

Strategic Plan

Fiscal Years 2022-2026

Draft Report for Comment

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Draft Report for Comment

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1 ABSTRACT

2	The U.S. Nuclear Regulatory Commission (NRC or agency) is an independent agency
3	established by the Energy Reorganization Act of 1974 that began operations in 1975 as a
4	successor to the Atomic Energy Commission. The NRC's mission is to license and regulate the
5	Nation's civilian use of radioactive materials; to provide reasonable assurance of adequate
6	protection of public health and safety; to promote the common defense and security; and to
7	protect the environment. This strategic plan, covering the period Fiscal Years 2022–2026,
8	provides the blueprint for the agency to plan, implement and monitor the work needed to
9	achieve its three strategic goals: (1) ensure the safe and secure use of radioactive materials,
10	(2) continue to foster a healthy organization, and (3) inspire stakeholder confidence in the NRC.
11	The strategic plan also provides an overview of the NRC's responsibilities and lays out how the
12	NRC uses data and evidence to inform decisionmaking to accomplish objectives and strategies
13	to achieve the agency's strategic goals.

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INTRODUCTION

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About the NRC

- 4 The U.S. Nuclear Regulatory Commission (NRC or agency), created by the Energy
- 5 Reorganization Act of 1974, began operations in 1975. The NRC's mission is to license and
- 6 regulate the Nation's civilian use of radioactive materials; to provide reasonable assurance of
- 7 adequate protection of public health and safety; to promote the common defense and security
- 8 and to protect the environment.
- 9 The NRC is headed by five Commissioners appointed by the President of the United States.
- and confirmed by the U.S. Senate, to serve staggered 5-year terms. The President designates
- one of the Commissioners to serve as Chairman. The Commission as a whole formulates
- 12 policies and regulations governing the safety and security of nuclear facilities and radioactive
- 13 materials, issues orders to licensees, and adjudicates legal matters brought before it.
- 14 The NRC's overall responsibility is to protect public health and safety in the civilian uses of
- radioactive materials. It has the following main regulatory functions:
 - Establish standards and regulations.
 - Issue licenses, certificates, and permits.
 - Ensure compliance with established standards and regulations.
 - Issue adjudicatory decisions.
 - Conduct research and risk and performance assessments to support regulatory decisions.

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The NRC carries out these regulatory functions to regulate nuclear power plants, fuel cycle facilities, and other civilian uses of radioactive materials, such as nuclear medicine programs at hospitals and academic activities at educational and research institutions. The NRC also uses these functions to regulate such industrial applications as gauges, irradiators, and other devices that contain radioactive material. The NRC also licenses the import and export of radioactive materials and works closely with its international counterparts to enhance global nuclear safety and security.

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In the course of its regulatory activities, the NRC complies with Federal laws and mandates, including the National Environmental Policy Act and other environmental laws that require the NRC to assess the environmental impacts of proposed NRC licensing and regulatory activities. Specific areas the NRC staff considers include potential human health and socioeconomic impacts; potential impacts to endangered species, air quality, water quality, environmental justice, historic properties; and Tribal cultural resources. As part of the agency's licensing activities, rulemaking, or policy development, the NRC consults with Tribes and interacts with Tribal governments as required by the National Historic Preservation Act and consistent with the Commission's Tribal Policy Statement.

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The NRC's regulatory activities have also been impacted in recent years by regulatory reform and licensing modernization required by the Nuclear Energy Innovation and Modernization Act (NEIMA) (Public Law 115-439) and the Nuclear Energy Innovation Capabilities Act (NEICA) (Public Law 115-248). Among other things, NEIMA mandates that the NRC develop strategies

for the licensing of commercial advanced nuclear reactors within its existing regulatory framework, and to complete a technology-inclusive rulemaking by the end of 2027 for the licensing of such reactors. NEICA directs the NRC to engage in cooperation with the Department of Energy to ensure that the NRC has sufficient technical expertise to assist in the evaluation of applications for licenses, permits, and design certifications and other requests for regulatory approval for advanced nuclear reactors. Both of these laws are intended to ensure that the NRC has the capacity and capabilities to license the new and innovative technologies of the 21st century.

Using Evidence and Evaluation for Strategic Planning

The Foundations for Evidence-Based Policymaking Act of 2018 ("Evidence Act") became law on January 14, 2019 (Public Law 115-435), and is intended to enhance evidence-building activities, make data more accessible, and strengthen privacy protections for those who participate in statistical research throughout the Federal Government. The Evidence Act formalized requirements for agencies to utilize evidence, evaluation, and data as a planning tool for policy and decisionmaking. The Evidence Act also requires agencies to develop an evidence-building plan¹ and a capacity assessment² to support agency strategic planning.

