

CEPS TASK FORCE ON SMART GRIDS

**BUILDING THE BUSINESS CASE FOR SMART
GRIDS IN EUROPE**

DATE OF FIRST MEETING: 14 JUNE 2013

Directed by

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Within the Europe2020 strategy of the European Union, the deployment of Smart Grids” plays a key role from both the perspective of economic and sustainable growth. Smart Grids are defined, in the EU context, as “*upgraded electricity networks to which two-way digital communication between supplier and consumer, intelligent metering and monitoring systems have been added*”. The benefits of Smart Grids are widely acknowledged in business, policy as well as academic circles. The European Commission sees Smart Grids as the backbone of the future decarbonised power system.

While there is agreement on the importance of Smart Grids for the European competitiveness as well as sustainability agenda, Smart Grids require new approaches to governance as the ‘new’ energy sector is fundamentally more decentralised, blurs the role between consumers and suppliers, and will be more capital intensive than in the past, as epitomised, for example, by the ‘smart city’ concept. Existing policy and regulatory approaches will need to be adapted to capture the full potential that emerging new value chains offer.

Status and questions

For example, the European Council of February 2011 recognised the important role of Smart Grids and invited Member States, in liaison with European standardisation bodies and industry, “to accelerate work with a view to adopting technical standards for electric vehicle charging systems by mid-2011 and for smart grids and meters by the end of 2012”. The Roadmap for moving to a competitive low-carbon economy in 2050¹ and the Energy Roadmap 2050² identify Smart Grids as a key enabler for a future low-carbon electricity system; the deployment of Smart Grids is of particular importance, as they will help in dealing with the problem of variable generation from many renewable energy sources. Their introduction should also facilitate demand-side efficiency and enable the electrification of the transport sector.

The Commission’s 2011 Communication “Smart Grids: from innovation to deployment” sets the stage for a number of future initiatives in this policy domain, such as actions on Smart Grids standards; actions on data privacy and security of data in Smart Grids; actions to adjust the existing regulatory framework for Smart Grids; actions to guarantee competitive Smart Grids services to customers; and actions to support innovation and rapid application.

More recently, under the context of “Connecting Europe Facility³”, the regulations on guidelines for Trans-European Infrastructure (COM (2011)658 and 657) have identified Smart Grids deployment across the Union as a priority thematic area for infrastructure investment up to 2020.

A Smart Grids Task Force (SGTF) was set up by the European Commission (EC) at the end of 2009. The SGTF reached a consensus over the last two years on policy and regulatory directions for the deployment of Smart Grids. The SGTF has also issued key recommendations for standardisation, consumer data privacy and security. Based on these results, during 2011 the EC has adopted a Communication on Smart Grids, issued a Mandate for Smart Grids standards to the European Standardisation Organisation and created an Inventory of Smart Grid projects and lessons learned in the EU. The EC has also adopted a Recommendation for the roll-out of Smart Metering Systems and issued Guidelines for conducting Cost Benefit Analysis of Smart Grids projects in 2012. Convinced that the above achievements represent crucial but just first steps in

¹ European Commission, *A Roadmap for moving to a competitive low carbon economy in 2050*. Com (2011) 112 final, 8.3.2011EC.

² European Commission, *Energy Roadmap 2050*. Com (2011) 885 final, 15.12.2011EC.

³ The Connecting Europe Facility presents a new funding instrument to finance infrastructure projects in Transport, Energy and Communications under the Multi-Annual Financial Framework for the period 2014-2020. According to the European Commission, the instrument aspires to enable a simple, coherent and harmonious implementation of EU project financing across the three crucial sectors. It also aims to attract further funding from the private and public sectors by rendering infrastructure projects more credible and coordinating more effectively private partners and financial institutions.

the process and tasks allocated to the SGTF, the EC updated the Mission and the Framework Programme for the SGTF and decided to extend its activities for two more years. Specific Annual Work Programmes should be adopted and executed during this period.

The challenge ahead for the SGTF is to jointly agree among governments, regulatory authorities, regulated companies and end users on key issues such as the estimated cost/benefits, potential business models, the associated risks and the incentives needed. The ultimate goal of the Work Programme is to jointly produce a set of regulatory recommendations and to identify projects of common interest to ensure EU-wide consistent, cost-effective, efficient and fair implementation of Smart Grids, while achieving the expected services and benefits for all network users. The expected recommendations to be developed by the Expert Groups described below should be based on an analysis of both the market activities that need regulation and the interfaces that need harmonisation. No rules should limit or define the technology. Recommendations should focus on non-exclusivity of technology or of parties in order to ensure competition, transparency and flexibility.

