

# Protecting Canadians



Canadian Nuclear Safety Commission  
2004-2005 Annual Report



Canadian Nuclear  
Safety Commission

Commission canadienne  
de sûreté nucléaire

Canada

# Table of Contents

<b>I. The Canadian Nuclear Safety Commission</b>	
Letter to the Minister . . . . .	1
Message from the Chief Executive Officer . . . . .	6
The Canadian Nuclear Safety Commission – Executive Management Team . . . . .	7
<b>II. The Canadian Nuclear Safety Commission – Overview</b>	
Mission and Vision . . . . .	8
Regulatory Policy and Program Delivery . . . . .	8
The CNSC and Results for Canadians . . . . .	9
CNSC Challenges and Risks . . . . .	10
2004-2005 Performance Summary . . . . .	12
<b>III. The Canadian Nuclear Safety Commission – Performance Against Plans</b>	
Outcome: 1. A clear and pragmatic regulatory framework . . . . .	17
2. Individuals and organizations that operate safely and conform to safeguards and non-proliferation requirements . . . . .	20
3. High levels of compliance with the regulatory framework . . . . .	21
4. CNSC cooperates and integrates its activities in national/international nuclear fora . . . . .	26
5. Stakeholders' understanding of the regulatory framework . . . . .	31
6. Management and Enabling Infrastructure . . . . .	32
Measures of Performance . . . . .	34
<b>IV. The Canadian Nuclear Safety Commission – Operating Context</b>	
The CNSC Strategic Framework . . . . .	38
Governance at the CNSC . . . . .	39
Organizational Information . . . . .	40
<b>V. Report Card on Nuclear Power Plant Performance as of January 2005 . . . . .</b>	<b>41</b>
<b>VI. Financial Statements . . . . .</b>	<b>42</b>

## Contact Information

### Canadian Nuclear Safety Commission

Office of Communications and Regulatory Affairs

280 Slater Street, P.O. Box 1046, Station B

Ottawa, Ontario K1P 5S9

Telephone: (613) 995-5894 or 1-800-668-5284 (within Canada) Fax: (613) 995-5086

e-mail: [info@cnscccsn.gc.ca](mailto:info@cnscccsn.gc.ca)

Web site: [www.nuclearsafety.gc.ca](http://www.nuclearsafety.gc.ca)

Published by Authority of The Honourable R. John Efford, P.C., M.P.

Minister of Natural Resources Canada

© Minister of Public Works and Government Services Canada 2005

Catalogue number CC171-2005E

ISBN 0-662-40882-9

*Please note that the Canadian Nuclear Safety Commission Annual Report of the Commission Tribunal 2004-2005 is located on the reverse side of this document.*

Photos on pages 3 and 22 courtesy of Elektro Inc., Norcross, GA, USA. Photo on page 30 courtesy of Dean Calma/International Atomic Energy Agency.



Printed on Recycled Paper

# I. The Canadian Nuclear Safety Commission

Letter to the Minister of Natural Resources Canada  
**The Honourable R. John Efford**

The Honourable R. John Efford  
Minister of Natural Resources Canada  
Ottawa, Ontario

Sir:

I have the honour of presenting you with the Annual Report of the Canadian Nuclear Safety Commission for the fiscal year ending March 31, 2005. The report has been prepared and is submitted in accordance with Section 72 of the *Nuclear Safety and Control Act*.



Linda J. Keen  
President and Chief Executive Officer



Canadian Nuclear Safety Commission  
Commission canadienne de sûreté nucléaire

Canada



## Protecting Canadians

The CNSC's regulatory regime requires that licensees design, construct and operate their facilities safely at all times.

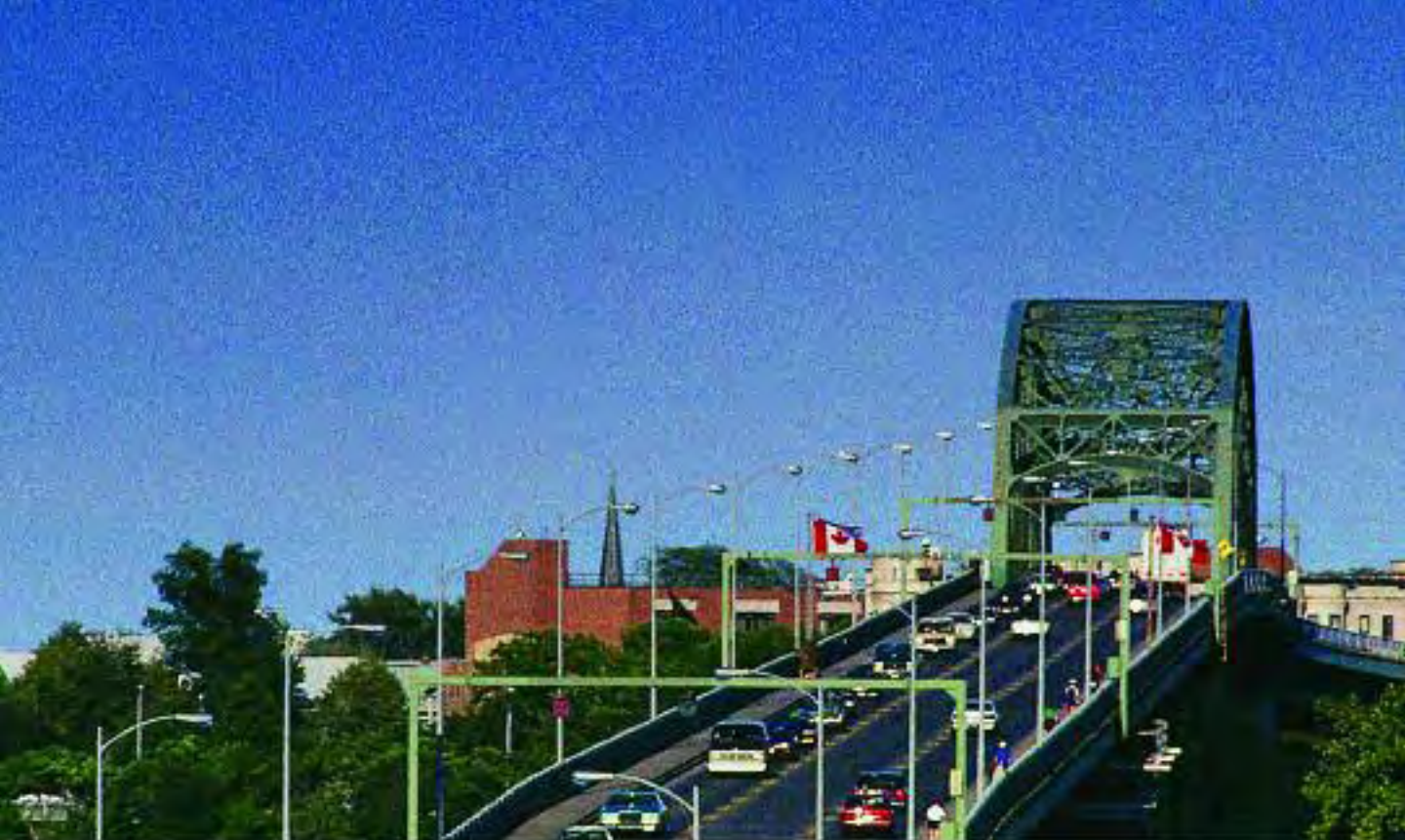




## Protecting Canadians' Health

Increased demand and the development of new technologies in the fields of nuclear medicine and radiation therapy require constant vigilance on the part of the CNSC.





## Protecting Canadians' Security

To protect Canadians, the CNSC has initiated major new security initiatives that apply to nuclear facilities and substances.





## Protecting the Canadian Environment

Protecting the environment is of major importance in the work of the CNSC, through its environmental responsibilities under the *Nuclear Safety and Control Act* and other relevant legislation.



Message from the Chief Executive Officer  
Linda J. Keen

I am pleased to present the 2004-2005 Annual Report of the Canadian Nuclear Safety Commission (CNSC).

This report covers my fourth year as President and Chief Executive Officer of the CNSC. It outlines the important steps that the CNSC, as Canada's nuclear regulator, has taken over the past year to deliver on its mission to protect health, safety, security and the environment and to respect Canada's international commitments on the peaceful use of nuclear energy.

On behalf of Canadians, the CNSC continues to exercise effective regulatory control over the use of nuclear energy and materials. Over the past year, we have worked diligently to ensure that the CNSC is effective in the way it manages its business. In addition to our vital work in licensing and in compliance inspection, we are continuing to improve our robust regulatory framework, and are committed to the implementation of quality management practices. We have already introduced an integrated management system to define and apply a common set of management practices and principles, align current and future improvements, and link key activity areas to outcomes. In addition, we have launched the Power Reactor Regulation Improvement Program, which is intended to ensure that the power reactor regulation program delivers more effective regulatory oversight. In addition, the CNSC has made substantial progress on the documentation of an updated licensing basis for the design of power reactors. This draft CNSC standard will be used to assess the licensability of any new reactors in Canada.

Internationally, the CNSC has been active in efforts to ensure the safe and peaceful use of nuclear substances. Highlights of the past year include: the adoption of an internationally harmonized regulatory regime for radioactive sources; subjecting Canada's nuclear power reactor pro-

gram to a thorough international peer review; strengthening international guidelines governing the safe operation of research reactors worldwide; strengthening radiation protection requirements for carriers; improving safeguards to track the use of nuclear substances in Canada; and tightening import/export controls over the movement of nuclear substances.

The CNSC also launched a values and ethics program in March 2005, under the theme "*Helping good people do the right thing*". This is a key component of a sound governance structure. A clearly articulated values and ethics strategy will provide CNSC staff with practical tools to guide them in making ethical decisions in the course of their work, and will also strengthen the CNSC's relationships with licensees and stakeholders. The CNSC's Audit and Ethics Group continues to be responsible for performing a rigorous internal audit role and, new in 2005, for receiving and investigating disclosures of wrongdoing consistent with the draft *Public Servants Disclosure Protection Act* (Bill C-11).

As you will see in the following pages, the CNSC has made important strides in every area of its mandate. Although many challenges lie ahead, our accomplishments so far provide a solid foundation on which to build.

As we move forward, our commitment to the people of Canada will remain unwavering – to protect health, safety, security and the environment and to respect Canada's international commitments on the peaceful use of nuclear energy. Whatever new growth or demands we face, we will not lose sight of this mission.

Sincerely,



Linda J. Keen, M.Sc.



## Executive Management Team

The Chief Executive Officer of the CNSC staff organization leads an Executive Committee responsible for the management of the agency.



**Linda J. Keen**  
*President and Chief Executive Officer*



**Ken Pereira**  
*Executive Vice President*  
Operations



**Ginette Bergeron**  
*Vice President*  
Corporate Services



**Marc Leblanc**  
*Commission Secretary*



**Ken Wagstaff**  
*Executive Director*  
Office of International  
Affairs



**James Clarke**  
*Executive Director*  
Office of Regulatory  
Affairs



**Jacques Lavoie**  
*Director*  
Legal Services and  
General Counsel

# II. The Canadian Nuclear Safety Commission

## Overview

### Mission and Vision

It is the CNSC's mission to regulate the use of nuclear energy and materials to protect health, safety, security, and the environment and to respect Canada's international commitments on the peaceful use of nuclear energy. In pursuing its mission, the CNSC<sup>1</sup> is working toward its vision of becoming one of the best nuclear regulators in the world. To realize its vision, the CNSC is committed to:

- the effectiveness of its regulatory regime;
- operating with a high level of transparency;
- attracting and retaining excellent staff; and
- efficiency of its regulatory regime.

To assess the achievement of this vision, the CNSC participates in domestic and international regulatory fora, benchmarks its activities against other domestic and international regulators by sharing and adopting best practices in a global context and meets the principles of Smart Regulation.

### Regulatory Policy and Program Delivery

The CNSC's Regulatory Fundamentals Policy (P-299), which was adopted in January 2005 by the Commission, is consistent with the principles of good governance and the Government of Canada's Smart Regulation initiative. It states that persons and organizations subject to the *Nuclear Safety and Control Act* (NSCA) and regulations are directly

responsible for managing regulated activities in a manner that protects health, safety, security, and the environment, while respecting Canada's international obligations.

The CNSC regulates the use of nuclear energy and nuclear materials in Canada. Its regulations apply to the following areas:

- Nuclear power reactors
- Non-power reactors
- Nuclear substances and radiation devices used in areas such as health care and research
- Nuclear fuel cycle from uranium mining through to waste management
- Imports and exports of controlled nuclear materials, dual-use materials, equipment and technology

The CNSC is a departmental corporation under Schedule II of the *Financial Administration Act* and a separate employer under the authority of the *Public Service Staff Relations Act*. The CNSC is an independent federal regulatory agency and a quasi-judicial administrative tribunal. To serve Canadians, the ultimate outcome of the CNSC is safe and secure nuclear installations and processes solely for peaceful purposes; and public confidence in the nuclear regulatory regime's effectiveness. Consistent with the Government of Canada's Smart Regulation principles, the CNSC engages in extensive consultation and communication to ensure that information is clearly understood and accepted by stakeholders, including licensees.

<sup>1</sup>Note: The Canadian Nuclear Safety Commission is referred to as the "CNSC" when referring to the organization and its staff in general, and as the "Commission" when referring to the tribunal component.

The CNSC reports to Parliament through the Minister of Natural Resources, but it remains an independent entity. This independence is critical in order to ensure that the CNSC is able to maintain an arm's length relationship with government when making legally-binding regulatory decisions. The CNSC is not an advocate of nuclear science or technology. Rather, its mandate and responsibility is to regulate users of nuclear energy or materials to ensure their operations will not pose unreasonable risks to Canadians. Canadians are the sole clients of the CNSC.

The CNSC's operations are funded through an annual appropriation from Parliament. The CNSC's workload and therefore its resource requirements are largely driven by the level of demand for licensing and oversight and by the nature of Canada's international commitments. Most costs incurred for the CNSC's regulatory activities are recovered by the federal government from licensees under the Canadian Nuclear Safety Commission *Cost Recovery Fees Regulations* (2003). Some licensees, such as hospitals and universities, are exempt from paying fees, which accounts for approximately 10 percent of total CNSC operational costs. Fees are not chargeable for activities that result from CNSC obligations that do not provide a direct benefit to identifiable licensees. This includes activities with respect to Canada's international obligations, including the non-proliferation of nuclear weapons, public responsibilities such as emergency preparedness and public information programs, and maintenance of the NSCA and associated regulations. This work amounts to approximately 20 percent of the CNSC's program costs.

