



Canadian Nuclear
Safety Commission

Commission canadienne
de sûreté nucléaire

CNSC
Annual Report
2022–23

Annual Report 2022–23

2022–23 ANNUAL REPORT **CANADIAN NUCLEAR** **SAFETY COMMISSION**

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MESSAGE FROM THE PRESIDENT

I am pleased to present the 2022–23 Annual Report of the Canadian Nuclear Safety Commission (CNSC), outlining to Parliamentarians and Canadians how we protected the environment and the health, safety and security of persons, and met our international obligations. It was another year of exemplary performance for Canada’s nuclear facilities in the areas of safety, environmental protection, security and the fulfillment of international obligations.

This report demonstrates how we ensure not only robust regulatory oversight, but also enable innovation in Canada’s nuclear sector.

As I reach the end of my 5-year term as President and CEO of the CNSC in 2023, I feel immensely proud of the vital work we have undertaken in our role as Canada’s nuclear regulator. Strengthening our cooperation with international partners, building trust with Indigenous Nations and communities, modernizing our ways of working, and establishing a more inclusive and agile workforce – our achievements this year clearly built on a proven legacy of regulatory excellence and global leadership to support nuclear safety and security at home and abroad.

The CNSC maintained regulatory oversight of [Bruce Power’s¹](#) Unit 6 major component replacement (MCR), where return-to-service activities continue, and began Unit 3 MCR activities, such as defueling and isolating the reactor and removing old components. In addition, the first regulatory hold point for the [Darlington Nuclear Generating Station’s²](#) Unit 3 was lifted. It is progressing with lead-out activities, with 3 hold points remaining. Unit 1 refurbishment began in February 2022. It is nearing the end of the removal phase. The refurbishment of Darlington Units 1 and 3 is progressing according to schedule, with regular compliance inspections being performed as planned.

This past fiscal year, we undertook 2 key licensing activities for medical isotope–producing initiatives. The first was the commissioning of molybdenum-99 radionuclide production at Ontario Power Generation’s (OPG’s) Darlington Nuclear Generating Station. The second was the commissioning of the installed lutetium-177 isotope production system at the Bruce Nuclear Generating Station.

The positive findings from the Office of the Auditor General’s (OAG’s) 2022–23 audit of our management of low- and intermediate-level radioactive waste are an important validation of how we fulfill our mandate. OAG audits also provide valuable feedback on how we can improve in our endeavours. We are addressing the OAG’s recommendations in the spirit of continuous improvement.

Our international leadership and global nuclear influence remained an important priority in 2022–23. At the Canadian Nuclear Association’s 2023 conference, where the theme was *Canada’s Global Leadership*, I provided remarks on how the CNSC, as a strong and proactive regulator, is not an impediment to innovation, but rather, one of Canada’s key assets. Furthermore, Canada currently chairs important international nuclear bodies, including the International Nuclear Regulators’ Association and the International Atomic Energy Agency’s Commission on Safety Standards, where we share expertise, address emerging challenges and pursue opportunities for collaboration. Our position of influence is essential to improving safety not just here at home, but around the world.



In addition, we continue to work towards the international standardization of small modular reactor (SMR) designs and the harmonization of regulatory practices. To this end, we renewed our memoranda of understanding with the United States Nuclear Regulatory Commission and with the United Kingdom's Office for Nuclear Regulation, and signed a new memorandum of cooperation with Poland's National Atomic Energy Agency.

We continued to further our readiness for SMRs, especially through the funding provided in Budget 2022, [A Plan to Grow Our Economy and Make Life More Affordable](#)³. We also received our first application for a licence to construct in 30 years, for OPG's Darlington New Nuclear Project, which will use the BWRX-300 SMR technology.

While our international leadership and our regulatory readiness and oversight are key to our success, how we engage with the public and Indigenous peoples is vital to our mandate as a trusted regulator. As part of that engagement, we created the Indigenous and Stakeholder Capacity Fund using funding received through the Impact Assessment Renewal Initiative.

We also co-hosted Canada's first Nuclear Energy Agency (NEA) International Mentoring Workshop. I had the pleasure of co-chairing the workshop along with Emily Whetung-MacInnes, Chief Emerita of Curve Lake First Nation, and Yeonhee Hah, Vice President for Global Activities with the Korea Institute of Nuclear Safety. This immersive workshop was the first of its kind in Canada, and what a success it was! A total of 39 talented Grade 9 Indigenous girls attended the workshop at Trent University. Mentors wove Indigenous knowledge with Western science to engage participants and inspire them to consider STEM-related careers.

Safety culture remained at the forefront of the CNSC's focus this past year, with Canada hosting the [Country-Specific Safety Culture Forum](#)⁴ with the NEA and the World Association of Nuclear Operators. The purpose of this forum was to bring together Canadian nuclear stakeholders and international experts to address specific national characteristics and their impact on day-to-day operations and safety culture. The report is slated to be published in summer 2023.

I am very pleased to say that, during this last fiscal year, we created the Transformation Management Office (TMO) to drive agility, adaptability and innovation in all we do, working with internal partners on medium- and long-term planning. The TMO will provide oversight, support and integrated information for decision making on projects that impact core program delivery and key organizational priorities. This will support our vision to be a world-class regulator.

I invite you to read the CNSC's 2022–23 Annual Report to learn more about our strategic and operational achievements from the past year. I would like to recognize CNSC staff once again for their hard work and for their dedication to protecting the environment and the health, safety and security of Canadians.

Rumina Velshi

RESULTS AT A GLANCE

THE CNSC'S 4 STRATEGIC PRIORITIES



modern

TO HAVE A **MODERN** APPROACH TO NUCLEAR REGULATION

- The CNSC is committed to a modern approach to nuclear regulation using science- and evidence-based, risk-informed, and technically sound regulatory practices and a regulatory framework that consider scientific uncertainties and evolving expectations.



trusted

TO BE A **TRUSTED** REGULATOR

- The CNSC continuously strives to be a trusted regulator, recognized as independent, open and transparent, and a credible source of scientific, technical and regulatory information.



global

TO MAINTAIN OUR **GLOBAL** NUCLEAR INFLUENCE

- The CNSC will continue to leverage and influence global nuclear efforts, relevant to Canadian interests and activities, to enhance international nuclear safety, security and non-proliferation.



agile

TO BE AN **AGILE** ORGANIZATION

- The CNSC will take the necessary steps to ensure that it is an agile organization – one that is flexible and inclusive, with an empowered and equipped workforce able to quickly adapt to an evolving operating environment.



RESULTS AT A GLANCE

The commitment to the CNSC’s core responsibility of nuclear regulation, the fulfillment of the organization’s mandate, and the achievement of its departmental results for 2022–23 and beyond are delivered through the CNSC’s [5 programs](#). The programs include the Nuclear Fuel Cycle Program, Nuclear Reactors Program, Nuclear Substances and Prescribed Equipment Program, Nuclear Non-Proliferation Program, and Scientific, Regulatory and Public Information Program (plus Internal Services) and are guided by 4 strategic priorities.



The CNSC is committed to a **modern** approach to nuclear regulation using science- and evidence-based, risk-informed, and technically sound regulatory practices that consider scientific uncertainties and evolving expectations.

