

Office of Electricity

Discussion on Addressing the Transformational Challenges of the Electric Grid (Section 8008, "Pathways")

Joe Paladino DOE Office of Electricity

Electricity Advisory Board Meeting

October 21, 2021

Section 8008 (H.R. 133, Energy Act of 2020)

Section 8008 – Establishment of Voluntary Model Pathways

In consultation with a Steering Committee [EAC with FERC and national lab representation] initiate the development of model pathways for modernizing the electric grid through a collaborative, public-private effort that:

- a) Produces illustrative policy pathways encompassing a diverse range of technologies that can be adapted for state and regional applications by regulators and policymakers,
- b) Facilitates the modernization of the electric grid and associated communications networks to achieve the objectives:
 - 1) Near-time situational awareness
 - 2) Advanced monitoring and control, and data visualization
 - 3) Enhanced certainty of policies for investment in the electric grid
 - 4) Increased innovation
 - 5) Greater consumer empowerment
 - 6) Enhanced reliability and resilience
 - 7) Improved integration of DER, interoperability, and predictive modeling/forecasting
 - 8) Diversification of generation resources
 - 9) Reduced cost of service to consumers
- c) Ensures a reliable, resilient, affordable, safe, and secure electric grid; and
- d) Acknowledges and accounts for different priorities, electric systems, and rate structures across States and regions.

Includes providing technical assistance

H.R. 133 – Consolidated Appropriations Act of 2021 (contains the Energy Policy Act of 2020, Title VIII – Grid Modernization, Section 8008 begins on page 1405); download pdf at: https://www.congress.gov/bill/116th-congress/house-bill/133/text

Steering Committee Effort/Process

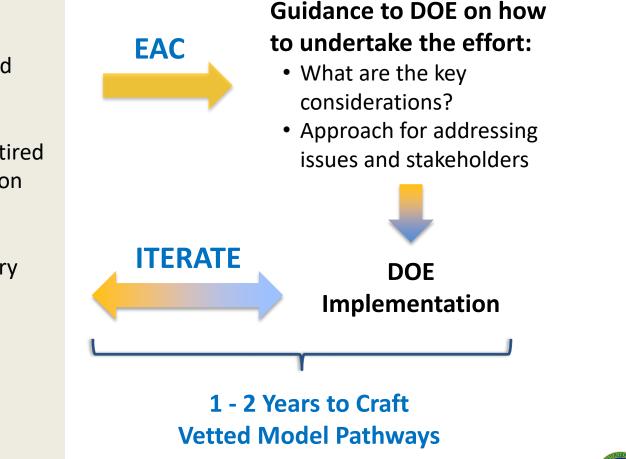
Steering Committee Deliverable by March 2022

Section 8008 Steering Committee

- Bob Cummings, Red Yucca Power Consulting
- Tom Bialek, Toumetis
- Flora Flygt, American Transmission Company, retired
- Darlene Phillips, PJM Interconnection
- Drew Fellon, Alliance Advisory Services
- Tom Weaver, American Electric Power Company, retired
- David Kathan, Federal Energy Regulatory Commission
- Bobby Jeffers, Sandia National Laboratory
- Jessica Lau, National Renewable Energy Laboratory
- Peter Larsen, Lawrence Berkeley National Laboratory

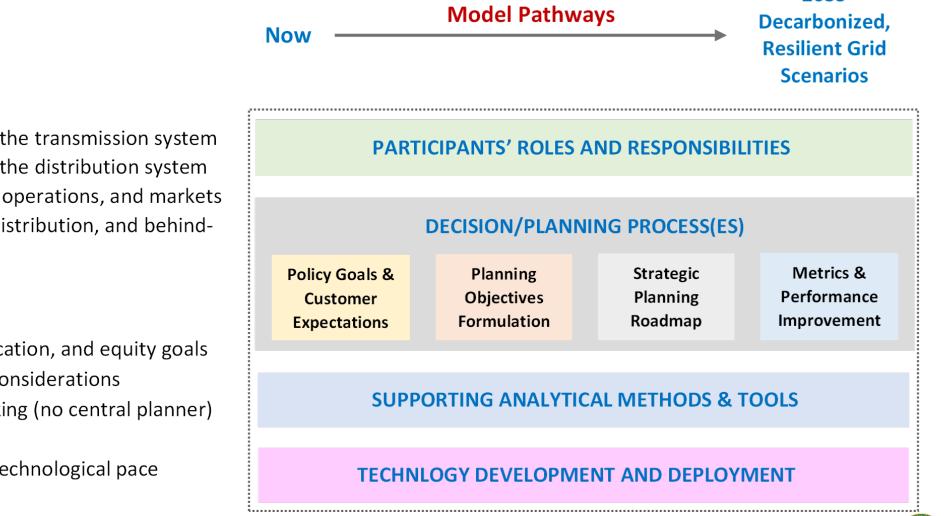
<u>DOE</u>:

Joe Paladino Matt Aronoff Chris Lawrence ICF Support



Analytical Objective and Approach

How do we get there? What are the transitional strategies?



2035

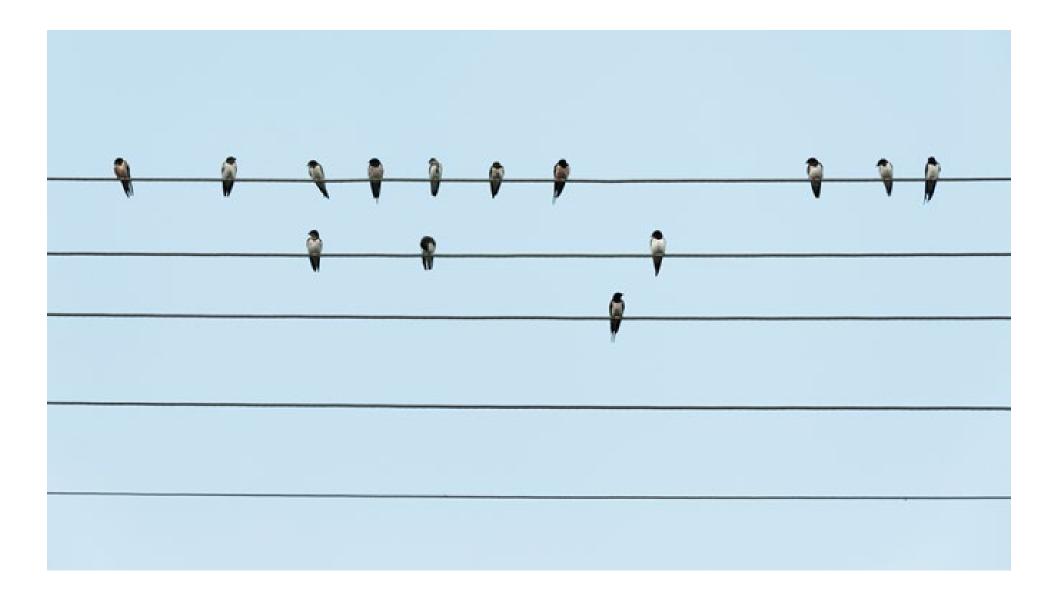
Challenges:

- 1. Structure and function of the transmission system
- 2. Structure and function of the distribution system
- 3. Coordination of planning, operations, and markets across the transmission, distribution, and behind-the-meter domains

Given:

- Decarbonization, electrification, and equity goals
- Resilience and flexibility considerations
- Fragmented decision-making (no central planner) and uncertainty
- Urgency, including rapid technological pace

Discussion





5