nwmo

NUCLEAR WASTE MANAGEMENT ORGANIZATION

SOCIÉTÉ DE GESTION DES DÉCHETS NUCLÉAIRES

Moving Forward Together

Annual Report 2008

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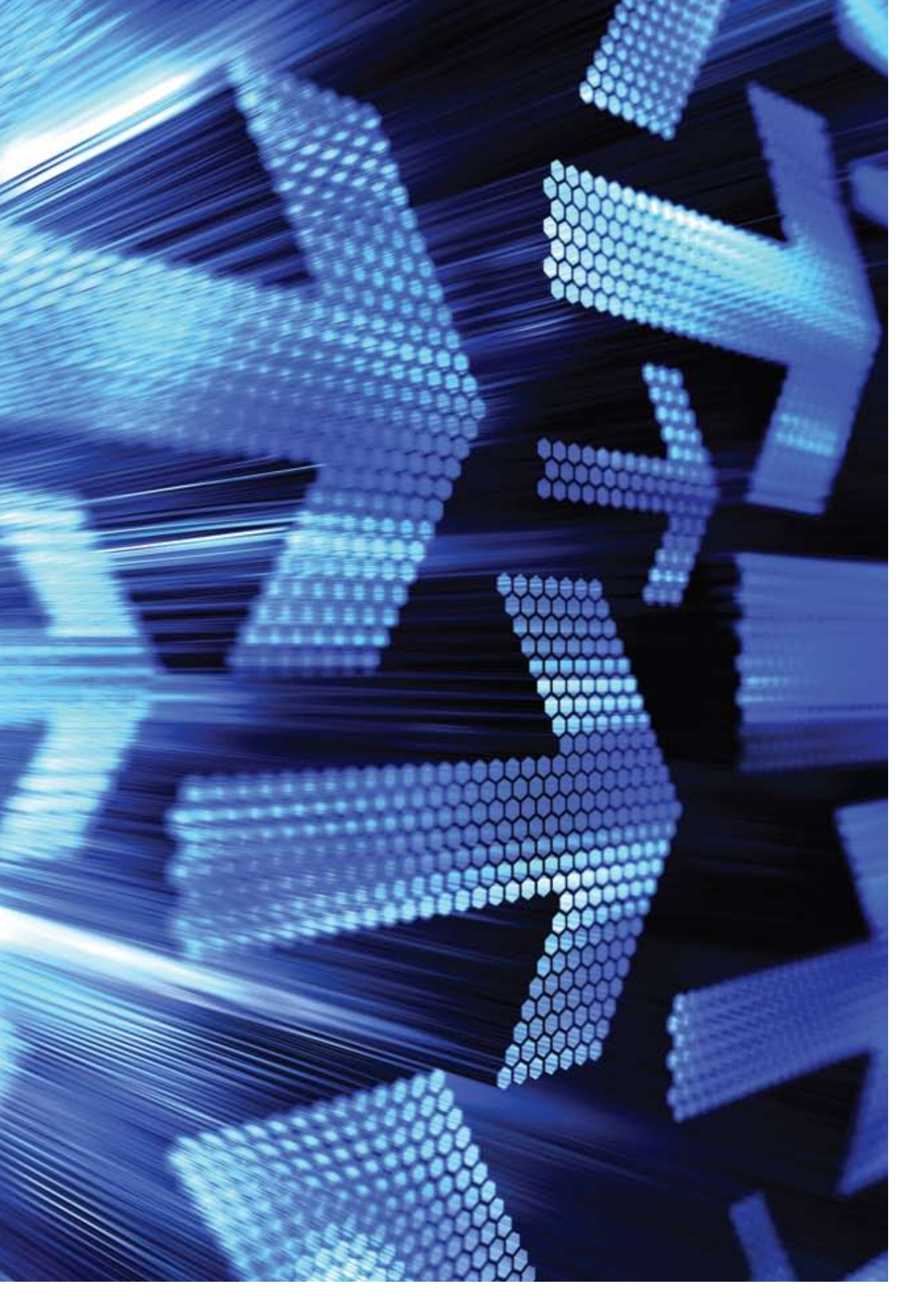

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NUCLEAR WASTE MANAGEMENT ORGANIZATION
SOCIÉTÉ DE GESTION DES DÉCHETS NUCLÉAIRES

The Honourable Lisa Raitt
Minister, Natural Resources Canada
Ottawa, Ontario
K1A 0A6

March, 2009

Dear Minister,

We are pleased to submit to you the annual report of the Nuclear Waste Management Organization (NWMO) for fiscal year 2008.

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

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

Respectfully submitted,

Gary Kugler
Chairman

Ken Nash
President

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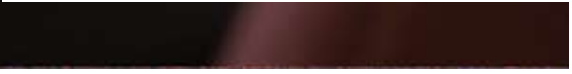
Overview

NWMO Mandate: The Nuclear Waste Management Organization (NWMO) was established in 2002 in accordance with the *Nuclear Fuel Waste Act (NFWA)* to assume responsibility for the long-term management of Canada's used nuclear fuel, a by-product of electricity generation in a nuclear power plant. The NWMO operates on a not-for-profit basis under Part II of the *Canada Corporations Act*.

All of Canada's used nuclear fuel is safely stored on an interim basis in licensed facilities at the nuclear reactor sites where it is generated, in Ontario, Québec and New Brunswick, and at AECL's nuclear research facility in Manitoba. Used nuclear fuel remains radioactive for a long period of time. A plan has been developed to ensure that the material will be contained and isolated from people and the environment indefinitely.

INSETS BELOW FROM LEFT Glaciation studies (Greenland); CANDU fuel bundle; public engagement; Youth Roundtable; panel discussion at Canadian Nuclear Association; used fuel in wet storage



Based on the "producer pays" principle, the *Nuclear Fuel Waste Act* (*NFWA*) required electricity generating companies that produce used nuclear fuel to establish a waste management organization (NWMO) to provide recommendations to the Government of Canada on the long-term management of used nuclear fuel. Within three years of the legislation coming into force, the NWMO was required to submit to the Minister of Natural Resources proposed approaches for the long-term management of used nuclear fuel, along with the comments of its Advisory Council and a recommended approach. The NWMO initiated its study in 2002, and presented its report and recommended approach to the Minister of Natural Resources Canada in November 2005.

In June 2007, authorized by the legislation to decide on a management approach, the Government of Canada selected Adaptive Phased Management (APM), the approach recommended by the NWMO. Our organization is now responsible for implementing APM, subject to all of the necessary regulatory approvals. We are committed to proceeding in stages, in an open, transparent and inclusive manner, taking the time that is needed to collaboratively plan and then confirm each step with Canadians before moving forward to the next.

ADAPTIVE PHASED MANAGEMENT

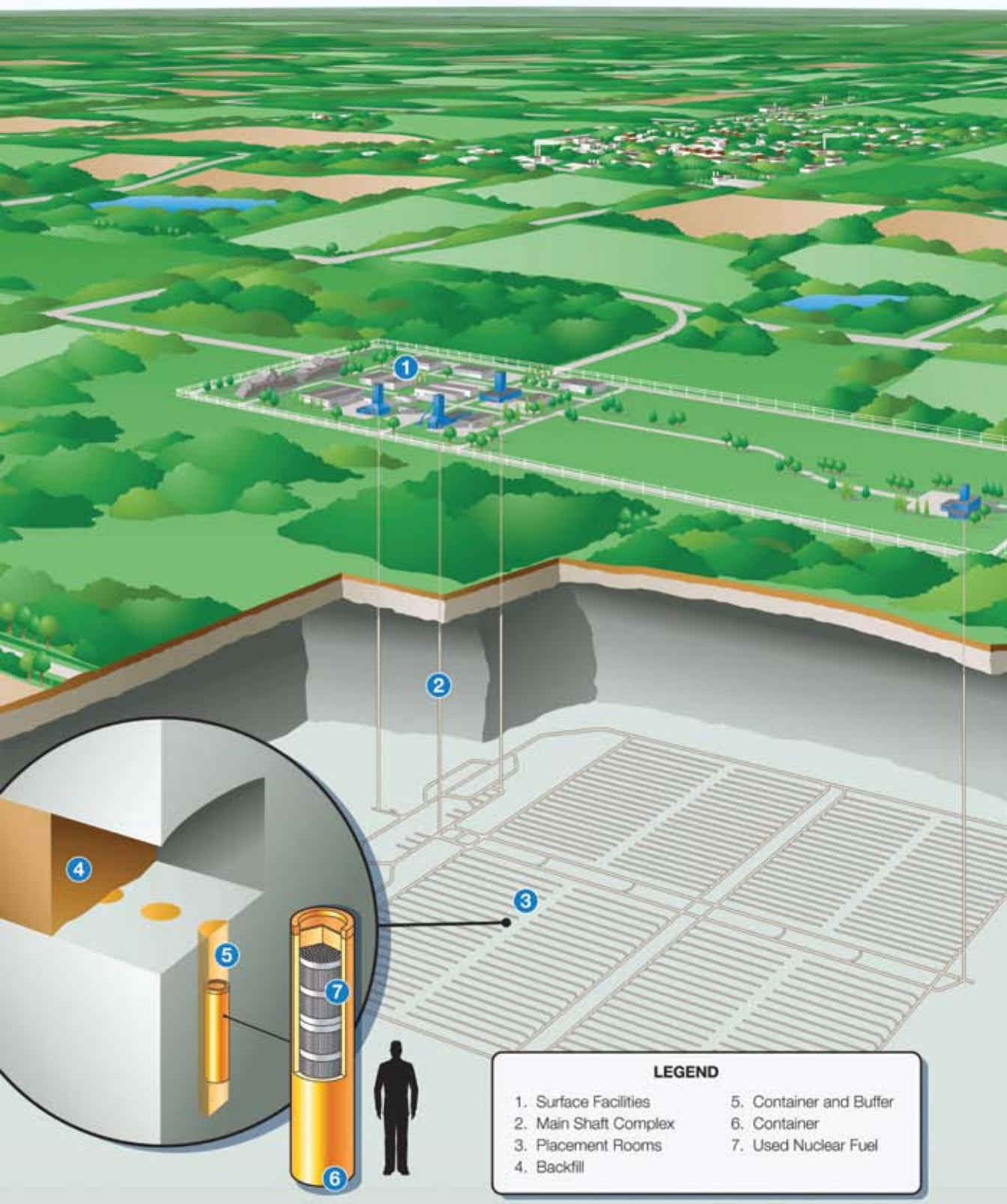
A Technical Method

- Centralized containment and isolation of used nuclear fuel in deep geological repository
- Continuous monitoring
- Potential for retrievability
- Optional step of shallow underground storage

A Management System

- Flexibility in pace and manner of implementation
- Phased and adaptive decision-making
- Responsive to advances in technology, research, Aboriginal Traditional Knowledge, societal values
- Open, inclusive, fair siting process - seek informed, willing host community
- Public engagement and site selection focused in four nuclear provinces (NB, ON, QC, SK)

The first milestone activity in implementing Adaptive Phased Management is the collaborative design of a process to select a site for a centralized deep geological repository. Only after a proposed process is tested and validated will the NWMO take the next step of welcoming expressions of interest from potential host communities. Following identification of a site in an informed and willing community, and after obtaining the necessary regulatory approvals, we will conduct site characterization research and complete a detailed design and safety assessment for the repository. Construction will occur in a later phase and will take several years after a construction licence is obtained. An operating licence will be required before the facility is brought into service.


1
2
3
4
5
6
7
LEGEND
1. Surface Facilities
2. Main Shaft Complex
3. Placement Rooms
4. Backfill
5. Container and Buffer
6. Container
7. Used Nuclear Fuel

The *NFWA* required the nuclear fuel waste owners to establish segregated trust funds to finance the long-term management of their used fuel. These funds were established in 2002. Contributions are made annually by the waste owners, and audited financial statements are posted on the NWMO website at www.nwmo.ca/trustfunds. In 2008, as it was obliged to do by the legislation, the NWMO proposed a funding formula and deposits to be made each year by the waste owners to pay for APM implementation. The proposed formula is before the Government for review and approval.

The *NFWA* also required the Nuclear Waste Management Organization to establish an Advisory Council whose independent comments on the organization's study and triennial reports beginning with the 2010 Annual Report, are made public.

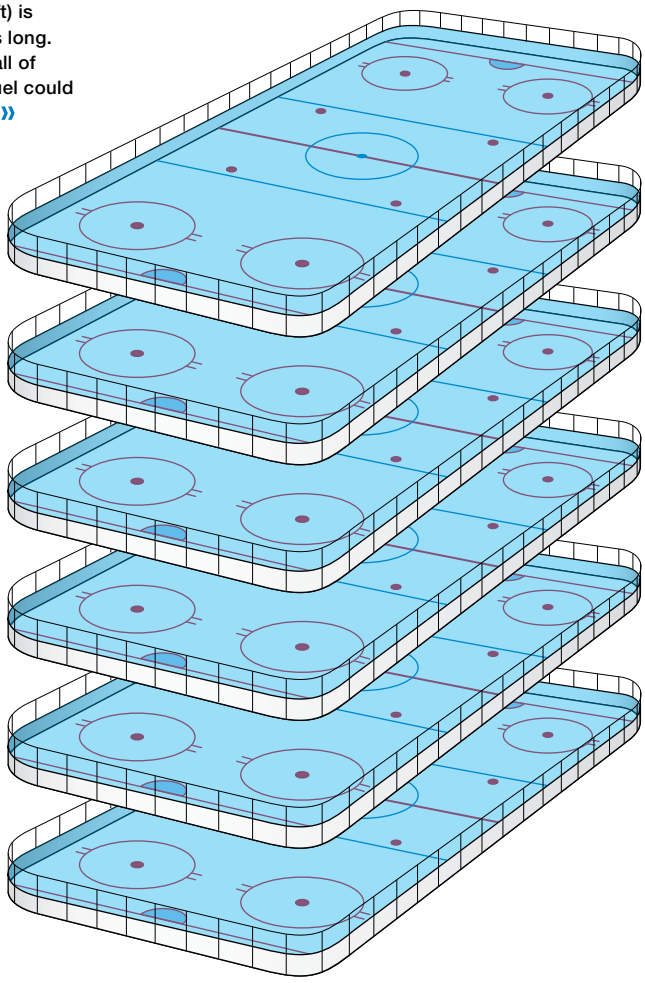
USED NUCLEAR FUEL

Canada has been generating electricity from nuclear power for more than 40 years. In that time just over two million used fuel bundles have been produced. Each fuel bundle is about the size and shape of a fireplace log, weighing approximately 24 kg.

If the entire current inventory of used fuel bundles could be stacked end-to-end like cordwood, they would fit into a space the size of six hockey rinks from the ice surface to the top of the boards.

After a fuel bundle is removed from a reactor it is safely managed in facilities licensed for temporary storage at the reactor site. First it is placed in a water-filled pool for seven to 10 years while its heat and radioactivity decreases. Afterwards, used fuel bundles are typically placed in dry storage containers, silos or vaults.

A CANDU fuel bundle (left) is approximately 0.5 metres long. Stacked like cordwood, all of Canada's used nuclear fuel could fit into six hockey rinks. »



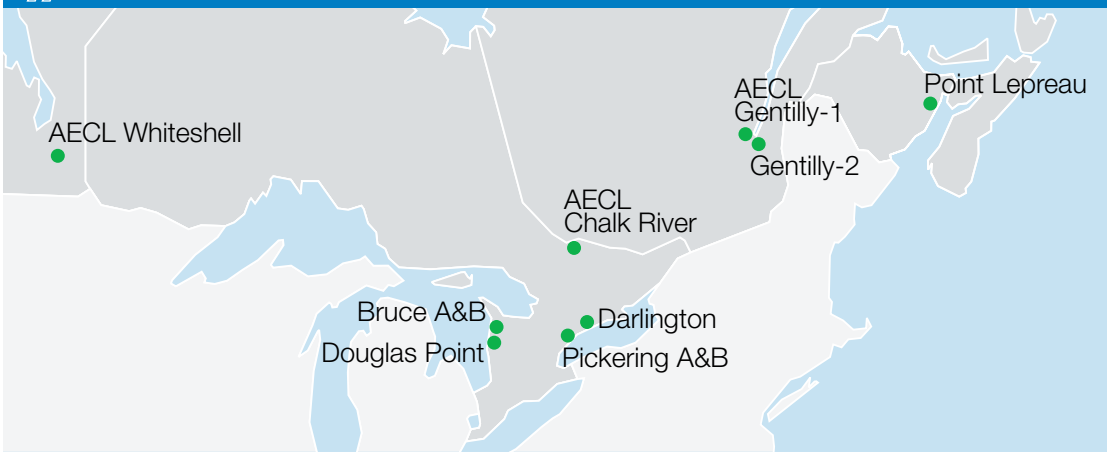
About 85,000 used nuclear fuel bundles are generated in Canada each year. As of June 30, 2008, the number of used fuel bundles stored at Canadian facilities was:

Table 1: Summary of Nuclear Fuel Waste in Canada as of June 30, 2008

LOCATION	WASTE OWNER	TOTAL (# Bundles)	CURRENT STATUS
Bruce A	OPG	393,429	2 units operational, 2 units under refurbishment
Bruce B	OPG	474,819	4 units operational
Darlington	OPG	333,880	4 units operational
Douglas Point	AECL	22,256	permanently shut down
Gentilly 1	AECL	3,213	permanently shut down
Gentilly 2	HQ	108,581	operational
Pickering A	OPG	581,130	2 units operational, 2 units permanently shut down
Pickering B	OPG		4 units operational
Point Lepreau	NBPN	121,758	currently undergoing refurbishment
AECL Whiteshell	AECL	2,268[1]	permanently shut down
AECL Chalk River	AECL	4,886[2]	includes fuel from NPD and other CANDU reactors
TOTAL		**2,046,220**	**Total of:** 17 units in operation 3 units under refurbishment 5 units permanently shut down

Notes: Data as of June 30, 2008
AECL = Atomic Energy of Canada, HQ = Hydro-Québec,
NBPN = New Brunswick Power Nuclear, OPG = Ontario Power Generation,
NPD = Nuclear Power Demonstration

CANADIAN NUCLEAR FACILITIES



[1] 360 bundles of Whiteshell fuel are standard CANDU bundles. The remaining bundles are various research fuel bundles, similar in size and shape to standard CANDU bundles.
[2] In addition to the totals shown in Table 1, AECL also has some 21,987 items of research reactor fuels, experimental fuels and partial fuel elements in storage at Chalk River.

