

U.S. Government Accountability Office Electricity Grid Resilience

Mid-West Electric Consumers Association 65th Annual Meeting

December 6, 2022



GAO - Overview

The U.S. Government Accountability Office (GAO) is an independent, nonpartisan agency that works for Congress.



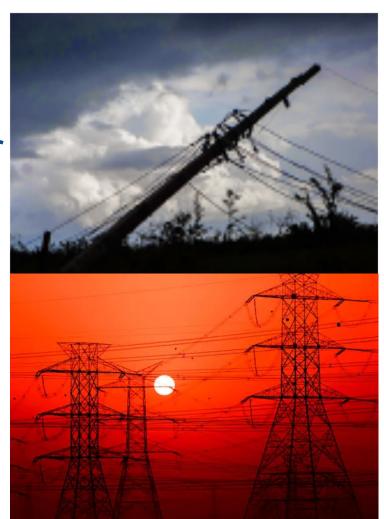
Source: GAO. | GAO-23-900398



Electricity – What We Audit

Federal efforts related to

- grid reliability and resilience to climate, cybersecurity, and other risks
- grid modernization
- market oversight
- federal power generation, transmission and marketing
- commercial nuclear power





Electricity Grid Resilience Disaster Recovery and Climate Change



Source: Federal Emergency Management Agency (top) and Puerto Rico's Central Office for Recovery, Reconstruction, and Resiliency (bottom). | GAO-20-141



Electricity Grid Resilience Disaster Recovery and Climate Change

- DOE Should Address Lessons
 Learned from Previous Disasters to
 Enhance Resilience, GAO-22-105093
- Climate Change Is Expected to Have Far-Reaching Effects and DOE and FERC Should Take Actions, GAO-21-346
- Opportunities Exist for DOE to Better Support Utilities in Improving Resilience to Hurricanes, <u>GAO-21-274</u>



Source: Federal Emergency Management Agency. | GAO-22-105093



Source: Braeden/stock.adobe.con



Electricity Grid ResilienceCybersecurity and other risks

- Electricity Grid Cybersecurity: DOE Needs to Ensure Its Plans Fully Address Risks to Distribution Systems, <u>GAO-21-81</u>
- Critical Infrastructure Protection: Actions
 Needed to Address Significant Cybersecurity
 Risks Facing the Electric Grid, GAO-19-332
- Critical Infrastructure Protection: Protecting the Electric Grid from Geomagnetic Disturbances, <u>GAO-19-98</u>





Upcoming and Future Work



- Climate risks to federal utilities
- Nuclear power plant climate resilience
- Strategic transformer reserves
- Development of microgrids and renewable energy on tribal lands
- Utility-scale energy storage technology assessment
- Recent funding for grid infrastructure and resilience



GAO on the Web

Connect with GAO on <u>LinkedIn</u>, <u>Facebook</u>, <u>Flickr</u>, <u>Twitter</u>, <u>YouTube</u> and our Web site: <u>https://www.gao.gov/</u> Subscribe to our RSS Feeds or Email Updates. Listen to our Podcasts and read The Watchblog

Congressional Relations

A. Nicole Clowers, Managing Director, <u>ClowersA@gao.gov</u> (202) 512-4400, U.S. Government Accountability Office 441 G Street, NW, Room 7125, Washington, DC 20548

Public Affairs

Chuck Young, Managing Director, youngc1@gao.gov (202) 512-4800, U.S. Government Accountability Office 441 G Street, NW, Room 7149, Washington, DC 20548

Strategic Planning and External Liaison

Stephen J. Sanford, Managing Director, spel@gao.gov, (202) 512-4707, U.S. Government Accountability Office, 441 G Street NW, Room 7814, Washington, DC 20548

Copyright

This is a work of the U.S. government and is not subject to copyright protection in the United States. The published product may be reproduced and distributed in its entirety without further permission from GAO. However, because this work may contain copyrighted images or other material, permission from the copyright holder may be necessary if you wish to reproduce this material separately.