 The NRC is an evidence-based organization, with a culture of continuous learning and improvement. Historically, the NRC has relied on high-quality data and evidence obtained from external entities or obtained through its own capacity. The NRC strategically plans for information and data gathering used to generate the evidence needed for decisionmaking. The agency uses evidence-building activities (e.g., analysis, research) to support licensing new or novel nuclear technologies, including advanced, non-light water reactor designs; accident tolerant nuclear fuel; and digital instrumentation and controls. Evidence-building is used to inform agency activities and actions, such as licensing, oversight, budgeting, human capital management, program improvement, accountability, management, rulemaking, guidance development, and policy development. This emphasis on evidence is meant to support innovation, improvement, and learning. Additionally, the NRC has increasingly sought to rely on evidence-based metrics to improve internal agency performance including budgeting and financial management. This approach has strengthened the agency's oversight of existing uses of nuclear technology, enhanced the agency's readiness to license and regulate new and novel nuclear technologies, and improved the NRC's internal processes.

The NRC will continue enhancing its efforts to assess performance and routinely evaluate strategies against the projected and actual outcomes. The NRC is committed to increasing its capability and capacity to build and use evidence to better inform future decisions and actively promoting a strong culture of achieving results through reliance on data, analysis, evidence-building, and evaluations.

Stakeholder Engagement

The NRC considers stakeholder engagement and transparency in its activities to be cornerstones for effective regulation. Conducting business in a transparent, open, independent manner that supports high-quality and well-informed decisionmaking builds stakeholder confidence and fosters engagement. The NRC recognizes the value of public engagement and

The NRC's Evidence-Building Plan can be found at https://www.nrc.gov/about-nrc/plans-performance/evidence-building-and-evaluation/learning-agenda.html.

The NRC's Capacity Assessment can be found at https://www.nrc.gov/about-nrc/plans-performance/evidence-building-and-evaluation/capacity-assessment.html.

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35 36 provides multiple ways that members of the public can be informed of and participate in the agency's regulatory activities. For instance, the agency publishes and provides information to stakeholders through its Web site (www.nrc.gov); operates the agency's Public Document Room at its headquarters in Rockville, MD; and holds public meetings virtually and in-person throughout the country.

The NRC conducted a wide range of outreach activities to solicit input and engage stakeholders to develop this strategic plan. During the months of August and September 2020 the NRC:

- interviewed and surveyed NRC senior leadership,
- conducted a public meeting with representatives of various stakeholder groups (including licensees, public interest groups, State governments, Federal agencies, congressional staff, the general public, and NRC staff), and
- issued Federal Register notices to gain feedback on the agency's strengths and weaknesses; use of data; evidence and evaluation; and external key factors that may impact the NRC during the upcoming planning period.

In June 2021, the NRC hosted a second public meeting to receive feedback on the high-level draft strategic plan for Fiscal Years (FYs) 2022-2026 and the annotated outline of the evidencebuilding plan. The feedback the NRC received highlighted opportunities and identified potential challenges. This strategic plan reflects consideration of stakeholder feedback and provides a path forward for addressing these opportunities and challenges to accomplish the agency's strategic goals.

Organization of the Plan

This strategic plan presents the NRC's mission, vision, as well as three strategic goals the agency is working to achieve. Each strategic goal has supporting objectives and strategies that reflect the outcome the agency is trying to achieve and the NRC's role in achieving it. The goals, objectives, and strategies are supported by evidence, as well as contributing programs and activities. Strategic objectives also form the basis for a set of performance goals and indicators established to help the agency monitor and understand progress. Figure 1 provides an overview of the NRC's strategic goals and objectives, including the associated theme that reflects the objectives' major purposes and outcomes. All organizations within the NRC play a significant role in leading the strategic goals, objectives, and strategies. Key external factors that influence the ability of the NRC to achieve its strategic goals and the associated objectives are discussed in Appendix A. Appendix B offers a glossary of terms used throughout this plan.

Theme	Goal	Objectiv es
		Provide quality licensing and oversight of nuclear facilities and radioactive materials.
Safety and Security	Ensure the safe and secure use of radioactive materials.	Ensure regulatory requirements adequately support the safe and secure use of radioactive materials.
		Maintain emergency preparedness and response capabilities for NRC and NRC-licensed facilities.
		Foster an organizational culture in which the workforce is engaged, adaptable, receptive to change, and makes high quality and timely decisions. Enable the workforce to carry
Organizational Health	Continue to foster a healthy organization.	out the agency's mission by leveraging modern technology, innovation, and knowledge management to support datadriven decisions in an evolving regulatory landscape.
		Attract, develop, and maintain a high-performing, diverse, engaged, and flexible workforce with the skills needed to carry out the NRC's mission now and in the future.
		Engage stakeholders in NRC activities in an effective and transparent manner.
Stakeholder Confidence	Inspire stakeholder confidence in the NRC.	Use high quality data and information in the NRC decisionmaking process and ensure the information is available and accessible to interested stakeholders.

Figure 1 Overview of the Strategic Themes, Goals, and Objectives

FULL DRAFT STRATEGIC PLAN FOR FISCAL YEARS 2022-2026

<u>Mission</u>

The NRC licenses and regulates the Nation's civilian use of radioactive materials to provide reasonable assurance of adequate protection of public health and safety; to promote the common defense and security; and to protect the environment.

