

U.S.NRC

United States Nuclear Regulatory Commission

Protecting People and the Environment

U.S. NUCLEAR REGULATORY COMMISSION

**Capacity
Assessment
FY 2022**

Introduction

What is the Foundations for Evidence-Based Policy-Making Act of 2018 (i.e., The Evidence Act)?

The Office of Management and Budget (OMB) expects agencies to improve their use of evidence and data to generate policies and inform programs supporting their mission and operations. The Evidence Act affirms the Federal Government's commitment to building and nurturing a culture of evidence and the infrastructure needed to support it.

Implications of the Evidence Act:

- Establishes critical leadership positions and activities to facilitate a culture of evidence.
- Calls on agencies to strategically plan and organize evidence-building, data management, and data access functions to ensure an integrated and direct connection to evidence needs.
- Institutionalizes the formal evaluation of programs, operations, and policies to improve agency performance.
- Requires an annual capacity assessment submitted to OMB to assess an agency's ability to build and maintain capacity to perform evidence-building tasks.

Which agency functions were included in NRC's FY 2022 assessment?

LICENSING	RULEMAKING
OVERSIGHT	FINANCIAL MANAGEMENT
RESEARCH	EVALUATION



What is a capacity assessment?

A capacity assessment helps the NRC to assess, build, and maintain the capacity to carry out evidence-building activities by:

- 1 Establishing measures of success that capture the NRC's progress in evidence-building.
- 2 Identifying needs, challenges, and opportunities for increasing technical expertise for evidence-building activities.
- 3 Increasing knowledge of evidence-building methodologies, practices, and standards.
- 4 Improving the agency's processes and ability to make evidence-based decisions.





How was the assessment done?




Evidence-building activities, including analysis and research, to support each of the six selected agency functions were assessed against five key attributes: coverage, quality, methods, effectiveness, and independence. The staff identified 27 findings and mitigating strategies across the various NRC functions included.

What data were used to identify findings and mitigating strategies?

- Survey data
- Interviews with staff and managers
- Strategic Workforce Planning data
- Competency Model Assessment data
- Budget data
- Work output data including licensing actions, rulemaking actions, inspections completed, and significant research projects completed

Priority Findings

	FINDING	PLANNED RESPONSE/ MITIGATION STRATEGY
<p>WORKFORCE GAPS</p> 	<p>Key evidence-building positions have expected staffing gaps across each analyzed NRC function and are potentially susceptible to high attrition. These gaps, if not mitigated, may challenge NRC's ability to meet its mission.</p>	<p>The NRC should (1) develop an agency-wide strategy to hire for positions with large staffing gaps and (2) proactively use recruiting, retention, and knowledge management resources to ensure qualified staff can perform NRC functions.</p>
<p>KNOWLEDGE MANAGEMENT</p> 	<p>Survey results showed that knowledge management tools are not being utilized to their fullest extent to ensure successful capture and transfer of knowledge to staff.</p>	<p>The NRC should undertake a formal evaluation of its knowledge management program to better align efforts with expected outcomes.</p>
<p>COMPETENCY MODELING</p> 	<p>The competency modeling program needs refinement to provide insights into agency-wide skill gaps. Many improvements are needed, including more participation among staff and branch chiefs.</p>	<p>The NRC should develop an updated plan to implement competency modeling considering each of the recommendations contained in the capacity assessment.</p>
<p>ARTIFICIAL INTELLIGENCE</p> 	<p>To effectively regulate nuclear facilities that use AI, NRC needs to build staff AI expertise and develop an AI infrastructure, including access to the latest programs, software, and libraries.</p>	<p>The NRC should develop and execute an implementation plan to ensure that goals and actions in NRC's Data Science and AI Strategic Plan are achieved.</p>

	FINDING	PLANNED RESPONSE/ MITIGATION STRATEGY
<p>SUPPORT RESOURCE LIMIT</p> 	<p>Attempts to meet the NEIMA cap on corporate support costs have caused the NRC to reduce or postpone critical investments and services.</p>	<p>The NRC should continue to monitor and document impacts of support resource caps and maintain efforts to alleviate constraints.</p>
<p>RESIDENT INSPECTORS</p> 	<p>The NRC expects challenges in recruitment and retention for its Resident Inspector Program and needs to offer sufficient incentives.</p>	<p>The NRC should continue to assess options using a data-driven approach to monitor program health and ensure resident inspector vacancies can be promptly filled.</p>
<p>PROGRAM EVALUATION</p> 	<p>The NRC would benefit from institutionalizing program evaluation into agency activities, like it has with enterprise risk management and performance management.</p>	<p>The NRC should hire an individual or external firm qualified in designing and performing program evaluations to serve as an agency-wide resource to support evaluation efforts.</p>

