# POWER SHIFT: Markets & Transmission Considerations for Clean Energy Integration Carrie Zalewski, American Clean Power Association Vice President of Markets and Transmission January 2024

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## WHY we need well-run markets and well-planned transmission:

- 1. Extreme weather
- 2. Rate and volume of load increase
- 3. Increasing market share of clean energy
- 4. Aging grid infrastructure
- 5. Grid reliability and stability
- 6. Increased National Security
- 7. Non-market benefits of clean energy
- 8. Clean Energy Economy
- 9. Lower cost energy

#### Extreme weather is now the norm

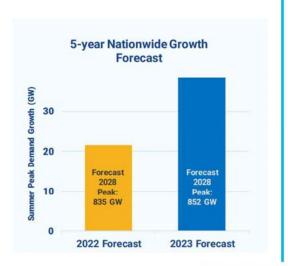
- "Record-breaking heat waves on land and in the ocean, drenching rains, severe floods, years-long droughts, extreme wildfires, and widespread flooding during hurricanes are all becoming more frequent and more intense." — NASA website
- "Extreme weather could cripple the US electrical grid" Energy Monitor, July 31, 2023
- "Extreme weather events are expanding the U.S. power grid is not" Utility Dive Article, Barbara Tyran, March 16, 2023



#### Load is increasing at astronomical rates

"The Era of Flat Power Demand is Over" Clean Grid Initiative Study, December 2023. According to the study:

- The U.S. forecast of electricity demand shot up from 2.6% to 4.7%.
- Experts agree that this is a massive underestimate



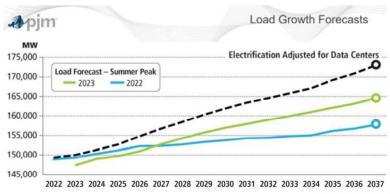
Source: National-Load-Growth-Report-2023.pdf (gridstrategiesllc.com)



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- Biggest drivers = Data
   Centers!! + manufacturing
   facilities (but also
   electrification + hydrogen fuel
   plants + extreme weather)
- Data Center = small 1-5 MW, large = 20-100+ MW, hyperscale = 100-300 MW



Source: National-Load-Growth-Report-2023.pdf (gridstrategiesllc.com)







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Title search: Market Reform and Redesign to Remove Barriers of Entry for Clean Energy and the Build Out a Robust Transmission Grid

First appeared as part of the conference materials for the 19<sup>th</sup> Annual Renewable Energy Law Institute session "Market Reform and Redesign to Remove Barriers of Entry for Clean Energy and the Build Out a Robust Transmission Grid"