The CNSC expects to recover approximately 70 percent of its total cost of operations from fee-paying licensees. Fees are collected by the CNSC and deposited to the Consolidated Revenue Fund. Fees are not a source of revenue for the CNSC or for its use without Parliamentary authority. External charging information for the CNSC's Cost Recovery Program is available on page 52.

The CNSC also administers the *Nuclear Liability Act* (NLA). It designates nuclear installations and sets the nuclear insurance requirements to be carried by the operators of such nuclear installations. The CNSC receives premiums paid by the operators for supplementary insurance coverage and credits these premiums to the Nuclear Liability Reinsurance Account in the Consolidated Revenue Fund. The NLA is currently undergoing review, which could change the role of the CNSC.

### The CNSC and Results for Canadians

The CNSC is a key contributor to the Government of Canada's outcomes, which are the long-term and enduring benefits to Canadians that federal departments and agencies are working to achieve. The CNSC contributes directly to assuring the health of Canadians, the protection of the environment and the protection of Canadian society from potentially harmful effects of nuclear materials, substances and processes.

The CNSC also plays a significant role in bringing Canada's expertise and perspective to the world on the safety and security of nuclear materials and technology, in matters such as possession, use, transport and international transfer of high-risk radioactive sources, radiation protection, international safety approaches for research reactors and global safeguards concepts and approaches used by the International Atomic Energy Agency (IAEA). As a well-established, independent, world-class regulator covering the full nuclear cycle, the CNSC's expertise is sought regularly by countries throughout the world. The CNSC is the Canadian lead on many international Conventions, and serves as the focal point to prepare, deliver and monitor Canadian compliance with these undertakings.

## CNSC Challenges and Risks

In 2004-2005, the CNSC's operating context became increasingly complex. The Canadian nuclear industry has experienced significant growth in all segments of the nuclear cycle and in virtually all areas where nuclear substances are used for industrial, medical or other purposes. There is unprecedented demand across most nuclear sectors for regulatory decisions and oversight. At the same time, threats and challenges to the international nuclear non-proliferation regime are substantial. Some of the challenges the CNSC faced in 2004-2005 are outlined as follows:

### 1. Power Reactors

Many of Canada's existing nuclear reactors are approaching the end of their designed operating lives, which has an impact on Canada's electricity supply. The most pressing decision facing the nuclear power industry is the refurbishment of many of Canada's fleet of 22 nuclear reactors. Operators have been considering the feasibility of refurbishment and the construction of new reactors.

The CNSC will need to provide clear, consistent input to licensees on regulatory requirements for each of the options under consideration. At this time, CNSC staff are fully occupied with the licensing and compliance work associated with existing facilities and were unable to allocate resources to prepare for the impending increase in regulatory workload.

### 2. Waste Management

Domestic and international pressure is being placed on Canadian industry and governments to handle nuclear waste more effectively and expeditiously. Waste management issues of significance in Canada include the storage of radioactive waste from power reactors, and the clean-up of legacy wastes from uranium mining and processing. Canadian industry and various levels of government are all moving forward with a number of initiatives to address nuclear waste management issues.

### 3. Uranium Mines, Refineries and Processing Facilities

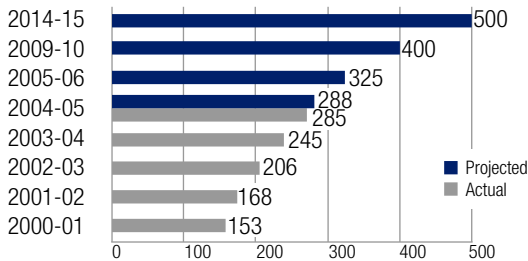
The world demand for uranium has increased substantially over the last five years, and prices have risen as a result. Responding to this demand, licensees have been accelerating production from existing mines and expanding exploration programs. This increased activity resulted in greater demand for regulatory oversight by the CNSC. The increase in mining activity has significant economic impact for licensees, and provincial and federal governments. CNSC staff faced this licensing challenge with limited resources and provided risk-informed regulatory oversight throughout the construction licensing process.

At the same time, some mining facilities are reaching the end of their useful lives and the CNSC has been encouraging progressive remediation with ongoing regulatory oversight throughout the winding-down of the mining operation, rather than at the end. The first modern-day mine decommissioning was started in Cluff Lake, Saskatchewan.

### 4. Nuclear Medicine

The demand for nuclear medicine has increased substantially in recent years, and this demand is expected to grow, due in part to the recent federal-provincial health accord. The graph on the next page indicates that licence applications for Class II nuclear facilities (principally, cancer treatment facilities) have grown from 153 in 2000 to 285 in 2004, which represents an 86% increase over four years. The number of these facilities is expected to increase to approximately 325 in 2005 and 500 units by 2015.

Number of Class II Facilities  
Projected and Actual, 2000 – 2015



### 5. Safeguards

With the discovery of undeclared nuclear activities in Iraq in the 1990s and the growing concern about North Korea’s nuclear programme, the IAEA and its Member States, including Canada, decided to strengthen the verification system by means of additional measures which significantly extend the IAEA’s rights and obligations beyond the scope of the existing Nuclear Non-Proliferation Treaty (NPT) agreement (the combination of the traditional measures and the new measures is commonly referred to as “strengthened safeguards”). Canada accepted the requirement for additional measures and the IAEA has been implementing strengthened safeguards in Canada since September 2000. As a consequence, the CNSC is obligated to provide the IAEA with considerably more information about Canada’s nuclear and nuclear-related activities, and enhanced access to sites and locations where nuclear material is customarily used and to sites and locations where nuclear material is not present.

The objective is to allow the IAEA to provide a more comprehensive annual conclusion to the world community that not only are declared nuclear materials and facilities in Canada used exclusively for peaceful purposes, but that there are also no undeclared nuclear materials and activities in Canada. In addition, in another effort to strengthen the verification regime, the IAEA recently decided to extend the scope of safeguards coverage under the 1972 Agreement to include uranium conversion and refining facilities. Canada possesses the world’s largest commercial facilities of this type. Considerable CNSC resources are being utilized in the new effort to design, develop and

implement an appropriate safeguards approach at these facilities on a priority basis. Despite the CNSC’s best efforts to find resources to respond to this new work by pursuing efficiency measures, lack of resources is hampering efforts to meet our international commitments to the IAEA with respect to safeguards implementation in Canada.

### 6. Security

Physical security and emergency preparedness are important components of the overall safety of nuclear facilities, and have received increased public attention since the events of September 11, 2001. The CNSC provides oversight of the physical protection and emergency preparedness programs of the licensed facilities.

In addition, issues related to border security and import/export controls over the movement of nuclear material have increased the CNSC’s regulatory work and level of responsibility in these areas, especially in the North American context.

### 7. Governance and Accountability

There has been an unprecedented demand from central agencies and Parliament for increased accountability. In 2004, the CNSC undertook a self-assessment against the elements of the Treasury Board’s Management Accountability Framework, a framework of management expectations for modern public service management. This assessment indicated that, consistent with the CNSC’s 2002 Modern Comptrollership Capacity Assessment, governance, accountability and stewardship are strong at the CNSC. The CNSC has demonstrated that it is well-governed in performance reviews by a number of oversight agencies in areas from financial and auditing obligations, to official languages, to human resources, to privacy matters and access to information. The Auditor General, in a statement made in February 2005, said that “the CNSC has made significant progress in acting on the recommendations [the OAG] made in 2000 on the licensing and regulation of nuclear power reactors.” She also added that “the CNSC stands out as an example of an organization that took [the OAG’s] recommendations very seriously...”

## 2004-2005 Performance Summary

The CNSC uses an established strategic framework for planning, monitoring and reporting (see page 38). Plans for future years are articulated in our annual Report on Plans and Priorities (RPP). The plans for this reporting year were outlined in the 2004-2005 RPP.

The CNSC has the following five immediate outcomes:

1. A clear and pragmatic regulatory framework
2. Individuals and organizations that operate safely and conform to safeguards and non-proliferation requirements
3. High levels of compliance with the regulatory framework
4. CNSC cooperates and integrates its activities in national/international nuclear fora
5. Stakeholders' understanding of the regulatory program

Underlying the CNSC's strategic framework is its management and enabling infrastructure. This infrastructure consists of management, human resources, finance, information services, processes and infrastructure programs that enable the CNSC to perform the activities required and meet the requirements of good governance with a high level of accountability.

For 2004-2005, the CNSC planned its expenditures for each immediate outcome. The 2004-2005 plan incorporated the CNSC's logic model for the first time. The following table shows a comparison of actual expenditures incurred against planned spending.

Outcome	2004-2005 plan (000's)	2004-2005 actual (000's)	2004-2005 plan FTEs	2004-2005 actual FTEs
1. A clear and pragmatic regulatory framework	\$ 6,986	\$ 6,130	44.61	38.1
2. Individuals and organizations that operate safely and conform to safeguards and non-proliferation requirements	16,366	13,318	133.34	99.4
3. High levels of compliance with the regulatory framework	28,462	34,004	230.76	252.1
4. CNSC cooperates and integrates its activities in national/international nuclear fora	14,635	15,360	91.29	96.2
5. Stakeholders' understanding of the regulatory program	4,146	4,368	30.2	31.0
<b>TOTALS</b>	<b>\$70,595</b>	<b>\$73,180</b>	<b>530.2</b>	<b>516.8</b>

The table below indicates the status of planned activities as set out in the CNSC's RPP 2004-2005. More details concerning these activities can be found on the relevant page of this report, where indicated, or by contacting the CNSC.

**Status (as of March 31, 2005)**

- Completed
- Partially completed
- I Initiated
- D Delayed
- > Ongoing core activity

“T” indicates that the information on the relevant plan is available in the Annual Report of the Commission Tribunal, on the reverse side of this document.

<b>1. Immediate Outcome: A clear and pragmatic regulatory framework</b>			
<b>2004-2005 RPP committed Priorities:</b>	<b>2004-2005 RPP committed Plans:</b>	<b>Status</b>	<b>Page</b>
Modern <i>Nuclear Safety and Control Act</i> (NSCA), with powers to protect health and safety, security, the environment and to respect Canada's international commitments on the peaceful use of nuclear energy	Review on an ongoing, systematic and consultative basis, the NSCA, regulations under the Act and regulatory practices codified in regulatory documents	>	17
Efficient regulatory system into which licensees and other stakeholders have appropriate input	Review <i>Rules of Procedure</i> for the Commission tribunal	•	T
An evergreen risk-informed approach to regulatory strategies, regulations and licensing requirements in line with Smart Regulation	Input into the Smart Regulation initiative of the Government of Canada	••	17
	Develop specific <i>Safeguards Regulations</i> based on the requirements of the Safeguards Agreement and Additional Protocol	I	--
	Revise the following existing regulations: <i>Nuclear Security Regulations</i> <i>Class II Nuclear Facilities and Prescribed Equipment Regulations</i> <i>Nuclear Substances and Radiation Devices Regulations</i> <i>Nuclear Non-Proliferation Import and Export Control Regulations</i>	•	18
		•	18
		•	18
Comprehensive, integrated and consistent set of regulatory documents (Policies, Standards and Guides) to clarify regulatory requirements and expectations	Develop regulatory policies, standards and guides in accordance with priorities identified in CNSC-approved Regulatory Documents Framework; start with a regulatory policy to promote consistency and clarity regarding the way in which the CNSC achieves its regulatory objectives	>	18
	Influence and adopt international standards where applicable to the Canadian context	>	29

<b>2. Immediate Outcome: Individuals and organizations that operate safely and conform to safeguards and non-proliferation requirements</b>			
<b>2004-2005 RPP committed Priorities:</b>	<b>2004-2005 RPP committed Plans:</b>	<b>Status</b>	<b>Page</b>
Optimization of the licensing principles, framework and methodology for all licensing and certification activities	Use a consistent risk-informed methodology for licensing priorities and resource allocation across all licensing areas	•	20
	Optimize licence periods for verification of performance and compliance	I	21
	Formulate an approach for licensing of new or refurbished nuclear power plants and possible waste management solutions	•	20
	Formulate an approach for decisions on end-of-life of facilities	I	--

	Integrate the licensing for nuclear facilities where a number of licences are now required for different processes at a single facility	I	21
Clarification of licensing and certification processes	Clarify licensing expectations and application requirements through clear communication with licensees and improved documentation of processes	I	20
Assurance that nuclear activities and facilities in Canada are conducted with adequate provision for protection of health, safety, security and the environment and the fulfillment of commitments to the peaceful use of nuclear energy	Continue to conduct the CNSC's comprehensive and diligent system of licensing and certification	>	21
	Continue the special focus on security within updated government and international requirements	>	24
Utilization of information technology to strategic advantage in licensing and certification consistent with the Government-on-Line initiative	Enhance and integrate a system for capturing licensee information including developing and implementing a secure electronic business-based licensing system	I	--
	Implement a new, integrated system to account for nuclear materials subject to IAEA safeguards and bilateral agreements	••	25
Improvement of the effectiveness of the role of the Commission Tribunal in licensing	Undertake an evaluation and implement improvements to the tribunal process	>	T

### 3. Immediate Outcome: High levels of compliance with the regulatory framework

2004-2005 RPP committed Priorities:	2004-2005 RPP committed Plans:	Status	Page
A fully integrated system for planning, conducting, reporting and measuring the effectiveness of compliance activities for all licensees	Develop integrated strategies emphasizing licensee safety culture and safety management	I	26
	Promote inter-licensee dialogue on compliance	>	--
	Develop integrated inspection plans	>	26
	Complete integration of the management of compliance activities into the results-based corporate planning and accountability processes and implement relevant performance measures	I	34
	Build an on-line system for CNSC staff to access current compliance information, inspection results and trends	I	--
Risk-informed compliance strategies to guide all compliance activities	Implement a dynamic risk ranking process for all licensees that informs the selection of compliance strategies	I	24
Provision of regulatory assurance to Canadians of the continuing compliance and safety performance of licensees	Continue to conduct a strong compliance program	>	26
	Continue to improve communication of compliance results to stakeholders	>	24

### 4. Immediate Outcome: CNSC cooperates and integrates its activities in national/international nuclear fora

2004-2005 RPP committed Priorities:	2004-2005 RPP committed Plans:	Status	Page
Effective cooperation with international, federal and provincial organizations, departments and agencies	Develop a framework for establishing and reviewing cooperative arrangements with federal and provincial organizations, departments and agencies, and foreign nuclear regulators on an evergreen basis	•	26
Effective, efficient and cooperative CNSC Emergency Preparedness framework and infrastructure	Maintain and continuously improve the CNSC's emergency response capacity and influence on other federal, provincial and municipal participants	•	29
Effective and targeted participation in international organizations, conferences and workshops Strong cooperative working relationships with strategic nuclear regulatory partners	Implement a framework, including tracking and reporting mechanisms, for determining and evaluating the CNSC's participation in international activities on nuclear-related matters	••	26



