U.S. GOVERNMENT ACCOUNTABILITY OFFICE

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Accessible Version

September 23, 2025

The Honorable John Kennedy
Chair
The Honorable Patty Murray
Ranking Member
Subcommittee on Energy and Water Development
Committee on Appropriations
United States Senate

The Honorable Chuck Fleischmann
Chairman
The Honorable Marcy Kaptur
Ranking Member
Subcommittee on Energy and Water Development and Related Agencies
Committee on Appropriations
House of Representatives

**Nuclear Power: Nuclear Regulatory Commission Relies on Information From its Reactor Oversight Process to Ensure Safety**

The United States has the largest fleet of nuclear power reactors in the world, and nuclear power has accounted for about 20 percent of annual U.S. electricity generation since the late 1980s. In recent years, nuclear energy has provided nearly half of our nation's carbon-free electricity, making it the largest domestic source of carbon-free energy.[1] Currently, the United States has 94 operating commercial nuclear reactors at 54 nuclear power plants in 28 states.[2] As of April 2024, the average age of nuclear reactors in the United States is about 42 years old.

The federal government, through the Nuclear Regulatory Commission (NRC), regulates commercial nuclear power reactors by certifying designs, issuing licenses and license renewals, and conducting inspections, among other things. NRC's mission involves protecting public health and safety through efficient and reliable licensing, oversight, and regulation. In recent years, the U.S. nuclear power industry has faced economic and financial challenges, particularly for reactors located in competitive power markets where natural gas and renewable power generators influence wholesale electricity prices.

[1]Nuclear power plants emit no carbon dioxide during operations and, unlike many sources of renewable energy, typically operate around the clock, producing on average above 90 percent of their generating capacity, according to the Energy Information Administration.

[2]Nuclear power plants are facilities that can host multiple nuclear reactors and other support facilities such as auxiliary buildings that host safety and other systems associated with the reactor (e.g., emergency cooling water systems and radioactive waste systems).

A House report accompanying the Energy and Water Development appropriations bills for fiscal year 2024 included a provision for us to provide a report on NRC oversight of nuclear power plant safety and mechanisms for ensuring adequate protection of public health and safety.[3] Specifically, the House report raised questions about the potential effects of financial pressures on the safety of U.S. nuclear power plants. This report describes the factors that affect the financial condition of nuclear power plants, and the information NRC uses to inform licensing and oversight of plant safety.

To describe the factors that affect nuclear power plants' financial condition, we reviewed industry reports on financial challenges facing the industry, plant safety and operations, and credit outlooks for the nuclear power industry. We also interviewed NRC officials and 12 stakeholders, including academics, industry groups, nuclear power plant companies, and credit rating agencies to obtain their perspectives on the financial condition of nuclear power plants and the industry. We identified these stakeholders using a "snowball sampling" technique.[4] We also analyzed the credit ratings of all operating nuclear power plant companies and the annual Securities and Exchange Commission financial filings, known as 10-K reports, from the five companies that own the most nuclear power reactors in the United States.[5] We obtained the list of companies from NRC's website and verified the list with NRC. Findings from our interviews with stakeholders and review of financial filings from selected companies are not generalizable to all stakeholders and companies.

To describe the information NRC uses on nuclear power plants to inform its licensing and oversight activities, we reviewed relevant laws, regulations, and agency guidance to understand NRC's overall safety processes. We interviewed NRC officials to gain their perspective on the role financial information can play in overseeing plant safety. We also visited one nuclear power plant—Calvert Cliffs Nuclear Power Plant in Lusby, Maryland—to observe aspects of NRC's oversight processes. We interviewed plant staff and NRC resident inspectors on safety procedures and the financial condition of nuclear power plants. We selected this plant because the owner of the plant owns the most nuclear power reactors in the United States. Findings from these interviews and the site visit are not generalizable to all stakeholders and sites.

We conducted this performance audit from October 2024 to September 2025 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

## Background

### Nuclear Power Plant Operations and Financial Condition

Building and operating nuclear power reactors is capital intensive, and few reactors have been built in the United States in recent years. Since 1996, four new reactors have been built in the United States, and the most recent reactors—Vogtle Units 3 and 4—cost a total of $30 billion to

[3]H.R. Rep. No. 118-126, at 190 (2023).

[4]In snowball sampling, the methodology begins with an initial list of contacts and asks each person interviewed to refer the interviewer to additional cognizant persons. The group of referred contacts (or "snowball") grows larger and then narrows as a group of individuals are identified frequently.

[5]10-K reports include key information about various risks companies face, including factors related to the market.

construct and put into operation.[6] Once built, operating nuclear power reactors involves operations and maintenance (O&M) costs, such as equipment upgrades and licensing fees, and additional capital expenditures. According to Department of Energy officials, high O&M costs can lead to plant shutdowns if plant operators do not have the financial capacity to cover the costs. Capital expenditures to replace critical components can be high, as well. For example, replacing a steam generator—infrastructure that converts water into steam and drives turbines to generate electricity—can cost between $500 million and $1 billion, according to several stakeholders we interviewed.