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<u>Vision</u>

Demonstrate the Principles of Good Regulation³ (independence, openness, efficiency, clarity, and reliability) in performing our mission.

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Strategic Goals, Objectives, and Strategies

The NRC has three strategic goals that represent the results the agency must achieve to carry out its mission successfully. These goals are the foundation for the organization of this plan:

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Goal 1: Ensure the safe and secure use of radioactive materials

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The Atomic Energy Act of 1954, as amended, is the fundamental U.S. law establishing the development, use, and control of nuclear materials for both civilian and military purposes. The NRC was established by the Energy Reorganization Act of 1974 for the purpose of licensing and regulating the civilian use of these materials. As such, the NRC is tasked with providing reasonable assurance of adequate protection of public health and safety, promoting the common defense and security, and protecting the environment. The NRC accomplishes this through day-to-day activities such as reviewing, issuing, and renewing power reactor licenses and amendments; overseeing the safety and security of power reactor facilities, including the storage and transportation of spent fuel; and licensing and regulating non-power uses of radioactive materials, such as industrial and medical applications of radionuclides. Although licensees and certificate holders have the primary responsibility for the safe and secure use of licensed radioactive material that they possess, the NRC establishes regulatory requirements, develops guidance, maintains continuing regulatory oversight, and, when necessary, enforces compliance with NRC requirements throughout the license term. For this goal, a successful outcome is one in which the civilian use of radioactive materials within the United States is carried out in a manner that protects the health and safety of the public and the environment, and promotes the common defense and security.

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Safety and Security Objective 1: Provide quality licensing and oversight of nuclear facilities and radioactive materials.

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The NRC maintains technically sound and rigorous licensing and oversight processes commensurate with the risk of the regulated activity using information gained from domestic and international operating experience, changes to the threat environment, climate change impacts, research, and lessons learned. The NRC monitors the performance of licensees to ensure

The Commission established the NRC's Principles of Good Regulation in 1991 to focus the agency on its safety and security mission while appropriately considering the interests of the NRC's stakeholders, including the public and licensees. The agency puts these principles into practice with effective, realistic, and timely regulatory actions, consistent with our organizational values and our open, collaborative work environment. The NRC's Principles of Good Regulation and other Values can be found at https://www.nrc.gov/about-nrc/values.html#principles.

consistency with its safety and security mission. As part of its regulatory responsibilities, the NRC must protect classified and sensitive unclassified information related to U.S. Government programs for the physical protection and safeguarding of nuclear materials and facilities from unauthorized disclosure.

Strategies:

 Promote risk-informed decisionmaking to result in effective and efficient oversight, rulemaking, and licensing and certification activities.

 Maintain material safety and security through the National Materials Program in partnership with Agreement States.

Uphold high quality standards and technical proficiency.

 Ensure that programs for the handling and control of classified and sensitive unclassified information are effectively implemented at the NRC and at licensed facilities.

 Ensure that licensees have resiliency measures to address the potential for increased risk due to climate change.

Evidence

The NRC receives information from applicants and licensees to consider in its licensing activities. The NRC relies heavily on its independent analysis of licensee submittals, licensing basis documents, and licensee responses to NRC's requests for information to make its regulatory decisions. The NRC staff uses standard review plans and other guidance where applicable, to efficiently review licensing requests while ensuring that the applicant's assumptions are technically sound and that the proposed activities will provide adequate protection of public health and safety. These guidance review documents leverage operational data and incorporate lessons learned from past reviews.

The NRC's oversight activities collect data on licensee performance by monitoring daily licensee activities, performing routine inspections, and performing reactive inspections. Monitoring and inspection functions at the agency closely focus on activities having the greatest impact on safety and overall risk.

 Information about licensee performance is used to assess safety significance and provide for an appropriate NRC response when warranted. Such responses can include supplemental inspections for selected issues or enforcement actions on significant inspection findings. These responses aim to keep the licensees at a performance level that ensures the safe and secure use of radioactive materials. Additionally, the NRC performs an annual review of nuclear materials users' inspection and enforcement data, as well as the NRC and Agreement State performance data to identify any adverse trends related to nuclear materials safety or security that warrant regulatory action.

Contributing Programs and Activities

Inspection Programs, Enforcement Program, Allegation Program, Integrated Materials Performance Evaluation Program, National Materials Program, Operating Experience Program, Research Program, Operator Licensing Program, Decommissioning Program, Nuclear Material Cask/Package Certification, Event Assessment, Accident Sequence Precursor Program,

49 Reactor Oversight Process, and Construction Reactor Oversight Process

Safety and Security Objective 2: Ensure regulatory requirements adequately support the safe and secure use of radioactive materials.

The NRC continues to improve the effectiveness and efficiency of its safety and security regulatory framework by promoting transformation through application of lessons learned, historical and contemporary data, and institutional knowledge. The NRC's regulatory framework will be strengthened as it incorporates risk-informed performance-based approaches and revises regulatory requirements based on insights gained from the use of risk-analysis tools while fulfilling its mission. The agency will develop the regulatory framework to review novel applications and advanced technologies required by NEIMA.

