

Canadian Nuclear Safety Commission

2017–18

Departmental Results Report

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Minister of Natural Resources

Departmental Results Report
Canadian Nuclear Safety Commission

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President's message

As the new President and Chief Executive Officer of the Canadian Nuclear Safety Commission (CNSC), I am pleased to present our 2017–18 Departmental Results Report.

In 2017–18, we continued to implement our Strategic Planning Framework, which guides our ongoing improvement efforts dealing with the changes taking place in government and in the nuclear industry. Ensuring modern nuclear regulation, being a trusted regulator, increasing our global nuclear influence and improving our management effectiveness continue to be our priorities and will guide us in regulating the evolving nuclear sector.



As the CNSC is the regulator for all nuclear activities in Canada, our work must reflect and anticipate a changing industry. We are committed to protecting health, safety, security and the environment, and to implementing Canada's international commitments on the peaceful use of nuclear energy.

Among its activities in 2017–18, the CNSC provided regulatory oversight for licensing decisions for major nuclear facilities in Canada, including licence renewals for the Point Lepreau Nuclear Generating Station in New Brunswick, the Chalk River Laboratories' nuclear research and test facility in Ontario, the Pickering and Western Waste Management Facilities in Ontario, and the McClean Lake uranium mining operation in Saskatchewan. The CNSC also provided regulatory oversight for Part I of the licence renewal hearing for the Bruce A and B Nuclear Generation Stations.

We also participated in a full-scale, multi-jurisdictional nuclear exercise, Exercise Unified Control, in December 2017. Organized and led by Ontario Power Generation, the exercise was conducted to fulfill CNSC requirements in the lead-up to the licence renewal hearing for the Pickering Nuclear Generating Station in 2018. For the CNSC, this exercise tested our updated Nuclear Emergency Response Plan and recently renovated Emergency Operations Centre.

We continued, and are still taking on, growing work in vendor design reviews for new small modular reactor concepts from vendors who have expressed an interest in obtaining our feedback on how their designs are addressing Canadian regulatory requirements.

Furthermore, we continued to monitor and participate in many government reviews, such as reviews of environmental assessment processes, and to strengthen our approach to public participation and outreach, including Indigenous engagement and CNSC 101 sessions. These activities are ongoing as well.

We have remained committed to promoting a healthy safety culture that encourages professional and respectful scientific debate. The CNSC is a science-based organization that fosters a working environment that encourages staff to exercise their best professional judgment. The ability to raise issues is an important element of a healthy safety culture.

As I begin my term as CNSC President, I wish to thank the CNSC’s highly skilled, professional staff who are dedicated and committed in their efforts to regulate Canada’s nuclear industry and to keep Canada and Canadians safe. I look forward to working with them in the years to come. Rest assured that we will continue to be true to our goals and never compromise safety.

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Rumina Velshi
President

Results at a glance

Actual spending

\$149,793,305

Actual full-time equivalents (FTEs)

854

CNSC priorities and results

Modern nuclear regulation: Ensure the CNSC uses science-based, risk-informed and technically sound regulatory practices that take into account scientific uncertainties, conservative regulatory decisions and evolving expectations

- The CNSC implemented its Policy on Science in a Regulatory Environment, in continued efforts to maintain integrity in making regulatory decisions and recommendations that are informed by the use of science. The policy is supported by a number of processes that are in place to ensure that a spirit of openness, engagement and continuous improvement thrives at the CNSC.

Trusted regulator: Ensure the CNSC is recognized by the public and industry as an independent, open and transparent regulator, and as a credible source of scientific, technical and regulatory information

- The CNSC focused on posting information on compliance oversight to the external website. This included Independent Environmental Monitoring Program (IEMP) data and desktop reviews; the CNSC published 11 IEMP reports in 2017–18.

Global nuclear influence: Ensure the CNSC leverages and influences global nuclear efforts that are relevant to Canadian interests and activities, to enhance international nuclear safety, security and non-proliferation

- The CNSC continued its engagement with international partners through:
 - leadership of the Convention on Nuclear Safety processes
 - preparatory work for the Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management (Joint Convention)
 - sustained engagement with the International Atomic Energy Agency (IAEA)
 - collaboration on small modular reactors with foreign regulators, particularly the U.S. Nuclear Regulatory Commission (U.S. NRC)

Improving management effectiveness: Ensure the CNSC is a dynamic, flexible and highly skilled organization that is supported by modern management practices and tools, and responds to an evolving workforce and industry

- The CNSC reviewed and updated 10-year workforce plans and profiles across all work units, continued to identify critical competencies for its regulatory work, and ensured that staff and new graduates have access to growth and development opportunities.

For more information on the CNSC’s plans, priorities and results achieved, see the “Results: what we achieved” section of this report.

Raison d'être, mandate and role: who we are and what we do

Raison d'être

The Canadian Nuclear Safety Commission (CNSC) was established on May 31, 2000, with the coming into force of the [Nuclear Safety and Control Act](#)ⁱ (NSCA). It replaced the Atomic Energy Control Board established in 1946 by the Atomic Energy Control Act.

The CNSC is a departmental corporation listed in Schedule II of the [Financial Administration Act](#),ⁱⁱ and reports to Parliament through the Minister of Natural Resources.

Mandate and role

The CNSC regulates the use of nuclear energy and materials to protect health, safety, security and the environment; to implement Canada's international commitments on the peaceful use of nuclear energy; and to disseminate objective scientific, technical and regulatory information to the public.

Under the NSCA, the CNSC:

- regulates the development, production and use of nuclear energy in Canada to protect health, safety and the environment
- regulates the production, possession, use and transport of nuclear substances, and the production, possession and use of prescribed equipment and prescribed information
- implements measures respecting international control of the development, production, transport and use of nuclear energy and substances, including measures respecting the non-proliferation of nuclear weapons and nuclear explosive devices
- is responsible for disseminating objective scientific, technical and regulatory information concerning the CNSC's activities, and about how the development, production, possession, transport and use of nuclear substances affect the environment and the health and safety of persons

For more general information about the department, see the "Supplementary information" section of this report.

Operating context and key risks

Operating context

To deliver on its mandate effectively, the CNSC continuously monitors the external environment to ensure that the organization is ready to adapt to changes that may impact its priorities. In 2017–18, the CNSC carried out its mandate against a backdrop characterized by continued demand for energy, growing interest in how the Canadian nuclear industry manages radioactive waste, and evolving expectations for public and Indigenous consultation and engagement.

Nuclear energy accounts for 15% of electricity generation in Canada. In Ontario, nuclear energy supplies approximately 60% of electricity; in New Brunswick it supplies 30%. The role of nuclear energy as part of Canada's clean energy mix and low carbon future was reaffirmed by the Government of Canada. In tandem, the Canadian nuclear industry has focused on refurbishments of the Darlington and Bruce nuclear generating stations and licence renewal activities at the Point Lepreau and Pickering nuclear generating stations. The CNSC is committed to the safety of these projects through robust regulatory oversight while, at the same time, avoiding unnecessary regulatory delays.

The nuclear industry has, however, been impacted by surplus quantities and the decreased price of uranium globally. This has led to suspended production at the Key Lake, McArthur River and Rabbit Lake mine operations.

Canada's nuclear sector generates various forms of radioactive waste each year, including low-, intermediate- and high-level; used nuclear fuel is considered high-level waste. The management, storage and transportation of all radioactive waste continue to be issues of concern to some Indigenous peoples, members of the public and stakeholders. This was demonstrated during the Chalk River licence renewal process, when a significant number of interventions with respect to waste and decommissioning were brought forward. The CNSC has a robust regulatory regime in place to ensure the safe management of radioactive waste in Canada, including strong oversight and enforcement of compliance with regulatory requirements.

In the wider government context, the Government of Canada proposed legislation to establish new rules for the assessment of potential impacts of major projects in Canada. This legislation would broaden the scope for assessing how a proposed project could affect not only the environment, but also health, the economy, Indigenous peoples, and society as a whole over the long term. The CNSC's ongoing engagement with Indigenous communities also coincides with the Government of Canada's focus on building and maintaining better relations with Canada's Indigenous peoples.

Exacerbated by the wide reach of social media, societal changes have contributed to a decline in the public's confidence in government, industry and experts. Government has to balance the

demand for public consultation with an increasingly individualistic society. With regard to nuclear energy, surveys have indicated that the perception held by the public is linked positively to their proximity to nuclear facilities and their understanding of the sector.

Finally, technology continues to advance at a rapid pace, and a growing gap can be observed between it and government's pace of policy and regulation adoption. These technological developments are already shaping Canadians' expectations for interacting with government and driving much-needed reform in day-to-day business. In the context of the CNSC, regulation will need to account for any number of innovative and "disruptive" technologies in the nuclear industry in the coming years. These include additive manufacturing (3D printing), drones, small modular reactors and similar new technologies that require consideration of new approaches to regulation.

