EAC
ELECTRICITY ADVISORY COMMITTEE

Smart Grid Subcommittee Report

June 2019

Smart Grid Subcommittee

Where we are at:

- Yesterday we participated in a panel on optimal reserves
- Last meeting we discussed Big Data Analytics
- We were asked to review DOE's 2018 Smart Grid Report and make suggestions for the 2020 report. Included in your materials should be these recommendations:
  - Include an outlook for future
  - ID Challenges and Opportunities
  - Identify Standards
  - Address Tools and Technologies
  - Clarify Jurisdictions
  - Consider Workforce Development & Adaptation for evolving markets

Smart Grid Subcommittee

Past Deliverables:

- 2008: Smart Grid Report; Energy Storage Report; Electricity Supply Adequacy Report.
- 2018: Enhancing Grid Resilience with Integrated Storage from Electric Vehicles; The Transmission-Distribution Interface; A Review of Emerging Energy Storage Technologies; EAC Regulatory Reform
- 2019: DOE's Role in Assisting State-Level Implementation Valuation & Policy Treatment of Energy Storage; Policy & Research Opportunities for Grid Resilience
- We have DOE's response to "Policy & Research Opportunities for Grid Resilience

Smart Grid Subcommittee

Where are we going?:

- We have the DOE list of priorities
- Yesterday during the Smart Grid Subcommittee meeting, we proposed this set of priorities
  1. Develop a Resilience Handbook framework proposal for DOE
  2. Recommendations on Optimal Reserves
  3. Panel & Recommendations on Data Analytics Part 1- "Impediments to Leveraging PMU Data & Synchrophasors"
  4. Workforce Planning
  5. Grid Planning with Renewables & DER
  6. State & Federal Coordination of Resiliency projects

Development of a Resiliency Handbook Framework

- In March of 2019, the EAC provided recommendations to the Department of Energy "Policy and Research recommendation for Grid Resilience". In these recommendations, the EAC recommended to DOE that they create a "Resiliency Handbook". DOE's response suggested that it would be helpful if the EAC develop a framework for such a Handbook.
- The Smart Grid Subcommittee proposes to recommend such a framework.

Development of Recommendations:

Optimal reserve procurement

- Based upon yesterdays panel, and further investigation of the subcommittee, it is our intent to develop a set of recommendations on optimal reserve procurement.

Data Analytics Part 1 -

Leveraging PMU data and Synchrophasors

- At the March EAC meeting we had a presentation on Big Data analysis
- As a follow-up on that presentation we are examining how these tools can help utilize Phasor Measurement units in operations.
- Tom Bialek is leading that effort: Initial work plan
  - WebEx
  - Survey of Real Time synchrophasor tools
  - October panel
  - Work product

Workforce development

- A repeated theme we encounter in all technical subjects is a need for an adequate workforce to support the industry.
- There is significant attrition.
- New skills are becoming necessary to the Grid, such as cyber security and data analytics.

Grid Planning

- We have discussed changing grid planning needs with renewable resources and DER. DOE had done considerable work on this topic, and several members have expressed interest in examining best practices under current conditions. The next step will be to ask for a DOE briefing.

State and Federal coordination

- There is continued ambiguity about the State and Federal role in resiliency projects
- In the past, such ambiguities have often been resolved in the courts on the basis of law, instead of negotiating a best practice which is acceptable to both state and federal authorities.
- If it is possible to negotiate these relationships, DOE might be able to make better solutions available.

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Questions?