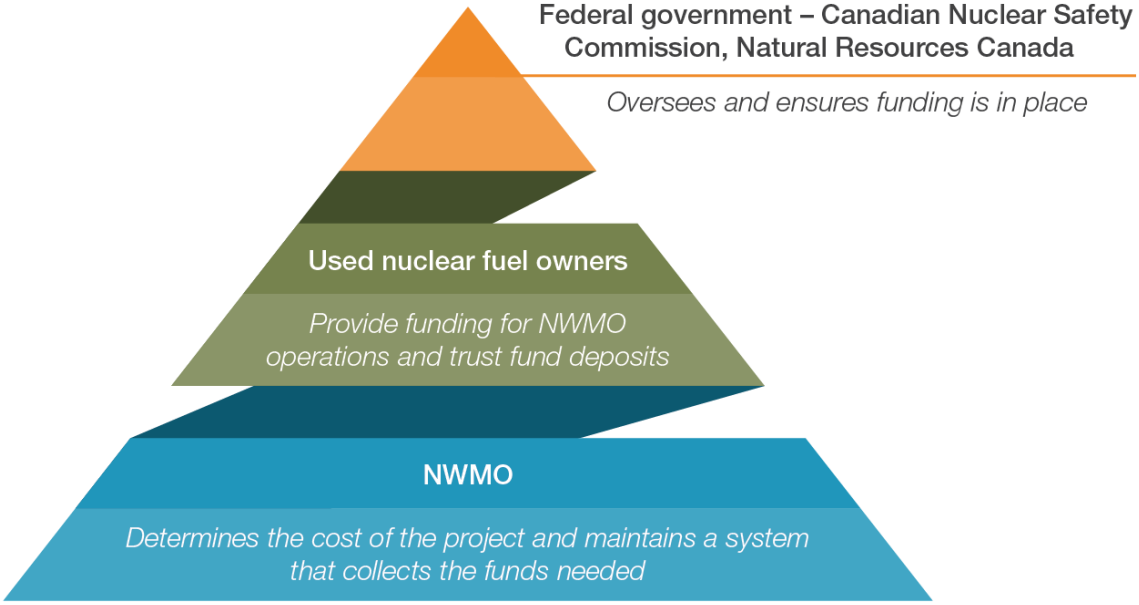
PEER REVIEWS

In order to ensure our work is based on the best science, the NWMO works with leading scientists and experts from universities, in the industry and as part of international research groups. We continue to seek independent external experts to review and comment on our technical work through peer reviews when publishing research results in scientific journals and at conferences. These external reviews help ensure high technical standards are met, as well as consistency with international best practice.

Ensuring funding is in place

USED NUCLEAR FUEL DEEP GEOLOGICAL REPOSITORY PROJECT

A key aspect of our commitment to accountability is ensuring that the funding necessary to pay for the long-term management of Canada's used nuclear fuel will be available when needed. The roles and responsibilities of financial surety are summarized in the diagram below.



Total cost estimate

One of the NWMO's important responsibilities is determining the lifecycle cost of the project so we can ensure the funds will be available when needed. Updated every five years based on the latest information, the Adaptive Phased Management lifecycle cost estimate explains what we anticipate the project will cost from beginning to end and why. It helps ensure accountability and transparency as we implement Canada's plan for the safe, long-term management of used nuclear fuel.

The NWMO completed a full update of the cost estimate for the Adaptive Phased Management project in 2021, with the next update to be completed in 2026.

The estimate includes costs to develop, construct, operate, monitor and decommission a long-term facility, including the deep geological repository and Centre of Expertise, and to transport the used nuclear fuel to the repository. As this is a 175-year estimate, many assumptions have been taken for planning purposes to ensure sufficient funds are available, and where possible, have been and will continue to be revised and made more specific as the plan advances.

Many factors impact the eventual cost of the project. They include the type and volume of used nuclear fuel to be managed, the facility's location, the surrounding infrastructure, rock type and characteristics, the design of the repository, and the length of time allocated to monitoring the site following

placement of used fuel. The 2026 cost estimate factors are currently being defined for completion of a 2026 cost estimate.

The total amount of used nuclear fuel in Canada, which is currently about 3.3 million fuel bundles, could be impacted by factors such as the longevity and productivity of nuclear reactors, and decisions on refurbishments or new nuclear reactors. Every year, we update used fuel bundle volume estimates and trust fund balances that impact the project's cost estimates and funding requirements, based on used fuel bundle estimates provided by the nuclear energy producers. We then determine the trust fund contribution requirements for the following year to ensure sufficient resources for future use.

Our 2021 cost estimate was based on an expected volume of 5.5 million used fuel bundles, the anticipated volume at the end of the planned operation of Canada's existing nuclear reactors.

Based on this expected volume, the cost for construction of the facility is approximately $4.5 billion (in 2020 dollars). The total lifecycle cost of the project — from the beginning of the site selection process in 2010 to regulatory approval, construction, operation, long-term monitoring and closure — is approximately $26 billion (in 2020 dollars). This amount covers many decades of lifecycle activity.

It is important to determine the amount that is required, in today's dollars, in order to have the necessary funds in place when needed in the future. The funds in place today will grow to cover the full cost of the project over the long term, based on continued additional payments from the funders of the project and through expected investment income that will also grow over time. The funding required to manage approximately 5.5 million fuel bundles from 2025 onwards is $11 billion (using Jan. 1, 2025, present value).

Pre- and post-construction costs

The $11 billion funding requirement (using Jan. 1, 2025, present value) includes $3 billion to select a site for the repository, complete a detailed design, develop the Centre of Expertise, acquire the site, evaluate environmental impacts, and obtain the site preparation licence and the construction licence under the *Nuclear Safety and Control Act* (NSCA). These pre-construction nuclear facility costs are paid for by the waste owners based on the annual NWMO budget, as approved by the Board of Directors.

The remaining $8 billion funding requirement is to construct the facility, transport existing and future fuel bundles to the repository, and operate, close and monitor the repository. The *Nuclear Fuel Waste Act* (NFWA) requires that costs after the Licence to Construct is granted must be funded through contributions to the NFWA trust funds established by Ontario Power Generation (OPG), Hydro-Québec (HQ), New Brunswick Power (NBP) and Atomic Energy of Canada Limited (AECL). As of December 2024, the total value of the NFWA trust funds was approximately $5.7 billion.

