

The scope of the Strategic Options for Integrating Emerging Technologies and Distributed Energy Interest Group (SOIG) is to study, evaluate, and demonstrate sustainable emerging technologies that will result in an increase in clean and renewable power supply capacity and a reduction in greenhouse gas emissions. This includes the integration of distributed, intermittent, and emerging generation technologies and the enablers of these new generation technologies - storage, microgrids, and demand response. The interest group also focuses on exploring diesel alternative energy options in remote communities, as well as on techno-economic scenario planning and forecasting.

The Interest Group enables its participants to enhance their knowledge via information exchange as well as through project co-funding opportunities that will lead to the development of practical innovations that can readily be applied to today's challenges.

### Topics & Issues

1. Renewable Energy
2. Distributed Generation
3. Energy Storage
4. GHG Mitigation
5. Sustainable Transportation
6. Bioenergy
7. Microgrids
8. Remote Community Energy Planning
9. Techno-economic scenario planning & forecasting

### Technical Advisor



**Dale T. Bradshaw** has over 40 years' experience in all aspects of the electric utility business, and is the CEO for Electrivation LLC, a consultant to the electric power industry. He is currently a consultant for National Rural Electric Cooperative Association's (NRECA) Business Technology Strategies Generation Environment and Carbon Membership Advisory Group working on mitigating the impact of cyclic operation of fossil plants; advances in energy storage technologies; improvements in fossil plant efficiency, reliability, and environmental controls; capture and conversion of CO<sub>2</sub> into useful products; etc. since 2004. In the past he has consulted with the California Energy Commission, Department of Energy, Advanced Clean Coal Technology, etc. Dale was the Senior Manager of Energy Option Development and Transmission R&D for TVA from 1975 until retiring in 2004. Dale has a BS in Engineering Physics and an MS in Mechanical Engineering from the University of Oklahoma, and an MBA in Finance from the University of Tennessee.

### Projects

- Utility Experience with Energy Storage
- How Low Can the Cost of Solar PV Go?
- Integration and Coordination of Energy Storage within Microgrids
- Microgrid Scoping Study
- Best Practices in Reducing the Effects of Lightning and Icing on Wind Turbines
- Leveraging Fast-Ramping Capabilities Beyond Frequency Regulations
- Assessment of Potential for Hydrokinetic Technologies
- Emerging Energy Technologies: Technical and Economic Assessment
- Canadian PEV Charging Infrastructure Deployment Guidelines
- PEV Deployment: A Policy Paper from a Utility Perspective
- Update of Torrefaction Benchmark Study: The Economics of Cofiring Torrefied Biomass
- Energy Storage Integration Study with Follow-on Deployments
- Customer Participation in Grid Management
- Solar PV: What is State of the Art?
- Evaluation of the Value Proposition and Economic Viability of Energy Storage in the Future



### Workshops

- Intelligent Distribution Systems of the Future
- Utility-Scale Renewable Energy - Operations and Optimization
- Managing System Impacts of the Renewable Portfolio
- Microgrids - Utility Perspectives and Lessons Learned
- Renewable Energy Integration and Management
- Wind and Solar Forecasting
- Utility Perspectives on Energy Storage
- Another Look at Renewables Integration: Exploring Opportunities for Synergy and Challenges Involved

### Working Groups

- Greenhouse Gas Mitigation Working Group
- Electric Vehicle Working Group
- Energy Storage Working Group
- Remote Communities Working Group
- Advanced Nuclear Working Group

### Annual Activities

- 2 Meetings & Quarterly Conference Calls
- Workshops & Tours
- 2-3 Webinars
- 4 Conference Calls per Working Group
- On-Demand Information Exchanges

\*Participation is open to all Electrical Utilities, Independent Power Producers, Distributors & System Operators, and Government Agencies.

For a complete project listing, please visit [www.ceati.com/SOIG](http://www.ceati.com/SOIG)

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