

Changes Needed to Ensure DOE Is Not Prematurely Excluding Less Expensive Options for Large Projects

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What GAO Found

GAO has previously found that the Department of Energy's (DOE) Office of Environmental Management (EM) has not followed its standards for defining mission need for some large projects. A mission need statement documents DOE's identification of a mission-related need and, according to DOE standards, should not identify a particular solution. This ensures that DOE does not limit potential solutions at the project initiation stage. However, the majority of mission need statements that GAO reviewed for EM's large projects identify a particular solution. For example, the mission need statement for the Outfall 200 Mercury Treatment Facility project at the Oak Ridge Reservation proposed "a new mercury treatment facility." EM officials said they did not see an issue with identifying a solution at the mission need stage because other solutions are explored in later planning stages. However, GAO found instances where EM did not consider or pursue potential cost-saving options as project planning continued because a preferred solution was identified in the mission need stage.

Rendering of the Outfall 200 Mercury Treatment Facility, a Large Capital Asset Project at the Oak Ridge Reservation



Source: Department of Energy. | GAO-26-108193

Legal and regulatory constraints are one factor that has limited what solutions EM has considered for some large projects. For example, experts in GAO's discussion groups said that EM did not pursue a cheaper yet technically sound treatment for one type of radioactive waste at the Idaho National Laboratory due to an existing agreement with regulators. Instead, EM spent taxpayer money over many years pursuing a solution it ultimately deemed suboptimal and suspended.

EM follows internal review steps before approving mission need for large projects, but the reviews do not include independent experts. Including independent members with relevant expertise in the agency's oversight structure can provide an impartial evaluation of its ability to achieve objectives. By incorporating independent experts outside of DOE who are not involved in EM's legal and regulatory agreements into its mission need review for future large projects (before agreeing to a solution with regulators), EM could better ensure it is considering all viable solutions, including less costly ones.

Why GAO Did This Study

EM manages cleanup of hazardous and radioactive waste, in part through facility construction, building demolition, and other capital asset projects. The total costs for EM's most expensive capital asset projects have grown by more than \$2 billion since 2022 and at least five EM sites anticipate needing future projects that will likely cost over \$100 million each. DOE acquisition management has been on GAO's High Risk List for decades because of its vulnerability to fraud, waste, and abuse.

Senate Report 118-188 includes a provision for GAO to evaluate EM planning for large capital asset projects and factors considered in its planning. GAO examined (1) the extent to which EM has defined the mission need for its large projects in accordance with DOE's project management standards and (2) the factors that influenced the range of solutions EM considered for selected large capital asset projects.

GAO analyzed 21 EM mission need statements for large projects—estimated to cost at least \$100 million—to determine if they identified a particular solution. GAO analyzed qualitative content from three expert discussion groups covering EM's planning for selected large projects. Twelve experts from academia, the national laboratories, and the private sector participated in one or more discussion groups. GAO interviewed EM headquarters officials and field staff at EM sites with large projects.

What GAO Recommends

GAO recommends that for future large projects DOE (1) ensures that the mission need is revised if it includes a predetermined solution and (2) includes independent experts in the mission need review before agreeing to a solution with regulators. DOE concurred with both recommendations.