Waste owners continue to contribute annually as the used fuel inventory increases, to ensure that the entire $11 billion funding requirement for existing and future inventory of used fuel bundles is fulfilled. The costs of interim storage at the reactor sites and retrieval of the used fuel from storage are not funded through the NWMO because they are the responsibility of the waste owners.

Financial reporting requirements

The NFWA specifically addresses the future financial obligations expected for managing used nuclear fuel over the long term, as described in the box below. All the requirements defined in subsection 16(2) of the NFWA are addressed in this section *Ensuring funding is in place*.

Requirements of the NFWA (2002)

The NWMO is required to provide a range of financial information in each of our annual reports following the government's decision, as defined in subsection 16(2) of the NFWA.

16(2) Each annual report after the date of the decision of the Governor in Council under section 15 must include:

(a) the form and amount of any financial guarantees that have been provided during that fiscal year by the nuclear energy corporations and Atomic Energy of Canada Limited under the *Nuclear Safety and Control Act* and relate to implementing the approach that the Governor in Council selects under section 15 or approves under subsection 20(5);

(b) the updated estimated total cost of the management of nuclear fuel waste;

(c) the budget forecast for the next fiscal year;

(d) the proposed formula for the next fiscal year to calculate the amount required to finance the management of nuclear fuel waste and an explanation of the assumptions behind each term of the formula; and

(e) the amount of the deposit required to be paid during the next fiscal year by each of the nuclear energy corporations and Atomic Energy of Canada Limited, and the rationale by which those respective amounts were arrived at.

Based on the NFWA's requirements, trust funds were established in 2002, and each waste owner has made annual contributions since. The total value of these funds, including investment income, was approximately $5.7 billion as of the end of 2024. Additionally, the companies have set aside other segregated funds and financial guarantees for nuclear waste management and decommissioning. The NFWA built in explicit provisions to ensure the trust funds are maintained securely and used only for their intended purpose. The NWMO may have access to these funds only for the purpose of implementing the management approach selected by the government once a construction or operating licence has been issued under the NSCA.

Owner	Trust fund balance ($ million)
	December 2024
OPG	5,211
NBP	225
HQ	193
AECL	80*
Total	**5,709**

All figures in the table above are approximate.

* NOTE: AECL is not a member of the NWMO and is required to contribute to a trust fund for used nuclear fuel under the NFWA. See next section for more detail.

As required by the NFWA, the NWMO makes public the audited financial statements of the trust funds when they are provided by the waste owners annually.

Canadian Nuclear Safety Commission Financial Guarantees

As mandated under the NSCA, the Canadian Nuclear Safety Commission (CNSC) requires waste producers to provide financial guarantees to cover the cost (in present value terms) associated with decommissioning, interim storage and the long-term management of radioactive waste (including used nuclear fuel) produced to date. The guarantees required for 2025 total $24 billion. They are reviewed independently by the CNSC as part of the waste owner licence requirements and are satisfied by segregated funds (totalling approximately $29 billion as of year-end 2024) and in the form of Provincial Guarantees, as needed.

The status of these guarantees is presented as follows:

Ontario Power Generation

In accordance with the NSCA, the CNSC requires Ontario Power Generation (OPG) to have sufficient funds available to discharge its existing nuclear waste management and nuclear-decommissioning obligations. The CNSC process requires the CNSC Financial Guarantee requirement to be updated once every five years, and OPG to provide an annual report to the CNSC on the assumptions, asset values, and resulting financial guarantee requirements. The CNSC Financial Guarantee requirement calculation takes into account nuclear waste expected to be generated to the end of each year.

The CNSC Financial Guarantee requirement continued to be satisfied, in part, by the forecast fair market value of the federally mandated Ontario NFWA Trust, and the remainder by the two segregated funds governed by the *Ontario Nuclear Funds Agreement* (ONFA) between OPG and the Province of Ontario (collectively, the “Nuclear Funds”) without the requirement of a Provincial Guarantee for 2025. As per the terms of the ONFA, the province is committed to providing a Provincial Guarantee to the CNSC as required, on behalf of OPG, should there be a shortfall between the CNSC Financial Guarantee requirement and the fair market value of the Nuclear Funds during 2025.

The CNSC Financial Guarantee requirement for 2025 is $22.1 billion (Jan. 1, 2025, present value). This will be satisfied by the 2024 year-end fair market value of the Nuclear Funds of $27.9 billion without the requirement of a Provincial Guarantee. The Nuclear Funds of $27.9 billion include $5.2 billion in the Ontario NFWA Trust.

NB Power

NB Power (NBP) has provided the CNSC with a Decommissioning Financial Guarantee that covers the costs associated with the long-term management of used fuel projected to be produced from the Point Lepreau Generating Station and the cost of station decommissioning, including the long-term management of low- and intermediate-level radioactive waste.

- The Financial Guarantee requirement is based on the present value of future costs to manage used fuel produced to the end of 2024 and the present value of future estimated costs for station decommissioning.
- The Financial Guarantee requirement is satisfied by three separate funds: a Used Fuel Fund, a Station Decommissioning Fund, and the NFWA Trust Fund.
- The total market value of the funds at Dec. 31, 2024, was approximately $1,015 million and was comprised of the following:
  - Used Fuel Fund — $261 million;
  - Station Decommissioning Fund — $529 million; and
  - NFWA Trust Fund — $225 million.

Hydro-Québec

The fair value of the NFWA Trust Fund as of Dec. 31, 2024, was estimated at $193 million. Hydro-Québec (HQ) has also provided the CNSC with a Decommissioning Financial Guarantee of $685 million that includes a guarantee associated with used fuel arising from the operation of Gentilly-2 and the cost of station decommissioning, including the long-term management of low- and intermediate-level radioactive waste. The guarantee is in the form of an expressed commitment of the Province of Quebec to HQ that provides a guarantee of payment.

The NFWA Trust Fund and the Financial Guarantee provided by the Province of Quebec covered the future financial obligations as follows:

- $703 million for decommissioning and long-term management of low- and intermediate-level radioactive waste; and
- $271 million for used fuel.