Strategies:

- Maintain and further risk-inform the current regulatory framework using information gained from operating experience, lessons learned, external and internal assessments, technology advances, research activities, and changes in the threat environment.
- Proactively identify, assess, and address safety issues, threats, vulnerabilities, and security risks.
- Leverage institutional knowledge, including that of Agreement States, to identify key areas of regulatory improvement.

Evidence

The NRC performs regulatory analyses to build evidence that informs the regulatory framework. Regulatory analyses are formal analyses that accompany proposed agency actions that quantify costs and benefits and consider preferred alternatives. Regulatory analyses are a decision tool, providing a transparent rationale for decisionmaking.

Contributing Programs and Activities

Rulemaking Process, Generic Communications, Operating Experience Program, Inspection Programs, and National Materials Program

Safety and Security Objective 3: Maintain emergency preparedness and response capabilities for NRC and NRC-licensed facilities.

Readiness to respond to an incident or emergency and reduce the consequences (should one occur) are key elements for achieving the NRC's goal of safe and secure use of radioactive materials. The NRC emphasizes the integration of safety, security, and emergency preparedness as the basis for the NRC's primary mission of adequately protecting public health and safety. The NRC uses risk-informed and performance-based approaches to enhance the effectiveness and efficiency of the regulatory framework that appropriately consider defense-indepth and risk insights. These approaches ensure that multiple layers of defense protect against accidents and their effects to ensure that the risk to the public is acceptably low. In this approach, the NRC does not rely solely on preventing emergencies, but also recognizes that provisions in approved emergency plans are included to mitigate the effects of emergencies, should they occur. Therefore, the NRC must ensure that all licensees have effective preparedness and response programs in place to address an emergency. The NRC must also ensure that effective programs are in place for the NRC itself to respond to incidents or events at nuclear facilities.

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Strategies:

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- Ensure the NRC maintains its readiness to respond to incidents and emergencies involving NRC-licensed facilities and radioactive materials, other events of domestic and international interest, and public health emergencies or other emergencies involving NRC's facilities and workforce.
- Ensure licensees have programs and plans in place to enable an NRC finding of reasonable assurance that adequate protective measures can and will be taken in the event of a radiological emergency.

Evidence

Evidence-based decisionmaking is used by the NRC to support emergency preparedness and response capabilities for the NRC and NRC-licensed facilities. Emergency preparedness and response data are collected during routine inspections, exercises, and through reporting requirements. Evidence is used to analyze the licensees' plans and actions to respond to an incident and, to review the licensees' protective actions to minimize the event's impact on public health and safety and the environment. During an event, the NRC obtains and analyzes event information to assess an event's potential impact on public health and safety and the environment. The agency in turn provides expert consultation, support, and assistance to State and local public safety officials responding to the event.

Contributing Programs and Activities

Force-on-Force Program, Incident Response Program, Emergency Preparedness Programs, Inspection Programs, Operating Experience Program, and Reactor Oversight Process

Goal 2: Continue to foster a healthy organization

A focus on organizational health is necessary to foster the agency's ability to carry out its mission. A healthy organization provides the capacity and capability to enhance the agency's culture, organizational learning, business practices, and strategic management to prepare for an evolving future. Continual improvement in these areas enables the NRC to enhance stewardship of resources, technology, and the workforce to improve performance in achieving its mission. In addition, this will continue to facilitate the NRC's transformation vision to be a more modern, risk-informed regulator.

A successful outcome of this goal results in an organization and infrastructure that facilitates continuous learning and innovation, knowledge management, diversity and inclusion, technology adoption, and strategic planning, which in turn inspires our workforce. Positive results include a culture that creates a sense of belonging, promotes and sustains a strong safety culture, fosters creativity and innovation, connects vision with action, and continuously adapts and strives to be a healthy organization.

Organizational Health Objective 1: Foster an organizational culture in which the workforce is engaged, adaptable, receptive to change, and makes high quality and timely decisions.

As the NRC adapts to new technologies, changes in the industry, workspace changes, and agency transformation and innovation efforts, the agency continues to invest in its staff with a focus on inclusion and excellence. The NRC strives for an environment in which everyone is engaged and accountable for creating a healthy and inclusive culture that embraces diversity and enables everyone to excel. The NRC encourages staff to look for opportunities to implement transformative and innovative ideas and remain agile in its work.

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Strategies:

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Maintain a high-performing, diverse, engaged, and agile workforce supported by a healthy organizational culture with focus on safety, security, and continuous improvement to meet mission needs.

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 Continue to transform into a more modern, risk-informed regulator that keeps pace with technological innovations.

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Promote innovation and development of new ideas by the NRC workforce.

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 Promote an organizational culture that embraces inclusion by recognizing the importance of a diverse workforce.

18 19 Recognize and act to inform the agency's decisions by weighing diverse and competing staff perspectives, having respect for self and for others, being open-minded and inquisitive, and using all available processes to address differences of opinion.

