

GAO Highlights

Highlights of [GAO-23-105997](#), a report to congressional requesters

Why GAO Did This Study

Our nation's demand for energy is expected to grow in the coming decades. To address this demand, Congress has supported the development of advanced nuclear reactors. NRC officials anticipate receiving a significant increase in the number of applications for advanced reactors in the next several years. However, because NRC's regulations and licensing processes have been used to evaluate existing nuclear reactor technologies, NRC is in the process of making changes to license advanced reactors.

GAO was asked to review NRC's preparedness to review applications for advanced nuclear reactors. This report examines (1) NRC's actions to modify its licensing process to include advanced reactors and (2) the extent to which modifications to NRC's licensing process have prepared the agency to review advanced reactors. GAO reviewed statutes, NRC regulations and guidance; analyzed NRC documentation on the modifications to its licensing process; interviewed NRC officials; and interviewed a nongeneralizable sample of 17 stakeholders.

What GAO Recommends

GAO is making four recommendations, including that NRC establish benchmarks and measures to assess the effectiveness of its recruitment, relocation, and retention strategies and incentives to help NRC retain and hire the staff to license advanced reactors. NRC generally agreed with our recommendations.

View [GAO-23-105997](#). For more information, contact Frank Rusco at (202) 512-3841 or ruscof@gao.gov.

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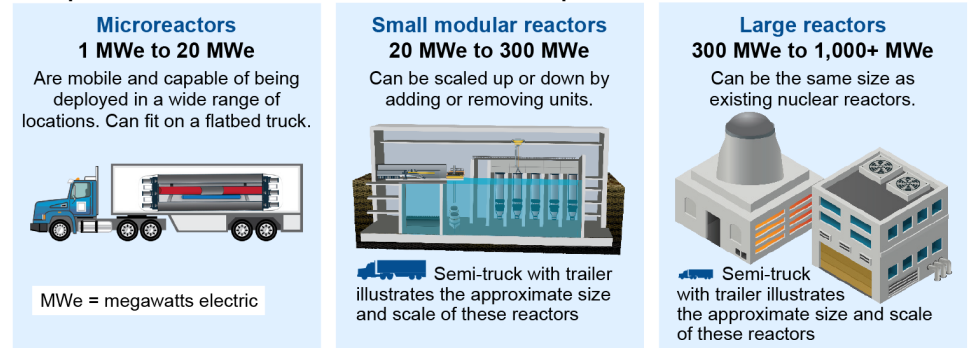
NUCLEAR POWER

NRC Needs to Take Additional Actions to Prepare to License Advanced Reactors

What GAO Found

The Nuclear Regulatory Commission (NRC) has taken several actions to modify its licensing process to include advanced nuclear reactors—nuclear fission reactors that may offer significant improvements over the most recent generation of nuclear fission reactors and may involve first-of-a-kind designs. For example, NRC reorganized its offices responsible for licensing advanced reactors and established dedicated review teams to provide continuity of staff throughout the review of an advanced reactor license application. NRC also issued a regulatory roadmap to help advanced reactor developers navigate the agency's licensing process. Furthermore, NRC has engaged with the nuclear industry to develop a technology-inclusive, risk-informed, and performance-based approach for assessing advanced reactor applications. NRC has also cooperated with the Department of Energy to share technical expertise and has incorporated feedback from several federal agencies and other stakeholders regarding modifications to its licensing process.

Examples of Advanced Nuclear Reactor Sizes and Output



Sources: GAO analysis of Department of Energy (DOE) and NuScale Power, LLC, information; DOE (left and right panel illustrations); NuScale Power, LLC (center panel illustration); GAO (truck silhouette) | GAO-23-105997

Some of the modifications NRC made to its licensing process have better prepared the agency to review advanced reactors. However, the modifications do not fully address ongoing challenges related to hiring and retaining the staff necessary to license advanced reactors. NRC analyzes its workforce annually and has implemented several measures to address its estimated workforce shortfalls, such as offering recruitment, relocation, and retention incentives for hard-to-fill positions. NRC recognizes its staffing limitations, recruitment challenges, and the expected influx of advanced reactor applications. However, NRC has not evaluated its efforts to address staffing gaps. NRC does not know the extent to which its recruitment strategies and incentives have had a positive effect on hiring and retention because the agency does not have benchmarks to assess their effectiveness. Without measures and benchmarks to assess its recruitment, relocation, and retention incentives and recruitment strategies, NRC is unable to determine the effectiveness of its efforts to ensure that it has sufficient numbers of knowledgeable staff needed to conduct licensing reviews in the coming years.