Atomic Energy of Canada Limited

Atomic Energy of Canada Limited (AECL) is not a member of the NWMO and is required to contribute to a trust fund for used nuclear fuel under the NFWA. Its Financial Guarantee is in the form of an expressed commitment by the Government of Canada to the CNSC, combined with supporting estimates of the financial liability and the basis for same. The AECL NFWA Trust Fund contained approximately $80 million as of Dec. 31, 2024.

Conclusion

The current and future contributions to the Nuclear Funds provided by OPG, NBP, HQ and AECL, and any respective governments guarantees are sufficient to cover the lifecycle costs estimated for the nuclear waste management and nuclear decommissioning obligations as at Dec. 31, 2024.

Budget forecast for 2025

For 2025, the NWMO Board of Directors approved a budget envelope of $498 million to continue implementing Adaptive Phased Management. Annual costs beyond 2025 are subject to further review and approval. Sharing of these costs will be in accordance with the percentages defined in the Membership Agreement, as amended from time to time. The 2025 cost-sharing percentages among the waste owners are OPG: 93.68%, NBP: 3.66%, HQ: 2.07%, and AECL: 0.59%.

Funding formula

The NWMO funding formula has been in place since its approval by the Minister of Natural Resources (now the Minister of Energy and Natural Resources) in April 2009. The formula allocates liabilities and trust fund contribution requirements to each waste owner. Costs common to all waste owners are shared based on a cost-sharing percentage agreed to by the members. The nuclear fuel waste owner is responsible for expenses that are owner-specific.

Trust fund deposits for 2025

The 2025 NFWA trust fund deposit requirements have been developed based on the NWMO's project cost estimate completed in 2021. Under the approved funding formula, the funding for post-construction licence costs is divided into two parts:

1. Funding for historical used fuel bundles (committed liability); and
2. Funding for used fuel to be produced each year (future liability).

Committed liability represents all costs that will be incurred regardless of whether any further used fuel bundles are generated in the future. This liability includes all fixed costs for the facility and variable costs attributed to the historical used fuel bundles. Considering the deep geological repository would be available between 2040 and 2045, contributions for the committed liability are to be amortized to the midpoint year 2043 in equal present value payments. This funding method has the advantage of distributing the funding obligations evenly to each year, while considering the time value of money. Future liability represents the incremental cost of transferring used fuel bundles to the repository, facility expansion, and additional operating and monitoring costs associated with used fuel bundles to be produced each year. Each future used fuel bundle would incur the same cost in present value terms, taking into account the time value of money. The 2025 trust fund deposit requirements are shown in the table below.

Total trust fund deposits: Year 2025		
Owner	**Trust fund balance ($ million)**	**Deposit to trust funds (committed and future bundles) ($ million)***
	December 2024	**2025**
OPG	5,211	88
NBP	225	7
HQ	193	0
AECL	80	0.4
Total	**5,709**	**95**

* Annual trust fund deposits are required to be made within 30 days of the submission of the annual report. A deposit date of April 23, 2025, is assumed for illustrative purposes.

INTERMEDIATE-LEVEL AND NON-FUEL HIGH-LEVEL WASTE DEEP GEOLOGICAL REPOSITORY PROJECT

The NWMO now has the added responsibility for implementing the long-term management of intermediate-level and non-fuel high-level waste in a second deep geological repository. The NWMO will also maintain flexibility to include used fuel from new nuclear projects, including small modular reactors in this second project.

The NWMO has initiated developing a draft siting process, inclusive of engagement plans, funding approach and implementation timelines, and considering experience and learnings gained from implementing other siting processes for nuclear facilities.

In 2025, modest funding for the project is provided by the current used nuclear fuel owners. The NWMO will engage with owners of intermediate-level and non-fuel high-level waste, as well as waste from new nuclear projects, to establish funding arrangements. This funding will support the site selection process and technical development of the second repository. We will also begin considering the long-term lifecycle funding approach.

NEW NUCLEAR PROJECTS

The NWMO has begun initial reviews of the technical and funding requirements related to the potential for used fuel from new nuclear projects. Preliminary analysis of some of the proposed reactor technologies and fuel types has been completed. Some of these technologies use existing fuel types that are also used by other countries planning for a deep geological repository.

This preliminary assessment work is completed on a cost-recovery basis, separate from Adaptive Phased Management funding. That is, the proponents that are developing these new reactors fund this work directly, and many of them are not waste owners at this time.

As potential new nuclear energy projects are still in the early stages of development and regulatory decision-making, it is too early to include their potential used nuclear fuel in our forecasting or the lifecycle cost estimate for either deep geological repository project. As these projects advance to later stages of development, including construction and operations, they will be addressed in the NWMO’s planning and projections.

Auditor's report and consolidated financial statements

MANAGEMENT'S RESPONSIBILITY FOR FINANCIAL REPORTING

The accompanying consolidated financial statements of the Nuclear Waste Management Organization (NWMO) and all the information in this annual report are the responsibility of management and have been approved by the Board of Directors.

The consolidated financial statements have been prepared by management in accordance with Canadian accounting standards for not-for-profit organizations set out in Part III of the Chartered Professional Accountants Canada Handbook. When alternative accounting methods exist, management has chosen those it deems most appropriate in the circumstances. Financial statements are not precise since they include certain amounts based on estimates and judgments, particularly when transactions affecting the current accounting period cannot be finalized until future periods.

Management has determined such amounts on a reasonable basis in order to ensure that the consolidated financial statements are presented fairly, in all material respects, and in light of information available up to February 19, 2025.

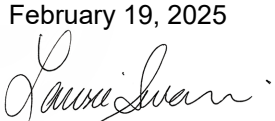
Management has a system of internal controls designed to provide reasonable assurance that the consolidated financial statements are accurate and complete in all material respects. The internal control system includes an established business conduct policy that applies to all employees. Management believes that the system provides reasonable assurance that transactions are properly authorized and recorded, financial information is relevant, reliable and accurate, and the Organization's assets are appropriately accounted for and adequately safeguarded.

The Board of Directors is responsible for ensuring management fulfils our responsibilities for financial reporting, and is ultimately responsible for reviewing and approving the consolidated financial statements. The Board carries out this responsibility through its Audit, Finance and Risk Committee (the Committee).