In 2022–23, the CNSC:

- continued to play a key role in [Canada’s small modular reactor \(SMR\) action plan](#),⁵ especially through funding under Budget 2022 ([A Plan to Grow Our Economy and Make Life More Affordable](#)³); the CNSC has used this funding to further its readiness for SMRs through:
 - focused hiring to increase its capacity and capability
 - launching the SMR Readiness project internal initiatives aimed at increasing regulatory predictability
 - external initiatives such as the SMR Leadership Table and the International Atomic Energy Agency (IAEA) Nuclear Harmonization and Standardization Initiative
 - continued international collaboration, cooperation and harmonization with other nuclear regulators
 - a partnership with the Natural Sciences and Engineering Research Council of Canada (NSERC) to launch the CNSC–NSERC SMR Grant Initiative
- completed a combined phases 1 and 2 [vendor design review \(VDR\)](#)⁶ of [GE Hitachi Nuclear Energy’s BWRX-300 boiling water reactor](#)⁷
 - during this 3-year review, the CNSC examined over 200 documents, attended technical presentations, analyzed and held discussions on 19 focus areas
 - the CNSC also continued the Phase 2 VDR of Terrestrial Energy Inc’s IMSR400, X-energy’s Xe-100 reactor, and ARC Clean Technology’s ARC-100 reactor
- led Canada’s participation in the Seventh Review Meeting of the Contracting Parties to the [Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management \(Joint Convention\)](#)⁸
 - the Joint Convention, to which Canada is a contracting party, is an international agreement governing all aspects of the safety of spent fuel and radioactive waste management
 - the CNSC is expected to lead Canada’s participation in the next Joint Convention review meeting in 2025
- completed its review of the draft of Canada’s Policy for Radioactive Waste Management and Decommissioning; Natural Resources Canada (NRCan) published the [Policy](#)⁹ in March 2023
- conducted a self-assessment to gain a better understanding of how its inspection process is implemented across the organization

- the assessment identified opportunities for improvement, and a recommendation was made that inspection practices be standardized across all CNSC directorates that use this process
- the assessment also confirmed the effectiveness and benefits of the CNSC’s current approach to conducting onsite, remote and hybrid inspection activities
 - specifically, this flexible approach allows for the safe conduct of inspection activities even in situations where site access may be limited or restricted; it is also beneficial when direct onsite observations are not necessary
 - this approach also offers more flexibility to inspection team members in terms of how they participate
- a management action plan was developed to address recommendations arising from the assessment; actions are already underway and are expected to be completed by 2024–25

Innovation/Experimentation

CNSC staff continue to explore innovative technologies. For example, in 2022–23, staff engaged with the IAEA and participated in the Transport Safety Standards Committee (TRANSSC) Technical Experts Group to obtain the latest information on transportable nuclear power plants (TNPPs). The CNSC also participated in the IAEA consultancy meeting that is expected to produce a technical report on design safety and security considerations for TNPPs.

In addition to engagement with other competent authorities through the IAEA, the CNSC is working with the U.S. Nuclear Regulatory Commission (U.S. NRC) through a memorandum of cooperation to consider a joint review of a transportable micro reactor design. The CNSC has also been in discussions with private industry stakeholders who are in the process of developing various TNPP technologies that can be transported **by road and by sea**.

In addition, as part of its commitment to innovation, the CNSC developed the Innovation and Research Hub to coordinate and explore new technologies that could have an impact on the regulation of nuclear in Canada. In 2022–23, the Hub continued to explore new technologies and began working on projects such as:

- regulatory readiness for artificial intelligence
- virtual reality / digital twin nuclear power plants for inspector training
- the ability of drones to support compliance verification activities



The CNSC continuously strives to be a **trusted** regulator, recognized as independent, open and transparent, and as a credible source of scientific, technical and regulatory information.

In 2022–23, the CNSC:

- continued to make progress on implementing its Indigenous Reconciliation Strategy action items, including working towards the hiring of an Indigenous advisor, who is an Indigenous leader, to help advise senior management on key issues across the CNSC; other activities that took place to build and strengthen relationships with Indigenous Nations and communities included:

- signing terms of reference for agreements with the Mississaugas of Scugog Island First Nation, the Athabasca Dene First Nations represented by the Ya’thi Néné Lands and Resources Office, and the Algonquins of Pikwakanagan First Nation
- updating the CNSC’s Indigenous Knowledge Policy Framework
- establishing the CNSC’s new Indigenous and Stakeholder Capacity Fund
- enhancing and modernizing the CNSC’s Participant Funding Program
- contributing to the development of the Government of Canada’s United Nations Declaration Act Action Plan
- actively participated in the Nuclear Energy Agency (NEA) Working Group on Public Communication of Nuclear Regulatory Organisations
 - the CNSC co-led the development of an NEA green booklet – *Characteristics of a Trusted Regulator* – which is now close to publication, expected in fall 2023
 - several regulators, including the CNSC, provided case studies to supplement the booklet and further illustrate key trust-building characteristics for the benefit of other regulators

Trust strategy

Trust remains an imperative commitment for the CNSC. The CNSC made strides under the 3 pillars of its trust-building strategy in 2022–23:

- Under the “transforming stakeholder engagement” pillar, the CNSC:
 - conducted research, benchmarking and analysis, and developed a stakeholder engagement program proposal for the organization; the purpose of the program is to develop and maintain long-term relationships with key stakeholders to gain various perspectives, input and an understanding of values, all to be taken into consideration throughout the lifecycle of a nuclear project
- Under the “demonstrating its independence” pillar, the CNSC:
 - began drafting a policy paper relating to whistleblower protection in Canada
 - identified ways in which CNSC–industry interactions could be improved, and is working to expand its Conflict of Interest Policy to encompass acceptable behaviours that will help prevent any real, potential or perceived conflicts of interest
 - continued to explore approaches to the proactive sharing of regulatory information
- Under the “modernizing Commission proceedings” pillar, the CNSC:
 - decided to extend the timeline for filing proceeding submissions for intervenors from 30 days to 60 days
 - benchmarked against other administrative tribunals to gather information about the feasibility of pre-hearing technical conferences and about online filings and the efficient collation of proceeding documents



The CNSC leverages and influences **global** nuclear efforts, relevant to Canadian interests and activities, to enhance international nuclear safety, security and non-proliferation.

In 2022–23, the CNSC:

- provided technical support for President Velshi and Executive Vice-President Ramzi Jammal at the Commission on Safety Standards (CSS) meetings, with staff promoting the CSS chairmanship and its activities at international fora

- co-sponsored the [International Commission on Radiological Protection \(ICRP\) 2021+1 Symposium¹⁰](#) with the Canadian Radiation Protection Association in November, where the organization connected with experts from around the world and explored the future of radiological protection
 - the overarching theme of ICRP2021+1 was Radiological Protection – The Next Generation, reflecting the need to review and refine the system of radiological protection over the coming decade to ensure that it remains fit for purpose for the next generation
- provided leadership in SMR readiness by hosting technical information exchanges with the Dutch and Czech nuclear regulators and with Australian delegates, and presented on CNSC regulatory readiness at multiple events, such as:
 - a ministerial conference in Washington, D.C.
 - a tech summit in Wyoming
 - the IAEA International Conference on Topical Issues in Nuclear Installation Safety 2022 in Vienna
 - the IAEA International Conference on Nuclear Law
 - the International Nuclear Law Association Inter Jura Congress in Washington, D.C.
 - the Generation 4 and Small Reactors conference in Toronto
 - the NetZero Conference and Expo in Calgary
 - the 7th World Nuclear Industry Congress in the UK
 - the North American Advanced Reactor Codes & Standards Workshop in Washington, D.C.
- continued to influence and hold leadership positions within multilateral organizations; for example:
 - the CNSC President's role as Chair of the International Nuclear Regulators' Association
 - the CNSC Executive Vice-President's chairmanship of the IAEA's Code of Conduct activities and leadership in the Regulatory Cooperation Forum
 - the election of the CNSC Vice-President, Legal and Commission Affairs, to the Board of Management of the International Nuclear Law Association
 - international events such as the IAEA General Conference, the U.S. NRC Regulatory Information Conference, and the Western European Nuclear Regulator's Association

CNSC's Women in Science, Technology, Engineering and Math initiative

The CNSC continued to further its impact under the Women in Science, Technology, Engineering and Math (WISTEM) initiative in 2022–23. Some activities conducted under this initiative include:

- operating as scientific secretary to a major gender equity initiative, led by President Velshi, called Driving Advancement of Women in Nuclear (DAWN)
 - DAWN supports various activities that focus on improving the gender balance by offering workshops to address the confidence gap, developing male allies in the nuclear industry, and focusing on encouraging more girls and women to pursue an education in STEM
- contributing to the International Gender Champions Impact Group on Gender Equality in Nuclear Regulatory Agencies; highlights include:
 - the hosting of 2 Impact Group meetings by the CNSC

- the establishment of a collaborative project between the Impact Group and the NEA to measure progress in the regulatory sector and to inform future NEA gender surveys
- launching a coaching program pilot at the CNSC
- advocating for gender equity through the active engagement of President Velshi and CNSC staff in over 30 events

These efforts under the WISTEM initiative serve to support the Government of Canada’s contribution to the United Nations’ [2030 Agenda for Sustainable Development](#),¹¹ specifically Goal 5 – Gender Equality, and Goal 10 – Reduced Inequalities.