Nuclear power plant companies rely heavily on debt financing to fund infrastructure investments, and companies receive credit rating scores that rate their ability to meet their financial obligations. According to some companies' annual 10-K reports, an inability to access longer-term debt and equity markets is a financial risk because it could affect their financing and result in the deferral of discretionary capital expenditures. Credit rating agencies assess the ability of companies to meet financial commitments and assign credit ratings based on certain criteria, including the capacity factor, or how often a nuclear power plant runs at maximum power. Nuclear power plants have operated at almost full capacity in recent years. Companies that own and operate nuclear power plants in the United States are generally considered by credit rating agencies to have an adequate or strong ability to meet their financial obligations with overall stable credit outlooks.[7] See enclosure I for more information on the credit ratings of these companies and the descriptors and scores.

Nuclear Power Plant Oversight

The Reactor Oversight Process is NRC's program to inspect, measure, and assess the safety and security performance of operating commercial nuclear power plants and to respond to any decline in their performance. NRC assesses nuclear plant performance by monitoring performance indicators and conducting inspections.

- **Performance indicators.** NRC uses performance indicators to monitor essential safety aspects of facility operation—for example, emergency preparedness and physical protection. The plants are to generate and submit quarterly reports to NRC with the relevant data for the performance indicators, such as the number of unplanned reactor shutdowns and worker radiation exposure levels. Each performance indicator is measured against established thresholds related to their effect on safety and color-coded to reflect its safety significance: green indicates performance within expected norms; while white, yellow, or red signal increasing levels of concern.

- **Inspections.** In parallel, NRC conducts regular inspections. Every nuclear power plant is subject to a baseline inspection program that covers routine safety and security practices. Resident inspectors—NRC staff who work full-time on-site at every nuclear power plant—and NRC regional-based inspectors are responsible for carrying out routine inspections. The inspection staff use the "significance determination process" to determine the safety

[6]Vogtle Units 3 and 4 were completed in 2023 and 2024, respectively, after over a decade of construction. Watts Bar Unit 2 was completed in 2016 after decades of construction and, at that time, was the first nuclear unit to enter commercial operation in 20 years since Watts Bar Unit 1 was completed in 1996.

[7]Credit ratings can provide insight about the financial health of a company and the overall financial condition of the nuclear industry. Companies that own and operate nuclear power plants often provide electricity through a variety of additional energy sources including hydroelectric, natural gas, and solar. Credit rating agencies assess and rate an entire company, rather than providing a rating for only a company's nuclear operations.

significance of inspection findings, using the same color-coded system as the performance indicators.

In addition to NRC's oversight, the Institute of Nuclear Power Operations, an industry organization established in response to the 1979 accident at Three Mile Island, periodically evaluates nuclear power plant performance and operating safety using standards of excellence that exceed NRC's regulatory requirements. This organization provides assessment ratings to nuclear power plants based on safety and operational performance. In addition, NRC and the institute have a memorandum of understanding whereby the institute collects and tracks safety data to inform NRC's Reactor Oversight Process and provides NRC with information on the performance of the industry and of individual plants, according to Institute of Nuclear Power Operations officials.

## Market and Other Factors Affect the Financial Condition of Nuclear Power Plants

Market and other factors affect the financial condition of nuclear power plants. These factors include the type of market and electricity prices and the availability of federal and state tax credits.[8]

**Market Type and Electricity Prices.** Nuclear power plants operate in different types of markets, including (1) rate-regulated markets, also known as regulated markets, where companies sell electricity at a rate established or approved by a state public service or public utility commission;[9] (2) competitive markets, where the price of electricity is determined by supply and demand; and (3) hybrid rate-regulated and competitive markets.

Companies operating in rate-regulated markets face less financial risk associated with fluctuating electricity prices, while those operating in competitive markets must absorb market fluctuations. For example, according to our review of selected nuclear power companies' 10-K reports, cost-based rate regulation and other cost recovery mechanisms can mitigate adverse changes in commodity prices.[10] Moreover, plants in rate-regulated markets can generally receive higher revenue for electricity or pass capital or O&M costs on to ratepayers, provided the regulator approves recovering such costs. As such, plants in rate-regulated markets are likely to face more stable economic conditions.

In contrast, nuclear power plants in competitive markets rely on the market to determine the price of electricity and experience more financial pressure than those in rate-regulated markets, according to one credit agency. Of the 13 nuclear power reactors that have shut down in the United States since 2013, eight were in competitive markets and one was in a hybrid market. Plants in competitive markets tend to have lower revenues than those in rate-regulated markets, due to competition from other power-generating resources, according to the Energy Information

[8]Nuclear power plants operate in a complex market and regulatory environment that involves significant risks. While companies that own or operate nuclear power plants may face unique challenges, these companies also share similar financial, economic, and market risks, according to our review of the companies' 10-Ks. Specifically, these companies are subject to the same financial, economic, and market risks to operating nuclear power plants, including price volatility associated with the power market in which a company operates, inflation, the ability to access capital and credit markets, and interest rates.

