



- **European Task Force for the implementation of Smart Grids**
Smart Grids Week Salzburg 2010

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● The policy drivers

- The low-carbon and renewable **generation targets**, coupled with **system efficiency, reliability and internal market** development objectives, require **extensive changes to the power grids**.
- The future grids must fully exploiting the use of **both large centralised generators and smaller distributed power sources throughout Europe**.

● The policy drivers/cont.

- Smart Grid solutions embrace the changing **structure of generation, the market and the use of electricity**
- The implementation of **more active transmission and distribution systems** in the form of Smart Grids is central to the deployment of the **internal market for energy**
- This evolution is a **complex subject** and requires a coordinated approach addressing **various issues and all the actors**

● Challenges and actors

- Why its **large-scale deployment** has not yet happened?.
Some reasons:
 - ❖ Limited pilot experiences so far
 - ❖ Limited statistical significance of the quantification of benefits achieved in these experiences
 - ❖ Existing uncertainties regarding the global investments needed, the new market models and the technology needed
- **Key challenges** for the Smart Grid deployment are:
 - ❖ Largely of **regulatory nature**
 - ❖ Appropriate **demonstration projects**
 - ❖ Coordination and dissemination of **lessons learned**

● Challenges and actors/cont.

- Network owners and operators are in a position to **initiate the transition towards Smart Grids** and will be responsible for most of the **investments**.
- This requires the **support of legislators and regulators** to provide the framework for **incentives, criteria and obligations for “smart” investments**.
- **European-scale Public-private partnerships** could provide an important role take the first steps.
- The **3rd Energy Package** provides the appropriate environment for the implementation of Smart Grids across Europe and its provisions support it to a large extent by 2020.

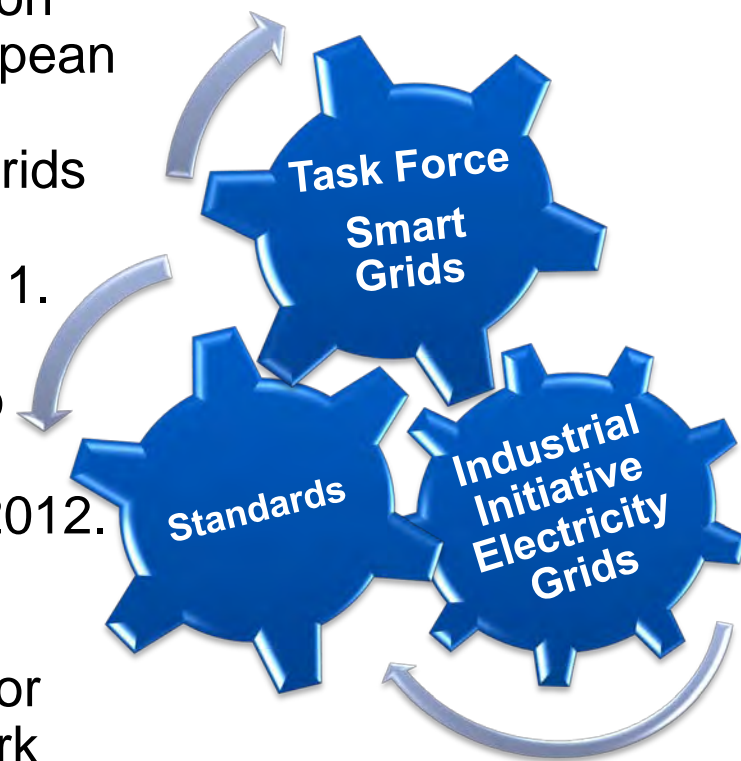
● Legal framework: the 3rd Energy Package

- **Recital 27:** Member States should encourage the **modernisation of distribution networks**, such as through the **introduction of smart grids**, which should be built in a way that encourages decentralised generation and energy efficiency.
 - **Electricity Directive 2009/72/EC** defines a number of general **tasks and provisions for the organisation of the electricity sector in** Articles 3.1, 3.2 and 3.10 which are relevant for the implementation of Smart Grids.
 - More **specific tasks** in relation to Smart Grids are defined in Article 12(a)-(e) for the TSOs and in Article 25.1-7 for the DSOs.
 - **Annex I:** Measures on Consumer Protection and preventions for the **smart meters assessment by 2012 and roll-out by 2020.**

● Running EC actions

- **Task Force** to advise the Commission on policy and regulatory directions at European level and to coordinate the first steps towards the implementation of Smart Grids under the provision of the Third Energy Package. From end 2009 to middle 2011.
- A mandate for **European Standards** to enabling interoperability of utility smart-meters has been launched for 2009 – 2012.