The Committee is appointed by the Board and meets periodically with management, as well as the external auditor, to discuss internal controls over the financial reporting process, auditing matters and financial reporting issues; to satisfy itself that each party is properly discharging its responsibilities; and to review the consolidated financial statements and the external auditor's report. The Committee reports its findings to the Board for consideration when approving the consolidated financial statements for issuance to the members. The Committee also considers, for review by the Board and approval by the members, the engagement or reappointment of the external auditor.

The consolidated financial statements have been audited by Deloitte LLP, the independent external auditor, in accordance with Canadian generally accepted auditing standards on behalf of the members.

February 19, 2025



Laurie Swami
President and CEO

Jeff Quick
Chief Financial and Risk Officer

Consolidated financial statements of

Nuclear Waste Management Organization

December 31, 2024

Deloitte LLP
Bay Adelaide East
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Toronto ON M5H 0A9
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Independent Auditor's Report

To the Members of
Nuclear Waste Management Organization

Opinion

We have audited the consolidated financial statements of Nuclear Waste Management Organization (the "Organization"), which comprise the consolidated statement of financial position as at December 31, 2024, and the consolidated statements of operations, changes in net assets, and cash flows for the year then ended, and notes to the consolidated financial statements, including a summary of significant accounting policies (collectively referred to as the "financial statements").

In our opinion, the accompanying financial statements present fairly, in all material respects, the financial position of the Organization as at December 31, 2024, and the results of its operations and its cash flows for the year then ended in accordance with Canadian accounting standards for not-for-profit organizations.

Basis for Opinion

We conducted our audit in accordance with Canadian generally accepted auditing standards ("Canadian GAAS"). Our responsibilities under those standards are further described in the *Auditor's Responsibilities for the Audit of the Financial Statements* section of our report. We are independent of the Organization in accordance with the ethical requirements that are relevant to our audit of the financial statements in Canada, and we have fulfilled our other ethical responsibilities in accordance with these requirements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Responsibilities of Management and Those Charged with Governance for the Financial Statements

Management is responsible for the preparation and fair presentation of the financial statements in accordance with Canadian accounting standards for not-for-profit organizations, and for such internal control as management determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, management is responsible for assessing the Organization's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the Organization or to cease operations, or has no realistic alternative but to do so.

Those charged with governance are responsible for overseeing the Organization's financial reporting process.

Auditor's Responsibilities for the Audit of the Financial Statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with Canadian GAAS will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

As part of an audit in accordance with Canadian GAAS, we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Organization's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.
- Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Organization's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Organization to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the financial statements, including the disclosures, and whether the financial statements represent the underlying transactions and events in a manner that achieves fair presentation.
- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Organization to express an opinion on the financial statements. We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our audit opinion.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

Deloitte LLP

Chartered Professional Accountants
Licensed Public Accountants
February 19, 2025

Nuclear Waste Management Organization

Consolidated statement of financial position

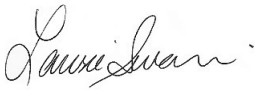
As at December 31, 2024

(in thousands of Canadian dollars)

	Notes	2024 $	2023 $
Assets			
Current assets			
Cash		**6,108**	4,817
Contributions receivable from members and AECL	5a	**202,114**	14,721
Other receivable from members and AECL		**29,053**	1,996
Accounts receivable		**721**	5
Prepaid expenses and deposits		**2,598**	3,015
		240,594	24,554
Capital assets	3	**36,238**	36,841
Contributions receivable from members and AECL	5c	**2,635**	—
Accrued pension asset	7	**44,195**	38,244
		323,662	99,639
Liabilities			
Current liabilities			
Accounts payable and accrued liabilities	7 and 12	**241,035**	24,146
Deferred lease inducements	8	**209**	293
Deferred/payable contributions from members and AECL	5b	**—**	765
		241,244	25,204
Deferred capital contributions	6	**36,238**	36,841
Deferred contributions from members and AECL	5c	**—**	4,723
Other post-employment and pension benefits liability	7	**31,495**	30,037
		308,977	96,805
Net assets		**14,685**	2,834
		323,662	99,639
Commitments and contractual obligations	10		

The accompanying notes are an integral part of the consolidated financial statements.

Approved by the Board of Directors on February 19, 2025



_____, Laurie Swami, President and CEO

_____, Beth Summers, Chair — Audit, Finance and Risk Committee

Nuclear Waste Management Organization

Consolidated statement of operations

Year ended December 31, 2024

(in thousands of Canadian dollars)

	Notes	2024 $	2023 $
Revenue			
Contributions from members	4	**151,280**	139,420
Contributions from AECL		**417**	1,359
		151,697	140,779
Change in contributions receivable from members and AECL	5a	**187,393**	(33)
Change in long-term contributions receivable/deferred contributions from members and AECL	5c	**7,358**	5,014
Change in deferred/payable contributions from members and AECL	5b	**765**	(617)
Change in deferred capital contributions	6	**603**	1,158
Total contribution revenue	11	**347,816**	146,301
Interest and other revenue	11	**605**	459
Total revenue		**348,421**	146,760
Expenses			
Adaptive Phased Management			
Engagement		**232,763**	39,534
Staffing and administration		**74,765**	60,977
Regulatory decision-making		**11,745**	9,303
Engineering		**9,823**	14,665
Communications		**6,725**	5,722
Site assessment		**6,159**	8,115
Safety		**3,208**	4,665
Detailed site characterization		**220**	—
Transportation		**171**	757
		345,579	143,738
Intermediate-level and non-fuel high-level waste			
Communications and engagement		**214**	437
Technical and project management		**706**	224
		920	661
New nuclear reactors			
Technical and project management		**269**	—
Amortization of capital assets		**1,653**	1,773
Loss on disposal of capital assets	3	**—**	588
Total expenses	11	**348,421**	146,760
Excess of revenue over expenses for the year		**—**	**—**

The accompanying notes are an integral part of the consolidated financial statements.

