Moving Forward Together

Annual Report 2007

nwmo

NUCLEAR WASTE MANAGEMENT ORGANIZATION

SOCIÉTÉ DE GESTION DES DÉCHETS NUCLÉAIRES

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SOCIÉTÉ DE GESTION DES DÉCHETS NUCLÉAIRES

The Honourable Gary Lunn, P.C., M.P.
Minister, Natural Resources Canada
Ottawa, Ontario
K1A 0A6

March, 2008

Dear Minister,

We are pleased to submit to you the annual report of the Nuclear Waste Management Organization (NWMO) for fiscal year 2007.

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

Further to section 16 (3) of the Act, and this being the first annual report submitted after the date of the decision by the Governor in Council selecting the management approach, we present for your approval, on pages 44–45 of this report, the funding formula and amount of trust fund deposits required for 2008.

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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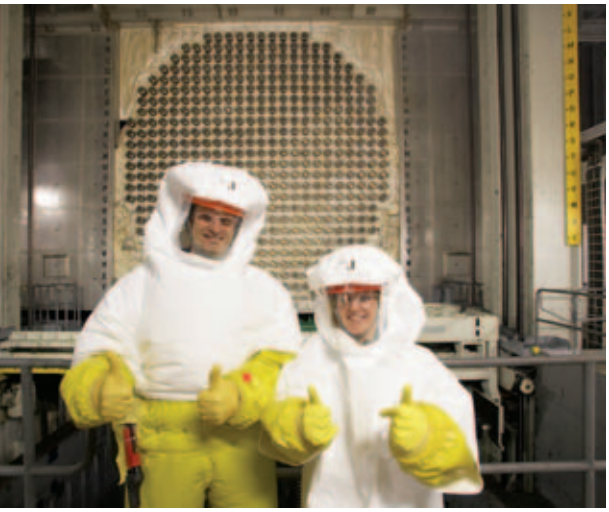


NWMO Mandate » **The Nuclear Waste Management Organization (NWMO) was established in 2002 in accordance with the *Nuclear Fuel Waste Act* (*NFWA*) to assume responsibility for the long-term management of Canada's used nuclear fuel, a by-product of electricity generation in a nuclear power plant.**

CLOCKWISE FROM LEFT
CANDU reactor face; used nuclear fuel in wet storage; dry storage containers; summer work project; NWMO president Ken Nash with the Minister of Natural Resources, Gary Lunn.

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

The *NFWA* required electricity generating companies which 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 comments of the Advisory Council, and a recommended approach. The NWMO initiated its study in 2002 and presented its report and recommended approach to the Minister in November 2005.

The legislation authorizes the Government of Canada to decide on the management approach, which it did in June 2007 when it 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 intend to proceed in stages in an open, transparent and inclusive manner, taking the time that is needed to collaboratively plan and then confirm each step before moving forward together.

Our Approach **Adaptive Phased Management**

A Technical Method

- Centralized containment and isolation of used nuclear fuel in appropriate geological formation
- Continuous monitoring
- Potential for retrievability

A Management System

- Collaborative decision-making
- Phased with explicit decision points
- Continuous learning & adaptation
- Open, inclusive & transparent
- Engagement focused in 4 nuclear provinces (ON, QC, NB, SK)
- Seek informed, willing host community

There is no fixed timetable for implementing APM. However, we have adopted conceptual timelines to guide our work over three phases. Our primary activity in the first phase will be the collaborative design and implementation of a process to select a site for a centralized facility. Following selection 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 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.

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: **www.nwmo.ca/trustfunds**. As it is obliged by

the legislation to do, the NWMO is proposing in this Annual Report, for ministerial review and approval, a funding formula and deposits to be made each year by the waste owners to pay for APM implementation.

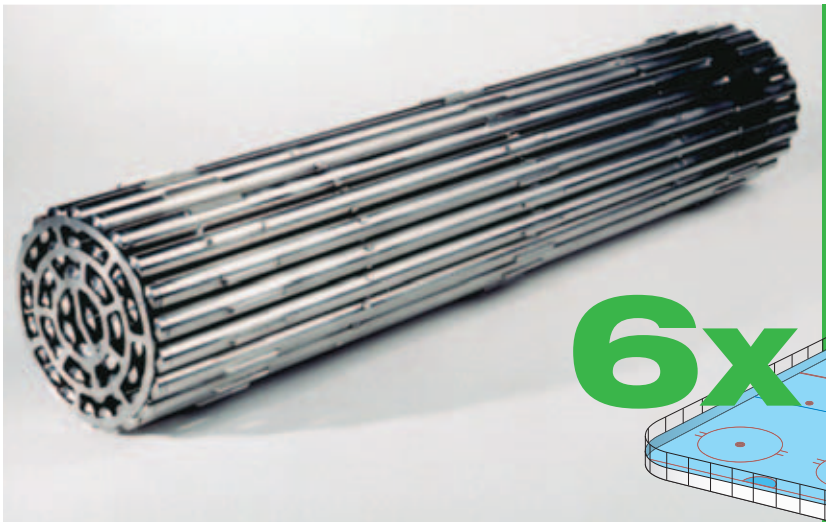
The *NFWA* also required the Nuclear Waste Management Organization to establish an Advisory Council whose independent comments on the organization's study and triennial reports are made public.

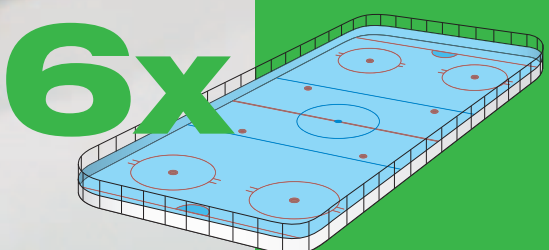
Used Nuclear Fuel

Over 40 years Canada's nuclear power program has produced just over two million used fuel bundles. 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, it could 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 the 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 ten years where its heat and radioactivity decreases. Afterwards, used bundles are typically placed in dry storage containers, silos or vaults.



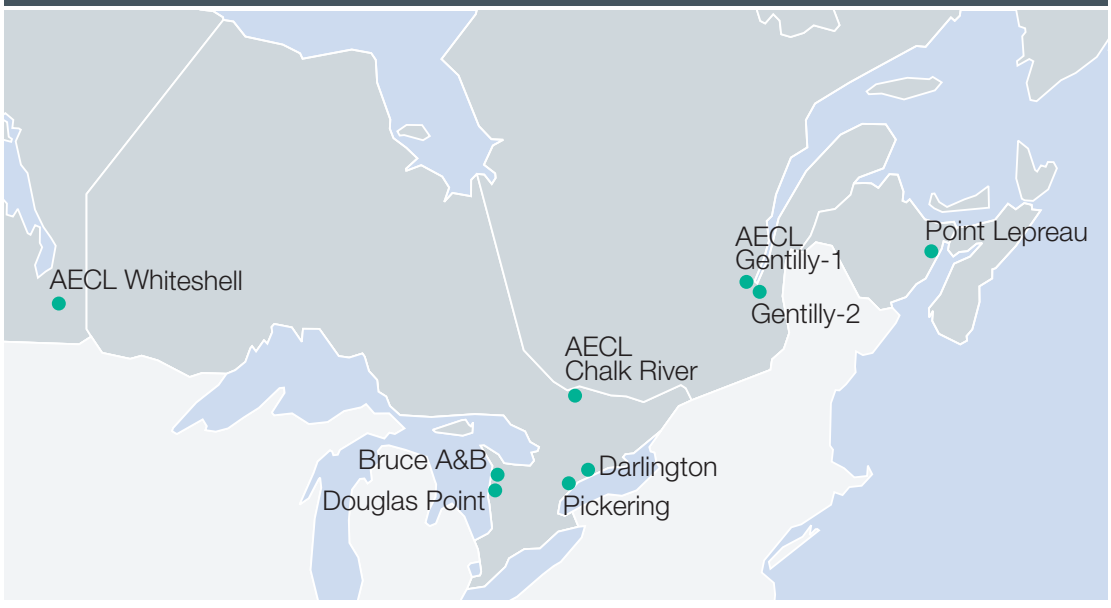


A CANDU fuel assembly is approximately 0.5 metres long. Stacked like cordwood, all of Canada's used nuclear fuel could fit into six hockey rinks.

About 85,000 used nuclear fuel bundles are generated in Canada each year. As of December 31, 2007, the number of used nuclear fuel bundles stored at Canadian nuclear facilities was:

	FACILITY	LOCATION	STORED BUNDLES
1.	Point Lepreau	New Brunswick	116,070
2.	Gentilly-2	Québec	107,237
3.	Bruce A	Ontario	388,730
4.	Bruce B	Ontario	464,856
5.	Pickering	Ontario	571,406
6.	Darlington	Ontario	322,757
7.	Douglas Point	Ontario	22,256
8.	AECL – Gentilly-1	Québec	3,213
9.	AECL – Whiteshell Laboratory	Manitoba	360
10.	AECL – Chalk River Laboratory	Ontario	4,853
	Total		**2,001,738**

Canadian Nuclear Facilities



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 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 Government of Canada's selection of an Adaptive Phased Management approach for the long-term care of used nuclear fuel marked a significant milestone in radioactive waste management history. The plan is consistent with approaches being pursued by other countries which use nuclear-generated electricity, and its acceptance returns Canada to the forefront of nations making responsible progress with long-term nuclear fuel waste management.

The Nuclear Waste Management Organization (NWMO) is now positioning itself to move forward with its new obligation of implementing Adaptive Phased Management collaboratively with Canadians in line with the commitments made and intentions expressed in our Final Study report, *Choosing a Way Forward*. We will proceed in full compliance with the *Nuclear Fuel Waste Act* (*NFWA*).

The Board of Directors is committed to the highest standards of governance. Our member companies have approved a new Membership Agreement and General By-law to reflect our renewed mandate. Board membership has been expanded to include a greater range of experiences including ethics, finance and Aboriginal culture.

We have also reformulated our Advisory Council. Building on the expertise of Councilors who accepted reappointments, we are pleased to have recruited new Council members adding experience in the fields of geosciences, strategic communications and Aboriginal Traditional Knowledge. Helen Cooper and Gordon Cressy left the Council at the end of 2007, having completed their terms. I would like to thank both for the insightful advice and generous guidance they offered our organization during its formative years.

Both the Board and the Advisory Council will soon benefit from the acumen and wisdom of a Technical Review Group which will be appointed in 2008. This new source of advice and counsel is being established to regularly review our technical program to ensure it is based on credible scientific approaches and methods, and is consistent with best international practices.

Canadians expect that the necessary money will be available when it is needed to pay for long-term used nuclear fuel management. In 2007, the NWMO with its Member companies met an important requirement of the *NFWA* by developing a funding formula which is published in this Annual Report and proposed to the Minister of Natural Resources for approval. The proposed formula ensures that those of us who benefit from nuclear power provide for the long-term management of the used fuel which is produced.

Implementing Adaptive Phased Management will be a long process over many decades. The NWMO intends to carry out its responsibilities collaboratively with Canadians, fully meeting their expectations. We appreciate the challenges and complexities of the task ahead and are confident that with the ongoing support of citizens, specialists, Aboriginal people and our Member companies, Canada's used nuclear fuel will be safely and securely managed in a manner that continues to protect humans and the environment now and in the future.

Dr. Gary Kugler
Chairman

President's Message

Our focus in 2007 was developing a foundation to implement Adaptive Phased Management (APM). With our Board of Directors, we drafted seven strategic objectives which have been put forward to Canadians for confirmation. Over the year, progress was made on each of these.

- We furthered our relationships with interested organizations, individuals and Aboriginal peoples and sought their views on how APM should be implemented. Our early implementation plans are scheduled to be completed in 2008.

- We furthered our social research program and incorporated the ongoing Canadian technical research program involving the specialist consulting community, eleven universities and four international partnerships. This research will continue throughout implementation and will set the direction and program for continuous learning and adaptation.

- We completed a proposal for how this generation which benefits from nuclear power will pay for the long-term management of the used fuel which is created. This funding formula is submitted in this Annual Report for approval by the Minister of Natural Resources.