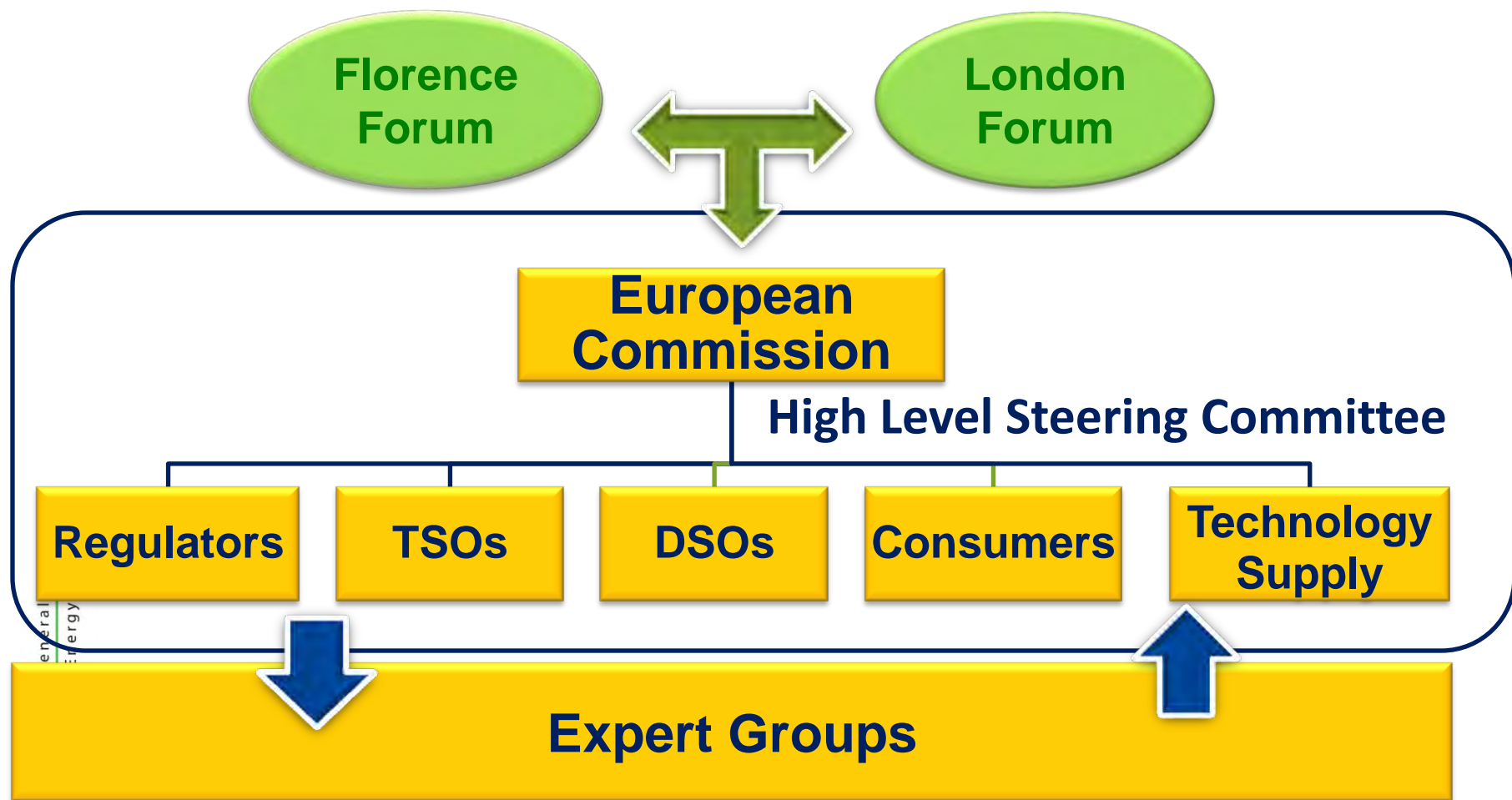
European Industrial Initiative on Electricity Grids under the SET Plan for the deployment of half of the EU network operating on the 'smart grid' principle by 2020.