The CNSC continues to make strides in ensuring that it is an **agile** organization – one that is flexible and inclusive, with an empowered and equipped workforce able to quickly adapt to an evolving operating environment.

In 2022–23, the CNSC:

- established the Transformation Management Office (TMO) to oversee the development, implementation and progress of major transformation initiatives at the CNSC over the next 3 years, including those highlighted through the internal strategic review
 - the TMO will provide oversight, support and integrated information for decision making on projects that impact core program delivery and key organizational priorities
- developed the [CNSC Accessibility Plan 2022–25](#)¹² to respond to the [requirements](#)¹³ of the [Accessible Canada Act](#).¹⁴
 - the plan was reviewed by the CNSC’s Accessibility Plan Working Group, in consultation with people living with disabilities and with their allies, to identify barriers to accessibility within the work environment
- developed the Working Alone Directive in response to a changing workplace and the fact that more employees are now working alone with the transition to a flexible hybrid work model
 - the directive was approved in November and fulfills the CNSC’s duty as an employer under the *Canada Labour Code*, as well as the requirements of the *Canada Occupational Health and Safety Regulations’ Hazard Prevention Program* and of the *Work Place Harassment and Violence Prevention Regulations*
 - the directive also supports the CNSC’s overall safety culture and its objective to create a safe, healthy and inclusive workplace for all employees
- launched a pilot career progression program for regional inspectors
 - the objective of this pilot is to provide advancement opportunities and give managers a flexible way to manage their workforce
 - work is already underway to expand the pilot to other areas within the organization

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

RESULTS: WHAT WE ACHIEVED

CORE RESPONSIBILITY: NUCLEAR REGULATION

THE CNSC'S DEPARTMENTAL RESULTS

1

The environment is protected from releases from nuclear facilities and activities.

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2

Canadians are protected from radiation resulting from nuclear facilities and activities.

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3

Nuclear material and substances, facilities and activities are secure and used for peaceful purposes.

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4

Canadians, including Indigenous peoples, have meaningful information about, and the opportunity to participate in, the nuclear regulatory process.

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RESULTS: WHAT WE ACHIEVED

Nuclear regulation



The CNSC regulates the development, production and use of nuclear energy and substances to protect the health, safety, security of persons and the environment; implements Canada’s international commitments on the peaceful use of nuclear energy; and disseminates objective scientific and regulatory information to members of the public. The CNSC maintains a regulatory framework and conducts licensing (including environmental protection reviews), compliance verification and enforcement. The CNSC is committed to building and maintaining the confidence of the public and Indigenous peoples through transparent, open and inclusive regulatory processes.

DEPARTMENTAL RESULT 1 & 2

1. The environment is protected from releases from nuclear facilities and activities.
2. Canadians are protected from radiation resulting from nuclear facilities and activities

For the CNSC to achieve its planned results, risks must be identified, monitored and controlled across all nuclear facilities and activities by CNSC inspectors, who conduct compliance and licensing activities for nearly 1,700 licensees across various sectors.

To ensure that the environment is protected from radiological and hazardous releases from nuclear facilities and activities, and to ensure that Canadians are protected from radiation resulting from nuclear facilities and activities, in 2022–23, the CNSC:

- continued the rigorous regulatory oversight in relation to the 2021 discovery of elevated hydrogen levels in pressure tubes. The CNSC’s decisive actions ensure that no operations will continue if the limits established under the *Nuclear Safety and Control Act* and associated regulations to protect the public and the environment are exceeded. During a November 2022 public meeting, the Commission was provided with updates from licensees and CNSC staff regarding research, predictive modelling, evaluation tools and regulatory oversight. The meeting also gave interested members of the public the opportunity to provide feedback to the Commission. CNSC staff continue to monitor industry progress and are preparing an update for a public Commission meeting in the fall
- maintained regulatory oversight of [Bruce Power’s¹ Unit 6](#) major component replacement (MCR), where return-to-service activities continue, and began Unit 3 MCR activities, such as defuelling and isolating the reactor and removing old components
- lifted the first regulatory hold point for the [Darlington Nuclear Generating Station’s² Unit 3](#) and is progressing with lead-out activities, with 3 hold points remaining
 - Unit 1 refurbishment began in February 2022 and is nearing the end of the removal phase; the refurbishment of Darlington Units 1 and 3 is progressing according to schedule, with regular compliance inspections being performed as planned
- completed a licence renewal process for the Point Lepreau Nuclear Generating Station (PLNGS)
 - the Commission granted a 10-year operating licence to the PLNGS on June 21, 2022, and issued a record of decision in October 2022

- received notification from Ontario Power Generation (OPG) in December 2022 that it intends to request Commission authorization to operate Pickering Units 5 to 8 until September 30, 2026, while Units 1 and 4 will shut down as planned in 2024
 - OPG’s application, due in June 2023, will be heard by the Commission at a public hearing tentatively scheduled for June 2024; CNSC staff will review OPG’s safety case for this request and will make recommendations to the Commission, which will make the final decision
- made progress on the environmental assessments for the [near surface disposal facility](#),¹⁵ [Nuclear Power Demonstration closure project](#),¹⁶ [Rook 1 project](#),¹⁷ [Wheeler River project](#),¹⁸ and [Whiteshell Reactor #1 decommissioning](#),¹⁹ begun under the *Canadian Environmental Assessment Act, 2012*
- continued to prepare to regulate the [Nuclear Waste Management Organization \(NWMO\)](#)²⁰ Adaptive Phased Management approach, which will site and develop a deep geological repository for the long-term management of Canada’s used nuclear fuel
 - as part of this preparation, the CNSC continued to identify regulatory requirements for geological disposal and participated in public meetings to provide information on the CNSC’s role as per the [service arrangement](#)²¹
 - the CNSC has also continued independent and internationally collaborative research focusing on long-term safety issues related to the deep geological disposal of radioactive waste and used nuclear fuel in both crystalline and sedimentary rock formations
- continued to conduct technical reviews of OPG’s [Darlington New Nuclear Project](#)²² application for a licence to construct and [Global First Power’s](#)²³ licence application and associated environmental assessment

Impact assessments

The CNSC continues to collaborate with the Impact Assessment Agency of Canada (IAAC) under the existing memorandum of understanding to develop tools and clarify roles in advance of the first impact assessment for nuclear-designated projects. To ensure future readiness, the CNSC and the IAAC are hosting workshops with proponents to discuss the impact assessment (IA) process and how it will apply to their potential projects. Among the efficiencies being explored are leveraging work early in the process to better understand issues and concerns from key partners, preparing updated tailored guidelines for the nuclear sector, and recognizing the potential to use existing information and studies. The collaborative work with the IAAC also includes encouraging early and ongoing dialogue between the CNSC and the IAAC, creating strong relationships with Indigenous peoples, and identifying other potential efficiencies while also ensuring a robust and transparent IA process.