- We continued to assess how changing circumstances might impact our plans, including the prospects for new nuclear power plants, additional fuel volumes and different fuel types. Developments in energy policy will be continually incorporated into our plans.

- We enhanced our governance structure in several ways, including development of revised By-laws and Members Agreement, new appointments to our Board and Advisory Council, the formalization of linkages for advice and guidance through our Aboriginal Working Group Niigani, and our relationship with the Canadian Association of Nuclear Host Communities. We look forward to establishing an independent Technical Review Group.

- We strengthened our organizational capacity through the incorporation of additional technical, social research, public engagement, legal and human resources expertise, including establishing an intern program. We will continue to grow in 2008.

- We furthered our research into processes for selecting a repository site through both desktop work and consultation with experts in Canada and abroad. We have begun preparations to start a dialogue with interested organizations and individuals on the design of a process for selecting a site.

The Government of Canada's decision in June 2007 to accept our recommendation for Adaptive Phased Management assigned the NWMO an important role in ensuring the long-term safety of Canadians and our environment in the way used nuclear fuel is cared for. The task dimensions are technical, social and ethical. We are enhancing our processes to draw on the best technical expertise in Canada and internationally, and we are developing our ability to benefit from the knowledge of specialists, the perspectives of citizens and the wisdom of Aboriginal people to address the social and ethical challenges. We know that the successful long-term management of nuclear fuel waste is dependent on the NWMO moving forward together, collaboratively with Canadians.

Ken Nash
President

Our Work

The year 2007 marked a new beginning for the Nuclear Waste Management Organization. With the Government of Canada's selection in June of our recommended approach for long-term used nuclear fuel management, our mandate changed. We now have responsibility for implementing Adaptive Phased Management.

CLOCKWISE FROM LEFT
Elder's Forum participants; NWMO on Parliament Hill; powwow at Garden River First Nation; NWMO staff with Elder's Forum member Donna Augustine; NWMO meets municipal councilors; loading samples for analysis at University of Waterloo; Virtual Reality Laboratory at Laurentian University; NWMO meets with Editorial Board.

One of our first tasks was to prepare a plan to guide our work over the early years of implementation. With the guidance of our Board of Directors we developed seven strategic objectives for comment and input from interested individuals and organizations. We have been reaching out to people who were engaged in our study as well as seeking the views of potential new participants in our work.

The draft strategic objectives now guide the development of our work plan. It is against them, that we report on our 2007 activities.

Building Long-term Relationships

Since its inception, the NWMO has recognized the importance of building and maintaining relationships with individuals and organizations with an interest in long-term nuclear waste management. We have learned that nurturing established relationships with those potentially affected by our work, and continually developing new ones, will define the success of Adaptive Phased Management (APM).

During the transition period following publication of our study in 2005, as the Government conducted its review of our recommendations, we engaged constituents primarily by responding to requests and communicating through standard and established reporting mechanisms like newsletters, the website and the Annual Report. With the Government's decision in June 2007 we resumed reaching out to the wide cross-section of individuals and organizations who will be important to establishing a foundation for successfully implementing APM. We used our website, e-mail and direct mail as well as personal meetings to re-introduce ourselves and invite discussion.

OBJECTIVE 1

Continue to build long-term relationships with interested Canadians and Aboriginal people, and involve them in setting future direction.

Engaging Stakeholders

It is vital that the NWMO remain accessible to the general public as well as interested individuals and organizations. The Government's decision launching our organization on its new mandate as implementer was an endorsement of our transparent and collaborative approach to our work.

One of our first undertakings following the decision was to re-introduce ourselves by advising all participants in our study, who had expressed a continuing interest, that the APM approach had been selected. This preceded a second correspondence aimed at inviting input on early plans to guide our work over the first five years of implementation. Our invitation was supported by a newly published brochure, *Moving Forward Together*, which tells the story of the NWMO, describing APM, and how it emerged through three years of public engagement. Updates were sent to more than 1,000 individuals who subscribed through the website, telephoned or wrote to express an interest.

In addition to our general invitation, the NWMO contacted a number of individuals and organizations and invited them to meet informally with us to be brought up to date on our work, briefed on near-term activities and asked how they would like to be engaged or kept informed as implementation unfolds. Our informal sessions were carried out over several months into early 2008.

We met with people from nuclear site communities including local, provincial and federally-elected representatives, community liaison groups, and advisory committees. These groups and individuals indicated an interest in our work and in continuing to be included. They also provided insight and suggestions on topics ranging from the need for increased youth engagement to ensuring ongoing transparency and inclusive engagement plans.

We conducted bilateral meetings with a number of community mayors and municipal councilors and we continued our long-standing engagement of the Canadian Association of Nuclear Host Communities (CANHC). Over three separate sessions through the year members provided us with numerous suggestions including reminding us of the importance of approaching the subject of long-term nuclear waste management from many viewpoints, and ensuring that our methods of involving people are varied and broadly include citizens in communities.

The NWMO also engaged municipal associations at the national and provincial levels including the Federation of Canadian Municipalities (FCM), the Québec Federation of Municipalities, the Saskatchewan Association of Rural Municipalities (SARM), the Association of Municipalities of Ontario (AMO), and the Federation of Northern Ontario Municipalities (FONOM). At the invitation of AMO, we attended their annual conference and distributed information to more than 250 delegates who stopped by the NWMO booth. We also accepted an invitation from FONOM to participate in a Northern Leaders Summit held in Timmins, Ontario. The interest expressed by these associations has encouraged the NWMO to continue expanding its outreach efforts to other similar organizations.

Many cabinet ministers and Members of Legislative Assemblies in nuclear provinces were generous with their time and welcomed briefings. They were keen to better understand Adaptive Phased Management and to learn how the NWMO proposed to go about developing its early implementation plans. An important aspect of keeping government informed is meeting with departmental staff. The NWMO scheduled information sessions attended by officials from a number of provincial and federal ministries and departments with an interest in long-term nuclear waste management.

We continued our dialogue with representatives of non-governmental organizations and others who have concerns about nuclear power and radioactive waste. These discussions often focused on recent developments in nuclear policy including questions about such things as reprocessing of used nuclear fuel, potential new build and funding issues.

Throughout the year the NWMO also kept organizations representing different facets of the nuclear industry aware of our activities. Several NWMO personnel attended the annual Canadian Nuclear Association seminar. Additionally, presentations were made at conferences organized by groups such as the Canadian Radiation Protection Association and Women in Nuclear.

Beyond meeting with elected officials and recognized groups and organizations the NWMO must maintain a basis for communication with the general public. It is important that we remain accessible to those who want information or wish to share their views and comments. We responded to telephone requests and written correspondence but the majority of public inquiries we receive arrive by e-mail through our website **www.nwmo.ca**.

The website is an important point of engagement. It is there that we publish our plans and make available all of our documentation including technical research and engagement reports, newsletters and news releases and minutes of our Board and Advisory Council meetings.

From January to December 2007 we fielded more than 170 e-mail requests, inquiries and comments. Many of these were requests for documentation, particularly printed copies of *Moving Forward Together* or our Final Study *Choosing a Way Forward*. Others were from people, often students, seeking detailed answers to specific questions.

In 2007 the website hosted more than 200,000 visitors, bringing the total number of visits since its launch in 2003 to over 650,000.

Another way of reaching the general public is through the news media. In addition to responding to reporters' inquiries, the NWMO sought to build media awareness following the Government's decision. We provided a technical briefing on Adaptive Phased Management for the Parliamentary Press Gallery. And, we initiated meetings with editorial boards of newspapers in communities we were visiting. In this way, we intend to continue building public and media interest in our work.

Engaging Aboriginal People

Aboriginal people continued to be very involved with the NWMO in 2007. A highlight was completion of the formation of Niigani, the Aboriginal working group which was recommended by the Elders' Forum at its second meeting held in 2006 and is composed of Elders and youth chosen from among Elders' Forum participants.

The third Elders' Forum was convened at the Garden River First Nation near Sault Ste. Marie in August. The Forum, held following a community powwow, attracted 21 Elders and 13 youth along with NWMO President Ken Nash, nine organization staff, Board member Deborah Poff and Donald Obonsawin of the Advisory Council.

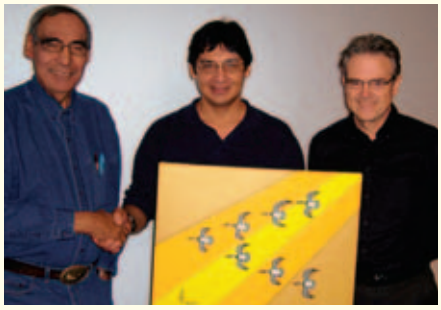
An important outcome was the Elders' direction that Niigani ensure recognition of the unique responsibility Aboriginal people have for the land and protection of Mother Earth be at the heart of the Niigani Mission Statement and be reflected in the detailed description of work Niigani does with the NWMO.

Over the year Niigani met five times. The group is working with the NWMO to "develop a process to assist the creation of a partnership between Aboriginal communities and the NWMO for the long-term management of used nuclear fuel."

Niigani

The Niigani logo depicts geese in flight. Artwork to represent this logo was commissioned through Kevin Belmore, an Ojibwe artist from Thunder Bay, Ontario.

"The word Niigani means 'leading the way' and represents all people working together and our wish to work collaboratively with the NWMO incorporating both Aboriginal and western world views in the long-term management of used nuclear fuel," said Niigani chair Gordon Williams. "Our logo, which depicts geese flying in formation behind a lead goose represents all people working together to find solutions."



Niigani chair Gordon Williams and NWMO President Ken Nash with artist Kevin Belmore

"Protect and preserve all creation: air, land, water, plants, medicines, animals and human kind – guided by the seven universal teachings of love, trust, sharing, honesty, humility, respect and wisdom."

— NIIGANI MISSION STATEMENT

Niigani Members

BACK ROW (L TO R) Mary Magiskan, Chris Lafontaine, Donna Augustine, Brennan Merasty, Tasha Kaye FRONT ROW (L TO R) Michael McGuire, Jim Sinclair, Mary Richard, Thomas Mattinas ABSENT Gordon Williams, Lindsay (Morgan) Freistadt.

One of the projects undertaken by Niigani was to advise the NWMO on the creation of a summer work program. The assignment took two students over a six-week period to Aboriginal communities in Elsipogtog (Big Cove), New Brunswick, Constance Lake, Ontario, Ile-a-la-Crosse, Saskatchewan and a Youth Outdoor Wellness Conference in Northern Saskatchewan. Their job was to conduct meetings with Elders, youth and community members to develop an understanding of the processes, tools and potential methods for communicating with Aboriginal people, particularly youth, about long-term management of used nuclear fuel.

As development of the implementation process proceeds, establishing long-term relationships with Aboriginal groups, communities and peoples to enhance Aboriginal understanding of used nuclear fuel and NWMO's understanding and sensitivity to Aboriginal concerns and perspectives will continue as an important element of our work.

Through 2007 we met with national and provincial Aboriginal organizations. We also began drafting a cooperation protocol with the Assembly of First Nations. This protocol will form the foundation for ensuring that mechanisms are in place for First Nations to access information and engage with the NWMO on an ongoing basis.

Exchanging Information

There is significant international and academic interest in NWMO processes and achievements. Each year we respond to invitations and requests from groups and organizations to provide information on past work and updates on current activities.

The NWMO was pleased to host and exchange information with delegations from several countries in 2007. Among those who visited were representatives of Australia's Nuclear Science and Technology Organization, the China-Canada Legislative Cooperation Project, the Swedish Young Generation Group and a Lithuanian Political Delegation.

We also accepted invitations to lecture at several institutions including the University of Calgary, the University of Western Ontario, Queen's University, Carleton University and the University of Ontario Institute of Technology. Almost 200 students attended these sessions. Another organization which asked to learn more about the NWMO approach to long-term radioactive waste management was the Canmore Museum and Geoscience Centre in Alberta.