● The Mission of the Task Force

Advice the Commission on **policy and regulatory directions** at European level and to **coordinate the first steps** towards the implementation of Smart Grids under the provision of the Third Energy Package.

● Task Force for Smart Grids



● Task Force- Work Programme

Key topics and initial efforts to consider:

- Expected services and functionalities
- Empowering consumers
- Supporting power system security
- Regulated and competitive markets
- Implementation and coordination of first steps

● Specific deliverables

- Produce a **common vision** in conjunction with institutional actors and key stakeholders for the implementation of Smart Grids.
- Identify the **strategic decisions and regulatory recommendations** for EU-wide implementation of Smart Grids: **policy, functionalities, scenarios and criteria for funding** Smart Grids deployment through regulatory means.

Produce a **strategic Roadmap** for the implementation of Smart Grids and Smart Meters into the European internal market.

Main Milestones

2009

- Agree and adopt the MISSION statements
- Reach consensus on structure and composition of initial three Expert Groups:
 - *Functionalities of Smart Grids and Smart Meters.*
 - *Regulatory recommendations for data safety, data handling and data protection.*
 - *Roles and responsibilities of actors involved in the deployment of Smart Grids*

2010

- **June 2010 : First Deliverables of the Expert Groups**

2011

- **Jan. 2011: Deliverable 2 “Strategies and Regulatory recommendations”**
- **May 2011: “Roadmap for Implementation”**
- **Continue/stop**

● Initial Expert Groups (by June '10)

1. Functionalities of Smart Grids and Smart Meters.

- Definition of Smart Grids, Expected Services and Functionalities
- Recommendation for Standards

2. Regulatory recommendations for data safety, data handling and data protection.

3. Roles and responsibilities of actors involved in the deployment of Smart Grids.

- Roles and responsibilities for the challenges ahead
- Benefits, criteria and recommendations for funding Smart Grids deployment
- Recommendations for regulatory directions

● EG1: Functionalities for Smart Grids

Achievements

- Consensus achieved for a definition of Smart Grids.
- Consensus achieved for the definition of the 6 High Level of Expected Services for Smart Grids and about 5 Functionalities for each service (total 33 functionalities).
- Consensus about the related standards to be revised for each high level service
- From a grid's perspective, a full revision has been carried out of the 6 functionalities defined for smart metering in the running standardisation work under the Mandate to CEN/CENELEC/ETSI.

Next steps:

- Develop a draft for a mandate for the European standardisation bodies on Smart Grids, by the end of the year, in collaboration with the recently launched "*Joint Smart Grids Focus Group*", under the auspices of relevant European standardisation bodies CEN-CENELEC-ETSI.

● **High-level services for SG**

1. Enabling the grid to **integrate users with new requirements**
2. Improving **market functioning**
3. Enhancing **efficiency in day-to-day grid operation**
4. Ensuring **grid security, system control and quality of supply**
5. Better **planning of future grid investment**
6. Enabling and encouraging stronger and more direct **involvement of consumers in their energy usage and improving customer service**

● EG2: Regulatory recommendations for data safety, data handling and data protection

Achievements:

- Consensus achieved for a definition of technical (anonymous) data and private data.
- Identification of relevant standards for security and privacy.

Next steps:

- Further specifications and recommendations for the split of data (technical and private), security levels and procedures.
- Define a framework for audit on data handling and related standards.

● **EG3: Roles and responsibilities of actors involved in the Smart Grids deployment.**

Achievements:

- Consensus on key actors, rules and interfaces.
- Consensus on quantification criteria for benefits and key performance indicators.
- Consensus on criteria and recommendations to support pilot projects by regulatory mechanisms.
- Consensus on a template for evaluation of Smart Grids deployment to be used in future cost assessments.
- Consensus that there are no needs for new EU regulatory framework for the implementation of Smart Grids and roll-out of Smart meters.



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http://ec.europa.eu/energy/gas_electricity/smartgrids/taskforce_en.htm