To ensure consistency in licensing and compliance verification, the CNSC’s regulatory framework and environmental assessment requirements must be clear and understood by proponents and licensees. The regulatory framework consists of [laws](#)²⁴ passed by Parliament, regulations, and licences and regulatory documents that are used to regulate Canada’s nuclear industry. In 2022–23, the CNSC published [5 regulatory documents](#).²⁵ Regulatory documents clarify the CNSC’s requirements and may contain practical guidance to licensees and applicants on how to meet the CNSC’s regulatory

requirements. Such guidance can include information on possible approaches to the design of nuclear facilities, the design and implementation of required management and operational programs, and forms for applying for licences or reporting information to the Commission.

The CNSC’s [Independent Environmental Monitoring Program](#)²⁶ (IEMP) helps verify that the public and the environment around CNSC-regulated nuclear facilities are not adversely affected by releases to the environment. The IEMP complements the ongoing compliance verification program and involves taking samples from public areas around nuclear facilities. These samples are measured and analyzed to determine the amount of radiological and hazardous substances and compared to guidelines. The CNSC continues to post IEMP sampling data and resulting conclusions on its [website](#).²⁶ This work serves to support the Government of Canada’s contribution to the United Nations’ [2030 Agenda for Sustainable Development](#),¹¹ particularly Goal 3, which focuses on good health and well-being.

The CNSC and its laboratory remain involved in the TerraCanada Science and Innovation Hub, which is part of a [federal government-wide initiative](#)²⁷ to both modernize science infrastructure and enhance collaboration among scientists. In 2022–23, it was announced that the CNSC would move forward with NRCan in the first stage of the initiative. As a result, the CNSC continues to contribute to over 20 committees, participating at many levels to help plan the laboratory relocation with TerraCanada and LabsCanada.

DEPARTMENTAL RESULT 3

Nuclear material and substances, facilities and activities are secure and used for peaceful purposes.

Through the *Nuclear Safety and Control Act* (NSCA), the CNSC implements Canada’s international commitments on the peaceful use of nuclear energy. The CNSC implements regulatory programs to ensure that CNSC licensees and Canada at large meet the obligations arising from Canada’s international safeguards agreements with the IAEA. Safeguards conclusions drawn by the IAEA assure Canadians and the international community that all nuclear materials in Canada are used for peaceful purposes.

The exports of significant nuclear items are made subject to [nuclear cooperation agreements \(NCAs\)](#).²⁸ These are treaty-level agreements designed to minimize the proliferation risk associated with international transfers of nuclear items. The CNSC implements the terms and conditions of NCAs through [administrative arrangements](#)²⁸ with its regulatory counterparts in partner countries. The CNSC also implements a licensing and compliance program to ensure that imports and exports of nuclear substances, prescribed equipment and prescribed information (technology) meet regulatory requirements. This allows the CNSC to meet [Canada’s nuclear non-proliferation](#)²⁹ policy and international obligations and commitments.

In 2022–23, the CNSC:

- conducted technical licensing assessments and made licensing decisions on applications for the import and export of nuclear substances, prescribed equipment and prescribed information, in accordance with the [Nuclear Non-proliferation Import and Export Control Regulations](#)³⁰ and the [General Nuclear Safety and Control Regulations](#).³¹ A total of **1,052** import and export licensing decisions were made by the CNSC under these regulations

- provided technical support to Global Affairs Canada in the area of safeguards and non-proliferation; this included participation in the [United Nations Nuclear Non-Proliferation Treaty Review Conference](#)³² in August 2022, and in other international non-proliferation fora

Being prepared in the event of an emergency is an essential part of being a responsible nuclear regulator. Nuclear emergency management is a shared responsibility in Canada, and the CNSC has a comprehensive emergency management program in place. The CNSC works with nuclear operators, all levels of government and other stakeholders, including international organizations, to ensure readiness. In 2022–23, the CNSC:

- participated with Bruce Power, provincial and municipal authorities, and federal partners in a full-scale emergency exercise in October 2022 based at the Bruce Nuclear Generating Station
- continued to chair the Potassium Iodide (KI) Pill Working Group
 - a new approach for Phase II of the KI Pill Working Group was adopted in November 2022
 - Emergency Management Ontario (EMO) will take the lead and capture the Phase II objectives in the 2023 update to the Provincial Nuclear Emergency Response Plan (PNERP)
 - the Working Group will support EMO and provide input into how the Phase II objectives are considered in the updated PNERP
 - Phase II objectives include the development of a strategy for the emergency distribution of KI pills and an examination of the advisability of KI pill pre-distribution to all schools in the Ingestion Planning Zone (50 km radius)

Modernizing the CNSC's *Nuclear Security Regulations*

Nuclear security is a major consideration in all CNSC activities. The CNSC is responsible for enforcing Canada's [Nuclear Security Regulations](#)³³ (NSR) and works closely with nuclear operators, law enforcement, intelligence agencies, international organizations and other government departments to ensure that nuclear materials and facilities are adequately protected. Cyber security remains an important and evolving issue. The CNSC is responsible for enforcing cyber security regulatory requirements to ensure that nuclear facilities continue to protect their cyber assets. In 2022–23, the CNSC:

- published draft amendments to the NSR in the *Canada Gazette*, Part I, from November 1, 2022, to January 11, 2023
- hosted a workshop with industry stakeholders in March 2023 to follow up on industry stakeholder comments in the *Canada Gazette*, Part I
 - the path forward will involve the publication of a stakeholder workshop report and additional consultation with stakeholders on revised policy proposals
- published a discussion paper on the revised nuclear security series of regulatory documents; the comments provided by stakeholders will inform the development of revised regulatory

documents, which will in turn provide clarification and guidance on meeting the requirements of the amended **NSR**

- completed an internal audit and evaluation of the CNSC’s regulation of cyber security, and identified areas that still require improvement

DEPARTMENTAL RESULT 4

Canadians, including Indigenous peoples, have meaningful information about, and the opportunity to participate in, the nuclear regulatory process.

The CNSC is a proactive regulator that supports participation by members of the public and Indigenous Nations and communities in the CNSC’s regulatory processes. Public hearings and meetings are open to the public, are sometimes held in the host community and are always webcast live on the CNSC’s website. In addition, the CNSC offers funding through its Participant Funding Program (PFP) to help support the participation of Indigenous Nations and communities, members of the public, and stakeholders in bringing valuable information to the Commission. This is recognized internationally as a best practice to emulate. Learn more about the [PFP](#)³⁴ and watch a short [CNSC video](#)³⁵ about it by visiting the CNSC website.

To ensure that Canadians, including Indigenous peoples, have meaningful information about, and the opportunity to participate in, the nuclear regulatory process in 2022–23, the CNSC continued to:

- pilot its [Let’s Talk Nuclear Safety](#)³⁶ e-consultation tool
 - efforts are ongoing to identify other platforms or tools that could be used to facilitate the CNSC’s online consultation
- explore tools to support its efforts to digitize the regulatory framework
 - staff evaluated a software tool that could be used to modernize the development of regulatory documents through a proof of concept; the evaluation was completed in February 2023, and the team’s findings were submitted to management for consideration

The CNSC welcomes input from the public and Indigenous groups on draft regulatory documents that are open for consultation on [Let’s Talk Nuclear Safety](#).³⁶ Each draft regulatory document open for public comment is made available for a specified period of time (at least 30 days). At the end of the consultation period, CNSC staff review all input and comments are posted for feedback on the CNSC website. The [consultation section](#)³⁷ of the CNSC website provides up-to-date information on current consultations for regulatory initiatives, and the necessary information and guidance on how to participate. In 2022–23, the CNSC posted **5** regulatory documents for public consultation, and **29** people provided comments.

IN 2022–23, THE CNSC

Paid out **\$2,142,686.13** to **143 recipients**, the majority being **Indigenous Nations and communities**



IN 2022–23, THE CNSC

Held over **300 meetings** with **52 Indigenous groups** representing over **100 different Indigenous Nations and communities**.



Through “Meet the Nuclear Regulator” sessions, CNSC experts offer the public an opportunity to learn about how to participate in the licensing process, in order to build understanding of and public confidence in Canada’s nuclear regulation. To participate in an upcoming [“Meet the Nuclear Regulator” or webinar session](#),³⁸ visit the CNSC website.