Vision, Mission and Values

Vision

Our vision is the long-term management of Canada's nuclear waste in a manner that safeguards people and respects the environment, now and in the future.

Mission

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

Values

The fundamental beliefs that will guide us in our work include:

Integrity:
We will conduct ourselves with openness, honesty and respect for all persons and organizations with whom we deal.

Excellence:
We will pursue the best knowledge, understanding and innovative thinking in our analysis, engagement processes and decision-making.

Engagement:
We will seek the participation of all communities of interest and be responsive to a diversity of views and perspectives. We will communicate and consult actively, promoting thoughtful reflection and facilitating a constructive dialogue.

Accountability:
We will be fully responsible for the wise, prudent and efficient management of resources, and be accountable for all of our actions.

Transparency:
We will be open and transparent in our process, communications and decision-making, so that the approach is clear to all Canadians.

Chairman's Message

The management of used nuclear fuel continues to be an important social and technical issue for many nations around the world, Canada among them. More than two million used CANDU fuel bundles, amounting to more than forty thousand tonnes of heavy metal, are currently in storage at nuclear reactor sites in Canada. The prevailing view of Canadians continues to be that the generation enjoying the benefits of nuclear power has the responsibility of managing its used fuel. The Nuclear Waste Management Organization (NWMO) is entrusted with the mandate to ensure that this is done safely and in an environmentally responsible way.

The year 2008 was a year of transition for NWMO. Following the Government of Canada's selection of an Adaptive Phased Management approach for the long-term care of used nuclear fuel in 2007, NWMO began to develop a site selection process in collaboration with the public. By the end of 2008 NWMO had undertaken public dialogues that generated suggestions for the design of the process. A proposal for the process will be published in spring 2009 and comments will be sought from the public. NWMO's plan is to refine and finalize the site selection process by the end of 2009. After that, the organization will begin providing opportunities for communities to learn more, as they think through their interest in potentially hosting the permanent repository.

As discussions on the site selection process were under way, the NWMO continued technical programs aimed at further understanding the requirements and design of the future repository. To assist in the oversight of this work, the Board of Directors appointed an Independent Technical Review Group composed of internationally recognized experts in nuclear waste repository technology. This Technical Review Group made its first presentation to the Board of Directors, and independently to the Advisory Council, in November 2008. In its first report, the Technical Review Group confirmed that NWMO's work is at a level consistent with best international practices in the area of used nuclear fuel management.

In 2008, the NWMO Board was further strengthened with the addition of two additional members, appointed by Ontario Power Generation, bringing the Board's membership to the maximum of nine directors, with seven appointed by Ontario Power Generation, and one each by Hydro Québec and NB Power Nuclear. We also established a Human Resources and Compensation Committee of the Board to ensure critical investments in people are made so that the NWMO can successfully carry out its mandate.

The member companies of the NWMO continued to meet their financial obligations to pay for the long-term management of their used nuclear fuel. They contributed to trust funds, as required under the *Nuclear Fuel Waste Act*, and provided the requisite operating funds of the NWMO.

Implementing Adaptive Phased Management will be a long process. The NWMO is committed to working collaboratively with Canadians throughout the various phases of this process, always seeking the input and support of citizens, specialists and Aboriginal peoples. Together we aim to manage Canada's used nuclear fuel over the long term, while protecting human life and respecting the environment.

Dr. Gary Kugler
Chairman

President's Message

In 2008, the Nuclear Waste Management Organization published its first five-year Implementation Plan. The document, which will be updated annually, is founded on our seven strategic objectives, which also provide the basis against which we measure ourselves in this Annual Report.

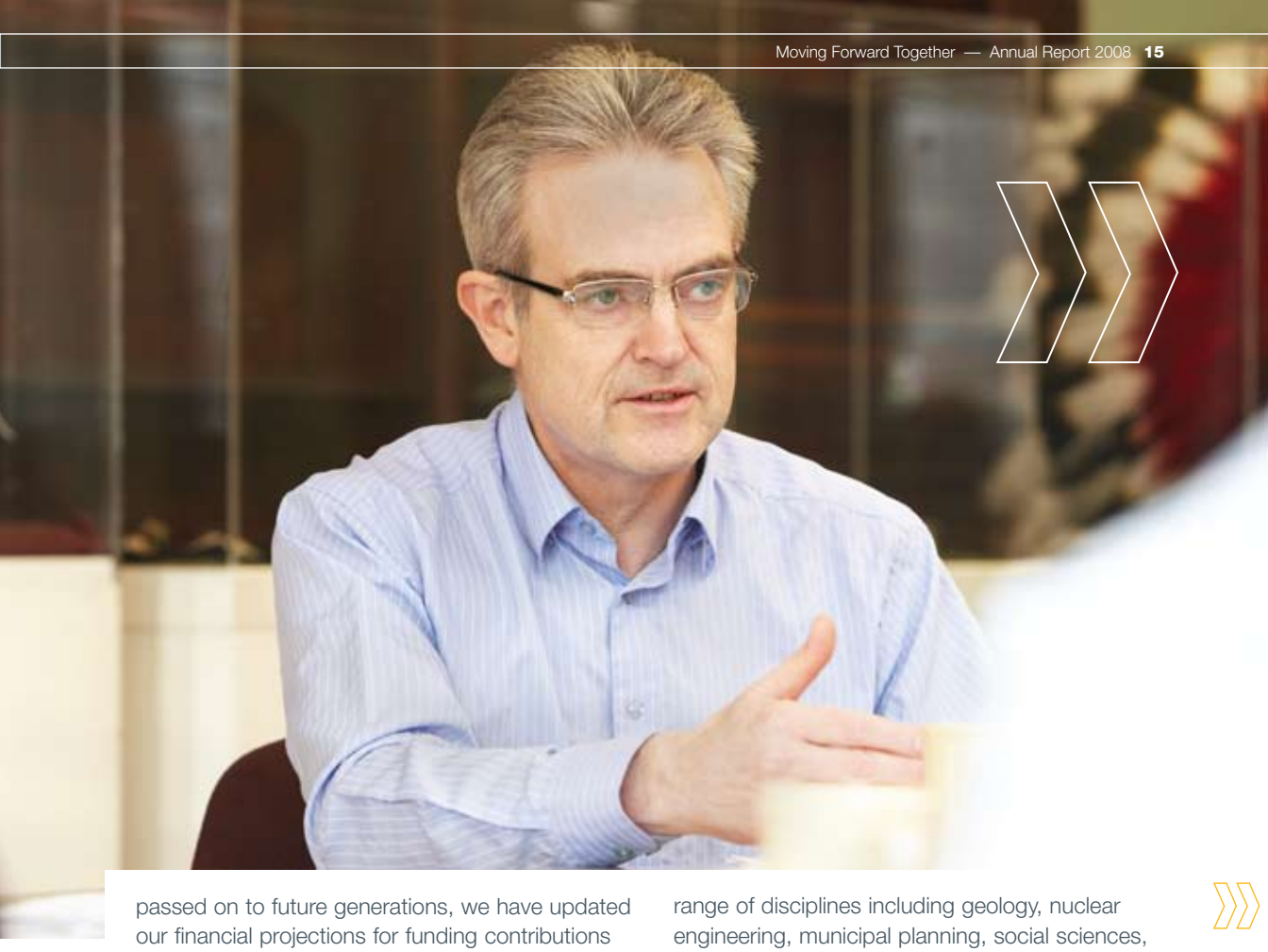
The Implementation Plan is a living document. It incorporates many enhancements resulting from a public review carried out during the first half of the year. I would like to thank those who participated in its development, and to welcome them and others with an interest to continue providing guidance as we move forward with Canada's approach for the long-term management of its used nuclear fuel. We've made progress in all areas of the Implementation Plan.

Our relationships with Aboriginal peoples have been furthered, particularly through the Elders' Forum and their working group, Niigani. We have advanced agreements for future work and have begun joint initiatives with the Assembly of First Nations (AFN) and the Native Women's Association of Canada (NWAC). Our relationship with the Federation of Canadian Municipalities, and its provincial counterparts and related affiliates, continues to grow and develop. And we have established a youth roundtable to provide advice on a strategy to engage young people. Our public outreach continues to expand, bringing in interested individuals and organizations from the four nuclear provinces and beyond.

Through our technical research program, the NWMO remains committed to applying the most advanced knowledge and best practices to our work. We have multiple contracts with more than a dozen Canadian, and several international, universities to advance our knowledge of repository engineering, geoscience and safety assessment. In 2008, we continued our participation in jointly sponsored international collaboration projects like the Äspö Hard Rock Laboratory in Sweden and the Mont Terri Underground Research Laboratory in Switzerland. In October we hosted nine countries at the Nuclear Energy Agency (NEA) Reversibility and Retrievability Project meeting in Toronto.

In the area of social research, a series of Citizen Panels in the four nuclear provinces provided input into our work. We held focus group sessions on specialized questions and conducted a nation-wide telephone survey to gauge citizen views on the design of a siting process for a deep repository. A very important project was assessing our adherence to the ethical values and principles to which we are committed.

Consistent with our obligation under the *Nuclear Fuel Waste Act*, and to ensure that the financial burden of managing used nuclear fuel over the long term is not



passed on to future generations, we have updated our financial projections for funding contributions to be made by the member companies to pay for Adaptive Phased Management.

The NWMO made significant effort through our engagement and research activities to ensure our plans take changes in societal values into account, as well as developments in energy policy. We met our commitment in 2008 to report on current and potential future inventories of used nuclear fuel volumes and types from both current and proposed new nuclear reactors in Canada, and started to incorporate the potential for increased fuel volumes and types into our planning.

Improvements in our governance included further development of our internal management and quality assurance systems, consistent with best international practices and standards. We also adopted a Transparency Policy to demonstrate our commitment to openness in all aspects of our work. Throughout the year, we remained accountable for the prudent management of the financial resources provided by the member companies for our operations. We completed our work program within budget.

Consistent with our objective of building our organizational capacity, we almost tripled our staff size, recruiting a mix of established expertise and recent graduates and post-graduates in a range of disciplines including geology, nuclear engineering, municipal planning, social sciences, communication, human resources and finance. We will continue growing to meet the needs of an expanding work program and to provide for succession over the long-term.

How a deep geological repository is sited will be as important as where it is sited. In 2008 the NWMO initiated a dialogue to collaboratively develop a process for identifying an informed and willing host community for the project. Based on these discussions we will propose a process early in 2009 and subject it to a period of extensive public review and revision, with the objective of having a process ready in 2010.

We are making good progress. I am confident that with the continued support of Canadians, Aboriginal peoples, governments and interested or affected organizations, that Canada's plan for long-term used nuclear fuel management will be implemented safely, and in a manner that continues to protect humans and the environment now and in the future.

K. E. Nash

Ken Nash
President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Moving forward together
Poursuivons l'avenir ensemble
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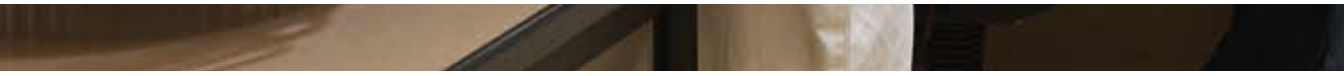
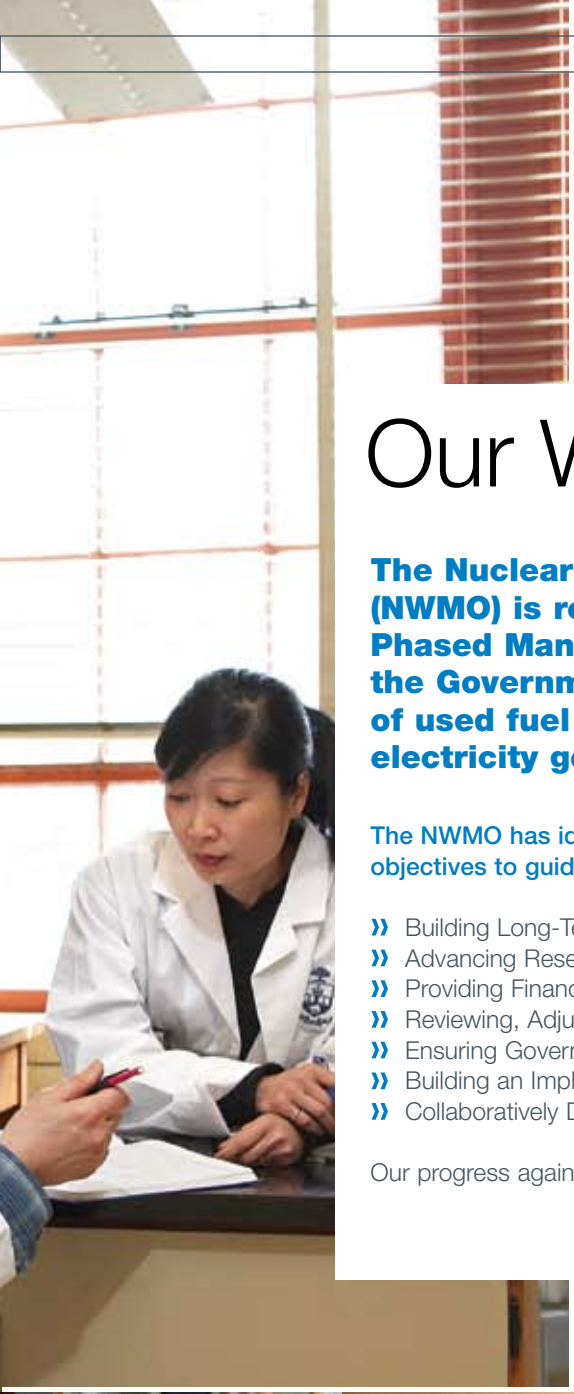
Win a Digital Camera!





Our Work

The Nuclear Waste Management Organization (NWMO) is responsible for implementing Adaptive Phased Management, the approach selected by the Government of Canada for the long-term care of used fuel produced by Canada's nuclear electricity generators.

The NWMO has identified, and confirmed with Canadians, seven strategic objectives to guide its work:

- Building Long-Term Relationships
- Advancing Research
- Providing Financial Surety
- Reviewing, Adjusting and Validating Plans
- Ensuring Governance, Oversight and Advice
- Building an Implementing Organization
- Collaboratively Designing a Siting Process

Our progress against each of these objectives is reported on the following pages.

INSETS BELOW FROM LEFT Aboriginal communication materials; engaging Canadians; NWMO makes a presentation; copper container section (Sweden); examining rock samples; community well-being workshop

BUILDING LONG-TERM RELATIONSHIPS

Public engagement is one of the fundamental values guiding the work of the NWMO. Sustained dialogue and collaboration with all interested individuals and organizations are essential for the successful implementation of Adaptive Phased Management and ensuring that it meets the needs of a broad diversity of Canadians and Aboriginal peoples.

In 2008 our engagement was focused in the four nuclear provinces and centred on developing plans for implementing Adaptive Phased Management (see Reviewing, Adjusting and Validating Plans, page 40) and on the collaborative design of a process to select a site for a centralized deep geological repository. A range of engagement activities were undertaken, including multi-party dialogues, citizen panels and activities on the website (see Collaboratively Designing a Siting Process, page 47).

MUNICIPAL ENGAGEMENT

Adaptive Phased Management will be implemented at the community level. For this reason it is important that the NWMO understand local perspectives as we design our processes and plans. Local officials and elected representatives, in particular members of the Canadian Association of Nuclear Host Communities (CANHC), have provided the NWMO with important insight since the organization began its study in 2002. While continuing to engage CANHC, and taking their advice to do so, the NWMO has endeavored to broaden its municipal outreach in the nuclear provinces and nationally.

In addition to meetings and briefings on request with officials and local community groups, the NWMO has strengthened its involvement at the municipal association level. We sponsored exhibits and distributed material about the NWMO and Adaptive Phased Management at annual conferences of the Federation of Canadian Municipalities (FCM), and the Association of Municipalities of Ontario (AMO) and their caucuses, including the Federation of Northern Ontario Municipalities (FONOM) and the Counties, Regions and Single Tier Municipalities of Ontario. Hundreds of elected representatives and municipal officials at these events expressed interest in being kept apprised of NWMO activities.

We also met with, and delivered presentations to, executive members and staff of many of these associations and others, including the Northwestern Ontario Municipal Association (NOMA), the Cities of New Brunswick Association (CNBA), the Union of Municipalities of New Brunswick (UMNB), the Union of Québec Municipalities, the Québec Federation of Municipalities, the Saskatchewan Association of Rural Municipalities (SARM) and the Saskatchewan Urban Municipalities Association (SUMA). NWMO will continue to provide information and to engage these and other municipal associations in the four nuclear provinces.

In discussions with municipal associations we have identified a range of mutual research interests. A scoping meeting was held in late 2008 with the Federation of Canadian Municipalities, and municipal associations from Saskatchewan, Ontario, Québec and New Brunswick, to discuss opportunities to work together and learn

from the inherent knowledge and experience of individuals working at the local government level. Moving forward we will work to learn more about best practices for communicating with local governments and associations, and to guide a research agenda to develop tools for exploring community well-being, visioning, sustainability and the economic impacts of large projects on communities.

Another valuable link to communities is through advisory committees and liaison groups. The NWMO briefed several of these on our work over the year, including the Durham Nuclear Health Committee, the Pickering Community Advisory Committee, the South Bruce Impact Advisory Committee and the Point Lepreau Community Liaison Committee.