The themes above drive the CNSC's environmental scanning, risk management and strategic planning processes.

Key risks

Risk management is a fundamental part of the CNSC's mission to protect health, safety, security and the environment; to implement Canada's international commitments on the peaceful use of nuclear energy; and to disseminate objective scientific, technical and regulatory information to the public. There are three key risks, described below.

Nuclear reactor accident: There is a risk of an accident at a nuclear reactor.

While power reactors apply a defence-in-depth approach that anticipates and mitigates many potential challenges caused by both internal and external events, there remains a possibility that an event can lead to an accident at a nuclear reactor. To minimize the risk of such an event, the CNSC not only conducts robust regulatory oversight of existing facilities, but during 2017–18 complemented those efforts with the implementation of periodic safety reviews at the Bruce and Pickering Nuclear Generating Stations. Additionally, the CNSC undertook research projects to establish site-wide safety goals, which take into account the interactions between different units at a station, the aggregation of risk from internal events and internal/external hazards, and radioactive sources other than the reactor cores.

Malevolent activities: There is a risk of malevolent activities and/or diversion of nuclear materials, equipment and technology of Canadian origin.

Nuclear facilities in Canada are not immune to the same security threats that terrorist groups pose to other infrastructure and other states, especially given the strategic importance of the energy sector. Facilities adhere to stringent nuclear security requirements set forth by the CNSC and have programs in place to prevent the theft, loss or illicit use of nuclear substances. The

CNSC also collaborates with domestic and international partners on this issue and adheres to the principles of the [Code of Conduct on the Safety and Security of Radioactive Sources and the supplementary Guidance on the Import and Export of Radioactive Sources](#),ⁱⁱⁱ issued by the IAEA. To mitigate this risk even further, in 2017–18 the CNSC continued to implement regulatory measures related to the security of nuclear substances (particularly of sealed sources), and enhanced regulatory control of inventories of disused and historical sources.

Lost or stolen nuclear substances and transport accidents: There is a risk of a loss of regulatory controls over nuclear substances if they are lost or stolen and/or there is an accident in transporting them.

Concerns exist over the non-malevolent loss or appropriation of nuclear substances as well. The CNSC regulates close to 1 million shipments of radioactive material in Canada every year. Several industrial and commercial applications involve the use of portable radiation devices. Medical isotopes are increasingly being produced by cyclotrons and being imported from overseas. As the use and transport of nuclear substances increases, there may be an increase in their loss or appropriation, and increased potential for transport events, resulting in an incident and/or risks to public safety. The CNSC requires licensees to have established procedures for the proper handling of such materials, and all shipments of risk-significant material are required to have a transport security plan as well as an emergency response assistance plan. In 2017–18, the CNSC’s enhanced regulatory control of inventories also helped to mitigate this risk, as did the ongoing collaboration with the Canada Border Services Agency under the [Single Window Initiative](#)^{iv}, a compliance verification interface that enables electronic sharing of import data.

Given these possibilities, the CNSC maintains strong controls to mitigate risks that the organization or stakeholders may face. The identified risks are mitigated through ongoing strategies that are part of the CNSC’s planned activities.

Key risks

Risks	Mitigating strategy and effectiveness	Link to the department’s Programs	Link to mandate letter commitments and any government-wide or departmental priorities
<p>Nuclear reactor accident</p> <p>There is a risk of an accident at a nuclear reactor.</p>	<p>Identified in 2017–18 Departmental Plan</p> <p>Risk mitigation strategies:</p> <ul style="list-style-type: none"> Executed baseline licensing and compliance activities for nuclear power plants Implemented periodic safety reviews (Bruce and Pickering Nuclear Generating Stations) 	<p>Nuclear Reactors</p>	<p>Departmental Priority – Modern Nuclear Regulation</p>

Risks	Mitigating strategy and effectiveness	Link to the department's Programs	Link to mandate letter commitments and any government-wide or departmental priorities
	<ul style="list-style-type: none"> Undertook research projects to establish site-wide safety goals (see Research report summaries for 2017–18^v on the CNSC website) 		
<p>Malevolent activities</p> <p>There is a risk of malevolent activities and/or diversion of nuclear materials, equipment and technology of Canadian origin.</p>	<p>Identified in 2017–18 Departmental Plan</p> <p>Risk mitigation strategies:</p> <ul style="list-style-type: none"> Continued implementation of REGDOC-2.12.3, Security of Nuclear Substances: Sealed Sources^{vi} Enhanced regulatory control of inventories of disused and historical sources with ongoing verification of licensee source inventories 	Nuclear Non-Proliferation	Departmental Priority – Global Nuclear Influence
<p>Lost or stolen nuclear substances and transportation accidents</p> <p>There is a risk of a loss of regulatory controls over nuclear substances if they are lost or stolen and/or there is an accident in transporting them.</p>	<p>Identified in 2017–18 Departmental Plan</p> <p>Risk mitigation strategies:</p> <ul style="list-style-type: none"> Completed CNSC deliverables under the Single Window Initiative Implemented CNSC action plan resulting from the recommendations of the 2015 International Physical Protection Advisory Service (IPPAS) mission recommendations Enhanced regulatory control of inventories of disused and historical sources with ongoing verification of licensee source inventories 	Nuclear Substances and Prescribed Equipment	Departmental Priority – Modern Nuclear Regulation

Results: what we achieved

Information on the CNSC's lower-level programs is available in the [GC InfoBase](#).^{vii}

Programs

Program 1.1 Nuclear Fuel Cycle

Description

This program aims to regulate facilities associated with the nuclear fuel cycle (nuclear processing facilities, nuclear waste management facilities, and uranium mines and mills) to protect the health, safety and security of Canadians and the environment in a manner consistent with Canada's international obligations on the peaceful uses of nuclear energy. The program regulates all the lifecycle stages for these facilities – from site preparation through construction and operation, to decommissioning (or long-term management, in the case of some nuclear waste facilities). The licensing and compliance activities associated with this program are all managed through a risk-informed and licensee performance history approach. Compliance verification is conducted against established criteria consistent with the licensing basis of the facility. The results of regulatory activities associated with this program are communicated to the public on a regular basis. The program is guided by a management system, and is based on fundamental safety principles for continuous improvement.

Nuclear Fuel Cycle	Uranium mines and mills inspections	33	Inspections of nuclear waste management facilities and major decommissioning projects	47
	Uranium and nuclear processing facilities inspections	42	Radiation exposures over the allowable dose limits for nuclear energy workers and members of the public	0
Radiological releases to the environment above regulatory limits				1

CNSC staff use a risk-informed approach for compliance activities, commensurate with the risk associated with each facility. CNSC staff establish compliance verification plans for each facility, taking into consideration a 10-year baseline that outlines the overall risk profile across the fuel cycle. Each facility-specific compliance plan then considers the risk profile of the facility, specific risk areas associated with any activity, facility performance, modifications and operating experience.

Results

Nuclear facilities are regulated to protect the health, safety and security of Canadians and the environment. To this end, in 2017–18, the CNSC:

- Continued environmental assessments under the Canadian Environmental Assessment Act, 2012 (CEAA 2012), as well as technical assessments under the NSCA of Canadian Nuclear Laboratories' proposed major projects: construction of the Near Surface Disposal Facility (NSDF) at Chalk River Laboratories and decommissioning of the Nuclear Power Demonstration (NPD) at Rolphton, both in Ontario, and decommissioning of Whiteshell Laboratories in Manitoba
 - April 2017 – held open houses in Deep River, Ontario, and Sheenboro, Quebec, to provide information respectively on the NSDF project and the associated process
 - October 2017 – held additional open houses in both Deep River and Sheenboro, and in Pembroke, Ontario
- Provided regulatory oversight in support of the licence renewal hearings for:
 - Orano's (formerly AREVA) uranium mine operating licence for the McClean Lake Operation
 - Ontario Power Generation's (OPG) waste facility operating licences for the Pickering Waste Management Facility and the Western Waste Management Facility
- Updated and consolidated guidance to enhance clarity of the CNSC's oversight of the long-term safety of radioactive waste management, subsequently published in May 2018 as [REGDOC-2.11.1, Volume II: Assessing the Long-Term Safety of Radioactive Waste Management](#)^{viii}
- Rolled out a communication plan on an updated risk model and 10-year baseline inspection strategy for fuel cycle facilities

- Maintained readiness for the regulatory oversight of OPG’s proposed Deep Geologic Repository (DGR) project through participation in research; the project has been on hold pending a ministerial decision since May 2015, when the Joint Review Panel delivered its report to the federal Minister of the Environment

