

Meeting Minutes

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

IEEE PES GM – Vancouver, BC, Canada

Wednesday, July 24th, 2013
9:00 AM – 12:00 PM
VCC West – West Meeting Room 1

Nick Miller - Chair, Istvan Erlich – Vice Chair, Ed Muljadi – Secretary, Mohamed El Sharkawi – Past Chair

- 1. Introduction** Welcome and Introductions
- 2. Meeting Minutes from 2012 was approved and Officers Elected from 2012** (Nick Miller – chair elect, Istvan Erlich – vice chair, Ed Muljadi – Secretary, Mohamed El Sharkawi – past chair). The officers will continue to serve for another year, new election will be held in 2014
- 3. Next meeting** (PES GM 2014 July 27-31, 2014, National Harbor, MD, Washington, DC Metro Area)
- 4. Ramakumar Award**
 - a. 2012 – Prof. Ned Mohan from University of Minnesota, Minneapolis
 - b. 2013 – Prof. Vladimir Miranda from the University of Porto and INESC TEC, Porto, Portugal
- 5. Report on Panel Session**
 - a. 2013 Panel Sessions
 - i. Condition monitoring of wind turbines – P. Neti
 - ii. Unbalanced faults for wind power plants – 50 attendees - Istvan Erlich
 - iii. Advanced controls – Bob Nelson – 65 attendees with the topics includes from weak grid connected wind power plant, harmonics in wind power plant, and Offshore HVDC-VSC operated at rated V/Hz
 - iv. Ancillary services for wind power plants – cancelled
 - v. Marine hydrokinetics – Ed Muljadi – 26 attendees with the topics includes hybrid ocean renewable energy converter, overview of marine hydrokinetic development, testing of marine hydrokinetic, small scale wave generation for buoy
 - b. 2014 Planned Panel Sessions
 - i. Advanced control of wind and solar power plants focusing on reserve power,

frequency/inertial response, governor control – TBD, Ed Muljadi to organize/find panel organizer-moderator)

- ii. Marine Hydrokinetic (TBD, Ed Muljadi to organize/find panel organizer and coordinate with Renewable Energy Technologies SC)
- iii. Field experience with (actual) wind plus energy storage projects (Bob Nelson)
- iv. Different types of wind turbine generators (new geometry, new concepts, new proposals) – Istvan Erlich & Bob Nelson?

6. Report on New Working Groups

- Ancillary services
- Standard – need coordination with the Standard Coordinating Committee and Wind Power Coordinating Committee

7. Report on the new study

- Draft version 11.4 of a new study “Fault Current Contributions from Wind Plants” a report to the Transmission & Distribution Committee, Electric Machinery Committee, Power System Relaying Committee of the IEEE Power and Energy Society, prepared by the Joint Working Group, led by Ron Harley of Georgia Tech.
- Istvan will distribute this report to the Renewable Energy subcommittee (our SC). The comments from members will be compiled and will be sent to the lead author as our feedback.

8. Tutorial

- Marine Hydrokinetic – this tutorial was cancelled but will be offered as a panel session next year (2014 GM) sponsored by our subcommittee in coordination with the Renewable Energy Technologies Subcommittee (RETSC).
- Integration of renewable energy – this tutorial was cancelled, and will be offered as a panel session next year (2014 GM) sponsored by the RETSC
- New tutorials for the 2014 GM:
 - a. Wind Integration, with our subcommittee bringing focus on specifics of wind technology. The idea is not to replicate the plant design tutorial given this year (Ernst Camm, et al), but to look at the choice and differentiation of turbine machinery/technology – Istvan Erlich (?)
 - b. Static analysis (i.e. Loadflow) with Wind (and maybe Solar)the limitations of PV with fixed Q_{max}/Q_{min} or PQ models in load flow, reality of reactive limits and voltage control – Bob Nelson (?)

9. Report on Presentation on Dynamic Modeling PV and CSP generation (Ed Muljadi)

- There was no overhead projector was available in the meeting room. So, the presentation was presented orally among the attendees. The power point presentation will be sent to all members.