Effectively and efficiently implement Canada's international commitments on the peaceful use of nuclear energy	Apply the requirements of multilateral conventions and arrangements on the physical protection of nuclear material, nuclear power reactor safety, spent fuel and radioactive waste management safety, and the safe transportation of radioactive material	>	28
	Strengthen the multilateral guidelines and export control lists on nuclear supply to counter contemporary nuclear proliferation threats, in collaboration with other nuclear suppliers	>	28
	Exercise controls with bilateral partners on the peaceful use of nuclear goods and technology exported or imported under Canada's nuclear cooperation agreements	>	28
	Cooperate with the IAEA on domestic safeguards challenges by improving the efficiency of international verification of nuclear material in Canada and addressing Canada's safeguards equipment requirements	>	28
Contribute to improving the effectiveness and efficiency of the IAEA safeguards regime	Provide technical support and other resources necessary to strengthen IAEA safeguards	>	29
Optimization of safeguards implementation in Canada, taking account of all information and measures made available to the IAEA	Cooperate with the IAEA in the development and introduction of an integrated safeguards approach for Canada	>	29

#### 5. Immediate Outcome: Stakeholders' understanding of the regulatory program

2004-2005 RPP committed Priorities:	2004-2005 RPP committed Plans:	Status	Page
Increased knowledge of key stakeholder issues and concerns	Undertake stakeholder surveys to form a baseline of information on knowledge of the CNSC and level of satisfaction with the CNSC's performance as regulator	••	31
Assurance that Canadians have knowledge of and confidence in the CNSC as regulator	Implement a well-structured and sustainable Outreach Program	>	31
Improvement in communication, consultation and sustained, predictable relationships with key stakeholders directly affected by the CNSC's regulatory regime	Review the CNSC Web site and revise the information to improve its interactivity, user-friendliness, etc. on an evergreen basis	>	31
Awareness among stakeholders of the process to become an active intervenor in the licensing process (e.g., participation in Commission Hearings)	Implement better processes for diffusion of Commission proceedings including such tools as Web-casting and increased access to documentation	>	T

#### Management and Enabling Infrastructure

2004-2005 RPP committed Priorities:	2004-2005 RPP committed Plans:	Status	Page
Results-based planning and management processes	Implement an integrated planning process that links strategies to results and to budgets – integrate into the performance contracts for all management	•	32
	Implement a systematic Performance Management and Reporting Process including key corporate measures of performance	•	34
	Integrate a corporate risk framework into the strategic planning process	I	--
	Improve the timeliness and relevance of management information	>	--
Corporate processes to enhance effectiveness, efficiency and consistency in the CNSC's management	Clarify roles, responsibilities and accountabilities within key business processes	>	32
	Implement an integrated information management improvement plan including developing required information technology tools	I	--

	Maximize efficiency and consistency of CNSC accommodation policies and utilization	••	--
	Benchmark the corporate services against those of similar public sector organizations	••	32
	Develop a business continuity planning program to ensure minimal or non-interruption to the availability of critical services and assets	I	32
Attraction and retention of excellent staff	Implement the workforce sustainability strategy	• >	32
	Implement health and safety improvement initiatives for staff (i.e., physical environment, health evaluations, protective equipment, training, etc.)	••	--
	Establish an employment equity plan	••	--
	Implement a modernized Values and Ethics program	••	32
Leadership	Strengthen leadership and management capacities	>	32

# III. The Canadian Nuclear Safety Commission

## Performance Against Plans

The following section outlines the results achieved during 2004-2005 in implementing the 2004-2005 to 2006-2007 strategic plan.

### 1. Outcome: A clear and pragmatic regulatory framework

The CNSC ensures its licensees are aware of and comply with all requirements respecting the protection of Canadians and the peaceful use of nuclear energy and materials.

The CNSC's regulatory framework is composed of:

- The *Nuclear Safety and Control Act*, regulations and regulatory documents
- The *Safeguards Agreement and Additional Protocol* between Canada and the International Atomic Energy Agency (IAEA)
- Canada's bilateral Nuclear Cooperation Agreements
- The *Canadian Environmental Assessment Act*
- The *Nuclear Liability Act*

The following highlights the key enhancements to the CNSC regulatory framework during the reporting year.

#### **Ongoing review of the *Nuclear Safety and Control Act* and regulations**

The *Nuclear Safety and Control Act* (NSCA), which gives the organization its specific regulatory authority, does not state a mandatory statutory review period. Nevertheless, the CNSC conducts an evergreen review of the NSCA and in 2004-2005, developed an ongoing list of possible amendments to the legislation should the Government of Canada decide to subject it to a review. No changes to the legislation are contemplated at this time.

The CNSC received recommendations for amendments to CNSC regulations from the Standing Joint Committee on the Scrutiny of Regulations (SJCSR). A list of amendments will be provided to the Department of Justice for inclusion in its miscellaneous amendment program for regulations.

#### **Contribution to the Smart Regulation Initiative**

Effectiveness and efficiency are principles that are central to the way the CNSC manages its business and regulates to protect health, safety, security and the environment, and to respect international obligations. The CNSC's key priorities include commitment to an evergreen, risk-informed approach to regulatory strategies, regulations and licensing requirements, in line with the Government of Canada's Smart Regulation initiative.

In 2004-2005, the CNSC contributed to the government-wide implementation of Smart Regulation by participating in interdepartmental meetings on the initiative, and monitoring the progress of the External Advisory Committee on Smart Regulation (EACSR). The CNSC assessed itself against the EACSR's recommendations on Smart Regulation, and determined that it already adheres to many of its practices and objectives. These include transparency (public hearings and published decisions), public consultation, coordination of regulatory efforts across jurisdictions, and integration of international best practices and norms where appropriate to the Canadian context.

As part of its Smart Regulation effort, the CNSC reviewed how it applies the *Canadian Environmental Assessment Act* (CEAA), with a view to improving the effectiveness and efficiency of its application of the CEAA requirements.

### **Regulatory amendments and improvements to the regulatory framework**

- **Published:**
  - *Policy on Regulatory Fundamentals (P-299)*
  - *Policy on Managing Radioactive Wastes (P-290)*
  - *Standard for Making Changes to Dose-Related Information Filed with the National Dose Registry (S-260)*
  - *Guide for Keeping Radiation Exposures and Doses As Low as Reasonably Achievable (G-129, rev.1)*
- *Nuclear Security Regulations*: revised proposed amendments to the regulatory requirements for nuclear security in response to extensive stakeholder input. The proposed changes will make the regulations more consistent with international recommendations and best practices, take into account current security threats, and address stakeholder input. The proposed changes are scheduled to be pre-published in the Canada Gazette in the spring of 2005.
- *Class II Nuclear Facilities and Prescribed Equipment Regulations*: amendments proposed to the Class II regulations to address deficiencies in the current regulations, to enhance safety and to reflect the latest international standards, consistent with the CNSC's risk-informed regulatory initiatives and the principles of Smart Regulation. Pre-consultation and publication in the Canada Gazette is scheduled for 2005.

- *Nuclear Substances and Radiation Devices (NSRD) Regulations*: amendments proposed to the NSRD regulations to introduce the latest international values for exemption quantities, surface contamination and clearance levels for regulating those who possess nuclear substances. Pre-consultation and publication in the Canada Gazette is scheduled for 2005.

- Thirty-nine consultative regulatory documents were issued with respect to various operational areas such as Type I and Type II inspection procedures, safety analysis for nuclear power plants, environmental protection policies, programs and procedures at Class I nuclear facilities and uranium mines and mills, and requirements for disposal of nuclear substances.

As part of its commitment to the safe and secure use of radioactive material, Canada has endorsed and continues to support the IAEA *Code of Conduct on the Safety and Security of Radioactive Sources*. This initiative will result in a comprehensive regulatory regime for the possession, use, transport and international transfer of high-risk radioactive sources.


In support of the international regulatory regime, the CNSC contributed its expertise and perspective towards the development of two additional IAEA documents, the *Code of Conduct on the Safety of Research Reactors* and *Safety Requirements for Research Reactors*. These documents will help strengthen the regulatory framework governing the safe operation of research reactors at home and abroad.





## A more effective and efficient regulatory regime

Environment Canada has determined that the CNSC, under the *Nuclear Safety and Control Act*, can play a role in controlling or preventing the release into the environment of uranium which has been deemed to be toxic under the 1999 *Canadian Environmental Protection Act*. A 2003 Memorandum of Understanding (MoU) between the CNSC and Environment Canada committed these organizations to assist each other in certain activities to prevent duplication of effort.



In 2004, an annex to this MoU was signed concerning the process for risk management of uranium releases from uranium mines and mills. For example, under this agreement, the CNSC, with the support of Environment Canada, will require the implementation of more stringent preventative or control measures for the Rabbit Lake Uranium Mine. The licensee will develop and implement measures to reduce the concentration of uranium effluents released from the facilities. Requirements for measures at other uranium mines and mills will be addressed based on the outcome of environmental assessments completed for each facility.

This initiative supports Smart Regulation by reducing duplication and simplifying the regulatory process for licensees, while meeting the requirements of the CNSC and Environment Canada.

The CNSC is committed to an evergreen, risk-informed approach to regulatory strategies, regulations and licensing requirements, in line with the Government of Canada's Smart Regulation initiative. Modernizing the regulatory framework helps bring clarity and consistency to it, helps ensure that both the CNSC and licensees adhere to the *Nuclear Safety and Control Act* and associated regulations, and promotes efficient delivery of services to Canadians.

## 2. Outcome: Individuals and organizations that operate safely and conform to safeguards and non-proliferation requirements

The CNSC ensures that licences and certifications are issued to those individuals or organizations who demonstrate they can operate safely and conform to international requirements. Activities such as public hearings, certification decisions and licence assessments help the CNSC ensure its licensees are qualified to carry out the activities for which they are seeking a licence. The Annual Report of the Commission Tribunal, available on the reverse side of this document, provides information on the Commission's licensing proceedings for 2004-2005. Licensing with respect to licences other than those for major facilities has been delegated by the Commission to senior staff, referred to as Designated Officers, for review. Designated Officers review more than 98% of applications received by the Commission, through streamlined processes commensurate with the level of risk and more limited public interest in these matters.

### Implementing risk-informed licensing methodology

Nuclear substance regulation includes approximately 4,000 licences and over 2,500 licensees. The CNSC developed a risk-informed methodology for the allocation of resources for nuclear substance regulation which has resulted in increased operational efficiency and integration of all licensing and compliance requirements. Clear expectations of regulatory requirements have been developed with the goal to promote safety with nuclear substances.

In 2004-2005, the CNSC completed an automated verification planning tool and continued development of licence assessment worksheets to improve licensee understanding of licensing requirements. In addition, assessment summaries have been introduced for licensing and renewal of Class II Nuclear Facilities. These summaries provide licensees with a list of regulatory requirements and their assessed performance, thereby increasing the transparency of the process.

The CNSC also developed a risk-informed methodology to be incorporated into the authorization system for the import and export of nuclear substances and materials that will provide greater transparency and predictability of the process for stakeholders, including licensees.

### Licensing basis for the design of new nuclear power plants

Canada's regulatory framework for licensing major facilities such as nuclear power plants has not been updated comprehensively since the previous generation of facilities was licensed in the 1970s and 1980s. The CNSC has developed a regulatory document on the licensing basis for the design of power reactors. It will be used to assess the licensability of any new reactors in Canada. It is a proactive initiative to modernize the regulatory framework in response to the nuclear sector's potential interest in new power reactors.

This licensing basis document will be applied to the Advanced CANDU Reactor being designed by Atomic Energy of Canada Limited (AECL) and to any other proposed reactor design. Because operators may choose from a variety of nuclear power technologies, care is being taken to make the general requirements technology neutral and suitable to different reactor types.

### Waste management

The new CNSC Regulatory Policy P-290, *Managing Radioactive Waste*, issued in July 2004, established as a key principle the minimization of radioactive waste through design measures, operating procedures and decommissioning practices. Licensees and CNSC staff will be guided by this principle when considering design, operating and decommissioning measures for new reactors.

### **Reactor refurbishment**

For refurbishment projects, the CNSC reviewed past practices and identified the essential components of a standard regulatory framework. In doing so, the CNSC identified well in advance the measures that would be necessary for licensees to continue safe operation of modified nuclear facilities.

### **Extending licence periods**

Licence periods were extended for nuclear substances and radiation devices, resulting in better management of regulatory and licensee resources where greater focus is on compliance and safety rather than the licensing process. As a result, licence renewals have decreased, and CNSC resources have been redirected towards verifying licensee compliance and therefore safety.

### **Other licensing-related initiatives:**

- The integration of radioactive substance licences with the power reactor operating licence at one facility on a trial basis, further reducing the administrative burden on licensees.
- Environmental assessments (EAs) are required under certain licence applications to identify possible impacts and mitigation measures necessary to protect the health, safety and security of Canadians, and the environment. As an example, the CNSC conducted an EA of a proposal by Cameco Corporation for a proposed slightly enriched uranium blending facility in Port Hope, Ontario, which included the review of Cameco's EA study report.
- CNSC staff began the comprehensive process to review the re-licensing of the Pickering Nuclear Power Plant (NPP) for five years. This is the first of many planned NPP licence renewals and includes the operation of Pickering Unit 4, the restart of Pickering Unit 1, and the possible restart of Pickering Units 2 and 3.

- To protect Canadian taxpayers and the federal government from potential liability should the licensee be unable to fulfill their regulatory obligations in the future, the CNSC requires the provision of the financial guarantees from licensees for certain types of activities, including decommissioning. In 2004-2005, the CNSC accepted financial guarantees from Canadian Light Source Inc., AECL Whiteshell Laboratories, and for five SLOWPOKE reactor facilities across Canada.
- In accordance with Canada's bilateral and multi-lateral nuclear non-proliferation obligations and to ensure that international transfers of nuclear and nuclear-related items are for peaceful purposes only, the CNSC continued to assess import/export applications and safeguards conditions relevant to licences to ensure peaceful international transfer of nuclear and nuclear-related items and Canada's compliance with its safeguards obligations.

