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DOE OE Energy Storage Peer Review
25 September, 2018
Electricity Advisory Committee

Charge

Providing Advice to the Department On:

1. Implementing the Energy Policy Act of 2005
3. Modernizing the Nation’s Electricity-Delivery infrastructure
**Energy Storage Subcommittee**

*Statutory Requirements*

- **Energy Independence and Security Act of 2007 (EISA)**
  - Energy Storage (Technologies) Subcommittee of EAC formed in March 2008 in response to Title VI, Section 641(e)

- **Title VI, Section 641(e) has two parts pertaining to this subcommittee**
  1. **Section 641(e)(4):** ‘...every five years [the Energy Storage Technologies Subcommittee], in conjunction with the Secretary, shall develop a five-year plan for...domestic energy storage industry for electric drive vehicles, stationary applications, and electricity transmission and distribution.’
  2. **Section 641(e)(5):** ‘...the Council shall (A) assess, every two years, the performance of the Department in meeting the goals of the plans developed under paragraph (4); and (B) make specific recommendations to the Secretary on programs or activities that should be established or terminated to meet those goals.’
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Energy Storage Subcommittee

Members

- Ramteen Sioshansi (Chair); The Ohio State University
- Lola Infante (Vice Chair); Edison Electric Institute
- John Adams; Electric Reliability Council of Texas
- Christopher Ayers; North Carolina Utilities Commission Public Staff
- Laney Brown; Avangrid
- Armond Cohen; Clean Air Task Force
- Robert Cummings; North American Electric Reliability Company
- Ann Delenela; Ameren
- Andrew Fellon; Trane Energy Supply Services
- Flora Flygt; American Transmission Company (retired)
- Lisa Grow; Idaho Power
Energy Storage Subcommittee

Members

- Michael Heyeck; The Grid Group LLC
- Clay Koplin; Cordova Electric Cooperative
- Arthur Kressner; Grid Connections, LLC
- Shaun Mann; Tri-State Generation and Transmission
- Jeff Morris; Washington State House of Representatives
- Delia Patterson; American Public Power Association
- Darlene Phillips; PJM Interconnection
- Wanda Reder; Grid-X Partners, LLC
- David Wade; Chattanooga Electric Power Board
- Tom Weaver; American Electric Power
Previous Reviews

- The ‘2016 Storage Plan Assessment: Recommendations for the U.S. Department of Energy,’ approved 29 September, 2016, fulfilled both requirements
- The ‘2018 Storage Plan Assessment: Recommendations for the U.S. Department of Energy,’ is proposed to fulfill the second
The 2012 review focused on storage-related activities of OE

The 2014 review expanded this scope to include OE, EERE, ARPA-E, and SC
- The report also examined coordination between the Department and other Federal agencies (e.g., NSF and DOD)
- This was in line with offices and agencies included in the Department’s overall strategy

The 2016 review maintained the same broad programmatic scope
- Technological scope was expanded beyond electricity in/electricity out storage
- Includes power-to-gas, thermal, and virtual storage

The 2018 review will maintain this same breadth
Planned Process

- Outside interviews: ‘users’ and ‘implementers’ of the Department’s storage program to inform assessment and recommendations

- Interviewee groups:
  - Energy-storage developers
  - Energy-storage deployers
  - Energy-storage researchers
  - State policymakers
  - ISOs/RTOs
  - NERC
  - FERC
  - Energy and environment think tanks and NGOs
  - Renewable developers

- DOE/OE Energy Storage Peer Review 2018: ‘piggy back’ off of gathering of interested parties

- Telephone interviews: to supplement the peer review
Other Work Products

Previous

- National Distributed Energy Storage in the Electric Grid (March, 2016)
- High Penetration of Energy Storage Resources on the Electricity System (June, 2017)
- A Review of Emerging Energy Storage Technologies (June, 2018)

Ongoing

- Rate, Tariff, and Market Design for Energy Storage
Questions/Comments?