FEDERAL AND PROVINCIAL GOVERNMENTS

The NWMO continued its practice of briefing elected and departmental officials at both the federal and provincial levels. In 2008, two meetings were held for staff from various federal government departments with an interest in long-term nuclear fuel waste management. They were provided with updates on NWMO activities and plans, and received responses to their questions about Adaptive Phased Management and its implementation.

We conducted similar meetings with multi-ministerial staff within the Ontario government. Over the year, officials in New Brunswick, Québec and Saskatchewan were also briefed. A meeting was held with Alberta government officials in light of ongoing discussions about the possibility of nuclear power development in that province.

In November, the NWMO participated, along with nuclear fuel waste owners, in a day-long technical briefing of the Canadian Nuclear Safety Commission on the status of nuclear waste management. NWMO representatives responded to questions on issues ranging from the schedule for developing a deep repository for used fuel, to funding for research programs and the status of used fuel management programs in other countries.

ABORIGINAL PEOPLE

Building on established relationships, the NWMO and Aboriginal peoples worked together in 2008 to strengthen our preparedness for implementing Adaptive Phased Management.

At the fourth Elders' Forum, chaired by Gordon Williams, and held in Waskesiu, Saskatchewan, in July, Elders and the NWMO advanced development of a policy to support Aboriginal engagement. Elders discussed key principles and elements for the policy, which we expect to finalize in 2009 after further input from the Forum, its working group Niigani, the NWMO Advisory Council and a public review.

NWMO Board Chair Gary Kugler and President Ken Nash attended the annual Elders' Forum, along with Board members Deborah Poff and Ron Jamieson, and Donald Obonsawin and Marlyn Cook of the Advisory Council. Elders learned about nuclear waste management while NWMO personnel participated with them

RIGHT: Dene family hosted NWMO staff and Niigani members participating in a Traditional Knowledge project on the Mackenzie River, NWT

in traditional ceremonies led by the Felix family of Prince Albert. These included a sweat, smudgings, prayers and pipe ceremonies.

Over the year, Niigani met four times to address questions and issues related to our ongoing work, including how to further NWMO relationships with national, provincial and regional Aboriginal organizations. They helped arrange meetings with a number of leaders who we were then able to brief on Adaptive Phased Management and its implementation. Work will continue in this area as the NWMO develops relationships and explores how best to engage at the community level and with Aboriginal organizations.

Niigani was also key in establishing and executing a summer project for youth that saw the hiring of two Aboriginal students to interview Elders and make presentations to young people about the NWMO. Students spoke with Elders in the nuclear provinces to learn from their experiences about community changes due to large-scale development projects, and sought their views on interweaving Traditional Knowledge and western science.

In response, in part, to work accomplished by Aboriginal students during the previous year's summer project, the NWMO began developing culturally appropriate communication materials in 2008. A Niigani member joined several other Aboriginal communication specialists, from the fields of television, print and community engagement, on a committee to help develop an introductory brochure aimed at Aboriginal peoples and to adapt an NWMO DVD for the same purpose. The next step will be translation of both items into Aboriginal languages. Niigani was also instrumental in the start-up of a regular Niigani newsletter for communicating with members of the Elders' Forum and for distribution among Aboriginal peoples.

Another important initiative to improve communication between the NWMO and Aboriginal communities was an agreement reached with the Assembly of First Nations (AFN). A two-year project has been launched to develop communication material for First Nations on nuclear waste management from a First Nation perspective. Through support provided by the NWMO, the AFN has hired a project coordinator who will assist First Nation communities that wish to engage with the NWMO as Adaptive Phased Management is implemented. The NWMO and AFN have also begun to develop a protocol agreement to guide our work together.

In 2008 the Federation of Saskatchewan Indian Nations (FSIN) explored the potential for developing a protocol agreement with us. A joint workshop was held with First Nations Chiefs and Elders in Saskatchewan to provide information on the NWMO and Adaptive Phased Management, and to hear what is important in a protocol. The FSIN Lands & Resources Commission will guide the development of this agreement through early 2009.

In another project, the Native Women's Association of Canada (NWAC), through its Environmental Roundtable, is exploring the development of a toolkit to assist Aboriginal women in engaging on community issues in their role as stewards of the environment and, in particular, in discussions on nuclear waste management. The toolkit was developed for NWAC through a graduate program in environmental studies at Dalhousie University and with support from the NWMO.

The NWMO is committed to learning about Aboriginal Traditional Knowledge and how it can be respectfully and legitimately applied to the long-term management of used nuclear fuel. To advance our understanding we conducted cultural training within the NWMO. Niigani Elders guided two all-day sessions for our staff on cultural protocols and on treaties and governance. A third session examined the issue of consultation with Aboriginal peoples.

The NWMO also conducted a Traditional Knowledge project aimed at better understanding how Traditional Knowledge and Western Science can interweave. The three-part endeavour encouraged sharing of expertise between practitioners of both (see Traditional Knowledge and Western Science, page 29).

ENGAGING YOUTH

One of the most consistent messages the NWMO has heard is about the need to engage young people. Adaptive Phased Management will be implemented over many decades so the involvement of youth is critical for success. Throughout implementation it will be important to identify generational differences in values, social norms and evolving issues and concerns, and to seek the advice of young people on how to resolve them.

In 2008, the NWMO met its commitment to establish a youth roundtable. Fifteen people ranging in age from 18 to 25 have agreed to participate in the process. With representation from the four nuclear provinces, the roundtable includes participants of varying demographic backgrounds and diverse

educational and work experiences. Members will convene several times in 2009, both in person and online, to provide advice on developing and implementing a strategy to engage youth. Also, youth members of the Aboriginal Elder's Forum will be developing further opportunities for increased involvement of Aboriginal young people in NWMO's work.

The NWMO also continued its practice of meeting with young people to share information about our work and seek comment. We made presentations at several universities and high schools, and assisted students who contacted us with nuclear waste questions related to their studies.

BROAD OUTREACH

Through our ongoing outreach in 2008, we invited the public to become involved in our work. We continued to nurture existing relationships and to develop new associations, encouraging participation and seeking input into how we can best move forward with the long-term management of Canada's used nuclear fuel.

The NWMO published the first of its evolving five-year implementation plans in 2008. In April, the document, *Implementing Adaptive Phased Management 2008 to 2012*, was released in draft for public comment. It was posted on the website, and 1,500 copies were mailed to NWMO mailing list subscribers, including private individuals and organizations. After two months of public review, which included Citizen Panels, e-dialogues, web-based review and surveys, meetings and briefing sessions, the views that were elicited were taken into account and the plan was revised. The five-year Implementation Plan will be reviewed and updated annually, www.nwmo.ca/implementationplan.

We continued to engage representatives of nongovernmental organizations to raise awareness about the NWMO and Adaptive Phased Management, and to seek their input into our Implementation Plan and the design of the process for selecting a site. Face-to-face meetings were held in the four nuclear provinces with representatives of environmental organizations and community-based groups. Many of these people also participated in multi-party dialogues held in the fall. The dialogues, convened in the four nuclear provinces to discuss elements of a siting process, brought together representatives of industry, faith-based organizations, academia and subject specialists. More than 90 percent of the participants who provided feedback on the multi-party dialogues rated the activity as very good or excellent and said the activity met its objectives. Almost all expressed interest in participating in future dialogues.

Throughout the year, the NWMO accepted invitations to make presentations to many diverse groups and organizations. Among these: NWMO president Ken Nash moderated a panel discussion on Advances in Social Aspects of Nuclear Waste Management at the annual seminar of the Canadian Nuclear Association; NWMO staff members made several presentations at workshops sponsored by chapters of the Canadian Nuclear Society in Ontario and New Brunswick; the NWMO was represented at well-attended community Energy Day functions in Kincardine and Haldimand, Ontario; we met with delegates at the Globe Environment Conference in Vancouver; industry groups, including staff at NB Power and Women in Nuclear, were briefed; and we continued our annual participation in the Fundy Bay Fishermen's Day event in Dipper Harbour, New Brunswick.

The website remains an important resource for communication with the public. It was updated regularly with news releases, newsletters and minutes from Board and Advisory Council meetings. Technical and social research and engagement reports were posted, as were the first iteration of NWMO's evolving five-year Implementation Plan and the Discussion Document to support dialogue on the design of a siting process. Public submissions on the Implementation Plan and the siting document were invited through the site and are published there. Well over 100 public inquiries arrived through the website. Many of these were requests for copies of NWMO documents or our DVD. Others came from people with questions or comments about our work.

COMMUNITY INVESTMENT

Youth is the focus of the new NWMO Community Investment Program. Established in 2008 to support worthwhile community initiatives, the program is designed to build capacity for engaging youth on energy matters.

Grants will be targeted to the four nuclear provinces and will focus on:

- youth and Education;
- youth and the Environment and Sustainable Development;
- youth and Science and Technology; and
- youth and Aboriginal Communities.

The first grant made under the Community Investment Program in 2008 was to the Youth Science Foundation of Canada, which assists Canadian youth in the development of skills and knowledge to further excellence in the fields of science and technology.

The NWMO Community Investment Committee will evaluate future proposals against the 2009 grant guidelines, and recommend a series of investments to senior management.
The NWMO will be responsive to proposals received, and will target investments in initiatives that align with the organization's values and mandate.

All community investments will be evaluated on an annual basis against a set of indicators, to assess the benefits and impacts derived by both the recipients and the NWMO.

COMMUNICATION

Communication is a critical factor in the realization of Adaptive Phased Management. In order to participate in its implementation, people need to understand the issues, what the NWMO is doing and why.

In 2008, the organization continued to enhance its communications. Over the year, we expanded our capacity to produce and deliver more effective and accessible information. All staff who engage the public participated a communication skills training program. We also improved our French language capabilities by hiring two bilingual communications personnel.

A new DVD, *Moving Forward Together*, was produced to introduce the NWMO and explain Adaptive Phased Management and its implementation, and the collaborative design of a process to identify an informed and willing community to host a deep geological repository.

To further promote general knowledge of the technical, social and economic issues of used nuclear fuel management, we published backgrounders and information sheets on a range of topics, including: the project to construct and operate a deep repository, climate change, transportation of used nuclear fuel and regulatory oversight. These materials, along with the DVD, were distributed to interested subscribers, and at conference trade shows, and are also available on the NWMO website.

The NWMO continued its efforts in 2008 to build media awareness of Canada's plan for long-term used nuclear fuel management. Although there was limited interest among newspaper editorial boards in meeting with us, many media outlets in each of the nuclear provinces did contact the NWMO for comment when nuclear waste management issues arose in their communities. On balance, the resulting coverage was fair and informative.

We engaged focus groups and citizen panels to provide feedback on many of our communications materials. A comprehensive communication audit will occur in 2009.

The NWMO will continue to identify and respond to opportunities to build awareness about our activities, and to develop communications materials to promote understanding of Adaptive Phased Management through all its stages of implementation. A priority project in 2009 will be to respond to the suggestions that we complete work begun in 2008 to update and improve our website's design, accessibility and functionality. Consistent with our commitment to ensure information on the website is maintained as current as possible, additional resources have been made available.

ADVANCING RESEARCH

Canadians expect significant and ongoing investment in research so that Adaptive Phased Management will benefit from the best technological innovation and most advanced social and scientific knowledge available. We understand the importance of listening to citizens and specialists in identifying research of relevance and interest.

THE NWMO RESEARCH PROGRAM IS DESIGNED TO:

- enhance understanding to improve confidence in predictions, reduce uncertainty, and evaluate potential program improvements;
- confirm performance during and after program operations;
- demonstrate capacity to respond to citizens' concerns and desires;
- support mid-course corrections in response to new information or societal decisions;
- prepare for facility siting, design, licensing, development, operations and transportation of the used fuel; and
- assure human capacity to manage the implementation of Adaptive Phased Management.

TECHNICAL RESEARCH AND DEVELOPMENT PROGRAM

The NWMO's Technical Research and Development program is supporting the implementation of Adaptive Phased Management and the collaborative design of a siting process for a deep geological repository. The workplan, which is updated annually, is focused on advancing used fuel storage and repository engineering, geosciences and safety assessment.

In addition to relying on our in-house capabilities, the NWMO has developed working relationships with a number of universities and consultants. Canadian universities contributing to the advancement of knowledge and understanding of repository engineering, geoscience and safety assessment include: University of British Columbia, University of Alberta, University of Calgary, University of Saskatchewan, University of Manitoba, University of Waterloo, University of Western Ontario, University of Toronto, University of Ontario Institute of Technology, Queen's University, Royal Military College, McGill University, Université Laval and University of New Brunswick. Other universities contributing to the NWMO's research include: University of Bern (Switzerland), Columbia University (USA), New Mexico Institute of Mining and Technology (USA) and University of Arizona (USA).

In 2008, the NWMO completed an evaluation of what the load would be on a copper container under repository conditions. The CANDU bundle stress model was improved, and a database on thermodynamic modelling of chemical species in a vault and geosphere was developed. A report on the spatial variations of the diffusive properties of sedimentary rock was prepared.

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

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

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

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

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

Throughout the year, technical staff conducted and participated in numerous presentations, workshops and seminars engaging universities, the consulting community and government organizations. Notable among these were:

- an Annual Geoscience Seminar with a focus on long-term geosphere stability and development of site characterization tools and methods;
- a Glaciation Scenario Safety Assessment Workshop on three-dimensional groundwater flow and radionuclide transport;
- a presentation of technical research papers at the International High-Level Radioactive Waste Management Conference;
- technical presentations to geological engineering students at Queen's University, and engineering students at Carleton University and the University of Ontario Institute of Technology (UOIT);
- an NWMO program update at the Annual Canadian Nuclear Workers Council (CNWC) Conference; and
- an Aboriginal Traditional Workshop to explore the interweaving of Aboriginal Traditional Knowledge and western science as it applies to the work of the NWMO, particularly implementing Adaptive Phased Management.

In November, NWMO was approved as a sponsoring organization for the Natural Sciences and Engineering Research Council's Industrial R&D Scholarship and Fellowship program. The scholarships are aimed at encouraging scholars to consider research careers in industry, where they will be able to contribute to strengthening Canadian innovation.

REGULATION

The NWMO continues to provide annual technical program updates to the Canadian Nuclear Safety Commission (CNSC) staff, and interact with them to identify and clarify regulatory requirements associated with the implementation of Adaptive Phased Management. In 2008, the NWMO worked on a project interface arrangement with the CNSC, expected to be finalized in 2009. The NWMO also made a presentation and responded to questions at a CNSC public meeting in November on the management of radioactive waste in Canada.

Monitoring Canadian and international regulatory developments for used fuel management facilities, the NWMO attended a planning meeting in Ottawa related to the development of the Canadian National Report for the 2009 review meeting of the Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management.

INTERNATIONAL TECHNICAL COLLABORATION

The NWMO has been participating actively in international collaboration and joint research activities, and has incorporated new international knowledge into its technical research and development program.

Through co-operation agreements to gain site characterization expertise, the NWMO is participating in underground research, experiments and technology demonstrations in crystalline rock at SKB's Äspö Hard Rock Laboratory in Sweden, and in sedimentary rock at the Mont Terri Underground Research Laboratory in Switzerland.

In May, NWMO personnel attended the Äspö Hard Rock Laboratory 15th Technical Evaluation Forum and International Joint Committee meeting. In August, the organization submitted the Canadian Response to the Nuclear Energy Agency (NEA) Radioactive Waste Management Committee Reversibility and Retrievability Questionnaire; and in October, we hosted the NEA Reversibility and Retrievability Project Meeting in Toronto with representatives from Belgium, Canada, Czech Republic, France, Germany, Japan, Korea, Spain and the United Kingdom, as well as from the International Atomic Energy Agency (IAEA) and NEA. The NWMO is also providing financial support to the four-year NEA Radioactive Waste Management Committee initiative on Reversibility and Retrievability.

NWMO technical program staff provided lectures at a two-day IAEA training course on Decision-Making and Stakeholder Involvement in Repository Development in Toronto, and attended the 10th Meeting of NEA Integration Group for the Safety Case in Paris.

LOOKING FORWARD

The NWMO is committed to a research and development program that advances knowledge and understanding of technology for long-term used fuel management, and to support the collaborative development of a siting process.

In 2008, the NWMO developed plans to initiate an update to the conceptual design and cost estimate for a deep geological repository and used fuel transportation system. This work will be done over the 2009 to 2011 period.

The focus of our research and development in 2009 will be to continue to develop and evaluate conceptual designs for a deep geological repository, and improve our readiness for site evaluations, used fuel transportation and preliminary safety assessments of potential candidate host sites for long-term management of used nuclear fuel.

SOCIAL RESEARCH

The objective of our social research program is to assist the NWMO, and interested citizens and organizations, in exploring and understanding social issues and concerns associated with implementing Adaptive Phased Management. The program helps to identify appropriate processes and techniques for engaging potentially affected citizens in decision-making.

Social research supports our ongoing dialogue and collaboration activities. This includes work to engage potentially affected citizens in the near-term visioning of the implementation process, long-term visioning and the development of decision making processes.

The program includes work to learn from the experience of others through examination of case studies, and conversation with people involved in similar processes, both in Canada and abroad. We engage a wide variety of specialists exploring a range of perspectives on key issues.

During 2008, the NWMO concluded its first Citizens Panel program involving a cross-section of individuals in each of the nuclear fuel cycle provinces. The Panels brought together citizens selected at random, over four meetings to provide input to our early plans. Discussions largely mirrored and complemented discussion in other NWMO engagement activities.

The Citizen Panels were recruited, organized, administered and reported on by a third party contractor. As is the case with other NWMO engagement activities, locations for the panels were chosen to include major population centres in the nuclear provinces and regions so that a broad range of views might be heard. Panelists underwent a standard research screening survey and were selected to ensure a diversity of age, gender and experience. Topics discussed included: input to the development of NWMO's first Implementation Plan and subsequent review of portions of a draft of this document; and review of the framework of values and objectives suggested as the starting point for collaborative development of the siting process. A summary report of the Panel sessions is published on the NWMO website at www.nwmo.ca/citizenpanels.