### **3. Outcome: High levels of compliance with the regulatory framework**

The CNSC rigorously enforces its regulatory requirements through a variety of measures. Licensee compliance is verified through inspections, reviews, audits and assessments. The CNSC also requires any licensee found to be non-compliant with either its licence conditions or the regulatory requirements to resolve the issue and demonstrate improvement by a specified deadline, or face enforcement action.



## Licensing protects health, safety, security and the environment

The CNSC plays a key role in protecting health, safety, security and the environment by regulating, monitoring and inspecting licensed activities. Among other activities, this role includes conducting the CNSC's comprehensive and diligent system of licensing.

Examples of results in this area during 2004-2005 include the licensing of the decommissioning of the Cluff Lake uranium mine in Northern Saskatchewan, the licensing of Canada's first Gamma Knife facility and the licensing of Canadian Light Source Inc., a world-class research and development synchrotron facility in Saskatoon.





### Decommissioning the Cluff Lake mine

The first of its generation of Northern Saskatchewan uranium mines to move into decommissioning, the Cluff Lake mine received a decommissioning licence in July 2004. The granting of this licence by the Commission Tribunal followed five years of environmental assessment, public consultations and regulatory review, and marked the initial phase of efforts by COGEMA Resources Inc. to return the Cluff Lake site to a natural state.

Dismantling the mill by COGEMA Resources Inc. began in 2004, with most major decommissioning activities to conclude in 2005. This will be followed by several years of CNSC monitoring to ensure compliance with the *Canadian Environmental Assessment Act* (CEAA).

### The unique nature of Gamma Knife facilities

A licence was issued in 2004-2005 for a Canada's first Gamma Knife facility, located in Winnipeg, Manitoba. When the CNSC conducted a compliance inspection of the Winnipeg facility in 2004, it recognized the unique nature of stereotactic gamma teletherapy, determining and documenting adequate radiation safety standards. For example, the main radiological hazard in the facility results from scattered gamma radiation, thus reducing the need for primary barriers to shield the facility. As a result, new licensing requirements for Gamma Knife facilities were fully implemented during the reporting period.

Also known as stereotactic radiosurgery, Gamma Knife is a precise, non-invasive procedure that can destroy deep-seated vascular malformations and brain tumours once considered inoperable. The technology does not require any incision; instead it uses a concentrated radiation dose of 201 Cobalt-60 sources with a total activity of 244 TBq to beam radiation at a specific area and destroy only abnormal tissue.

In addition to the Winnipeg facility, another is licensed and operating in Sherbrooke, Québec, and another is under construction in Toronto.

### Operation of Canadian Light Source begins

Owned by the University of Saskatchewan, the Canadian Light Source Inc. (CLS) is a national facility for synchrotron light research that brings together academic and industrial researchers to conduct materials R&D, and is subject to oversight of the Canadian Nuclear Safety Commission.

A synchrotron produces infra-red, ultraviolet and X-ray light which scientists use to see the microscopic nature of matter, down to the level of the atom. Information obtained with this technology can be used for many applications such as developing new drugs, building more powerful computer chips, and helping with mining clean-up.

The CLS met the requirements of commissioning – conceptualizing, designing and constructing a facility that is safe for use – and the Commission Tribunal granted an operating licence for routine operation in June 2004.

During the reporting year, the CNSC continued to conduct its compliance program that involved ongoing monitoring of the production, use, storage and flow of nuclear material at Canadian nuclear facilities, and the maintenance of a national nuclear materials accountancy system. CNSC staff report on licensee operations through mid-term performance reports, status reports, significant development reports and annual industry reports. This is in addition to performance information provided in licensing hearings, transcripts of which are available to the public along with records of proceedings. The CNSC Annual Industry Report on the Safety Performance of the Canadian Nuclear Power Industry is prepared on an annual basis, and contains the Report Card on Nuclear Power Plant Performance. The most recent Report Card is an evaluation of safe and secure installations, and is available on page 41. CNSC staff observed, through inspections and reviews, that the power reactor industry operated safely in 2004. No worker at any power reactor station or member of the public received a radiation dose in excess of the regulatory limits.

### **Compliance planning and management**

Designed to administer, promote and assess compliance, the CNSC has commenced the use of risk-informed formulas to determine inspection frequency and resource requirements. The CNSC is implementing the new Type I and Type II<sup>2</sup> inspection planning program, along with associated compliance tools, working cooperatively with licensees to improve transparency, communication, performance and safety. During the reporting year, the CNSC also conducted extensive training of staff in the various facets of the new risk management program, reviewed the risk-profile of certain nuclear facilities, and revised baseline compliance plans.

In March 2004, the CNSC initiated the Power Reactor Regulation Improvement Program (PRRIP), intended to ensure a power reactor regulation program delivers the best possible performance for licensees and the public. The PRRIP will achieve this by examining and improving all relevant aspects of the regulation program, from planning and problem-solving to communication and management methods. The goal of the PRRIP is to facilitate the CNSC's management of the risk to public health, safety, security and the environment arising from the operation of nuclear power reactors in Canada. More information on the PRRIP is available on page 27.

### **Nuclear security**

CNSC staff continued to monitor potential threats to Canadian nuclear facilities, and inspected and evaluated licensees' physical security programs, placing priority on higher-risk facilities. Specifically, security inspections were conducted at nuclear power plants, nuclear research facilities, fuel fabrication and tritium processing facilities, radioisotope facilities and waste management areas. Security inspections of other facilities such as hospital and university laboratories that use, process or store high-risk radioactive sources were also conducted and resulted in measures to improve security. Overall, CNSC staff were satisfied that licensees are taking appropriate measures to meet the requirements for physical protection of their facilities.

CNSC staff are in the process of developing two standards to address the security requirements for high-risk sources during transport as well as during storage.

<sup>2</sup>Type I inspections are on-site audits and evaluations of a licensee's programs, processes and practices. Type II inspections are routine (item-by-item) checks and rounds that typically focus on the outputs, or performance of licensee programs, processes and practices. Findings from Type II inspections play a key role in identifying where a Type I inspection may be required to determine systemic problems in licensee programs, processes or practices.

### **Radiation protection for carriers**

During the reporting year, the CNSC continued to actively promote the new international requirements for radiation protection for licensed and non-licensed carriers, which came into effect in June 2004. These requirements improve radiation safety of transport carriers and other stakeholders. To build awareness of the new requirements, the CNSC prepared a supporting guide (G-314) to help carriers establish their own radiation protection programs. It also undertook numerous activities such as conducting awareness sessions and encouraging carriers to submit their radiation protection programs to the CNSC for review and follow up.

As of May 31, 2004, carriers not licensed by the CNSC were required to have work procedures and a radiation protection program in place based on the risk of worker exposure to radiation. Visits to approximately 30 transport companies were conducted to promote compliance with this new requirement and Transport Type I inspections have been conducted at approximately 10 sites. Implementation of the Radiation Protection Program for these transport carriers not licensed by the CNSC is underway.

### **Sealed source tracking**

The CNSC played a significant role in developing the IAEA *Code of Conduct on the Safety and Security of Radioactive Sources*, which has been endorsed by the Government of Canada. It also played a significant role in developing the IAEA Technical Document 1344 entitled *The Categorization of Radioactive Sources*.

In support of this *Code of Conduct*, the CNSC began to build a national sealed source registry database and tracking system for high-risk radioactive sources. Under the new system, radioactive sources are ranked and assigned to one of five categories to provide an internationally-harmonized foundation for making risk-informed decisions. Implementation, to track the highest-risk categories, is scheduled for January 2006. The com-

pleted system will enhance the CNSC's regulatory control of radioactive sources used in medical, industrial and research activities throughout Canada. The system will be available to stakeholders through a Web-enabled user interface. Licensees will update inventory data electronically, enabling the CNSC to track the movement of high-risk sources.

### **Safeguards, non-proliferation and the Nuclear Material Accounting System**

In response to safeguards measures introduced in Canada in 2000, IAEA verification objectives have undergone a major shift and have been extended to include facilities not previously subject to safeguards requirements. To establish national-level safeguards in Canada, the CNSC has worked collaboratively with the IAEA in areas such as:

- Installation of new safeguards equipment at facilities.
- Implementation of an enhanced nuclear material accounting system allowing licensees to make submissions electronically and allowing the CNSC to meet its international non-proliferation and safeguards obligations more effectively.
- Development of a new safeguards approach at Canada's uranium refining and conversion sites.
- Exchange of bilateral nuclear inventory reports with other countries, and reconciliation of inventories with them. Such activity ensures that international transfers of nuclear items are for peaceful purposes only, and in accordance with Canada's bilateral and multilateral nuclear non-proliferation obligations.
- Provision to the IAEA of periodic nuclear material accounting reports and other information required under Canada's Safeguards Agreement and Additional Protocol with the IAEA.
- Facilitation of access by IAEA safeguards inspectors to nuclear facilities and other locations in Canada.

In a major effort by the CNSC to ensure that Canadian uranium conversion and refining facilities conform to new safeguards requirements, the CNSC conducted ongoing negotiations with the IAEA and industry to establish a system of accountancy for nuclear material and a plan for IAEA verification of initial inventories in mid-2005 at refining facilities.

### **Safety culture and management**

The CNSC encourages licensees to embrace a safety culture that results in behaviour that exceeds expectations of the regulator. During the reporting year, the CNSC participated in workshops in Canada and internationally on safety culture and management. This involvement allows the CNSC to influence the direction of the nuclear industry on safety culture at home and abroad, and to adopt successful practices deployed elsewhere.

The CNSC held a safety culture symposium for industry in 2004. The workshop highlighted the significant progress the industry has made in the area of safety culture and the recognition of its importance. For example, some facilities have developed safety culture frameworks, while others have developed and piloted evaluation methods for performing safety culture self-assessments. The CNSC has been developing a safety management program that will address the need for information to be presented to the Commission Tribunal, providing a complete picture of operators' performance and safety trends.

### **Other compliance-related initiatives:**

- The CNSC conducted compliance inspections of high- and moderate-risk licensed activities, which included 959 of the 2380 planned inspections of medical, academic and industrial licensees. In the 2005-2006 fiscal year, the CNSC will be requesting additional resources to enable us to ensure an appropriate level of compliance inspections while handling an increase in regulatory workload. Compliance efforts identified and responded to 117 reportable occurrences, of which 10 involved the transportation

of nuclear substances, 27 involved the recycling industry and 24 involved lost or stolen material. The reportable occurrences in these activity areas resulted in the issuance of four orders related to health and safety and six incidents of exceeding dose limits to nuclear energy workers.

- The CNSC continued to emphasize integrated audits at licensed facilities. Multi-disciplinary teams carrying out audits of more than one safety area can identify more comprehensively potential risks to workers, the public and the environment, and set priorities for remedial actions.

### **4. Outcome: CNSC cooperates and integrates its activities in national/international nuclear fora**

The CNSC works cooperatively on an ongoing basis with a number of national and international organizations to advance nuclear safety and security at home and abroad, and to provide benchmarking information.

#### **Cooperative frameworks**

The CNSC developed a framework for establishing and reviewing domestic cooperative arrangements with federal and provincial organizations, departments and agencies. The framework enhances cooperation and integration by providing CNSC staff with guidance to ensure that administrative arrangements are consistent with the CNSC mandate.

The CNSC also developed a framework for tracking and coordinating Memoranda of Understanding, cooperative undertakings with foreign governments/agencies and international organizations, and a framework for assessing the value of participating in international activities and subsequently evaluating the results. Targeted involvement with international fora is essential to achieving the CNSC's commitment to promote nuclear safety, non-proliferation and safeguards objectives in Canada and worldwide.



## An Improved Program for Regulating Power Reactors

Initiated in March 2004, the Power Reactor Regulation Improvement Program (PRRIP) is intended to ensure the power reactor regulation program delivers the best possible performance of the regulatory fundamentals. The PRRIP will achieve this by examining and improving all relevant aspects of the regulation program, from planning and problem-solving to communication and management methods.



The improved power reactor program will include:

- Regulatory activity based on a formal, well-articulated risk management approach;
- Clearer roles and accountabilities for all stakeholders in the process;
- A single point of contact for licensees;
- Consistency of regulatory approach within and across all power reactor licensees;
- Clear and documented processes defining how the various contributors can work together in the most coordinated and efficient way; and
- A streamlined information management system that supports the CNSC's business.

The Power Reactor Service Line (PRSL) group was re-aligned during the reporting year to enhance effectiveness and efficiency, and to meet changing demands. By providing a sharper focus, reducing duplication, and creating more appropriate lines of authority and accountability, the realigned organization structure improves clarity by consolidating specialist functions, such as quality assurance, radiation protection, environmental protection, personnel certification and event analysis into specialist divisions focused on these areas of responsibility.

## International nuclear non-proliferation activities

In Canada, the CNSC is responsible for implementing the international nuclear non-proliferation obligations agreed to by Canada. It does so through its regulatory programs under the *Nuclear Control and Safety Act* (NSCA) and through its participation in multilateral non-proliferation initiatives on behalf of the Government of Canada. The CNSC acted as technical advisor to the Nuclear Non-Proliferation Treaty (NPT) 2004 Preparatory Committee and is actively involved in the Canadian delegation participating in the May 2005 Review Conference.

The CNSC advised the Vienna Permanent Mission to the IAEA, Foreign Affairs Canada and other Canadian stakeholder organizations in order to advance Canadian positions on safeguards, export controls and non-proliferation with a view of strengthening the nuclear non-proliferation regime.

The CNSC also held consultations on the implementation of bilateral non-proliferation trade agreements with Argentina, Australia, Brazil, EURATOM, the Russian Federation, Spain, the United Kingdom and the United States for the purpose of assuring that Canadian exports of nuclear items are for peaceful purposes only, and to contribute to the international non-proliferation regime. For example, in 2004, the CNSC amended an Administrative Arrangement with the Russian Federation to assure adequate non-proliferation verification measures are in place for Canadian transfers of uranium to Russia.

The CNSC continued its ongoing international work on multilateral guidelines with the Nuclear Suppliers Group and the 35-nation NPT Exporters (Zangger) Committee to toughen nuclear export controls, particularly in response to emerging non-proliferation challenges.