Furthermore, the CNSC frequently participates in community outreach and engagement activities and responds to media calls and public information inquiries. As an agent of the Crown, the CNSC has an important responsibility to engage and consult with interested Indigenous groups and is committed to developing long-term positive relationships with these communities.

Disseminating information is part of the CNSC’s mandate, but that information also has to be accessible and understood. One goal of the CNSC’s web and social media platforms – [YouTube](#),³⁹ [Facebook](#),⁴⁰ [LinkedIn](#)⁴¹ and [Twitter](#)⁴² – is to provide technical information in plain language that explains complicated nuclear science in simple terms. The CNSC continues to dedicate resources to its social media engagement, not only to share information, but also to answer questions from followers, often with the assistance of a subject-matter expert.

The CNSC maintains research initiatives and programs to ensure that it keeps abreast of new scientific information, develops its own knowledge base and shares its research findings with stakeholders and scientists in Canada and abroad. The organization offers the public a [comprehensive list of relevant scientific and technical information](#)⁴³ on its website. Topics can be searched according to the CNSC’s 14 [safety and control areas \(SCAs\)](#),⁴⁴ which are used to assess, evaluate, review, verify and report on regulatory requirements and performance. The SCAs are presented in a comprehensive framework and grouped into 3 primary functional areas: management; facility and equipment; and core control processes.

The CNSC funds an external research program to obtain knowledge and information needed to support its regulatory mission. The outcome of these research activities helps the CNSC understand and address new or emerging safety issues, gain third-party perspectives on nuclear science, and share scientific knowledge with the nuclear industry and the public at large. For more information on the outcomes of this program, visit the [CNSC’s website](#).⁴⁵

The CNSC, as well as licensees, continue to make progress in ensuring documents and reports are made readily available

IN 2022–23, THE CNSC

Responded to **687 public information inquiries** and **56 media inquiries**, posted **11 feature articles** to its website and disseminated **20 new publications**.



IN 2022–23, THE CNSC

Had over **438 participants** across **9 “Meet the Nuclear Regulator” sessions**.



IN 2022–23, THE CNSC

Posted **1,677 times** on social media channels and **engaged** with the public through these platforms **28,486 times**.



RESEARCH AND SUPPORT PROGRAM: \$3,308,934

\$1,123,348 invested in **29** research contracts

\$2,116,087 invested in **36** contribution agreements

\$69,500 put towards **8** grants



online to members of the public, including documents submitted for Commission proceedings, which can be found on the [CNSC's website](#).⁴⁶ Specifically, in 2022–23, the CNSC:

- developed an Open Government working group to gather an inventory on what data and information could be posted on the Open Government portal
 - a benchmarking exercise was also undertaken to understand how other departments work in terms of Open Government
 - currently, the CNSC is drafting an Open Government implementation plan to best structure the organization and the process for posting to the portal
- posted 6 new environmental protection review reports to the federal Open Government portal and engaged with NRCan to make these reports available through its Open Science and Data Platform
 - the licensee radionuclide release database continues to be updated annually on the federal Open Government portal
 - in 2022, active links were established to connect the National Pollutant Release Inventory website and the CNSC facility-specific web pages with the radionuclide database hosted on the Open Government portal
 - the radionuclide release database on the portal was also geospatially mapped and coded so that it is searchable and obtainable under the NRCan Open Science and Data Platform
- created an internal working group to explore the best approach for improving regulatory oversight reports (RORs)
 - the goal is to develop better internal guidance to ensure that RORs provide clearer, more focused information for the Commission, as well as to leverage existing communication tools and other relevant mechanisms that would strengthen Indigenous and public outreach and engagement activities
 - changes to the current process and the format of the RORs will take effect once the necessary mechanisms are in place; these changes are anticipated for the 2023 RORs, which will be presented to the Commission in 2024

Results achieved

The following table shows, for Nuclear regulation, the results achieved, the performance indicators, the targets and the target dates for 2022–23, and the actual results for the three most recent fiscal years for which actual results are available.

Departmental results	Departmental result indicators	Target	Date to achieve target	2020–21 Actual results	2021–22 Actual results	2022–23 Actual results
The environment is protected from releases from	Number of instances of radiological releases that exceeded regulatory limits	0	March 31, 2023	0	0	0
	Number of instances of hazardous releases that exceeded regulatory limits	≤ 5	March 31, 2023	2	0	2

nuclear facilities and activities.	Percentage of Independent Environmental Monitoring Program (IEMP) samples (food, water, air and vegetation) that met guidelines	≥ 95%	March 31, 2023	94.9% ⁴⁷	97%	98%
Canadians are protected from radiation resulting from nuclear facilities and activities.	Number of radiation doses to members of the public that exceeded regulatory limits	0	March 31, 2023	0	0	0
	Number of radiation doses to workers that exceeded regulatory limits	0	March 31, 2023	3 ⁴⁸	0	0
Nuclear material and substances, facilities and activities are secure and used for peaceful purposes.	Number of instances of non-peaceful or malicious use of Canadian exports of nuclear substances, equipment and information	0	March 31, 2023	0	0	0
	Number of lost or stolen radioactive sealed sources	≤ 2	March 31, 2023	0	0	0
	Canada's international commitments to the International Atomic Energy Agency (IAEA) with respect to nuclear safeguards and verification are met	IAEA broader conclusion	December 31, 2022	Met	Met	Met
Canadians, including Indigenous peoples, have meaningful information about, and the opportunity to participate in, the nuclear regulatory process.	Percentage of Commission proceedings that were accessible to members of the public and Indigenous peoples	> 90%	March 31, 2023	100%	92%	95%
	Percentage of Commission proceedings for which the Participant Funding Program (PFP) was made available to members of the public and Indigenous peoples	> 90%	March 31, 2023	100%	100%	100%
	Percentage of Commission proceedings documents that were available in a timely manner on the CNSC external website upon request by members of the public and Indigenous peoples	> 90%	March 31, 2023	100%	95%	95%
	Number of self-identified Indigenous groups and organizations who participated in CNSC proceedings	Increasing trend	March 31, 2023	18 ⁴⁹	23	29

Financial, human resources and performance information for the CNSC's Program Inventory is available in the [GC InfoBase](#).⁵⁰

Budgetary financial resources (dollars)

The following table shows, for Nuclear regulation, budgetary spending for 2022–23, as well as actual spending for that year.

2022–23 Main Estimates	2022–23 Planned spending	2022–23 Total authorities available for use	2022–23 Actual spending (authorities used)	2022–23 Difference (Actual spending minus Planned spending)
96,985,453	104,496,124	115,303,643	102,591,286	(1,904,838)

Financial, human resources and performance information for the CNSC's Program Inventory is available in the [GC InfoBase](#).⁵⁰

Human resources (full-time equivalents)

The following table shows, in full-time equivalents, the human resources the department needed to fulfill this core responsibility for 2022–23.

