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Anil Pahwa
Kansas State University
Background

- Third in a series of joint workshops
  - Honolulu, Hawaii - January 2014
    - Anthony Kuh
  - Arlington, Virginia - April 2015
    - Kevin Tomsovic
- Models and theories for distributed energy systems including renewables: power, controls, economics, social, computer science
Motivation

• Changing energy landscape in Japan, Germany, Norway and US
• Higher dependence on renewable energy
• Need an extensive research agenda with international collaboration to address emerging issues
• The first two provided opportunities to researchers to know each other. The third one to promote ideas for long-term collaboration.
Agenda

• Themes:
  – Dynamic and harmonic stability assessment and control
  – Design and operation of hybrid AC/DC power systems
  – Power electronics devices, circuits and systems
  – Approaches to increase robustness and survivability of power systems
Agenda

– Smart energy systems informatics, modeling, simulation and test beds
– Economic aspects of smart power systems
– Transfer of knowledge and industry applications
– Testimonials of international collaborations

• Poster presentations
• Field trip to Wildpoldsried (Energy Village)
International Collaborations

• University of Tennessee/Waseda University
  – Wide area control, distribution systems, home energy management systems
  – Visits
  – Student exchange planned
• DFG – Call for proposals for German researchers to collaborate with US researchers: Due date – Oct 14, 2016.

• Japan Science and Technology Agency (JST) CREST
  – Several collaborations with US, Germany, Norway, and Italy.
  – Washington State, MIT, NC State, Clemson, Carnegie Mellon
Other Activities/Programs

• Joint program of NSF and European Union for CAREER Awardees
  – Short or long term
  – Supplement request for CAREER Awardees
• Carnegie Mellon University – National Test Beds Workshop 2015
• University of Achen – Cloud-based real-time simulations with Idaho National Lab
Participants

- Approximately 40 from Japan, 30 from Germany, 20 from US, and 6 from Norway
Wildpolsried (Energy Village)

- 100% renewable energy. Solar PV, wind, and biomass (agricultural waste)
- Surplus sold to the grid