



**INAUGURATION OF THE EUROPEAN COMMISSION'S
INTEROPERABILITY CENTRE AT THE JOINT RESEARCH CENTRE**

In conjunction with

**INTERNATIONAL SYMPOSIUM
"TOWARDS A TRANSATLANTIC E-MOBILITY MARKET"
(Vehicles and grids of the future)**

Location: Ispra (Italy)

Date: 28th-29th October 2015



Draft Concept
16 September 2015



Rationale

The EU – US market covers altogether about 800 million people and together accounts for almost half of global GDP. The **automotive industry in particular is of strategic importance to the European and the United States' economies**, representing 12 million jobs, 4% GDP and 90 billion in Europe alone. It is also a sector responsible for a quarter of EU carbon emissions and consumes more than 30% of the EU's total energy intake. Transport in Europe is over 90 % dependent on oil, nearly 80 % of it being imported, with a bill up to EUR 1 billion per day, and increasing costs to the environment. Thus **electrification of transport** is seen as an important element to curb oil dependency and to decarbonize transport.

The EU **Energy Union strategy¹**, endorsed in February 2015 includes in its roadmap several actions aiming at the **decarbonisation of the transport sector** and improved **energy efficiency**.

The strategy for **transport decarbonisation** covers key areas which can directly or indirectly reduce greenhouse gas emissions from the transport sector by:

- switching towards carbon free or less carbon intensive fuels,
- improving vehicle efficiency and
- managing transport demand.

Interoperability between the electric vehicles and the grid is a key issue for the deployment and the full exploitation of the potential of transport electrification. Both, the European Union and the United States of America hold a **shared interest** in the rapid development of **cost-efficient e-mobility** and **intelligent grid solutions** in order to attain cleaner, smarter and integrated transport and energy systems on both sides of the Atlantic.

The worldwide market for advanced batteries is growing at a rapid pace with the market already crossing \$27 billion in 2014. The global market for advanced batteries alone is expected to be worth over \$55 billion by the year 2020², with electric vehicles accounting for the biggest share of the market.

Setting up suitable and **harmonized regulatory and market models, developing compatible and interoperable standards** for the electric vehicles and the electricity grids will minimize trade barriers and bring innovative products and services into markets on both the European Union and the United States of America.

A high level of interoperability, both within and between the e-mobility and the electricity systems, is a precondition for these changes to happen through market mechanisms. **Interoperability** indeed aims at

¹ Energy Union Package (COM2015) 80, 25/02/2015

² "Global Market for Advanced Batteries - Forecast, Trends & Opportunities 2015-2020" <http://www.researchandmarkets.com>



reducing uncertainties faced by **market actors** (including consumers, utilities and vendors) and ensuring that emerging technologies and services operate in a multi-actor, multi-standard environment.

On this background, in 2011, **the Transatlantic Economic Council (TEC)** endorsed a comprehensive **Work Plan** setting out short- and medium term objectives for **e-mobility** and **smart electricity systems** aiming to promote electric vehicle/smart-grid interoperability and continued scientific exchange for transatlantic cooperation.

The US Department of Energy and the EC Joint Research Centre (JRC) have agreed to establish two Electric Vehicle/Smart Grid Interoperability Centers in the United States at the Argonne National Laboratories (Chicago, Illinois), and in Europe at the Joint Research Centre (Ispra, Italy, and Petten, The Netherlands).

The **US Smart Grid Interoperability Centre** was inaugurated in 2013 to support standards and technology harmonization for the EV-grid interface, as well as charging interoperability, to ensure future electric vehicles and charging stations work together seamlessly.

The European Commission's Interoperability Centre at the JRC will be inaugurated on **the 29th October 2015 in Ispra, Italy**, in conjunction with the International Symposium "Towards a transatlantic E-Mobility Market". It is also foreseen to hold a meeting of the Transatlantic Economic Council in connection with the inauguration.

The new Centre will address interoperability aspects of the electric vehicles and smart grids interaction (in Ispra) and safety and performance issues of vehicle batteries (in Petten).

The aim of the two EU-US Interoperability Centers is to increase cooperation in the following areas:

- Development and verification of standards, technologies and communication protocols;
- Harmonization of test procedures for vehicles, batteries, smart grids, and their interoperability – to facilitate EV and smart grid components compatibility among products from global suppliers;
- Identification of gaps in standards and technologies;
- Recommendation of solutions through the creation of proof-of-concept systems and validation of proposed approaches.



International Symposium

"Towards a Transatlantic E-Mobility Market (Vehicles and grids of the future)"

The **International Symposium “Towards a Transatlantic E-Mobility Market (Vehicles and grids of the future)”** will be organized on the **28th -29th October 2015** in Ispra, Italy, with the main objective of bringing together key stakeholders, to discuss key aspects related to interoperability and concrete actions to pave the road towards an e-mobility market.