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Evidence 23

> The NRC prioritizes staff input to drive evidence and decisionmaking toward the desired organizational culture. Feedback from surveys, meetings, initiatives, and lessons learned is used to gauge staff engagement and adaptability while promoting innovation and diversity. The NRC uses this data to propose paths that lead to an inclusive and empowered workforce capable of making high-quality, timely, and evidence-based decisions to ensure the safe and

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Life Programs

secure use of radioactive materials.

Contributing Programs and Activities

Organizational Health Objective 2: Enable the workforce to carry out the agency's mission by leveraging modern technology, innovation, and knowledge management to support data-driven decisions in an evolving regulatory landscape.

Staff surveys (e.g., Federal Employee Viewpoint Survey, Office of the Inspector General Safety

NRC, Affirmative Employment and Diversity Management Program, Culture Initiative, and Work

Culture and Climate Survey, Pulse Survey), all-employee and town hall meetings, employee

suggestion programs, Innovate NRC, Nuclear Regulator Apprenticeship Network, Embrace

Modernizing our technology and increasing staff access to information is central to maximizing the capability of the workforce, expanding the agency's ability to attract the best talent, and facilitating timely and high-quality regulatory decisions. Technologies will enhance the NRC's ability to capture critical insights and more effectively transfer important regulatory knowledge.

The NRC's approach focuses on modernizing information technology tools and systems, improving business processes, enhancing access to data for more risk-informed decisionmaking, modernizing the NRC's network, and improving stakeholder experience.

Strategies:

 Recognize and act on current and future information technology needs to effectively carry out the NRC's mission.

 Ensure the NRC's data strategy is effective to enhance access and use of internal and external data for decisionmaking.

 Introduce new technologies to enhance decisionmaking, improve knowledge management, and accelerate innovation in our regulatory activities.

Evidence

Leveraging technology and innovation to support the agency's decisionmaking is a priority for the NRC. Continuous internal and external feedback related to agency processes, information technology, and knowledge management provides the data used by the staff to analyze the NRC's current and future information technology needs. Specifically, the staff uses the evidence to adjust, update, and enhance the NRC's use of modern technology and innovation by deploying new systems, processes, and software to effectively and efficiently carry out the NRC's mission.

Contributing Programs and Activities

Information Technology and Information Management Strategic Roadmap, Knowledge Management Program, Continual Service Improvement Plan, Competency Modeling Project, InnovateNRC, Data Strategy, and Information Technology and Information Management Portfolio Executive Council Forum

Organizational Health Objective 3: Attract, develop, and maintain a high-performing, diverse, engaged, and flexible workforce with the skills needed to carry out the NRC's mission now and in the future.

 The NRC realizes that to attract, develop, and maintain highly skilled and educated professionals, the agency must be an employer of choice that provides access to the tools to perform their jobs and a workplace that promotes strong employee engagement. The NRC's approach for this objective focuses on ensuring that the NRC has a highly trained workforce that is knowledgeable of regulatory processes that govern agency actions and the regulatory principles inherent in making the agency a strong and independent regulator.

Strategies:

 - Ensure the agency is an employer of choice that offers a work culture and workplace environment that attracts and retains highly motivated employees, who are engaged, adaptable, high performing, and receptive to change.

 Ensure the agency has a workforce with the right skillsets to achieve the agency's goals now and for the future by integrating results of strategic workforce planning into our hiring activities, enhancing recruiting efforts, and streamlining hiring practices.

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Evidence

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Maintain a high-performing, inclusive, and engaged workforce by rewarding high performers, enhancing career paths, promoting diversity, and creating a continual learning culture with cross-training opportunities for career advancement.

- Improve knowledge management by identifying and capturing critical information and leveraging the agency's investment in modern information management and technology to enhance information accessibility and searchability.
- Improve performance and productivity by investing in technical, professional and management training, accountability, and encouraging leadership development.

To attract and sustain a high-performing and diverse workforce the agency continuously assesses its leadership, scientific and technical core competency needs, recruitment activities, applicant data, hiring results, by continuously seeking feedback from the staff at all levels. The agency analyzes this data to design its strategic workforce plan; inform recruitment, hiring, and succession planning decisions; develop a robust knowledge management and transfer system; and continuously provide learning opportunities in support of an inclusive and engaged workforce.

Contributing Programs and Activities

Human Capital Operating Plan, Strategic Workforce Planning Process, Agency Annual Recruiting Plan, University Champions Program, Civil Rights Program, Affirmative Employment and Diversity Management Program, Federal Equal Opportunity Recruitment Plan, student and recent graduate programs (e.g., Nuclear Regulator Apprenticeship Network, Honor Law Graduate Program, etc.), Inclusive Diversity Strategic Plan, Leaders at All Levels Certificate Program, Aspiring Leaders Certificate Program, Senior Executive Service Candidate Development Program, work life programs, Career Mentor Program, Supervisor Development Program, and Employee Journey Initiative

Goal 3: Inspire stakeholder confidence in the NRC

To be successful, the NRC must not only excel in carrying out its mission but must do so in a manner that inspires confidence. The NRC strives to promote transparency in its regulatory activities, provide opportunities for candid and meaningful public participation, and demonstrate that the agency is a capable, independent, trustworthy, and objective regulator. Confidence in the NRC and engagement with stakeholders are enhanced when the agency consistently carries out its mission in an effective, timely, disciplined, and open manner.