The NWMO also commissioned a nation-wide telephone survey of 2,600 Canadians to solicit input to the design of the siting process.

We conducted several sessions of focus groups on specialized questions during Fall 2008. Two sessions, involving Aboriginal participants selected at random, reviewed an adapted draft version of NWMO's corporate brochure. Their comments and suggestions led to refinements in the brochure before it was released in late 2008. The document was recommended by Niigani, the NWMO Aboriginal Working Group.

We also commissioned focus groups to review the NWMO DVD. Participants provided helpful direction for future refinements of the presentation and for the production of DVDs on topics of interest to Canadians. Research reports for each of these activities are published on the NWMO website.

TRADITIONAL KNOWLEDGE AND WESTERN SCIENCE

The NWMO undertook a project with the guidance of Niigani to explore interweaving Traditional Knowledge and western science as they apply to NWMO's work. The initiative provided opportunities for sharing personal experiences and dialogue between NWMO staff members and holders of Traditional Knowledge.

» In the first phase, to learn more about technical research and nuclear waste management, participants visited the Ontario Power Generation proposed Deep Geological Repository site for low and intermediate level waste near Kincardine, Ontario. Here they saw first-hand the geological investigations being conducted in the development of a deep repository.

» Later, to experience Aboriginal Traditional Knowledge, NWMO technical and engagement staff, along with members of the Aboriginal working group Niigani, participated in a fish camp with a traditional Aboriginal family near Fort Good Hope in the Northwest Territories. The experience afforded a natural environment for sharing Traditional Knowledge and provided an opportunity for NWMO personnel to develop their skills in communicating scientific knowledge to Aboriginal Elders and youth.

» The project concluded with a workshop to bring together holders of Traditional Knowledge, resource people with experience in industrial projects involving interweaving Traditional Knowledge and western science, and NWMO technical and engagement team members. Workshop participants identified a number of ways to draw from the distinct strengths of each knowledge system, and shared experiences and observations. They discussed similarities and differences between western science and Traditional Knowledge, and they identified some of the opportunities and limitations of each.

ETHICAL FRAMEWORK

The NWMO is committed to respecting the highest ethical standards in carrying out its mandate. In recommending Adaptive Phased Management as the approach for long-term care of used nuclear fuel, we endorsed and adopted the ethical values and principles that emerged from our three-year engagement of Canadians, between 2002 and 2005. We also accepted the counsel of our Roundtable on Ethics that our work should be guided by a series of questions relating to process and procedure, as well as to substantive recommendations and decisions. We committed to reporting on our adherence to these measures.

The commentary on the opposite page represents NWMO's initial report and corporate reflection on its performance in this area. In the future, as we further develop our work and advance the implementation of Adaptive Phased Management, we will begin to involve independent experts in these assessments.

The NWMO supports the Canadian Business Ethics Research Network (CBERN), which aims to promote knowledge-sharing and partnerships within the field of business ethics and across private, governmental, voluntary and academic sectors.

We participate in the Forum on Stakeholder Confidence, a collaborative working group of the Organization for Economic Co-operation and Development (OECD), an intergovernmental organization of industrialized countries, based in Paris.

The Social Research group commissions academic papers in response to topics raised during dialogue; these are published on the NWMO website. A small number of papers was commissioned in 2008, largely focusing on review of best practices and lessons learned with respect to the concept of "community well-being," which is expected to be important to the design of a siting process and interaction with communities. Commissioning expert perspectives to support future dialogue is expected to increase substantially in the coming years, as we begin to address issues in greater detail.

LOOKING FORWARD

Adaptive Phased Management will be implemented over many decades. The NWMO will have many opportunities to improve performance, enhance effectiveness, build understanding and address societal concerns. The nature and conduct of our social research will change as best practices evolve, and as interested citizens and organizations identify the issues of most interest and concern to them.

ETHICAL FRAMEWORK – REFLECTION ON PERFORMANCE

Over 2008, the NWMO has endeavoured to clearly communicate its values, and its transparency and engagement policies, in public documents made available in a number of formats. Specifically, guided by the outcome of its public consultation and the recommendations of the Ethics Roundtable, the NWMO has integrated ethical values and principles into its work in the following ways:

1. It has set out its mandate in a Vision Statement that commits the NWMO to carrying out its mandate in "a manner that safeguards people and respects the environment."
2. It has committed to proceeding collaboratively with Canadians in a manner that is "socially acceptable, technically sound, environmentally responsible and economically feasible."
3. It has identified five core values that it is committed to respecting, with a view to ensuring that it carries out its mandate in an ethically responsible manner. These values are: integrity, excellence, engagement, accountability and transparency.
4. It has developed policies designed to ensure that the values to which it has committed itself are integrated into its operations. Specifically:

- The Transparency Policy commits the NWMO to ensuring that the information guiding the management and the direction of the NWMO is readily accessible to all interested persons and organizations. The policy commits the NWMO to providing the information that public generally and individuals, groups and organizations have said they require to determine, from their own perspective, whether the NWMO is living up to its ethical responsibilities.
- The NWMO's Public Engagement policies and strategy build on its values. A key element of the NWMO's engagement strategy is an invitation to everyone and anyone with an interest in participating in designing the process for selecting a site for the deep geological repository. The first two questions invite those joining the dialogue to focus on the ethical values that should guide the site selection process.

5. The NWMO has designed a communications strategy that uses a broad range of tools, including a website, videos, reports and citizen panels, designed to facilitate access to information that will support informed public engagement, and provide the foundations for the informed public evaluation of its work. The NWMO issued two reports in 2008 on what was heard in the course of these various forms of engagement.
6. The NWMO has facilitated the creation of an Aboriginal Elders' Forum that meets annually. Composed of Elders suggested by Aboriginal organizations from across the country, the Elders' Forum is responsible for shaping a strategy and setting out the values that, in its view, should guide NWMO's engagement with Canada's Aboriginal peoples. The Elders' Forum has in turn created Niigani, a working group to guide and structure NWMO's engagement with Canada's Aboriginal peoples between annual meetings of the Elders' Forum.
7. NWMO has put in place two key principles designed to ensure that the process of selecting a used fuel repository site is guided by high ethical standards. The first of these is the "Producer Pay" principle. This means that those who benefit must shoulder the costs associated with the long-term management of nuclear waste. The second is the "informed and willing community" principle. A repository site will not be imposed on an unwilling community. These two principles taken together are designed to ensure that the NWMO fulfills its mandate in accordance with the ethical values to which it has committed itself.

PROVIDING FINANCIAL SURETY

The *Nuclear Fuel Waste Act* specifically addresses the future financial obligations for managing used fuel over the long term. The legislation requires the establishment of trust funds by each waste owner. The funds were established in 2002 and annual contributions have been made by each waste owner since. The total value of these funds, including investment income, was approximately $1.5 billion as of the end of 2008. This money is in addition to other segregated funds and financial guarantees the companies have set aside for nuclear waste management and decommissioning.

Owner	Trust Fund Balance ($ million) December 2008
Ontario Power Generation	1,386
Hydro-Québec	50
NB Power Nuclear	49
Atomic Energy Canada Limited	25
Total	**1,510**

Experience in other countries has demonstrated the importance of safeguarding these funds so that they will be preserved for the intended purpose. The *NFWA* built in explicit provisions to ensure that the trust funds are maintained securely and used only for the 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 *Nuclear Safety and Control Act* (*NSCA*).

These legislated obligations are the responsibilities of the individual companies named, and not the responsibility of the NWMO. The trust funds are noted here because of their significance in the overall provision for long-term nuclear waste management.

As required by the *NFWA*, the NWMO makes public the audited financial statements of the trust funds when they are provided by the financial institutions annually. They are posted at www.nwmo.ca/trustfunds.

In addition, the NWMO is required to provide a range of financial information in each of its annual reports following the Government's decision, as defined in Subsection 16(2) of the *Nuclear Fuel Waste Act* (*NFWA*).

FINANCIAL GUARANTEES As Required by *NFWA* Section 16(2)(a)

As specified in the *NFWA*, this report provides the form and amount of the financial guarantees that all NWMO members – Ontario Power Generation Inc. (OPG), Hydro-Québec (HQ) and NB Power Nuclear (NBP) have provided to the Canadian Nuclear Safety Commission (CNSC). These guarantees for year 2009 total $12 billion and equal the total cost (in present value terms) of

managing the decommissioning of all reactors and permanently managing all nuclear waste (including used nuclear fuel) produced to date. A large portion of these guarantees, approximately $10 billion (as at December 31, 2008), exist in segregated funds dedicated to nuclear waste management and decommissioning with the remainder in the form of Provincial Guarantees.

» **Details of the status of these guarantees are presented in Attachment 1** (p.38).

TOTAL COST ESTIMATE As Required by *NFWA* Section 16(2)(b)

The *NFWA* requires the NWMO to address the cost and funding of the long-term management of used nuclear fuel. In its 2005 final study report, NWMO estimated the cost of APM to be in the range of $5 billion to $6 billion (stated in present value as of January 1, 2004) assuming 3.6 million used fuel bundles are produced over the life of Canada's nuclear reactors. When updated to January 1, 2009 present value, the estimated cost of APM is in the range of $7 billion to $8 billion. These cost estimates include costs for reactor site storage, which are carried out and funded by the individual waste owners, and costs to develop, construct and operate a central long-term facility, including a deep geological repository and transportation for the used nuclear fuel to the repository, which are carried out and funded by the NWMO.

The next generation of baseline cost estimates is expected to be completed no later than the year 2012. In addition to regular baseline cost estimate updates, NWMO is committed to providing annual assessments on all factors that impact these cost estimates. Any material change in the cost estimate will be assessed and disclosed in the NWMO Annual Report.

The highest present value cost scenario for long-term management of Canada's used nuclear fuel assumes a deep geological repository would be available starting in 2035. For the purpose of determining the funding requirements for the long-term management of used fuel, the cost estimate is further segregated into two parts:

1. The cost of developing and building a repository, transporting the used fuel and operating the repository starting in 2035 for the estimated 1.9 million fuel bundles produced as of the end of June 2006 would be approximately $5.0 billion (stated in present value as of January 1, 2009). This amount represents the "committed" portion of the total cost of the long-term management of used fuel already generated. The costs of interim storage at the reactor sites and recovery of the used nuclear fuel from storage are not included since they are the responsibility of the waste owners.

2. The incremental cost of fuel bundles generated after June 30, 2006, including the transport to the repository, facility expansion and additional costs are identified as the "future" portion of the total cost of the long-term management of used nuclear fuel. These costs will be dependent on future production levels.

BUDGET FORECAST FOR 2009 As Required by the *NFWA* Section 16(2)(c)

In addition to making financial provision for work required post-construction licence, NWMO will incur costs of approximately $1.7 billion (as stated in present value as of January 1, 2009) to site the long-term management option, develop its detailed design, evaluate its environmental impacts and obtain a construction licence from the CNSC. For 2009, the NWMO Board of Directors approved a budget envelope of $33 million. Annual costs beyond 2009 are subject to further review. Sharing of these costs will be in accordance with the percentages defined in the funding formula.

FUNDING FORMULA As Required by *NFWA* Section 16(2)(d)

In accordance with the requirements of the *NFWA*, the NWMO proposed a funding formula to address the future financial costs of implementing the Adaptive Phased Management (APM) approach. This proposal was contained in the 2007 Annual Report following the Government's selection in June 2007 of the APM approach for the long-term management of used nuclear fuel. The proposed funding formula, based largely on projections of used fuel to be generated by each waste owner, allocates liabilities to each of the corporations for their portion of the estimated total cost. It identifies trust fund contributions by each nuclear waste owner for their portion of the estimated total cost. The proposed funding formula is currently under review by the Minister of Natural Resources.

The five-year used fuel production forecast for each waste owner is shown in Table 1.

Table 1: Used Fuel Bundle Production (Historical and Forecast)

	June 2006	2007*	2008*	2009*	2010*	2011*
Owner	**Inventory**	**Actual**	**Actual**	**Projection**		
OPG	1,640,481	71,104	71,673	75,983	76,576	79,852
HQ	101,130	4,651	2,800	4,819	4,500	8,105
NBP	109,298	4,668	7,792	-	2,000	4,923
AECL	30,715**	-	-	-	-	-
Total	**1,881,624**	**80,423**	**82,265**	**80,802**	**83,076**	**92,880**

*from July 1 (previous year) to June 30 (current year) **updated by AECL in 2008

It should be noted that the small quantities of research reactor fuel waste are not included in the AECL used fuel inventory listed in Table 1. The NWMO is obligated to offer its nuclear fuel waste management services at a reasonable fee to all owners of nuclear fuel waste produced in Canada.

2008 TRUST FUND CONTRIBUTIONS

For the 2008 fiscal year the four corporations made contributions to their respective trust funds in the amounts indicated below:

Ontario Power Generation Inc.	$100,000,000
Hydro-Québec	$ 4,000,000
NB Power Nuclear	$ 4,000,000
Atomic Energy of Canada Limited	$ 2,000,000

The *NFWA* specifies that contributions to the trusts are to continue at the present rate until a new funding formula is approved by the Minister of Natural Resources. Upon approval of the funding formula, the difference between these contribution amounts and those calculated under the funding formula for 2008 will be deposited into the trust funds. Ministerial approval of the funding formula is currently expected to be in 2009.

TRUST FUND DEPOSITS FOR 2009 As Required by *NFWA* Section 16(2)(e)

The *NFWA* Trust Fund deposits for 2009 and beyond stated herein have been developed based on the proposed funding formula. Under this funding formula, the funding for the post-construction licence cost is divided into two parts:

1. Cost associated with used nuclear fuel already produced to June 30, 2006 (Committed Liability)
2. Cost associated with used nuclear fuel to be produced after June 30, 2006 (Future Liability)

COMMITTED LIABILITY

The committed portion of the funding requirement represents all costs that will be incurred, regardless of whether any further used fuel bundles are generated after June 30, 2006. This liability includes all fixed costs for the facility and variable costs attributed to used fuel bundles in inventory up to June 30, 2006.

Contributions for the “committed” liability are to be amortized to year 2035 in equal present value payments. The rationale for this amortization period is that 2035 is consistent with the planned end of life of the current nuclear reactors that created the 1.9 million used fuel bundles and it is consistent with the earliest planned date when the deep geological repository would be available. This funding method has the advantage of distributing the funding obligations evenly to each year, taking into account the time value of money.

The contribution amounts required to fund the committed liability are shown in Table 2.

Table 2: Contributions to Trust Funds for "Committed" Fuel Bundle Liability

Owner	Deposits to Trust Fund – "Committed" Bundles ($ million)		
	2009	2010	2011
OPG	60	63	66
HQ	4	4	4
NBP	4	4	5
AECL	2	2	2
Total	**70**	**73**	**77**

FUTURE LIABILITY

This liability represents the incremental cost of transferring[3] to the repository, facility expansion and additional operating and monitoring costs for any future bundles produced beyond June 30, 2006. Each future used nuclear fuel bundle would incur the same cost in present value terms, taking into account the time value of money.

The projected waste owner contributions to trust funds for the liability associated with the future used fuel bundles to be generated are shown in Table 3. Actual contributions by the waste owners for future used fuel bundles will depend on the actual number of bundles generated annually by the individual waste owners.

Table 3: Contributions for Future Fuel Bundle Liability

Owner	Projected Deposits to Trust Fund – Future Bundles ($ million)		
	2009	2010	2011
OPG	68	76	80
HQ	2	4	4
NBP	6	0	2
AECL	0	0	0
Total	**76**	**80**	**86**

[3] Transferring includes transportation of the casks to the central facility, and unloading the used nuclear fuel from the casks and loading it into long-term storage containers.

Table 4 summarizes the total expected contributions from 2009 to 2011.

Table 4: Total Trust Fund Contributions: Year 2009 to 2011
(assumed to be made on April 30 of each year)

Owner	Trust Fund Balance* ($ million)	Deposits to Trust Funds (Committed and Future Bundles) ($ million)			
	Dec 2008*	2009**	2009	2010	2011
OPG	1,386	25	128	139	146
HQ	50	3	6	8	8
NBP	49	4	10	4	7
AECL	25	0	2	2	2
Total	**1,510**	**32**	**146**	**153**	**163**

* The 2008 financial market volatility had little negative impact on the trust funds due to the conservative portfolios they held.

** Contributions in 2009 are calculated to include the year 2008 funding shortfall as required by the proposed funding formula plus interest accrued on this shortfall. Amounts are rounded to the nearest million dollars.

The *NFWA* specifies that the full trust fund deposits are to be made within 30 days of the Minister of Natural Resources' approval of the proposed funding formula. Subsequent annual contributions are due within 30 days of the issuance of the NWMO Annual Report.

The deposits to trust funds represent the total contribution towards the committed liability and the projected contribution towards future bundles. The total deposits to trust funds of $146 million in 2009, rising to $163 million in 2011, compares to $110 million annually, as legislated in the *NFWA.* The revised values are pending the approval of the funding formula by the Minister of Natural Resources.

ATTACHMENT 1

Financial Guarantee Status – NWMO Members

ONTARIO POWER GENERATION INC.

Effective July 31, 2003, OPG provided the Canadian Nuclear Safety Commission (CNSC) with a Decommissioning Financial Guarantee that included a guarantee associated with the long-term management of used fuel arising from the operation of OPG-owned nuclear stations and waste management facilities, including those leased by Bruce Power. The Decommissioning Financial Guarantee also covers liabilities associated with long term management of low and intermediate level waste, as well as plant decommissioning.