2022–23 Planned full-time equivalents	2022–23 Actual full-time equivalents	2022–23 Difference (Actual full-time equivalents minus Planned full-time equivalents)
613	617	4

Financial, human resources and performance information for the CNSC's Program Inventory is available in the [GC InfoBase](#).⁵⁰

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 services that support program delivery in the organization, regardless of the internal services delivery model in a department. These are:

- ▶ management and oversight services
- ▶ communications services
- ▶ corporate security services
- ▶ legal services
- ▶ human resources management services
- ▶ financial management services
- ▶ information management services
- ▶ information technology services
- ▶ materiel management services
- ▶ acquisition management services

Results highlights

Prioritizing equity, diversity and inclusion remains a fundamental commitment at the CNSC, as bringing together diverse voices and perspectives strengthens the organization and increases innovation, while ensuring that employees feel safe and empowered to grow and do their best work. To enable equity, diversity and inclusion, in 2022–23, the CNSC:

- hosted its first Equity, Diversity and Inclusion Fair with several presentations for employees, while also launching 3 new employee networks – the Diverse Employee Network, the Pride Network and the Accessibility Network
 - nearly 700 staff members attended the fair and were provided with a safe space to ask questions, create networking opportunities, and continue building a community for equity-seeking groups
- launched the Advisory Council on Inclusion in September 2022 to advocate for members of equity-seeking groups, employee networks and CNSC staff through open discussion and transparent decision-making processes
 - the focus has been on the governance structure of the new Council, with facilitated visioning sessions taking place to finalize the mandate
 - the focus of the Council for the upcoming fiscal year will be to provide guidance on the drafting of the new strategic plan for equity, diversity and inclusion
- continued work on the pay equity plan project, including forming the CNSC Pay Equity Committee

Enabling a hybrid workforce

The CNSC continues to work as a hybrid workforce and is modernizing its physical offices as well as its IM/IT infrastructure and services to ensure effective work experiences for employees. For example, the CNSC continues to renovate its office space portfolio to meet GCworkplace standards. By fall 2023, approximately 75% of the office space portfolio in the National Capital Region will be fully converted to the new standards, with unassigned seating layouts.

In 2022–23, the CNSC also moved forward with its Digital Strategy, including launching the Digital Workspace to the organization and initiating work to modernize core data and support services for licensing, compliance and certification.

- in accordance with the [Pay Equity Act](#),⁵¹ the CNSC needs to establish a pay equity plan by September 3, 2024, to identify, and where it exists, correct gender wage gaps within the organization

Contracts awarded to Indigenous businesses

The CNSC is a Phase 2 organization and is aiming to achieve the minimum 5% target by the end of 2023–24. In order to achieve this target, the CNSC will:

- implement procurement strategies to increase opportunities for Indigenous businesses
- develop an Indigenous business outreach strategy
- establish a process to monitor and report on performance
- ensure that procurement personnel have the required training

Budgetary financial resources (dollars)

The following table shows, for internal services, budgetary spending for 2022–23, as well as spending for that year.

2022–23 Main Estimates	2022–23 Planned spending	2022–23 Total authorities available for use	2022–23 Actual spending (authorities used)	2022–23 Difference (Actual spending minus Planned spending)
46,696,700	50,312,948	53,031,858	50,374,879	61,931

Human resources (full-time equivalents)

The following table shows, in full-time equivalents, the human resources the department needed to carry out its internal services for 2022–23.

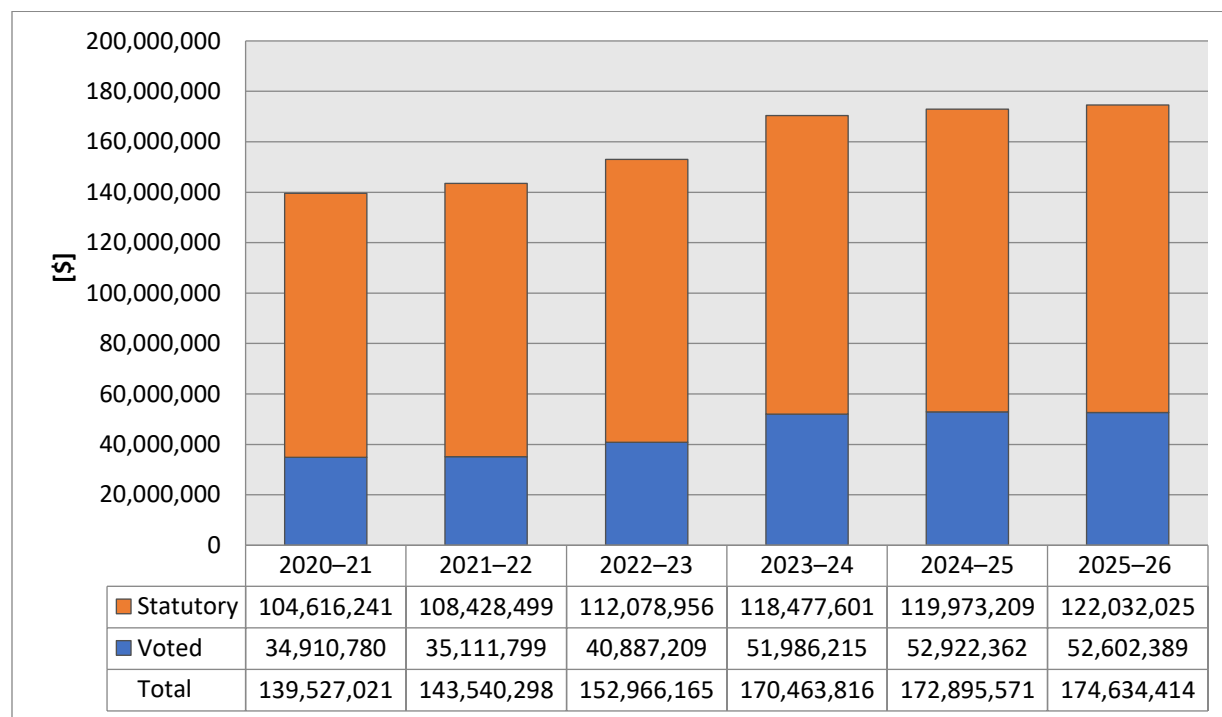
2022–23 Planned full-time equivalents	2022–23 Actual full-time equivalents	2022–23 Difference (Actual full-time equivalents minus Planned full-time equivalents)
284	291	7

SPENDING AND HUMAN RESOURCES

Spending

Spending 2020–21 to 2025–26

The following graph presents planned (voted and statutory) spending over time.



The CNSC is financed by the Government of Canada through voted parliamentary and statutory authorities. Included in the statutory appropriation is a revenue-spending authority, which allows the CNSC to spend most licence-fee revenue, as well as funding for contributions to employee benefit plans. The voted authority provides funding for the activities of licensees exempt from paying fees (that is, hospitals and universities) and for activities relating to Canada’s international obligations (including non-proliferation activities), public responsibilities such as emergency management and public information programs, and the updating of the NSCA and its associated regulations.

The budgetary performance summary section provides variance explanations on year-to-year fluctuations in spending.

Budgetary performance summary for core responsibility and internal services (dollars)

The “Budgetary performance summary for core responsibility and internal services” table presents the budgetary financial resources allocated for the CNSC’s core responsibilities and for internal services.

Core responsibility and internal services	2022–23 Main Estimates	2022–23 Planned spending	2023–24 Planned spending	2024–25 Planned spending	2022–23 Total authorities available for use	2020–21 Actual spending (authorities used)	2021–22 Actual spending (authorities used)	2022–23 Actual spending (authorities used)
Nuclear regulation	96,985,453	104,496,124	116,574,133	118,614,657	115,303,643	92,862,646	96,598,106	102,591,286
Subtotal	96,985,453	104,496,124	116,574,133	118,614,657	115,303,643	92,862,646	96,598,106	102,591,286
Internal services	46,696,700	50,312,948	53,889,683	54,280,914	53,031,858	46,664,375	46,942,192	50,374,879
Total	143,682,153	154,809,072	170,463,816	172,895,571	168,335,501	139,527,021	143,590,298	152,966,165

The CNSC’s Main Estimates for fiscal year 2022–23 totalled \$143.7 million, compared to total authorities of \$168.3 million. The \$24.6 million in additional authorities is primarily attributable to:

- contributions to employee benefit plans for personnel expenditures related to subsection 21(3) of the *Nuclear Safety and Control Act* that are not included in the 2022–23 Main Estimates: \$10.3 million
- funds received from the Treasury Board of Canada Secretariat (TBS) through the Impact Assessment Renewal Initiative for the establishment of a new grants and contributions program, called the Indigenous and Stakeholder Capacity Fund, and an increase in the funding envelope for the existing Participant Funding Program: \$3.6 million
- funds received from TBS to expand the CNSC’s technical ability, capacity and competency to regulate small modular reactors (SMRs): \$3.3 million
- an increase in revenue spending authority mainly stemming from revenue available for use in future years that was not reflected in the 2022–23 Main Estimates: \$3.3 million
- an operating budget carry-forward from 2021–22 to 2022–23: \$1.9 million
- funds received from TBS for the cumulative impact of retroactive economic increases for executives: \$1.4 million
- funds reprofiled from 2021–22 to 2022–23 based on anticipated operational requirements: \$0.8 million

The \$4.1 million increase in actual spending from \$139.5 million in 2020–21 to \$143.6 million in 2021–22 is due mainly to an increase in personnel costs resulting from a rise in the use of full-time equivalents (FTEs) and to economic increases, including retroactive payments.