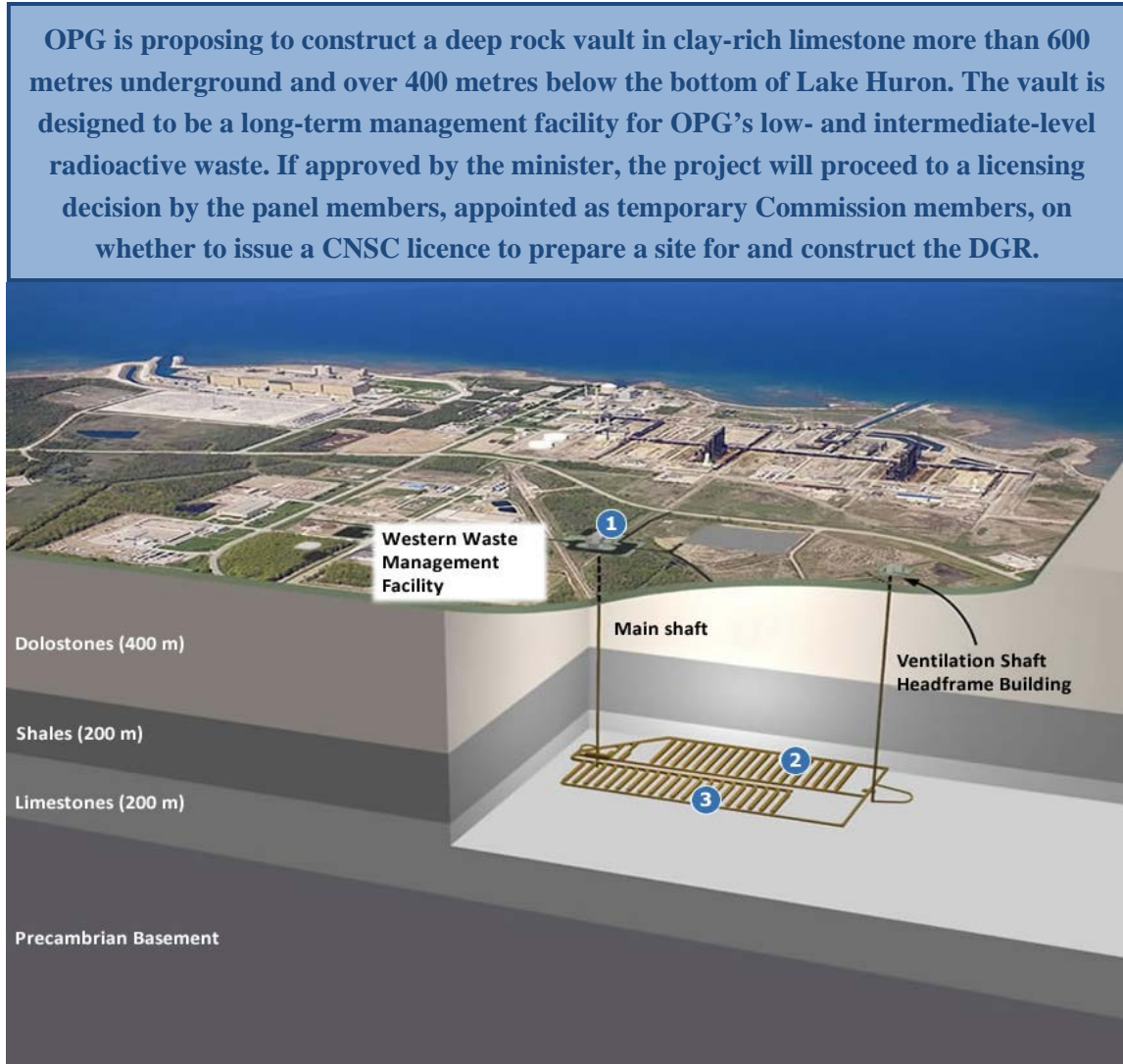


Figure 1. Conceptual DGR design

Results achieved

Expected results	Performance indicators	Target	Date to achieve target	2017–18 Actual results	2016–17 Actual results	2015–16 Actual results
Nuclear processing facilities, nuclear waste management facilities, and uranium mines and mills are regulated to protect the health, safety and security of Canadians and the environment	Number of radiation exposures over the allowable dose limits for nuclear energy workers and members of the public	0	March 31, 2018	0	0	0
	Number of radiological releases to the environment above regulatory limits	0	March 31, 2018	1*	0	0

* The reported exceedance was in relation to the monthly average discharge limit for radium-226 at the Elliot Lake historic decommissioned uranium mine site for the month of January 2018. The value of the exceedance was well below both the federal guideline and the provincial standard on drinking water, with no radiological impacts to the public or the environment.

Budgetary financial resources (dollars)

2017–18 Main Estimates	2017–18 Planned spending	2017–18 Total authorities available for use	2017–18 Actual spending (authorities used)	2017–18 Difference (Actual spending minus Planned spending)
10,096,285	10,891,883	11,227,829	10,847,005	(44,878)

Human resources (full-time equivalents)

2017–18 Planned full-time equivalents	2017–18 Actual full-time equivalents	2017–18 Difference (Actual full-time equivalents minus Planned full-time equivalents)
68	62	(6)

Program 1.2 Nuclear Reactors

Description

This program aims to regulate facilities associated with nuclear energy (nuclear power plants and research reactors) to protect the health, safety and security of Canadians and the environment in a manner consistent with Canada’s international obligations on the peaceful uses of nuclear energy. The program regulates all the lifecycle stages for nuclear reactors (specifically, nuclear power plants and research reactors), from site preparation, construction and operation, to the decommissioning of the facility and abandoning the site (once operations are ended). The licensing and compliance activities associated with this program are all managed through a risk-informed and licensee performance history approach. Compliance verification is conducted against established criteria consistent with the licensing basis of the facility. The results of all the regulatory activities associated with this program are communicated to the public on a regular basis. The program is guided by a management system and is based on fundamental safety principles for continuous improvement.

Nuclear Reactors	Nuclear power plant inspections	109
Research reactor inspections	Radiation exposures over the allowable dose limits for nuclear energy workers and members of the public	23 0
Radiological releases to the environment above regulatory limits		0

Approximately 100 to 150 applicable compliance verification activities are selected for each year’s compliance plan. The plan is then validated by CNSC technical specialists and licensing staff, who use a risk-informed approach that considers the status, performance history, and conditions and challenges of each reactor facility, to ensure appropriate regulatory oversight and safety performance evaluation. Where necessary, additional reactive compliance verification activities are added that focus on known or potential licensee challenges. Additional supplemental compliance verification activities may also be added as necessary during the year in response to new or emerging licensee challenges.

Results

Nuclear reactors are regulated to protect the health, safety and security of Canadians and the environment. To this end, in 2017–18, the CNSC:

- Provided regulatory oversight in support of the licence renewal processes for:
 - NB Power’s power reactor operating licence for the Point Lepreau Nuclear Generating Station
 - Canadian Nuclear Laboratories’ (CNL) nuclear research and test establishment operating licence for the Chalk River Laboratories (CRL) site
 - OPG’s power reactor operating licence for the Darlington Nuclear Generating Station, encompassing the refurbishment project of the four reactor units, the first of which started in October 2016 and is currently in progress
- Presented site-wide safety methodology to the Commission, to help members understand the implication of whole-facility impacts
- Reviewed OPG’s multi-unit probabilistic safety assessment (PSA) for the Pickering Nuclear Generating Station

<h3>Probabilistic Safety Assessments for Nuclear Power Plants</h3>	<h4>What is a PSA?</h4> <p>A comprehensive and structured analysis tool used to evaluate risk at an NPP and drive safety improvements, by examining the design and operation of an NPP to demonstrate the overall safety of the facility</p>
<p>Did you know?</p> <p>The CNSC is leading international efforts to produce a PSA methodology for integrating the risks specific to multi-unit NPP stations</p>	<p>Did you know?</p> <p>NPP licensees are required to implement and maintain a PSA program, which must be updated every five years or whenever an NPP undergoes major changes</p>
<p>The focus of a Level 1 PSA is on the NPP’s response to different INTERNAL EVENTS, which could be initiated by human error or system malfunctions, and to EXTERNAL HAZARDS.</p>	
<p>INTERNAL EVENTS: which are caused by random component failures, human error, fires and floods originating from within the plant</p>	<p>EXTERNAL HAZARDS: such as earthquakes, high winds, floods, freezing rain, meteorites, geomagnetic storms, solar flares and airplane crashes, and accidents at nearby industrial facilities</p>

- Reviewed and accepted periodic safety reviews (PSRs) for the Pickering and the Bruce A and B Nuclear Generating Stations in preparation for licence renewal hearings for both facilities in 2018–19
- Participated in [Exercise Unified Control](#),^{ix} a nuclear emergency preparedness exercise at the Pickering Nuclear Generating Station