Development and maintenance of the Financial Guarantee considers the following points:

- The Financial Guarantee covers the liability based on projected used nuclear fuel generated to year-end in any given year. As a result, the value of the used fuel Financial Guarantee changes annually to recognize the incremental costs associated with additional used fuel generated during that year.
- The initial Financial Guarantee submission covered the five-year period to year-end 2007. It was updated annually by means of an Annual Report provided to the CNSC.
- The financial guarantee is satisfied in part by the actual accumulation of funds within a Used Fuel Fund and a Decommissioning Fund under the *Ontario Nuclear Funds Agreement (ONFA)* between OPG and the Province of Ontario. This value is supplemented by a Provincial Guarantee that is executed between the Province of Ontario and the CNSC.
- The *NFWA* Trust Fund forms part of the Used Fuel Fund under *ONFA*.

The Provincial Guarantee Agreement provides an unconditional and irrevocable guarantee to supplement monies set aside by OPG in segregated funds, including the *NFWA* Trust Fund, to satisfy the total financial guarantee required by the CNSC.

OPG submitted documents to the CNSC in 2007 to support its application to update the financial guarantee for the period from January 1, 2008 to year-end 2012. The CNSC Hearing for this application was held in November 2007. The CNSC accepted the financial guarantee proposal on November 29, 2007.

The Annual Report to the CNSC for year 2009 shows a financial guarantee requirement of $10.774 billion. This will be satisfied by a segregated fund balance at year-end 2008, projected at $9.229 billion, and a Provincial Guarantee of $1.545 billion.

The value of the Ontario Power Generation *Nuclear Fuel Waste Act* Trust Fund as of year-end 2008 is $1.386 billion. This value forms part of the segregated fund balance shown above.

HYDRO-QUÉBEC

Hydro-Québec has provided the CNSC with a Decommissioning Financial Guarantee of $685 million, stated in present value as of December 31, 2011, that includes a guarantee associated with used fuel arising from the operation of Gentilly-2 until 2011, and the cost of station decommissioning, including the long-term management of low and intermediate level radioactive waste.

- The total guarantee is made up of $402 million for decommissioning and long-term management of low and intermediate level radioactive waste, and $283 million for used fuel.
- The guarantee is in the form of an expressed commitment of the Province of Québec to Hydro-Québec, which provides a guarantee of payment until December 31, 2011, and the Hydro-Québec *Nuclear Fuel Waste Act* Trust Fund.
- The Hydro-Québec *Nuclear Fuel Waste Act* Trust Fund contained $50 million as of December 31, 2008.

NB POWER NUCLEAR

NB Power Nuclear has provided the CNSC with a Decommissioning Financial Guarantee that includes 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 current used fuel financial guarantee is based on the present value of future costs to manage used fuel produced to the end of 2009. The fund will be increased annually based on future used fuel production estimates.
- The financial guarantee requirement is satisfied by three separate funds: a used fuel fund, a station decommissioning fund and the *Nuclear Fuel Waste Act* Trust Fund
- The total market value of the funds at December 31, 2008 was approximately $435 million and was composed of the following:

- Used fuel fund – $247 million
- Station decommissioning fund – $139 million
- *Nuclear Fuel Waste Act* Trust Fund – $49 million

ATOMIC ENERGY OF CANADA LIMITED

The AECL financial guarantee is in the form of an expressed commitment by the Government of Canada to the CNSC. No specific dollar values are quoted in the commitment letter.

- The AECL *Nuclear Fuel Waste Act* Trust Fund contained $25 million as of December 31, 2008.

REVIEWING, ADJUSTING AND VALIDATING PLANS

The long-term management of used nuclear fuel in Canada will necessarily be implemented over many decades. In that time, energy policies will continue to change, societal values and expectations will evolve, and technology will advance.

Incorporating new learning and knowledge into decision-making about used fuel management is a key strength of Adaptive Phased Management. As we implement the approach, the NWMO is committed to re-evaluating choices where warranted, maintaining the option to adjust course, and being prepared to act on new information and adapt to changing circumstances.

IMPLEMENTATION PLAN

In 2008, we published our first five-year Implementation Plan, a living document built on our strategic planning objectives. The plan reconfirms and demonstrates NWMO's commitment to engaging and collaborating with Canadians in defining how we go forward. It will be reviewed and updated annually.

Implementing Adaptive Phased Management 2008 to 2012 was first released in draft, in April, for public comment to identify adjustments and course corrections to address the needs of Canadians at the early planning stages. Before confirming the document in June, we received input and guidance from many subscribers who were mailed hard copies, visitor submissions, surveys and e-dialogues on the website and Citizen Panels, and through briefings and presentations conducted with a range of groups and associations.

The Implementation Plan takes into account and reflects many of the comments we received. There was a consistent call for the NWMO to continue moving forward. Indeed, many organizations confirmed their interest in working with us, with some expressing interest in developing protocol agreements to formalize collaboration and communications.

There was also considerable discussion of the changing energy landscape in Canada, including the possibility of new nuclear reactors being built. Consistent with our mandate under the *Nuclear Fuel Waste Act*, most people who spoke about energy policy advocated that the NWMO incorporate the implications of possible new reactors and different fuel types into our plans for implementing Adaptive Phased Management (see next page: Energy Policy).

The suggestions we heard will be considered for incorporation into future plans as specific program elements are designed. A summary of all the comments we heard is posted, along with Implementing Adaptive Phased Management 2008 to 2012, on our website at www.nwmo.ca/engagementreports.

The NWMO understands that the strength and acceptance of its implementation plan will come from a shared vision of where we are headed. Our updated plan, covering the years 2009 to 2013, was published in early 2009 and made available on the NWMO website at www.nwmo.ca/implementationplan. The NWMO will report on progress against its Implementation Plan in each of its Annual Reports. Comments are always welcome.

ENERGY POLICY

The NWMO has a legal obligation to manage all of Canada's used nuclear fuel – that which exists now and that which will be produced in the future. We are preparing to adapt our plans in response to the possibility of new quantities and characteristics of used nuclear fuel from the operation of both new and refurbished nuclear generating stations.

We met our commitment to report on, and publish on our website, current and projected future inventories of used fuel volumes and types. We have prepared a report which summarizes the existing inventory of used CANDU nuclear fuel and fuel-like wastes in Canada as of June 30, 2008, and forecasts the potential future volumes arising from the existing reactor fleet, as well as from proposed new-build reactors.

For the existing reactor fleet, the total used fuel produced to end-of-life of the reactors ranges from 2.8 to 5.5 million used CANDU fuel bundles. Used fuel produced by potential new reactors will depend on reactor types and number of units deployed. Plans in Canada are at various stages of development and decisions about reactor technology and the number of units have not yet been made. If all of the potential units where a formal licence application has already been submitted are constructed, the total additional quantity of used fuel from these reactors could be up to 2.3 million CANDU fuel bundles, or 27,000 Pressurized Water Reactor (PWR) fuel assemblies, or 27,000 Boiling Water Reactor (BWR) fuel assemblies. As these decisions are made by the utilities, our forecasts will be incorporated into future versions of this report.

We have also prepared a report on the technical design implications of potential changes in fuel volumes and types to be managed over the long term, and we are completing an estimate of financial cost implications for the various potential future scenarios.

These reports are available on the NWMO website at www.nwmo.ca/adaption.

TECHNOLOGICAL DEVELOPMENTS

NWMO is maintaining a watching brief on used nuclear fuel reprocessing, partitioning and transmutation (RP&T) and alternative technologies for the long-term management of nuclear fuel waste. In 2008, the first of a series of annual reports on RP&T and alternative technology was prepared. The report documented recent developments in national and international research activities on these subjects, as well as their potential impact on radioactive waste management.

EVOLVING SOCIETAL EXPECTATIONS

In light of evolving societal values and expectations, the NWMO continued to seek opportunities through its various engagement activities to continually confirm the social acceptability of its implementation plans for Adaptive Phased Management. These discussions arose as part of our dialogue on the design of a process for site selection. Views to help benchmark public concerns were also heard from participants in Citizen Panels, through public attitude research and a regular review of published media.

As we move forward with implementing Canada's plan for long-term used nuclear fuel management, the NWMO will continue to seek the input of citizens to validate the social acceptability of our plans. We will adapt and develop future plans against our Strategic Objectives, the framework of values and objectives developed with Canadians during the study phase, and with the guidance of our advisors.

In 2009, we will test the collaboratively designed siting process in a way that takes into account the most recent technical, social and energy policy information. It will be designed to be adaptive, with the flexibility to change and evolve over time, with the benefit of experience and new information.

ENSURING GOVERNANCE, OVERSIGHT AND ADVICE

In 2008 the NWMO examined internationally accepted management systems and alternative frameworks. A process framework based on the ISO 9001 and ISO 14001 management systems has been adopted, and a set of essential policies and procedures identified. Work to develop these has begun.

The organization also adopted a quality policy compliant with ISO 9001, and established supporting procedures for setting business objectives, obtaining member and community insight, regulatory interaction, managing nonconformance, and management review. Work will continue in 2009 to develop procedures enabling the NWMO to achieve full conformance to the ISO 9001 standard.

TRANSPARENCY

Sharing information and encouraging an exchange of perspectives is fundamental to the NWMO mandate. Consistent with our value that transparency should guide our work, and to demonstrate our commitment, the organization proposed a transparency policy in 2008 that was adopted by the Board of Directors following revisions and improvements elicited from Canadians during a period of public comment.

The transparency policy confirms continued use of the NWMO website to provide access to documents that are developed as we implement Adaptive Phased Management, and to receive submissions on our work as it progresses. Among items to be made public on www.nwmo.ca are documents related to the NWMO work program, including implementation plans, commissioned research reports, engagement and dialogue reports, and public comments and submissions received through the website. The NWMO will continue to publish governing documents and corporate reports, along with the minutes of its Board of Directors meetings and the discussion records of Advisory Council meetings.

TECHNICAL REVIEW

Following on the NWMO's expanded role in 2007, which gave the organization responsibility for managing and directing research on used nuclear fuel in Canada, the Board of Directors considered ways in which the NWMO technical research program could be reviewed by an independent group of specialists on an ongoing basis.

In 2008, the Board established an Independent Technical Review Group (ITRG). Initial ITRG membership comprises independent technical specialists from Canada, Sweden, Switzerland and the United Kingdom. Each has significant experience in technologies associated with the implementation of nuclear waste geologic repository projects.

The ITRG's mandate is to inform the Directors and the Advisory Council whether the NWMO technical program: is based on appropriate scientific and technical approaches and methodologies; is consistent with international practices; broadens and advances NWMO's technical knowledge to adequately support implementation of Adaptive Phased Management; and has sufficient technical resources to achieve its mission. The ITRG commenced its first review in 2008 and presented its inaugural report to the Board of Directors and the Advisory Council in November, www.nwmo.ca/itrg.

MEMBERS OF THE INTERNATIONAL TECHNICAL REVIEW GROUP

Allan Hooper is the Chair of the ITRG. He is an independent consultant who specializes in the safe, long-term management of radioactive waste for UK and other national programmes since 2007. He has held a number of senior management positions in the UK repository development program, including Director for Science. Dr. Hooper currently acts as the Chief Scientific Advisor to the UK Nuclear Decommissioning Authority Radioactive Waste Management Directorate, and in 2008 was appointed Visiting Professor in the Department of Earth Science and Engineering at Imperial College London.

Kaj Ahlbom has 30 years of experience in the Swedish radioactive waste programme concerning site selection, site characterisation and interaction with stakeholders. Since 2002, he has been the Site Manager for SKB's (Swedish Nuclear Fuel and Waste Management Company) site investigation for a repository for spent nuclear fuel at Forsmark, Sweden. He has been involved in all aspects of site selection, from formulating site selection critera to participating in the site selection process and investigating candidate municipalities and sites.

Lawrence Johnson is a senior scientist and research and development coordinator at Nagra (Swiss National Cooperative for the Disposal of Radioactive Waste), where he has worked since 1999 on various aspects of engineered barriers performance. He is the author of over 110 reports and journal papers covering many areas related to materials performance aspects of engineered barrier systems, as well as a number of studies dealing with long-term safety assessment.

Derek Martin has been a professor in the Department of Civil and Environmental Engineering at the University of Alberta, Edmonton, since 2000. Dr. Martin has reviewed nuclear waste programs for countries around the world. He is a scientific advisor to the Swedish nuclear fuel and waste management program, as well as a member of the Geoscience Review Group for Ontario Power Generation's Deep Geologic Repository project for Low and Intermediate Level Waste.

BOARD MEMBERSHIP

The breadth of experience represented on the NWMO Board of Directors was further strengthened in 2008, when Ontario Power Generation (OPG) exercised its prerogative under the Membership Agreement to fill two director vacancies.

Pierre Charlebois, who was appointed February 22, is responsible for the operation of OPG's nuclear, hydro and fossil businesses. Previously he served as Chief Nuclear Officer, overseeing OPG's nuclear generation business and its performance.

Donn Hanbidge, who joined the Board effective September 25, is Chief Financial Officer for OPG, where he is responsible for providing financial leadership and operational support to all of the company's business units and has overall accountability for all of OPG's financial services.

BUILDING AN IMPLEMENTING ORGANIZATION

With the Government of Canada's selection of the Adaptive Phased Management approach for the long-term care of used nuclear fuel, the NWMO embarked on an evolution from its role as a small study-based organization to a sustainable corporation with full responsibility for implementing the plan.

In 2008, work was undertaken to establish the organization as its own employer with all of the necessary supporting infrastructure and processes, including Finance and Human Resources. The move, which took effect January 1, 2009, enhances NWMO's long-term viability and improves its capacity to recruit and retain personnel.

Over the year, staffing levels increased from 27 at the end of 2007 to 81 by December 31, 2008. Many of these additions resulted from an agreement between the NWMO and Ontario Power Generation (OPG) to transfer to the NWMO all of the OPG personnel who had been working on both NWMO programs and the OPG Low and Intermediate Level Waste repository project.

The transfer arrangement brought with it significant benefit to the NWMO. In addition to acquiring the experience base of an established nuclear waste management and repository team, the organization entered into a services agreement with OPG to develop and license the electricity generating company's proposed Deep Geological Repository for Low and Intermediate Level Waste at Kincardine, Ontario.

The NWMO will gain first-hand experience in several areas including relationship-building with a host community and licensing a repository through the regulatory system, as well as design, development, safety assessment, environmental assessment and construction of a deep repository. A further advantage is the opportunity to develop a common and consistent approach to external relationships with regulators, Aboriginal peoples, the international community and others. This will provide increased organizational capacity that will directly benefit the NWMO's mandate to implement APM.

There are particular challenges in building a new organization in the current nuclear environment. The international industry, which has not expanded in the past 20 years, is now facing the possibility of significant growth. The number of young people being trained in relevant disciplines is on the increase, which bodes well for NWMO succession planning. However, given the current aging workforce, our organization will have to be very proficient and resourceful to attract the leadership capabilities we will need for the very specialized work that lies ahead of us.

In 2009 and beyond, the NWMO will further develop its business support systems and processes while strengthening and broadening its internal nuclear waste management expertise and maintaining an appropriate balance between in-house capacity and external resources to meet the needs of its expanding work program.

COLLABORATIVELY DESIGNING A SITING PROCESS

The NWMO is committed to working collaboratively with interested citizens and organizations as we seek to identify an informed and willing community to host the central facilities that will be required to manage Canada's used nuclear fuel over the long term.

As noted in Building Long-Term Relationships (page 18), we initiated a range of activities in 2008 designed to engage people in our work related to the design of a siting process.

The organization understands and resolutely believes that to be successful, the process for selecting a site must ensure that the values and objectives of those who are involved and affected are taken into account, and reflected in the choice that will eventually be made. The process, and how it is developed, must also be open, inclusive and transparent.

The NWMO initiated discussions in 2008 to collaboratively design a process for identifying an informed and willing community to host a site for a deep geological repository. We developed and tested a range of communication materials, on a variety of subjects, to inform and help start the conversation. Citizen Panels, first convened in 2007, were re-assembled in 2008 and, among other things, reviewed information prepared by the NWMO to support the dialogue.

Important among the materials was a discussion document, *Moving Forward Together: Designing the Process for Selecting a Site*. It presented an initial framework of objectives and principles, as well as key issues and questions, people might wish to consider in designing a siting process. The discussion document was complemented by a suite of backgrounders and information sheets on subjects ranging from transportation and climate change to security and safeguards and a description of the project.

THE DIALOGUE

The dialogue on the design of a process for site selection commenced in the Fall of 2008 and utilized a variety of engagement techniques to ensure that a broad diversity of perspectives was heard.

The NWMO conducted a series of multi-party dialogues in Ontario, Saskatchewan, Québec and New Brunswick. These full-day sessions brought together a cross-section of opinion leaders, including municipal and community associations, the nuclear industry, labour, academia, Aboriginal organizations and Elders, researchers, environmental and non-governmental organizations, public health workers, the faith community, and persons with practical experience in siting major projects.

Dialogue focused on material presented in the discussion document. Participants were asked to reflect on key considerations for siting; major activities involved in the siting process; identifying stakeholders and the information and tools they would need; technical and social considerations and criteria that would guide decision-making; and NWMO's challenges and opportunities in designing the process.

People told us that the process for selecting a site must be grounded in a set of clear and practical principles and safeguards. Among these, they addressed safety, community well-being, collaboration and shared decision-making, inclusiveness and Aboriginal rights, treaties and land claims.

They also identified a range of technical, social and process considerations. Safety was addressed for the different stages of the project, including the current safety of storage at reactor sites, safety during transportation and long-term safety in the repository. On transportation, some people were concerned about impacts on communities along the transport route; others were more concerned about potential disruption to the project during transportation. Some dialogue participants said the NWMO must not underestimate the impact that new technology could have on both the implementation of the project and on the siting process itself. Many spoke of the importance of public education and outreach.

