

## Why GAO Did This Study

About 20 percent of U.S. electricity is generated by 104 nuclear reactors. NRC, which regulates reactors, requires their owners (licensees) to reduce radioactive contamination after reactors permanently shut down. This process, called decommissioning, costs hundreds of millions of dollars per reactor. NRC requires licensees to provide reasonable assurance that they will have adequate funds to decommission, in part, by accumulating funds that are greater than or equal to NRC's decommissioning funding formula. GAO and NRC's OIG have identified concerns about NRC's oversight of decommissioning funds. GAO was asked by Representative Markey in his former capacity as Chairman of the House Subcommittee on Energy and Environment to (1) describe how NRC ensures that licensees provide reasonable assurance of adequate decommissioning funds and (2) identify any improvements or weaknesses in NRC's oversight of this area. GAO analyzed NRC's formula and reviews of licensee information and interviewed NRC officials, licensees, and others.

## What GAO Recommends

GAO recommends, among other things, that NRC define what it means by the "bulk" of the funds needed for decommissioning and consider reviewing a sample of licensees' investments to determine if they comply with standards. NRC agreed to consider reviewing a sample of investments, but disagreed that defining bulk is needed because of the comprehensiveness of NRC's regulatory system. GAO continues to believe that this definition is needed.

View [GAO-12-258](#). For more information, contact Frank Rusco, 202-512-3841, [ruscof@gao.gov](mailto:ruscof@gao.gov).

## NUCLEAR REGULATION

### NRC's Oversight of Nuclear Power Reactors' Decommissioning Funds Could Be Further Strengthened

## What GAO Found

The Nuclear Regulatory Commission (NRC) periodically reviews licensees' decommissioning funds and related licensee data to determine if licensees have provided reasonable assurance that they will accumulate adequate funds for decommissioning. For example, licensees must submit estimates to NRC of decommissioning costs throughout the life of the reactor and submit fund status reports at least every 2 years while the reactor is operating. Licensees typically accumulate such funds over time through trust fund investments. The minimum amount of funds considered adequate is established by NRC's decommissioning funding formula, which is based on information collected more than 30 years ago.

NRC has taken actions to strengthen its oversight of licensees' decommissioning funds by (1) creating guidance and other documents related to criteria for reviewing licensees' 2-year reports and by using its enforcement process when deficiencies are identified, (2) conducting reviews at licensee offices to verify that fund balances licensees reported in their 2-year reports match their year-end bank statements in response to a 2006 NRC Office of the Inspector General (OIG) recommendation, (3) reevaluating the decommissioning funding formula to determine if it should be updated, and (4) improving decommissioning planning. However, several weaknesses may limit NRC's ability to ensure that licensees have provided reasonable assurance. Specifically:

- NRC's formula may not reliably estimate adequate decommissioning costs. According to NRC, the formula was intended to estimate the "bulk" of the decommissioning funds needed, but the term "bulk" is undefined, making it unclear how NRC can determine if the formula is performing as intended. In addition, GAO compared NRC's formula estimates for 12 reactors with these reactors' more detailed site-specific cost estimates calculated for the same period. GAO found that for 5 of the 12 reactors, the NRC formula captured 57 to 76 percent of the costs reflected in each reactor's site-specific estimate; the other 7 captured 84 to 103 percent.
- The results of more than one-third of the fund balance reviews that NRC staff performed from April 2008 to October 2010 to verify that the amounts in the 2-year reports match year-end bank statements were not always clearly or consistently documented. As an example of inconsistent results, some reviewers provided general information, such as "no problem," while others provided more detail about both the balance in the year-end bank statement and the 2-year report. As of October 2011, NRC did not have written procedures describing the steps that staff should take for conducting these reviews, which likely contributed to NRC staff not always documenting the results of the reviews clearly or consistently.
- NRC has not reviewed licensees' compliance with the investment standards the agency has set for decommissioning trust funds. These standards specify, among other things, that fund investments may not be made in any reactor licensee or in a mutual fund in which 50 percent or more of the fund is invested in the nuclear power industry. As a result, NRC cannot confirm that licensees are avoiding conditions described in the standards that may impair fund growth. Without awareness of the nature of licensees' investments, NRC cannot determine whether it needs to take action to enforce the standards.