Workshop at Bilderberg hotel Arnhem/Oosterbeek, the Netherlands, hosted by Alliander, 25th of April 2012

Objectives of the Workshop

To present a showcase of national and international projects and to present the final results of the IEA-task. Furthermore, to discuss on the participants´ involvement in the penetration of new technologies and on the related business models and ICT.

Program

09:00-09:15 ***Registration***

09:15-09:45 ***Introduction Alliander***

Marcel van Hest, short introduction of Alliander

Harry van Breen, Alliander, "Sense and Nonsense of Smartgrids for integration of DG-RES, DR and storage"

The session will end with a number of thought provoking and focusing questions to come back to at the end of the day.

09:45-10:30 ***Block 1: Present state of the IEA-project Seppo Kärkkäinen/Jussi Ikäheimo***

"Evaluation of demand response, DG-RES and storage technologies"

"Project case study database update"

"Quantitative and qualitative business models and stakeholders"

10:30-10:45 ***Discussion***

10:45-11:00 ***Break***

11:00-12:15 ***Block 2: DER testing, operation and planning***

Samuli Honkapuro and Jussi Tuunanen, Lappeenranta University of Technology: "Impact of DER for planning and operation of electricity distribution grid and business"

Raphael Caire, Grenoble Institute of Technology/G2ELAB, "PREDIS: A smartgrid experimental test bed platform - practical example of self healing demonstration"

Asier Moltó Llovet, "Spanish most relevant SmartGrid demonstration projects"

Alfons Lansink, MS Livelab, a living lab for the distribution grid

Matthias Stifter, AIT: "Integration of renewables on MV and LV networks - some experiences from Field tests and current projects"

12:15-12:30 *Discussion*
12:30-13:15 Lunch

13:15-14:45 *Block 3: Smart Electricity Ecosystems and Markets*

Marcel van Hest, Alliander: "Building an innovation eco system"

Representative of Cybergrid, ''European Demand Response Center Project (EDRC)''

Koen Kok, TNO/NL: "The EU-FP7 EcoGrid project on the Isle of Bornholm"

Nouredine HadjSaid, Grenoble Institute of Technology/G2ELAB: "GREENLYS, a large system view French Pilot project on Smartgrids".

René Kamphuis, TNO/NL: "New use cases in the PowerMatching: City-II project in Hoogkerk, the Netherlands"

14:45-15:00 *Discussion*
15:00-15:15 *Break*
15:15-16:30 *Block 4: EV Integration*

Gaizka Alberdi, EDF R&D, "Managing the impact of EV on the distribution network by use of Demand Response: The INTER project, a practical example"

Rusbeh Razania: "EV business models- Participation of EVs in control energy markets and the second life potential"

André Postma: "Deployment of the charging infrastructure for vehicles in the Netherlands"

Wilfred Smith, Alliander, The voice of the customer (to be confirmed).

16:30-17:00 Round table reiterating on the opening session questions/ Conclusions

Registration

Please send an Email with **your name and company details** to IEAWorkshop@tno.nl preferably before April 13th 2012 with "**IEA-Oosterbeek**" as the subject.

How to reach the Bilderberg Hotel

Oosterbeek is close to Arnhem in the Eastern part of the Netherlands. From Schiphol Airport, there is a direct train connection to Arnhem (1 hr and 15 minutes; see http://www.ns.nl/reisplanner-v2/index.shtml). From the station you can take bus 86 to reach the hotel. Exit at busstop at 'Wolfhezerweg' where you can see the entrance to Hotel De Bilderberg (Utrechtseweg 261, 6862 AK Oosterbeek).

Background

The Workshop is organized by the Task XVII of the IEA Demand Side Management Programme (http://www.ieadsm.org/). The title of the Task XVII is "**Integration of Demand Side Management, Distributed Generation, Renewable Energy Sources and Energy Storages**".

The main objective of this Task is to study how to achieve a better integration of flexible demand (Demand Response, Demand Side Management) with Distributed Generation, energy storages and Smart Grids. This would lead to an increase of the value of Demand Response, Demand Side Management and Distributed Generation and a decrease of problems caused by intermittent distributed generation (mainly based on renewable energy sources) in the physical electricity systems and at the electricity market.

Thus the integration means in this connection

- how to optimally integrate and combine Demand Response and Energy Efficiency technologies with Distributed Generation, Storage and Smart Grids technologies, at different network levels (low, medium and high voltage)
- and how to combine the above mentioned technologies to ideally support the electricity networks and electricity market

Phase 1

The first phase in the Task was to carry out a scope study. It has been completed with 4 Subtasks and the following public reports were produced (http://www.ieadsm.org/Publications.aspx?ID=18):

- Task XVII - Integration of Demand Side Management, Distributed Generation, Renewable Energy Sources and Energy Storages - Final Synthesis Report vol 1. December 2008 (
- Task XVII - Integration of Demand Side Management, Distributed Generation, Renewable Energy Sources and Energy Storages - Final Synthesis Report vol 2.

