An innovative, reliable, and affordable grid

Relevant studies, reports, and analyses

Grid operators & reliability entities
- Government
- National laboratories
- Independent consultants
- Associations, institutions & NGOs
- Academic publications

Grid operators & reliability entities

1. **State of Reliability 2017**
   North American Electric Reliability Corporation
   June 2017
2. **2016 Comprehensive reliability plan**
   New York Independent System Operator
   April 2017
3. **Evolving resource mix and system reliability**
   PJM Interconnection
   March 2017
4. **Using renewables to operate a low-carbon grid**
   California Independent System Operator
   December 2016
5. **2016 Long-term reliability assessment**
   North American Electric Reliability Corporation
   December 2016
6. **2016 Wind integration study**
   Southwest Power Pool
   January 2016
7. **Beyond 33% renewables: Grid integration policy for a low-carbon future**
   California Independent System Operator
   November 2015

Government

1. **Short-term energy outlook**
   U.S. Energy Information Administration
   June 2017
2. **Quadrennial energy review**  
   U.S. Department of Energy  
   January 2017

3. **The power of transformation: Wind, sun, and the economics of flexible power systems**  
   International Energy Agency  
   February 2014

### National laboratories

1. **Demonstration of essential reliability services by a 300 MW solar PV power plant**  
   National Renewable Energy Laboratory  
   April 2017

2. **Eastern renewable generation integration study**  
   National Renewable Energy Laboratory  
   August 2016

3. **The role of advancements in solar PV efficiency, reliability, and coat**  
   National Renewable Energy Laboratory  
   May 2016

4. **Low carbon grid study: Analysis of a 50% emission reduction in California**  
   National Renewable Energy Laboratory  
   January 2016

5. **Renewable electricity futures: Operational analysis of the western interconnection at very high renewable penetrations**  
   National Renewable Energy Laboratory  
   September 2015

6. **Relevant studies for NERC’s analysis of EPA’s CPP**  
   National Renewable Energy Laboratory  
   June 2015

7. **Grid integration and the carrying capacity of the US grid to incorporate variable renewable energy**  
   National Renewable Energy Laboratory  
   April 2015

8. **Western wind and solar integration study phase 3 – frequency response and transient stability**  
   National Renewable Energy Laboratory  
   December 2014

9. **Meta-analysis of high penetration renewable energy scenarios**  
   National Renewable Energy Laboratory  
   September 2013

10. **Eastern frequency response study**  
    National Renewable Energy Laboratory  
    September 2013

11. **Renewable electricity future study, Volume 2: Renewable electricity generation and storage technologies**  
    National Renewable Energy Laboratory  
    February 2012

12. **Nebraska statewide wind integration study**  
    National Renewable Energy Laboratory  
    March 2010

13. **20% Wind energy by 2030**  
    National Renewable Energy Laboratory  
    July 2008
Independent consultants

1. Reply comments of Michael Milligan, Ph. D. to FERC
   Michael Milligan
   October 2017
2. Electric System Reliability: No Clear Link to Coal and Nuclear
   Rhodium Group
   October 2017
3. Coal-Fired Electricity Generation in the United States and Future Outlook
   M.J. Bradley & Associates, LLC
   September 2017
4. Electricity markets, reliability and the evolving U.S. power system
   The Analysis Group
   June 2017
5. Advancing past “baseload” to a flexible grid
   The Brattle Group
   June 2017
6. Reliability risks due to coal retirement at ERCOT
   The Brattle Group
   December 2016
7. Integrating renewable energy into the electricity grid
   The Brattle Group
   June 2015
8. Minnesota renewable energy integration and transmission study
   General Electric
   October 2015
9. PJM renewable integration study
   General Electric
   March 2014

Associations, institutions & NGOs

1. The state of wholesale power markets: What’s wrong with proposed changes in Eastern RTOs?
   Energy Innovation
   June 2017
2. Secretary Perry, we have some questions too
   Energy Innovation
   May 2017
3. Energy fact check: The impact of renewables on electricity markets and reliability
   American Council on Renewable Energy
   May 2017
4. Changing the power grid for the better
   Advanced Energy Economy Institute
   May 2017
5. Renewable energy builds a more reliable and resilient electricity mix
   American Wind Energy Association
   May 2017
6. Solar and renewables benefit the grid and the US economy
   Solar Energy Industries Association
   January 2016
7. Renewables and reliability fact sheet: Grid management solutions to support CA’s clean energy future
   Union of Concerned Scientists
   March 2015
Academic publications

1. **Abstracts of 25 Peer-Reviewed Published Journal Articles Supporting the Result That the Electric Grid can Stay Stable with Electricity Provided by 100% or Near-100% Renewable Energy**
   Stanford University
   August 2017

2. **Can coal make a comeback?**
   Columbia Center on Global Energy Policy
   April 2017

3. **Potential for concentrating solar power to provide baseload and dispatchable power**
   Nature Climate Change
   June 2014

4. **Managing variable energy resources to increase renewable electricity’s contribution to the grid**
   Scott Institute for Energy Innovation an Carnegie Mellon University
   May 2013

5. **Supplying baseload power and reducing transmission requirements by interconnecting wind farms**
   Journal of Applied Meteorology and Climatology
   February 2007