

Session on the Interoperability of Networks Madrid - November 22, 2018 Paseo de la Castellana, 141, Floor 12

Context and objective of the session

According to the European Commission, Interoperability is a key factor in making a digital transformation possible. Interoperability is one of the objectives on which the general Internet infrastructure was created. With the advance of the Internet of Things (IoT), the proliferation of the interconnection of devices of all kinds, encompasses the interconnection of the technologies of the energy value chain. In this sense, the European objective of flexible management and energy supply with the active participation of the consumer goes through the advance of interoperability between Smart Homes, all its elements, and Smart Grids.

In this framework, <u>FUNSEAM</u>, in collaboration with the <u>TR@NSENER</u> consortium, organizes this session with the aim of discussing how interoperability of different interfaces can ensure a benefit for the society as the result of the opportunities that the IoT will create. The session will count with the participation of representatives of the operating companies of the electricity networks from Spain, France and Portugal, and will be structured around an introductory panel and two roundtables. Consolidated technology companies and start-ups of the SUDOE region providing interoperability services and products will also take part in the session.

The topics to be discussed in the session will be:

- Expected benefits of interoperability in terms of system and market operation.
- How to ensure, on a technical level, interoperability for enabling demand side flexibility.
- Innovative energy services associated with interoperability.
- Interoperability to create the Internet of Energy.
- New appliances in the Smart Home to communicate to any energy management.
- Business opportunities.

Interoperability for the electric power system

Interoperability for the electric power system can be defined as "the seamless, end-to-end connectivity of hardware and software from the customers appliances all the way through the distribution & transmission systems to the power source, enhancing the coordination of energy flows with real-time flows of information and analysis." It is a foundational component of the modernized or Smart Grid concept, which is a large, complex "system of systems" with many stakeholders who each have diverse needs that must be met.

Interoperability is a critical enabler to allow that many emerging technologies—some involving advanced communications capabilities as well as distributed energy resources—are coming online at the distribution system level. The labour of the Interoperability allows such technologies to scale and the distribution system to accommodate them. This is where the protocols and communication standards become decisive managers of Interoperability, so that the connection between devices at points of energy consumption and generation facilities are possible. In this sense, the benefits of Interoperability are clear: allowing optimal coupling between demand-side and supply-side.



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Introduction

9:30h Marina Serrano, President of AELEC

Joan Batalla, General Director of FUNSEAM

Roundtable 1: Expected benefits of interoperability in terms of power system operation

Juan Bola, Head of Operation department of Centro de Control Eléctrico (CECOEL) of Red 10h Eléctrica de España (REE): Spanish business group that acts as an operator of the electricity system in the electricity market of the country.

Albino Marques, Director at Redes Energéticas Nacionais (REN): Portuguese energy sector company responsible for the planning, construction, operation, maintenance and global technical management of both these grids and associated infrastructures.

Damián Cortinas, Regional Director of Power System Operation at Réseau de Transport d'Électricité (RTE): Electricity transmission system operator of France. It is responsible for the operation, maintenance and development of the French high-voltage transmission system.

Chairman: Joan Batalla, General Director of FUNSEAM

11:15 Coffee Break

Roundtable 2: Innovative energy services associated with power system digitalisation

11:45h Eva Faure, Regulation of the Electrical Distribution of ENDESA: The largest electric utility company in Spain. The company is a majority-owned subsidiary of the Italian utility company ENEL.

Enric Vinyes, Iberian Cluster Energy Business Unit of SCHNEIDER ELECTRIC: European multinational corporation that specializes in energy management, automation solutions, spanning hardware, software, and services.

Daniel Morales, CTO of Ingelectus: Spanish startup established in March 2012 with the main purpose of developing innovative technological solutions to face the challenges that rise in the electrical power

Txetxu Arzuaga, Metering Business Development Manager of ZIV Automation: Spanish company leader in Smart Grid solutions with a knowledge in protection, control, communication and metering technologies.

Chairman: Pedro González, Director of Regulation of AELEC

13:30h End of session

About TR@NSENER project

This Session is being run as part of the European cooperation Network on Energy Transition in Electricity -TR@NSENER - project. This European project, financed by FEDER funds, and brought to fruition by the consortium led by the French university Université Toulouse III - Paul Sabatier aims to contribute to transnational cooperation to solve common problems in the south western region of Europe, such as exposure to climate change and energy and environmental challenges. The Consortium includes the participation of the Foundation for Energy Sustainability (FUNSEAM) together with the Chair of Energy Sustainability of the Universitat de Barcelona (CES-UB), the Faculdade de Ciências of the Universidade de Lisboa (FCUL), the Universidad Politécnica de Madrid, the University of Beira Interior, the CIRCE Foundation, PROMES and the Technological Corporation of Andalusia (CTA).

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