

GAO Highlights

Highlights of [GAO-23-106224](#), a report to congressional requesters

Why GAO Did This Study

The four PMAs play a significant role in selling and transmitting electricity to public power utilities, cooperatives, and Indian Tribes, in over 30 states. However, more frequent extreme weather events and other risks associated with climate change could cost utilities and customers billions of dollars from power outages and infrastructure damage. DOE's Office of the Under Secretary for Infrastructure oversees the PMAs.

GAO was asked to examine U.S. energy infrastructure resilience to climate change. This report examines (1) the risks climate change poses to PMA operations and (2) steps the PMAs have taken to manage climate-related risks and additional steps needed. GAO analyzed relevant reports, including the *Fourth National Climate Assessment*; and interviewed PMA officials, as well as 18 knowledgeable stakeholders from risk management; consumer, trade association, and environmental groups; and staff from five DOE national laboratories.

What GAO Recommends

GAO is making seven recommendations, including that the Southeastern Power Administration and the Western Area Power Administration develop vulnerability assessments and resilience plans, as directed by DOE. DOE agreed with GAO's recommendations. The Southeastern Power Administration and the Western Area Power Administration plan to develop plans by December 31, 2023.

View [GAO-23-106224](#). For more information, contact Frank Rusco at (202) 512-3841 or RuscoF@gao.gov.

March 2023

POWER MARKETING ADMINISTRATIONS

Additional Steps Are Needed to Better Manage Climate-Related Risks

What GAO Found

The Power Marketing Administrations (PMA)—the Bonneville Power Administration, the Southeastern Power Administration, the Southwestern Power Administration, and the Western Area Power Administration—face several climate-related risks to their operations. For example, decreasing water availability resulting from drought could reduce electricity generation from federal hydropower dams, such as the Hoover Dam. Warmer temperatures and drier conditions could lead to more frequent wildfires, which could disrupt operations. For example, in September 2020, 38 of the Bonneville Power Administration's transmission lines were out of service because of wildfires, with some lines out of service momentarily and others for over a week. While it is not possible to attribute an individual event, such as a wildfire, to climate change, such events provide insights into the risks climate change poses to PMA operations.

Low Water Levels at the Hoover Dam in August 2021



Source: GAO. | GAO-23-106224

The PMAs have taken some steps to manage climate-related risks. For example, through a series of congressionally mandated assessments, all of the PMAs have identified risks that climate change poses to federal hydropower generation. In addition, the Bonneville Power Administration and the Southwestern Power Administration have conducted assessments of critical assets vulnerable to climate change and developed resilience plans to address climate-related risks, as called for by the Department of Energy's (DOE) *Vulnerability Assessment and Resilience Planning Guidance*. The Southeastern Power Administration and the Western Area Power Administration, however, have not yet done so. Identifying critical assets vulnerable to climate change would help these entities develop resilience measures to address climate-related risks and determine whether mitigating certain risks is worth the investment. As GAO and others have reported, investing in resilience can reduce the need for more costly actions in the future. This, in turn, would help the PMAs fulfill their mission of providing reliable and affordable power to their customers.