## IAEA Safeguards – Domestic and international

In 2004-2005, the CNSC participated in numerous activities with the IAEA to address domestic safeguards challenges and provide support for strengthened IAEA safeguards. Key cooperative activities included:

- Participation in a major review of the IAEA's safeguards system to provide recommendations aimed at maintaining the credibility of the safeguards system and enhancing its effectiveness and efficiency.
- Continued installation of new, technologically advanced safeguards equipment at Canadian nuclear facilities, to be completed at all locations by the end of 2005. Assistance has been provided at Pickering and Gentilly-2 to replace aging video surveillance systems with digital ones that include remote surveillance capabilities. Assistance was also provided to the IAEA to find secure, cost-effective methods to gain remote access to safeguards data collected at facilities. This cooperation with the IAEA in both planning and funding, and the ability to remotely monitor activities relevant to safeguards, are crucial to establishing a state-level safeguards approach in Canada.
- Completed a major software upgrade to the equipment used by the IAEA to remotely monitor the discharge of spent fuel from CANDU reactors. The ability to collect and review this data at the IAEA offices reduces expense and disruption at the facilities and also allows the IAEA to review and analyze data more quickly.
- Continued work with the Swedish nuclear regulator on improvements to the Digital Cerenkov Viewing Device used by the IAEA to verify long-cooled, low burn-up fuel held in storage pools. It is a more cost-effective technology.
- Co-operation with the IAEA and its member states to improve safeguards implementation by providing input into the IAEA revision of a safeguards publication on State System of Accounting for and Control of Nuclear Material (SSAC) guidelines.

- Ongoing formal consultations with the IAEA and the Canadian nuclear industry to finalize the Canadian integrated safeguards approach.

#### **Other cooperative activities**

- Consultation with other government stakeholders to develop mechanisms that support efficient, effective and accountable assessment and licensing of applications for the import and export of controlled nuclear and nuclear-related dual-use substances, materials, equipment and technology.
- Provision of technical support for a major G8 initiative aimed at preventing the acquisition of weapons and materials of mass destruction by terrorists or those who shelter them.
- Publication in 2004 of Canada's Third Report on the Convention on Nuclear Safety by the CNSC in consultation with industry representatives and other Government of Canada departments. In April 2005, the President and CEO of the CNSC, Ms Linda J. Keen, will preside over the Third Review Meeting of the IAEA Convention on Nuclear Safety. Such high-profile involvement provides the CNSC with an opportunity to influence the international agenda and to learn from other leaders in the field.

#### **Domestic cooperation**

- Hosting a three-day annual meeting of the Federal Provincial Territorial Radiation Protection Committee, whose purpose is to harmonize regulation and standards across the industry by sharing progress, new ideas and priorities.
- Co-hosting a Canadian forum on the 2005 International Committee on Radiation Protection (ICRP) Recommendations, attended by the public industry and other regulatory and government bodies. Such activities provide the CNSC with the opportunity to communicate regularly with various government and industry stakeholders and ensure that Canadian needs and viewpoints are taken into account in developing international standards. They also allow the

CNSC to influence the development and application of international standards and to adopt best practices from our peers around the world.

#### **Nuclear Emergency Management**

The CNSC is employing a collaborative approach in developing a new Nuclear Emergency Management (NEM) policy and upgraded programs. It is being developed in partnership with external stakeholders, and has included extensive consultations with licensees, provincial, municipal and federal government organizations involved in emergency preparedness management.

The CNSC NEM policy provides the foundation for all CNSC emergency management activities. Specifically, it outlines responses consistent with the risks at hand, clarifies roles and responsibilities, and helps maintain current capacity while taking future requirements into account. The policy will be adopted following public consultation.

In addition to developing the policy, key elements of an improved nuclear emergency management program have been identified and updated emergency plans and procedures are under development.

In addition, the CNSC Emergency Operations Centre (EOC) has been redesigned and reorganized to increase reliability and functionality and enhance back-up resources. Extensive training on roles, responsibilities, procedures and emergency response to chemical, biological, radiological and nuclear-related events has been conducted for staff and other Government of Canada departments. A wide variety of activities have been undertaken, ranging from creating a federal-provincial-territorial committee on radiological/nuclear emergencies to the installation of an emergency power generator at CNSC headquarters to maintain the CNSC's capacity in the event of an outage.

## Strengthening Safeguards

The verification approaches and measures utilized by the IAEA to verify that nuclear material is not diverted from peaceful uses to nuclear weapons or other nuclear explosive devices, are commonly referred to as 'safeguards'. In 1972, Canada was the first country to bring into force a comprehensive safeguards agreement with the IAEA for such verification as required by the Nuclear Non-Proliferation Treaty (NPT).

The CNSC also cooperates with the IAEA in developing new safeguards approaches for Canadian facilities and contributes to efforts to strengthen safeguards internationally. Through its regulatory process, the CNSC ensures that all relevant licensees have in place policies and procedures that include the reporting and monitoring of nuclear material and nuclear activities and the provision of access to nuclear facilities for IAEA safeguards inspectors. The CNSC performs compliance and auditing activities to ensure that these policies and procedures remain sufficient to meet safeguards requirements. Through its Safeguards Support Program, the CNSC also assists the IAEA in developing advanced safeguards equipment or techniques aimed at strengthening the effectiveness and efficiency of safeguards implementation. The Program also supports domestic needs in resolving specific safeguards issues related to Canadian nuclear facilities and the use of nuclear material.

At all stages of the nuclear cycle, from uranium refining and conversion sites to nuclear power plants and waste management facilities, the CNSC has been actively working with the IAEA to design better approaches for meeting Canada's international obligations.

For example, since 2002, as a result of strengthened safeguards, there has been a dramatic increase in the resources required to track transfers of spent fuel to dry storage at multi-unit power reactor sites in Canada. To address this issue, the CNSC collaborated with the IAEA and Ontario Power Generation on a successful field trial at the Pickering reactor site in April-May 2004 to test a more cost-effective approach to track transfers of spent fuel to dry storage. All participants agreed that the trial provided a feasible approach that could be implemented at any multi-unit CANDU station.

The CNSC's experience in this area led to an invitation to participate in a similar field trial in April 2005 at a single-unit CANDU station in the Republic of Korea. Participation in this field trial reflects the CNSC's ongoing efforts to optimize the national and international implementation of safeguards.







## **5. Outcome: Stakeholders' understanding of the regulatory program**

The CNSC is committed to openness and transparency. This commitment requires the CNSC to engage stakeholders above and beyond the public hearings and meetings process, through a variety of appropriate consultation processes, effective information sharing and communications activities.

In 2004-2005, the CNSC carried out stakeholder surveys, implemented a well-structured and sustainable Outreach Program, improved the CNSC Web site and launched a pilot project to communicate Commission proceedings using Web-casting and other tools.

### **Surveying stakeholder awareness and perceptions**

The CNSC increased its knowledge of key stakeholder issues and concerns by undertaking a variety of survey activities in 2004-2005.

Stakeholder groups and 1,055 Canadian citizens were surveyed in 2004 to evaluate their knowledge of, level of confidence in and satisfaction with the performance of the CNSC as a nuclear regulator. The results indicated that more than half of Canadians feel confident that the nuclear industry in our country has effective regulation. In addition, the CNSC undertook an environmental scan to obtain a clearer picture of the political, cultural and social climate in which it operates. An analysis was also conducted of how media coverage presents the CNSC, nuclear regulation, and nuclear energy in general, in order to further understand the environment and the needs and perceptions of stakeholders. The knowledge acquired through these activities has contributed to the CNSC improving its communications and outreach strategies to meet the needs of citizens and stakeholders more effectively.

### **Developing a sustainable Outreach Program**

Building on tools and initiatives already in place, an Outreach Program was launched on June 4, 2004 to heighten public awareness and under-

standing of regulated nuclear activities and the CNSC's role in protecting health, safety, security and the environment. Outreach activities undertaken in 2004-2005 include meetings with mayors in communities near nuclear facilities, meetings with licensee boards of directors, and providing affected communities with the opportunity to participate directly during public hearings by electronic means or through visits by the Commission.

Other activities, such as speaking engagements for the President and CEO and other CNSC staff, in Canada and abroad, offer opportunities to interact with stakeholders about the organization's role, responsibilities and priorities.

Based on results of outreach activities and stakeholder surveys, an analysis is being prepared to identify where outreach can be enhanced in 2005-2006.

### **Other activities**

- Publication of a new brochure series to provide stakeholders with information about the CNSC's work and its public hearing process.
- Improved information on the CNSC's international activities and research and support program was developed and posted to the CNSC's Web site. Other activities to improve the user-friendliness of the Web site included work to develop a subscription service to allow the public and stakeholders to receive automatic e-mail notification when new information is available on the site, and a redesign of the Commission hearings and meetings Web site, to be launched in the spring of 2005.
- Coordination of a joint CNSC-IAEA-industry meeting on the implementation of integrated safeguards in Canada. The goal was to ensure that stakeholders developed a common understanding of regulatory requirements and industry challenges.
- Development of an e-learning initiative to support licensee understanding of and compliance with nuclear non-proliferation import/export regulations. The first electronic modules are scheduled to be launched in the fall of 2005.

## 6. Management and Enabling Infrastructure

The CNSC's management and enabling infrastructure ensure that CNSC staff have the necessary support to fulfill their mandates to meet or exceed the accountability requirements of central and parliamentary agencies.

### **Integrated planning for results, efficiency and consistency**

In 2004-2005, the CNSC developed and implemented comprehensive results-based planning as well as corporate strategies and processes to enhance the effectiveness, efficiency and consistency of its operations and management. This included the introduction of strategic and business plans for the CNSC and its major business lines, and linking them to results, budgets and performance. The CNSC also developed a planning and reporting cycle to better align the strategic, business, work plan and budget cycles. The planning and reporting cycle is part of the CNSC's management system.

### **Human resources**

The CNSC continued to implement key components of its workforce sustainability strategy. This strategy is driven by the CNSC's operational business needs.

For example, the CNSC has implemented a Leadership Development Program to build a strong team of managers and leaders. The program offers courses in leadership, resourcing, financial management, contracting, privacy, staff relations, health and safety, etc. The program also includes use of 360-degree performance evaluations for senior management, armchair discussions and access to coaching. In addition, the leadership team assembles two to three times a year to address key issues such as values and ethics and communications.

In 2004, part of the CNSC workforce was certified by the Public Service Staff Relations Board to be represented by the Professional Institute of the Public Service of Canada (PIPSC). The collective bargaining process with newly unionized staff began in 2004, and was ongoing as of March 31, 2005.

A survey of CNSC staff on internal communications needs was conducted in 2004, and was followed-up with targeted focus groups. The survey identified opportunities for improvement and efforts will continue in 2005-2006 to address the findings.

### **Values and Ethics Strategy**

A clearly-articulated values and ethics strategy is a key component of a sound governance structure. The CNSC's Values and Ethics Strategy reflects the organization's values, provides practical tools for ethical decision-making by CNSC staff, includes a formal process for receiving information about alleged wrongdoing in the workplace and supports staff in fulfilling their responsibilities in regulating nuclear energy and materials. It also strengthens the CNSC's relationships with licensees and stakeholders.

Tailored specifically for the CNSC, the values and ethics strategy under the theme "*Helping good people do the right thing*" was formally launched in March 2005. The strategy meets government requirements, and reflects the spirit and intent of the draft *Public Servants Disclosure Protection Act* (Bill C-11).

### **Other improvement initiatives:**

- A benchmarking study comparing the CNSC's corporate services against services in four similar organizations and two international regulators was completed. The results indicated that the CNSC's costs of common services (i.e., human resources, information management and technology, finance and administration, legal services, etc) are well within the range of those found in comparable federal organizations and "sister" international agencies.
- Developing a business continuity planning program to ensure minimal or no interruption to the availability of critical services and assets in the event of unforeseen circumstances.
- Developing the first phase of an internal management system manual that articulates the role of the CNSC and its staff, the organization's governance structure and its fundamental business processes. The manual also provides a framework for supporting documentation such as policies, procedures and instructions.



## Building Public Trust

Nuclear regulators have the responsibility to regulate the industry in a manner that provides the public with assurances that health, safety, security and the environment are the priority. The CNSC is committed to increasing public confidence in the nuclear regulatory regime through openness, transparency, independence and competence. It has undertaken a variety of measures to improve public knowledge of the CNSC's role as Canada's nuclear regulator.

This commitment requires the CNSC to engage stakeholders above and beyond the public hearings and meetings process through activities such as consultations, information sharing, and a sustainable outreach program.

### Protecting and Engaging Communities

One key factor of an effective and sustainable outreach program is to ensure effective communications with communities that are particularly affected by the nuclear industry. Both the Commission and CNSC staff have participated in face-to-face dialogue across the country with concerned citizens.

For example, CNSC staff were heavily involved in the preparation of licensing documents for the public hearings held in Saskatchewan in June 2004. The CNSC regulates six uranium mines in northern Saskatchewan, affecting about 30 mainly Aboriginal communities. These communities want to understand the potential impacts that uranium mining could have on their lands and people. Increased access to the Commission by local communities helps to further this understanding and allows the Commission the opportunity to interact directly with affected communities.

In May 2004, the President and CEO, as well as senior CNSC staff, addressed the Councils of the Municipalities of Kincardine and Saugeen Shores, and participated in several media events. This was part of a broad information and consultation effort on current and pending issues of particular interest to the Bruce peninsula area, namely, power reactors, waste management facilities and financial guarantees.

### Building confidence

As part of its international outreach activities, the CNSC collaborated with the Nuclear Energy Agency's (NEA) Committee on Nuclear Regulatory Activities to organize an international workshop entitled "Building, Measuring and Improving Public Confidence in the Nuclear Regulator". The NEA is an agency of the Organization for Economic Cooperation and Development (OECD).

The workshop was held in Ottawa, Ontario in May 2004, and provided staff from nuclear regulatory organizations from around the world with the opportunity to share information, practices and experiences, and to discuss developments, progress and techniques for nuclear regulatory organizations in communicating with the public.

At the workshop, the CNSC shared its approach to communicating with its stakeholders, including Canada's Aboriginal communities, about the nuclear regulatory regime. The presentation made by a CNSC staff member from the Saskatoon regional office provided specific examples of the CNSC's activities for improving its relationship with local Aboriginal communities, such as communicating in native languages and face-to-face interaction.

## Measures of Performance

The CNSC recognizes the importance of being able to measure both the effectiveness and the efficiency of its programs, and has initiated the development of an integrated performance management framework. Effectiveness will be measured by way of selected outcome measures relating to the collective impact of the activities on meeting the mandate of the CNSC.

Efficiency, on the other hand, will be measured through ongoing monitoring of the CNSC's performance against external and internal performance standards relating to individual activities undertaken and their associated outputs.