- Continued reviews of vendor designs for small modular reactors
 - completed a [Phase 1 review](#)^x for Terrestrial Energy’s Integral Molten Salt Reactor; several other [vendor designs](#)^{xi} are in various stages of pre-licensing review
- Strengthened its engagement on regulatory and technical topics of mutual interest with CANDU (Canada Deuterium Uranium) states by:
 - holding the first technical exchange meeting with India under the Canada–India Nuclear Cooperation Agreement
 - hosting a scientific visit of representatives from Romania’s National Commission for Nuclear Activities Control
 - exchanging inspectors with the U.S. NRC so that U.S. inspectors may become familiar with CANDU technology

Results achieved

Expected results	Performance indicators	Target	Date to achieve target	2017–18 Actual results	2016–17 Actual results	2015–16 Actual results
Nuclear power reactors and research reactors are regulated to protect the health, safety and security of Canadians and the environment	Number of radiation exposures over the allowable dose limits for nuclear energy workers and members of the public	0	March 31, 2018	0	0	0
	Number of radiological releases to the environment above regulatory limits	0	March 31, 2018	0	0	0

Budgetary financial resources (dollars)

2017–18 Main Estimates	2017–18 Planned spending	2017–18 Total authorities available for use	2017–18 Actual spending (authorities used)	2017–18 Difference (Actual spending minus Planned spending)
39,698,384	42,826,661	44,147,591	46,375,052	3,548,391

Note: The difference between actual and planned spending is mainly due to increased spending on salaries as a result of increased FTE utilization and retroactive payments for negotiated salary adjustments.

Human resources (full-time equivalents)

2017–18 Planned full-time equivalents	2017–18 Actual full-time equivalents	2017–18 Difference (Actual full-time equivalents minus Planned full-time equivalents)
273	278	5

Program 1.3 Nuclear Substances and Prescribed Equipment

Description

This program regulates the use and transport of nuclear substances, prescribed equipment manufacturers and users and dosimetry providers, to protect the health, safety and security of Canadians and the environment, in a manner consistent with Canada's international obligations on the peaceful uses of nuclear energy. The program ensures effective regulatory oversight of all uses of nuclear-related substances and dosimetry providers. It includes licensing the possession of nuclear substances, the delivery of dosimetry services, overseeing the safe transport of nuclear substances, certification of transport packages and prescribed equipment, and overseeing the certification of radiation safety officers for Class II nuclear facilities. Oversight of activities is risk-informed, depending on the type of licensed activity, nuclear substances and prescribed equipment being used, as well as the relative risk. The licensing and compliance activities associated with this program are managed through a risk-informed and licensee performance history approach. Compliance verification is conducted against regulatory criteria, consistent with the licensing basis of the activity being regulated. The results of regulatory activities associated with this program are communicated to the public and other stakeholders on a regular basis. The program is guided by a management system, and is based on fundamental safety principles for continuous improvement.

Nuclear Substances and Prescribed Equipment	Inspections conducted	Annual compliance reports reviewed
Radiation exposures over the allowable dose limits for nuclear energy workers and members of the public	820	1,889
Percentage of independent dosimetry tests passed by licensees	1	Radiological releases to the environment above regulatory limits 0
100%	0	Incidents in transport resulting in an individual receiving a dose above the limit for members of the public (1 millisievert per year) 0

All regulated activities have been categorized into more than 70 licence types known as use-type groups (e.g., industrial radiography, therapeutic nuclear medicine), which are ranked as low-, medium- or high-risk. The higher the risk level, the greater the overall regulatory effort required, including a higher inspection frequency. In determining risk ranking, the CNSC considers the probability of non-compliances as well as the impact of non-compliances on health and safety.

The risk ranking provides a relative order of suggested regulatory effort and subsequently dictates the inspection frequency by use type. The actual compliance effort will be influenced by available resources, as well as other factors which may affect the actual inspection frequency for a given licensee or an entire use type. An increase in required compliance effort may include but is not limited to increased surveillance, increased inspection frequency and increased desktop compliance review.

Results

Nuclear substances and prescribed equipment are regulated to protect the health, safety and security of Canadians and the environment. To this end, in 2017–18, the CNSC:

- Put Mobile Inspection Kits into operation, enabling inspectors to directly record inspection results in CNSC databases
- Reviewed regulatory program design for hadron facilities in light of potential industry interest in pursuing proton therapy
- Continued ongoing verification of licensee inventories of disused and historical nuclear sources; a National Sealed Source Registry improvement project is also to be completed in 2018–19
- Participated in 19 licensee-related events, including the 13th International Topical Meeting on Nuclear Applications of Accelerators (Quebec City, Quebec), the CNSC Annual Eastern Regional Radiography Meeting (Ottawa, Ontario) and the CNSC Annual Western Regional Radiography Meeting (Nisku, Alberta)

Results achieved

Expected results	Performance indicators	Target	Date to achieve target	2017–18 Actual results	2016–17 Actual results	2015–16 Actual results
Nuclear substances and prescribed equipment are regulated to protect the health, safety and security of Canadians and the environment	Number of radiation exposures over the allowable dose limits for nuclear energy workers and members of the public	0	March 31, 2018	1*	3**	0
	Number of radiological releases to the environment above regulatory limits	0	March 31, 2018	0	0	0

* In February 2018, a nuclear medicine technologist at the Windsor Regional Hospital in Windsor, Ontario received a dose to the right wrist, in excess of the regulatory dose limit. An event initial report was submitted to the CNSC by the licensee and presented at a Commission meeting in March 2018. No health effects have been noted since the incident and no physical effects of the exposure are expected.

** One member of the public received a dose above the regulatory limit. (See the note on transport incidents for further information.) The incident occurred on September 24, 2016 and was reported to the Commission on December 14, 2016. One nuclear energy worker received a dose to their hands on October 28, 2016. The incident was reported to the Commission on December 14, 2016. One nuclear energy worker received a dose to their hands on March 1, 2017. The incident was reported to the Commission on April 12, 2017.

Budgetary financial resources (dollars)

2017–18 Main Estimates	2017–18 Planned spending	2017–18 Total authorities available for use	2017–18 Actual spending (authorities used)	2017–18 Difference (Actual spending minus Planned spending)
13,824,249	14,913,615	19,496,085	13,452,249	(1,461,366)

Note: The difference between planned versus actual spending is primarily a result of lower-than-planned salary costs because FTE utilization across various sectors was lower than planned due to delays in planning staffing.

Human resources (full-time equivalents)

2017–18 Planned full-time equivalents	2017–18 Actual full-time equivalents	2017–18 Difference (Actual full-time equivalents minus Planned full-time equivalents)
88	78	(10)

Note: Delays in staffing.

Program 1.4 Nuclear Non-Proliferation

Description

This program aims to provide assurance to both the Canadian public and the international community that the development, production and use of nuclear energy and nuclear substances, prescribed equipment and prescribed information is safe and conforms with the control measures and international obligations to which Canada has agreed, including those under the Treaty on the Non-Proliferation of Nuclear Weapons. Under its mandate, the CNSC implements measures of control respecting nuclear non-proliferation, including domestic and international arrangements, IAEA safeguards, and import-export of nuclear substances, prescribed equipment and prescribed information.

Nuclear Non-Proliferation	Import and export licences issued 977	Inspections of import and export licensees 5
Safeguards inspections led by the International Atomic Energy Agency 60	Safeguards inspections led by the CNSC 7	
Additional protocol declarations 53	Maintain IAEA safeguards broader conclusion 100%	

Results

The Canadian public and the international community are assured that nuclear energy, nuclear substances, prescribed equipment and prescribed information are used for peaceful purposes, and do not contribute to threats to nuclear non-proliferation and radiological safety or security. To this end, in 2017–18, the CNSC:

- Implemented the [Single Window Initiative](#),^{xii} a compliance verification interface that enables electronic sharing of import data, with Canada Border Services Agency (CBSA); currently working with CBSA to assist in the onboarding of brokers and licensees

The CNSC was the first nuclear regulator among the G7 countries to develop a national registry and to implement a Web-based tracking system, along with enhanced import and export controls, for high-risk radioactive sealed sources.