To achieve this goal, the NRC must be viewed as an independent, open, and reliable regulator. This will be accomplished by providing stakeholders with clear and accurate information about, and a meaningful role in, its regulatory processes.

Stakeholder Confidence Objective 1: Engage stakeholders in NRC activities in an effective and transparent manner.

It is key to public confidence that the NRC engage with diverse stakeholders with a wide range of views and expertise, learn from them, and communicate in clear and accessible ways. The NRC's mission is carried out on behalf of the American people, which makes nuclear regulation the public's business. As such, it should be transacted openly and candidly to maintain the public's confidence.

Strategies:

- Foster proactive and meaningful interactions with States, Tribes, other governmental and nongovernmental organizations, the regulated industry, the international regulatory community, and other members of the public.
- Provide a fair and timely process to allow public involvement in NRC decisionmaking.

Evidence

Stakeholder engagement is achieved through regular involvement of the affected parties. The NRC engages the media and the public through public meetings, seminars, press releases, NRC-sponsored training, and regulatory communications, among other activities. Stakeholder feedback collected during these interactions is analyzed and used by the NRC to update, enhance, and increase the communication tools and processes used to reach and engage with the public. These measures include reaching a wider pool of stakeholders, increasing opportunities for stakeholder feedback, and enhancing the NRC's information on public websites and presence in social media. This information is also used to develop and provide training to internal and external stakeholders on the NRC's mission, decisionmaking processes, data collection, and accessibility. This ensures an effective and transparent process to allow public involvement in NRC's decisionmaking.

Contributing Programs and Activities

Public Reactor Oversight Program Annual Assessment Meetings, Customer Feedback Process, Customer Service Plan, Initial Web Improvement Plan, Open Government Plan, Facilitator Corps, Freedom of Information Act Program, Agreement States Program, Federal and State Liaison Program, and Tribal Liaison Program

Stakeholder Confidence Objective 2: Use high quality data and information in the NRC-decisionmaking process and ensure the information is available and accessible to interested stakeholders.

The agency strives to increase transparency in decisionmaking processes and decisions by increasing the quality, availability, and sharing of information.

Strategies:

- Engage stakeholders to ensure awareness and understanding of the NRC's regulatory requirements and decisions.
- Develop effective communication strategies to explain how risk and uncertainty are addressed and considered in the decisionmaking process.
- Make information relevant to the NRC's regulatory activities available and accessible to interested stakeholders.
- Ensure that stakeholders, particularly members of the public that may be disproportionately impacted by the agency's decision, are aware of opportunities for public engagement in the NRC's decisionmaking processes.

- Ensure that the NRC maintains and publishes accessible and comprehensive information by transforming agency information and siloed databases.
- Leverage feedback received from a broad range of stakeholders in the agency's decisionmaking processes.
- Maintain a high standard of quality and clarity in NRC documents to promote confidence in the agency's work.

Evidence

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As a regulatory agency, the NRC documents the bases for its decisionmaking processes. The NRC has established procedures for the systematic collection, analysis, and management of the data and information associated with carrying out its regulatory responsibilities. These procedures include timeliness goals and metrics to ensure that regulatory decisions and supporting information are made available to stakeholders promptly. The NRC solicits feedback from stakeholders on the timeliness, accessibility, uniformity, relevance, and content of the information contained in its platforms. This feedback is crucial as it provides the agency with the basis for adopting measures to continuously improve the NRC's use of high-quality data and information in our decisionmaking process and to ensure that information is available and accessible to stakeholders. The NRC, as a regulatory agency whose processes and decisions are captured primarily in the form of documents, uses this information to ensure its documents are available in widely used formats for public viewing.

Contributing Programs and Activities

Generic Communications Program, Open Government High-Value Dataset Identification and Submission Process, and Common Baseline Plan

APPENDIX A - KEY EXTERNAL FACTORS

Many external factors influence the ability of the U.S. Nuclear Regulatory Commission (NRC) to achieve its strategic goals and the associated objectives. These factors include industry operating experience, national priorities, climate change impacts, the security and threat environment, legislation, Federal court litigation, market trends, new technologies, public health emergencies, and resource availability. This appendix discusses the most significant of these factors. The NRC will strengthen its ability to manage change and respond promptly to shifts in agency priorities necessitated by these future planning challenges. The agency will also make efforts to influence those factors that enable the achievement of its strategic objectives, where appropriate. The NRC performs an annual environmental scan as part of its capacity assessment to identify key external factors that will influence the agency's workload and workforce over a 5-year period.