[9]Public power markets work similarly to rate-regulated markets but do not go through state regulators to set rates. In this report, we refer to public power markets as rate-regulated markets.

[10]Cost-based rates are electricity rates that are based on regulator-approved costs, operating expenses, and a reasonable investment return. Cost-based rate regulations operate in rate-regulated markets, also known as cost-of-service markets.

Administration.[11] As of August 2025, about one-third (30 of 94) of the nuclear power reactors in the United States operate in a competitive market; over half (55 of 94) operate in a rate-regulated market; and about one-tenth (nine of 94) operate in a hybrid rate-regulated and competitive market.

**Federal and State Tax Credits.** Some nuclear power plant costs can be offset by federal and state tax credits. For example, two federal tax credits available to nuclear power plants can help offset costs by providing funding to repair or replace at-risk reactors or by providing additional revenue.[12] Tax credits are beneficial for nuclear power companies because they provide some financial certainty, according to several stakeholders.

In addition, some states provide zero-emission tax credits that help offset costs by subsidizing plants' production of electricity. The credits help nuclear plants in these states compete against other sources of energy such as natural gas. For example, according to the Congressional Research Service, from 2016 through 2021, state intervention—including tax credits and subsidies—helped avert shutdown at 20 nuclear reactors that had previously announced closures or were likely to close.[13]

In addition to tax credits providing some financial certainty in certain states, power purchase agreements—a long-term contract where a buyer agrees to purchase electricity from a seller at a fixed price—can also provide some financial certainty for plants. For example, private technology companies that need power to operate data centers have entered into agreements such as power purchase agreements with nuclear power companies providing these companies a guaranteed customer and cash flow and thus the capital needed to construct, restart, or continue operating reactors.[14]

## NRC Relies on its Reactor Oversight Process to Ensure Safety and Uses Nuclear Power Plant Financial Information for Licensing and Other Purposes

NRC primarily relies on information collected as part of its Reactor Oversight Process to ensure plant safety. According to NRC's Reactor Oversight Process, the process focuses on monitoring

[11]U.S. Energy Information Administration (EIA), *Nuclear Power Outlook: Issues in Focus from the Annual Outlook 2018*, May 2018.

[12]The Infrastructure Investment and Jobs Act established the Civil Nuclear Credit Program that provides tax credits to plants that were projected to cease operations due to economic factors and could demonstrate that ceasing operations would lead to a rise in air pollutants. Infrastructure Investment and Jobs Act, Pub. L. No. 117-58, div. D, tit. III, § 40323, 135 Stat. 429, 1019 (2021) (codified at 42 U.S.C. § 18753). The Inflation Reduction Act established the Zero-Emission Nuclear Power Production Credit, also known as the Nuclear Production Tax Credit, that offers a tax incentive to produce electricity at certain nuclear power plants. Inflation Reduction Act of 2022, Pub. L. No. 117-169, § 13105, 136 Stat. 1818, 1929 (codified at 26 U.S.C. § 45U). There are other tax credits available to companies that produce energy or invest in energy projects. Nuclear power companies are eligible to claim these credits, but the credits are also available to other types of energy generation such as renewables.