Other activities which elicited views on siting included a national public attitude telephone survey and a deliberative survey on the NWMO website. A number of individuals and organizations also made submissions through the website. Over the course of the year, two e-dialogues were conducted by the Department of Environment and Sustainability at Royal Roads University on behalf of the NWMO. They involved discussion among an expert panel, as well as dialogue with young people involved in sustainable development. Reports on each of these activities are available on the NWMO website.

Having heard from Canadians in 2008, the NWMO is drawing on their views, and on a variety of experiences and processes developed in Canada and elsewhere to site major projects, to draft a proposal for a site selection process. We will propose a process in early 2009, which will be released for extensive public dialogue before it is finalized, taking into account the comments of those who participate.

Only after a siting process is confirmed will the NWMO consider engaging communities that might express interest in learning more. We will begin by providing information and building awareness about our organization, Adaptive Phased Management, the project and the siting process. We also intend to introduce a funding program to enable communities and interested organizations to learn more.

The Organization

The Members: *The Nuclear Fuel Waste Act (NFWA)* requires the nuclear energy corporations to establish the NWMO. Accordingly, Ontario Power Generation Inc., New Brunswick Power Corporation and Hydro-Québec are founding Members of the NWMO and, under the legislation, must remain Members of the organization. They are also required, along with AECL, to fund the NWMO's operations.

Together, the Member corporations develop cost-sharing provisions for NWMO's annual operating budget and the underlying governance structures for the organization.

Members convened their Annual General Meeting in New Brunswick in June 2008. They received a report from the Board of Directors on the NWMO's activities since the last Annual General Meeting and were provided with a report on proposed activities for the following year. They also appointed Deloitte Touche as the external auditor for the purposes of the 2008 audit.

INSETS BELOW FROM LEFT Engaging Aboriginal youth (2008 summer work project); NWMO at YMCA Corporate Challenge; visiting Äspö Hard Rock Laboratory, Sweden; Citizen Panels; reviewing geologic maps

Our team

(Left to right) Kenneth Birch, Debbie Williams, Janet David, Kevin Orr, Angelo Castellan, Angela Ciccotelli, Jo-Ann Facella, Michael Hung, Mahrez Ben Belfadhel, Branko Semec, Robin Frizzell, Daniela Heimlich, Patrick Moran, Dylan Luhowy, Frank King, Amy Hutchison, Sally Clark-Mills, Kevin Tsang, Jenny Parina, Richard Heystee, Anda Kalvins, Michael Borrelli, Laura Grant, John Kennard, Pat Patton, Paul Hader, Wendy Yan, Jorge Villagran, Jessica Millar, Frank Garisto, Chantal Green, Peter Maak, Maryam Dabir, Tiger Liu, Sean Russell, John Mauti, Gillian Morris, Toivo Wanne, Tammy Yang, Marie Wilson, Jose Freire-Canosa, Peter Simmons, Cynthia Jourdain, Mike Budge, Andre Vorauer, Helen Leung, Mark Gobien, Stella Shiv, Sean O'Dwyer, Nicole DiCarlo, Erik Kremer, Kelly Sedor, Jamie Robinson, Tom Lam, Gloria Kwong, Ken Nash, Michael Krizanc, Atika Khan, Phyllis Pandovski, Larry Starecky, Mark Jensen, Kathryn Shaver, Ulf Stahmer, Jessica Perritt, Mike Garamszeghy, Kitty Lee, John van den Hengel, Deb Rzeplinski, Paul Gierszewski, Gowie Garcia, Alex Covarrubias, Jim McLay, Deanna Wolff, Monica Dias, Eric Sykes, Elena Mantagaris, Ian Walker, Kevin She, Diane Barker

THE BOARD OF DIRECTORS

The NWMO Board of Directors is responsible for oversight of the organization and taking a leadership role in the development of the corporation's strategic direction.

As of December 31, 2008, the Board was composed of nine directors: Dr. Gary Kugler serves as Chairman; Mr. Ken Nash, President & CEO, is also a director; Ms. Josée Pilon is appointed by Hydro-Québec; and Ms. Sharon MacFarlane serves on behalf of NB Power Nuclear Corporation. Ontario Power Generation appointees include: Mr. C. Ian Ross, Mr. Ron Jamieson and Dr. Deborah Poff. OPG also appointed Mr. Pierre Charlebois effective February 22, 2008, and Mr. Donn Hanbidge effective September 25, 2008.

» The Board convened five formal meetings and one conference call in 2008.

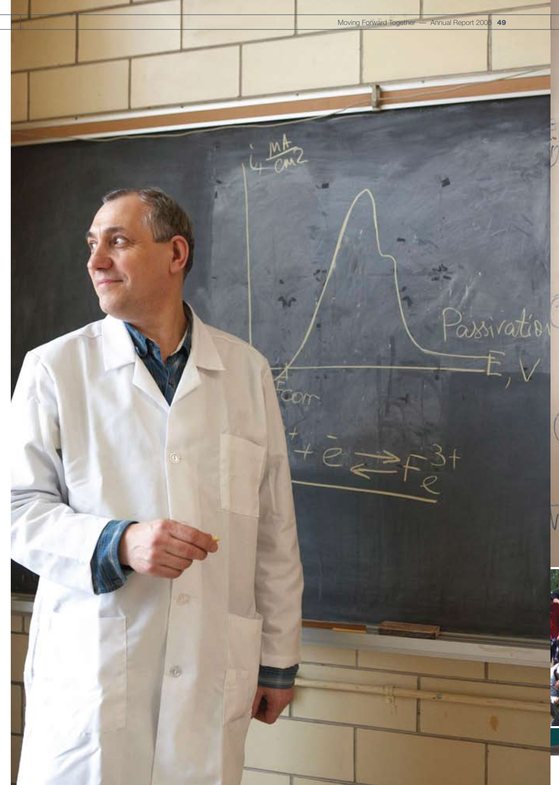
Early in the year, the Board reviewed and approved the 2007 Annual Report and audited financial statements, which were subsequently presented to NWMO Members at the June Annual General Meeting. The 2009 NWMO Five-Year Business Plan and Budget were presented to the Board for approval in the fall of 2008.

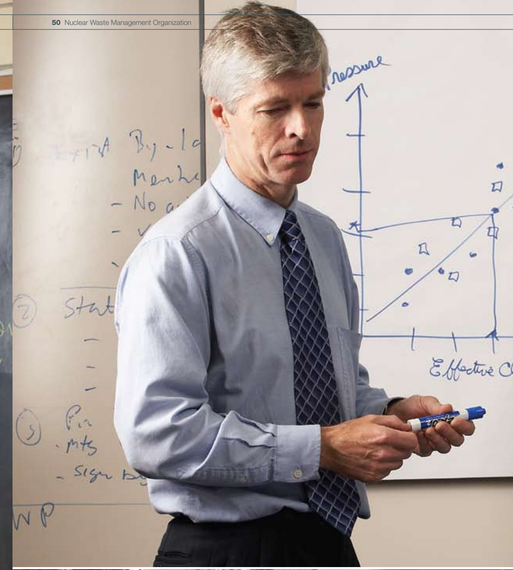
The Board regularly discussed strategic planning issues as well as NWMO's technical and social research programs and public engagement plans. They also received financial updates and reports from the Chairs of the Advisory Council and the Board committees.

Other Board of Directors activities in 2008 included:

» consideration and review of legal agreements for NWMO's transition to an employer in its own right, with its own financial and business support systems;
» review and approval of the proposed funding formula to the Minister of Natural Resources Canada, and review and discussion of the findings of the expert panel, which reviewed the funding formula;
» establishment of a Human Resources and Compensation Committee of the Board;
» review and approval of appointments to the NWMO Independent Technical Review Group and receipt of the first report from the ITRG;
» examination of NWMO's readiness to proceed with public engagement on the design of a proposed process for selecting a site for a deep geological repository; and
» a meeting with Niigani, the Aboriginal working group.

The Board of Directors directs that minutes of its meetings be posted on the NWMO's corporate website at www.nwmo.ca/board.





Building an implementing organization...

The NWMO is growing from a small study-based organization to a sustainable corporation with all of the necessary skills and capacity that will be needed to meet the challenges of implementing Adaptive Phased Management, Canada's plan for the long-term care of used nuclear fuel.

Social Research
The NWMO Social Research program supports our ongoing dialogue and collaboration activities including work to engage potentially affected citizens and interested organizations, visioning of the implementation process and the development of decision-making processes. We learn from the experiences of others, exploring the perspectives of citizens and specialists on key issues.

Public Engagement
The NWMO is building long-term relationships to develop awareness, understanding and support for Adaptive Phased Management. The success of Canada's approach for the long-term care of used nuclear fuel is dependent on the involvement of interested Canadians, organizations and Aboriginal people in key decisions through open, transparent and inclusive engagement processes.

Liability Management
The NWMO is responsible for ensuring that the cost estimates for Adaptive Phased Management remain updated and that the funding formula to pay for the plan collects and protects enough money to ensure that its entire costs are covered under a variety of social and economic circumstances, and within the required timeframe.

Technical Research
The NWMO Technical Research program is focused on developing engineering designs for a deep geological repository, advancing geoscience and site characterization methods, and preparing illustrative safety assessments to support development of the siting process. In addition to our in-house staff capabilities, the program benefits from strong working relationships with universities and consultancies, as well as collaboration and participation in joint research, development and demonstration projects internationally.

Corporate
As of January 1, 2009, the NWMO is a stand-alone employer with all of the necessary supporting infrastructure including human resources, finance, legal services, quality assurance and administrative support.

COMMITTEES OF THE BOARD OF DIRECTORS

Audit, Finance and Risk Committee

The Audit, Finance and Risk Committee convened four regular meetings in 2008, and conference calls as required. The committee provided oversight of the external audit of the NWMO's 2007 financial statements, meeting with the auditors to discuss their findings, and advising on selection of the auditors for 2008 and terms of the audit service plan. The Committee also regularly reviewed in-year financial statements and reported to the Board.

Other activities during the year included:

- regular reviews of business risk;
- review of Chair's and President's expenses;
- transition activities, including oversight of the establishment of the NWMO pension plan; and
- review of NWMO transition agreements with Ontario Power Generation.

As of December 31, 2008, there were four directors on the Audit, Finance and Risk Committee:

- Ian Ross, Chair
- Ron Jamieson
- Josée Pilon
- Donn Hanbidge (joined Nov 13, 2008)

Siting Committee

The Siting Committee convened three regular meetings in 2008.

Activities of the committee during 2008 included:

- ongoing and extensive preparations for the dialogue on the design of the siting process;
- establishment of readiness criteria to proceed with the design of the siting process dialogue;
- review of international siting experiences;
- development of a critical path for developing the site selection process; and
- review of input from the fall dialogues.

As of December 31, 2008, there were four directors on the committee:

- Ron Jamieson, Chair
- Deborah Poff
- Sharon MacFarlane
- Pierre Charlebois (joined November 13, 2008)

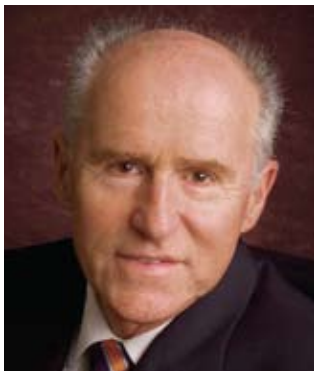
Human Resources and Compensation Committee

The Human Resources and Compensation Committee was established in April 2008 to provide oversight of NWMO's human resources functions, including compensation practices, human resources policy, organizational design, labour relations and pension plan. The committee convened three regular meetings in 2008 and conference calls as required.

As of December 31, 2008, there were four directors on the Committee:

- Ian Ross, Chair
- Pierre Charlebois
- Josée Pilon
- Deborah Poff (joined as of November 13, 2008)

Members of the Board of Directors



Dr. Gary Kugler – Chairman

Dr. Gary Kugler is the retired Senior Vice-President, Nuclear Products and Services of Atomic Energy of Canada, Limited (AECL), where he was responsible for AECLs commercial operations. During his 34 years with AECL, he held various technical, project management, business development and executive positions. Prior to joining AECL, he served as a pilot in the Canadian air force. Dr. Kugler is a graduate of the Institute of Corporate Directors' Director Education Program and also serves on the Board of Ontario Power Generation (OPG). He holds a Bachelor of Science degree in honours physics and a Ph.D. in nuclear physics from McMaster University.

Ken Nash – President and CEO

Ken Nash is a founding director of the NWMO and the immediate past-chair of the organization's Board of Directors. He held a number of senior management positions at Ontario Hydro and Ontario Power Generation in the areas of finance, engineering and environmental management, and was Senior Vice-President, Nuclear Waste Management Division. Mr. Nash is the President and CEO of the NWMO. He is also the past Chair of EDRAM, an association of waste management organizations from 10 countries, including Canada.

Pierre Charlebois – Executive Vice-President and Chief Operating Officer, Ontario Power Generation

Pierre Charlebois is Executive Vice-President and Chief Operating Officer for Ontario Power Generation (OPG). He was appointed to his current position in December 2006 and is responsible for the operation of OPG's nuclear, hydro and fossil businesses. From December 2003 to November 2006, Mr. Charlebois served as Chief Nuclear Officer, responsible for overseeing OPG's nuclear generation business and its performance. Pierre Charlebois graduated from Ottawa University in 1975 with a bachelor's degree in Applied Science. He is a member of the Professional Engineers Ontario.

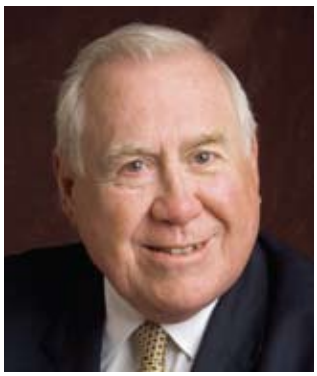
Donn Hanbidge – Chief Financial Officer, Ontario Power Generation
Donn Hanbidge is Chief Financial Officer for Ontario Power Generation (OPG). He was appointed to his current position in 2005 and is responsible for providing financial leadership and operational support to OPG's business units, and has overall accountability for accounting, reporting, taxation, investment planning, treasury, pension, financial communications, controllership groups and risk services. Prior to joining OPG, Donn Hanbidge held various financial management roles with Union Gas Limited. He began his career with Ernst & Young. Mr. Hanbidge obtained an Honours Bachelor of Arts Degree in Business Administration from the University of Western Ontario, and is a Chartered Accountant.

Ronald (Ron) L. Jamieson – Director, Ontario Power Authority
Ron Jamieson is a member of the Board of Directors of the Ontario Power Authority. Prior to his retirement in late 2005, he served as Senior Vice-President, Aboriginal Banking, BMO Financial Group. Mr. Jamieson has held several senior executive positions in the financial services industry. Throughout his career he has also been active in economic development initiatives for Aboriginal communities across Canada. Mr. Jamieson also served as chairman, president and CEO of Ontario Energy Corporation, whose mandate was to invest or participate in energy projects throughout Canada.

Sharon MacFarlane – Vice-President, Finance, NB Power Group
Sharon MacFarlane has been Vice-President of Finance and Chief Financial Officer at NB Power since 2003. Ms. MacFarlane joined NB Power in 1997 as managing director of Finance and became Vice-President of Finance and Information Systems one year later. Prior to 1997, she was Vice-President of Finance and Administration at Mount Allison University. Ms. MacFarlane is a graduate of the University of New Brunswick and holds a Chartered Accountant designation.

Josée Pilon – Special Projects Manager, Hydro-Québec
Josée Pilon is an MBA graduate of Laval University. She is member of the steering committee on the project for the rehabilitation of Gentilly-2. As a special projects manager, she is responsible for evaluating business opportunities for new sources of energy from the private sector, including wind power, biomass and hydroelectric. She is also involved on the financial impact evaluation of new hydroelectric projects on municipalities. Prior to her current position, she held numerous business development positions in international projects.

Deborah C. Poff – Professor, Philosophy and Political Science, University of Northern British Columbia
Deborah Poff is a Professor of Philosophy and Political Science at the University of Northern British Columbia (UNBC). From 1994 to 2004, Dr. Poff was Vice-President and Provost at UNBC. In 2004, she was awarded a Fellowship in Public Policy with the Sheldon Chumir Foundation in Ethical Leadership. She is the founder and editor of the Journal of Business Ethics, Teaching Business Ethics and the Journal of Academic Ethics. She is the editor of Business Ethics in Canada. Dr. Poff is currently working on a book on ethical leadership and the future of university governance.



C. Ian Ross – Chairman, GrowthWorks Canadian Fund Ltd.
Ian Ross served at the Richard Ivey School of Business at the University of Western Ontario from 1997 to 2003. Most recently, he was Senior Director, Administration in the Dean's Office, and was also Executive in Residence for the School's Institute for Entrepreneurship, Innovation and Growth. He has served as Governor and President, and CEO of Ortech Corporation; Chairman, President and CEO of Provincial Papers Inc.; and President and CEO of Paperboard Industries Corp. Mr. Ross currently serves as a Director for a number of corporations, including Ontario Power Generation. He is also a member of the Law Society of Upper Canada.