Market Forces and Climate Change Mitigation

Many market forces affect the nuclear industry, which may impact the business operations of license applicants and operating facilities subject to NRC jurisdiction. For example, supply and demand fundamentals driven by competition from alternative energy sources (e.g., natural gas) may increase the competitive landscape and reduce operating margins. Financial and insurance markets, Federal and State taxation and regulatory policies, and aging technologies may also affect operating costs. Additionally, the effects of climate change can have an impact on existing energy infrastructure. Efforts to reduce carbon emissions and expand low-carbon electricity generation also can incentivize the development and use of new technologies and facilities. These factors, in turn, can affect NRC operating budgets and priorities. The NRC must be prepared with the regulatory infrastructure to support areas such as decommissioning of older or uneconomic operating plants, changes in exports and imports in an increasingly global economy, and licensing of new technologies and facilities.

Globalization and Development of Nuclear Technology

Technological changes may affect the development of advanced nuclear systems and support infrastructure, resulting in market changes and other impacts on industry activities subject to NRC jurisdiction. Increased globalization effects of nuclear technology, including small modular reactors, could increase competition in the nuclear supply chain and, therefore, affect operating costs across the nuclear industry and increase the complexity of regulatory oversight. In addition to operating and regulatory impacts on the domestic nuclear industry, globalization necessitates enhanced cooperation between the United States and international organizations for licensing activities, training, development and implementation of codes and standards, and conventions and treaties to ensure safe and secure use of nuclear technology.

Security Threats and Significant Incidents

Looking ahead, the U.S. national security landscape is likely to continue to be dynamic, encompassing a full range of threats and incidents, including the identification of and protection against cyber threats and physical security threats such as nuclear proliferation, robotics and unmanned aerial systems, and terrorism. As a result, the regulatory approach needed to ensure the safety and security of nuclear materials and infrastructure is expected to continue to evolve.

A significant incident at a nuclear facility, whether caused by adversaries, natural disaster, or other factors, could cause the agency to reassess its safety and security requirements, affect the agency's focus and include extensive interactions with other Federal and State partners. Given the high level of public interest in the safe and secure use of radioactive materials, even events of low safety significance could require a response that involves considerable agency resources. The NRC must anticipate and be prepared for an operational and regulatory response to threats and incidents involving NRC-licensed nuclear infrastructure.

Government and Regulatory Impacts

Actions taken by Congress or Executive Branch agencies may affect the NRC, either directly or indirectly by affecting NRC stakeholders. Actions could impact areas such as investment in new technology, operation and oversight of an aging reactor fleet, or other NRC policies and initiatives.

International Treaties and Conventions

The ratification by the United States of international instruments related to the safety of nuclear facilities or radioactive materials could potentially impose binding provisions on the Nation and the corresponding governmental agencies, such as the NRC.

Workforce Dynamics

The agency's most valuable resource is its staff, and its ability to recruit, hire, train, motivate, and retain qualified staff in a competitive job market is critical to meeting its strategic goals. Workforce changes such as greater diversity, employee expectations for more flexibility in work locations and schedules, and an increased frequency of job changes during careers will require the NRC to better understand its employees and become a more flexible and agile organization.

Information Technology Advances

The NRC continues to build a flexible, agile, and innovative information technology and information management environment that is prepared for the rapid development of new technologies and changes in the nuclear industry. Technological advances continue to change the way the agency works and interacts with stakeholders. The increased use of social media, virtual meetings, data analytics, cloud computing, and artificial intelligence will improve efficiency and provide support for the workforce. These activities increase dependency on a robust and resilient network and information technology infrastructure. The NRC will need to gain knowledge and expertise for a wide range of skills and capabilities such as artificial intelligence and data literacy, to continue expanding the use of data for decisionmaking in the agency.

The NRC continues its efforts to strategically plan, modernize the agency information technology systems, integrate the use of information technology systems and applications throughout the agency, and increase internal capacity to gather, define, evaluate, analyze, link, and present data to support decisionmaking. Maintaining the secure use and protection of sensitive and proprietary information will be a challenge given the increased use of mobile devices, alternative data storage options, new communication technologies, and the increased use of telecommunication. The NRC will remain prepared for the heightened risk that sensitive information held by the agency or its licensees may be lost, misplaced, or intercepted and fall into the hands of unauthorized users. The agency will need to maintain a knowledgeable

- workforce capable of addressing these cybersecurity challenges. Additionally, the agency will see an increased demand for cybersecurity external auditing, risk reporting, automated real-time risk assessment and mitigation, and a continuation of cybersecurity workforce shortage. 2 3

APPENDIX B - GLOSSARY

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Agreement State: A U.S. State that has signed an agreement with the U.S. Nuclear Regulatory Commission (NRC), or its predecessor the Atomic Energy Commission, pursuant to Section 274 of the Atomic Energy Act of 1954, as amended, authorizing the State to regulate certain uses of radioactive materials within the State.

Analysis: A examination of a subject or discrete product, in support of the agency's regulatory mission (technical and corporate), in order to gain an understanding of its elements, or parts.

Capacity Assessment: An objective accounting of the NRC's capacity (e.g., the sufficiency of the agency's staffing, funding, infrastructure, and processes) to carry out the evidence-building activities needed to meet agency functions and to disseminate and use evidence.