Collaboratively Developing a Five-Year Work Plan

On receiving our new mandate we sought to hear a diversity of voices for advice and direction on the design of our processes and the issues to be explored in the early stages of implementation. To begin the discussion about a plan to guide our near-term work we published a brief concept paper, *Preparing for Implementation*. It outlined our draft strategic objectives and posed several questions to help start the dialogue. We asked if the objectives we are proposing are the right ones and if others ought to be considered. We also inquired about important considerations for implementation. And, we wanted to know how people might wish to be involved in our work going forward. Visitors to the website were encouraged to respond.

In the coming months the NWMO will continue developing plans to guide our work over the near term. Like all of our endeavours, this is being done collaboratively. We are engaging people in an open, transparent and inclusive manner, and will take the time that is necessary to confirm each step before moving forward together.

DIALOGUE AND COLLABORATION

EXCERPT FROM ***PREPARING FOR IMPLEMENTATION***

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

The NWMO is building its capacity to both engage citizens in dialogue and collaboration as well as to reflect on the direction which emerges and to ensure this is reflected in the implementation of APM. The NWMO is a strong participant in joint research and international collaborative efforts to identify and develop new and more effective processes for encouraging dialogue and collaboration on the types of difficult decisions which will need to be addressed during the implementation process. We are in the early stage of our efforts and will report out regularly on our activities.

Advancing Research

Adaptive Phased Management (APM) demands that the best Canadian and international knowledge is brought to bear on decision-making about long-term nuclear waste management. Implementing the approach will require extensive and ongoing research, both social and technical.

In addition to maintaining our in-house staff capability, the NWMO strives to develop effective working relationships with universities and the specialist consulting community within Canada. We also take advantage of opportunities for international collaboration and participation in joint technical research, development and demonstration programs. All of this is conducted through complementary technical and social research programs.

OBJECTIVE 2

Advance research to broaden NWMO's foundation of technical and social knowledge, bringing to bear the most advanced international expertise, to support implementation of the government decision.

Technical Research and Development Program

In 2007, the NWMO assumed responsibility for directing and managing all aspects of the established technical research and development program on used nuclear fuel in Canada. More than 20 multi-year contracts previously held by Ontario Power Generation were transferred to our organization. During the year we issued more than 30 additional contracts, including agreements with eleven different Canadian universities.

We have developed a 5-year technical research and development program to support implementation of Adaptive Phased Management and the collaborative design of a siting process. The work program is focused on used fuel storage and repository engineering, geosciences, and safety assessment.

The geoscience program is conducting research to develop tools and techniques to improve site evaluation and characterization capabilities; advance the understanding of the long-term evolution of deep groundwater flow systems; improve numerical methods to assess the long-term geosphere stability and its response to external perturbations; and to develop visualization tools for integrating, archiving and communicating geoscientific information.

Ongoing geoscience research and development projects cover a wide range of areas including geology, seismology, climate change and glaciation, hydrogeology, geochemistry and paleohydrogeology.

Used fuel storage and repository engineering work includes research into fuel integrity, repository design, container design and integrity, corrosion research, sealing material properties, microbial studies, used fuel monitoring and retrievability.

THE PRINCIPAL OBJECTIVES OF THE NWMO'S TECHNICAL R&D PROGRAM ARE:

1. Maintain skilled technical capability by developing in-house expertise and effective working relationships with Canadian universities and the consulting community.
2. Enhance scientific understanding of the technology for central storage and long-term containment and isolation of used fuel in a deep geological repository.
3. Further develop capability to evaluate potential sites from a technical perspective.
4. Seek opportunities for international collaboration and participation in joint technical research and development and demonstration programs, to bring the best international knowledge and practices into the technical work of the NWMO.
5. Build understanding of monitoring and retrievability during the various stages of implementation.
6. Maintain awareness of alternative means for the long-term management of used nuclear fuel.
7. Revise and update the cost estimate for long-term management of Canada's used nuclear fuel.
8. Incorporate Aboriginal Traditional Knowledge into technical research and development.

Our safety assessment program is examining used fuel dissolution, biosphere data, safety assessment system model and code development, as well as preparing safety case studies. We also continue to monitor international research on alternative technologies in used fuel long-term management.

Through the year the NWMO held a series of technical presentations, workshops and seminars with universities, the consulting community and government organizations. Notable among these were:

- A workshop on Used-Fuel Container Corrosion to review the state-of-science in corrosion processes;
- An Annual Geosciences Seminar to provide an update on geosciences for deep geological repositories;
- An annual technical program update with the Canadian Nuclear Safety Commission;
- A workshop on Sealing Materials Technology Development; and
- A Scenario Safety Assessment Modelling Workshop where we met with safety assessment and geoscience contractors to discuss progress on modelling the various stages of a glacial cycle and the potential impact on a deep geological repository.

Regulation

In 2007, anticipating future licensing processes which will be required as Adaptive Phased Management progresses, the NWMO initiated a dialogue with the Canadian Nuclear Safety Commission. Together we identified formal and day to day informal points of contact within both organizations. We also agreed on arrangements for cost recovery to allow CNSC staff to work on the NWMO file. In addition to providing an annual technical program update, the NWMO has agreed to brief the Commission in 2008 on the status of used fuel long-term management in Canada.

International Technical Collaboration

An important component of the NWMO's approach to research is our interaction with national waste management organizations in other countries. We also support research initiatives through Canada's membership in the Organisation for Economic Co-operation and Development Nuclear Energy Agency (OECD/NEA).

We are active in joint research and development projects at the Äspö Hard Rock Laboratory in Sweden and are benefiting from our cooperation agreements with SKB in Sweden, Posiva in Finland, NAGRA in Switzerland and ANDRA in France. These agreements cover all fields of long-term radioactive waste management study ranging from management options and site investigation and characterization, to engineering designs and public communication and involvement.

In May we participated in the Äspö Hard Rock Laboratory 14th International Joint Committee Meeting and Technical Evaluation Forum where we presented the results of Canadian support to a number of projects. Later in the year the NWMO hosted the 23rd International SKB Äspö Task Force meeting on modeling groundwater flow and transport of solute. Eight other national waste organizations participate in the ongoing international research being conducted at the Äspö Hard Rock Laboratory.

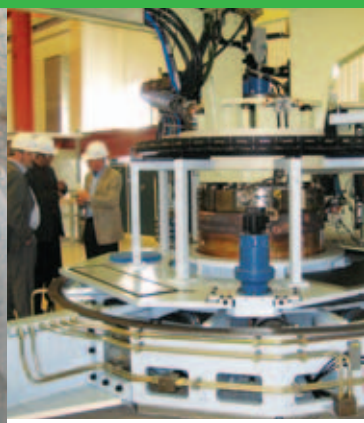
Other international participation included a visit to the Bure Underground Research Laboratory in France to explore potential collaborative research projects with ANDRA. We also attended the OECD/NEA Integration Group for the Safety Case annual meeting in Paris to discuss collaborative program plans for the next four years.

Technical Review Group

The NWMO technical program must be based on credible scientific and technical approaches and methodologies, consistent with international practices, and able to broaden and advance the organization's technical knowledge to support the implementation of APM. To ensure program quality the Board of Directors has approved terms of reference for an Independent Technical Review Group. These specialists will hold their first meetings in 2008 and will report to both the Board of Directors and the NWMO Advisory Council.

INTERNATIONAL COLLABORATION

Sweden has one of the most advanced national programs for long-term nuclear fuel waste management in the world. SKB, the country's nuclear fuel and waste management company, is pursuing an approach similar to the one Canada has adopted and expects to complete its step-wise process to select a site for a deep geological repository within the next few years. An NWMO team visited the SKB's Äspö Hard Rock Laboratory in Oskarshamn in May to review some of the joint experiments being conducted there, including a demonstration of precision drilling.



LEFT NWMO visits SKB – precision drilling at Äspö Hard Rock Laboratory; ABOVE copper welding in the canister laboratory at SKB.

Looking Forward

The NWMO is committed to a vibrant and robust research and development program to enhance our understanding of the technology for long-term used fuel management and to support the collaborative development of a siting process. Our near-term work will focus on developing the means to evaluate potential sites from a technical perspective, strengthening our understanding of the safety case for a geological repository and developing conceptual designs for a repository.

In the field of geosciences we look forward to developing geoscientific siting criteria to assist in screening potential sites. Our safety assessment work will include completing an illustrative safety case for a deep geological repository while continually monitoring developments in regulatory aspects of used fuel management facilities.

In addition to maintaining a program to provide assurance on the integrity of used fuel in storage, our engineering activities will include, among other endeavours, a technical evaluation of the impact of different used fuel types or volumes on APM and an evaluation of container placement methods in a deep repository.

Throughout, we will continue to focus on building our own human resource capacity to ensure that we have the necessary capabilities to manage the implementation of Adaptive Phased Management.

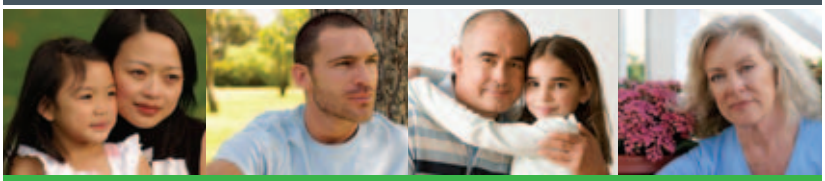
Social Research

Implementing Adaptive Phased Management will require an understanding of the many social issues and concerns associated with the long-term management of used nuclear fuel. As we proceed, the NWMO will need to identify techniques and lead processes to effectively engage interested people and organizations in decision-making, particularly those who will be most affected.

The broad range of people with whom we expect to work includes those living in reactor site and other potentially affected communities, Aboriginal people at the local, regional and national levels, specialists in science, industry, government and non-governmental organizations, as well as those potentially affected by our work and interested citizens at large. We will need to find ways to communicate the often complex issues to be addressed, and to help build the capacity of those who wish to be involved in decision-making.

One way we are attempting to build capacity at this early stage is through commissioned papers by academics and practitioners in Canada and abroad to help promote awareness and understanding of what is at stake in the decisions we will face. As well, experts can inform on the experiences of others who have confronted similar concerns. Commissioning specialist papers and publishing them on our website is an important element of our social research.

EXPECTATIONS FOR IMPLEMENTATION



Here is what Canadians told us they want from the NWMO:

- Continue to build new knowledge
- Inform the public about emerging innovations
- Seek third-party verification as a measure of trust
- Consider the work of other countries
- Assure that best knowledge and expertise is applied
- Measure actions against independent benchmarks
- Report in easy-to-understand, non-technical language
- Ongoing public involvement in decision-making

The NWMO is a founding partner of the Canadian Business Ethics Research Network which crosses academic disciplines and economic sectors to weave together insights emerging from business ethics, corporate social responsibility, sustainable development, triple bottom line and corporate governance research.

Our social research also includes work to explore and understand the expectations of Canadians at large. As a part of this work, in late 2006 we engaged Navigator, a leading research firm, to convene a series of discussion groups with community-engaged opinion leaders in the four nuclear provinces. This qualitative research to explore the expectations citizens have of the NWMO continued into 2007, confirming the characteristics Canadians expect of an organization implementing a long-term management approach for used nuclear fuel.

Many of the participants in our discussion groups accepted invitations to continue contributing to our social research by re-constituting into citizen panels for a series of further discussions about the NWMO and nuclear waste management. One of the first tasks they undertook was a review of some of our communication materials.

In assessing our brochure, *Moving Forward Together*, they were generally receptive and judged it to be fair and well-presented. However, they did offer specific suggestions for improvements in future editions.

Citizen Panel members also responded to questions about the NWMO website. Many said it was informative, detailed and easy to navigate. Again, a number of improvements were suggested and will be helpful as the NWMO further develops the site. The citizen panels will continue to inform the NWMO's work through 2008.

We hope to learn from our citizen panels how we might engage citizens more broadly in the near-term visioning of the implementation process going forward, long-term visioning, and the development of decision-making processes to be used in the future.

International Social Research

Continuous learning and adaptability are integral to successfully implementing Adaptive Phased Management. The NWMO continued throughout 2007 to learn from and contribute to international developments in public engagement best practices concerning radioactive waste management.