- Collaborated with the IAEA and licensees (Cameco and CNL) in developing a neutron-detector portal monitor, for the transfer of materials subject to safeguards from Cameco's Port Hope conversion facility to CNL's Long Term Waste Management Facility
- Held an annual meeting with Global Affairs Canada, identifying specific areas to deepen collaboration (e.g., IAEA training material on the security of radioactive materials during transport; forensics; specific countries of interest)
- Led two multi-departmental R&D and capability development projects aimed at enhancing and expanding Canada's national nuclear forensics capability
 - the first project, the Nuclear Forensics Capability Advancement Project, is scheduled to conclude by the end of March 2019
 - the second project, the Nuclear Material Signature and Provenance Assessment Capability Development Project, is scheduled to conclude in March 2020
- Developed criteria for staff participation in international peer review missions, including a requirement for the host Member State to make the review, and its follow-up, publicly available
- Worked with the IAEA and Canadian nuclear operators to define updated safeguards measures for Canadian facilities and ensure that nuclear material inventories and transfers remain subject to robust verification
 - the new approach, which is expected to be fully implemented over the next two years, is anticipated to include additional equipment-based approaches for safeguards that will strengthen safeguards without additional inspector presence
- Published the first comprehensive safeguards regulatory document that includes all safeguards obligations and guidance, [REGDOC-2.13.1, Safeguards and Nuclear Material Accountancy](#);^{xiii} the resulting document will serve as a new basis for the evolution of safeguards compliance in Canada



Figure 2. IAEA Headquarters, Vienna, Austria (Vienna International Centre)

Results achieved

Expected results	Performance indicators	Target	Date to achieve target	2017–18 Actual results	2016–17 Actual results	2015–16 Actual results
Assurance to the Canadian public and international community that nuclear energy, nuclear substances, prescribed equipment and prescribed information are used for peaceful purposes, and do not contribute to threats to nuclear non-proliferation and radiological safety or security	Maintain IAEA safeguards broader conclusion (the IAEA concludes that there was no diversion of declared nuclear material, and no indication of undeclared nuclear material or nuclear activity)	100%*	June 30, 2018	100%	100%	100%

* 100% refers to the IAEA broader conclusion being maintained for that year.

Budgetary financial resources (dollars)

2017–18 Main Estimates	2017–18 Planned spending	2017–18 Total authorities available for use	2017–18 Actual spending (authorities used)	2017–18 Difference (Actual spending minus Planned spending)
5,937,337	6,405,206	6,602,765	4,920,301	(1,484,905)

Note: The difference between planned and actual spending in this program is mainly a result of lower spending for the Canadian Safeguards and Support Program; reduced spending on salaries due to lower than planned FTE utilization; and a review of activities subject to cost recovery.

Human resources (full-time equivalents)

2017–18 Planned full-time equivalents	2017–18 Actual full-time equivalents	2017–18 Difference (Actual full-time equivalents minus Planned full-time equivalents)
40	29	(11)

Note: Delays in staffing and reallocation of resources due to shift in regulatory oversight activities and a review of activities subject to cost recovery.

Program 1.5 Scientific, Technical, Regulatory and Public Information

Description

This program aims to inform the Canadian public – including Canadian nuclear licensees, vendors, academic community, special interest groups, Indigenous groups, other government departments, other jurisdictions and international organizations – that nuclear facilities and activities are being used safely, in adherence to regulatory requirements and best available scientific and technical information. This program is realized through the processes of generating scientific and technical information, institutionalizing the information within the regulatory framework, and disseminating the information through a variety of channels and engagement practices.

Scientific, Technical, Regulatory and Public Information	Research projects funded 17	Papers and conference presentations by CNSC staff 41
Separate recipients awarded funding under the Participant Funding Program 34	Public inquiries to the CNSC's info account 1,400	Indigenous groups that had meetings with the CNSC 20
Views of CNSC Web pages related to this program		17,912

Results

Scientific, technical and regulatory information is delivered to inform the Canadian public about the effectiveness of Canada's nuclear regulatory regime. To this end, in 2017–18 the CNSC:

- Published [REGDOC-2.9.1, Environmental Protection: Environmental Principles, Assessments and Protection Measures, version 1.1](#),^{xiv} which clarifies how the CNSC undertakes an environmental assessment under the NSCA for all licence applications, and under CEAA 2012 for designated projects

- this is an important regulatory document for the CNSC as one of its key responsibilities under the NSCA is protection of the environment
- Published [REGDOC-2.2.4, Fitness for Duty, Volume II: Managing Alcohol and Drug Use, version 2](#),^{xv} which makes the CNSC the first regulator in Canada to require random drug and alcohol testing for a specified worker population

Human performance is a key contributor to the safety and security of nuclear facilities, and the adoption of measures that monitor alcohol and drug use is a key component of ensuring worker fitness for duty.

- Expanded online public access to documents submitted for Commission proceedings
- Published [Regulatory Framework Plan](#)^{xvi} 2017–22, which sets out the regulations and regulatory documents that the CNSC plans to develop or amend in the coming five years
 - CNSC documents are reviewed periodically to determine if they are still appropriate or need to be updated



Figure 3. What makes up the CNSC's regulatory framework?

- Published or completed 12 regulatory documents and 1 discussion paper
- Completed a comprehensive review of the 5-year [Regulatory Framework Plan](#)^{xvii} for 2018–19 to 2023–24
- Continued engagement within the organization to ensure that the CNSC 101 Program is flexible and meets the expectations of stakeholders
- Implemented initial modules of new software for CNSC work processes, to manage workflow and related information for licensing, certification and compliance activities
- Awarded more than \$640,000 to 34 different recipients through the CNSC's Participant Funding Program (PFP)



○ this included funding to 12 Indigenous communities or organizations to support participation in CNSC regulatory processes, to learn more about the CNSC's regulation of the nuclear sector in Canada and the performance of CNSC-regulated facilities, and to appear before the Commission to share their findings and perspectives

- Completed a capability catalogue on current expertise and research infrastructure, internal and external to the CNSC, identifying and assessing required capabilities, potential gaps and remedial steps

Results achieved

Expected results	Performance indicators	Target	Date to achieve target	2017–18 Actual results	2016–17 Actual results	2015–16 Actual results
Scientific, technical and regulatory information is delivered to inform the Canadian public on the effectiveness of Canada's nuclear regulatory regime	Number of views of CNSC Web pages related to this program	TBD*	TBD*	17,912	16,321**	5,247,516**
	Number of public requests for information (non-Access to Information and Privacy) or outreach support	TBD*	TBD*	1,400	1,700	1,521

* This indicator will no longer be reported on in future Departmental Results Reports.

** The CNSC refined its methodology for page views, which explains the difference between the 2015–16 and 2016–17 Actual results.

Budgetary financial resources (dollars)

2017–18 Main Estimates	2017–18 Planned spending	2017–18 Total authorities available for use	2017–18 Actual spending (authorities used)	2017–18 Difference (Actual spending minus Planned spending)
26,494,116	28,581,883	29,265,079	27,089,234	(1,492,649)

Note: The difference between planned and actual spending is primarily due to a decrease in actual spending in the Scientific and Technical Information sub-program due to reduced spending on salaries as a result of a shift in regulatory oversight demands.

Human resources (full-time equivalents)

2017–18 Planned full-time equivalents	2017–18 Actual full-time equivalents	2017–18 Difference (Actual full-time equivalents minus Planned full-time equivalents)
154	138	(16)

Note: Decrease in the Scientific and Technical Information sub-program as a result of a shift in regulatory oversight demands.

Internal Services

Description

Internal Services are those groups of related activities and resources that the federal government considers to be services in support of programs and/or required to meet corporate obligations of an organization. Internal Services refers to the activities and resources of the 10 distinct service categories that support program delivery in the organization, regardless of the Internal Services delivery model in a department. The 10 service categories are: Management and Oversight Services, Communications Services, Legal Services, Human Resources Management Services, Financial Management Services, Information Management Services, Information Technology Services, Real Property Services, Materiel Services and Acquisition Services.

Results

Internal Services are leveraged to ensure that the CNSC is a dynamic, flexible and highly skilled organization that is supported by modern management practices and tools, and responds to an evolving workforce and industry. To this end, in 2017–18 the CNSC:

- Conducted a high-level assessment of the top mitigating measures recommended by the Communications Security Establishment and addressed critical priorities
 - the CNSC is currently working with Shared Services Canada on the Government of Canada Secret Network
- Enhanced workplace and workforce management practices with the full implementation of the CNSC's **key behavioural competencies**^{xviii} into human resources functions
- Initiated a project to improve how the CNSC interacts with licensees for reporting of nuclear materials
- Implemented the Government of Canada's Policy on Results, with the development of the CNSC's Departmental Results Framework, Program Inventory and Performance Information Profiles, which now form the reporting structure for future Departmental Plans and Departmental Results Reports
- Made progress in the planning phase of a new financial and material management system, to ensure effective configuration with existing CNSC systems
 - project charter and memorandum of understanding (MoU) finalized with Agriculture and Agri-Food Canada, with which the CNSC is collaborating towards full implementation



Figure 4. The CNSC's key behavioural competencies

Budgetary financial resources (dollars)

2017–18 Main Estimates	2017–18 Planned spending	2017–18 Total authorities available for use	2017–18 Actual spending (authorities used)	2017–18 Difference (Actual spending minus Planned spending)
40,870,088	44,090,697	45,450,614	47,109,464	3,018,767

Note: The difference between actual and planned spending is due to several reasons:

- the increased salary costs due to increased FTE utilization
- salary increases for 2017–18 and retroactive salary payments covering 2014–15 to 2016–17, as a result of negotiated salary adjustments
- initial costs incurred for the replacement of the CNSC’s current financial and material management system

Human resources (full-time equivalents)

2017–18 Planned full-time equivalents	2017–18 Actual full-time equivalents	2017–18 Difference (Actual full-time equivalents minus Planned full-time equivalents)
234	269	35

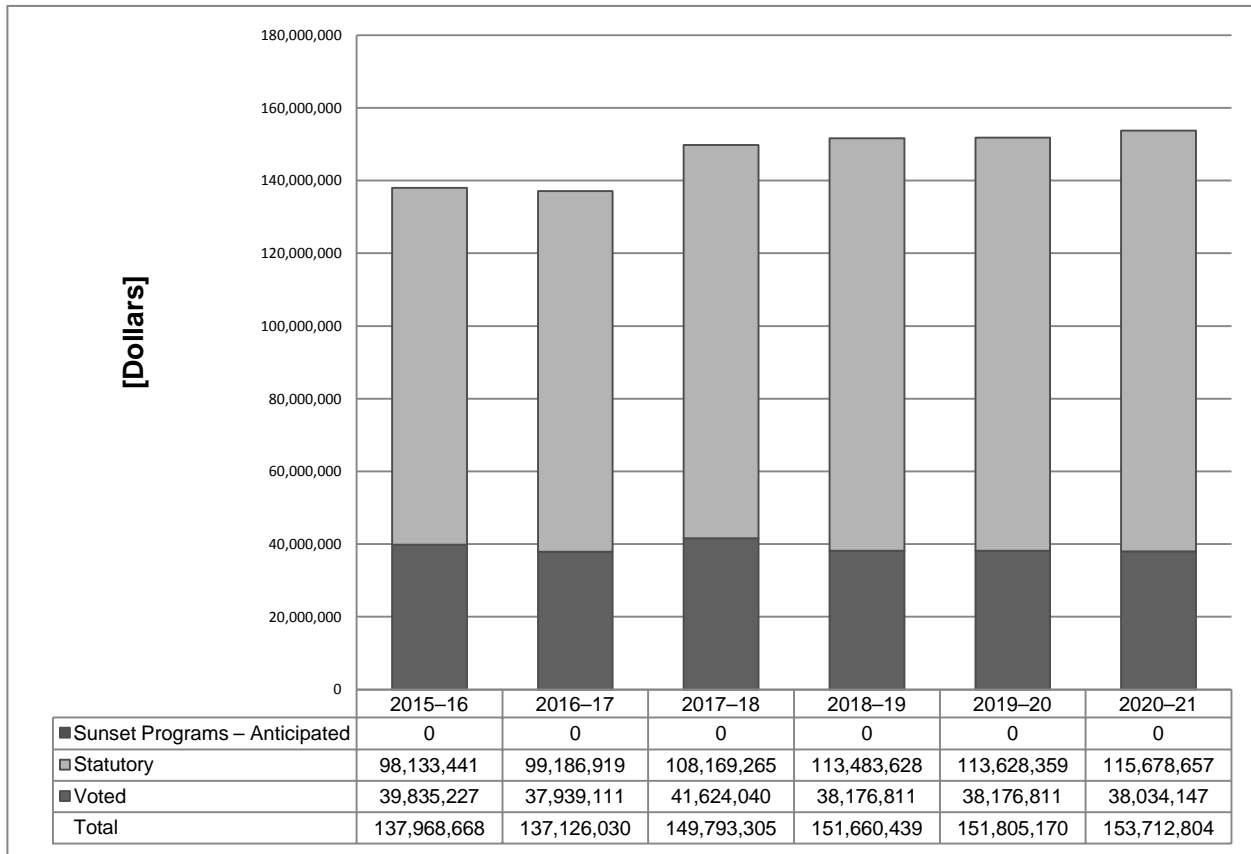
Note: The difference between actual and planned FTEs is primarily due to the following reasons:

- replacement of information management and information technology consultants with indeterminate employees
- the addition of resources to address the replacement of the CNSC’s current financial and material management system
- the addition of resources to address the challenges arising from implementation of the Phoenix pay system

Analysis of trends in spending and human resources

Actual expenditures

Departmental spending trend graph



Budgetary performance summary for Programs and Internal Services (dollars)

Programs and Internal Services	2017–18 Main Estimates	2017–18 Planned spending	2018–19 Planned spending	2019–20 Planned spending	2017–18 Total authorities available for use	2017–18 Actual spending (authorities used)	2016–17 Actual spending (authorities used)	2015–16 Actual spending (authorities used)
Nuclear Fuel Cycle	10,096,285	10,891,883	14,487,287	14,267,181	11,227,829	10,847,005	11,570,635	10,173,578
Nuclear Reactors	39,698,384	42,826,661	47,217,482	48,880,322	44,147,591	46,375,052	41,057,571	40,002,299
Nuclear Substances and Prescribed Equipment	13,824,249	14,913,615	12,446,898	12,898,452	19,496,085	13,452,249	13,395,547	13,930,082
Nuclear Non-Proliferation	5,937,337	6,405,206	6,267,181	6,468,632	6,602,765	4,920,301	5,327,246	5,982,791
Scientific, Technical, Regulatory and Public Information Program	26,494,116	28,581,883	25,500,088	26,314,480	29,265,079	27,089,234	24,375,420	26,696,945
Subtotal	96,050,371	103,619,248	105,918,936	108,829,067	110,739,349	102,683,841	95,726,419	96,785,695
Internal Services	40,870,088	44,090,697	45,741,503	42,976,103	45,450,614	47,109,464	41,399,611	41,182,973
Total	136,920,459	147,709,945	151,660,439	151,805,170	156,189,963	149,793,305	137,126,030	137,968,668

In 2017–18, the CNSC transitioned from its Strategic Outcome and Program Alignment Architecture, which was required under the previous Policy on Management Resources and Results Structures, to a Departmental Results Framework (DRF), which is required under the new Policy on Results. The planned spending for 2018–19 and 2019–20 was prepared as per the DRF, where the programs were consolidated under the core responsibility of Nuclear Regulation.

The financial resources indicated in the table above include the amounts reported for the CNSC's Main Estimates as well as the authorities used for the previous three years, as presented in the Public Accounts of Canada. The planned spending for 2018–19 and 2019–20 were prepared as per the DRF and restated to the Program Alignment Architecture for illustration purposes only.

The CNSC's Main Estimates for fiscal year 2017–18 totalled \$136.9 million, compared to total authorities of \$155.3 million. The \$19.3 million increase is primarily attributable to:

- contributions to employee benefit plans for personnel expenditures related to subsection 21(3) of the NSCA that were not included in the 2017–18 Main Estimates
- funds received from the Treasury Board of Canada Secretariat for negotiated salary adjustments and for the reimbursement of eligible payroll expenses

- an operating budget carry-forward from 2016–17 to 2017–18

The increase in actual spending from \$137.1 million in 2016–17 to \$149.8 million in 2017–18 is primarily due to salary increases for 2017–18 and retroactive salary payments covering 2014–15 to 2016–17, as a result of negotiated salary adjustments. The increase from planned spending of \$147.7 million for 2017–18 to actual spending of \$149.8 million is a result of higher retroactive salary payments than were initially forecasted.

Planned spending is forecasted to increase to \$151.7 million in 2018–19, from actual spending of \$149.8 million in 2017–18 due to increased salary and wages and costs relating to the replacement of the CNSC’s current financial and material management system, partially offset by retroactive salary payments that were made in 2017–18. Planned spending is projected to increase marginally to \$151.8 million in 2019–20, from \$151.7 million in 2018–19 due to cost-of-living increases that are offset by costs to be incurred in 2018–19 for the replacement of the CNSC’s current financial and material management system.

Actual human resources

Human resources summary for Programs and Internal Services
(full-time equivalents)

Programs and Internal Services	2015–16 Actual full-time equivalents	2016–17 Actual full-time equivalents	2017–18 Planned full-time equivalents	2017–18 Actual full-time equivalents	2018–19 Planned full-time equivalents	2019–20 Planned full-time equivalents
Nuclear Fuel Cycle	64	71	68	62	92	87
Nuclear Reactors	257	261	273	278	298	298
Nuclear Substances and Prescribed Equipment	83	85	88	78	84	84
Nuclear Non-Proliferation	38	31	40	29	35	35
Scientific, Technical, Regulatory and Public Information Program	145	128	154	138	130	130
Subtotal	587	576	623	585	639	634
Internal Services	221	247	234	269	295	295
Total	808	823	857	854	934	929

The increase in FTEs over the last three years is primarily attributable to the implementation of the workforce renewal initiative (temporary undertaking). In recognition of its aging and retiring

workforce and projected labour market pressures, the CNSC has implemented programs to protect its core organizational capabilities critical to its mandate. Workforce initiatives include significant new-graduate hiring and continuation of technical co-operative programs as well as the implementation of a knowledge management strategy and continued workforce planning efforts.