Nuclear Waste Management Organization

Consolidated statement of changes in net assets

Year ended December 31, 2024

(in thousands of Canadian dollars)

	Notes	2024 $	2023 $
Net assets, beginning of year		**2,834**	7,398
Excess of revenue over expenses for the year		**—**	**—**
Remeasurements during the year:			
Accrued pension asset	7	**9,463**	(85)
Other post-employment and pension benefits liability	7	**2,388**	(4,479)
Net assets, end of year		**14,685**	2,834

The accompanying notes are an integral part of the consolidated financial statements.

Nuclear Waste Management Organization

Consolidated statement of cash flows

Year ended December 31, 2024

(in thousands of Canadian dollars)

	Notes	2024 $	2023 $
Operating activities			
Cash received from contributions		**150,585**	139,343
Interest and other revenue received		**605**	459
		151,190	139,802
Cash paid for salaries and benefits, materials and services		**(149,899)**	(139,778)
		1,291	24
Investing activities			
Purchase of capital assets	3	**(1,112)**	(1,436)
Proceeds on disposal of capital assets	3	**—**	135
		(1,112)	(1,301)
Financing activity			
Cash received from contributions used for purchase of capital assets		**1,112**	1,436
Net increase in cash		**1,291**	159
Cash, beginning of year		**4,817**	4,658
Cash, end of year		**6,108**	4,817

The accompanying notes are an integral part of the consolidated financial statements.

1. Description of organization

The Nuclear Waste Management Organization ("NWMO") is a not-for-profit corporation without share capital, established under the *Canada Corporations Act*, as required by the *Nuclear Fuel Waste Act* ("NFWA"), which came into force on November 15, 2002. The NWMO transitioned to the *Canada Not-for-profit Corporations Act* and obtained a Certificate of Continuance on December 20, 2012.

The NFWA requires electricity-generating companies which produce used nuclear fuel to establish a waste management organization. In accordance with the NFWA, the NWMO established an Advisory Council, conducted a study and provided recommendations on the long-term management of used nuclear fuel to the Government of Canada. The results of the study and the recommendations were submitted in November 2005. As part of the long-term mandate, the NWMO is now responsible for implementing Adaptive Phased Management ("APM"), an approach selected by the Government of Canada to address the management of used nuclear fuel.

The NWMO formally began operations on October 1, 2002. Its founding members are Hydro-Québec, New Brunswick Power Corporation, and Ontario Power Generation Inc. ("OPG") ("members"). The NFWA requires that the NWMO offer nuclear fuel waste management services at a fee to all owners of nuclear fuel waste produced in Canada, including non-members and Atomic Energy of Canada Limited ("AECL").

Pursuant to a Membership Agreement, cost sharing of APM costs in 2024 is based on the principle of "producer pays," based on the projected total number of fuel bundles and the assumed timing of access to the long-term used fuel management facility. This cost-sharing formula has been in effect since January 1, 2018.

In November 2020, as part of the Government of Canada's review of the *Policy for Radioactive Waste Management and Decommissioning*, the NWMO was tasked with developing an integrated strategy for all Canada's radioactive waste with no long-term disposal plans. The Integrated Strategy for Radioactive Waste was provided to the Minister of Energy and Natural Resources Canada on June 30, 2023, for consideration and review. On October 5, 2023, the strategy was accepted by the Minister. Based on this acceptance, the NWMO now has the added responsibility for implementing the long-term management of intermediate-level and non-fuel high-level waste ("ILW-NFHLW") in a deep geological repository.

In accordance with the NFWA, the NWMO is responsible for the management of all nuclear fuel waste, including from new nuclear reactors ("NNR") that are in development. Since 2022, the NWMO has supported its members and third parties in technical assessment of long-term storage options for NNR fuels and related analysis.

2. Significant accounting policies

Basis of presentation

The NWMO has elected to present consolidated financial statements that included its accounts and those of its wholly owned subsidiaries (collectively, the "NWMO").

The consolidated financial statements of the NWMO are the representations of management prepared in accordance with Canadian accounting standards for not-for-profit organizations set out in Part III of the Chartered Professional Accountants Canada ("CPA Canada") Handbook using the deferral method of reporting restricted contributions. The significant accounting policies adopted by the NWMO are as follows:

Principles of consolidation

The NWMO's wholly owned subsidiaries are those entities over which the NWMO has control and has the right and ability to obtain future economic benefits, and is exposed to the related risks. Control is the continuing power to determine the strategic operating, investing and financing policies of the other entity without the co-operation of others.

On January 2, 2020, the NWMO incorporated its three wholly owned subsidiaries under the *Canada Business Corporations Act* to support site assessment activities.

Consolidated wholly owned subsidiaries include:

- NWMO Property Management 1 Inc.;
- NWMO Property Management 2 Inc.; and
- NWMO Property Management 3 Inc.

Capital assets

Capital assets are recorded at cost. Amortization is provided for on the straight-line basis over their estimated useful lives as follows:

Office building	15 years
Furniture and office equipment	7 years
Transport and work equipment	7 years
Vehicles	5 years
Computer equipment and software	3 years
Leasehold improvements	Initial lease term plus one renewal period

Income tax

The NWMO and its wholly owned subsidiaries are not-for-profit organizations, and pursuant to section 149(1)(1) of the *Income Tax Act* ("ITA"), are not subject to income tax.

2. Significant accounting policies (continued)

Revenue recognition

Contributions received from members and AECL are treated as restricted contributions, and as such, they are recognized as revenue when qualifying expenses are incurred. Any excess or shortfall of member contributions is recorded as deferred/payable contributions or member contributions receivable, respectively.

Contributions used for the purchase of capital assets owned by the NWMO are initially recognized as deferred capital contributions and amortized into revenue at the rate corresponding with the amortization rate of the related capital assets.

Pension and other post-employment benefits

The NWMO's post-employment benefit programs include a contributory defined benefit registered pension plan, a defined benefit supplementary pension plan, and other post-employment benefits, including group life insurance and health-care benefits. The NWMO has adopted the following policies with respect to accounting for these post-employment benefits:

(i) The NWMO accrues its obligations under pension, supplementary pension plan, and other post-employment benefit ("OPEB") plans. The defined benefit obligation for pension is determined using the projected benefit method pro-rated on service and is measured based on the actuarial valuation prepared for funding purposes (but not one prepared using a solvency, wind up, or similar valuation basis). Under this method, the benefit costs are amortized over the average remaining service period of active employees as indicated in Note 7. For other unfunded plans such as supplementary pension plan and OPEB, a similar accrual method is used and the benefit obligations are measured based on the actuarial valuation for accounting purposes. Remeasurements for the period are recorded through the consolidated statement of changes in net assets.