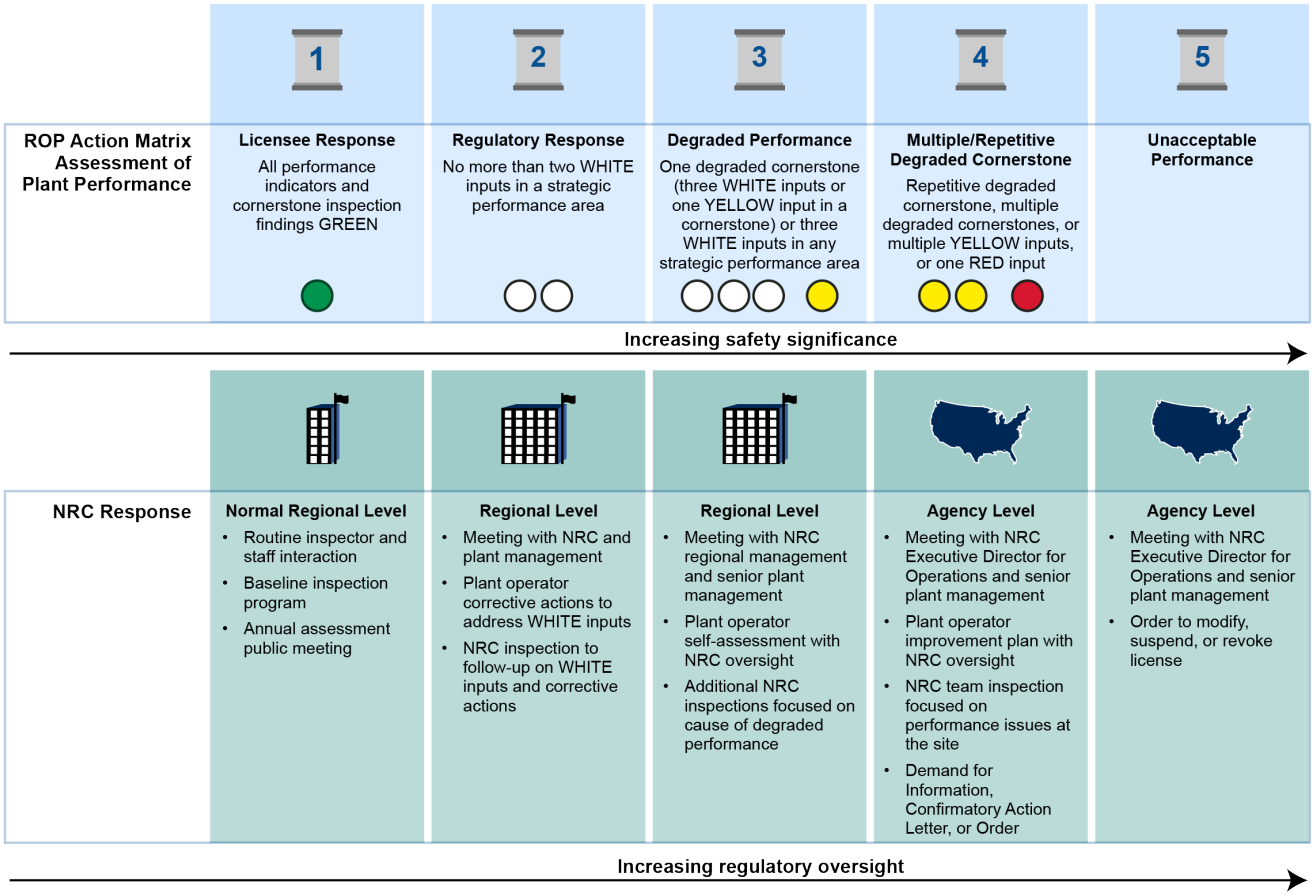
[13]Congressional Research Service, *U.S. Nuclear Plant Shutdowns, State Interventions, and Policy Concerns* (Feb. 2022). These states include Connecticut, Illinois, New Jersey, New York, Ohio, and Pennsylvania. While the Ohio nuclear subsidy was ultimately postponed and repealed without being implemented, two plants in the state rescinded shutdown notices shortly after the subsidy was passed and remain operational.

[14]Specifically, in June 2025, a nuclear power company announced that it had signed a 20-year power purchase agreement with Meta Platforms, Inc. to financially support the generation of more than 1,000 megawatts of nuclear energy at a plant. In October 2024, Amazon.com, Inc. announced that it signed three agreements to construct new reactors and support the operations of another reactor. In September 2024, Microsoft Corporation announced a 20-year power purchase agreement to restart a decommissioned reactor and support the generation of more than 800 megawatts of nuclear energy at the plant.

and inspections of plant activities that have the greatest effect on safety and overall risk. If a plant's performance indicators or inspection findings raise concerns, NRC conducts supplemental inspections that are more targeted and in-depth.

Information from performance indicator reports and inspections informs an assessment of a plant's overall safety posture. Based on this assessment, each plant is placed into one of five columns in NRC's Action Matrix, which guides the level of oversight applied. Plants in Column 1 are operating within expected safety margins and receive standard oversight. As issues arise and become more serious, plants may be moved into Columns 2 through 5, triggering increasingly intensive regulatory engagement—up to and including consideration of plant shutdown in cases of unacceptable performance (see fig. 1). Almost all (91 of 94) operating reactors were in Column 1 as of June 2025, and the remaining three were in Column 2. No reactors were in Columns 3 through 5 as of June 2025.

**Figure 1: Nuclear Regulatory Commission's (NRC) Action Matrix and Response to Reactor Oversight Process (ROP) Assessment**




Source: GAO adaptation of NRC graphic. | GAO-25-107807

**Accessible Data for Figure 1: Nuclear Regulatory Commission's (NRC) Action Matrix and Response to Reactor Oversight Process (ROP) Assessment**

### ROP Action Matrix Assessment of Plant Performance by increasing safety significance

- **Licensee Response**
  All performance indicators and cornerstone inspection findings GREEN

- **Regulatory Response**
  No more than two WHITE inputs in a strategic performance area
- **Degraded Performance**
  One degraded cornerstone (three WHITE inputs or one YELLOW input in a cornerstone) or three WHITE inputs in any strategic performance area
- **Multiple/ Repetitive Degraded Cornerstone**
  Repetitive degraded cornerstone, multiple degraded cornerstones, or multiple YELLOW inputs, or one RED input
- **Unacceptable Performance**

**NRC Response by increasing regulatory oversight**

- **Normal Regional Level**
  - Routine inspector and staff interaction
  - Baseline inspection program
  - Annual assessment public meeting
- **Regional Level**
  - Meeting with NRC and plant management
  - Plant operator corrective actions to address WHITE inputs
  - NRC inspection to follow-up on WHITE inputs and corrective actions
- **Regional Level**
  - Meeting with NRC regional management and senior plant management
  - Plant operator self-assessment with NRC oversight
  - Additional NRC inspections focused on cause of degraded performance
- **Agency Level**
  - Meeting with NRC Executive Director for Operations and senior plant management
  - Plant operator improvement plan with NRC oversight
  - NRC team inspection focused on performance issues at the site
  - Demand for Information, Confirmatory Action Letter, or Order
- **Agency Level**
  - Meeting with NRC Executive Director for Operations and senior plant management
  - Order to modify, suspend, or revoke license

Source: GAO adaptation of NRG graphic. I GAO-25-107807

Note: NRC measures performance indicators against established thresholds related to their effect on safety and color-coded to reflect their safety significance: green indicates performance within expected norms; while white, yellow, or red signal increasing levels of concern. NRC inspection findings use a "significance determination process" to determine the safety significance of findings using the same color-coded system as the performance indicators.

