

GAO Highlights

Highlights of [GAO-16-487](#), a report to congressional committees

Why GAO Did This Study

By law and executive order, DOD is to pursue goals for the production and consumption of renewable energy. Also, DOD policy calls for investing in cost-effective renewable energy and improving energy security—addressing risks such as disruption of electricity grids serving military installations.

The Joint Explanatory Statement for the National Defense Authorization Act for Fiscal Year 2015 included a provision for GAO to examine how DOD determines the costs and benefits of a sample of renewable energy projects. This report examines (1) DOD's approach for developing renewable energy projects with a generating capacity greater than 1 megawatt, (2) DOD's approach for analyzing the financial costs and benefits of selected projects, and (3) the extent to which these projects addressed DOD's renewable energy goals and energy security objective. GAO examined a nongeneralizable sample of 17 projects that reflect a mix of military departments and services, funding mechanisms, and technologies. GAO also examined legal authorities, project documentation, and DOD guidance, and interviewed DOD officials.

What GAO Recommends

GAO is making eight recommendations, including that DOD should clarify guidance to call for project documentation to include (1) a comparison of the value of the land used and the compensation DOD is to receive for it and (2) information on projects' contributions toward DOD's energy security objective. DOD fully concurred with GAO's recommendations.

View [GAO-16-487](#). For more information, contact Frank Rusco at (202) 512-3841 or ruscof@gao.gov or Brian J. Lepore at (202) 512-4523 or leporeb@gao.gov.

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DOD RENEWABLE ENERGY PROJECTS

Improved Guidance Needed for Analyzing and Documenting Costs and Benefits

What GAO Found

The Department of Defense (DOD) has emphasized working with private developers using a variety of alternative financing mechanisms—that is, agreements with private developers to pay back the costs of the projects over time—to develop renewable energy projects greater than 1 megawatt. According to DOD officials, DOD works with private developers because doing so gives DOD several advantages. For example, private developers have access to tax incentives that can significantly lower the overall costs of developing projects compared to what those costs would be if DOD developed the projects on its own.

DOD used various approaches to analyze the financial costs and benefits of the 17 renewable energy projects GAO examined, but project documentation was not always clear or complete. In particular, project documentation did not always clearly identify the value of land used and compare that to any compensation DOD received. Specifically, for 8 projects, DOD received little or no financial compensation for the use of its land, but the documentation did not clearly compare the value for granting use of DOD land to the value of what DOD received for it. As a result, DOD contributed potentially valuable land—in some cases, over 100 acres—for the development of a project without including this as a cost in project documentation. GAO's 2009 cost-estimating guide states that one basic characteristic of a credible cost estimate is the recognition of excluded costs, so any excluded costs should be disclosed and a rationale provided. However, DOD guidance does not specify that project documentation should include a comparison of the value of land and any compensation received. By clarifying its guidance to call for project documentation to include a comparison of land values and any compensation it would receive, DOD would have greater assurance that its officials have credible information about projects' financial costs and benefits before approving them.

Some of the 17 projects GAO reviewed advanced DOD's renewable energy goals and energy security objective (e.g., for access to reliable supplies of energy during an outage of the commercial grid), but project documentation was not always clear about how projects did so. For example, officials told GAO they believe that all the projects contributed to DOD's energy security objective, but this view was not reflected in the documentation for the 17 projects. GAO found that only 2 projects would immediately be able to provide electricity to an installation in the event of a grid outage. Five other projects would require additional investment, such as the installation of batteries or other energy storage, before they would be able to deliver electricity during an outage, and project documentation did not always reflect this information. Under federal standards for internal control, agencies are to record and communicate information to management and others who need it and in a form and within a time frame that enables them to carry out their internal control and other responsibilities. Without clarifying its guidance to call for project documentation to include information about projects' contributions to DOD's energy security objective and any additional investment needed to do so, DOD officials may not have a full understanding of all relevant information when approving renewable energy projects.