The growth within the Internal Services Program is a result of the replacement of the CNSC's current financial and material management system, challenges arising from the implementation of the Phoenix pay system and the replacement of information management and information technology consultants with indeterminate employees.

The increase from 854 actual FTEs in 2017–18 to 934 planned FTEs in 2018–19 is due to anticipated growth in regulatory oversight activities as well as the continued implementation of the workforce renewal initiative, which focuses on the recruitment and development of new graduates to meet the organization's future need for senior regulatory and technical officers.

Expenditures by vote

For information on the CNSC's organizational voted and statutory expenditures, consult the [Public Accounts of Canada 2017–2018](#).^{xix}

Government of Canada spending and activities

Information on the alignment of the CNSC's spending with the Government of Canada's spending and activities is available in the [GC InfoBase](#).^{vii}

Financial statements and financial statements highlights

Financial statements

The CNSC's financial statements for the year ended March 31, 2018, are available on the [departmental website](#).^{xx}

Financial statements highlights

Condensed Statement of Operations for the year ended March 31, 2018 (dollars)

Financial information	2017–18 Planned results	2017–18 Actual results	2016–17 Actual results	Difference (2017–18 Actual results minus 2017–18 Planned results)	Difference (2017–18 Actual results minus 2016–17 Actual results)
Total expenses	162,414,000	163,143,631	152,999,737	729,631	10,143,894
Total revenues	115,199,000	113,322,728	108,064,648	(1,876,272)	5,258,080
Net cost of operations before government funding and transfers	47,215,000	49,820,903	44,935,089	2,605,903	4,885,814

The actual total revenues of \$113.3 million were 1.6% or \$1.9 million lower than planned revenues of \$115.2 million, as a result of lower-than-forecasted revenues collected for special projects due to delays in vendor design reviews and lower license cost recovery fees arising from lower than planned expenses. The actual total expenses of \$163.1 million were 0.4% or \$0.7 million more than planned expenses of \$162.4 million.

The CNSC's total expenses increased by 6.6% or \$10.1 million, while revenues increased by 4.9% or \$5.3 million from 2016–17 to 2017–18. The increase in expenses was primarily due to an increase in salaries and employee benefits as a result of increases in salaries and the number of full-time equivalents. It is also attributable to an increase in amortization expenses as a result of developing and purchasing informatics software and implementing leasehold improvements. The increase in revenue was attributable to increases in regulatory oversight activity as well as higher formula fees for nuclear substances used for commercial and industrial purposes as the CNSC continues to phase in increases to fully recover the cost for these activities. The increase in revenues also reflects increased special projects related to vendor design reviews.

Condensed Statement of Financial Position as of March 31, 2018 (dollars)

Financial information	2017–18	2016–17	Difference (2017–18 minus 2016–17)
Total net liabilities	42,516,893	49,499,602	(6,982,709)
Total net financial assets	27,464,509	35,596,162	(8,131,653)
Departmental net debt	15,052,384	13,903,440	1,148,944
Total non-financial assets	13,613,468	13,720,141	(106,673)
Departmental net financial position	(1,438,916)	(183,299)	(1,255,617)

The decrease in the CNSC's net liabilities is mainly due to a decrease in the amounts payable to licensees due to the excess of fees charged and collected over the actual fees earned at year-end and a decrease in the liability for projected collective agreements retroactive payments, which were largely paid in 2017–18.

The decrease in the CNSC's net financial assets is primarily a result of a decrease in the amounts due from the Consolidated Revenue Fund, which is related to the decrease in accounts payable at year end.

The overall difference between the Total net liabilities and Total net financial assets are then reflected in the Departmental net debt.

Supplementary information

Corporate information

Organizational profile

Appropriate minister: Amarjeet Sohi

Institutional head: Rumina Velshi

Ministerial portfolio: [Natural Resources Canada](#)^{xxi}

Enabling instrument: [Nuclear Safety and Control Act](#)^{xxii}

Year of incorporation/commencement: 2000

Other: The CNSC’s headquarters are located in Ottawa, Ontario. The CNSC maintains 11 regional offices, both at major facilities and elsewhere, in order to conduct inspections of licensees across the country on a regular basis.

Reporting framework

The CNSC’s Strategic Outcome and Program Alignment Architecture of record for 2017–18 are shown below.

1. Strategic Outcome: Safe and secure nuclear installations and processes used solely for peaceful purposes and an informed public on the effectiveness of Canada’s nuclear regulatory regime.

1.1 Program: Nuclear Fuel Cycle

1.1.1 Sub-Program: Uranium Mines and Mills

1.1.2 Sub-Program: Nuclear Processing Facilities

1.1.3 Sub-Program: Nuclear Waste Management Facilities

1.2 Program: Nuclear Reactors

1.2.1 Sub-Program: Nuclear Power Plants

1.2.2 Sub-Program: Research Reactors

1.3 Program: Nuclear Substances and Prescribed Equipment

1.3.1 Sub-Program: Medical Sector

1.3.2 Sub-Program: Industrial Sector

1.3.3 Sub-Program: Commercial Sector

1.3.4 Sub-Program: Academic and Research Sector

1.3.5 Sub-Program: Packaging and Transport

1.3.6 Sub-Program: Dosimetry Services

1.4 Program: Nuclear Non-Proliferation

1.4.1 Sub-Program: Domestic and International Arrangements

1.4.2 Sub-Program: Safeguards

1.4.3 Sub-Program: Import and Export

1.5 Program: Scientific, Technical, Regulatory and Public Information

1.5.1 Sub-Program: Regulatory Framework

1.5.2 Sub-Program: Scientific and Technical Information

1.5.3 Sub-Program: Research

1.5.4 Sub-Program: Public Engagement and Outreach

Internal Services

Supporting information on lower-level programs

Supporting information on lower-level programs is available on the [GC InfoBase](#).^{vii}

Supplementary information tables

The following supplementary information tables are available on the [CNSC's website](#).^{xxiii}

- ▶ Evaluations
- ▶ Fees
- ▶ Internal audits
- ▶ Response to parliamentary committees and external audits

Federal tax expenditures

The tax system can be used to achieve public policy objectives through the application of special measures such as low tax rates, exemptions, deductions, deferrals and credits. The Department of Finance Canada publishes cost estimates and projections for these measures each year in the [Report on Federal Tax Expenditures](#).^{xxiv} This report also provides detailed background information on tax expenditures, including descriptions, objectives, historical information and references to related federal spending programs. The tax measures presented in this report are the responsibility of the Minister of Finance.

Organizational contact information

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E-mail: cpsc.info.ccsn@canada.ca

Website: nuclearsafety.gc.ca^{xxv}

Appendix: definitions

appropriation (crédit)

Any authority of Parliament to pay money out of the Consolidated Revenue Fund.

budgetary expenditures (dépenses budgétaires)

Operating and capital expenditures; transfer payments to other levels of government, organizations or individuals; and payments to Crown corporations.

Departmental Plan (plan ministériel)

A report on the plans and expected performance of an appropriated department over a three-year period. Departmental Plans are tabled in Parliament each spring.

Departmental Results Report (rapport sur les résultats ministériels)

A report on an appropriated department's actual accomplishments against the plans, priorities and expected results set out in the corresponding Departmental Plan.

evaluation (évaluation)

In the Government of Canada, the systematic and neutral collection and analysis of evidence to judge merit, worth or value. Evaluation informs decision making, improvements, innovation and accountability. Evaluations typically focus on programs, policies and priorities and examine questions related to relevance, effectiveness and efficiency. Depending on user needs, however, evaluations can also examine other units, themes and issues, including alternatives to existing interventions. Evaluations generally employ social science research methods.

experimentation (expérimentation)

Activities that seek to explore, test and compare the effects and impacts of policies, interventions and approaches, to inform evidence-based decision-making, by learning what works and what does not.

full-time equivalent (équivalent temps plein)

A measure of the extent to which an employee represents a full person-year charge against a departmental budget. Full-time equivalents are calculated as a ratio of assigned hours of work to scheduled hours of work. Scheduled hours of work are set out in collective agreements.

gender-based analysis plus (GBA+) (analyse comparative entre les sexes plus [ACS+])

An analytical approach used to assess how diverse groups of women, men and gender-diverse people may experience policies, programs and initiatives. The “plus” in GBA+ acknowledges that the gender-based analysis goes beyond biological (sex) and socio-cultural (gender) differences. We all have multiple identity factors that intersect to make us who we are; GBA+ considers many other identity factors, such as race, ethnicity, religion, age, and mental or

physical disability. Examples of GBA+ processes include using data disaggregated by sex, gender and other intersecting identity factors in performance analysis, and identifying any impacts of the program on diverse groups of people, with a view to adjusting these initiatives to make them more inclusive.

government-wide priorities (priorités pangouvernementales)

For the purpose of the 2017–18 Departmental Results Report, those high-level themes outlining the government’s agenda in the 2015 Speech from the Throne, namely: Growth for the Middle Class; Open and Transparent Government; A Clean Environment and a Strong Economy; Diversity is Canada’s Strength; and Security and Opportunity.

horizontal initiative (initiative horizontale)

An initiative where two or more departments are given funding to pursue a shared outcome, often linked to a government priority.