According to NRC, the Reactor Oversight Process was developed to be risk-informed, performance-based, and transparent, with a goal of detecting and correcting safety issues before they escalate. NRC officials told us that as a performance-based regulator, NRC examines outcomes from this process to oversee safety. NRC officials we interviewed stated that plant performance and inspection findings are more indicative of potential safety issues

than financial information and would lead to corrective actions under the Reactor Oversight Process. Officials from NRC and the Institute of Nuclear Power Operations told us that if a plant compromised on safety system investments, they would likely see degradation in performance indicators. In addition, NRC officials we interviewed said that licensees must cover the costs of additional NRC inspections if safety issues are identified and require supplemental inspections, so there could be a financial incentive for plants to perform well on safety outcomes.

NRC uses financial information for initial licensing, license transfer, and other purposes but does not regularly use such information to oversee plant safety. Specifically, under federal regulations and NRC guidance, NRC conducts a financial qualification review of nuclear power plants at initial licensing and license transfer to determine whether the applicant has adequate funds to cover the cost of construction and operations.[15] As part of the financial qualification review at initial licensing and license transfer, NRC staff may consider information in Securities and Exchange Commission filings of plant owners to assess the overall financial condition of the plant owner. Under federal regulations and NRC guidance, NRC also conducts a decommissioning financial assurance review intended to ensure plants have adequate funds set aside to cover the cost of fully decommissioning the site once the power plant is shut down.[16]

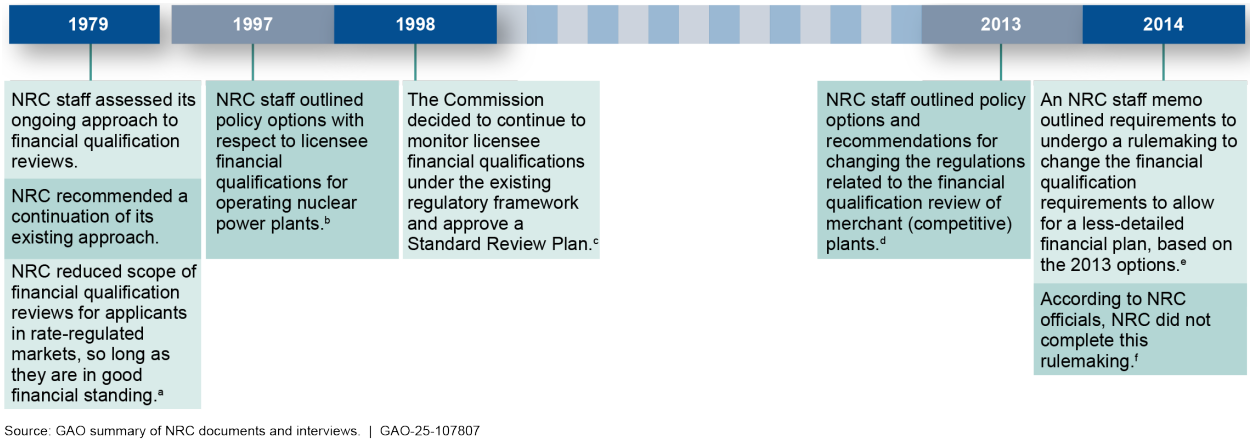
NRC generally does not collect financial information on an ongoing basis or for license renewals and generally does not use financial information to inform its ongoing oversight processes once a license has been issued. According to NRC officials, NRC has never reviewed financial information on an ongoing basis, but it can review such information if deemed necessary. For example, according to NRC officials, NRC staff monitor industry information, and if they find information about the financial condition of a plant that could raise questions about safety, they may request additional information from that plant and conduct a more in-depth review.

NRC has assessed its financial qualification review processes several times since 1979 to determine whether changes were needed. NRC has maintained the same general approach with few changes resulting from these assessments (see fig. 2).

