



Cooperation in research and development activities of Smart Grid Project

Introduction

The Institute of Physical Energetics (IPE) is the leading institute in Latvia in the field of energy research. Its main activities cover a wide scope of energy research issues, including power system modelling, dynamic optimization methods, decision methods under information uncertainty, research and practical implementation of software systems for dynamic optimization of grids and system development.

Fields of Expertise

IPE has very wide national and international cooperation, and participates in many national and international cooperation projects, including the FP5, FP6 and FP7, IEE, Interreg, EC JRC, IAEA and other projects. For example, IPE participates in the FP7 project ICOEUR that concerns intelligent coordination of operation and emergency control of EU and Russian power grids.

IPE has developed software LDM that is foreseen for planning of HV, MV and LV distribution network under information uncertainty. The products of the software family LDM is used by Latvian Transmission System Operator (JSC *Augstsprieguma tīkls*) and Distribution System Operator (JSC *Sadales tīkls*). Software database includes:

- System state calculation,
- Reliability calculation,
- Dynamic optimization,
- Network sustainable development,
- Decision-making under uncertainty.

IPE has experience and is interested to cooperate as a project partner in the research areas concerning 1st SmartGrids ERA-net Call topics:

- Balancing (load management / demand side management / grid operation / control),
- Design of market places (Ancillary Services / data management / handling legal / technical aspects),
- Non-technological issues such as economic and legal aspects, user acceptance, regulations and ethical aspects,
- Design and operation of stand-alone systems in SmartGrids and the integration into the high-voltage grid / system and related markets.

IPE would like to become a partner in the 1st SmartGrids ERA-Net Call for applied research proposals.

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