

Title: Distributed Energy Systems Research for a Low Carbon Economy

Abstract:

A major implication of the current scientific debate about climate change and sustainability is that the global emissions of greenhouse gases (GHG) into the atmosphere should be reduced by at least 80% to stabilize the climate. Making reductions of this magnitude will require major changes in the structure of the energy industry as well as the development of new technologies. In a low-carbon economy, the production of energy will be much less centralized and most energy services will be delivered to customers via the electric grid, and electric power systems, transportation systems and building systems are seamlessly integrated. However, the transition to such a low-carbon economy will face technological, institutional, financial and environmental challenges.

The objective of this topical lunch is to bring researchers across the campus to address those challenges. Specifically, we would like to discuss:

- How we can integrate new technologies and distributed resources into the existing centralized electricity delivery system in coherent and symbiotic ways.
- How we can synergize the current research activities, identify missing gaps in research, and establish a vigorous program on distributed energy systems at Cornell