[15]See 10 C.F.R. § 50.33. Appendix C to Part 50 provides additional information on requirements for demonstrating financial qualification. Electric utility applicants are generally exempt from the financial qualification review since their qualification is presumed due to their access to rate-based revenues. Non-electric utility applicants (i.e., merchant applicants) must demonstrate financial qualifications under 10 C.F.R. § 50.33(f). Under this requirement, the applicant must submit information sufficient to demonstrate the applicant's financial qualification to carry out the activities for which the permit or license is sought. For a construction permit, (f)(1) requires an applicant to demonstrate that the applicant possesses or has reasonable assurance of obtaining the funds necessary to cover estimated construction costs and related fuel cycle costs. Such assurance includes total construction costs of the facility and related fuel cycle costs, as well as identifying funding source(s) to cover these costs. For an operating license, (f)(2) requires the applicant to submit information that demonstrates the applicant possesses or has reasonable assurance of obtaining the funds necessary to cover estimated operation costs for the period of the license. This includes estimates for total annual operating costs for each of the first 5 years of operations, as well as source(s) of funding to cover these costs. For a combined license application, (f)(3) requires an applicant to submit the information described in (f)(1)-(2). Additionally, (f)(4) requires "newly formed entities" to submit information on the legal and financial relationships it has or proposes to have with its stockholders or owners, stockholders' or owners' financial ability to meet any contractual obligations, and any other information NRC deems necessary.

[16]*See* 10 C.F.R. § 50.75. Decommissioning financial assurance is not part of the scope of this review.

**Figure 2: Summary Timeline of Nuclear Regulatory Commission (NRC) Assessment of Financial Qualification Review Processes**




Source: GAO summary of NRC documents and interviews. | GAO-25-107807

**Accessible Data for Figure 2: Summary Timeline of Nuclear Regulatory Commission (NRC) Assessment of Financial Qualification Review Processes**

- **1979:**
  - NRC staff assessed its ongoing approach to financial qualification reviews.
  - NRC recommended a continuation of its existing approach.
  - NRC reduced scope of financial qualification reviews for applicants in rate-regulated markets, so long as they are in good financial standing.[a]
- **1997:** NRC staff outlined policy options with respect to licensee financial qualifications for operating nuclear power plants.[b]
- **1998:** the Commission decided to continue to monitor licensee financial qualifications under the existing regulatory framework and approve a Standard Review Plan.[c]
- **2013:** NRC staff outlined policy options and recommendations for changing the regulations related to the financial qualification review of merchant (competitive) plants.[d]
- **2014:**
  - An NRC staff memo outlined requirements to undergo a rulemaking to change the financial qualification requirements to allow for a less-detailed financial plan, based on the 2013 options.[e]
  - According to NRC officials, NRC did not complete this rulemaking.[f]

Source: GAO summary of NRG documents and interviews. I GAO-25-107807

[a]NRC staff recommended that NRC retain its current scope of financial qualification review for applicants in competitive markets. See NRC SECY-79-299, *Generic Issue of Financial Qualifications: Licensing of Production and Utilization Facilities* (Apr. 27, 1979).
[b]NRC SECY- 97-253, *Policy Options for Nuclear Power Reactor Financial Qualifications in Response to Restructuring of the Electric Utility Industry* (Oct. 24, 1997).
[c]NRC SECY-98-153, *Update of Issues Related to Nuclear Power Reactor Financial Qualifications in Response to Restructuring of the Electric Utility Industry* (Dec. 9, 1998). See also NRC-NUREG 1577, *Standard Review Plan on Power Reactor Licensee Financial Qualifications and Decommissioning Funding Assurance*.
[d]NRC SECY-13-0124, *Policy Options for Merchant (Non-Electric Utility) Plant Financial Qualifications* (Nov. 22, 2013).
[e]NRC, *Staff Requirements – SECY 13-0124 - Policy Options for Merchant (Non-Electric Utility) Plant Financial Qualifications* (Apr. 24, 2014). Specifically, the selected policy option, Option 2, Approach, C, recommended a rulemaking to change the financial qualification requirements to replace the “reasonable assurance” standard of review as currently required in 10 C.F.R. Part 50 with "appears to be financially qualified" standard of review as required in 10 C.F.R. Part 70.
[f]According to NRC officials, the effort was discontinued in September 2022, at which time the Commission published a proposed rule indicating that “[t]he staff will address financial qualifications during the development of an ongoing rulemaking activity to establish a risk-informed, technology inclusive regulatory framework for advanced reactors.” 87 Fed. Reg. 58459 (Sept. 27, 2022). That effort is ongoing.

**Agency Comments**

We provided a draft of this report for review and comment to the Nuclear Regulatory Commission. NRC's written comments are reproduced in enclosure II. NRC also provided technical comments, which we incorporated as appropriate.

We are sending copies of this report to the appropriate congressional committees, the Chair of the NRC, and other interested parties. In addition, the report is available at no charge on the GAO website at https://www.gao.gov.

If you or your staff have any questions about this report, please contact me at ruscof@gao.gov. Contact points for our Offices of Congressional Relations and Public Affairs may be found on the last page of this report.

//SIGNED//

Frank Rusco
Director, Natural Resources and Environment

Enclosures – 2

## Enclosure I: Credit Ratings for Companies that Own or Operate Nuclear Power Plants

### Credit Rating Descriptors

Companies that own or operate nuclear power plants rely heavily on debt financing to fund infrastructure investments, and companies receive credit rating scores that rate their ability to meet their financial obligations. Credit rating agencies assign ratings to companies based on certain criteria, including the capacity factor, or how often a nuclear power plant runs at maximum capacity. Nuclear power plants have operated at almost full capacity in recent years. Credit ratings indicate the likelihood a company will repay its debts on time. Credit rating agencies also provide information about the outlook on the potential direction of a company's rating. Companies that own and operate nuclear power plants in the United States are generally considered by credit rating agencies to have an adequate or strong ability to meet their financial obligations with overall stable credit outlooks.[17]

Table 1 describes the quality of long-term credit ratings, as defined by the three major credit rating agencies.