Management, Resources and Results Structure (structure de gestion, des ressources et des résultats)

A comprehensive framework that consists of an organization’s inventory of programs, resources, results, performance indicators and governance information. Programs and results are depicted in their hierarchical relationship to each other and to the Strategic Outcome(s) to which they contribute. The Management, Resources and Results Structure is developed from the Program Alignment Architecture.

non-budgetary expenditures (dépenses non budgétaires)

Net outlays and receipts related to loans, investments and advances, which change the composition of the financial assets of the Government of Canada.

performance (rendement)

What an organization did with its resources to achieve its results, how well those results compare to what the organization intended to achieve, and how well lessons learned have been identified.

performance indicator (indicateur de rendement)

A qualitative or quantitative means of measuring an output or outcome, with the intention of gauging the performance of an organization, program, policy or initiative respecting expected results.

performance reporting (production de rapports sur le rendement)

The process of communicating evidence-based performance information. Performance reporting supports decision making, accountability and transparency.

plan (plan)

The articulation of strategic choices, which provides information on how an organization intends to achieve its priorities and associated results. Generally a plan will explain the logic behind the strategies chosen and tend to focus on actions that lead up to the expected result.

planned spending (dépenses prévues)

For Departmental Plans and Departmental Results Reports, planned spending refers to those amounts that receive Treasury Board approval by February 1. Therefore, planned spending may include amounts incremental to planned expenditures presented in the Main Estimates.

A department is expected to be aware of the authorities that it has sought and received. The determination of planned spending is a departmental responsibility, and departments must be able to defend the expenditure and accrual numbers presented in their Departmental Plans and Departmental Results Reports.

priority (priorité)

A plan or project that an organization has chosen to focus and report on during the planning period. Priorities represent the things that are most important or what must be done first to support the achievement of the desired Strategic Outcome(s) or Departmental Results.

program (programme)

A group of related resource inputs and activities that are managed to meet specific needs and to achieve intended results and that are treated as a budgetary unit.

Program Alignment Architecture (architecture d'alignement des programmes)

A structured inventory of an organization's programs depicting the hierarchical relationship between programs and the Strategic Outcome(s) to which they contribute.

result (résultat)

An external consequence attributed, in part, to an organization, policy, program or initiative. Results are not within the control of a single organization, policy, program or initiative; instead they are within the area of the organization's influence.

statutory expenditures (dépenses législatives)

Expenditures that Parliament has approved through legislation other than appropriation acts. The legislation sets out the purpose of the expenditures and the terms and conditions under which they may be made.

Strategic Outcome (résultat stratégique)

A long-term and enduring benefit to Canadians that is linked to the organization's mandate, vision and core functions.

sunset program (programme temporisé)

A time-limited program that does not have an ongoing funding and policy authority. When the program is set to expire, a decision must be made whether to continue the program. In the case of a renewal, the decision specifies the scope, funding level and duration.

target (cible)

A measurable performance or success level that an organization, program or initiative plans to achieve within a specified time period. Targets can be either quantitative or qualitative.

voted expenditures (dépenses votées)

Expenditures that Parliament approves annually through an Appropriation Act. The Vote wording becomes the governing conditions under which these expenditures may be made.

Endnotes

- i. Nuclear Safety and Control Act, <http://laws-lois.justice.gc.ca/eng/acts/N-28.3/>
- ii. Financial Administration Act, <http://laws-lois.justice.gc.ca/eng/acts/F-11/>
- iii. International Atomic Energy Agency, “Code of Conduct,” <http://www-ns.iaea.org/tech-areas/radiation-safety/code-of-conduct.asp>
- iv. Canada Border Services Agency, “Single Window Initiative,” <http://www.cbsa-asfc.gc.ca/prog/sw-gu/menu-eng.html>
- v. Canadian Nuclear Safety Commission, “Research report summaries 2017–2018,” <http://www.nuclearsafety.gc.ca/eng/resources/research/research-and-support-program/research-report-abstracts/research-report-summaries-2017-2018.cfm>
- vi. Canadian Nuclear Safety Commission, “REGDOC-2.12.3, Security of Nuclear Substances: Sealed Sources,” <http://www.nuclearsafety.gc.ca/eng/acts-and-regulations/regulatory-documents/published/html/regdoc2-12-3/index.cfm>
- vii. GC InfoBase, <https://www.tbs-sct.gc.ca/ems-sgd/edb-bdd/index-eng.html#start>
- viii. Canadian Nuclear Safety Commission, “REGDOC-2.11.1, Volume II: Assessing the Long-Term Safety of Radioactive Waste Management,” <http://nuclearsafety.gc.ca/eng/acts-and-regulations/regulatory-documents/published/html/regdoc2-11-1-v2/index.cfm>
- ix. Canadian Nuclear Safety Commission, “Emergency preparedness and the CNSC – Exercise Unified Control,” <http://nuclearsafety.gc.ca/eng/resources/educational-resources/feature-articles/ExUC-exercise-unified-control.cfm>
- x. Canadian Nuclear Safety Commission, “Pre-Project Design Review of Terrestrial Energy Inc. Integral Molten Salt Reactor-400,” http://www.nuclearsafety.gc.ca/eng/pdfs/Pre-Project_Design_Review/Terrestrial-Energy-Pre-Project-Design-Review-Exec-Summary-eng.pdf
- xi. Canadian Nuclear Safety Commission, “Pre-Licensing Vendor Design Review,” <http://www.nuclearsafety.gc.ca/eng/reactors/power-plants/pre-licensing-vendor-design-review/index.cfm>
- xii. Canada Border Services Agency, “Single Window Initiative,” <http://www.cbsa-asfc.gc.ca/prog/sw-gu/menu-eng.html>
- xiii. Canadian Nuclear Safety Commission, “REGDOC-2.13.1, Safeguards and Nuclear Material Accountancy,” <http://nuclearsafety.gc.ca/eng/acts-and-regulations/regulatory-documents/published/html/regdoc2-13-1/index.cfm>
- xiv. Canadian Nuclear Safety Commission, “REGDOC-2.9.1, Environmental Protection: Environmental Principles, Assessments and Protection Measures, version 1.1,” <http://www.nuclearsafety.gc.ca/eng/acts-and-regulations/regulatory-documents/published/html/regdoc2-9-1-new-v1.1/index.cfm>
- xv. Canadian Nuclear Safety Commission, “REGDOC-2.2.4, Fitness for Duty: Volume II : Managing Alcohol and Drug Use, version 2,” <http://www.nuclearsafety.gc.ca/eng/acts-and-regulations/regulatory-documents/published/html/regdoc2-2-4-v2-version2/index.cfm>
- xvi. Canadian Nuclear Safety Commission, “The CNSC’s Regulatory Framework Plan,” <http://www.nuclearsafety.gc.ca/eng/acts-and-regulations/regulatory-framework/regulatory-framework-plan.cfm>
- xvii. Canadian Nuclear Safety Commission, “The CNSC’s Regulatory Framework Plan,” <http://www.nuclearsafety.gc.ca/eng/acts-and-regulations/regulatory-framework/regulatory-framework-plan.cfm>
- xviii. Canadian Nuclear Safety Commission, “CNSC key behavioural competencies,” <http://nuclearsafety.gc.ca/eng/about-us/careers-at-cnsc/key-behavioral-competencies.cfm>
- xix. Public Accounts of Canada 2017–2018, <http://www.tpsgc-pwgsc.gc.ca/recgen/cpc-pac/index-eng.html>
- xx. Canadian Nuclear Safety Commission, “Annual reports,” <http://www.nuclearsafety.gc.ca/eng/resources/publications/reports/annual-reports/index.cfm>
- xxi. Natural Resources Canada, <http://www.nrcan.gc.ca/home>
- xxii. Nuclear Safety and Control Act, <http://laws-lois.justice.gc.ca/eng/acts/N-28.3/>
- xxiii. Canadian Nuclear Safety Commission, <http://nuclearsafety.gc.ca/eng/resources/publications/reports/departmental/index.cfm>
- xxiv. Report on Federal Tax Expenditures, <http://www.fin.gc.ca/purl/taxexp-eng.asp>
- xxv. Canadian Nuclear Safety Commission, <http://www.nuclearsafety.gc.ca/eng/>