Key challenges today for Smart Grid deployment are, first, largely of regulatory nature; second, to develop appropriate standards; and third, to support and launch appropriate infrastructures and co-ordination/dissemination of lessons learned. This requires the support of legislators and regulators to provide the framework for incentives, criteria and obligations for “smart” investments.

The planned efforts of the SGTF for 2012 are focused on deliverables split between four Expert chaired by the Commission:

- EG1. Reference Group for Smart Grid Standards
- EG2. Expert Group for Regulatory Recommendations for Privacy, Data
- EG3. Expert Group for Regulatory Recommendations for Smart Grids
- EG4. Expert Group for Smart Grid Infrastructure Deployment

All groups have produced deliverables during 2012/2013, but overall, the Task Force seems to have just paved the way for further reflection and policy debate, especially for what concerns standards, business models, incentives to deploy smart grid technologies, data protection, and other issues.

Themes for the CEPS Task Force on ‘smart grids’

The deployment of smart grids is surrounded by a substantial degree of legal and economic uncertainty. This risks delaying and ultimately undermining smart grid deployment.

Main issues for discussion could be:

- the quality of infrastructure, including the impact of the EU budget on investment in major infrastructure projects linked to the roll out of smart grids,
- cooperation models for energy and telecom operators
- (timing of) investment in smart meters,
- (optimal level of) interoperability, including common standards
- new market opportunities and business models,
- the role of cloud computing for smart grids deployment and business models
- the (right) level of cooperation and competition among players on the value chain
- data protection
- grid stability and security
- privacy and security
- risk analysis and management and the resilience of smart grids
- the role of consumers (e.g. demand response)
- the future of energy storage and new technologies (e.g. power-to-gas),

- Regulatory approaches for integration of technologies, e.g. ICT-energy supply-transport-energy demand.
- Lessons learned from Smart City initiatives
- Global smart grid developments

Added value of a CEPS Task Force

Many of these issues have been discussed in the Commission's Smart City Task Force and in other fora. The added value of CEPS is to

- Create a concrete platform for discussing definitions, standards, governance aspects, case studies (success & failures) or market opportunities of Smart Grids at the EU level;
- bring together a pool of experts with inter-disciplinary competences that support the exchange of ideas among stakeholders;
- establish a forum for reflection, discussion and dissemination to provide input to institutions that attempt to clarify governance and technical aspects of Smart Grids;

CEPS is uniquely positioned to ensure adequate representation of a multiple number of stakeholders. Besides its strong links with EU institutions and academia, CEPS can count on a well-established group of corporate members from the energy and IT sector, which was further strengthened by the recent creation of the CEPS Carbon Market Forum and the CEPS Digital Forum.

CEPS has a track record of its ability to facilitate the public debate on similar issues – for example, in its Task Force on Critical Infrastructure Protection or the Energy Markets Forum that spurred a lively debate inside and outside EU institutions.

Practical information

We foresee the organization of four (closed door) meetings plus a public event in which the report will be officially presented to a wider audience. Each meeting will be preceded by a short background document provided by the Rapporteurs, which will shortly present the issues to be discussed. Then, each meeting will be structured around presentations and discussions. Different speakers will be invited to present their opinions: academics, practitioners, company representatives, NGOs and civil society, and EU institutions. Participants to the Task Force are welcome to present their own views. From the institutional side, the European Commission DG ENER, CLIMA, CONNECT, ENISA, ENTR and the JRC will be involved.

The Task Force is directed by Andrea Renda, head of the Digital Forum and Christian Egenhofer, Head of the Energy Programme to maximise integration and synergies from both sectors. They will be supported by their respective research teams.

Meeting schedule:

(All meetings will be held at CEPS)

Inaugural Meeting: 14 June 2013 from 10H-16H

Objective is to set the scene and agree on terms of reference

Second Meeting: early September

Third Meeting: October

Final Meeting: Early December

Report ready by Early 2014

CEPS TASK FORCE ON SMART GRIDS

BUILDING THE BUSINESS CASE FOR SMART GRIDS IN EUROPE

Friday, 14 June 2013, 10:00-16:00, CEPS

Smart Grids are believed to become the backbone of the future decarbonised power system. But the successful operation of Smart Grids require new approaches to governance as the ‘new’ energy sector is fundamentally more decentralised, blurs the role between consumers and suppliers, and will be more capital intensive than in the past. At this inaugural meeting of the new CEPS Task Force on Smart Grids we will discuss who should do what in a ‘smart world’, thus identify the relevant stakeholders, define their responsibilities and single out the market opportunities.