**Table 1: Long-Term Credit Rating Descriptors from Fitch Ratings (Fitch), Moody's Investors Service (Moody's), and Standard and Poor's (S&P)**

| Fitch | Moody's | S&P |
|---|---|---|
| AAA<br>Highest Credit Quality | Aaa<br>Highest quality with minimal risk | AAA<br>Highest rating; extremely strong |
| AA<br>Very High Credit Quality | Aa<br>*Aa1, Aa2, Aa3<br>High quality, subject to very low default risk | AA+, AA, AA-<br>Differs from the highest rated obligations only in small degree; very strong |
| A<br>High Credit Quality | A<br>*A1, A2, A3<br>Upper-medium grade, subject to low credit risk | A+, A, A-<br>Somewhat more susceptible to the adverse effects of changes in circumstances and economic conditions than obligations in higher rated categories; strong |
| BBB<br>Good Credit Quality | Baa<br>*Baa1, Baa2, Baa3<br>Medium-grade, moderate credit risk, may have speculative characteristics | BBB+, BBB, BBB-<br>Adequate protection parameters |
| BB<br>Speculative | Ba<br>*Ba1, Ba2, Ba3<br>Substantial credit risk, has speculative characteristics | BB+, BB, BB-<br>Less vulnerable to nonpayment than other speculative issues |

[17]Credit ratings can provide insight about the financial health of a company and the overall financial condition of the nuclear industry. Companies that own and operate nuclear power plants often provide electricity through a variety of additional energy sources, including hydroelectric, natural gas, and solar. Credit rating agencies assess and rate an entire company, rather than providing a rating only for a company's nuclear operations.

| Fitch | Moody's | S&P |
|---|---|---|
| B<br>Highly Speculative | B<br>*B1, B2, B3<br>High credit risk, considered speculative | B+, B, B-<br>More vulnerable to nonpayment than obligations rated 'BB', but the obligor currently has the capacity to meet financial commitment |
| CCC<br>Substantial Credit Risk | Caa<br>*Caa1, Caa2, Caa3<br>Very high credit risk, poor standing | CCC+, CCC, CCC-<br>Currently vulnerable to nonpayment, and is dependent upon favorable business, financial, and economic conditions for the obligor to meet its financial commitment |
| CC<br>Very High Levels of Credit Risk | Ca<br>Highly speculative. Likely in or very near default with some prospect of recovery of principal and interest | CC<br>Highly vulnerable to nonpayment |
| C<br>Near Default | C<br>Lowest rated class of bonds. Typically, in default with little prospect for recovery of principal or interest | C<br>Highly vulnerable to nonpayment, and the obligation is expected to have lower relative seniority or lower ultimate recovery compared to obligations that are rated higher |
| RD<br>Restricted Default | N/A | N/A |
| D<br>Default | N/A | D<br>In default or in breach of an imputed promise |
| NR<br>Not Rated | NR<br>An unrated issuer, obligation, and/or program | NR<br>No rating has been requested, or there is insufficient information on which to base a rating, or S&P does not rate a particular obligation as a matter of policy |
| WD<br>Rating has been removed, and the issue is no longer rated | WR<br>Withdrawn | N/A |

Source: GAO summary of credit rating definitions from Fitch, Moody's, and S&P. I GAO-25-107807

### Credit Ratings for Companies that Own or Operate Nuclear Power Plants

We reviewed the most recently available long-term credit ratings and outlooks for 23 nuclear power companies, which included issuer ratings originally assigned between 2004 and 2025.[18]

[18]We used a financial data and analytics platform to gather long-term credit ratings and outlooks of nuclear power companies in the United States. To identify the list of nuclear power companies, we used Nuclear Regulatory Commission (NRC) data on nuclear power reactor owners and operators. We verified this list with NRC. NRC's list of companies refers to the companies with whom NRC corresponds about the reactor licenses and which are generally the reactor operator. We then matched those company names with the corporate entities rated by credit rating agencies. Our dataset included issuer ratings (also known as company-level ratings) from one or more of the three major credit rating agencies, Fitch Ratings (Fitch), Moody's Investors Service (Moody's), and Standard and Poor's (S&P). The credit ratings in our dataset have effective dates that correspond with when a company's rating is assigned, changed, or withdrawn by a credit rating agency. We then verified the credit ratings with information from the credit rating agencies.

These 23 nuclear power companies own 92 of the 94 operating nuclear power reactors in the United States.[19] Table 2 summarizes the credit ratings and outlooks for these companies.

