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MISSILE DEFENSE

Air Force Report to Congress Included Information on the Capabilities, Operational Availability, and Funding Plan for Cobra Dane

Why GAO Did This Study

First fielded in 1976 on Shemya Island in Alaska, the Cobra Dane radar faces growing sustainment challenges that DOD plans to address through modernization projects. Anticipating future needs, DOD began investing in new radar systems that share capabilities with Cobra Dane to support ballistic missile defense and space surveillance, including the LRDR (Alaska), the Space Fence (Marshall Islands), and the Pacific Radar (location to be determined).

The conference report accompanying a bill for the National Defense Authorization Act for Fiscal Year 2018 included a provision that GAO review the Air Force's report to Congress on the operation and sustainment of Cobra Dane. This report identifies information included in the Air Force's report and describes additional information that GAO reviewed on (1) the capabilities of the Cobra Dane radar and other planned radars to meet DOD's mission requirements, (2) Cobra Dane's operational availability and the plan to mitigate the effect on those missions when Cobra Dane is not available, and (3) DOD's funding plan and project cost estimates for the operation and sustainment of Cobra Dane and its site at Shemya Island. GAO reviewed the Air Force report and related documentation, and interviewed relevant officials.

What GAO Found

In its January 2018 report to Congress, the Air Force reported how the Cobra Dane radar and the Long Range Discrimination Radar (LRDR) have shared and unique capabilities to support ballistic missile defense and space surveillance missions. The report noted that the respective locations of both radar systems affect their ability to provide those capabilities. The Department of Defense (DOD) also has other radar investments—the Pacific Radar and the Space Fence, which, according to DOD officials, may reduce DOD's reliance on Cobra Dane to provide ballistic missile defense and space surveillance capabilities.

The Cobra Dane Radar on Shemya Island, Alaska



Source: Air Force. | GAO-19-68

The Air Force's report to Congress noted that Cobra Dane met its requirement for operational availability, which refers to the percentage of time that the radar is able to meet its missions. GAO found that the Air Force has developed procedures to mitigate risks when Cobra Dane is not available. For example, U.S. Northern Command and Missile Defense Agency (MDA) officials stated that they can mitigate risks when Cobra Dane is not available by using the Sea-Based X-band radar to provide support for ballistic missile defense. The Air Force would face some limitations in its ability to conduct space surveillance if Cobra Dane were not available, as Cobra Dane tracks objects no other radar can track. However, MDA officials noted there are no plans to take Cobra Dane offline long enough to compromise space surveillance.

The Air Force and MDA plan to contribute total funding of \$278.6 million for the operation and sustainment of Cobra Dane, according to their fiscal year 2019 budget plans. Specifically, the Air Force and MDA plan to share funding for the operation and maintenance of the Cobra Dane radar and for three modernization projects that make up their sustainment plan for the radar. Further, the Air Force report noted that the Air Force also plans to provide \$140 million in funding for the sustainment and maintenance of operational access to Cobra Dane's site at Shemya Island. In addition, GAO found that the Air Force developed a total cost estimate for one project—known as the transmitter group replacement—but not for its other two projects. Air Force officials plan to complete cost estimates for those two projects in conjunction with their fiscal year 2020 budget submission.

View [GAO-19-68](#). For more information, contact Joe Kirschbaum at (202) 512-9971 or kirschbaumj@gao.gov.