Agenda

(v 10.06.13)

9.30 **Registration**

10:00 Welcome to CEPS by **Kerstin Born**, Director of Corporate and External Relations

10.05 Introduction by **Andrea Renda**, Head of CEPS Digital Forum & **Christian Egenhofer**, Head of Energy and Climate Change unit, CEPS

10.15 *The EC Smart Grid Task Force: Achievements and gaps*, **Colette Maloney**, Head of Unit, DG Connect, European Commission

10.30 *Presentation of 2 JRC studies: “Smart Grids around Europe” and “Comparing EU and US approaches”*, **Silvia Vitiello**, JRC

10.45 **Rolf Adam**, Director, Utilities & Smart Grid sales business development, CISCO

11.00 Q&A

Session 1: The Changing Role of Energy Industries

11.30 Panel Discussion chaired by **Christian Egenhofer**, Head of Energy and Climate Change unit, CEPS (Max 10 – 15 minutes introduction each)

Smart grid opportunities and challenges for electricity generators, Representative from **RWE** (*tbc*)

Business opportunities and regulatory challenges for DSOs, **Sylvie Courtier-Arnoux**, Director, Studies Energy Policies, ERDF

What TSOs can contribute to Smart Grids, **Hubert Lemmens**, Director Innovation and Knowledge Management, Elia

Jos Menting, Chief Technologist, Laborelec, GDF Suez

12.30 Open Discussion

13.00 **Light lunch at CEPS**

Session 2: What do telecom and ICT have to offer?

13.45 Panel Discussion chaired by **Andrea Renda**, Head of CEPS Digital Forum

What telecoms and ICT have to offer, **Werner Kremer**, Senior Portfolio Manager Smart Grid, Deutsche Telecom

Business models for smart grids, **DS Park**, Head of EU Affairs Office, or **Damir Filipovic**, EU Technology and Regulation Policy Manager, Samsung Electronics

Building resilient and secure energy grids, **Evangelos Ouzounis**, ENISA, Head of Resilience and Critical Information Infrastructure Protection (CIIP) Unit

Risk analysis and security frameworks in smart grids, **Eyal Adar**, White Cyber Knight

14.45 Open discussion

15.30 Conclusions and wrap-up ending with agreement on terms of reference by **Andrea Renda** and **Christian Egenhofer**

16.00 End of meeting

CONDITIONS FOR PARTICIPATION

The CEPS Task Force is principally designed for CEPS Corporate Members but participation is open to non-members as well, at a higher fee.

The fee covers participation in all workshops, documentation, lunches and three copies of all reports produced.

Fee Structure

Participation fee for:

CEPS Corporate Members: EUR 1,000 + VAT

Non-members: EUR 5,000 + VAT

To register, please use the Registration Form in the Appendix of this document.

About CEPS

The Centre for European Policy Studies, based in Brussels, was launched as an independent research institute in 1983 to encourage the study and discussion of public affairs in Europe. It aims:

- to provide decision-makers, inside and outside government, with authoritative and independent analysis of European affairs;
- to contribute to the public debate about European institutions and policies through sound research and judgement; and,
- to create a network of leaders and thoughtful individuals who are committed to working together to enhance the development of European integration and co-operation.

CEPS is funded by corporations, public bodies, membership fee dues and income from activities.

If you have any questions regarding the Task Force, please contact:

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REGISTRATION FORM

CEPS TASK FORCE ON SMART GRIDS

BUILDING THE BUSINESS CASE FOR SMART GRIDS IN EUROPE

Friday, 14 June 2013, 10:00-16:00

Venue: CEPS, Conference Room
Place du Congres 1, 1000 Brussels

A participation fee for the task force including all task force meetings of €1,000 applies for CEPS Corporate Members, while €5,000 applies for non-members.

First Name		Last Name	
Position		Company	
Address			
Telephone		Email	

Please tick the correct box:

<input type="checkbox"/>	My company is a corporate member of CEPS and pays €1,000 (+21% VAT).
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<input type="checkbox"/>	My company is not a corporate member of CEPS and pays €5,000 (+21% VAT).
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<input type="checkbox"/>	My company is interested in becoming a member of CEPS. Please send additional information.
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