**Table 2: Summary of Nuclear Power Plant Companies' (Anonymized) Credit Ratings and Outlooks (as of August 2025)**

| Company | Long-Term Credit Ratings | Long-Term Credit Ratings | Long-Term Credit Ratings | Outlooks[a] | Outlooks[a] | Outlooks[a] |
|---|---|---|---|---|---|---|
| **Company** | Fitch | Moody's | S&P | Fitch | Moody's | S&P |
| **Company 1** | BB+ | Ba2 | BB+ | Stable | Stable | Positive |
| **Company 2** | A- | A2 | A- | Stable | Stable | Stable |
| **Company 3** | BB+ | Baa3 | BB | Positive | Stable | Positive |
| **Company 4** | NR | A2 | BBB+ | N/A | Stable | Stable |
| **Company 5** | NR | Baa1 | BBB+ | N/A | Stable | Stable |
| **Company 6** | AA+ | Aa1 | AA+ | Stable | Stable | Stable |
| **Company 7** | A- | A2 | A- | Stable | Stable | Negative |
| **Company 8** | NR | A2 | BBB+ | N/A | Stable | Stable |
| **Company 9** | BB- | Ba3 | BB- | Negative | N/A | Stable |
| **Company 10** | A- | A3 | BBB+ | Stable | Positive | Stable |
| **Company 11** | BBB+ | Baa2 | BBB+ | Stable | Negative | Stable |
| **Company 12** | NR | Baa2 | BBB+ | N/A | Stable | Stable |
| **Company 13** | NR | Baa2 | BBB+ | N/A | Stable | Stable |
| **Company 14** | A | A1 | A | Stable | Stable | Stable |
| **Company 15** | A- | Baa1 | A- | Stable | Stable | Stable |
| **Company 16** | NR | Baa2 | BBB+ | N/A | Stable | Stable |
| **Company 17** | BBB+ | Baa1 | BBB+ | Stable | Stable | Stable |
| **Company 18** | A- | Baa1 | BBB+ | Stable | Stable | Stable |
| **Company 19** | BBB+ | Baa1 | A- | Stable | Stable | Stable |
| **Company 20** | NR | Baa1 | BBB+ | N/A | Stable | Stable |
| **Company 21** | BB+ | Ba1 | BB+ | Stable | Stable | Positive |
| **Company 22** | AA | Aa2 | AA- | Stable | Stable | Stable |
| **Company 23** | A+ | A1 | A+ | Negative | Stable | Negative |

Source: GAO summary of credit rating agencies' information. I GAO-25-107807

Note: To identify the list of nuclear power companies, we used Nuclear Regulatory Commission (NRC) data on nuclear power reactor owners and operators. NRC's list of companies refers to the companies with whom NRC corresponds about the reactor licenses and which are generally the reactor operator. We then matched those company names with the corporate entities rated by credit rating agencies. Our dataset included issuer ratings (also known as company-level ratings) from one or more of the three major credit rating agencies, Fitch Ratings (Fitch), Moody's Investors Service (Moody's), and Standard and Poor's (S&P). The credit ratings in our dataset have effective dates that correspond with when a company's rating is assigned, changed, or withdrawn by a credit rating agency. A company with "NR" as its rating indicates the issuer has not been rated. A company with N/A as its outlook does not necessarily mean the credit agency did not rate it. It could mean there is no rating on which to apply an outlook or that the ratings are under review.

[19]We gathered ratings data on 27 of the 28 companies identified by NRC as owners or operators of nuclear power reactors. We excluded one company because the company had multiple owners, each of which was individually rated, but the operating company itself did not have its own ratings. Of the 27 remaining companies, some were unrated subsidiaries linked to each other through shared parent companies that have been rated. After accounting for these relationships, we identified 23 corporate entities for our analysis.

[a]According to Fitch, Moody's, and S&P, outlooks assess the potential direction of a long-term credit rating over the medium term. Outlooks fall into four categories: Positive, Negative, Stable, and Developing.

## Enclosure II: Comments from the Nuclear Regulatory Commission

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

September 9, 2025

Frank Rusco, Director
Natural Resources and Environment
U.S. Government Accountability Office
441 G Street, NW
Washington, DC 20226

Dear Director Frank Rusco:

On behalf of the U.S. Nuclear Regulatory Commission (NRC), I am responding to the U.S. Government Accountability Office (GAO) Draft Audit Report: "Nuclear Power: Nuclear Regulatory Commission Relies on Information From its Reactor Oversight Process to Ensure Safety (GAO-25-107807)," dated August 11, 2025. You requested comments from the NRC to be reflected in GAO's final report on this subject.

The NRC appreciates the opportunity to review the draft report. We also appreciate the GAO staff's professionalism and many constructive interactions during this GAO engagement. In the enclosure to this letter, we have provided some comments and clarifications for your consideration.

If you have any questions or need additional information, please contact me or have your staff contact Erin Deeds via e-mail at Erin.Deeds@nrc.gov.

Sincerely,

Signed by King, Michael
on 09/09/25

Michael F. King
Acting Executive Director
for Operations

Enclosure:
As stated

cc: OPA
OCA

## Accessible Text for Enclosure II: Comments from the Nuclear Regulatory Commission

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