OFFICERS

Chairman of the Board
Gary Kugler

President and CEO
Ken Nash

Vice-Presidents
Frank King – Vice-President and Chief Engineer (effective January 1, 2009)
(and Vice-President Science and Technology to December 31, 2008)
Kathryn Shaver – Vice-President, APM Engagement and Site Selection
(and Corporate Secretary to June 19, 2008)

Corporate Secretary
Patrick Moran – General Counsel and Corporate Secretary
(Corporate Secretary from June 19, 2008)

Treasurer
Angelo Castellan – Chief Financial Officer (to December 31, 2008)
John Mauti – Chief Financial Officer (from January 1, 2009)

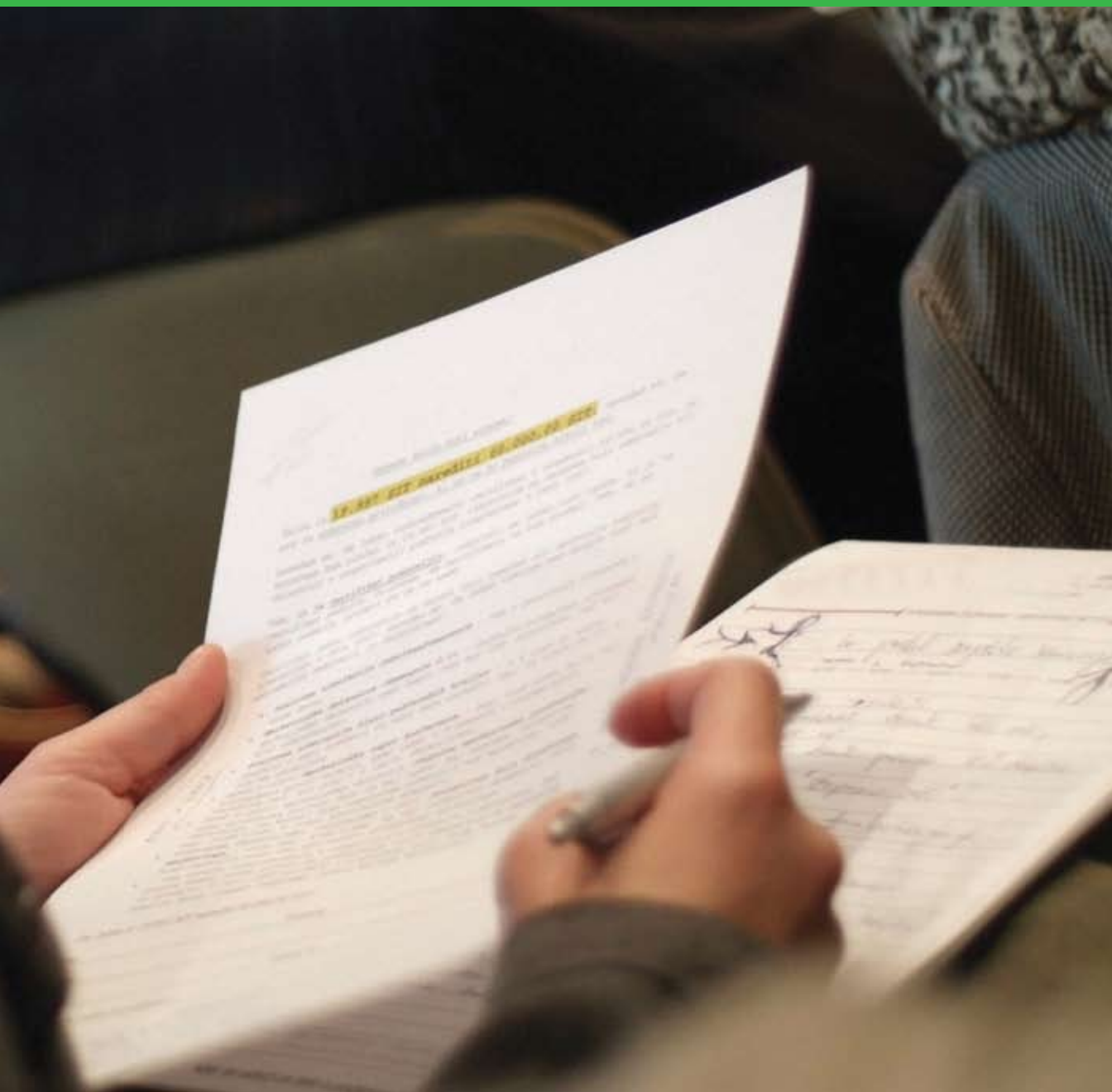
THE NWMO TEAM

As at December 31, 2008 NWMO had 81 full-time staff equivalents. The organization grew from a staff of 27 individuals at the end of December 2007. Added capabilities are in the areas of human resources, administration, finance, social and technical research, and engagement.

The NWMO will continue to expand its internal capacity in 2009, expecting to reach a complement of 112 to meet the needs of its increasing workload and new lines of business.

OUR HEAD OFFICE

The head office of the NWMO is located at:
22 St. Clair Avenue East, 6th Floor,
Toronto, Ontario M4T 2S3
Canada



The Advisory Council

Membership and Mandate: The NWMO Advisory Council, established in accordance with the *Nuclear Fuel Waste Act (NFWA)* in 2002, was reconstituted in 2008 with seven of the original members reappointed and three new members joining the group. The Honourable David Crombie continued to serve as Chair. The new members, Dr. Marlyn Cook, Rudyard Griffiths and Dr. Dougal McCreath, brought considerable expertise to the Council in the areas of Aboriginal Traditional Knowledge, strategic communications and geosciences. The full Advisory Council membership is outlined on pages 62–65.

The Advisory Council is required by the *NFWA* to comment every three years on the previous three years of NWMO activity. These independent statements, which include observations on the results of NWMO public consultations and analysis of any significant socio-economic effects of the organization's activities, are to be published in the NWMO's triennial reports beginning with the 2010 Annual Report. In addition, the Advisory Council is obliged to comment on the Organization's five-year strategic plans and budget forecasts. Advisory Council comments are submitted to the Minister of Natural Resources and made public at the same time.

2008 ACTIVITIES

Over and above adhering to its legislated responsibilities, the Advisory Council makes important contributions to the NWMO by providing ongoing advice and guidance.

The Advisory Council convened four formal meetings in 2008. Each included an "in camera" session where members deliberated privately without the presence of NWMO management or staff. Council members also convened one informal conference call during the year.

At each of its meetings, the Advisory Council received progress reports on ongoing technical and social research, including the findings of public engagement activities. Members provided counsel on the organization's in-year work plans, the 2009-13 business plan and the development of the NWMO Implementation Plan.

Early in the year, the NWMO reviewed findings from its meetings and engagement concerning the organization's strategic objectives for the 2008-2012 Implementation Plan. Council advised on communications planning and the design of a youth roundtable to guide development of NWMO's youth engagement strategy.

Members expressed strong support for involving young people in NWMO's work to enhance understanding of nuclear issues for future generations. They discussed ethical dimensions of incorporating youth opinions into decision-making that will have impacts far into the future. Council also encouraged the NWMO to engage young people with a range of perspectives, rather than only those who have an interest in nuclear energy issues.

Throughout the year, the Advisory Council was briefed and invited to comment on the design of the draft process to select a site for a deep geological repository. Members discussed engagement and communications plans, provided input to the siting process discussion document, and reviewed readiness criteria to proceed with dialogues.

Some Council members attended Citizen Panels to hear discussion directly. In November, a full report from the four phases of Citizen Panels convened in Ontario, New Brunswick, Saskatchewan and Quebec was delivered to the Council by Navigator Ltd., the organization that facilitated the Panels on behalf of the NWMO. In the latter part of the year, Council also reviewed findings from the multi-party dialogues, which were held to discuss the design of the siting process, and considered NWMO's preliminary plans for the 2009 engagement program to review and confirm the draft process.

The Advisory Council provided extensive input into NWMO's evolving municipal engagement plans. Members stressed the importance of involving municipal and provincial governments, noting that local engagement will be increasingly important for implementing Adaptive Phased Management. The Council expressed support for further developing relationships with municipal associations to bring forward local perspectives. Members also provided suggestions for the development of NWMO's new funding program.

The Advisory Council continued to review the changing external landscape, with particular focus on proposed new nuclear generating units in Canada, and their potential impacts on NWMO's work. Members urged that the NWMO communicate clearly the organization's work plan to continually review energy policy, and adapt its plans as required in response to new nuclear build. The importance of providing clarity in published documents on the regulatory process and transportation considerations was also emphasized. In addition, Council requested opportunities to review NWMO's reports on potential technical implications of new nuclear build for Adaptive Phased Management.

The Advisory Council remained supportive of NWMO's Aboriginal engagement program. Members were regularly briefed on these activities. They provided input on a number of areas, including opportunities to engage Aboriginal people at the community level. Council members Donald Obonsawin and Marlyn Cook attended the annual Elders' Forum in June in Waskesui, Saskatchewan. Dr. Cook also made a presentation at a Traditional Knowledge Workshop held with NWMO staff.

In November, the Advisory Council also met

with the NWMO Aboriginal working group Niigani. Council members requested an opportunity to continue these discussions in early 2009 and, at the invitation of Niigani, Council will participate in a cultural training session to be arranged by the Elders.

Throughout the year, Council was consulted and updated on the formation of the Independent Technical Review Group (ITRG) and in November was provided a presentation of the ITRG's first report by Allan Hooper, Chair of the new body.

A number of specific topics were identified by Council for discussion. Dr. Lister and Dr. Rozon presented a paper that, among other things, addressed possible utilization of the fluoride volatility method for reprocessing used fuel. Council requested a dedicated session to learn about NWMO's science and technology program. Finland's program for long-term used nuclear fuel management was described by guest speaker Eero Pattrakka, who addressed the Council at its request.

Dr. Lister presented a paper prepared by the Chairman, Dr. Rozon and himself at the 16th Pacific Basin Nuclear Conference in Aomori, Japan. The presentation addressed challenges ahead in the management of of Canada's used nuclear fuel.

The Council was kept abreast of NWMO's transition in 2008 to a stand-alone employer, and its assumption of responsibility for work on Ontario Power Generation's (OPG) proposed Deep Geological Repository for Low and Intermediate Level Waste. Council reviewed its mandate in this regard and agreed that while it is important for the Council to continue to be advised on developments in NWMO's work for OPG, the focus of its work would remain on the implementation of Adaptive Phased Management.

The Advisory Council Chair has direct access to NWMO Board meetings to ensure a comprehensive exchange of information and to provide a conduit for the Chair to keep the Council fully informed on Board matters. Council members and the Board of Directors repeated their annual practice of meeting together for an informal exchange of views.

At the Advisory Council's request, formal minutes of Council meetings are recorded and posted on the NWMO website at www.nwmo.ca/advisorycouncil.

NWMO ADVISORY COUNCIL TOURS DARLINGTON WASTE MANAGEMENT FACILITY

Advisory Council members, along with several NWMO staff members, toured the Darlington Nuclear Generating Station and its waste storage facilities in November 2008.

Pictured, Darlington Waste Management Facility Plant Manager Doug Soutar (right) responds to questions from Advisory Council members Donald Obonsawin, Dougal McCreath, The Honourable David Crombie and Dr. Marlyn Cook, and NWMO staff Atika Khan (fourth from the left).

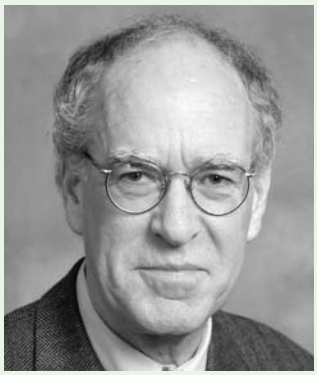
Dry Storage Containers used by Ontario Power Generation at its waste management facilities each contain 384 used nuclear fuel bundles and provide safe, interim storage for at least 50 years.

Members of the Advisory Council

As of December 31, 2008, members of the Advisory Council are:

Hon. David Crombie

The Hon. David Crombie is the President of David Crombie and Associates, the Chair of Toronto Lands Corporation, and Chair of Ontario Place. He is the immediate past President and CEO of the Canadian Urban Institute. He is also a past mayor of the City of Toronto and a Privy Councillor. Mr. Crombie was the first Chancellor of Ryerson University, and is the recipient of honorary doctorates of law from the University of Toronto and the University of Waterloo. Mr. Crombie is an Officer of the Order of Canada.

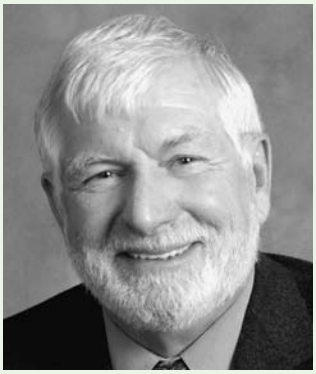


David R. Cameron

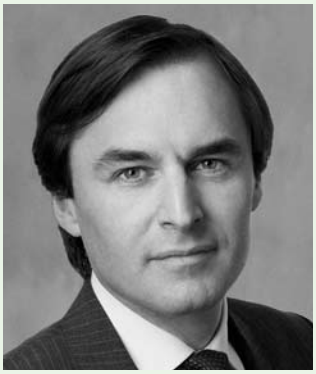
David R. Cameron is the Chair of, and a Professor in, the Department of Political Science at the University of Toronto, and a Fellow of the Royal Society of Canada. He has held a number of senior government positions in both the federal and Ontario civil services. He continues to advise on a wide range of governmental issues.

Dr. Marlyn Cook

Dr. Cook is presently Chief of Staff with Weeneebayko General Hospital in Moose Factory, Ontario. Dr. Cook is Cree and a member of the Grand Rapids First Nation in Northern Manitoba. She has practised medicine in the Mohawk community of Akwesasne, in Sioux Lookout Zone and in a number of northern Aboriginal communities in Manitoba. She is active in her community serving as an advisor and Board member to a number of organizations. Dr. Cook is known for her work blending Western and Traditional medicine, and has been involved with sharing this knowledge with medical students and doctors throughout Canada. Her belief is that healing needs to be focused on all aspects of the person – spiritual, mental, physical and emotional.



Frederick Gilbert
Frederick Gilbert is the President of Lakehead University in Thunder Bay, Ontario. He also serves as a member of the Board of Directors of the Thunder Bay Regional Research Institute. Dr. Gilbert has had an extensive teaching, research and administrative career in the United States and Canada at Colorado State University, the University of Northern British Columbia, Washington State University, the University of Guelph and the University of Maine, and also has held several environmental and wildlife management public service appointments and positions.

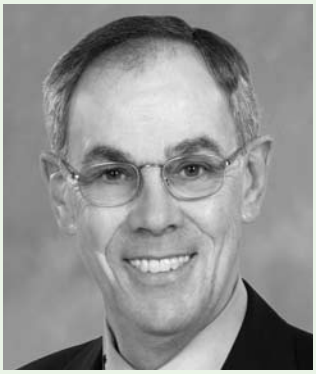


Rudyard Griffiths
Rudyard Griffiths is the co-founder of the Dominion Institute, a national non-profit organization dedicated to the promotion of history and shared citizenship, and the co-founder of the Salon Speakers Series. In 2006, Mr. Griffiths was recognized by the Globe and Mail as one of Canada's Top 40 under 40. He sits on a variety of not-for-profit boards, and is a columnist with The Toronto Star and a regular political commentator for CityTV. Mr. Griffiths holds a degree from University of Toronto and a Master's of Philosophy from Emmanuel College, Cambridge.

Eva Ligeti
Eva Ligeti is the Executive Director of the Clean Air Partnership, a non-profit organization with a mandate to make Toronto more environmentally sustainable and a world leader in clean air. A lawyer, she served as Ontario's first Environmental Commissioner from 1994 to 1999. Ms. Ligeti serves on the Council of the Federation of Canadian Municipalities' Green Municipal Fund, is a member of the Province of Ontario's Expert Panel on Climate Change Adaptation, and is a co-chair of the Greening Greater Toronto Task Force. She teaches Environmental Law in the graduate program in Environmental Science at the University of Toronto.

Members of the Advisory Council

Derek Lister
Derek Lister is Professor Emeritus in the Chemical Engineering Department at the University of New Brunswick in Fredericton, where he also holds the Research Chair in Nuclear Engineering. His main research interests are in the areas of chemistry and corrosion associated with nuclear systems. He holds positions on a number of national and international committees.



Dougal McCreath
Dougal McCreath is the Director of the School of Engineering and a Professor of Civil and Mining Engineering at Laurentian University in Sudbury, Ontario. A Fellow of the Engineering Institute of Canada, he has wide teaching, research and international consulting interests, ranging from the design of deep underground excavations to the recovery and sustainability of damaged eco-systems. He has served on two Canadian Environmental Assessment Agency review panels dealing with nuclear related issues.

Donald Obonsawin
Donald Obonsawin is founder and President of Directions, a government relations company. From 2003 to 2007, he was president and CEO of Jonview Canada Inc., Canada's largest receptive tour operator. Prior to that, he had been Deputy Minister of seven Ontario government ministries over a 15 year period. He also held senior positions with the federal departments of Indian Affairs and Northern Development, and Health and Welfare Canada. Mr. Obonsawin is Abenaki and a member of the Odanak First Nation.

Daniel Rozon
Daniel Rozon is Professor Emeritus in the Engineering Physics Department at École Polytechnique de Montreal. A fellow of the Canadian Nuclear Society, he is a specialist in reactor physics, with research interests in nuclear fuel management optimization. He was the director of the Nuclear Engineering Institute (l'Institut de genie nucleaire) for more than 15 years.

Auditors' Report and Financial Statements

MANAGEMENT'S RESPONSIBILITY FOR FINANCIAL REPORTING

The accompanying Financial Statements of the Nuclear Waste Management Organization (NWMO) are the responsibility of management and have been prepared in accordance with Canadian generally accepted accounting principles. When alternative accounting methods exist, management has chosen those it considers most appropriate. The preparation of financial statements necessarily involves the use of estimates based on management's judgment, particularly when transactions affecting the current accounting period cannot be finalized with certainty until future periods. The financial statements have been properly prepared within reasonable limits of materiality and in light of information available up to January 23, 2009.

Management maintains a system of internal controls which is designed to provide reasonable assurance that financial information is relevant, reliable and accurate and that assets are safeguarded and transactions are executed in accordance with management's authorization. The system is monitored and evaluated by management.

The financial statements have been examined by Deloitte & Touche, LLP, independent external auditors appointed by the Members. The external auditors' responsibility is to express their opinion on whether the financial statements are fairly presented in accordance with Canadian generally accepted accounting principles. The Auditors' Report outlines the scope of their examination and their opinions.