## Outcome Measures

In 2004-2005, the CNSC developed an initial set of seven non-financial indicators based on feasibility, relevance and availability of data. The initial set of indicators is as follows:

Outcome	Indicator
Stakeholders' understanding of the regulatory program	Level of understanding by stakeholders of the regulatory program
High levels of compliance with the regulatory framework	Number and significance of non-compliances
	Proportion of licensees meeting expectations (by safety area where applicable)
	Number of non-authorized activities detected/identified
Low levels of exposure to humans and the environment	Levels of radiation doses to workers and to the public
	Levels of releases of hazardous substances from licensees to the environment
	Number of times regulatory limits are exceeded (workers, public, environment)

These indicators will be further defined, base-level data will be collected, and potential target levels will be explored to monitor the performance of the CNSC against the above-noted outcomes. Under this initiative, the CNSC is also contributing to the Expenditure Management Information System (EMIS) project, coordinated by Treasury Board.

The CNSC currently publishes two significant measures of safe and secure nuclear installations and processes used only for peaceful purposes, the first part of the CNSC's stated ultimate outcome (see the logic model on page 38). These measures are the Radiation Index for nuclear stations, and the CNSC Report Card on Nuclear Power Plant Performance. The CNSC Report Card on Nuclear Power Plant Performance as of January 2005 is available on page 41. For more information on these significant measures, please consult the CNSC's Web site at [www.nuclearsafety.gc.ca](http://www.nuclearsafety.gc.ca).

## Performance Standards

Performance standards have been developed for stakeholders. It is very important to note that as an independent regulator, it is inappropriate for the relationship between licensees and the CNSC to be considered a service; hence there are no service standards. A list of performance standards focusing on the needs and expectations of external stakeholders has been developed and work is progressing on implementing such standards. Internal performance standards have been put in place to monitor and report on the ability of corporate service functions to meet the needs and expectations of internal CNSC clients in supporting the delivery of the overall regulatory program.

External performance standards for the following activities were developed in 2003-2004, and were implemented in 2004-2005. These include:

Activity	Performance standard	Target	2004-2005 results
<b>Access to Information (ATI)</b>			
Respond to requests under the ATI and Privacy Acts	within legislated time periods as stated in the Acts	90%	95.5%
<b>Response to public inquiries</b>			
Acknowledge request	within same business day	100%	100%
Respond to request - low complexity - medium complexity - high complexity	within same business day within 5 business days within 10 business days	100%	90.5%
<b>External Communications</b>			
Place Public Hearings Advertisements	within deadlines stipulated in the regulations	100%	94%
<b>External Reporting to Central Agencies</b>			
File annual Report on Plans and Priorities and Departmental Performance Report	within required timelines	100%	100%
<b>Invoice Processing</b>			
Pay supplier invoices	within 30 calendar days of receipt of invoice or goods, whichever is the latest	100%	83.6%
<b>Licensing – for requests pertaining to an existing licence, the CNSC will:</b>			
Publish the Records of Proceedings, including Reasons for Decision, upon conclusion of the public hearing	within 30 business days	90%	93%



## Helping good people do the right thing

Values and ethics are increasingly recognized as a cornerstone of good governance and leadership in the public and private sectors. How we achieve results for Canadians has become just as important to public confidence as the results themselves. Since the CNSC holds a significant responsibility for public trust in the safe, effective regulation of nuclear energy and materials, having an active, clearly-articulated ethics strategy reinforces our commitment to our mandate.

In 2004, the CNSC's Audit and Ethics Group was mandated to develop such a strategy, perform a rigorous internal audit role, and receive and investigate disclosures of wrongdoing as required by the draft *Public Servants Disclosure Protection Act* (Bill C-11). Designed especially for the CNSC with extensive input from leaders, staff and subject experts, the values and ethics strategy "*Helping good people do the right thing*" was launched in March 2005. It meets government requirements, reflects the spirit and intent of the draft Bill C-11, and includes a formal process for receiving information about alleged wrongdoing in the workplace.

The CNSC's Values and Ethics Strategy was formally launched in March 2005 under the theme "*Helping good people do the right thing*." An active, clearly articulated values and ethics strategy is a key component of sound governance, and provides all CNSC staff with practical tools for making ethical decisions in the course of their work. The strategy also provides guidance for strengthening the CNSC's relationships with licensees and stakeholders.

It also reinforces the CNSC's longstanding culture of employee openness, integrity, and commitment, encourages new channels for workplace dialogue, and provides protection against reprisals.

To help implement the strategy, leaders and staff have been provided with practical tools and advisory services to guide their ethical decision-making. These include publications for staff and management that offer a model for ethical decision-making and case studies.

As the strategy unfolds, the next focus of the CNSC's attention will be geared towards our relationships with licensees and the public. The values and ethics initiative will work towards preparing guidance for licensees, contractors, and other stakeholders to guide them in their relationships with the CNSC.



External performance standards for operational activities were developed in 2004-2005, and will be implemented in 2005-2006. These include:

Activity	Performance standard	Target
<b>Compliance</b>		
<b>Verification: upon completion of the verification activity, the CNSC will:</b>		
Issue Type I Inspection Report	within 60 business days	80%
Issue Type II Inspection Report <sup>3</sup>	within 40 business days	80%
Issue Desktop Review Report	within 60 business days	90%
<b>Enforcement: upon an order being made, the CNSC will:</b>		
Confirm, amend, revoke or replace the order (see CNSC Regulatory Guide G-273)	within 10 business days	100%
<b>Licensing: for requests pertaining to an existing licence, the CNSC will:</b>		
Screen the request for completeness and issue notification that the licensing request is/is not complete	within 20 business days	90%
Issue a licensing decision when a public hearing is not required (assuming an environmental assessment under the <i>Canadian Environmental Assessment Act</i> (CEAA) is not required)	within 80 business days	80%
Issue a licensing decision when a public hearing is required (assuming an environmental assessment under the CEAA is not required) (see CNSC document INFO-0715)	within 160 business days	90%

<sup>3</sup> In Power Reactors, unless major issues arise, findings from Field Inspections and Control Room Inspections will be reported on a quarterly basis, within 40 business days of end of quarter.

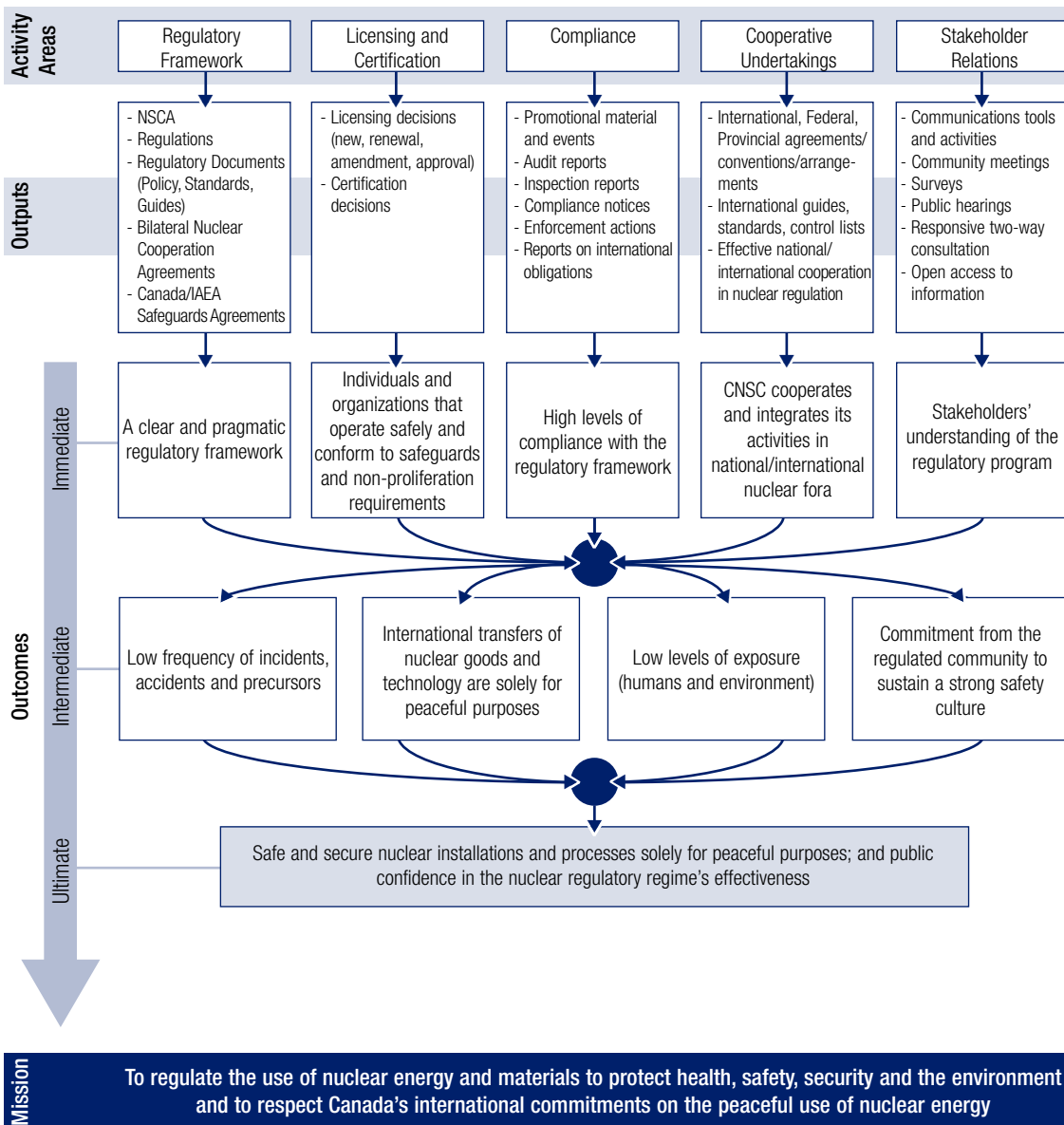
# IV. The Canadian Nuclear Safety Commission

## Operating Context

### The CNSC Strategic Framework

The CNSC Strategic Framework uses this logic model for planning, for focusing activities and programs, for evaluating the contribution of initiatives to the CNSC outcomes and for illustrating the role of the CNSC as an agency committed to achieving results for Canadians.

### CNSC Logic Model – Results for Canadians





## Governance at the CNSC

The Commission is an independent, quasi-judicial administrative tribunal and court of record, and is separate from CNSC staff. Both the staff organization and the Commission operate in a transparent manner. The CNSC is known as one of the most open and transparent nuclear regulators in the world.

The CNSC's governance includes a clear vision with articulated outcomes, a focused mission and mandate, strong leadership as well as strong and professional corporate services providing information and internal controls that enable good stewardship of resources.

Integrated planning and performance management is an important aspect of the CNSC's governance. It promotes vigorous and responsible management of resources with an emphasis on results. The CNSC defines desired results, delivers regulatory programs and activities, evaluates performance and makes necessary adjustments. The CNSC conducts mid-year and year-end corporate reviews of results achieved against plans and reallocates resources to the highest priorities. In addition, regulatory activities are reviewed and monitored quarterly.

Performance agreements that are specific, results-based, and clearly identify accountability continued to be in place in 2004-2005 for the top two levels of management. The next level of management will prepare 2005-2006 performance contracts. Performance agreements include Modern Management, Workforce Sustainability as well as commitments under the business planning and budgeting process.

A high level of oversight and scrutiny is provided by an independent internal audit program, complemented by regular audits by the Office of the Auditor General (financial and performance) and other officers of Parliament including the Canadian Human Rights Commission (employer obligations under the *Employment Equity Act*) and the Privacy Commissioner of Canada (*Privacy Act*). The CNSC also abides by a "Conflict of Interest and Post-Employment Code for the CNSC", modeled on the Values and Ethics Code for the Public Service.

## Organizational Information

The CNSC operates as two separate organizations as follows:

- (i) a Commission of up to seven members; and
- (ii) a staff organization of approximately 530 people.

### (i) Commission

The *Nuclear Safety and Control Act* (NSCA) provides for the appointment of up to seven Commission members by the Governor in Council. Members serve for a term not exceeding five years. One member of the Commission is designated as the President of the Commission. This position is held by Linda J. Keen.

Supported by the Secretariat, the Commission functions as an independent, quasi-judicial administrative tribunal and court of record. It sets regulatory policy direction on matters relating to health, safety, security and environmental issues affecting the Canadian nuclear industry. It makes independent decisions on the licensing of nuclear-related activities in Canada, and establishes legally-binding regulations. The Commission takes into account the views, concerns and opinions of interested parties and intervenors. The Commission delegates to Designated Officers the authority to render licensing decisions for certain categories of nuclear facilities and activities in accordance with the requirements of the NSCA and its associated regulations. The Commission retains for its own consideration licensing matters related to major nuclear facilities, for which it holds public hearings, in accordance with the CNSC Rules of Procedure.

### (ii) CNSC Staff

CNSC staff are located at a headquarters in Ottawa, site offices at each of the five nuclear power plants in Canada, and five regional offices. CNSC staff are located at each nuclear power plant in Canada to assess performance against regulations and specific conditions of operating licences. Regional offices conduct compliance activities for nuclear substances, transportation, radiation devices and equipment containing nuclear substances. They also respond to unusual events involving nuclear substances.

CNSC staff support the Commission by:

- developing regulatory frameworks;
- carrying out licensing, certification, compliance inspections and enforcement actions;
- coordinating the CNSC's international undertakings;
- developing CNSC-wide programs in support of regulatory effectiveness;
- maintaining relations with stakeholders; and
- providing administrative support.

In addition, staff prepare recommendations on licensing decisions, present them to the Commission for consideration during public hearings and subsequently administer the Commission's decisions. Where so designated, staff also render licensing decisions.

# V. The Canadian Nuclear Safety Commission

## Report Card on Nuclear Power Plant Performance as of January 2005

CNSC staff assesses licensee programs (“P”) and their implementation (“I”) separately, according to five ratings. As of January 2005, Pickering A Units 1, 2 and 3 remained fuelled and in a guaranteed shutdown state, and Unit 1 was undergoing restart work. Bruce A Units 1 and 2 remained defuelled and in a lay-up state.