The \$9.4 million increase in actual spending from \$143.6 million in 2021–22 to \$153.0 million in 2022–23 is due mainly to:

- an increase in travel expenses attributable to the easing of COVID-19 travel restrictions: \$4.3 million
- an increase in personnel costs resulting from a rise in FTE use, partially offset by retroactive payments made in 2021–22: \$1.7 million

- an increase in transfer payments resulting from increased activity in the Participant Funding Program and the Research and Support Program: \$1.4 million
- an increase in professional and special services, primarily information technology services: \$0.9 million
- a net increase in other expenditure categories primarily as a result of a return to pre-COVID-19 expenditure levels: \$1.1 million

There was minimal variance between actual spending of \$153.0 million in 2022–23 and planned spending of \$154.8 million.

The CNSC’s planned spending is forecasted to increase by \$17.5 million to \$170.5 million in 2023–24, compared to actual spending of \$153.0 million in 2022–23, as a result of funding received for SMRs; the implementation of the *Impact Assessment Act*; cost-of-living increases, including salary and wages; and a projected higher level of staffed positions. Planned spending is forecasted to increase to \$172.9 million in 2024–25 as a result of projected cost-of-living increases.

Human resources

The “Human resources summary for core responsibility and internal services” table presents the full-time equivalents (FTEs) allocated to the CNSC’s core responsibility and to internal services.

Human resources summary for core responsibility and internal services

Core responsibilities and Internal Services	2020–21 Actual full-time equivalents	2021–22 Actual full-time equivalents	2022–23 Planned full-time equivalents	2022–23 Actual full-time equivalents	2023–24 Planned full-time equivalents	2024–25 Planned full-time equivalents
Nuclear regulation	581	592	613	617	682	678
Subtotal	581	592	613	617	682	678
Internal services	269	279	284	291	301	300
Total	850	871	897	908	983	978

The increase in FTEs from 850 in 2020–21 to 871 in 2021–22 is primarily a result of the staffing of vacant positions. The increase in FTEs from 871 in 2021–22 to 908 in 2022–23 is a result of SMR readiness activities and the continued staffing of vacant positions.

Actual FTEs of 908 in 2022–23 exceeded planned FTEs of 897, which did not include staffing related to SMR readiness.

As published in the 2023–24 Departmental Plan, the planned increase from 908 FTEs in 2022–23 to 983 FTEs in 2023–24 is due to the full-year impact of the 2022–23 staffing actions related to SMR regulatory readiness, the new grants and contributions programs, and the continued staffing of vacant positions. The FTE forecast anticipates a marginal decrease from 983 FTEs in 2023–24 to 978 FTEs in 2024–25.

Expenditures by vote

For information on the CNSC’s organizational voted and statutory expenditures, consult the [Public Accounts of Canada](#).⁵²

Government of Canada spending and activities

Information on the alignment of the CNSC’s spending with Government of Canada’s spending and activities is available in [GC InfoBase](#).⁵⁰

Financial statements and financial statement highlights

Financial statements

The CNSC’s financial statements (audited) for the year ended March 31, 2023, are available on the [departmental website](#).⁵³

Financial statement highlights

Condensed Statement of Operations (unaudited) for the year ending March 31, 2023 (dollars)

Financial information	2022–23 Planned results	2022–23 Actual results	2021–22 Actual results	Difference (2022–23 Actual results minus 2022–23 Planned results)	Difference (2022–23 Actual results minus 2021–22 Actual results)
Total expenses	169,616,000	177,280,599	157,653,268	7,664,599	19,627,331
Total revenues	123,991,000	126,577,756	115,676,030	2,586,756	10,901,726
Net cost of operations before government funding and transfers	45,625,000	50,702,843	41,977,238	5,077,843	8,725,605

The total actual expenses of \$177.3 million were \$7.7 million or 4.5% more than planned expenditures of \$169.6 million mainly because of:

- greater-than-planned personnel costs resulting from an accrual for projected collective agreement increases and greater-than-planned FTE use: \$6.6 million
- an increase in transfer payments primarily as a result of incremental funding received for the Participant Funding Program: \$1.4 million
- a net decrease in other expenditure categories: \$0.3 million

The actual total revenues of \$126.6 million were \$2.6 million or 2.1% greater than planned revenues of \$124.0 million.

The CNSC's total expenses increased from 2021–22 to 2022–23 by \$19.6 million or 12.5%, mainly due to:

- an increase in personnel costs resulting from an accrual for projected collective agreement increases and an increase in FTE use: \$11.7 million
- an increase in travel attributable to the easing of COVID-19 travel restrictions: \$4.1 million
- an increase in professional and special services primarily resulting from an increase in information technology services, including the costs of services provided without charge by Shared Services Canada: \$2.0 million
- an increase in furniture, repairs and rentals primarily as a result of the purchase of computer equipment to upgrade tablets used by staff: \$1.3 million
- a net increase in other expenditure categories: \$0.5 million

The CNSC's revenues increased by \$10.9 million or 9.4% due to increased levels of spending and the resulting cost recovery.

The net cost of operations increased by \$8.7 million or 20.8% due to increased levels of spending, including on SMR readiness activities and the implementation of the Impact Assessment Renewal Initiative.

The 2022–23 planned results information is provided in the [CNSC's Future-Oriented Statement of Operations and Notes 2022–23](#).⁵³

Condensed Statement of Financial Position (unaudited) as of March 31, 2023 (dollars)

Financial information	2022–23	2021–22	Difference (2022–23 minus 2021–22)
Total net liabilities	46,477,900	50,753,285	(4,275,385)
Total net financial assets	30,532,919	34,533,170	(4,000,251)
Departmental net debt	15,944,981	16,220,115	(275,134)
Total non-financial assets	8,934,668	9,973,337	(1,038,669)
Departmental net financial position	(7,010,313)	(6,246,778)	763,535

The decrease of \$4.3 million in the CNSC's net liabilities is mainly due to a decrease in the amount of year-end refunds payable to licensees for the excess collection of fee charges over actual fees at year-end, partially offset by an increase in salaries and wages payable.

The decrease of \$4.0 million in the CNSC's net financial assets is the result of a decrease in the amount due from the Consolidated Revenue Fund, which is an amount due from the federal government and may be disbursed without further charges to the CNSC's authorities.

The decrease of \$0.3 million in departmental net debt is a result of the increase in net liabilities, offset by a decrease in total net financial assets.

The decrease of \$1.1 million in non-financial assets is a result of a decrease in the net book value of tangible capital assets, as amortization expenses exceeded the cost of new capital acquisitions.

The increase of \$0.8 million in the CNSC's departmental net financial position is the difference between the total non-financial assets and the departmental net debt.

The 2022–23 planned results information is provided in the [CNSC's Future-Oriented Statement of Operations and Notes 2022–23](#).⁵³

CORPORATE INFORMATION

Organizational profile

Appropriate minister: Jonathan Wilkinson

Institutional head: [Rumina Velshi](#)⁵⁴

Ministerial portfolio: [Energy and Natural Resources Canada](#)⁵⁵

Enabling instrument: [Nuclear Safety and Control Act](#)⁵⁶

Year of incorporation: 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.