FEBRUARY 19, 2009

K. E. Nash

Ken Nash
President

John Mauti
Chief Financial Officer

AUDITORS' REPORT

To the Directors of Nuclear Waste Management Organization

We have audited the statement of financial position of Nuclear Waste Management Organization (NWMO) as at December 31, 2008 and the statements of operations, changes in net assets and cash flows for the year then ended. These financial statements are the responsibility of NWMO's management. Our responsibility is to express an opinion on these financial statements based on our audit.

We conducted our audit in accordance with Canadian generally accepted auditing standards. Those standards require that we plan and perform an audit to obtain reasonable assurance whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation.

In our opinion, these financial statements present fairly, in all material respects, the financial position of NWMO as at December 31, 2008 and the results of its operations and its cash flows for the year then ended in accordance with Canadian generally accepted accounting principles. As required by the *Canada Corporations Act*, we report that, in our opinion, these principles have been applied on a basis consistent with that of the preceding year.

Deloitte & Touche LLP

Chartered Accountants
Licensed Public Accountants
Toronto, Ontario
January 23, 2009

Statement of Financial Position

Statement of Financial Position
AS AT DECEMBER 31, 2008

	2008	2007
ASSETS		
CURRENT		
Cash	$ 9,835,204	$ 4,999,105
Accounts receivable (NOTE 4)	323,196	365,920
Prepaid expenses and deposits	375,781	253,046
	10,534,181	**5,618,071**
CAPITAL ASSETS (NOTE 3)	2,301,065	938,773
	$ **12,835,246**	$ **6,556,844**
LIABILITIES		
CURRENT		
Accounts payable and accruals (NOTE 4)	$ 3,647,984	$ 1,406,469
Member overcontributions payable (NOTE 5)	6,886,197	4,211,602
	10,534,181	**5,618,071**
COMMITMENTS (NOTE 6)		
NET ASSETS		
INVESTED IN CAPITAL ASSETS	2,301,065	938,773
	2,301,065	**938,773**
	$ **12,835,246**	$ **6,556,844**

APPROVED BY THE BOARD OF DIRECTORS, JANUARY 23, 2009:

K. E. Nash

Ken Nash
President and CEO
Toronto, Canada

C. Ian Ross
Chair – Audit, Finance and
Risk Committee
Toronto, Canada

Statement of Operations

Statement of Operations

YEAR ENDED DECEMBER 31, 2008

	2008	2007
REVENUE		
Member contributions (NOTE 4)	$ 27,322,542	$ 15,444,090
Non-member contributions	323,458	255,910
Interest income	418,890	313,836
	28,064,890	**16,013,836**
EXPENSES		
Staffing and administration (NOTE 4)	8,298,803	4,468,206
Technical research and development	7,057,297	5,052,959
Stakeholder engagement and communications	3,044,116	649,442
Compliance and governance	835,568	884,833
Social research and support implementation	269,499	541,189
Amortization	311,118	116,990
Loss on disposal of assets	–	44,344
	19,816,401	**11,757,963**
EXCESS OF REVENUE OVER EXPENSES	$ **8,248,489**	$ **4,255,873**

Statement of Changes in Net Assets

Statement of Changes in Net Assets

YEAR ENDED DECEMBER 31, 2008

	2008			2007
	Invested in Capital Assets	Internally Restricted	Total	Total
BALANCE, BEGINNING OF YEAR	$ 938,773	$ –	$ 938,773	$ 894,502
EXCESS OF REVENUE OVER EXPENSES	(311,118)	8,559,607	8,248,489	4,255,873
ADDITIONS TO CAPITAL ASSETS	1,673,410	(1,673,410)	–	–
REFUNDABLE TO MEMBERS (NOTE 5)	–	(6,886,197)	(6,886,197)	(4,211,602)
BALANCE, END YEAR	**$ 2,301,065**	**$ –**	**$ 2,301,065**	**$ 938,773**

Statement of Cash Flows

Statement of Cash Flows

YEAR ENDED DECEMBER 31, 2008	2008	2007
NET INFLOW (OUTFLOW) OF CASH RELATED TO THE FOLLOWING ACTIVITIES		
OPERATING		
Cash received from contributions	$ 27,646,000	$ 15,700,000
Interest received on short-term investments	418,890	313,836
	28,064,890	**16,013,836**
Cash paid for materials and services	(21,555,381)	(11,189,899)
	6,509,509	**4,823,937**
INVESTING		
Purchase of capital assets	(1,673,410)	(1,035,540)
NET INCREASE IN CASH	**4,836,099**	**3,788,397**
CASH, BEGINNING OF YEAR	4,999,105	1,210,708
CASH, END OF YEAR	$ **9,835,204**	$ **4,999,105**

Notes to the Financial Statements

December 31, 2008

1. PURPOSE OF ORGANIZATION

Nuclear Waste Management Organization ("NWMO") is a not-for-profit corporation without share capital, established under the *Canada Corporations Act*, 1970 ("the Act"), as required by the *Nuclear Fuel Waste Act (Canada)*, 2002 ("*NFWA*") which came into force November 15, 2002.

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 the Adaptive Phased Management, 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, NB Power Nuclear, and Ontario Power Generation Inc. ("Members") – which are Canadian companies that currently produce used nuclear fuel as a by-product of electricity generation.

Pursuant to a Membership Agreement, the costs of the NWMO are shared pro rata by the Members based on the number of used fuel bundles owned by each member.

2. SIGNIFICANT ACCOUNTING POLICIES

Basis of presentation

The financial statements of NWMO are the representations of management prepared in accordance with accounting standards for not-for-profit organizations established by the Canadian Institute of Chartered Accountants using the deferral method of reporting restricted contributions. The significant accounting policies adopted by NWMO are as follows:

Capital assets

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

Furniture	7 years
Computer equipment and software	3 years
Leasehold improvements	Initial lease term plus one renewal period

Income tax

The NWMO is a not-for-profit organization and, pursuant to section 149(1)(1) of the *Income Tax Act*, is not subject to income tax.

Contribution revenue

Contributions are recognized as revenue in the year to which they relate. Excess member contributions may require repayment in accordance with the membership agreement. As a result, any excess of revenue over expenses is reflected as internally restricted net assets. Any amounts determined to be refundable reduce the internally restricted amount.

Financial instruments

In accordance with Section 3855 – Financial Instruments Recognition and Measurement, and Section 3865 – Hedges standards, NWMO has classified each of its financial instruments into accounting categories, effective January 1, 2007. The category for an item determines its subsequent accounting treatment. Effective January 1, 2007, NWMO has classified its financial instruments as follows:

- Cash and cash equivalents as "held-for-trading". Held-for-trading items are carried at fair value, with changes in their fair value recognized in the Statement of Operations in the current period.

- Accounts receivable as "loans and receivables". "Loans and receivables" are carried at amortized cost, using the effective interest method, net of any impairment.

- All accounts payable and accrued liabilities as "other liabilities". "Other liabilities" are carried at amortized cost, using the effective interest method.

NWMO selected January 1, 2003, as its transition date for accounting for embedded derivatives. Based on a review of NWMO's contracts, management has determined that there are no embedded derivatives that are required to be accounted for separately as derivatives.

Use of estimates

The preparation of 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 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.

FUTURE ACCOUNTING CHANGES

Financial instruments

In December 2006, the Canadian Institute of Chartered Accountants (CICA) issued Section 3862, Financial Instruments – Disclosures and Section 3863 Financial Instruments – Presentation. Both sections were to be applicable to financial statements relating to fiscal years beginning on or after October 1, 2007. On October 15, 2008, the CICA deferred implementation of these sections for not-for-profit organizations for an additional year, and accordingly, NWMO will adopt the new standards for its fiscal year beginning January 1, 2009. Section 3862 on financial instruments disclosures, requires the disclosure of information about: (a) the significance of financial instruments for the entity's financial position and performance and (b) the nature and extent of risks arising from the financial instruments to

which NWMO is exposed during the period and at the balance sheet date, and how the entity manages those risks. Section 3863 on the presentation for financial instruments establishes standards for presentation of financial instruments and non-financial derivatives.

These changes in accounting policies, which will be adopted effective January 1, 2009, will require additional disclosures in the financial statements. In the meantime, NWMO will continue to apply Section 3861 Financial Instruments - Disclosure and Presentation as applicable.

In addition, on April 23, 2008, the CICA amended Section 3855, "Financial Instruments – Recognition and Measurement" of the CICA Handbook to allow not-for-profit organizations to elect to not have to account for certain non-financial contracts as derivatives under Section 3855 and also to not have to account for certain derivative features embedded in non-financial contracts, leases and insurance contracts as embedded derivatives under Section 3855. These amendments to Section 3855 apply to fiscal years beginning on or after August 1, 2008, with earlier adoption permitted.

NWMO has elected to adopt these amendments to Section 3855 effective for its fiscal year beginning on January 1, 2009. This change in accounting policy is required to be applied retrospectively with restatement of prior years. As NWMO did not have any non-financial contracts that were required to be accounted for as derivatives under Section 3855, nor any derivative features embedded in non-financial contracts, leases and insurance contracts that were required to be accounted for as embedded derivatives under Section 3855, this change in accounting policy will not have an impact on NWMO's financial statements.

Not-for-profit accounting changes

In September 2008, the CICA issued amendments to several of the existing sections in the 4400 series – Financial Statements by Not-For-Profit Organizations. Changes apply to annual financial statements relating to fiscal years beginning on or after January 1, 2009. Accordingly, NWMO will have to adopt the amended standards for its fiscal year beginning January 1, 2009. The amendments include: a) additional guidance in the applicability of Section 1100, Generally Accepted Accounting Principles; b) removal of the requirement to report separately net assets invested in capital assets; c) requirement to disclose revenues and expenses in accordance with EIC 123, Reporting Revenue Gross as a Principal Versus Net as an Agent; d) requirement to include a statement of cash flows in accordance with Section 1540, Cash Flow Statements; e) requirement to apply Section 1751, Interim Financial Statements, when preparing interim financial statements in accordance with generally accepted accounting principles (GAAP); f) requirement for non-for-profit organizations that recognize capital assets to depreciate and assess these capital assets for impairment in the same manner as other entities reporting on a GAAP basis; g) requirement to disclose related party transactions in accordance with Section 3840, Related Party Transactions; and h) new disclosure requirements regarding the allocation of fundraising and general support costs.

NWMO is currently evaluating the impact of the adoption of these amendments on its financial statements.

3. CAPITAL ASSETS

	2008			2007
	Cost	Accumulated Amortization	Net Book Value	Net Book Value
Furniture	$ 861,929	$ 122,751	$ 739,178	$ 397,705
Computer equipment and software	1,345,006	235,996	1,109,010	306,702
Leasehold improvements	508,715	55,838	452,877	234,366
	$ 2,715,650	**$ 414,585**	**$ 2,301,065**	**$ 938,773**

4. RELATED PARTY TRANSACTIONS AND BALANCES

	2008	2007
Transactions during the year		
Member contributions		
Ontario Power Generation Inc.	$ 25,097,039	$ 14,180,240
NB Power Nuclear	1,155,603	656,260
Hydro-Québec	1,069,900	607,590
	$ 27,322,542	**$ 15,444,090**
Transactions with Ontario Power Generation Inc.		
Managerial services (included in administration expenses)	6,098,516	3,113,040
Reimbursement for leaseholds and specific capital assets related to 22 St. Clair Avenue East	281,925	791,063
Rent and shared cost recovery	(295,232)	(128,926)
BALANCES OUTSTANDING		
Due to Ontario Power Generation Inc. (included in accounts payable and accruals)	1,214,648	583,586
Amounts due from Ontario Power Generation Inc. (included in accounts receivable)	57,170	128,926

Related party transactions are recorded at the exchange amount.

NWMO and Ontario Power Generation Inc. (OPG) entered into a cost sharing arrangement that addresses costs of OPG staff working on NWMO work programmes, costs of setting up shared office space and office management costs.

Staff costs of OPG employees working on NWMO programmes are cost-shared on the basis of full time commitment, percentage commitment or variable hours worked.

Costs of setting up shared office space and the on-going maintenance of the office space are shared on the basis of planned staff occupancy levels that have currently been determined as 67% NWMO and 33% OPG. Examples of shared costs that would be subject to the cost sharing arrangement are leasehold improvements, purchase of new office furniture, rental costs of leased premises, utility costs, insurance and general office supplies.

This agreement expires December 31, 2008. Details of future arrangements are disclosed in Note 8.

5. MEMBER OVER-CONTRIBUTIONS PAYABLE

In accordance with the terms of the NWMO membership agreement, unused contributions of $6,886,197 (2007 – $4,211,602) will be refunded to members.

6. COMMITMENTS

The following summarizes NWMO's lease commitments:

(i) On December 22, 2006, NWMO entered into a five-year lease for its offices at 22 St. Clair Avenue East, Toronto, Ontario, commencing July 1, 2007. Annual total lease payments are $229,360 plus additional amounts for taxes, utilities and maintenance, for the term of the lease. NWMO has an option to extend the term of the lease for one additional term of five years on the same terms and conditions, except for the annual minimum rent payable, which will be $265,198.

(ii) On January 10, 2008, NWMO amended its lease at 22 St. Clair Avenue East, Toronto, Ontario, to include an additional space commencing June 1, 2008, for a term of 4 years and 2.5 months. Annual total lease payments for the additional space are $86,872 plus additional amounts for taxes, utilities and maintenance, for the term of the lease. NWMO has an option to extend the term of the lease for one additional term of five years on the same terms and conditions, except for the annual minimum rent payable, which will be $102,501.

(iii) On October 1, 2008, NWMO entered into a one-year lease to expand its offices at 22 St. Clair Avenue East, Toronto, Ontario, commencing November 1, 2008. Annual total lease payments are $50,625 plus additional amounts for taxes, utilities and maintenance, for the term of the lease.

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

2009	$358,420
2010	$316,232
2011	$316,232
2012	$168,975

NWMO is negotiating to lease an additional 10,703 square feet of office space at 2 St. Clair Avenue East, Toronto, Ontario, for minimum rent of $17.00 per square foot in year one, $18.00 per square foot in years two and three, and $19.00 per square foot in years four and five.

7. GUARANTEES

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

(a) The Organization has provided indemnities under a lease agreement for the use of its premises. Under the terms of this agreement, the Organization 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 Organization indemnifies all directors, officers and employees acting on behalf of the Organization for various items including, but not limited to, all costs to settle suits or actions due to services provided to the Organization, subject to certain restrictions.

The nature of these indemnification agreements prevents the Organization 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 Organization has not made any payments under such or similar indemnification agreements, and therefore, no amount has been accrued with respect to these agreements.

8. SUBSEQUENT EVENTS

Expansion of Operations

In addition to the existing NWMO mandate, effective January 1, 2009, NWMO entered into two new agreements with Ontario Power Generation Inc. (OPG) to expand its operations to provide project management services for OPG's Low and Intermediate Level Waste Deep Geologic Repository (DGR Services) and certain provision costing and accounting services relating to nuclear lifecycle liability management (LLM services) .

As part of this arrangement, staff from OPG that had been supporting NWMO while employed by OPG have left OPG and are being directly employed by NWMO. The transition of the resources and activities involving DGR services and LLM services from OPG to NWMO was completed by December 31, 2008. Accordingly, NWMO has implemented systems and processes for the administration of payroll, pension, financial information and human resource management. An integrated information technology system and additional office space were acquired to accommodate the expansion of operations. NWMO had approximately 80 full-time employees as of January 1, 2009.

Asset Transfer

Pursuant to an Asset Transfer Agreement dated January 1, 2009, NWMO has acquired certain assets and liabilities of OPG relating to its nuclear waste management division. The transfer agreement identifies all capital assets, contracts, purchase orders and other assets and liabilities that NWMO will assume, effective January 1, 2009. Assets from OPG will be transferred to the NWMO at book value. Any liabilities assumed from OPG will be captured as part of a closing statement process and NWMO will receive working capital compensation for such assumed liabilities that were incurred while the business was under the direction of OPG.

DGR Services for OPG

Pursuant to the DGR agreement, the DGR Services requires NWMO to obtain the site preparation and construction license for the DGR from the Canadian Nuclear Safety Commission (CNSC). The DGR Services does not include the construction, or the procurement of construction of the DGR at the date of this agreement. NWMO will provide the DGR Services on a cost recovery basis without markup for profit, and OPG will provide funding in advance to maintain a positive cashflow to NWMO. The term of the DGR agreement is five years, commencing January 1, 2009.

LLM Services for OPG

Pursuant to the LLM Agreement, the LLM Services require NWMO to provide to OPG all information related to the lifecycle liability management reasonably required by OPG to meet its internal and regulatory requirements. NWMO will provide the LLM Services on a cost recovery basis without markup for profit, and OPG will provide funding in advance to maintain a positive cash flow to NWMO. The term of the LLM agreement is five years, commencing January 1, 2009.

Pension Transfer

Effective January 1, 2009, NWMO entered into a Pension Transfer Agreement with OPG whereby NWMO agreed that the pension assets and obligations of OPG relating to the OPG employees transferred to NWMO will be transferred to, and assumed by, NWMO.

Pursuant to the Pension Transfer Agreement, NWMO agrees:

a) to provide pension benefits for the Transferred Employees and to give the Transferred Employees credit for all service with and compensation from OPG (including service and compensation with another employer) to the extent credited or recognized by OPG immediately before December 31, 2008, under the OPG Pension Plan for all purposes under the NWMO Pension Plan, including for purposes of determining eligibility for benefits, the amount of any benefits or benefit accruals, vesting and service-related levels of benefits;

b) to establish the NWMO Pension Plan; and

c) that the Transferred Employees would cease participation in the OPG Pension Plan and commence participation in the NWMO Pension Plan with effect on January 1, 2009.

In addition to the transfer of pension assets and obligations and pursuant to the Reciprocal Pension Transfer Agreement, NWMO and OPG agreed to provide pension portability so as to recognize service under the OPG Pension Plan, or the NWMO Pension Plan, as applicable, covering transferring members during the period from January 1, 2009, to December 31, 2010.

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