Function-Specific Findings

LICENSING

Currently, about **600** staff members perform licensing activities for the NRC. **Without mitigation, the NRC anticipates it may be short 200 licensing staff by 2026.** Retirements play a key role in this potential workforce gap, as over 170 licensing staff are expected to retire by 2026. To reduce the impact of staff attrition, the **NRC will focus on recruitment, retention, and improving knowledge transfer to current and new staff.**

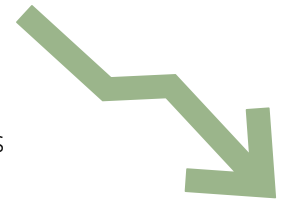
Due to the varying length of time it takes to perform licensing actions, it is difficult to examine efficiency of performing licensing actions. **NRC is planning an evaluation of the licensing program** to learn more.

OVERSIGHT

There are over **600** NRC oversight staff in core positions. Without hiring, the oversight function will be short by around 150 staff by 2026.

The **Resident Inspector** program anticipates challenges regarding recruitment and retention. **NRC will use a data-driven approach to further investigate staffing issues and create and implement an action plan that addresses workforce challenges.**

Another notable oversight function assessment finding was that reactor inspection findings steadily decreased from 811 in 2015 to 124 in 2021. NRC will create a plan to monitor and assess causes and impact of the decline in reactor inspection findings.



RESEARCH



There are about 130 staff in research core positions. By 2026, the NRC anticipates it may have a potential gap of about 25 staff without mitigation. **To address this gap, the NRC will employ targeted hiring, recruitment, retention, and knowledge management strategies.**

NRC has developed its Future Focused Research program aimed at identifying and preparing the NRC for the work of the

future. As the program matures, staff will review it to assess if any changes are warranted to better serve its intended purpose.

The NRC anticipates and is working to address challenges regarding data and modeling needed for computer simulation of advanced non-LWR safety and operations. **NRC intends to perform an analysis of the readiness of computer codes needed to support advanced reactor licensing.**

EVALUATION

NRC plans to hire a program evaluator to lead and support agency-wide evaluation efforts. NRC staff are currently developing a management directive to establish procedures for ensuring evaluation activities are performed consistently across the agency.

FINANCIAL MANAGEMENT

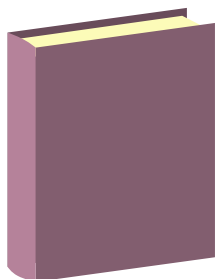
Without mitigation, the NRC anticipates a potential workforce gap of about 12 financial management staff by 2026. **To ensure positions are filled at a faster rate, NRC should consider including financial management positions in the NRAN program or something similar.**

To meet the need for resources and skill development in data analytics, the **NRC will use the Enterprise Data Strategy Implementation** to identify the specific data analytics roles and responsibilities needed, provide role-based training, and develop analysis skills of financial management staff.



RULEMAKING

The NRC has over 30 rulemaking staff. By 2026, the NRC may have a gap of 13 rulemaking staff if mitigation measures are not put into place. **To address anticipated rulemaking staff shortages, NRC will employ knowledge management, retention, and recruitment strategies, along with a focus on NRAN and summer hire programs.**



Datasets for independent analysis are limited, and when rulemaking activities overlap, staff often have to redouble their efforts to complete rulemaking analyses. **NRC will increase training for staff who conduct analyses to support rulemakings.**

In an effort to understand the effectiveness of the NRC's regulatory analysis process, the agency will also determine if a retrospective review of past rulemakings would provide useful data to improve future regulatory analyses.

DEVELOPMENT OF THE FY 2023 CAPACITY ASSESSMENT

NRC has partnered with Pacific Research and Evaluation, a firm with expertise in program evaluation, based in Portland, Oregon, to complete the FY 2023 capacity assessment. PRE is helping NRC to revise the capacity assessment staff survey and conduct management interviews. They will analyze and report on these and additional data collection efforts in 2023.





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