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Title: BOLOGNA: THE ELECTRIC POWER SYSTEM OF THE FUTURE - INTEGRATING SUPERGRIDS AND MICROGRIDS

Abstracts

THIS SET INCLUDES:

- THE TECHNICAL PROGRAMME
- THE SYMPOSIUM PAPERS
Assessing the impact of distributed generation on energy losses using reference network models

System management and technical issues in a medium-range transportation system microgrid

MODELING AND NEW TOOLS

Software platform for technical and economic evaluation of large RES penetrations

Average-value models for the simulation of VSC-HVDC transmission systems

Initial results of international survey on industrial practice on power system load modelling conducted by CIGRE WG C4.605

A short-term load forecasting tool for energy management in smart grids

RELIABILITY

Risk analysis: towards a smarter grid operation

An analytical formulation to assess distribution system reliability in presence of conventional and renewable distributed generators

Fault diagnosis based on wavelet technique for wind energy conversion system equipped with DFIG

Evolution of the fault locator (fault passage indicator) on MV distribution networks: from simple stand-alone device, to a sophisticated strategic component of the smart grid control system

Future roles of Milli-, micro-, and nano-grids

ICT AND SMART METERING

An analysis of communications and networking technologies for the smart grid

Smart metering technology trials using PLC and RF mesh communications in the Republic of Ireland

Smart metering—opportunity or threat to the power industry?

Addressing advanced metering infrastructure implementation in Iran: status of pilot projects

Smart meter standardisation as a market enabler and flexible information demands

Data volume estimation for CIM based information exchange

New applications of the common information model

PHOTOVOLTAICS

A Bayesian-based approach for photovoltaic power forecast in smart grids

Performance evaluation of photovoltaic-ultracapacitor based power generator under varying solar irradiance

Improving capacity utilization—low voltage grids with high photovoltaic penetration

PV production forecast for an effective VPP exploitation

Facilitating higher penetration of photovoltaics on distribution networks with advanced inverter controls

Development of test facilities for next generation grid

VULNERABILITY AND POWER QUALITY

Distributed filtering of high harmonics in smart grid

The threat of intentional electromagnetic interference (IEMI) to the control of supergrids

On the evaluation of voltage dip performance of micro-grids

Non-linear power flow analysis and compensation for microgrids using p-q theory
A methodology for assessing the impact of distributed wind power on voltage flicker

Preliminary analysis of MV overhead lines models for high frequency harmonic penetration studies in the new scenario of smart grids

Experimental evaluation of cyber risks for electric power utilities - towards the operation of smarter grids

Locational marginal pricing based impact assessment of plugin hybrid electric vehicles on transmission networks

Information exchange needs for the electricity internal energy market (IEM). ENTSO-E work to allow interoperability and efficient electronic data interchange in Europe

Market Models to support integration of super grids & micro grids

Smarter distribution network in non-deregulated market

European energy regulators’ views on regulating smarter transmission networks

Smart grid program - challenges for its deployment in Brazil

3.9 VIRTUAL POWER PLANTS AND PILOT PROJECTS

Campus based smart microgrid at British Columbia Institute of Technology in Vancouver, Canada

The Swedish government inquiry on smart grids

Direct load control as a distributed energy resource

Large scaled smart-grid application project in Korea

Demonstrating DER-based voltage control in the Danish Cell Project

3.10 INTEGRATING MICROGRIDS AND SUPERGRIDS

Cooperation of HVDC and other converters of distributed generation with AC systems in case of large disturbances

What makes a transmission grid smart?

An analysis of technical aspects of smart grid technologies integration into power system of megacity

How to design a domestic smart grid field test taking into account the demands of a transmission system operator

Vision of smartgrids implementation in Slovenia

More Informations:

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