Industry, policy makers, regulators, standardization bodies, research organizations and academic institutions will discuss the following topics:

- State-of-the-art and trends of technologies on both the vehicles and grid side (vehicles, batteries and other components, interoperability, grids and electric systems etc.);
- Market perspectives and policy initiatives to promote electrification of transport
- Research challenges to be addressed at international level on alternative fuels and transport decarbonisation
- Barriers to the deployment of e-mobility and ways to overcome them
- Future international collaboration on key e-sectors and to foster common interoperability standards



Draft programme

Day 1, Wednesday, 28th October 2015

8.30 – 9.00 Registration & welcome (*JRC Auditorium, Building 58c*)

9.00 – 10.30 OPENING SESSION I: Setting the Scene

Co-Chaired by **Giovanni De Santi**, European Commission, Director of the Institute for Energy and Transport JRC and **Peter B. Littlewood** the Director of Argonne National Laboratory, the USA.

Session will cover: views from stakeholders setting the scene regarding vehicles and infrastructure, transatlantic business, energy and transport related policies, international standardization for e-mobility and smart grids, and research and development.

- **Mike Tinskey**, Global Director, Vehicle Electrification & Infrastructure, Ford Motor Company
- **Michael Keller**, Leader Energy Storage, Volkswagen AG
- **Stefan Niemand**, Trans-Atlantic Business Council (TABC) / AUDI AG
- **Marie Donnelly**, Director for Renewables, Research and Innovation, Energy Efficiency, DG ENER, European Commission
- **Ramamoorthy Ramesh**, Associate Laboratory Director for Energy Technologies at the Lawrence Berkeley National Laboratory *tbc*
- **Elena Santiago**, Director General of CEN and CENELEC
- **Joe Bhatia**, President and CEO, American National Standards Institute (*video message*)

10.30 – 11.00 Coffee break

11.00 - 13.00 SESSION II – Technology Development and Standardisation Needs

Co-Chaired by **Marco Gilli**, Rector of Politecnico di Torino and **David Dossett**, Chair of the e-Mobility Coordination Group, CEN CENELEC

Session will cover: Current status and outlook of technologies, manufacturing and supply chain (industry), research and innovation efforts and capacities, and actions needed at EU- and international level to support these; synergy with other road transport developments (V2V communications, autonomous vehicles, etc) and international standardization efforts.

- **Josef Affenzeller**, Secretary General of the European Green Vehicles Initiative (EGVIA)



- **Gereon Meyer**, Head of Strategic Projects at VDI/VDE-IT
- **Keir Fitch**, Head of Unit of Research and Innovative Transport Systems, DG MOVE, European Commission
- **Riccardo Groppo**, Chair of The European Technology Platform on Smart Systems Integration (EPoSS) Automotive experts group
- **Peter van den Bossche**, Secretary of IEC TC 69, CEN-CENELEC
- **Ben Kroposki**, Director – Power Systems Engineering Center, NREL, USA *tbc*

Open Discussion, Q&A from the audience

13.00 – 14.30 NETWORKING LUNCH

14.30 – 16.00 SESSION III – Business Opportunities and Challenges

Co-Chaired by **Valeria Termini**, Vice President of the Council of European Energy Regulators (CEER) and **Stefan Niemand**, Trans-Atlantic Business Council / AUDI AG

Session will cover: Identification of scientific-technological and non-technological barriers (costs for externalities, variability in incentive schemes, strengthened green public procurement ...) for the deployment of e-mobility and identify common transatlantic issues; opportunities offered by other developments: Big Data, internet of things, etc.

- **Nikos Hatziargyriou**, President of European Technology Platform on SmartGrids
- **Ana Aguado**, Secretary General of European Distribution System Operators for Smart Grids (EDSO)
- **João A. Peças Lopes**, Full Professor of EE at FEUP and Member of the Board of INESC TEC; Vice-President of the Portuguese Association for Electric Mobility
- **Gerrit Riemer**, Director Future Mobility, General Motors *tbc*
- **Joseph Beretta**, President of AVERE-France, French Electric mobility development association
- **Baerte de Brey**, STEDIN, Dutch Electric Utility Company

Open Discussion, Q&A from the audience

16.00 – 16.30 Coffee break



16.30 – 18.00 SESSION IV – EV/Smart-Grid Interoperability

Co-Chaired by **Keith Hardy**, Director, US EV-Smart Grid Interoperability Centre, Argonne National Laboratory (ANL) and **Roberto Ridolfi**, Director Sustainable Growth and Development, DG DEVCO, European Commission

Session will cover: Interoperability requirements and role of international standards and of non-recognised standards; connectivity and communication systems; current experience with different charging columns and connectors.

- **Alberto Pototschnig**, ACER Director
- **Wolfgang Selle**, Supervisor E-Mobility & Infrastructure FoE, Dipl.-Ing., Ford Motor Co *tbc*
- **Venizelos Efthymiou**, Chairman of the Research Centre for Sustainable Energy (FOSS)
- **Petr Dolejsi**, Director for Mobility & Sustainable Transport, ACEA
- **Luciano Martini**, Coordinator of the Smart Grids Joint Programme, European Energy Research Alliance (EERA)
- **Prof. Laurent Guise**, Smart Grid Standardisation Director, Schneider Electric; Member of IEC TC 57 committee and CEN-CENELEC-ETSI Smart Grid Co-ordination Group *tbc*

Open Discussion, Q&A from the audience

18.00 CLOSING OF THE 1st DAY SYMPOSIUM

18.30 Departure (*bus transfer*)

20.00 Evening reception and dinner (*ATA Hotel Varese*)



Inauguration Ceremony of the European Commission's Interoperability Centre Joint Research Centre, Ispra

Day 2, Thursday, 29th October 2015

9.30 -11.00 SESSION – Inauguration ceremony (*JRC Auditorium, Building 58c*)

Chair of the session: **Tibor Navracsics**, EU Commissioner for Education, Culture, Youth and Sports and responsible for DG JRC

- **Maroš Šefčovič**, Vice-President of the European Commission for Energy Union
- **Lynn Orr**, the US Under Secretary for Energy and Science, the US Department of Energy
- **Representative of the US Department of Commerce**
- **Representative of Italian Government**
- **Michael Cramer**, Chair of the TRAN Committee, European Parliament *tbc*
- **Roberto Maroni**, President of Regione Lombardia *tbc*

11.00 – 12.30 Opening of Interoperability Centre (ceremony and tour of the facility)

12.30 – 14.00 - Networking Lunch

14.00 – 15.30 SESSION V The EU-USA collaboration on e-mobility: views from the policy makers

Co-Chaired by **Vladimir Šucha**, European Commission, Director-General, Joint Research Centre and **Lynn Orr**, the US Under Secretary for Energy and Science, the US Department of Energy:

Session will cover: history and development of EU-US collaboration on e-mobility; the Transatlantic Economic Council process; JRC/ANL scientific/technical collaboration and the expectations from the side of policy makers.

- **Henrik Hololei**, European Commission, Director General, DG Mobility and Transport *tbc*
- **Jean-Luc Demarty**, European Commission, Director-General, DG Trade *tbc*
- **H.E. Mr Anthony Gardner**, the US Ambassador to the European Union
- **Mary Donnelly**, Director for Renewables, Research and Innovation, Energy Efficiency, DG ENER, European Commission
- **US representative from DoC** *tbc*
- **Paolo Alli**, Member of the Italian Parliament *tbc*
- **Valeria Termini**, Vice President of the Council of European Energy Regulators (CEER)
- **Stefan Niemand**, Trans-Atlantic Business Council



Open discussion with the Audience

15.30 – 17.00 SESSION VI The EU-USA collaboration on e-mobility – views from the stakeholders

Co-Chaired by **Giovanni De Santi**, Director of Institute for Energy and Transport JRC and **Peter B. Littlewood** the Director of Argonne National Laboratory, the USA.

Session will cover: views and expectations from industry, academia, standardisation bodies and legislators.

- **Francesco Profumo**, President of IREN
- **Ernesto Ciorra**, Head of Innovation and Sustainability, Enel
- **Elena Santiago**, Director General of CEN and CENELEC
- **Mike Tinskey**, Global Director, Vehicle Electrification & Infrastructure, Ford Motor Company
- **Josef Affenzeller**, Secretary General of the European Green Vehicles Initiative (EGVIA)
- **Ramamoorthy Ramesh**, Associate Laboratory Director for Energy Technologies at the Lawrence Berkeley National Laboratory, the USA *tbc*
- **Alfons Westgeest**, Executive director, Association of European Automotive and Industrial Battery Manufacturers (EUROBAT)
- **Prof. Helmut List**, Vice Chairman ERTRAC, Chairman and Chief Executive Officer of AVL List GmbH.
- **Federico Testa**, Director General of ENEA

17.00 – 17.15 Closing Remarks

Vladimir Šucha, European Commission, Director-General, Joint Research Centre and **Lynn Orr**, the US Under Secretary for Energy and Science, the US Department of Energy