(ii) The obligations are affected by actuarial assumptions, including salary escalation, inflation, and cost escalation of specific items (e.g., cost of living, health-care cost trend). Pension and OPEB costs and obligations are determined annually by independent actuaries using management's best estimate assumptions. The discount rate used by the NWMO in determining projected benefit obligations and the costs for the NWMO's pension plan is based on the funding valuation on a going concern basis, while other employee benefit plans' discount rates are based on representative AA corporate bond yields in effect at the end of the year.

(iii) Pension fund assets are valued using market-related values for the purposes of determining actuarial gains or losses and the actual return on plan assets. The plan's assets consist of pooled funds, fixed income securities and limited partnership units in a real estate fund. Market and credit risk on these securities are managed by the plan by placing plan assets in trust and through the plan's investment policy.

Research and development

Research and development costs are charged to operations as expenses in the year incurred.

2. Significant accounting policies (continued)

Foreign currency translation

Monetary assets and liabilities denominated in foreign currencies are translated into Canadian currency at the year-end exchange rate. Any resulting gain or loss is reflected in staffing and administration expenses. Transactions in foreign currencies throughout the year have been converted at the exchange rate prevailing at the date of the transaction.

Financial instruments

Financial instruments include cash, contributions receivable from members and AECL, other receivable from members and AECL, accounts receivable, and accounts payable and accrued liabilities.

Financial assets and financial liabilities are initially recognized at fair value when the NWMO becomes a party to the contractual provisions of the financial instrument. Subsequently, all financial instruments are measured at amortized cost. Financial assets measured at amortized cost are assessed at each reporting date for indications of impairment. If such impairment exists, the asset is written down and the resulting impairment loss is recognized in the consolidated statement of operations.

Related party transactions

Related party transactions are recorded at the exchange amount.

Use of estimates

The preparation of consolidated financial statements in conformity with Canadian generally accepted accounting principles requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, disclosures of contingent assets and liabilities at the date of the consolidated financial statements, and the reported amounts of revenues and expenses during the reporting period. Due to the inherent uncertainty in making estimates, actual results could differ from those estimates. Accounts requiring significant estimates include accrued pension asset, other post-employment and pension benefits liability, certain accrued liabilities and amortization which is based on the estimated useful life of the capital assets.

3. Capital assets

	Cost $	Accumulated amortization $	2024 Net book value $	2023 Net book value $
Land	**31,839**	**—**	**31,839**	31,839
Computer equipment and software	**6,844**	**5,618**	**1,226**	1,620
Transport and work equipment	**5,386**	**3,213**	**2,173**	2,094
Furniture and office equipment	**2,479**	**2,337**	**142**	389
Leasehold improvements	**2,036**	**1,719**	**317**	299
Office building	**1,183**	**669**	**514**	593
Vehicles	**406**	**379**	**27**	7
	50,173	**13,935**	**36,238**	36,841

Capital asset additions totalling $87 ($149 in 2023) have been excluded from the consolidated statement of cash flows as they remain unpaid at year-end. During 2024, capital asset additions totalling $149 ($247 in 2023) have been included in the consolidated statement of cash flows as they were accrued at December 31, 2023, and paid in 2024 (accrued at December 31, 2022, and paid in 2023).

During the year, there was no disposal of capital assets. In 2023, capital assets with a cost of $2,006 and accumulated amortization of $1,283 were disposed as the Used Fuel Container research, development, prototyping and testing were successfully completed as an essential step in building the safety case for Canada's long-term management of used nuclear fuel. Proceeds on disposition of capital assets were $135. The resulting loss on disposal of $588 is included in the consolidated statement of operations.

4. Related party transactions and balances

Transactions and balances not otherwise disclosed separately in these consolidated financial statements are as follows:

	APM $	ILW-NFHLW $	NNR $	2024 Total $	2023 Total $
Transactions during the year					
Member contributions					
Ontario Power Generation Inc.	**141,612**	**774**	**551**	**142,937**	130,915
New Brunswick Power Corporation	**4,945**	**37**	**23**	**5,005**	5,703
Hydro-Québec	**3,305**	**16**	**17**	**3,338**	2,802
	149,862	**827**	**591**	**151,280**	139,420

5. Member and AECL contributions

The NWMO is solely funded through contributions it receives from its members and AECL. The contributions are restricted in nature, and thus revenue is recognized when qualifying expenses are incurred. Amounts received in advance of qualifying expenses are recorded as deferred contributions. Commitments for contributions that have not been received by the NWMO are recorded as member contributions receivable when the amount is determinable and the ultimate collection is likely.

(a) Contributions receivable from members and AECL — current

Contributions receivable from members are comprised of the following:

	2024	2023
	$	$
Ontario Power Generation Inc.	**189,873**	14,425
New Brunswick Power Corporation	**7,353**	—
Hydro-Québec	**3,992**	296
Atomic Energy of Canada Limited	**896**	—
	202,114	14,721

(b) Deferred/payable contributions from members and AECL — current

Deferred/payable contributions from members and AECL are comprised of the following:

	2024	2023
	$	$
Atomic Energy of Canada Limited	**—**	684
New Brunswick Power Corporation	**—**	81
	—	765

(c) (Contributions receivable)/deferred contributions from members and AECL — long term

Long-term (contributions receivable)/deferred contributions from members and AECL represent amounts receivable or received to fund various employee future benefits as follows:

	2024	2023
	$	$
Accrued pension asset	**44,195**	38,244
Other post-employment and pension benefits liability	**(31,495)**	(30,037)
Other post-employment and pension benefit liabilities — short term (Note 7)	**(650)**	(650)
Remeasurements in net assets	**(14,685)**	(2,834)
(Contributions receivable)/deferred contributions from members and AECL — long term	**(2,635)**	4,723

5. Member and AECL contributions (continued)

(d) Continuity of (contributions receivable)/deferred contributions from members and AECL

The continuity of (contributions receivable)/deferred contributions from members and AECL is as follows:

	2024 $	2023 $
Balance, beginning of year		
Deferred/payable contributions from members and AECL — current	**765**	148
Deferred contributions from members and AECL — long term	**4,723**	9,737
	5,488	9,885
Contributions received	**151,697**	140,779
Contributions receivable	**202,114**	14,721
Contribution revenue recognized	**(347,816)**	(146,301)
Amounts received previously recognized	**(14,721)**	(14,754)
Change related to deferred capital contributions	**603**	1,158
	(2,635)	5,488
Balance, end of year		
Deferred/payable contributions from members and AECL — current	**—**	(765)
(Contributions receivable)/deferred contributions from members and AECL — long term	**(2,635)**	4,723

6. Deferred capital contributions

	2024 $	2023 $
Balance, beginning of year	**36,841**	37,999
Contributions for the purchase of capital assets	**1,050**	1,338
Less amortization into revenue	**(1,653)**	(1,773)
Less proceeds on disposition of capital assets	**—**	(135)
Less loss on disposal of capital assets	**—**	(588)
Balance, end of year	**36,238**	36,841

7. Pension and other post-employment benefit plans

Effective January 1, 2009, the NWMO offers benefits to certain employees and retirees. A brief overview of these benefit plans is set out below:

(a) Registered pension plan

The federally registered pension plan is a contributory defined benefit plan covering eligible employees and retirees. The registered pension plan is funded, and plan assets are managed by third parties and include pooled funds, fixed income securities, and limited partnership units in a real estate fund. The benefit costs and assets related to this plan are recorded in the NWMO's consolidated financial statements.

(b) Supplementary pension plan

The supplementary pension plan is a defined benefit plan covering certain employees and retirees. This plan is unfunded.

(c) Other post-employment benefit plans

The other post-employment benefit plans provide medical, dental and group life insurance coverage for certain groups of full-time employees when they retire from the NWMO. These plans are unfunded.

A funding valuation, which was completed for the registered pension plan as of January 1, 2024, reported an actuarial surplus of $37.0 million and a funding ratio of 135% on a going concern basis; and an actuarial surplus of $31.9 million and a solvency ratio of 129% on a solvency basis.

In the case of a federally registered pension plan surplus, the ITA prohibits the making of contributions while the plan assets exceed 125% of the current value of the plan's liabilities on a going concern basis if the pension plan is also fully funded on a solvency basis (solvency ratio in excess of 105%).

As a result, the ITA prohibits the plan sponsor from contributing to the pension plan after the actuarial valuation report is filed with regulators. Consequently, the NWMO has made nil contribution for 2024, 2023 and 2022 as supported by the actuarial funding valuation report.

The most recent actuarial valuations were performed for the registered pension plan as at January 1, 2024, for the supplementary pension plan as at December 31, 2022, and for the other post-employment benefit plans as at December 31, 2023. The liability as at December 31, 2024, is based on an extrapolation of the previous valuations.

7. Pension and other post-employment benefit plans (continued)

Information for the NWMO's pension plans and other post-employment benefit plans is as follows:

	Registered pension plan		Supplementary pension plan		Other post-employment benefit plans	
	2024	2023	**2024**	2023	**2024**	2023
	$	$	**$**	$	**$**	$
Changes in accrued benefit obligation						
Accrued benefit obligation, January 1	**(106,095)**	(94,915)	**(10,519)**	(7,117)	**(20,168)**	(16,650)
Current service cost	**(5,143)**	(4,425)	**(1,095)**	(543)	**(1,836)**	(1,245)
Interest cost	**(5,818)**	(5,189)	**(547)**	(406)	**(1,004)**	(901)
Past service cost	**—**	—	**—**	—	**—**	—
Employee contributions	**—**	—	**—**	—	**—**	—
Benefits paid	**3,435**	3,707	**383**	352	**253**	302
Net actuarial (loss) gain	**(3,186)**	(5,273)	**312**	(2,805)	**2,076**	(1,674)
Accrued benefit obligation, December 31	**(116,807)**	(106,095)	**(11,466)**	(10,519)	**(20,679)**	(20,168)
Changes in plan assets						
Fair value of plan assets, January 1	**144,339**	135,817	**—**	—	**—**	—
Expected return on plan assets	**7,449**	7,041	**—**	—	**—**	—
Benefits paid	**(3,435)**	(3,707)	**(383)**	(352)	**(253)**	(302)
Net actuarial gain (loss)	**12,649**	5,188	**—**	—	**—**	—
Employer contributions	**—**	—	**383**	352	**253**	302
Past service cost	**—**	—	**—**	—	**—**	—
Employee contributions	**—**	—	**—**	—	**—**	—
Fair value of plan assets, December 31	**161,002**	144,339	**—**	—	**—**	—
Funded status						
Fair value of plan assets	**161,002**	144,339	**—**	—	**—**	—
Accrued benefit obligation	**(116,807)**	(106,095)	**(11,466)**	(10,519)	**(20,679)**	(20,168)
Accrued benefit asset (liability)	**44,195**	38,244	**(11,466)**	(10,519)	**(20,679)**	(20,168)
Short-term portion	**—**	—	**(350)**	(350)	**(300)**	(300)
Long-term portion	**44,195**	38,224	**(11,116)**	(10,169)	**(20,379)**	(19,868)
	44,195	38,224	**(11,466)**	(10,519)	**(20,679)**	(20,168)
Components of cost recognized						
Current service cost	**5,143**	4,425	**1,095**	543	**1,836**	1,245
Interest cost on accrued benefit obligation	**5,818**	5,189	**547**	406	**1,004**	901
Expected return on plan assets	**(7,449)**	(7,041)	**—**	—	**—**	—
Cost recognized	**3,512**	2,573	**1,642**	949	**2,840**	2,146

The total accrued benefits liability for the supplementary pension and other post-employment benefit plans is $32,145 ($30,687 in 2023), of which the current portion of $650 ($650 in 2023) is included in accounts payable and accrued liabilities in the consolidated statement of financial position.

The pension and other post-employment benefit costs recognized are included in the respective expense categories in the consolidated statement of operations.

