

Near-Term Reliability Needs Discussion

Joe Paladino
Office of Electricity
US Department of Energy

EAC Panel Session on Reliability

October 17, 2023

Issues Affecting Grid Reliability

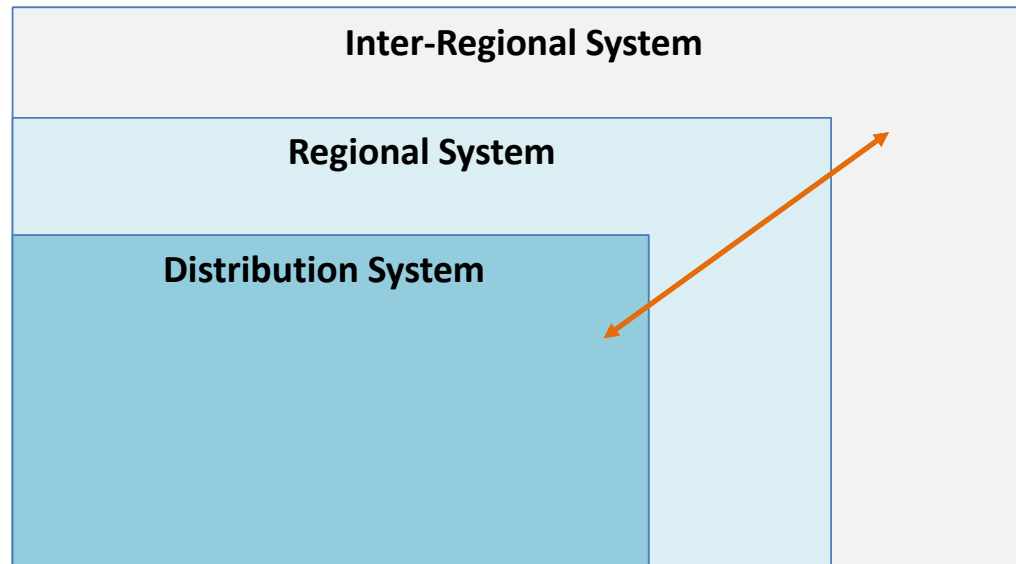
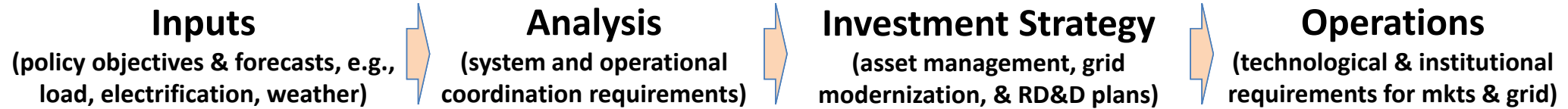
Emerging key issues lack coordinated processes and alignment of strategies for addressing them

- **An evolving resource mix becoming more reliant on renewable and distributed energy resources**
 - Greater level of variability in the supply and demand of electricity requiring operational flexibility
 - Control and coordination of inverter-based resources to provide essential grid services
 - Resource and energy adequacy determination across the system to address dynamics
- **Addressing electrification and resilience will require foundational grid infrastructure investments**
 - Uncertainties require advanced methods for forecasting, scenario analysis, and risk assessments
 - Interdependence of natural gas and electricity systems requires analytical treatment
- **Transmission build-out constraints affect where resources need to be built (T vs D)**
- **Energy resources owned by customers and third-parties introduce uncertainty and vulnerability**
 - Coordination rules defining roles and responsibilities, and data exchange requirements, are not standardized
 - Cybersecurity vulnerable to a larger attack surface
- **Supply chain issues becoming an issue**
- **Insufficient coordination across multiple jurisdictions inhibits holistic planning and market designs**



Multi-Jurisdictional Coordination of Planning, Operations, and Markets

What needs to be addressed within the next 3 – 5 years to ensure reliability?



Thank You

