

# **Meeting Minutes**

## **IEEE Subcommittee on Renewable Energy Machines and Systems (RESC-EMC)**

### **IEEE PES GM – Denver, CO**

**Tuesday, July 28<sup>th</sup>, 2015**

**5:00 pm- 7:00 pm**

**Denver**

Istvan Erlich – Chair, Ed Muljadi – Vice Chair, Matt Richwine – Secretary, Nick Miller – Past Chair

#### **1. Introduction**

#### **2. Agenda**

- a. Review last year's minutes and report this meeting to EMC on Thursday
- b. Bob motioned to accept the 2014 meeting minutes, Matt seconded

#### **3. Report on 2015 Sessions**

- a. Tutorial, Renewable Energy Systems Modeling and Dynamic Performance – 36 registrants, seen as successful
- b. Panel, Marine Hydrokinetics – 7 panelists, 38 attendees
- c. Panel, Interconnection Requirements for Renewable Generation – 45 attendees, standing room only, a few presenter substitutions
- d. Panel, Weak Grid Part 1 and Part 2 planned for Wednesday, 5 papers in each; seen as an important topic that will continue as regions with good wind resources and weak grids like West Texas continue to attract wind developers.

#### **4. Panel sessions for next year (Boston, MA, 2016)**

- a. “100% Inverter-Based System”
  - i. Nick and Bob to check for contributors
  - ii. Bob mentioned this could branch into black start capability; Nick suggested this may be better as a separate topic
- b. Steady-state representation of Wind Turbine Reactive Power Capability in Transmission Planning Tools
  - i. Bob to organize
  - ii. Bob explained that the inability to enter voltage-dependent P-Q curves into the common transmission planning tools for use in powerflow solutions can lead to a misguided requirement to install additional shunts at new wind farm sites. Suggested to provide guidance to developers on how to evaluate steady-state reactive capability in the tools.
- c. Marine Hydrokinetics

- i. Ed to organize
- d. Storage and Wind Applications (similar to 2014 panel)
  - i. Irina to organize
  - ii. Ed can help with AES, PJM contacts
  - iii. Potential for working across other groups

**5. Tutorial for 2017 PES GM:**

Tutorial proposed on the design of electric machines in renewable generation applications. Consider the direct-drive PMG, Enercon type machine, traction drives. Potential collaboration with others from EMC, cross-discipline – electric, magnetic, thermal, etc

**6. Miscellaneous Topics:**

- a. Offshore topics – not a lot of movement in the US on this
- b. Short-circuit contribution and applying to protection – would be a cross-panel opportunity
- c. Istvan asked if we need a working group or task force... attendees responded that the sub-committee is working well as-is

**7. 2015 Attendees List**

Name	Affiliation	E-mail
Matt Richwine	GE	<a href="mailto:Matthew.richwine@ge.com">Matthew.richwine@ge.com</a>
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