

# GAO Highlights

Highlights of [GAO-25-106048](#), a report to congressional committees

## Why GAO Did This Study

The United States is investing tens of billions of dollars in nuclear weapon acquisition programs to modernize aging nuclear weapons. NNSA is currently managing seven such programs, in coordination with DOD.

Two Senate Armed Services Committee reports include provisions for GAO to review NNSA's management of its nuclear weapon acquisition programs, as well as the status of these programs biennially. This report assesses (1) the processes NNSA uses for managing these programs and (2) the challenges NNSA faces. The report also includes individual assessments of the five NNSA nuclear weapon acquisition programs under way at the start of GAO's review.

GAO reviewed NNSA documentation and directives on agency processes, program cost and schedule baselines, and design and technology issues. GAO assessed performance in these areas using criteria in NNSA directives, as well as criteria from GAO's Technology Readiness Assessment Guide. GAO also visited NNSA sites and interviewed agency officials and contractors about challenges.

## What GAO Recommends

GAO recommends that NNSA document, in a formal and comprehensive manner, the process its nuclear weapon acquisition programs must follow to identify which technologies are critical technologies. NNSA agreed with GAO's recommendation.

View [GAO-25-106048](#). For more information, contact Allison B. Bawden at (202) 512-3841 or [bawdena@gao.gov](mailto:bawdena@gao.gov).

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# NATIONAL NUCLEAR SECURITY ADMINISTRATION

## Assessments of Nuclear Weapon Acquisitions

## What GAO Found

The National Nuclear Security Administration (NNSA) uses several processes to manage its nuclear weapon acquisition programs. These processes include the Phase X and Phase 6.X processes, which provide a framework to coordinate NNSA's activities with those of the Department of Defense (DOD). NNSA also uses an internal process—called the product realization process—whereby an NNSA program office leads each program while multiple contractor teams of experts from NNSA's laboratories and production sites manage technical work.

NNSA's acquisition processes can be organized into three phases: (1) initiation, which explores options and early designs; (2) development, which covers the design, testing, and evaluation of technologies and the maturing of production processes; and (3) production. Within these phases, NNSA has established numerous requirements that its programs must follow regarding, among other things, the establishment of cost and schedule baselines and the assessment of technology readiness. However, NNSA has not documented, in a formal or comprehensive manner, the process that its programs must follow to identify which technologies are critical technologies—that is, technologies critical to meeting a system's operational requirements that are new or novel or are used in a new or novel way. By more formally and comprehensively documenting its process, NNSA may help ensure that its nuclear weapon programs do not waste valuable funding and schedule resources.

NNSA programs face several challenges in managing nuclear weapons acquisitions, including in maturing technologies, producing or procuring components, and overseeing contractors. For example, according to NNSA officials, it is difficult to estimate how long it will take to mature technologies to a manufacturing-ready state. As a result, NNSA's programs have had difficulty reaching technology readiness milestones. Specifically, of the technologies tracked by NNSA's Office of Cost Estimating and Program Evaluation in the two NNSA programs for which data were available and which had reached the development phase, a majority had not reached NNSA's minimum required readiness level for critical technologies by the start of that phase (see table).

**Number of Technologies in Nuclear Weapon Acquisition Programs Reaching NNSA's Technology Readiness Milestone at the Start of Development Phase**

Acquisition program	Number of technologies	Number of technologies meeting NNSA's readiness milestone for critical technologies
B61-12 bomb	37	12
W80-4 warhead	42	5

Source: GAO analysis of National Nuclear Security Administration's (NNSA) Office of Cost Estimating and Program Evaluation information. | [GAO-25-106048](#)

Partly to address this challenge, NNSA established an office in 2019 to perform early stage research and development activities to advance technologies to a higher level of readiness before passing them on to nuclear weapon acquisition programs for further development.