Remeasurements as reported on the consolidated statement of changes in net assets include remeasurements arising from the registered pension plan totalling $9,463 (2023 — $85), and remeasurements arising from the supplementary pension plan and other post-employment benefit plans totalling $2,388 (2023 — $4,479), and are derived from the table above. Actuarial gains and losses are a function of the changes to demographic or financial assumptions, or experience adjustments, as applicable, to the assumptions used in the actuarial valuation.

7. Pension and other post-employment benefit plans (continued)

The significant actuarial assumptions for benefit obligations and costs adopted in estimating the NWMO's accrued benefit obligations are as follows:

	Registered pension plan		Supplementary pension plan		Other post-employment benefit plans	
	2024	2023	**2024**	2023	**2024**	2023
	%	%	**%**	%	**%**	%
Discount rate at the beginning of the period	**5.25**	5.25	**4.60**	5.10	**4.60**	5.10
Salary escalation rate	**3.00**	3.00	**3.00**	3.00	**—**	—
Rate of cost of living increase	**2.00**	2.00	**2.00**	2.00	**—**	—
Rate of increase in health-care cost trend	**—**	—	**—**	—	**5.49**	5.12
Discount rate at the end of the period	**5.25**	5.25	**4.80**	4.60	**4.80**	4.60
Average remaining service life for employees	**14 years**	15 years	**14 years**	15 years	**15 years**	16 years

Sensitivity information related to the other post-employment benefit plans is as follows:

	2024	2023
	$	$
Effect of 1% increase in health-care cost trends on		
Accrued benefit obligation	**4,093**	4,574
Current service cost and interest cost	**828**	859
Effect of 1% decrease in health-care cost trends on		
Accrued benefit obligation	**(3,066)**	(3,367)
Current service cost and interest cost	**(587)**	(597)

The supplementary pension plan is unfunded and is secured by a Standby Letter of Credit of $10,863 ($10,224 in 2023) obtained on the NWMO's behalf by OPG, as approved by the members.

8. Deferred lease inducements

	2024	2023
	$	$
Tenant inducements	**836**	836
Less accumulated amortization	**(627)**	(543)
	209	293

9. Guarantees and contingencies

In the normal course of business, the NWMO enters into agreements that meet the definition of a guarantee.

(a) The NWMO has provided indemnities for various agreements. Under the terms of these agreements, the NWMO agrees to indemnify the counterparty for various items, including, but not limited to, all liabilities, loss, suits, and damages arising during, on or after the term of the agreement.

(b) The NWMO indemnifies all directors, officers and employees acting on behalf of the NWMO for various items, including, but not limited to, all costs to settle suits or actions due to services provided to the NWMO, subject to certain restrictions.

The nature of these indemnification agreements prevents the NWMO from making a reasonable estimate of the maximum exposure due to the difficulties in assessing the amount of liability which stems from the unpredictability of future events and the unlimited coverage offered to counterparties. Historically, the NWMO has not made any payments under such or similar indemnification agreements, and therefore, no amount has been accrued with respect to these agreements.

The NWMO also arranged a Standby Letter of Credit issued by OPG to secure its supplementary pension plan (Note 7).

10. Commitments and contractual obligations

Leases

The NWMO has entered into a number of operating leases for office premises which expire at various dates up to February 28, 2030.

The estimated annual minimum payments over the initial term of these leases up to their expiration are as follows:

	$
2025	1,711
2026	1,155
2027	632
2028	108
2029	108
2030	18
	3,732

10. Commitments and contractual obligations (continued)

Contractual obligations

Under APM, the NWMO enters into multi-year agreements with third-party contractors for engineering, geoscience, design and construction, and other professional services in support of the project. These contractual obligations are recorded as a liability when the third-party contractor services are performed.

Additionally, the organization enters into multi-year infrastructure funding agreements with Indigenous and municipal communities for their participation within the APM project. In 2024, the NWMO entered into hosting agreements with Indigenous and municipal communities selected as the hosts for the future site of Canada's deep geological repository for used nuclear fuel. These agreements extend for multiple years and provide for milestone and annual payments to the communities over the term of the agreements. Milestone payments are based on the achievement of project milestones, and annual payments are for community development, infrastructure and operating expenditures associated with the project.

The NWMO will recognize the liability for milestone payments in the fiscal year when specific project milestones are achieved. Milestones are related to the submission of the initial project description and impact studies to the Impact Assessment Agency of Canada and the receipt of licences to prepare, construct and operate the site from the Canadian Nuclear Safety Commission.

The hosting agreements require the communities' continuous participation throughout the regulatory decision-making and licensing processes, as well as during the construction, operations and extended monitoring phases of the project. Annual operating payments represent funding to the hosting communities for fulfilling their continuous obligations under the project and foreseeable community development, infrastructure and operating expenditures associated with the project. The annual payments will be expensed annually as the criteria for annual payments are met.

11. Segment reporting

Segment information for the NWMO's three reportable segments is as follows:

	APM		**ILW-NFHLW**		**NNR**		**Total**	
	2024	2023	**2024**	2023	**2024**	2023	**2024**	2023
	$	$	**$**	$	**$**	$	**$**	$
Contribution revenue	**346,630**	145,641	**919**	660	**267**	—	**347,816**	146,301
Interest and other income	**602**	458	**1**	1	**2**	—	**605**	459
Total revenue	**347,232**	146,099	**920**	661	**269**	—	**348,421**	146,760
Amortization of capital assets	**1,653**	1,773	**—**	—	**—**	—	**1,653**	1,773
Loss on disposal of capital assets	**—**	588	**—**	—	**—**	—	**—**	588
Operating expenses	**345,579**	143,738	**920**	661	**269**	—	**346,768**	144,399
Total expenses	**347,232**	146,099	**920**	661	**269**	—	**348,421**	146,760
Capital asset additions	**1,050**	1,338	**—**	—	**—**	—	**1,050**	1,338

The allocation of the common service expenses to each reportable segment above is based on direct staff hours in each segment.

12. Government remittances

Government remittances is comprised of the following:

	2024	2023
	$	$
Goods and Services Tax/Harmonized Sales Tax ("GST/HST") payable	**(29,059)**	(2,164)
GST/HST receivable	**649**	737
GST/HST payable, net	**(28,410)**	(1,427)

The net government remittances payable balance of $28,410 (2023 — $1,427) is included in accounts payable and accrued liabilities.

For more information, please contact:

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