

**Analysis of the European energy system
under the aspects of flexibility and technological progress**

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Deliverable

D7.2 Scenario Workshop

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Table of Contents

1. Short description of the event	4
2. Agenda	5
3. Participant list	6

1. Short description of the event

On 17th November 2016, the first public workshop of REFLEX took place in Brussels. During this event, about 50 representatives from industry, policy and science discussed the topic “Energy Decarbonisation and Flexibility Needs -How can high shares of intermittent renewable energies efficiently be balanced?”

Section 2 displays the agenda, while section 2 reports the participant list.

The workshop combined two aspects. One part aimed to present and discuss the project REFLEX and the scenarios, which will be investigated within the project. This part was complemented with interesting presentations resulting from precedent projects fitting to the topic flexibility options. External energy experts were invited to contribute to the key topic with presentations. Thereby, current topics relevant for the European energy system were addressed. We were happy, to welcome three keynote-speaker from policy and industry:

- Henrik Dam (European Commission, DG Energy) talked about the European Policy Initiatives in support of the Energy Transition
- Paul Kreutzkamp (CEO of Next Kraftwerke Belgium) gave some insights about the Role of a Flexibility Aggregator on the European Electricity Markets
- Maria Sandqvist (Director of the council for Swedish Smart Grid) gave a presentation about the benefit of the Smart Grid in the Future Energy System

In addition, the keynote-speakers took part in a lively panel discussion with many questions from the auditorium. The keynote-presentations and panel discussion were complemented by first insights from the REFLEX-project which were introduced by Prof. Dr. Dominik Möst (project coordinator of REFLEX). He shortly presented the project (objectives, approach, consortium, etc.) as well as the scenarios.

The objective of the workshop was to bring together representatives from politics, industry and science from different fields to enable fruitful discussions about relevant topics in the European energy system, especially with regard to flexibility options. A look at the participant list (section 3) shows, that this objective has been achieved. The workshop-format was based on presentations and included time for discussions. This was a good basis for intensive exchange between the participants.

The presentations from the workshop are available on the REFLEX-Website (www.reflex-project.eu).

2. AGENDA

Energy Decarbonisation and Flexibility Needs -

How can high shares of intermittent renewable energies efficiently be balanced?

Subject

The decarbonisation of the energy system is one of the main challenges the European Union is facing in the coming years and decades. Renewable energies play a crucial role in this transformation process. However, due to their intermittent nature they rise the need for flexibility. A large bundle of technologies may provide the needed flexibility, such as energy storage systems or demand side management.

The role of different flexibility options for the decarbonisation of the European energy system will be discussed during this afternoon event. The focus lies on the trade-off between different technologies in the electricity, mobility and heat sector as well as cross-sectoral interactions. In addition, the workshop addresses questions about market design options and policy measures, to facilitate the exploitation of flexibility options in different energy sectors.

Speaker

These topics will be addressed in keynote-presentations and a panel discussion with following energy experts:

- Henrik Dam, European Commission, DG Energy, Project Officer
- Paul Kreutzkamp, CEO of Next Kraftwerke BELGIUM
- Maria Sandqvist, Director of the council for Swedish Smart Grid

The keynote-presentations and panel discussion are complemented by first insights from the REFLEX-project.

Program

- 14:30 Registration
- 15:00 Welcome and Presentation of REFLEX-project
- 15:20 Keynote Presentations:
 - H. Dam: *European Policy Initiatives in support of the Energy Transition*
 - P. Kreutzkamp: *The Role of a Flexibility Aggregator on the European Electricity Markets*
 - M. Sandqvist: *Benefit of the Smart Grid in the Future Energy System*
- 16:30 Panel Discussion
- 17:30 Reception

Date

Thursday, 17th November 2016

Venue

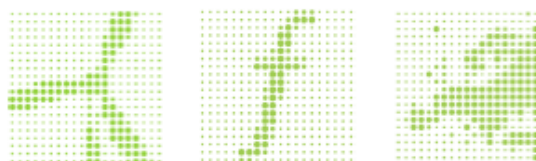
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3. PARTICIPANT LIST



REFLEX-Workshop

Energy Decarbonisation and Flexibility Needs –
How can high shares of intermittent renewable energies efficiently be balanced?

