

USEA Strengthens Georgia's Grid and Improves the Energy Investment Climate



The United States Energy Association's Georgia Power System Resilience Study delivered a transparent, data-driven assessment of Georgia's transmission grid, reducing investment risk and guiding targeted modernization efforts. By strengthening grid resilience and building investor confidence, the initiative opened new avenues for U.S. technology providers and engineering firms while advancing American energy diplomacy in the South Caucasus.

Through the Georgia Power System Resilience Study, the United States Energy Association (USEA) conducted a comprehensive vulnerability and risk assessment of Georgia's national transmission system. This assessment enhances transparency, identifies infrastructure priorities, and strengthens the foundation for public and private investment in the South Caucasus energy sector.

In partnership with the Georgian State Electrosystem (GSE), USEA systematically assessed Georgia's high-voltage grid against two man-made threats (cyberattacks and military conflict) and seven natural hazards (avalanches, earthquakes, floods, landslides, wildfires, icing, and windstorms). Using detailed geospatial analysis and environmental data, the study categorized transmission lines as having

sustainable, moderate, or severe risk levels. The study identified geographic hotspots of vulnerability, ranging from mountainous terrain to coastal and arid zones, and offered actionable insights for risk mitigation and infrastructure resilience.

The final report suggests a data-driven, stakeholder-engaged approach to guide grid modernization and investment planning. It includes hazard-specific risk registries and regional exposure maps, which offer GSE and national energy authorities a technical reference for prioritizing substation upgrades, line reinforcements, control system enhancements, and emergency response planning. By translating complex vulnerability data into clear intervention strategies, the study improves predictability, strengthens institutional planning, and aligns with

international best practices. This initiative is crucial because it de-risks Georgia's energy investment environment by introducing a structured, transparent approach to infrastructure assessment, which reduces uncertainty for financiers, donors, and development partners. It also establishes a technical baseline for modeling cascading grid failure.

This project demonstrates how U.S. technical cooperation can help partner countries reduce systemic energy risks, build investor confidence, and strengthen grid resilience, while creating new opportunities for U.S.-based technology providers and engineering firms. By doing so, USEA supports Georgia's path to energy security and regional integration, as well as the broader strategic goals of American energy diplomacy and trade promotion.