**Legend:** A = Exceeds requirements B = Meets requirements C = Below requirements  
D = Significantly below requirements E = Unacceptable

Safety Area/Program	P / I	Bruce		Darlington	Pickering		Gentilly-2	Point Lepreau
		A	B		A	B		
<b>Operating Performance</b>	P	B	B	B	B	B	B	B
	I	B	B	B	B	B	B	B
Organization & Plant Management	P	B	B	B	B	B	B	B
	I	B	B	B	B	C	B	B
Operations	P	B	B	B	B	B	B	B
	I	B	B	B	B	B	B	B
Occupational Health & Safety (non-radiological)	P	B	B	B	B	B	B	B
	I	B	B	B	B	B	B	B
<b>Performance Assurance</b>	P	B	B	B	B	B	C	B
	I	B	B	B	B	B	C	B
Quality Management	P	C	C	B	B	B	B	B
	I	B	B	C	C	C	B	B
Human Factors	P	B	B	B	B	B	C	C
	I	B	B	B	B	B	C	C
Training, Examination, and Certification	P	B	B	B	B	B	C	B
	I	B	B	B	B	B	C	B
<b>Design &amp; Analysis</b>	P	B	B	B	B	B	B	B
	I	B	B	B	B	C	B	B
Safety Analysis	P	B	B	B	B	B	B	B
	I	B	B	B	B	B	B	B
Safety Issues	P	B	B	B	B	B	B	B
	I	B	B	B	B	B	B	B
Design	P	B	B	B	B	B	B	C
	I	B	B	B	B	C	B	C
<b>Equipment Fitness for Service</b>	P	B	B	B	B	B	B	B
	I	B	B	B	B	B	B	C
Maintenance	P	B	B	B	B	B	B	B
	I	B	B	B	B	C	B	B
Structural Integrity	P	B	B	B	B	B	B	C
	I	B	B	B	B	B	B	C
Reliability	P	B	B	B	B	B	B	B
	I	B	B	B	B	B	B	B
Equipment Qualification	P	B	B	B	B	B	B	B
	I	B	B	C	B	B	B	C
<b>Emergency Preparedness</b>	P	A	A	A	A	A	A	A
	I	A	A	A	A	A	B	C
<b>Environmental Performance</b>	P	B	B	B	B	B	B	B
	I	B	B	B	B	B	B	B
<b>Radiation Protection</b>	P	B	B	B	B	B	B	B
	I	B	B	B	B	B	C	B
<b>Site Security</b>	P	Protected						
	I	Protected						
<b>Safeguards</b>	P	B	B	B	B	B	B	B
	I	B	B	B	B	B	B	B

## VI. The Canadian Nuclear Safety Commission

# Management Responsibility for Financial Statements

The accompanying financial statements of the Canadian Nuclear Safety Commission (CNSC) for the year ended March 31, 2005 and all information included in its annual report are the responsibility of management.

These financial statements have been prepared by management in accordance with Canadian generally accepted accounting principles for the public sector and, where appropriate, they include amounts that have been estimated according to management's best estimates and judgement. Management has prepared the financial information presented elsewhere in the annual report and has ensured that it is consistent with that provided in the financial statements.

Management has developed and maintains books, records, financial and management controls and information systems. They are designed to provide reasonable assurance that the Government's assets are safeguarded and controlled, that resources are managed economically and efficiently in the attainment of corporate objectives, and that transactions are in accordance with the *Financial Administration Act* and regulations as well as CNSC policies and statutory requirements such as the *Canadian Nuclear Safety Commission Cost Recovery Fees Regulations*.

The Commission's external auditor, the Auditor General of Canada, has audited the financial statements and at the specific request of the Commission, compliance with the *Canadian Nuclear Safety Commission Cost Recovery Fees Regulations*. The Auditor General has reported on her audit and compliance findings to the Commission and to the Minister of Natural Resources.



Linda J. Keen  
President and CEO



Hugh Robertson  
Acting Vice President, Corporate Services Branch

Ottawa, Canada  
June 3, 2005

## Auditor's Report

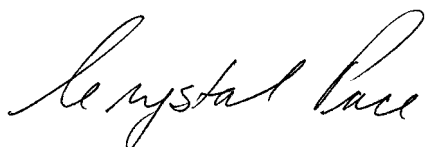
To the Canadian Nuclear Safety Commission  
and the Minister of Natural Resources

I have audited the statement of financial position of the Canadian Nuclear Safety Commission as at March 31, 2005 and the statements of operations, deficit and cash flows for the year then ended. These financial statements are the responsibility of the Commission's management. My responsibility is to express an opinion on these financial statements based on my audit.

I conducted my audit in accordance with Canadian generally accepted auditing standards. Those standards require that I 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 my opinion, these financial statements present fairly, in all material respects, the financial position of the Commission as at March 31, 2005 and the results of its operations and its cash flows for the year then ended in accordance with Canadian generally accepted accounting principles.

Further, in my opinion, the Canadian Nuclear Safety Commission has complied, in all significant respects, with the *Canadian Nuclear Safety Commission Cost Recovery Fees Regulations* pursuant to the *Nuclear Safety and Control Act*.



Crystal Pace, CA  
Principal  
for the Auditor General of Canada

Ottawa, Canada  
June 3, 2005

# Statement of Financial Position

## as at March 31

	2005	2004
<b>Assets</b>		
Current assets:		
Due from the Consolidated Revenue Fund	\$6,273,832	\$5,141,024
Accounts receivable (Note 4)	4,665,597	2,630,536
Prepaid expenses	<u>256,489</u>	<u>269,569</u>
	11,195,918	8,041,129
Non-current assets:		
Capital assets (Note 5)	3,309,023	1,395,878
<b>Total Assets</b>	<b>\$14,504,941</b>	<b>\$9,437,007</b>
<b>Liabilities and Deficit</b>		
Current liabilities:		
Accounts payable and accrued liabilities	\$6,273,832	\$5,141,024
Vacation pay	3,350,110	3,136,267
Deferred revenue (Note 6)	4,944,687	6,445,602
Employee severance benefits (Note 12)	<u>476,757</u>	<u>468,705</u>
	15,045,386	15,191,598
Non-current liabilities:		
Employee severance benefits (Note 12)	<u>8,034,219</u>	<u>7,264,144</u>
	23,079,605	22,455,742
<b>Deficit</b>	<b>(8,574,664)</b>	<b>(13,018,735)</b>
<b>Total Liabilities and Deficit</b>	<b>\$14,504,941</b>	<b>\$9,437,007</b>

Commitments and Contingencies (Note 11)

The accompanying notes are an integral part of these financial statements.

Approved by:



Linda J. Keen  
President and CEO



Hugh Robertson  
Acting Vice President, Corporate Services Branch

# Statement of Operations

## for the year ended March 31

	2005	2004
<b>Revenues</b>		
Licence fees	\$44,296,069	\$38,010,204
Special projects	4,489,706	4,122,783
Other	10,143	16,336
<b>Total revenues (Note 7)</b>	<b>48,795,918</b>	<b>42,149,323</b>
<b>Expenses</b>		
Salaries and employee benefits	54,458,975	51,330,580
Professional and special services	10,701,495	9,818,998
Accommodation	4,640,009	4,288,523
Furniture, equipment repairs and rental	4,412,733	3,699,189
Travel and Relocation	3,699,005	4,084,327
Communication and information	1,613,672	1,574,955
Utilities, materials and supplies	597,019	742,353
Grants and contributions	226,957	448,976
Other	489,855	486,072
<b>Total expenses (Note 7)</b>	<b>80,839,720</b>	<b>76,473,973</b>
<b>Net cost of operations</b>	<b>\$32,043,802</b>	<b>\$34,324,650</b>

# Statement of Deficit

## for the year ended March 31

	2005	2004
Balance at beginning of year	(\$13,018,735)	(\$17,029,479)
Net cost of operations	(32,043,802)	(34,324,650)
Services provided without charge (Note 9)	8,138,745	7,783,155
Net cash provided by government (Note 3 c)	27,216,320	29,233,200
Change in due from Consolidated Revenue Fund	1,132,808	1,319,039
<b>Balance at end of year</b>	<b>(\$8,574,664)</b>	<b>(\$13,018,735)</b>

The accompanying notes are an integral part of these financial statements.

# Statement of Cash Flows

## for the year ended March 31

	2005	2004
<b>Operating Activities</b>		
Net cost of operations	\$32,043,802	\$34,324,650
Non-cash items		
Amortization of capital assets (Note 5)	(481,056)	(408,792)
Services provided without charge by other Government departments and agencies (Note 9)	(8,138,745)	(7,783,155)
Net gain on disposal of surplus assets	3,759	984
Net change in non-cash working capital balances	2,168,193	3,549,407
Change in non-current employee severance benefits	(770,075)	(1,019,087)
Cash used in operating activities	24,825,878	28,664,007
<b>Investing Activities</b>		
Acquisitions of, and improvements to, capital assets (Note 3a)	2,394,201	571,212
Proceeds on disposal of surplus assets	(3,759)	(2,019)
Cash used in investing activities	2,390,442	569,193
<b>Net cash provided by government (Note 3c)</b>	<b>\$27,216,320</b>	<b>\$29,233,200</b>

The accompanying notes are an integral part of these financial statements.



# Notes to Financial Statements

## as at March 31, 2005

### 1. Authority and Objectives

The Canadian Nuclear Safety Commission (CNSC) was established in 1946 by the *Atomic Energy Control Act*. Prior to May 31, 2000, when the federal *Nuclear Safety and Control Act* (NSCA) came into effect, the CNSC was known as the Atomic Energy Control Board (AECB). The CNSC is a departmental corporation named in Schedule II to the *Financial Administration Act* and reports to Parliament through the Minister of Natural Resources.

The *Nuclear Safety and Control Act* provides comprehensive powers to the CNSC to establish and enforce national standards for nuclear energy in the areas of health, safety and environment. It establishes a basis for implementing Canadian policy and fulfilling Canada's obligations with respect to the non-proliferation of nuclear weapons. The NSCA also provides CNSC compliance inspectors with clearer, fuller powers and brings penalties for infractions in line with current legislative practices. The CNSC is empowered to require financial guarantees, order remedial action in hazardous situations and require responsible parties to bear the costs of decontamination and other remedial measures.

The objectives of the CNSC are to:

- regulate the development, production and use of nuclear energy and the production, possession and use of nuclear substances, prescribed equipment and information in order to: a) prevent unreasonable risk to the environment, to the health and safety of persons and to national security; and b) achieve conformity with measures of control and international obligations to which Canada has agreed; and
- disseminate scientific, technical and regulatory information concerning: a) the activities of the CNSC; b) the development, production, possession, transport and use of nuclear energy and substances; and c) the effects of nuclear energy and substances use on the environment and on the health and safety of persons.

The CNSC also administers the *Nuclear Liability Act*, including designating nuclear installations and prescribing basic insurance to be carried by the operators of such nuclear installations, and the administration of supplementary insurance coverage premiums for these installations. The sum of the basic insurance and supplementary insurance totals \$75 million for each designated installation (Note 13). The number of installations requiring insurance coverage is 14 (2004 – 14).

The CNSC's expenditures are funded by a budgetary lapsing authority. Employer contributions to employee pension and non-pension benefits are authorized by a statutory authority.

The CNSC established a cost recovery program as provided for by the NSCA. The intent of the program is the recovery of CNSC's expenditures related to its regulatory activities from users licensed under the Act. These expenditures include the technical assessment of licence applications, compliance inspections and the development of licence standards. On July 1, 2003 new CNSC *Cost Recovery Fees Regulations* were implemented which replace the former AECB *Cost Recovery Fees Regulations 1996*. The new fees are being phased in over a three-year period through application of fee reductions amounting to 15% in the first year, 10% in the second year and 5% in the third year.

## 2. Significant Accounting Policies

These financial statements have been prepared in accordance with Canadian generally accepted accounting principles for the public sector. The significant accounting policies are:

### **a) Parliamentary appropriations**

Appropriations are based in large part on cash flow requirements. Consequently, items recognized in the statement of deficit and the statement of financial position are not necessarily the same as those provided through appropriations from Parliament. Note 3 shows the reconciliation of net cost of operations, parliamentary appropriations voted and net cash provided by government to parliamentary appropriations used.

### **b) Due from the Consolidated Revenue Fund**

The CNSC operates within the Consolidated Revenue Fund (CRF), which is administered by the Receiver General for Canada. All cash received by the CNSC is deposited to the CRF and all cash disbursements made by the CNSC are paid from the CRF. Due from the Consolidated Revenue Fund represents the amount of cash that the CNSC is entitled to draw from the Consolidated Revenue Fund, without further appropriations, in order to discharge its liabilities.

### **c) Revenue**

Licence fee revenue is recognized on a straight-line basis over the period to which the fee payment pertains (normally three months or one year). All other revenue is recognized in the period in which the underlying transaction or event occurred that gave rise to the revenue. Licence fees received for future year licence periods are recorded as deferred revenue. Revenue from licence fees, contract projects and other sources is deposited to the Consolidated Revenue Fund and is not available for use by the CNSC. Legislative authority allows for the respending of amounts received on the disposal of surplus assets.

### **d) Vacation pay**

Vacation pay is expensed as the benefit accrues to employees under their respective terms of employment using the salary levels at year end. Vacation pay liability payable on cessation of employment represents obligations of the CNSC that are normally funded by appropriation when paid.

### **e) Pension benefits**

All eligible employees participate in the Public Service Pension Plan administered by the Government of Canada. The CNSC's contributions reflect the full cost as employer. This amount is currently based on a multiple of an employee's required contributions and may change over time depending on the experience of the Plan. The CNSC's contributions are expensed during the year in which the services are rendered and represent the total pension obligation. The CNSC is not currently required to make contributions with respect to actuarial deficiencies of the Public Service Pension Plan.

### **f) Employee severance benefits**

Employees are entitled to severance benefits, as provided for under their respective terms of employment. The cost of these benefits is accrued as employees render the services necessary to earn them. Employee severance benefits represent obligations of the CNSC that are normally funded by appropriation when the benefits are paid. The cost of the benefits earned by employees is calculated using information derived from the results of the actuarially determined liability for employee severance benefits for the Government as a whole.

**g) Services provided without charge by other government departments and agencies**

Services provided without charge by other government departments and agencies are recorded as operating expenses at their estimated fair value. These include services such as: accommodation provided by Public Works and Government Services Canada, contributions covering employers' share of employees' insurance premiums and costs paid by Treasury Board Secretariat, salaries and associated legal costs of services provided by Justice Canada, audit services provided by the Office of the Auditor General, and workers' compensation benefits provided by Human Resources and Skills Development Canada. A corresponding amount is credited directly to the Deficit.

**h) Grants and contributions**

Grants are recognized in the year in which entitlement of recipients has been established, while contributions are recognized in the year in which the conditions for payment are met.