Classified Information: Information that has been determined pursuant to an Executive Order or the Atomic Energy Act of 1954, as amended, to require protection against unauthorized disclosure and is marked to indicate its classified status when in documentary form. The NRC has two types of classified information. The first type, known as National Security Information, is information that is classified by an Executive Order. Its release would damage national security. The second type, known as Restricted Data, would assist individuals or organizations in designing, manufacturing, or using nuclear weapons. Access to both types of information is restricted to authorized persons who have been properly cleared and have a "need to know" the information to accomplish their official duties.

Effectiveness: The degree to which something is successful in producing a desired result.

Efficiency: The degree to which the resources needed to produce an outcome can be minimized without reducing the outcome's effectiveness.

Emergency Preparedness: The programs, plans, training, exercises, and resources used to prepare for and rapidly identify, evaluate, and respond to emergencies, including those arising from terrorism or natural events such as hurricanes. Emergency preparedness strives to ensure that operators of nuclear power plants and certain fuel cycle facilities can implement measures to protect public health and safety in the event of a radiological emergency. Licensees that operate certain nuclear facilities, such as nuclear power plants, must develop and maintain emergency preparedness plans that meet NRC requirements.

Evaluation: As defined by 5 U.S.C. 311(3), "evaluation" means an assessment using systematic data collection and analysis of one or more programs, policies, and organizations intended to assess their effectiveness and efficiency.

Evidence: As defined by 44 U.S.C. 3561(6), "evidence" means information produced as a result of statistical activities conducted for a statistical purpose. However, evidence, as applied in the context of the Federal Performance Framework for improving organizational and agency performance, is viewed more broadly as the available body of facts or information indicating whether a belief or proposition is true or valid. As such, evidence can be quantitative or qualitative and may come from a variety of sources, including foundational fact finding (e.g., aggregate indicators, exploratory studies, descriptive statistics, and other research),

performance measurement, policy analysis, and program evaluation (see OMB Memorandum M-19-23).

Evidence-Building Activities: The planning, implementation, management, and reporting of evidence (e.g., analyses, research, assessments, and program evaluations) performed by the agency for programmatic, operational, regulatory, and policy decisionmaking.

Evidence-Building Plan: A systematic approach for identifying and addressing priority questions relevant to the agency's programs, policies, and regulations. More broadly, it is a coordination tool to engage stakeholders in evidence planning and building to help achieve an agency's mission.

Incident Response: Activities that address the short-term, direct effects of a natural or human-caused event and require an emergency response to protect life or property.

National Materials Program: The broad collective effort within which both the NRC and the Agreement States function in carrying out their respective regulatory programs for radioactive material.

Radioactive Material: As used in this strategic plan, refers to any substance that produces ionizing radiation and is regulated by the NRC. The NRC regulates civilian uses of material producing ionizing radiation, including the use of such substances for nuclear power generation, all aspects of the nuclear fuel cycle, medical and government uses, and research and industrial applications.

Radioisotope (radionuclide): An unstable isotope of an element that decays or disintegrates spontaneously, thereby emitting radiation. About 5,000 natural and artificial radioisotopes have been identified.

Regulatory Framework: The interrelated elements that form the basis for the NRC's oversight of the use of radioactive materials, including (1) the NRC's mandate from Congress in the form of enabling legislation, (2) the NRC's licenses, orders, and regulations in Title 10 of the Code of Federal Regulations (10 CFR), (3) regulatory guides, review plans, and other documents that clarify and guide the application of NRC requirements and amplify agency regulations, (4) the licensing and inspection procedures used by NRC employees, and (5) the agency's enforcement guidance.

Risk Assessment: A systematic method for addressing three questions as they relate to the performance of a particular system:

- 1. What can go wrong?
- 2. How likely is it?
- 3. What are the consequences?

Risk-Informed: An approach that considers risk insights along with other factors such as engineering judgment, safety limits, and redundant or diverse safety systems. Such an approach is used to establish requirements that better focus licensee and regulatory attention on design and operational issues and ensure that such attention is commensurate with the importance of those issues to public health and safety.

Risk-Informed Decisionmaking: An approach to regulatory decisionmaking that considers risk and engineering insights.

Risk Insights: The results and findings that come from risk assessments. They may include improved understanding of the likelihood of possible outcomes, sensitivity of the results to key assumptions, relative importance of the various system components and their potential interactions, and the areas and magnitude of the uncertainties.

 Safeguards Information: A special category of sensitive unclassified information that must be protected. Safeguards information includes control or accounting procedures or security measures for the physical possession of certain quantities of special nuclear material; security measures for the physical protection of certain quantities of source material or byproduct material; and security measures for the physical protection of and the location of plant equipment vital to safety. Broadly speaking, safeguard information concerns the physical protection of operating power reactors, spent fuel shipments, strategic special nuclear material, or other radioactive material.

Stakeholders: Members of the public; public interest groups; Federal, State, Tribal, and local agencies; non-governmental organizations; and license applicants and licensees with an interest in a given NRC topic or activity.

Standards: Technical requirements and recommended practices for any device, apparatus, system, or phenomenon associated with a specific field.

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