



# Expert Workshop: V2X User perception, Business Models and Regulatory Framework

26<sup>th</sup> -28<sup>th</sup> October | Paris, France

**Local Organisers:**

Chaire Armand Peugeot Chair



**Operating Agent:**



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**Hosted by:**

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## Workshop Objectives

The international Expert Workshop is organized by Task 28 of the IEA\* Hybrid and Electric Vehicle Technology Collaboration Program (HEV-TCP) with the support of the Chaire Gouvernance and Regulation of the University Paris Dauphine and the Chaire Armand Peugeot.

This International Workshop features high-level world-speakers and academics from the field of engineering, management, economics, political science, among others, who will exchange their views and debate about V2X challenges and related topics.

Workshop objectives are as follow:

⇒ **Business Models**

What are the emerging business models? How are their benefits, costs, and risks allocated?

⇒ **Regulatory Challenges**

How can policy makers create better incentives? Which are the regulatory barriers that prevent V2X to fully deploy?

⇒ **V2G experiments & International diffusion**

What hurdles to V2X deployment have been identified? Lessons learnt from on-going V2X projects in different countries.

⇒ **User's engagement**

How can we engage the consumer towards V2G? How should V2G services be paid?

## Venue

26<sup>th</sup> - 27<sup>th</sup> October | University Paris Dauphine, Salle R. Aron.  
Place du Maréchal de Lattre de Tassigny, 75016  
Paris, France.

28<sup>th</sup> October | ESSEC Business School, CNIT la Défense Paris.

Registration to the workshop is mandatory ([iea-hev@irec.cat](mailto:iea-hev@irec.cat)).

**Notice that attendance to the first day workshop (October 26<sup>th</sup>) is under IEA HEV-TCP Task 28 member's invitation. Second and third days (October 27<sup>th</sup> and 28<sup>th</sup>) are open.**

*\*(Information or material of the Technology Collaboration Programme (TCP) on Hybrid and Electric Vehicles (HEV TCP) (formally organised under the auspices of the Implementing Agreement for Co-operation on Hybrid and Electric Vehicle Technologies and Programmes), does not necessarily represent the views or policies of the IEA Secretariat or of the IEA's individual Member countries. The IEA does not make any representation or warranty (express or implied) in respect of such information (including as to its completeness, accuracy or non-infringement) and shall not be held liable for any use of, or reliance on, such information.)*

## Programme overview

Wednesday 26 <sup>th</sup> October		Thursday 27 <sup>th</sup> October
	<b>Panel 1: Business Models</b>	<b>Panel 3: V2G experiments &amp; International diffusion</b>
<b>9h00-10h30</b>	Welcome <b>Task 28 Operating Agents</b> Business models for V2X: A framework analysis and identification of industry challenges <b>C. Weiller</b> ( <i>Hg Capital</i> ) Effects of Battery Degradation on Economic Analyses of V2X Service Provision <b>A. Thomson</b> ( <i>Vedecom</i> ) Chair: <b>B. Sahut</b> ( <i>PSA Groupe</i> )	V2G HUBs <b>S. Cascante</b> ( <i>Enel</i> ) Parker and V2X – V2G and V2L Pilots in Denmark <b>P. Bach</b> ( <i>DTU</i> ) Nissan Europe new headquarters exciting innovation. V2G, 2nd life batteries, RES and EMS <b>E. Mascarell</b> ( <i>Nissan</i> ) Chair: <b>TBD</b> ( <i>Nissan</i> )
<b>Coffee break</b>		
<b>11h00-12h30</b>	Business models for sustainable technologies: Exploring business model evolution in the case of electric vehicles <b>J. Pinkse</b> ( <i>Manchester Business School</i> ) Electric Vehicles and ancillary services market <b>R. Konidena</b> ( <i>MISO</i> ) EV deployment scenarios used in France to estimate the grid development <b>F. Chiappini</b> ( <i>ENEDIS</i> ) Chair: <b>M. Sanmarti</b> ( <i>IREC</i> )	Towards sector integration? Challenges and opportunities for E-mobility in Germany <b>S. Strunz</b> ( <i>UFZ</i> ) Practical V2G experiences in Amsterdam and evolving European initiatives & networks, where electric vehicles and city renewables really co-operate, enforcing each-others & future clean cities <b>H. Niesing</b> ( <i>AUAS</i> ) Chair: <b>C. Bonnery</b> ( <i>ENEDIS</i> )
<b>Lunch</b>		
	<b>Panel 2: V2X Challenges for field implementation</b>	<b>Panel 4: User's engagement</b>
<b>14h00-15h30</b>	Integration of new technologies in the energy system <b>C. Plum</b> ( <i>energinet.dk</i> ) Electric Vehicles – A Problem or an Opportunity for Utilities <b>S. McGrath</b> ( <i>Eurelectric</i> ) A methodology for interoperability testing of V2X technologies <b>M. Olariaga</b> ( <i>Joint Research Center</i> ) Chair: <b>E. Brousseau</b> ( <i>U. Dauphine</i> )	JuiceNet (demand flexibility platform) overview and case studies <b>A. White</b> ( <i>eMotorWerks</i> ) Engaging the Consumer in V2G <b>M. Nicholas</b> ( <i>UC Davis</i> ) Project „Gesteuertes Laden V3.0“ <b>F. Schmalfuß</b> ( <i>Chemnitz University of Tech.</i> ) Workshop conclusion and wrap up <b>Task 28 Operating Agents</b> Chair: <b>TBC</b>
<b>Coffee break</b>		
<b>16h00-17H30</b>	Economic Regulation issues regarding VtG in the US <b>R. Sioshansi</b> ( <i>U. Ohio</i> ) Barriers to entry in Frequency-Regulation Services Markets <b>O. Borne</b> ( <i>Armand Peugeot Chair</i> ) Standardization trends in regards to V2G <b>F. Colet</b> ( <i>Vedecom</i> ) Chair : <b>B. Carroll</b> ( <i>ESB</i> )	<b>Internal task 28 Executive Meeting</b>
<b>17h30-18h</b>	First day Workshop conclusion and wrap up <b>Task 28 Operating Agents</b> Cocktail	

