

# CEATI Energy and Integration Strategy

The scope of the Energy and Integration Strategy Interest Group 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 Advisors



**Mr. Doug Campbell** (B.Sc., B.Eng., M.Sc., P.Eng.) is a Professional Engineer with over 45 years of experience. He developed a wide range of technical skills associated with the design, construction, and start-up of new generation. He has been involved in providing expert advice on new and developing technologies to support the transformation of the electrical grid. His current work includes providing insights to the progress in these developments, especially as related to a low carbon world

## 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.