

The Future of America's Infrastructure

Summary of Panel Discussion - May 2022

On May 11, 2022, OurEnergyPolicy, a non-partisan organization, hosted a webinar examining America's aging electrical grid and what is needed to modernize it. This paper briefly summarizes the panelists' key points. Find the recording [here](#).

PANELISTS



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Issue Scope

- The shift towards decarbonization and electrification will have sweeping implications for how electricity is produced, sold, and managed.
- As a result of falling natural gas prices, older coal and nuclear plants are struggling to compete with the low-cost power generated from natural gas plants, accelerating and increasing stress on the aging grid.
- Intermittent renewable sources of energy, such as wind and solar, continue to add new capacity challenges to the current grid.
- There are also new challenges other than generation. According to [one study](#), \$125 billion will be needed to allow the grid to handle electric vehicles by 2030.

Most Important Challenges for Grid Modernization

- Cybersecurity concerns stemming from terror threats and foreign actors.
- Increasing the amount of long-distance energy storage available to facilitate load leveling.
- Threats to raw material supply chains for technologies critical to the energy transition.
- Supporting and expanding a pipeline of young talent in the research and manufacturing workforce needed to develop next-generation technologies.

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Challenges Articulated by Panelists

- Variable pace of modernizing in different sectors.
 - Grid modernization vs. decarbonizing the economy vs. electrifying transportation.
 - Auto manufacturers are pledging to increase EV production, yet the timeline to modernize the grid isn't happening quick enough to adapt.
- The current infrastructure package can help derisk needed industry investment.
 - The provided funds allow states to lead through the implementation of strategic goals and objectives for investment in infrastructure.
 - Promotes industry leadership in advancing technology deployment.
- Supply chain issues must be dealt with as the nation invests in energy infrastructure.
- The ability to conduct scenario analysis and look at the grid from a risk perspective, whether it's climate events, extreme weather, or cyberattacks, is vital.
- Energy security needs more funding as avenues for attacks expand.
- The sector lacks a widely agreed upon and actionable understanding of how to best integrate renewable/intermittent energy sources.
- Electric vehicle and electric vehicle infrastructure integration.
 - According to a [GridWise report](#), utilities are not worried about the increase in residential EV adoption but, instead, were more concerned about potential timing mismatch of fleet electrification.
 - Lack of communication between fleet owners and utilities can result in a lack of the required utility hosting capacity.
- Supply chains for critical minerals.
 - In order to expand domestic manufacturing, the industry must examine the current supply chain and determine where the key vulnerabilities lie. Reinforcing the battery recycling industry is a key example.
 - Solar trade cases must be remedied. Over 3/4 of the major U.S. solar projects are stalled or potentially stalled because of shortages created by business uncertainties and price changes related to unfair trade practice cases.

Beyond the Infrastructure Package

- Panelists are waiting on a second piece of legislation, which may or may not be included in a reconciliation package or at the end of 2022 in a tax extenders package.
- New legislation might include green energy tax credits, 45Q for carbon capture, wind, solar, and advanced technologies that have performance characteristics associated with them.
- Panelists remain skeptical regarding a larger reconciliation package, but are generally certain that a tax extenders package is on the table.