We attended the CARL workshop in Oskarshamn, Sweden in September. This multi-year international research project, which concluded in 2007, provided insights into the effects of stakeholder involvement on decision-making.

We continued our participation in the OECD Nuclear Energy Agency's Radioactive Waste Management Committee Forum for Stakeholder Confidence. NWMO staff presented an update on our public engagement experience and shared best practices with representatives of the 15 other nuclear waste management programs who attended. We also participated in the Forum's year-end brainstorming workshop on priorities for the group's future activities.

Future Social Research

As we move forward, our social research activity will centre on a broad range of implementation questions. We expect the following areas will continue to be a focus:

- What are the evolving approaches to dialogue, collaboration and dispute resolution;
- How might NWMO support the building of capacity among dialogue participants;
- How might we best support the interweaving of Traditional Knowledge with that of natural, social and scientific research in decision-making;
- What is the evolving framework of Canadian values which comes to bear on this topic; and
- How can we ensure the well-being of impacted communities?

Publications

The NWMO publishes its social and technical research and posts reports on the NWMO website: **www.nwmo.ca**.

Providing Financial Surety

Who will pay for Adaptive Phased Management? And how? Canadians expect that the necessary money will be available to pay for long-term used nuclear fuel management when it is needed. They also believe that those who benefit from nuclear power must provide for the care of waste which is produced.

OBJECTIVE 3

Propose funding formula and trust fund deposit schedules that address financial surety and long-term program funding.

The Nuclear Fuel Waste Trust Funds

The *Nuclear Fuel Waste Act* (*NFWA*) specifically addresses the future financial obligations for managing used nuclear fuel over the long term. The legislation assigns responsibility to the major owners of used nuclear fuel for the financing of its long-term management, and requires that these corporations establish trust funds for this purpose, into which they must make annual payments.

Ontario Power Generation Inc., Hydro-Québec, New Brunswick Power Corporation[1] and Atomic Energy of Canada Ltd. established these funds in 2002 and have made the required contributions to their respective funds each year. Total annual deposits were $1.1 billion at the end of fiscal year 2007. The total value of these funds, including investment income, was approximately $1.4 billion. This money is in addition to other segregated funds and financial guarantees the companies have set aside for nuclear waste management and decommissioning.

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**.

[1] In 2004, through a transfer order, the Government of New Brunswick assigned responsibility for all aspects of the provincially-owned nuclear generating assets to a new subsidiary corporation, NB Power Nuclear.

2007 CONTRIBUTIONS

For the 2007 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[2]	$8,000,000
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.

Developing a Funding Formula

The *NFWA* obliges the NWMO in this, our first Annual Report following the Government's selection of a management approach, to propose a funding formula to address the future financial costs of implementing the Adaptive Phased Management approach.

Financial surety has the objective of determining what costs can reasonably be expected to occur over the life of a project, along with a contingency for unexpected events, and then designing a system that collects and protects enough money to ensure that the entire cost can be covered under a variety of social and economic circumstances, and within a required time-frame.

In 2007 the Member companies committed time and effort with the NWMO to develop a formula to ensure the money will be there to pay for long-term used nuclear fuel management when it is required. The formula, based largely on the 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 of the management approach.

Canadians expect that those who benefit from electricity generated by nuclear reactors should pay for the long-term management of the used fuel that is produced. Intergenerational fairness has been embraced by the NWMO along with the "producer pays" principle, financial conservatism and other principles consistent with the *Nuclear Fuel Waste Act* (*NFWA*) and with international best practices. These principles have been applied in the development of our proposed formula to pay the long-term management costs of used nuclear fuel.

[2] In addition to the $4,000,000 deposit Hydro-Québec is required by the *Nuclear Fuel Waste Act* to make, the company made a one-time additional contribution of $4,000,000 for a total deposit of $8,000,000 in 2007.

NWMO FUNDING FORMULA – EXPERT REVIEW PANEL MEMBERS

Jean-Paul Baillet	Secretary-General, ANDRA (French national Agency for Radioactive Waste Management)
Donald Carmichael	Financial Consultant, former Investment Banker, Power and Energy Group, Scotia Capital Inc. (1996-2005); Financial Advisor to OPG
Donald Dewees	Professor of Economics, Professor of Law, University of Toronto; former Vice-Chair Market Design Committee – Ontario Electricity Sector
Richard Ferch	Nuclear Consultant; formerly Director, Wastes and Decommissioning, Canadian Nuclear Safety Commission

The NWMO's recommended funding formula and trust fund deposit amounts were submitted to a group of independent experts for review. After assessing the economic assumptions, the funding methods of both committed costs and future fuel bundles, the period of committed costs and assumed start dates for operation of the deep geological repository, the expert panel concluded that the funding formula, as proposed, is reasonable.

If the Minister of Natural Resources approves the proposed funding formula, total annual deposits to the *NFWA* trust funds will increase from the legislated requirement of $110,000,000 in 2007 to $137,000,000 in 2008, with a projected increase to $165,000,000 in 2011.

As Adaptive Phased Management is implemented the NWMO has ongoing responsibility for ensuring that the cost estimates remain updated and that the funding formula will support financing of all aspects of the long-term management approach. Contributions will be adjusted periodically to reflect updated projections of overall costs of the management approach and the number of fuel bundles to be produced by each used fuel owner.

Henceforth, in each annual report after the Minister of Natural Resources approves a funding formula, we will provide updated cost information and the amount of the deposit required to be paid during the next fiscal year by each of the nuclear energy corporations and AECL.

The proposed funding formula is presented on pages 44–45 of this Annual Report for consideration by the Minister of Natural Resources.

Review, Adjustment and Validation of Plans

OBJECTIVE 4

Continually review, adjust and validate plans against factors such as advances in technical learning, evolving societal expectations and values, and changes in energy and environmental policies.

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.

A fundamental tenet of Adaptive Phased Management (APM) is the ongoing incorporation of new learning and knowledge to guide decision-making. We must continually monitor new developments and be prepared to adjust our implementation plans as required in light of changes to our operating environment.

APM was proposed in 2005 following an extensive three-year dialogue with Canadian citizens, specialists and Aboriginal people. Since then Canada's energy policy landscape has evolved.

New Brunswick, Ontario and even Alberta – heretofore a non-nuclear province – are engaged in discussions about adding to Canada's existing number of nuclear reactors. In Ontario, the debate extends further. Consideration is being given to introducing light water reactors, a technology used elsewhere in the world that produces used nuclear fuel with characteristics different from those which Canadian nuclear operators now manage.

Further changing the Canadian energy picture is the Government's recent decision to become a member of GNEP, the Global Nuclear Energy Partnership. The possibility exists that Canada may one day recycle used nuclear fuel, potentially reducing the volume of waste, but creating a new waste stream which may have to be managed. We note that the Government of Canada has made clear that in joining GNEP, it does not, in any way, commit Canada to a policy of repatriation of nuclear fuel waste.

Decisions on new nuclear reactors, recycling or other changes in energy choices will not be made by the NWMO. They will be taken by nuclear operators in conjunction with government and the regulators. As the NWMO Advisory Council has underscored, it is important that we recognize uncertainties in our operating environment and put in place an active process for ongoing monitoring and review of new developments so that we can adjust our implementation path as may be required.

From a technical perspective APM is flexible. However, from a social perspective it requires the ongoing engagement of Canadians to determine how it is implemented. It will be important that we test the applicability of our existing plans for their social, ethical and technical appropriateness in light of new projections of used fuel types and volumes to be managed.

As part of our continuing engagement of Canadians, the NWMO will be discussing with interested individuals and organizations how changing conditions, such as new build, different fuel types or reprocessing should be incorporated into our approach. And, we will continually review, adjust and validate our implementation plans against the changing external environment.

Ensuring Governance, Oversight and Advice

OBJECTIVE 5

Develop a governance structure that provides Government, Members, Board, NWMO management and the public with greater assurance, oversight, advice, and guidance about NWMO activities during the implementation phase.

A New Membership Agreement and By-Law

In 2002, consistent with their obligations under the *Nuclear Fuel Waste Act* (*NFWA*), Ontario Power Generation, New Brunswick Power Corporation[3] and Hydro-Québec became the founding Members of the NWMO. The companies developed a Membership Agreement clarifying their roles and responsibilities in furtherance of the objectives of the *NFWA*. A General By-law was also prepared and filed with Industry Canada, forming the basis for the issuance of the corporation's letters patent.

The original Membership Agreement was developed against the NWMO objectives for the study period. Following the Government's decision in June 2007 a new Agreement was required to confirm Member roles, responsibilities and cost-sharing arrangements for NWMO's annual operating funding to implement the Adaptive Phased Management approach.

At a Special General Meeting of Members convened in October 2007, Members confirmed a new By-law and Membership Agreement, as proposed by the Board, for the implementation phase of NWMO's work. The amended By-law was subsequently submitted to Industry Canada for approval.

Reconstituting 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. Since its establishment in 2002, the Board has been strengthened in several ways, and grown in numbers.

In 2006 the Member corporations considered the composition of the Board of Directors against the organization's anticipated new mandate as an implementer following a Government decision. Members recognized the importance of ensuring that the Board reflects the appropriate skills, experience and competencies required to oversee the managerial, financial and operational activities associated with the long-term management of used nuclear fuel. They also took into account comments of the Advisory Council about Board composition, and expressions of concern expressed by some members of the public during the study which highlighted the importance of a Board which includes a broader scope beyond executives of the nuclear industry.

[3] In 2004, through a transfer order, the Government of New Brunswick assigned responsibility for all aspects of the provincially-owned nuclear generating assets to a new subsidiary corporation, NB Power Nuclear.

Taking the issue seriously, and being responsive to the views of others, the Members expanded the Board effective March 1, 2007 to add perspectives from outside the nuclear industry and capabilities in ethics, Aboriginal culture and finance management. The current Board of Directors is profiled on page 56 of this Annual Report.

The Advisory Council

The *Nuclear Fuel Waste Act* requires that the governing body of the NWMO appoint an Advisory Council to review and comment on its study and its triennial reports following the Government's selection of a long-term management approach for used nuclear fuel. An Advisory Council was established in 2002 and in addition to meeting its statutory obligations provided ongoing independent guidance and advice to the NWMO through the organization's study and transition periods.

In 2007, recognizing the new implementation mandate of the NWMO, the Board of Directors conducted a review of the Advisory Council terms of reference, size and composition. Wanting to build upon the experience and effectiveness of the existing Council membership the Board initiated a search to identify candidates competent in the areas of geosciences, strategic communications and Aboriginal Traditional Knowledge.

Three new members were appointed to the Council effective January 1, 2008. Two members, having completed their terms, vacated their positions to focus on other activities. The current membership of the Advisory Council is profiled on pages 62–65 of this Annual Report.

Technical Review Group

In 2007, in light of the NWMO's new expanded responsibilities for managing and directing the established technical research program on used nuclear fuel in Canada, the Board of Directors sought to establish a means by which the program would be reviewed by an independent group of technical specialists on an ongoing basis. A proposal was made for the establishment of a standing Independent Technical Review Group to meet this need.

The Independent Technical Review Group will be appointed in 2008 and will begin conducting reviews to regularly inform the Board and the Advisory Council whether the NWMO technical program is based on credible scientific and technical approaches and methodologies; is consistent with international practices; and will broaden and advance NWMO's technical knowledge to adequately support implementation of Adaptive Phased Management.

Policies and Procedures

The NWMO established a number of corporate and financial policies and procedures during its study phase. In 2007, the organization initiated a review of these to update and expand them as appropriate for an implementation organization with an expanded budget, a significant technical program and increased staffing levels. This work will continue in 2008. Once formulated, the procedures will be examined by a third party. As part of this work, the NWMO will review the best practices of similar organizations to ensure its policies and procedures achieve the highest standards.

Building an Implementing Organization

OBJECTIVE 6

Build an implementing organization with a full range of capabilities to implement the government decision, including social, environmental, technical and financial.

The NWMO recognizes the importance of consistency in vision and values and a continued commitment to citizen engagement, collaboration and research, both technical and social. With the Government of Canada's decision in June 2007 we moved from what was a small study-based organization to a new role as implementer. We began building a sustainable corporation with the necessary skills and capacity that will be needed to meet the challenges of managing Canada's used nuclear fuel over the long term.