Friday 28<sup>th</sup> October 2016

9h00-10h30

Session 1 Chair: <b>J. Lepoutre</b> (Armand Peugeot Chair)	Session 2 Chair: <b>C. Donada</b> (Armand Peugeot Chair)	Session 3 Chair: <b>M. Petit</b> (Armand Peugeot Chair)
<b>Experiments in mobility</b>	<b>Business models choices</b>	<b>EVs and Islands</b>
Preparing electro mobility take off : EVs charging and discharging experiments in Japanese smart communities' demonstrators <b>Y. Leclerc &amp; B. Faivre d'Arcier</b> ( <i>University of Lyon</i> )	Make or buy in the electric vehicle industry? Choices between modularity and integration in the case of BMW I <b>Y. Chen, C. Donada, Y. Perez</b> ( <i>Armand Peugeot Chair</i> )	Could Energy Storage be the best way to boost the sustainability in isolated energy system? The case of Canary Islands – With special respect to the electromobility <b>G. Marrero, F. Ramos, Real, A. Ramírez, Y. Perez</b> ( <i>Universidad de la Laguna</i> )
Rebound effects in car-based mobility <b>S. Becker</b> ( <i>University of Stuttgart</i> )	Comparison of socio-psychological characteristics of conventional and battery electric car buyers <b>C. Klockner</b> ( <i>NTNU</i> )	Feasibility Study of the Orkneys Electric Future <b>D. Beeton</b> ( <i>urbanforesight.org</i> )
Can single-driver car-users become multimodal travelers? A MAMCA analysis <b>R. Le Boennec, P. Da Costa, I. Nicolai</b> ( <i>Vedecom</i> )	EV in China <b>B. Chen</b> ( <i>Polytechnique ParisTech</i> )	EV Integration in Island Systems –Case study of Reunion Island <b>D. Loffredo</b> ( <i>EDF SEI</i> )

Coffee Break

11h00-12H30

Session 4 Chair: <b>Y. Perez</b> (Armand Peugeot Chair)	Session 5 Chair: <b>J. Lepoutre</b> (Armand Peugeot Chair)	Session 6 Chair: <b>G. Calabrese</b> (CNR-Ircres)
<b>V2G and markets</b>	<b>Innovations challenges</b>	<b>Economic evaluations</b>
Optimized charging control method for plug-in electric vehicles in lv distribution networks <b>J.G. Villalobos</b> ( <i>Universidad Del Pais Vasco</i> )	Do sunkwork projects help to accelerate innovation in large organization? <b>C. Donada</b> ( <i>Armand Peugeot Chair</i> )	A Cost Benefit Analysis of Hydrogen for Mobility The Normandy Project and the French Roadmap <b>J.P. Ponsard</b> ( <i>Polytechnique ParisTech</i> )
An aggregate model of plug-in electric vehicles including distribution network characteristics for primary frequency control <b>P. Garcia Gonzales</b> ( <i>IIT Madrid</i> )	Innovations for Sustainable mobility <b>G. Fournier</b> ( <i>Hochschule Pforzheim</i> )	Willingness to change and willingness to pay for electric vehicles in Tenerife ( <i>Canary Islands</i> ) <b>A. Ramirez, F. Ramos, Real, G. Marrero, Y. Perez</b> ( <i>Universidad de la Laguna</i> )
Reducing reserves costs by changing the market design of flexibility provision: the case of Electric Vehicle fleets <b>P. Codani, L. Cassin, Y. Perez</b> ( <i>PSA Group</i> )	The autonomous car: economic and social issues and future perspective <b>D. Attias</b> ( <i>Armand Peugeot Chair</i> )	Electromobility in collective residential buildings: energy management and car sharing services <b>M. Petit</b> ( <i>Armand Peugeot Chair</i> )

## About Task 28 Home grids and V2X Technologies

The IA-HEV Executive Committee (ExCo) approved Task 28 Home Grids and V2X Technologies at the Executive Committee meeting in May 2014 held in Copenhagen. It is expected to continue through May 2017. This task will explore the technologies and accompanying issues associated with the use of electric storage from plug-in electric vehicles (PEVs) for uses other than powering the vehicles.

Customers may use their PEV electric storage capabilities for other applications such as vehicle-to-grid (V2G), vehicle-to-home (V2H), vehicle-to-load (V2L), and vehicle-to-vehicle (V2V). Task 28 aims to address the technical and economic knowledge gaps preventing V2X technology to fully deploy.

Task objectives are as follow:

- Analyze the technical and economic viability of V2X technology, specifically, give responses to a number of identified questions.
  - When V2X will be available as a consumer application?
  - Which are the potential synergies with self-generated electricity in households? -Which is the value provided by V2X in terms of security of supply?
  - Which impact to expect on tax revenues?
  - Which are the roles of the different industry players?
  - Which is the impact of the different regulatory frameworks in different countries?
- Develop a set of best practices by connecting and synchronizing the existing V2X research and demonstration projects.
- Develop a policy-making toolbox and a technology roadmap definition in order to serve decision makers seeking to introduce V2X technology in their respective countries.
- Establish a worldwide technical information exchange platform enabling information sharing among scientific institutions and industrial representatives working in V2X issues.
- Promotion of new V2X technology demonstration projects.

LIST OF TASK MEMBERS:

