

# Update: DOE's Grid Modernization Initiative

# NARUC Staff Subcommittee on Critical Infrastructure

**February 14, 2016** 

David Meyer, Senior Advisor
DOE Office of Electricity Delivery
and Energy Reliability

#### **GMI Will Have National Impact --**88 projects, \$220 Million **Drivers** of Change **DOE Multi-Year** Changing Plan Electricity Devices and Supply Mix Regional Integrated Systems **Demonstrations** Threats to Modernized Sensing and Low Reserve Resilience and **Grid** Measurement Margin Reliability Demos System Operations New Market Clean and Control Opportunities Srid Modernization Distribution for Consumers Feeders Design and Planning Tools Grid Information **Analytics** and Control Security and **Platform Technologies** Resilience Goal: Institutional Support Aging Power the U.S. economy for Infrastructure the 21<sup>st</sup> Century



## Grid Modernization Lab Call: Proposed Pioneer Partnerships





#### For more information ...

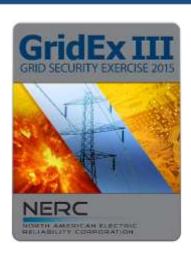
- See 2-page handout provided
- Go to: http://energy.gov/doe-gridmodernization-laboratory-consortiumgmlc-awards
- Contact: David.Meyer@hq.doe.gov



### **GridEx III**

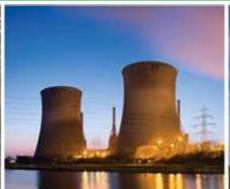
Marcus H. Sachs, P.E. SVP and CSO, NERC

NARUC Winter Meeting February 14, 2016



#### RESILIENCY | RELIABILITY | SECURITY











### **GridEx III Objectives**

GridEx III

Exercise crisis response and recovery

Improve communication

Identify lessons learned

Engage senior leadership



#### **GridEx III Exercise**

# Distributed Play (2 days)

Players across the stakeholder landscape participated from their local geographies **Utilities** E-ISAC Reliability Injects and and BPSA Coordinators info sharing by email and phone Support Fed/State/Prov and Agencies **Vendors** 

**Exercise Control** (ExCon)

Oversaw exercise play and facilitated interactions between exercise modules

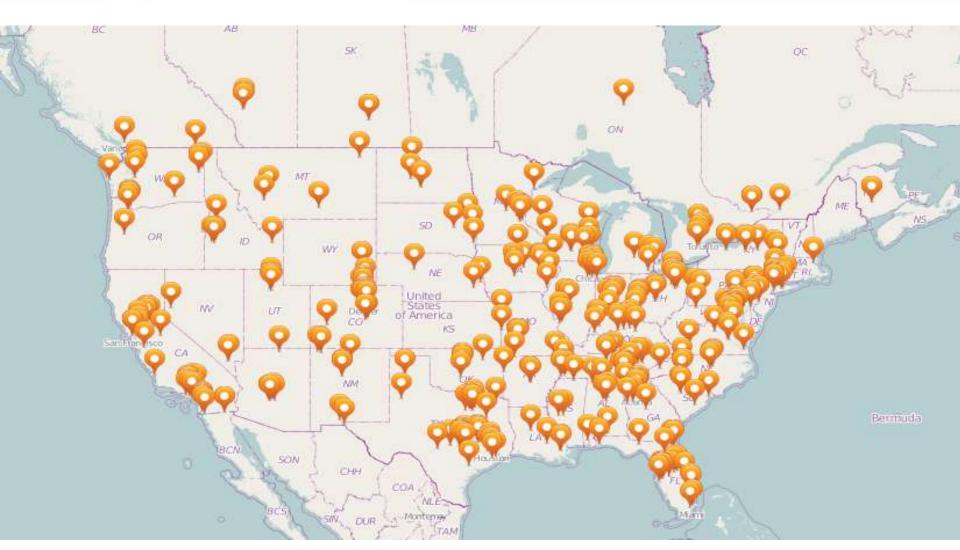
Executive Tabletop (1/2 day)

Facilitated discussion engaged senior decision makers in assessing distributed play and exploring policy triggers





### **Geographic Participation**





### **A Long-Term View**

**GridEx III** 2015 **GridEx II** 

**GridEx IV** 2017

2013

**GridEx** 2011





## **Questions and Answers**



#### Cyber Supply Chain Risk Management References



- Cybersecurity Procurement Language for Energy Delivery Systems http://energy.gov/sites/prod/files/2014/04/f15/CybersecProcurementLanguage-EnergyDeliverySystems 040714 fin.pdf
- Cybersecurity Capability Maturity Model (C2M2) http://energy.gov/sites/prod/files/2014/03/f13/C2M2-v1-1 cor.pdf
- FERC Supply Chain Technical Conference statements: http://www.ferc.gov/CalendarFiles/20151223134159-RM15-14-000-Agenda.pdf
- Utilities Telecom Council (UTC) Cyber Supply Chain Risk Management for Utilities—Roadmap for Implementation http://www.utc.org/sites/default/files/public/UTC\_Public\_files/SupplyChain2015.pdf
- NIST SP 800-161, Supply Chain Risk Management Practices for Federal Information Systems and Organizations http://nvlpubs.nist.gov/nistpubs/SpecialPublications/NIST.SP.800-161.pdf
- NIST Cyber Supply Chain resources http://csrc.nist.gov/scrm
- ISO/IEC 27036, Information Security for Supplier Relationships http://www.iso.org/iso/search.htm?qt=27036&sort\_by=rel&type=simple&published=on&active\_tab=standards
- ISO/IEC 20243, Open Trusted Technology ProviderTM Standard (O-TTPS) -- Mitigating maliciously tainted and counterfeit products
  - http://www.iso.org/iso/home/store/catalogue\_tc/catalogue\_detail.htm?csnumber=67394
- IEC 62443-2-4, Security for industrial automation and control systems Part 2-4: Security program requirements for IACS service providers https://webstore.iec.ch/publication/22810
- National Electrical Manufacturers Association (NEMA) Supply Chain Best Practices https://www.nema.org/news/Pages/NEMAs-Cybersecurity-Council-Releases-Supply-Chain-Best-Practices.aspx

© 2014 Utilities Telecom Council