Beginning to meet our implementation responsibilities requires the NWMO to address the appropriate balance between building internal expertise and expanding capacity through external networks and contractors. We started with a consolidation of staff resources by hiring as permanent employees former NWMO contract staff as well as integrating into the organization many of the people who previously directed and managed Canada's technical research program for long-term used nuclear fuel management. Ensuring NWMO viability also involved new permanent staff appointments in senior, intermediate, intern and support positions, with particular attention paid to succession planning.

A new position, Vice President of Science and Technology was established. A manager of geoscience was hired along with a director of environment, a director of policy and planning and a manager of community relations. Three technical staff in geosciences, safety assessment and engineering also joined the organization. Two graduate trainees, one in engagement and communications and another in social research, were employed and administrative support was strengthened. Additional graduate trainees in the areas of engagement, social research and technology are being sought.

The organization recruited to fill several important functions that were formerly externally contracted. These included employing our own legal counsel to coordinate legal reviews and provide support for commercial contracts, protocol agreements, compliance requirements and labour relations issues. A director of human resources was enlisted to manage recruitment, training and development, succession planning and labour relations issues. A director of communications has been engaged to develop and implement a strategic approach to public communications.

For the NWMO to build an organization that is, and is seen to be, fully competent to carry out its mandate will require ongoing effort. By year-end 2007 our staffing levels had increased to 27 full-time equivalents from a core complement of 12 individuals a year earlier. This incremental strengthening and broadening of our capabilities will continue as needs are identified in the coming years. Throughout, we will continue to focus on building the strong governance and management practices that will be critical to remaining accountable to citizens and our funding Member organizations.

Collaboratively Designing a Siting Process

OBJECTIVE 7

Proceed with the collaborative design of a siting process, supported by a public engagement program, and subsequent initiation of a siting process.

The NWMO is committed to designing a process for selecting a site for a deep geological repository collaboratively with Canadians, in a manner and with a result that meets the commitments and intentions expressed in *Choosing a Way Forward*, our Final Study. Our work program draws on lessons learned during the study process about effective approaches and tools, while seeking to be innovative, adaptive and responsive to the needs and interests of Canadians.

To help ensure the site selection process that emerges meets the expectations of Canadians, this work is being conducted in a way that is flexible; that aligns with NWMO's philosophy and other ongoing work; that continues to integrate technical, social, environmental and economic elements; that builds in-house capacity for future implementation; that incorporates best domestic and international practices; and that fosters conditions for effective implementation by continuing to build trust and confidence.

In preparing to work collaboratively with Canadians to design the process for selecting a site, the NWMO began in late 2006 by reviewing the commitments and intentions pertinent to siting that were made in the Final Study. We reviewed the comments and contributions of citizens, organizations and others who had expressed an interest and we evaluated relevant literature. We also brainstormed with specialists and practitioners on issues, techniques and possible approaches.

In 2007, the NWMO began exploring and framing through focused research, analysis and dialogue important siting-related themes such as the implications and requirements of site selection specific to Adaptive Phased Management, the range and nature of stakeholders and communities of interest, and the experience of siting approaches for other nuclear waste management and analogous initiatives. Work progressed in drafting clear and concise communication materials on a variety of topics of likely concern to citizens such as transportation, security and environmental issues.

We also began to develop a core discussion document designed to help initiate and facilitate conversations with Canadians on the design of the process for selecting a site. When it is published the document will, among other things, present an initial framework of objectives and principles to help guide discussion. It will also identify a number of key issues that people will likely wish to consider.

Finally, we visited selected organizations and experts responsible for, or knowledgeable of, siting processes elsewhere, collaboration methodologies and other topics, to gather lessons learned, experiences and advice.

Looking forward, our work will focus on engaging interested Canadians and Aboriginal peoples in dialogue on the design of a process for selecting a site. A variety of methods will be used with the aim of hearing from people holding diverse perspectives.

Following our initial engagement, we will draft a siting process proposal which will then be tested and validated with interested Canadians. The proposal will address both matters of process and substance, including preliminary criteria. In concert, a complementary information, education, and awareness program will be developed. Attention will also be given to developing institutional policies, practices, structures and arrangements to support implementation of the siting process. This is important foundation work required in advance of NWMO considering the initiation of a site selection process.

A Financial Foundation for the Future

On June 14, 2007, a decision was made by the Governor in Council to accept the NWMO's recommendation of Adaptive Phased Management (APM) as Canada's approach for the long-term management of used nuclear fuel.

The NWMO is now obliged to propose, for approval by the Minister of Natural Resources, a funding formula and deposit schedule for the next fiscal year, for the nuclear energy corporations and Atomic Energy of Canada Limited.

1. Requirements of the *Nuclear Fuel Waste Act*

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*). Furthermore, and in the unique situation as described in *NFWA* Paragraph 16(3)(a), the Minister is required to approve the funding formula to be used to finance the long-term management of nuclear fuel waste, together with the amounts of the deposits required for the next fiscal year by each nuclear energy corporation and Atomic Energy of Canada Limited.

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

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

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

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

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

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

16(3) The formula referred to in paragraph (2)(d) and the amount of each deposit referred to in paragraph (2)(e) are subject to the approval of the Minister when proposed in

(a) the first annual report after the date of a decision of the Governor in Council under section 15 or subsection 20(5); and

(b) the first annual report after the issuance, under section 24 of the *Nuclear Safety and Control Act*, of a construction or operating licence for an activity to implement the approach that the Governor in Council selects under section 15 or approves under subsection 20(5).

This section of the annual report is structured to be consistent with requirements defined in Subsection 16(2) of the *NFWA*.

2. Financial Guarantees: As Required by *NFWA* Paragraph 16(2)(a)

Financial guarantees have been provided to Canadian Nuclear Safety Commission (CNSC) by all NWMO members – Ontario Power Generation Inc. (OPG), Hydro-Québec (HQ) and NB Power Nuclear (NBP). These guarantees for year 2007 total $9 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 $8 billion (as at January 1, 2007), 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**.

3. Total Cost Estimate: As Required by *NFWA* Paragraph 16(2)(b)

The *Nuclear Fuel Waste Act* 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. 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.

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 in 2035 for the estimated 1.88 million fuel bundles produced as of the end of June 2006 would be approximately $4.8 billion (stated in present value as of January 1, 2008). 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 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 fuel. These costs will be dependent on future production levels.

4. Funding Formula: As Required by *NFWA* Paragraph 16(2)(d)

DEVELOPMENT

Following the submission of its final study report in November 2005, NWMO commenced work on developing a funding formula in consultation with financial experts, including those from its member companies. Based on a review of international practice, and the results of the extensive engagements with Canadians in the development of the APM, principles were established and adopted for guiding the development of the funding formula. These are listed below.

FUNDING PRINCIPLES

The principles and approach used by the NWMO for calculating costs and trust fund deposits are consistent with the intent of the *NFWA*, the approach used by the Canadian Nuclear Safety Commission (CNSC) for financial guarantees under the *Nuclear Safety and Control Act*, and the approaches used in other member countries of the Organization for Economic Co-operation and Development (OECD).

These funding principles used to develop the funding formula are:

Producer Pays: Each waste owner pays based on the quantity of waste produced and usage of the repository.

Financial Conservatism: The highest cost option for implementing Adaptive Phased Management is used.

Uncertainty Analysis: Provide for reasonably foreseeable and unforeseen events; contingencies are provided in the cost estimates.

Intergenerational Fairness: Funds will be collected over the assumed economic life of the nuclear reactors producing the used fuel bundles.

Fund Growth: Reasonable assumptions are used for real growth of funds to manage the used fuel over the long term.

COSTS TO BE FUNDED THROUGH *NFWA* TRUSTS

The $4.8 billion present value cost estimate of a deep geological repository for an estimated 1.88 million used fuel bundles (see Section 3 of this report) includes $1.6 billion to develop the repository to the point of obtaining a construction licence and $3.2 billion to complete construction, transport the fuel to the repository, operate, close and monitor the repository.

The *NFWA* requires that post-construction licence costs (currently estimated as $3.2 billion) must be funded through contributions to the *NFWA* trust funds established by OPG, HQ, NBP, and AECL.

As of December 2007, the total value of these funds including investment income was approximately $1.4 billion. It is proposed that each waste owner's proportionate share of the remainder of the $3.2 billion

(i.e., $1.8 billion) be funded by equal present value contributions over the period 2008 to 2035. These contributions are to escalate annually based on the respective assumed rate of return of each waste owner's fund. The rationale for this period is that 2035 is consistent with the earliest planned date when the deep repository would be available and the planned end of life of several of the current nuclear reactors that created the 1.88 million used fuel bundles. Contributions will also be such that the funds necessary for the complete construction costs of the facility will be available by the time construction commences.

For used fuel bundles generated after June 30, 2006, a contribution rate per bundle is calculated based on the incremental cost of transferring to the repository, facility expansion, and additional operating and monitoring costs. Each of these bundles would incur the same cost in present value terms taking into account the time value of money. The contribution amount will be determined based on the actual number of used fuel bundles produced. The funds necessary to meet the costs of fuel bundles created in annual cycles, beginning with the July 1, 2006 to June 30, 2007 cycle, will be deposited in the following year.

The 5-year used fuel production forecast for each waste owner is shown in **Table 1**.

Table 1 **Inventory of Used Nuclear Fuel Bundles in Canada**

OWNER	JUNE 2006 INVENTORY	2007* ACTUAL	2008*	2009*	2010*	2011*
			PROJECTION			
Ontario Power Generation	1,640,481	71,140	73,985	76,170	77,166	79,852
Hydro-Québec	101,130	4,651	4,805	4,456	4,775	8,105
NB Power Nuclear	109,298	4,668	7,795	—	3,942	4,923
Atomic Energy Canada Ltd.	30,682	—	—	—	—	—
Total	**1,881,591**	**80,423**	**86,585**	**80,626**	**85,883**	**92,880**

*from July 1 (previous year) to June 30 (current year)

The terms of the funding formula used to calculate the deposits are outlined in **Attachment 2**, together with other related assumptions.

COST SHARING

For purposes of sharing NWMO costs, this will initially be done based on the number of fuel bundles produced as of June 30, 2006, adjusted to account for the assumed timing of transfer of used fuel to the repository. For OPG, this transfer is assumed to start in 2035. For Hydro-Québec, New Brunswick Power and AECL, this transfer is assumed to start in 2050. The resulting cost sharing percentage amongst the waste owners is approximately: OPG 90.8%; HQ: 3.9%, NBP: 4.2%; and AECL: 1.2%.

These cost sharing percentages will be updated periodically and as a minimum on a 5-year cycle. The next revision is expected no later than the year 2012.

These percentages will apply to the sharing of both pre- and post-construction costs.

Costs specific to a nuclear fuel waste owner such as special fuel, and special transportation costs that are owner specific, will be attributed to the owner.

POSSIBLE FUTURE REACTORS

New build nuclear power reactors are currently being planned. In accordance with the *NFWA*, NWMO would be responsible for long-term management of the used fuel produced. This would necessitate a revision to the funding formula to take account of sharing of fixed, variable costs and investments already made by the current owners, amongst other considerations. Future revisions to the funding formula will be done in a fair and equitable manner balancing the interests of current and new waste owners, and based on the funding principles which form the basis of the current funding formula.

5. Trust Fund Deposits for 2008: As Required by *NFWA* Paragraph 16(2)(e)

The amount of the deposits required to be paid to the *NFWA* trust funds for 2008 are shown in **Table 2** below. Projected fund deposits are also shown for subsequent years.