17th November 2016, Representation of Stockholm, Brussels

List of participants

Nr.	Name	Institution	Signature
1	Ahluwalia, Kavita	Uniper SE	
2	Arnaud, Christophe	SolarPower Europe	
3	Becker, Markus	General Electric	
4	Bolle, Alix	energycities	
5	Botschek, Peter	Cefic	
6	Brown, Nils	KTH - Royal Institute of Technology	<i>N. Brown</i>
7	Carton, Stijn	European Climate Foundation	
8	Chatzikyriakou, Despoina	Toyota Motor Europe NV/SA	
9	Coffineau, Loïse	KIC InnoEnergy	
10	Conconi, Manuela	European Commission, INEA	<i>Manuela Conconi</i>
11	Corbetta, Giorgio	EEX	<i>Giorgio Corbetta</i>
12	Dam, Henrik	European Commission, DG Energy	
13	Daniel, Ewelina	European Commission, DG Energy	
14	Drabik, Eleanor	CEPS - Centre for European Policy Studies	
15	Ducarme, Olivier	Engie Lab Laborelec	
16	Fichtner, Wolf	KIT- Karlsruhe Institute of Technology	<i>Wolf Fichtner</i>
17	Fondi, Ludovica Sara	CEDEC	
18	Gomez, Jonathan	KIT- Karlsruhe Institute of Technology	<i>Jonathan Gomez</i>
19	Gras, Sebastian	European Commission, DG Energy	
20	Hall, Siobhan	S&P Global Platts	
21	Herbst, Andrea	Fraunhofer Institute for System and Innovation Reserach (ISI)	<i>Andrea Herbst</i>
22	Herges, Benedikt	Siemens AG	<i>B. Herges</i>

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Nr.	Name	Institution	Signature
23	Ibáñez , Lucia	EFET - European Federation of Energy Traders	
24	Jakob, Martin	TEP Energy; ESA ² - Energy System Analysis Agency	
25	Janusz, Zyśk	AGH - University of Science and Technology	
26	Jentjens, Julian	BVA Elektrokessel GmbH	
27	Jerzyniak, Tomasz	European Commission, DG Energy	
28	Jochem, Patrick	KIT- Karlsruhe Institute of Technology	
29	Kashanizadeh, Babak		
30	Kiso, Jan Ole	European Commission, DG Energy	
31	Kreutzkamp, Paul	Next Kraftwerke BELGIUM	
32	Kreuz, Michael	Deutsches Zentrum für Luft- und Raumfahrt	
33	Kroll, Annette	ENGIE, Regulatory Oversight and Market Design	
34	Kronimus, Alexander	Verband der Chemischen Industrie e.V.	
35	Kunze, Robert	ESA ² - Energy System Analysis Agency	
36	Lauber, Matthias	innogy SE	
37	Lischka, Tanja	Siemens AG	
38	Litzenburger, Judith	EnergieAgentur.NRW	
39	Macwhinnie, Nathan	Ofgem	
40	Maier, Norbert	European Commission, DG Comp	
41	Makelá, Tero	European Investment Bank	
42	Markova, Darja	Research Center Jülich	
43	Martino, Angelo	TRT Trasporti e Territorio srl	
44	Michaelis, Julia	Fraunhofer Institute for System and Innovation Reserach	
45	Morris, Gethin	O'gem	
46	Möst, Dominik	Technische Universität Dresden	
47	Müller, Theresa	Technische Universität Dresden	
48	Pathie, Sandra	Institut der deutschen Wirtschaft, IW Köln	
49	Poganietz, Witold-Roger	KIT- Karlsruhe Institute of Technology	
50	Quoilin, Sylvain	European Commission, Joint Research Centre	
51	Reijalt, Marieke	European Hydrogen and Fuel Cell Association EHA	
52	Reiter, Ulrich	TEP Energy	



Nr.	Name	Institution	Signature
53	Rioual, Pascal	EDF	
54	Roberts, Josh	ClientEarth	
55	Rocher, Viola	EnBW Energie Baden-Württemberg AG	
56	Sakellaris, Kostis	European Commission, DG Energy	
57	Sanchez, Manuel	European Commission	
58	Sandqvist, Maria	Director of the council for Swedish Smart Grid	
59	Thomas, Maldonis	WIP Renewable Energies	
60	Tost, Alois	BVA Elektrokessel GmbH	
61	Vach, Jonas	DIHK - Association of German Chambers of Commerce and Industry	
62	van Dyck, Sara	BBLV	
63	van Hove, Patrick	European Commission, DG Research & Innovation	
64	van Stark, Wilfried	Utrecht University	
65	van Stiphout, Arne	KU Leuven	
66	Verhaegen, Ruben	3E	
67	Versijp, Nicole	European Commission, DG Energy	
68	Vogt, Thomas	NEXT ENERGY	
69	Walton, Denzil	Forté Communications	
70	Wietschel, Martin	Fraunhofer Institute for System and Innovation Reserach	
71	Wohlfahrt, Katharina	Fraunhofer Institute for System and Innovation Reserach	
72	Zumpolle, Dominick Anne	Vattenfall AB	
73	Bhagwat, Gukund	Aurubis	
74	Anna Aramayo	Joint Research Center	
75	HONDHAWA, MIRUZ	DIHK	
76	Stancheva, Mariana	INEA, European Commission	