Vol l. includes the main report and Vol 2. is the annex report with detailed country descriptions, analysis tools etc. These reports are available at the IEADSM-website.

Two public workshops were also arranged in Petten and in Seoul. The presentations can be found from web-site: (http://www.ieadsm.org/ViewTask.aspx?ID=16&Task=17&Sort=0).

Phase 2

Phase 2 of the Task is going on and the main topic of it is to assess the effects of the penetration of emerging DER technologies to different stakeholders and to the whole electricity system. The emerging DER technologies to be discussed include

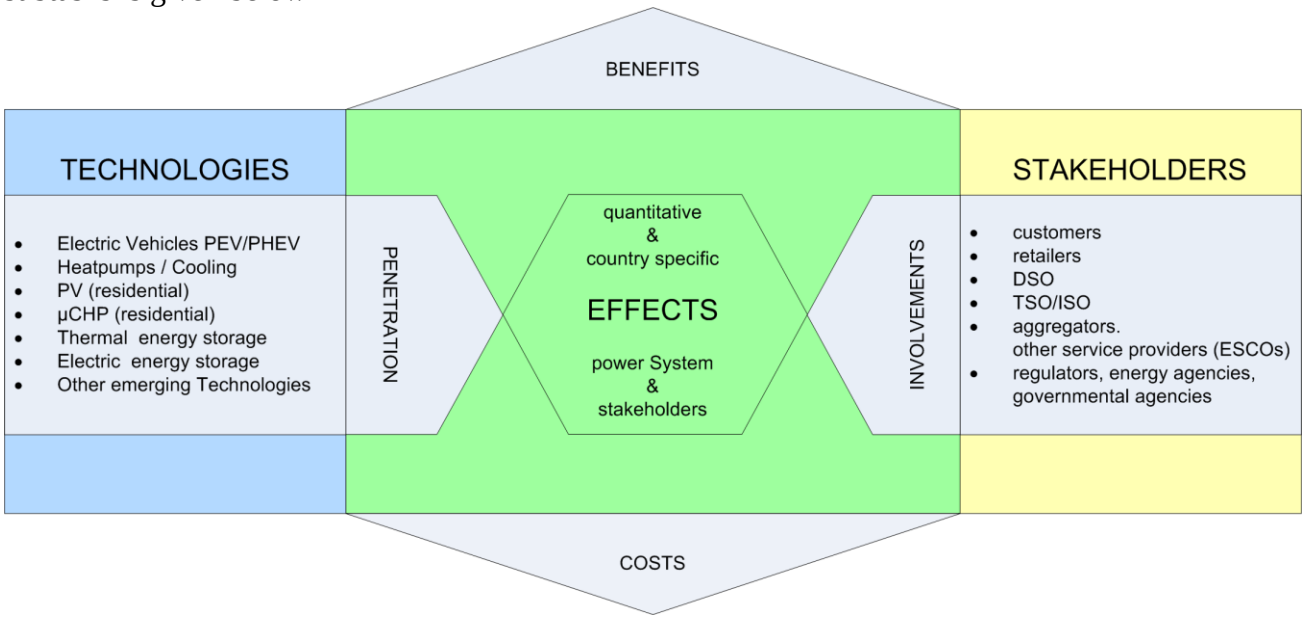
- plug-in electric and hybrid electric vehicles (PEV/PHEV)
- different types of heat pumps for heating and cooling
- photovoltaic at customer premises

- micro-CHP at customer premises
- energy storages (thermal/electricity) in the connection of previous technologies
- smart metering
- emerging ICT
- other technologies seen feasible in 10 – 20 years period, especially by 2020.

The main Subtasks are (in addition to Subtasks 1 – 4 of the phase one):

Subtask 5: Assessment of technologies and their penetration in participating countries
Subtask 6: Pilots and case studies
Subtask 7: Stakeholders involved in the penetration and effects on the stakeholders
Subtask 8: Assessment of the quantitative effects on the power systems and stakeholders
Subtask 9: Conclusions and recommendations

The figure below describes the concept of this extension. The more detailed descriptions of the subtasks is given below



Two public workshops will be organised by the Phase 2 of the Task. The first one was arranged in Sophia Antipolis, France, in May 2011 (presentations are available at the web-site (http://www.ieadsm.org/ViewTask.aspx?ID=16&Task=17&Sort=0). The second one is this workshop in Arnhem.