Table 2 **Total Trust Fund Deposits: Year 2007 to 2011**

	TRUST FUND BALANCE ($ million)	DEPOSITS TO TRUST FUNDS FOR COMMITTED & FUTURE BUNDLES ($ million)			
OWNER	DEC. 2007	2008	2009	2010	2011
Ontario Power Generation	1,244	121	130	139	147
Hydro-Québec	44	7	7	7	8
NB Power Nuclear	45	7	10	4	8
Atomic Energy Canada Ltd.	23	2	2	2	2
Total	**1,356**	**137**	**149**	**152**	**165**

The deposits to trust funds represent the total contribution towards the committed liability (fixed costs plus variable cost for bundles already generated) and the projected contribution towards future bundles. The total deposits to trust funds of $137 million in 2008 rising to $165 million in 2011 compares to $110 million annually, as legislated in the *NFWA* prior to the approval of the funding formula by the Minister of Natural Resources.

6. Expert Panel Review

In the summer of 2007, an independent expert panel reviewed the proposed funding formula. The panel concluded that the funding formula, as proposed, was reasonable, and made a series of recommendations for its enhancement. These have been accepted by NWMO and are incorporated in the funding formula. The expert panel report is available on **www.nwmo.ca**.

7. Budget Forecast for 2008: As Required by the *NFWA* Paragraph 16(2)(c)

In addition to making financial provision for work required post-construction licence, NWMO will incur costs of approximately $1.6 billion (as stated in present value as of January 1, 2008) to site the long-term management option, develop its detailed design, evaluate its environmental impacts and obtain a construction licence from the CNSC. For 2008, the NWMO Board of Directors approved a budget envelope of $28 million. Annual costs beyond 2008 are subject to further review. Sharing of these costs will be in accordance with the percentages defined in the funding formula.

8. Ministerial Approval: As Required by *NFWA* Paragraph 16(3)(a)

The *NFWA* Paragraph 16(3)(a), requires that the funding formula and the amounts of each deposit in the next fiscal year must be presented to the Minister of Natural Resources for approval in the first annual report after the date of decision by the Governor in Council. This is a unique requirement for the 2007 annual report.

The following is presented for approval by the Minister.

COST ESTIMATE

- The estimated cost of managing used fuel will be based on the highest cost of feasible planning scenarios. As of March 2008, the cost estimate of the long-term management of used fuel will be based on an assumption of a geological repository in service by 2035. The highest cost scenario and cost estimate will change in future years as planning scenarios are further developed and estimates are refined.

- The escalation rates applied to account for the future escalation of costs will be based on long-term economic forecasts.

INVESTMENT INCOME

- The funding formula assumes that the funds deposited by each of the nuclear energy corporation and AECL will earn investment income. The estimated rates of returns on trust funds will be the best estimates by the individual trust fund owners. The estimates may vary from year to year and company to company.

SCHEDULE OF FINANCIAL CONTRIBUTIONS

- Annual *NFWA* trust fund contributions will comprise two components: (1) Funding for "committed" fuel bundles generated up to June 30, 2006, and (2) Funding for "future" bundles generated from July 1, 2006 onwards.

- The funds necessary to meet the cost of the long-term management of the "committed" fuel bundles consistent with the highest cost option as identified above, will be fully deposited by 2035, in equal installments adjusted for the time value of money. This time period is consistent with the end of life of the fleet of existing nuclear reactors. The life expectancy of the nuclear reactors varies from reactor to reactor. The actual life will depend on planned or likely refurbishments. It is reasonable to assume several of the existing reactors will be operational for a further 25 to 30 years.

- The funds necessary to meet the complete construction costs of the facility will be available at the time construction commences.

- The funds necessary to meet the cost of the long-term management of the "future" bundles will be deposited in the year following the generation of the bundles. For example, the 2008 deposits to the trust funds will allow for the recovery of incremental costs for fuel bundles generated between July 1, 2006 and June 30, 2007. A contribution rate per bundle based on the incremental cost of transferring to the repository, facility expansion, and additional operating and monitoring costs will be applied to the bundles generated.

COST SHARING

- The cost sharing percentage by each nuclear fuel waste owner will be based on the number of fuel bundles produced up to June 30, 2006, adjusted to account for the assumed timing of transfer of used fuel to the repository. The cost sharing percentages will be updated periodically and as a minimum on a five-year cycle based on updated fuel bundle inventories and other factors. Costs specific to a nuclear fuel waste owner such as special fuel, special packaging or transportation cost will be attributed to the owner.

DEPOSIT AMOUNTS FOR 2008

- The amounts of the deposits required to be paid during the next fiscal year (2008) are $121 M by OPG, $7 M by HQ, $7 M by NBP, and $2 M by AECL. The rationale for these amounts is based on the items above.

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 used fuel arising from the operation of OPG-owned facilities, including the facility leased by Bruce Power.

- The value of the used fuel financial guarantee required changes over time based on new generation of used fuel.
- The financial guarantee covers a five-year period to year-end 2007 and is updated annually by means of an annual report provided to the CNSC.
- For year 2007, the current estimate of the required financial guarantee for used fuel management is approximately $4.964 billion stated in present value as of January 1, 2007 and $2.742 billion for the purpose of guaranteeing the funding of decommissioning and low- and intermediate-level waste management costs. The financial guarantee covers the liability based on projected waste arising to year-end in any given year. These values were included within the year 2007 annual report provided to the CNSC.
- The financial guarantee is satisfied by actual accumulation of funds within segregated funds under the *Ontario Nuclear Funds Agreement* between OPG and the Province of Ontario, the *NFWA* Trust Fund, and a *Provincial Guarantee Agreement* to supplement these.

  The *Provincial Guarantee Agreement* provides an unconditional and irrevocable guarantee to supplement monies set aside by OPG in segregated funds and the *NFWA* trust to satisfy the total financial guarantee required by the CNSC. For the five-year period from 2003 to year-end 2007, the Provincial Guarantee was set at $1.51B. For year 2007 the Provincial Guarantee was not required as funds/trust accumulation was sufficient to cover the required Financial Guarantee.
- 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 on November 1. CNSC decision on this application was received on November 29, 2007.[4] The CNSC accepted the financial guarantee proposed by OPG. The 2008 Financial Guarantee of $9.999 billion will be satisfied by a projected segregated fund balance of $9.240 billion and a Provincial Guarantee of $760 million.
- The value of the Ontario Power Generation *Nuclear Fuel Waste Act* Trust Fund as of December 31, 2007 is $1,244 million.

[4] *(Canadian Nuclear Safety Commission) Record of Proceedings, Including Reasons for Decision*, In the Matter of Ontario Power Generation Inc., Financial Guarantee and Licence Amendment for OPG's Class I Nuclear Facility Licences in Ontario, Date of release of Decision: November 29, 2007.

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.[5]

- 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, projected to be generated by the operation of Gentilly-2 until 2011.
- 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 about $44 million as of December 31, 2007.

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.[6]

- The current used fuel financial guarantee is based on the present value of future costs to manage used fuel produced to the end of 2008. The fund will be increased annually based on future used fuel production estimates.
- At December 31, 2007, the financial guarantee requirement is satisfied by three separate funds: a used fuel fund with a market value of $227 million; a *Nuclear Fuel Waste Act* Trust fund of approximately $45 million, and a station decommissioning fund of $135 million.
- The New Brunswick Power Nuclear Corporation *Nuclear Fuel Waste Act* Trust Fund contained about $45 million as of December 31, 2007.

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.[7] No specific dollar values are quoted in the commitment letter.

- The AECL *Nuclear Fuel Waste Act* Trust Fund contained about $23 million as of December 31, 2007.

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5 *(Canadian Nuclear Safety Commission) Record of Proceedings, Including Reasons for Decision*, In the Matter of Hydro-Québec, Application to Renew the Gentilly-2 Nuclear Generating Station Operating Licence, Date of release of Decision: December 22, 2006.

6 *(Canadian Nuclear Safety Commission) Record of Proceedings, Including Reasons for Decision*, In the Matter of New Brunswick Power Nuclear Corporation, Application for the renewal of the Power Reactor Operating Licence for the Point Lepreau Nuclear Generating Station, Date of release of Decision: June 30, 2006

7 *(Canadian Nuclear Safety Commission) Record of Proceedings, Including Reasons for Decision*, In the Matter of Atomic Energy of Canada Limited, Application for the Renewal of the Chalk River Laboratories Nuclear Research and Test Establishment Operating Licence, Date of release of Decision: July 28, 2006.

ATTACHMENT 2

Terms of the Funding Formula

Economic Assumptions

The baseline cost estimates for the long-term management of Canada's used nuclear fuel have been developed in constant dollar cash flows. Three different escalators are currently used as shown in **Table 2-1**, to determine the costs of the long-term management of used fuel in escalated dollars.

The escalation rates have been updated since the November 2005 submission of the NWMO's final study report to the Government of Canada. The current escalation rates are extracted from the University of Toronto Institute for Policy Analysis Economic Forecast – January 2007. The labour escalation rate applied represents the long-term nominal rate without adjustment for labour productivity. Although some degree of labour productivity improvement is generally considered to be valid, it was decided to include a labour productivity improvement assumption of 0% to ensure additional financial conservatism. The escalation rates below are the expected long-term rates which have been applied to all future years. Escalation rates will be reviewed and updated every five years.

Table 2-1 **Escalation Indices**

ESCALATION INDICES	ANNUAL PERCENTAGE INCREASE
Labour (Average Hourly Earnings All Industry – Canada)	3.6%
Materials (GDP Deflator – Canada)	1.8%
Other (Consumer Price Index (CPI) – Canada)	1.9%

After escalation, these costs are discounted to arrive at the present value (PV) of the liability. A discount rate of 5.15% based on a real rate of return of 3.25% above long-term CPI of 1.9% was used to determine the January 1, 2008 present value costs.

The calculations of deposits to trust funds incorporated assumptions regarding the growth of the funds based on the investment policies and principles of each trust fund owner. **Table 2-2** summarizes the rates of return for the respective waste owners.

The rates of return as stated in the previous table reflect each waste owner's unique situation. Depending on the financial asset mix of each waste owner's fund, the expected rate of return of each waste owner is different.

Table 2-2 **Rates of Return on Trust Funds**

OWNER	ANNUAL PERCENTAGE INCREASE
Ontario Power Generation	5.15%
Hydro-Québec	5.00%
NB Power Nuclear	5.00%
Atomic Energy Canada Ltd.	4.30%

Computation of Annual Trust Fund Contributions

The proposed funding for the post-construction licence costs is divided into two parts:

(1) Costs associated with used fuel bundles produced as of June 30, 2006; and

(2) Costs associated with used fuel bundles to be generated beyond that date.

The first deposits are due within 30 days of the Minister of Natural Resources' approval of the funding formula. Subsequent annual contributions are due within 30 days of the issuance of the NWMO Annual Report.

The used fuel bundles produced by each waste owner as of June 30, 2006, the actual used fuel bundles generated between July 1, 2006 and June 30, 2007, and the projected used fuel bundles to be produced annually thereafter are shown in **Table 2-3**.

Table 2-3 **Used Fuel Bundle Production (Historical and Projected)**

OWNER	JUNE 2006 INVENTORY	2007* ACTUAL	2008*	2009*	2010*	2011*
			PROJECTION			
Ontario Power Generation	1,640,481	71,104	73,985	76,170	77,166	79,852
Hydro-Québec	101,130	4,651	4,805	4,456	4,775	8,105
NB Power Nuclear	109,298	4,668	7,795	—	3,942	4,923
Atomic Energy Canada Ltd.	30,682	—	—	—	—	—
Total	**1,881,591**	**80,423**	**86,585**	**80,626**	**85,883**	**92,880**

*from July 1 (previous year) to June 30 (current year)

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 2-3**.

Committed Used Fuel Bundle Liability

The cost estimate for used fuel bundles produced as of June 30, 2006 is considered the "committed" portion of the liability as these costs will be incurred regardless of whether any further used fuel bundles are generated in the future. This portion of the funding requirement includes all fixed costs for the repository facility and variable costs attributed to used fuel bundles in inventory.

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 several of the existing nuclear reactors that created the 1.88 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 waste owner contributions to trust funds for the "committed" liability associated with the used fuel bundles produced as of June 30, 2006 are given in **Table 2-4**.

Table 2-4 **Contributions to Trust Funds for "Committed" Fuel Bundle Liability**

	DEPOSITS TO TRUST FUNDS FOR "COMMITTED" BUNDLES ($ million)			
OWNER	**2008**	**2009**	**2010**	**2011**
Ontario Power Generation	57	60	63	66
Hydro-Québec	3	4	4	4
NB Power Nuclear	4	4	4	5
Atomic Energy Canada Ltd.	2	2	2	2
Total	**66**	**70**	**73**	**77**

Percentages of committed costs and the contribution requirement attributed to individual waste owners will be updated periodically and as a minimum on a 5-year cycle based on updated bundle volumes and other factors.

Future Used Fuel Bundle Liability

For used fuel bundles produced beyond June 30, 2006, a contribution rate per bundle is calculated based on the incremental cost of transferring to the repository, facility expansion, and additional operating and monitoring costs. Each future used fuel bundle would incur the same cost in present value terms taking into account the time value of money.

The waste owner contributions to trust funds for the liability associated with the future used fuel bundles to be generated beyond June 30, 2006 are given in **Table 2-5**. Actual contributions by the waste owners for future used fuel bundles will depend on the actual number of used fuel bundles generated annually by the individual waste owners.

The waste owner contribution rates for future used fuel bundles will be updated periodically and as a minimum on a 5-year cycle.

The total waste owner contributions to trust funds for the liability associated with the "committed" and future used fuel bundles are given in **Table 2-6**, along with the balance of the waste owner trust funds, as of December 31, 2007.

Table 2-5 **Contributions for Future Fuel Bundle Liability**

	DEPOSITS TO TRUST FUNDS FOR FUTURE BUNDLES ($ million)			
OWNER	2008 ACTUAL	2009	2010 PROJECTION	2011
Ontario Power Generation	64	70	76	81
Hydro-Québec	3	3	3	4
NB Power Nuclear	3	6	0	3
Atomic Energy Canada Ltd.	0	0	0	0
Total	**70**	**79**	**79**	**88**

Table 2-6 **Contributions for Total Used Fuel Liability***

	TRUST FUND BALANCE ($ million)	DEPOSITS TO TRUST FUNDS FOR COMMITTED & FUTURE BUNDLES ($ million)			
OWNER	DECEMBER 2007	2008 ACTUAL	2009	2010 PROJECTION	2011
Ontario Power Generation	1,244	121	130	139	147
Hydro-Québec	44	7	7	7	8
NB Power Nuclear	45	7	10	4	8
Atomic Energy Canada Ltd.	23	2	2	2	2
Total	**1,356**	**137**	**149**	**152**	**165**

* The values reported in Table 2-6 are subject to rounding error.

The Organization

SEATED (LEFT TO RIGHT) Kitty Lee, Jose Freire-Canosa, Monique Hobbs, Paul Gierszewski, Frank King, Monica Dias, Cynthia Jourdain, Tom Lam, Pat Patton, Nancy D'Alanno, Cynthia Summers, Mike Krizanc.
STANDING (LEFT TO RIGHT) Sally Clark-Mills, Andre Vorauer, Peter Maak, Jessica Cornelius, Aaron DesRoches, Patrick Moran, Angela Cicottelli, Ken Nash, Kathryn Shaver, Anda Kalvins, Frank Garisto, Gloria Kwong, Ken Birch, Sarah Hirshorn,

The Members » **The *Nuclear Fuel Waste Act* (*NFWA*) assigns responsibility to the nuclear energy corporations to establish and fund the NWMO's operations. Accordingly, Ontario Power Generation Inc., New Brunswick Power Corporation[8] and Hydro-Québec are founding Members of the NWMO and, under the *NFWA*, must remain Members of the organization.**

Brian Kang, Eric Sykes, Paula Lum, Michael Hung, Mary Cholodny, Deb Rzeplinski, Jo-Ann Facella, Debbie Williams, Jamie Robinson, Atika Khan, Sean Russell, Sherry Adams, Angelo Castellan, Gillian Adshead, Michael Borelli.
ABSENT Mahrez Ben Belfadhel, Nicole DiCarlo, Gowie Garcia, Amy Hutchison, Phyllis Pandovski, Doug Wright.

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 June 2007. At a Special General Meeting of Members convened in October 2007, Members confirmed a new General By-law and Membership Agreement, as proposed by the Board, for the implementation phase of NWMO's work. The amended By-law was subsequently submitted to Industry Canada for approval.

[8] In 2004, through a transfer order, the Government of New Brunswick assigned responsibility for all aspects of the provincially-owned nuclear generating assets to a new subsidiary corporation, NB Power Nuclear.

In addition to formal meetings, officials and staff from Member companies and the NWMO convened several informal working meetings and conference calls for the purpose of developing the By-law, Membership Agreement and proposed funding formula.

The Board of Directors

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

As at December 31, 2007, the Board was composed of seven directors. Dr. Gary Kugler serves as Chairman. Mr. Ken Nash, President & CEO, is also a director. Five new directors joined the NWMO Board in 2007. Hydro-Québec appointed Ms. Josée Pilon effective January 26, to succeed Mr. Michel Rhéaume. NB Power Nuclear Corporation appointed Ms. Sharon MacFarlane to succeed Mr. Laurie Comeau as of June 30, 2007. OPG appointed Mr. C. Ian Ross to the Board on March 1, to succeed Mr. Fred Long. Additional OPG appointments to the Board included Mr. Ron Jamieson and Ms. Deborah Poff, who accepted invitations to join the Board as of March 1, 2007. OPG also appointed Pierre Charlebois effective February 22, 2008.

The Board convened five formal meetings in 2007, as well as two separate strategic planning workshops, and conference calls as required. An orientation program was convened for directors, which included a site visit to a used nuclear fuel storage facility.

Early in 2007, the Board reviewed and approved the 2006 Annual Report and audited financial statements, subsequently presented to NWMO Members at the June Annual General Meeting. The 2008 NWMO Five-Year Business Plan and Budget was presented to the Board for approval in the fall of 2007.

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

Many specific areas of focus for the Board in 2007 related to facilitating NWMO's transition into an implementing organization. The Board reviewed and approved the new General By-law, Membership Agreement and the proposed funding formula to support the early years of implementation. Directors discussed and provided guidance on labour relations and human resource planning and development.

Addressing oversight and governance, Directors developed a framework for the Advisory Council for NWMO's implementation phase. The Board approved a revised Terms of Reference for the Council and provided direction for a review of the Council's composition to ensure the appropriate breadth of expertise for the implementation phase.

The Board approved establishment of an Independent Technical Review Group to oversee the NWMO technical program.

The Board also confirmed its Charter and established a Siting Committee of the Board to provide focused attention on this aspect of NWMO's plans and future activities. In strategic planning sessions, the Directors agreed on a set of draft strategic objectives and a process through which NWMO would collaboratively develop its five-year implementation plan.

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

Committees of the Board of Directors

AUDIT, FINANCE AND RISK COMMITTEE

The Board's Audit, Finance and Risk committee convened four regular meetings in 2007 and one special session to discuss the expert panel review of NWMO's proposed funding formula.

It provided oversight of the external audit of the NWMO's 2006 financial statements, advising on selection of the auditors for 2007 and terms of the audit service plan. The committee met with the auditors to discuss their findings.

The Committee regularly reviewed in-year financial statements and cash flow projections, budgetary planning for the upcoming year, and management of business risk in advance of presentation to the full Board.

As at December 31, 2007, the Board's Audit, Finance and Risk Committee was composed of three Directors: Mr. C. Ian Ross, Mr. Ron Jamieson and Ms. Josée Pilon.

SITING COMMITTEE

In 2007, the Board established a Siting Committee as a vehicle through which the Board maintains oversight of the strategic direction for the preparatory work for the collaborative design of a siting process and, in the future, the site selection process itself.

The Committee convened two meetings in 2007 during which members received orientation briefings on NWMO's work program and reports from the Special Advisor's work on preparations for the collaborative design of a siting process,

As at December 31, 2007, the Board's Siting Committee comprised three Directors: Mr. Ron Jamieson, Dr. Deborah Poff, and Ms. Sharon MacFarlane. Ms. Elizabeth Dowdeswell, Special Advisor to the Board, served as an ex-officio member of the committee.

Members of the Board of Directors

Dr. Gary Kugler
Chairman

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

Ronald (Ron) L. Jamieson

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 Bank of Montreal. 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

Sharon MacFarlane VP, Finance, NB Power Group

Ms. MacFarlane has been VP – Finance and chief financial officer at NB Power since 2003. Ms. MacFarlane joined NB Power in 1997 as managing director of Finance and became VP of Finance and Information Systems one year later. Prior to 1997, she was VP 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

Josée Pilon Special Projects Manager, Hydro-Québec

Ms. Pilon is an MBA graduate of Laval University. She is member of the steering committee on the evaluation 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

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. 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

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 September 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 Inc. He is also a member of the Law Society of Upper Canada.

EFFECTIVE FEBRUARY 22, 2008, PIERRE CHARLEBOIS WAS APPOINTED TO THE BOARD OF DIRECTORS

Pierre Charlebois

Pierre Charlebois

Executive Vice President and Chief Operating Officer, Ontario Power Generation Inc.

Pierre Charlebois is Executive Vice President and Chief Operating Officer for Ontario Power Generation Inc. (OPG). Mr. Charlebois 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 of Ontario.

Officers

GARY KUGLER
Chairman of the Board

KEN NASH
President and CEO

KATHRYN SHAVER
Vice President, Corporate Affairs & Corporate Secretary

FRANK KING
Vice President, Science and Technology

ANGELO CASTELLAN
Chief Financial Officer

Notes: Angelo Castellan succeeded Fred Long as Chief Financial Officer on March 1, 2007. Frank King was appointed Vice President, Science and Technology effective November 12, 2007.

The NWMO Team

As at December 31, 2007 NWMO had 27 full-time staff equivalents. The organization grew during the year from a staff of 12 individuals at the end of December 2006. Added capabilities are in the areas of social research, engagement, technical research, human resources and administration.

The NWMO will continue to expand the breadth of its internal capacity in 2008 to meet the needs of a sustaining organization capable of implementing Adaptive Phased Management.

Our Head Office

From January through to June 2007, the head office of the Nuclear Waste Management Organization (NWMO) was located at 49 Jackes Avenue, Toronto, Ontario, M4T 1E2.

In June 2007, the head office was relocated to:
22 St. Clair Avenue East, 6th Floor, Toronto, Ontario, M4T 2S3.

The Advisory Council

Mandate and Membership

The NWMO Advisory Council was established by the Board of Directors in 2002 as required by the *Nuclear Fuel Waste Act* (*NFWA*).

Council's original nine members continued to serve through to the end of December 2007. The Board of Directors, having completed its assessment of expertise and competencies required on Council to support NWMO's early implementation years, extended invitations to the nine members to serve a further term. Seven members accepted re-appointment, providing important continuity in Council's operations. The Honourable David Crombie agreed to stay on as Advisory Council Chairman. The Board of Directors appointed three new Council members effective January 1, 2008, bringing current membership to ten, as outlined on pages 62 to 65.

The Advisory Council met its statutory obligation of reviewing and commenting on the NWMO study in 2005 and its comments were made public when the study was submitted to the Minister of Natural Resources Canada.

The Council's next statutory obligation will be to provide comments for inclusion in NWMO's triennial reports beginning with the 2010 report. Council is required in each triennial report to comment on the NWMO's activities for the previous three years, including the results of NWMO's public consultations and analysis of any significant socio-economic effects of its activities. The Advisory Council must also comment on NWMO's five-year strategic plans and its budget forecasts. The triennial reports will be submitted to the Minister of Natural Resources and made public at the same time.

2007 Activities

In 2007 the Advisory Council continued its important role of providing ongoing independent guidance and advice to the NWMO as the organization prepared for its implementation phase.

The Council convened four formal meetings during the year. Each meeting included an in-camera session where members deliberated privately without the presence of NWMO staff or management. Council members also convened one informal conference call in 2007.

At each meeting, NWMO management and staff reported on recent technical and social research as well as public engagement activities and findings. Much of Council's focus was on NWMO's planning for implementation activities. The Council was briefed and consulted on the organization's in-year work plans and the development of its 2008 business plan, development of the proposed funding formula and the draft strategic objectives to guide early NWMO work.

