



2015 International Symposium on Smart Electric Distribution Systems and Technologies (EDST)

CIGRE SC C6 Colloquium

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Special Session on

Modeling, Co-Simulation and Validation/Testing of Smart Energy Systems

organized and co-chaired by:

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Call for Papers

Technical Outline of the Session and Topics:

Future energy systems integrate very distinctive elements and processes: continuous physics like power transmission/distribution infrastructure and heating domains, discrete components like information and communication elements, autonomous roles and agents, controls, and even socio-economic phenomena with real people in the loop. The complexity of this setup allows for cause and effect to transcend the boundaries of these conventionally separated domains. Questions to be investigated across domains include distribution grid operation, demand response markets, stability and vulnerability of cyber-physical systems.

Existing modeling, simulation and validation/testing tools are not capable of covering all issues in a comprehensive manner. Advanced approaches like co-simulation, software/hardware-in-the-loop experiment, etc. are strategies to cover the smart energy systems in a cyber-physical way.

Topics of interest include, but are not limited to:

- Modelling approaches for cyber-physical energy systems (incl. power systems, information and communication network, automation and control concepts)
- Advanced simulator coupling concepts
- Integration of hardware-in-the-loop in co-simulation concepts
- Co-simulation applications and experiments
- Software/hardware-in-the-loop applications and experiments
- Rapid modelling and prototyping approaches
- Interoperability, performance, numeric stability, and synchronization
- Information and communication simulation
- Advanced validation and testing concepts for smart energy systems
- Large-scale scenarios validation

Submission of Special Session papers: for details see www.edst2015.org/timelines.html

All the instructions for paper submission are included in the conference website: www.edst2015.org