**i) Capital assets**

Capital assets with an acquisition cost of \$10,000 or more are recorded at cost less accumulated amortization. Amortization commences on the first day of the month following the month of acquisition and is calculated on a straight-line basis over the estimated useful life of the asset as follows:

<b>Asset Class</b>	<b>Amortization Period</b>
Informatics equipment and software	2 to 5 years
Motor vehicles	4 years
Furniture and equipment	5 to 20 years

**j) Nuclear Liability Reinsurance Account**

The CNSC administers the Nuclear Liability Reinsurance Account on behalf of the federal government. The CNSC receives premiums paid by the operators of nuclear installations for the supplementary insurance coverage and credits these to the Nuclear Liability Reinsurance Account in the Consolidated Revenue Fund. Since the CNSC does not have the risks and rewards of ownership, nor does it have accountability for this account, it does not include any of the associated financial activity or potential liability in its financial statements. Financial activity and liability is however reported in Note 13 of these financial statements.

**k) Use of estimates**

These financial statements are prepared in accordance with Canadian generally accepted accounting principles. The preparation of accrual financial statements requires management to make estimates and assumptions that affect the reported amounts of assets, liabilities, revenue, expenses and contingencies during the reporting period. Actual results could differ from the estimates. The most significant items where estimates are used are employee severance liabilities and amortization of capital assets.

### 3. Parliamentary Appropriations

The CNSC receives its funding through parliamentary appropriations, which are based primarily on cash flow requirements. Items recognized in the statement of operations and the statement of deficit in one year may be funded through parliamentary appropriations in prior and future years. Accordingly, the CNSC has different net results of operations for the year on a government funding basis than on a Canadian generally accepted accounting principles basis. These differences are reconciled below.

#### a) Reconciliation of net cost of operations to total parliamentary appropriations used

	2005	2004
Net cost of operations	\$32,043,802	\$34,324,650
Items not affecting appropriations:		
Amortization of capital assets	(481,056)	(408,792)
Vacation pay – accrual	(213,842)	(333,069)
Services provided without charge by other Government departments and agencies	(8,138,745)	(7,783,155)
Revenue (non-respendable)	48,795,918	42,149,323
Change in employee severance benefits	(778,127)	(807,610)
Other expenses	(655,803)	(394,164)
	<u>38,528,345</u>	<u>32,422,533</u>
Items affecting appropriation:		
Capital asset acquisitions	2,394,201	571,212
Prepays (excluding accountable advances)	214,039	262,707
	<u>2,608,240</u>	<u>833,919</u>
Total parliamentary appropriations used	<u>\$73,180,387</u>	<u>\$67,581,102</u>

#### b) Reconciliation of parliamentary appropriations voted to total parliamentary appropriations used

	2005	2004
Parliamentary appropriations voted:		
Vote 20 – CNSC Operating expenditures	\$57,414,000	\$53,241,000
Supplementary Vote 20a	9,229,200	6,743,500
Supplementary Vote 20b	359,000	2,553,472
Transfer from Treasury Board Vote 10	-----	120,000
Transfer from Treasury Board Vote 15	1,015,000	940,000
	<u>68,017,200</u>	<u>63,597,972</u>
Less: lapsed appropriation	2,425,660	3,026,176
	<u>65,591,540</u>	<u>60,571,796</u>
Statutory		
Spending of proceeds from disposal of surplus assets	1,035	9,981
Contributions to employee pension and non-pension benefit plans	7,587,812	6,999,325
Total parliamentary appropriations used	<u>\$73,180,387</u>	<u>\$67,581,102</u>

**c) Reconciliation of net cash provided by government to total parliamentary appropriations used**

	2005	2004
Net cash provided by government	\$27,216,320	\$29,233,200
Revenue (non-respendable)	48,795,918	42,149,323
Net change in non-cash working capital balances charged to Vote	(2,873,894)	(3,920,615)
Refunds of prior years' expenditures	42,043	119,194
<b>Total parliamentary appropriations used</b>	<b>\$73,180,387</b>	<b>\$67,581,102</b>

**4. Accounts Receivable**

	2005	2004
Licence fees	\$4,233,803	\$2,218,096
Contract Project	-----	377,630
Other	431,794	34,810
<b>Net receivables</b>	<b>\$4,665,597</b>	<b>\$2,630,536</b>

**5. Capital Assets**

Capital asset class	2005			2004	
	Opening Balance	Additions (disposals) for the year	Accumulated Amortization	Net book value	Net book value
Informatics equipment and software	\$717,272	\$39,838	\$435,308	\$321,802	\$388,223
Motor vehicles	457,592	(13,079)	352,633	91,880	119,698
Furniture and equipment	1,415,794	2,305,941	826,394	2,895,341	887,957
<b>Total</b>	<b>\$2,590,658</b>	<b>\$2,332,700</b>	<b>\$1,614,335</b>	<b>\$3,309,023</b>	<b>\$1,395,878</b>

Amortization for the current year amounts to \$481,056 (2004 – \$408,792) and is included in other expenses on the statement of operations.

**6. Deferred Revenue**

Generally, licence fees are paid in advance of the fee period. Since revenue is recognized over the duration of the fee period, fees received for future year licence periods are recorded as deferred revenue.

	2005	2004
Balance at beginning of year	\$6,445,602	\$10,210,591
Less: revenue included in licence fees in the year	(6,403,401)	(9,163,830)
Add: fees received in the year for future year licence periods	4,902,486	5,398,841
<b>Balance at end of year</b>	<b>\$4,944,687</b>	<b>\$6,445,602</b>

## 7. Summary of Expenditures and Revenues by Cost Recovery Fee Category

	Revenue	Licences Provided Free of Charge (Note 10)	2005 Total Value of Licences and Other Revenue	2004 Total Value of Licences and Other Revenue	2005 Cost of Operations	2004 Cost of Operations
<b>Licensing, Certification &amp; Compliance</b>						
<b>Regulatory Plan Activity Fees</b>						
Power reactors	\$29,900,355	\$ -----	\$29,900,355	\$26,428,275	\$33,690,541	\$32,148,743
Non-power reactors	930,285	375,084	1,305,369	1,142,648	1,474,702	1,415,411
Nuclear research & test establishments	3,002,441	-----	3,002,441	1,580,560	3,383,063	1,937,790
Particle accelerators	-----	344,147	344,147	227,702	339,091	385,724
Uranium processing facilities	1,543,800	-----	1,543,800	923,614	1,739,493	1,113,162
Nuclear substance processing facilities	272,577	-----	272,577	430,034	310,008	581,857
Heavy water plants	11,774	-----	11,774	133,426	13,266	112,698
Radioactive waste facilities	993,807	-----	993,807	896,937	1,119,782	1,251,051
Fusion facilities	-----	-----	-----	9,387	-----	10,366
Uranium mines & mills	3,799,696	124,314	3,924,010	3,136,572	4,453,525	3,914,313
Waste nuclear substance licences	155,074	361,744	516,818	427,665	579,801	489,984
<b>Total Regulatory Plan Activity Fees</b>	<b>40,609,809</b>	<b>1,205,289</b>	<b>41,815,098</b>	<b>35,336,820</b>	<b>47,103,272</b>	<b>43,361,099</b>
<b>Formula Fees</b>						
Nuclear substances	3,141,773	3,876,512	7,018,285	5,924,507	7,560,905	7,321,967
Class II nuclear facilities	191,680	1,826,446	2,018,126	1,736,311	2,486,997	2,070,465
Dosimetry services	46,252	2,797	49,049	90,837	693,913	537,046
<b>Total Formula Fees</b>	<b>3,379,705</b>	<b>5,705,755</b>	<b>9,085,460</b>	<b>7,751,655</b>	<b>10,741,815</b>	<b>9,929,478</b>
<b>Fixed Fees</b>						
Transport licences and transport package certificates	132,505	-----	132,505	294,633	431,250	692,018
Radiation device and prescribed equipment certificates	91,600	16,650	108,250	168,316	272,134	167,756
Exposure device operator certificates	82,450	-----	82,450	39,100	43,310	138,198
<b>Total Fixed Fees</b>	<b>306,555</b>	<b>16,650</b>	<b>323,205</b>	<b>502,049</b>	<b>746,694</b>	<b>997,972</b>
<b>Total Licensing, Certification and Compliance</b>	<b>44,296,069</b>	<b>6,927,694</b>	<b>51,223,763</b>	<b>43,590,524</b>	<b>58,591,781</b>	<b>54,288,549</b>
<b>Non-Licensing and Non-Certification</b>						
Co-operation undertakings	10,143	-----	10,143	-----	12,243,854	11,162,148
Stakeholder relations	-----	-----	-----	-----	4,812,991	6,051,862
Regulatory framework	-----	-----	-----	-----	521,812	894,826
Special projects, other revenue and related expenses	4,489,706	-----	4,489,706	4,139,119	4,669,282	4,076,588
<b>Total Non-Licensing and Non-Certification</b>	<b>4,499,849</b>	<b>-----</b>	<b>4,499,849</b>	<b>4,139,119</b>	<b>22,247,939</b>	<b>22,185,424</b>
<b>Total</b>	<b>\$48,795,918</b>	<b>\$6,927,694</b>	<b>\$55,723,612</b>	<b>\$47,729,643</b>	<b>\$80,839,720</b>	<b>\$76,473,973</b>

## 8. Related Party Transactions

The CNSC is related in terms of common ownership to all Government of Canada departments, agencies, and Crown corporations. The CNSC enters into transactions with these entities in the normal course of business. Certain of these transactions are on normal trade terms applicable to all individuals and enterprises, while others are services provided without charge to the CNSC. All material related party transactions are disclosed below.

During the year, the CNSC expensed \$18,547,219 (2004 – \$17,025,131) which include services provided without charge of \$8,138,745 (2004 – \$7,783,155) as described in Note 9. The CNSC recognized revenue of \$4,072,168 (2004 – \$7,508,925) which include accounts receivables in the amount of \$774,719 (2004 – \$745,842).

## 9. Services Provided Without Charge

During the year, the CNSC received services that were obtained without charge from other government departments and agencies. These are recorded at their estimated fair value in the financial statements as follows:

	2005	2004
Accommodation provided by Public Works and Government Services Canada	\$4,473,762	\$4,149,585
Contributions for employer's share of employee benefits provided by the Treasury Board Secretariat	3,398,459	3,232,418
Salary and associated costs of legal services provided by Justice Canada	171,000	207,996
Audit services provided by the Office of the Auditor General of Canada	63,524	106,221
Other	32,000	86,935
<b>Total</b>	<b>\$8,138,745</b>	<b>\$7,783,155</b>

## 10. Licences Provided Free of Charge by the CNSC

The CNSC provides licences free of charge to educational institutions; not-for-profit research institutions wholly owned by educational institutions; publicly funded health care institutions, not-for-profit emergency response organizations; and federal departments. The total of these licences amounted to \$6,927,694 (2004 – \$5,580,320).

## 11. Commitments and Contingencies

### a) Commitments

The nature of the CNSC's activities results in some multi-year contracts and obligations whereby the CNSC will be committed to make some future payments when the services and goods are received. These commitments are subject to there being an appropriation by Parliament for the fiscal year in which the payment is made and the CNSC has the right to terminate these commitments. As of March 31, 2005 the CNSC has future years contractual obligations for the following:

	2006	2007	2008	2009 and thereafter
Acquisitions of goods and services	\$7,616,896	\$ 16,833	\$ -----	\$-----
Operating leases	113,432	93,786	93,216	8,510
Total	\$7,730,328	\$110,619	\$93,216	\$8,510

### b) Contingencies

Claims have been made against the CNSC in the normal course of operations. Legal proceedings for claims totaling approximately \$55,250,000 (2004 – \$55,250,000) were still pending at March 31, 2005. The final outcome is presently not determinable and, accordingly, no provision has been recorded in the accounts for these contingent liabilities. Settlements, if any, resulting from the resolution of these claims will be accounted for in the year in which the liability is considered likely and the cost can be reasonably estimated.

## 12. Employee Future Benefits

### a) Pension Benefits

The CNSC and all eligible employees contribute to the Public Service Pension Plan. This pension plan provides benefits based on years of service and average earnings at retirement. The benefits are fully indexed to the increase in the Consumer Price Index. The employer's and employees' contributions to the plan were as follows:

	2005	2004
CNSC's contributions	\$5,561,867	\$4,983,519
Employees' contributions	\$2,269,595	\$2,141,052

### b) Employee Severance Benefits

The CNSC provides severance benefits to its employees based on years of service and final salary. This benefit plan is not pre-funded and thus has no assets, resulting in a plan deficit equal to the accrued benefit obligation. Benefits will be paid from future appropriations. Information about the plan, measured as at the statement of financial position date is as follows:

	2005	2004
Accrued benefit obligation, beginning of year	\$7,732,849	\$6,925,239
Cost for the year	1,245,415	1,254,449
Benefits paid during the year	(467,288)	(446,839)
Accrued benefit obligation, end of year	\$8,510,976	\$7,732,849



### 13. Nuclear Liability Reinsurance Account

Under the *Nuclear Liability Act* (NLA), operators of designated nuclear installations are required to possess basic and/or supplementary insurance of \$75 million per installation for specified liabilities. The federal government has designated the Nuclear Insurance Association of Canada (NIAC) as the sole provider of third party liability insurance and property insurance for the nuclear industry in Canada. NIAC provides insurance to nuclear operators under a standard policy.

The policy consists of two types of coverage: Coverage A and Coverage B. Coverage A includes only those risks that are accepted by the insurer, that is, bodily injury and property damage. Coverage B risks include personal injury that is not bodily, for example psychological injury, damages arising from normal emissions and damage due to acts of terrorism. Effective in 2003, the federal government agreed to provide coverage for damage due to acts of terrorism which was previously provided under Coverage A.

NIAC receives premiums from operators for both coverages, however, premiums for Coverage B risks are remitted to the federal government which reinsures these risks under a Reinsurance Agreement between NIAC and the federal government. The federal government, through the Reinsurance Agreement also pays the difference (supplementary insurance) between the basic insurance amount set by the CNSC and the full \$75 million of liability imposed by the NLA. As of March 31, 2005 the total supplementary insurance coverage is \$584,500,000 (2004 – \$584,500,000).

All premiums paid by the operators of nuclear installations for the supplementary insurance coverage are credited to a Nuclear Liability Reinsurance Account in the Consolidated Revenue Fund. Premiums received in respect of coverage for damage due to acts of terrorism amount to \$140,523 (2004 – \$134,055). Claims against the supplementary insurance coverage are payable out of the Consolidated Revenue Fund and charged to the Account. There have been no claims against or payments out of the Account since its creation.

As explained in Note 2 j), the CNSC administers the Nuclear Liability Reinsurance Account on behalf of the Government of Canada through a specified purpose account consolidated in the Public Accounts of Canada. During the year, the following activity occurred in this account:

	2005	2004
Opening balance	\$690,476	\$554,921
Receipts deposited	142,323	135,555
Closing balance	\$832,799	\$690,476