As part of the planning discussion, there was extensive Council comment about changes in the external landscape, particularly discussion about new nuclear build in Canada and how the NWMO might best stay abreast of these developments and incorporate such developments into its strategic direction. Council acknowledged that the NWMO is required under the *NFWA* to manage all of Canada's used nuclear fuel and emphasized that the organization must prepare for a variety of eventualities, and their social and technical impacts.

In discussion about NWMO governance, Council members expressed their desire for the new Board to continue operating under the principles established by the NWMO during its study phase, and that it maintain its vision for Adaptive Phased Management. Council

urged that the principles of transparency and openness be made explicit in NWMO's vision, mission and values. Members also discussed the importance of peer review processes for the technical program, noting that transparency and independent review are essential for public confidence in the scientific and technical work of NWMO.

The Advisory Council expressed strong support for development of the Aboriginal Working Group, Niigani. Council members met with Niigani in November for an exchange of views and requested that future opportunities be provided to continue the discussion. The NWMO was encouraged to continue to include Aboriginal people in all areas of its work. Council member Donald Obonsawin attended NWMO's 2007 Elders' Forum in Garden River, Ontario to participate in and listen to the discussion first hand.

The Council provided input into the development of NWMO's engagement programs. Members suggested that the time required to build relationships will be one of the NWMO's greatest challenges. They reiterated their support for the NWMO approach of proceeding in stages, providing information, inviting discussion and reporting back. The organization was encouraged to remain flexible on the timing of its work.

Council discussed different approaches to disseminating information and engaging in dialogue. Members encouraged the NWMO to ensure that mechanisms are in place to invite comment from youth in the organization's broader engagement activities. Council supported development of a youth engagement strategy and encouraged the exploration of modern communication opportunities to make dialogue accessible to youth.

Discussions were held with the Special Advisor to the Board, Elizabeth Dowdeswell, regarding planning for the collaborative development of a siting process. The Advisory Council provided comment on the proposed direction of this work and on a discussion document being prepared to assist the dialogue with citizens on the issue.

Also in 2007, at the request of the Board Chairman, Advisory Council members were invited to discuss the Council's mandate and membership for the next phase as NWMO implements Adaptive Phased Management. Council reviewed a draft Terms of Reference for the Council and discussed future membership. Council members stressed the importance of maintaining their independence and having access to independent expertise, while offering advice to NWMO.

The Advisory Council Chair continued to have direct access to all NWMO Board meetings to ensure a comprehensive exchange of information. These sessions provided regular opportunities for an informal exchange of views and a conduit for the Chair to keep the Council fully informed on Board matters. The Board of Directors and Advisory Council members met once to informally exchange views, as has been the practice in previous years.

At the Advisory Council's request, the NWMO records formal minutes of Council meetings and makes them publicly available. These can be found on the NWMO website at **www.nwmo.ca/advisorycouncil**.

Members of the Advisory Council

AS OF JANUARY 1, 2008, THE ADVISORY COUNCIL COMPRISES THE FOLLOWING MEMBERSHIP

Honourable David Crombie Advisory Council Chairman

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.

Frederick Gilbert

Frederick Gilbert is the President of Lakehead University in Thunder Bay, Ontario. He 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. His research interests included resource management and the sustainable use of the natural environment.

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, she is a member of the Province of Ontario's Expert Panel on Climate Change Adaptation, and she is a co-chair of the Green GTA Task Force. She teaches environmental law in the Graduate Program in Environmental Science at the University of Toronto.

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 and he holds positions on a number of national and international committees.

Donald Obonsawin
Donald Obonsawin is a past-president and CEO of Jonview Canada Inc. 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.

Daniel Rozon
Daniel Rozon is a retired Professor of Engineering Physics at École Polytechnique de Montréal. 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 génie nucléaire) for more than 15 years.

ALSO SERVING ON COUNCIL IN 2007:

Helen Cooper OCTOBER 2002-DECEMBER 2007 INCLUSIVE
Helen Cooper has devoted most of her professional career to strategic planning and development for broader public sector and not-for-profit organizations. She has practiced as a mediator and adjudicator in dispute resolution and has taught courses in urban planning at both Queen's University and the University of Waterloo. She is a former mayor of Kingston, Ontario, and a former president of the Association of Municipalities of Ontario.

Gordon Cressy OCTOBER 2002-DECEMBER 2007 INCLUSIVE
Gordon Cressy retired as President of the Canadian Tire Foundation for Families early in 2007. A past President of the United Way of Greater Toronto, he has held Vice-President positions at both the University of Toronto and Ryerson University. Mr. Cressy has a lengthy record of community involvement.

EFFECTIVE JANUARY 1, 2008, THE FOLLOWING MEMBERS WERE APPOINTED TO THE ADVISORY COUNCIL:

Dr. Marlyn Cook

Dr. Cook is presently a family physician with the Mohawk Council of Akwesasne Department of Health in the Mohawk community of Akwesasne, Ontario. Dr. Cook is Cree and a member of the Grand Rapids First Nation in Northern Manitoba. She has practiced medicine in a number of northern Aboriginal communities in Manitoba and 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.

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. Rudyard holds a degree from University of Toronto and a Masters of Philosophy from Emmanuel College, Cambridge.

Dougal McCreath

Dougal McCreath is 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.

Auditors' Report & 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 25, 2008.

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 22, 2008

Ken Nash
President

Angelo Castellan
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, 2007 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, 2007 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 25, 2008

Statement of Financial Position

Statement of Financial Position

DECEMBER 31, 2007	2007	2006
ASSETS		
CURRENT		
Cash	$ 4,999,105	$ 1,210,708
Accounts receivable (NOTE 5)	365,920	126,764
Prepaid expenses and deposits	253,046	7,074
	5,618,071	**1,344,546**
CAPITAL ASSETS (NOTE 4)	938,773	64,561
	$ **6,556,844**	$ **1,409,107**
LIABILITIES		
CURRENT		
Accounts payable and accrued liabilities (NOTE 5)	$ 1,406,469	$ 514,605
Member overcontributions payable (NOTE 6)	4,211,602	–
	5,618,071	**514,605**
COMMITMENTS (NOTE 7)		
NET ASSETS		
Invested in capital assets	938,773	64,561
Internally restricted (NOTE 6)	–	829,941
	938,773	**894,502**
	$ **6,556,844**	$ **1,409,107**

APPROVED BY THE BOARD OF DIRECTORS, FEBRUARY 22, 2008:

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, 2007

	2007	2006
REVENUE		
Member contributions (NOTE 5)	$ 15,444,090	$ 4,200,000
Non-member contributions	255,910	–
Interest income	313,836	30,326
	16,013,836	**4,230,326**
EXPENSES		
Administration and financial analysis (NOTE 5)	4,468,206	2,097,880
Stakeholder engagement and communications	649,442	565,288
Technical research and development	5,052,959	–
Compliance and governance	884,833	496,017
Social research and support implementation	541,189	–
Refinement of analysis and preparatory work	–	231,018
Amortization	116,990	34,969
Loss on disposal of assets	44,344	–
	11,757,963	**3,425,172**
EXCESS OF REVENUE OVER EXPENSES	**$ 4,255,873**	**$ 805,154**

Statement of Changes in Net Assets

Statement of Changes in Net Assets

YEAR ENDED DECEMBER 31, 2007

	2007			2006
	Invested in Capital Assets	Internally Restricted	Total	Total
BALANCE, BEGINNING OF YEAR	$ 64,561	$ 829,941	$ 894,502	$ 89,348
EXCESS OF REVENUE OVER EXPENSES	(161,334)	4,417,207	4,255,873	805,154
ADDITIONS TO CAPITAL ASSETS	1,035,546	(1,035,546)	–	–
REFUNDABLE TO MEMBERS (NOTE 6)	–	(4,211,602)	(4,211,602)	–
BALANCE, END YEAR	**$ 938,773**	**$ –**	**$ 938,773**	**$ 894,502**

Statement of Cash Flows

Statement of Cash Flows

YEAR ENDED DECEMBER 31, 2007

	2007	2006
NET INFLOW (OUTFLOW) OF CASH RELATED TO THE FOLLOWING ACTIVITIES		
OPERATING		
Cash received from contributions	$ 15,700,000	$ 4,251,639
Interest received	313,836	30,326
	16,013,836	**4,281,965**
Cash paid for materials and services	(11,189,893)	(4,041,547)
	$ **4,823,943**	$ **240,418**
INVESTING		
Purchase of capital assets	(1,035,546)	(10,182)
NET INCREASE IN CASH	**3,788,397**	**230,236**
CASH, BEGINNING OF YEAR	1,210,708	980,472
CASH, END OF YEAR	$ **4,999,105**	$ **1,210,708**

Notes to the Financial Statements

DECEMBER 31, 2007

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, New Brunswick Power Corpoartion (successor, NB Power Nuclear), and Ontario Power Generation Inc., (the "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.

Following the Government of Canada's selection of a management approach for used nuclear fuel, NWMO members must review, amend and restate the NWMO by-law to reflect the objects and responsibilities of NWMO as it assumes an implementation mandate. The amended and restated by-law will require the unanimous approval of the NWMO members and the approval of the Minister of Industry, Canada.

2. Changes in Accounting Policy

On January 1, 2007, NWMO was required to adopt the Canadian Institute of Chartered Accountants' ("CICA's") revised standards on recognition and measurement and presentation of financial instruments for not-for-profit organizations. The standards are titled S.3855 – Financial Instruments Recognition and Measurement, S.3861 – Financial Instruments Disclosure and Presentation, and S.3865. – Hedges.

In accordance with these revised 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 under the revised standards. 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 face 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.

These new standards did not result in any opening or year end adjustments.

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

3. 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 of capital assets is provided for on a straight-line basis over their estimated useful lives as follows:

Furniture	7 years
Computer equipment	3 years
Leasehold improvements	10 years (term of lease)

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.

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.

4. Capital Assets

	2007			2006
	Cost	Accumulated Amortization	Net Book Value	Net Book Value
Furniture	$ 428,298	$ 30,593	$ 397,705	$ 47,043
Leasehold improvements	246,701	12,335	234,366	–
Computer equipment	367,242	60,540	306,702	17,518
	$ 1,042,241	$ 103,468	$ 938,773	$ 64,561

5. Related Party Transactions and Balances

	2007	2006
TRANSACTIONS DURING THE YEAR		
Member contributions		
• Ontario Power Generation Inc.	$ 14,180,240	$ 3,721,656
• NB Power Nuclear	656,260	253,507
• Hydro-Québec	607,590	224,837
	15,444,090	**4,200,000**
Transactions with Ontario Power Generation Inc.		
• Managerial services (included in administration and financial analysis expenses)	3,113,040	1,547,520
• Reimbursement for leaseholds and specific capital assets related to move to 22 St. Clair Avenue	791,063	–
• Rent and shared cost recovery	(128,926)	–
BALANCES OUTSTANDING		
Due to Ontario Power Generation Inc. (included in accounts payable and accruals)	583,586	285,222
Amounts due from (included in accounts receivable):		
Ontario Power Generation Inc.	128,926	–
NB Power Nuclear	–	67,185
Hydro-Québec	–	59,579

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, purchases of new office furniture, rental costs of leased premises, utility costs, insurance and general office supplies.

6. Member Over-Contributions Payable

The Members, on December 13, 2007, approved to refund unused contributions of $4,211,602 to the members in accordance with the terms of the NWMO membership agreement. These amounts are to be refunded in 2008. In the prior year, the Members had agreed that unused contributions in the amount of $829,941 be held in internally restricted net assets to be applied towards leasehold improvements for the new office premises.

7. 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.

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

2008	$ 229,360
2009	$ 229,360
2010	$ 229,360
2011	$ 229,360
2012	$ 114,680

(ii) NWMO is negotiating with the landlord to lease an additional 4,873 sq. ft. of office space at an annual minimum rental of $18.50 per sq. ft.

8. 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.

Mixed Sources
Product group from well-managed forests, controlled sources and recycled wood or fiber

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