Raison d’être, mandate and role: Who we are and what we do

“Raison d’être, mandate and role: Who we are and what we do” is available on the [CNSC’s website](#).⁵⁷

Operating context

Information on the operating context is available on the [CNSC’s website](#).⁵⁷

Reporting framework

The CNSC’s Departmental Results Framework and Program Inventory of record for 2022–23 are shown below.

Core responsibility: Nuclear regulation

Description: The CNSC regulates the development, production and use of nuclear energy and substances to protect health, safety, security of persons and the environment; implements Canada’s international commitments on the peaceful use of nuclear energy; and disseminates objective scientific and regulatory information to members of the public. The CNSC maintains a regulatory framework and conducts licensing (including environmental protection reviews), compliance verification and enforcement. The CNSC is committed to building and maintaining the confidence of the public and Indigenous peoples through transparent, open and inclusive regulatory processes.

Departmental results	Indicators
R 1: The environment is protected from releases from nuclear facilities and activities.	Number of instances of radiological releases that exceeded regulatory limits
	Number of instances of hazardous releases that exceeded regulatory limits
	Percentage of Independent Environmental Monitoring Program (IEMP) samples (food, water, air, soil, sediment, sand and vegetation) that met guidelines
R 2: Canadians are protected from radiation resulting from nuclear facilities and activities.	Number of radiation doses to members of the public that exceeded regulatory limits
	Number of radiation doses to workers that exceeded regulatory limits

R 3: Nuclear material and substances, facilities and activities are secure and used for peaceful purposes.

Number of instances of non-peaceful or malicious use of Canadian exports of nuclear substances, equipment and information

Number of lost or stolen radioactive sealed sources

Canada’s international commitments to the International Atomic Energy Agency (IAEA) with respect to nuclear safeguards and verification are met

R 4: Canadians, including Indigenous peoples, have meaningful information about, and the opportunity to participate in, the nuclear regulatory process.

Percentage of CNSC proceedings that were accessible to members of the public and Indigenous peoples

Percentage of CNSC proceedings for which the Participant Funding Program (PFP) was made available to members of the public and Indigenous peoples

Percentage of public proceedings documents that were available in a timely manner upon request by members of the public and Indigenous peoples

Number of self-identified Indigenous groups and organizations who participated in CNSC proceedings

Program Inventory

Nuclear Fuel Cycle

Nuclear Reactors

Nuclear Substances and Prescribed Equipment

Nuclear Non-Proliferation

Scientific, Regulatory and Public Information

Internal Services

SUPPORTING INFORMATION ON THE PROGRAM INVENTORY

Supporting information on planned expenditures, human resources, and results related to the CNSC’s program inventory is available in the [GC InfoBase](#).⁵⁰

SUPPLEMENTARY INFORMATION TABLES

The following supplementary information tables are available on the [CNSC’s website](#).⁵⁷

- ▶ Reporting on green procurement
- ▶ Details on transfer payment programs
- ▶ Gender-based Analysis Plus
- ▶ 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](#).⁵⁸ This report also provides detailed background information on tax expenditures, including descriptions, objectives, historical information and references to related federal spending programs as well as evaluations and GBA Plus of tax expenditures.

ORGANIZATIONAL CONTACT INFORMATION

Mailing address

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Ottawa ON K1P 5S9
Canada

Telephone: 613-995-5894

Toll free: 1-800-668-5284

Fax: 613-995-5086

Email: cpsc.info.ccsn@cpsc-ccsn.gc.ca

Website: www.nuclearsafety.gc.ca⁵⁹

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.

core responsibility (*responsabilité essentielle*)

An enduring function or role performed by a department. The intentions of the department with respect to a core responsibility are reflected in one or more related departmental results that the department seeks to contribute to or influence.

Departmental Plan (*plan ministériel*)

A report on the plans and expected performance of an appropriated department over a 3-year period. Departmental Plans are usually tabled in Parliament each spring.

departmental priority (*priorité*)

A plan or project that a department 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 departmental results.

departmental result (*résultat ministériel*)

A consequence or outcome that a department seeks to achieve. A departmental result is often outside departments' immediate control, but it should be influenced by program-level outcomes.

departmental result indicator (*indicateur de résultat ministériel*)

A quantitative measure of progress on a departmental result.

departmental results framework (*cadre ministériel des résultats*)

A framework that connects the department's core responsibilities to its departmental results and departmental result indicators.

Departmental Results Report (*rapport sur les résultats ministériels*)

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

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. For a particular position, the full-time equivalent figure is the ratio of number of hours the person actually works divided by the standard number of hours set out in the person's collective agreement.

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

An analytical tool used to support the development of responsive and inclusive policies, programs and other initiatives; and understand how factors such as sex, race, national and ethnic origin, Indigenous origin or identity, age, sexual orientation, socio-economic conditions, geography, culture and disability, impact experiences and outcomes, and can affect access to and experience of government programs.

government-wide priorities (*priorités pangouvernementales*)

For the purpose of the 2022–23 Departmental Results Report, government-wide priorities are the high-level themes outlining the government’s agenda in the [November 23, 2021, Speech from the Throne](#): building a healthier today and tomorrow; growing a more resilient economy; bolder climate action; fighter harder for safer communities; standing up for diversity and inclusion; moving faster on the path to reconciliation; and fighting for a secure, just and equitable world.

horizontal initiative (*initiative horizontale*)

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

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 to the expected result.

planned spending (*dépenses prévues*)

For Departmental Plans and Departmental Results Reports, planned spending refers to those amounts presented in 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.

program (*programme*)

Individual or groups of services, activities or combinations thereof that are managed together within the department and focus on a specific set of outputs, outcomes or service levels.

program inventory (*répertoire des programmes*)

Identifies all the department's programs and describes how resources are organized to contribute to the department's core responsibilities and results.

result (*résultat*)

A 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.

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.

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 - 47 In fiscal year 2020–21, 94.9% of IEMP results met the guidelines. Exceedances for the 2020–21 fiscal year were expected, and similar to the values reported by CNSC licensees' environmental monitoring programs. No unexpected exceedances were noted. There were 3 exceedances at Port Hope Conversion Facility. Three fluoride concentrations measured in lake water samples were slightly above the CCME freshwater quality guideline for the protection of aquatic life but were below Health Canada's guidelines for drinking water quality and well below the CCME toxicity benchmark for sensitive aquatic biota. Thus, adverse effects are not expected. There were 26 exceedances at Cigar Lake out of 468 samples. The exceedances were selenium and polonium-210 in fish tissue samples collected at both the exposure station, which could potentially be impacted by the operation of the facility, and the reference station, which is not impacted by the operation of the facility. Thus, the exceedances are not attributed to the facility. These results were also within the natural background range for the region. Exceeding a guideline does not mean that there is an expected health impact; rather, it triggers a more in-depth assessment by CNSC staff to ensure that the health and safety of people and the environment are protected. In all noted cases, CNSC staff concluded that the public and environment are protected from ongoing releases from nuclear facilities and activities. More information in IEMP results for each site is available on the [CNSC website](#).
 - 48 In 2020–21, there were 3 occurrences of a worker exceeding a regulatory dose limit. The first instance involved a non-NEW who received an effective dose of 1.28 mSv, which exceeded the annual dose limit of 1 mSv/year. The second instance involved a non-NEW who received an effective dose of 1.3 mSv, which exceeded the annual dose limit of 1 mSv/year. This event was reported to the Commission in January 2021 in CMD 21-M10. The third instance involved a non-NEW who received an effective dose of 1.05 mSv, which exceeded the annual dose limit of 1 mSv/year. Note that there was a fourth event reported to the Commission in 2020/21, although the event occurred in 2019/20. This case involved a non-Nuclear Energy Worker (NEW) who recorded a non-occupational effective dose of 3.54 mSv on their dosimeter. This exceeded the annual dose limit for non-NEWs of 1 mSv/year. This event was reported to the Commission in September 2020 in CMD 20-M27. In all cases, there was no health effect to the worker from the exposures.
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