

# Policy drivers and actions for the implementation of Smart Grids

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# Policy drivers

- **Sustainability: 20-20-20 targets**
  - Reduction of CO<sub>2</sub> emissions
  - Increased generation based on renewable sources and
  - Need to increase grid and consumption efficiency - decrease losses
- **Security of supply**
  - Increase grid robustness and resilience
  - Integration of different generators (centralised and distributed)
- **Competitiveness and Internal Market development**
  - Better management of supply and demand
  - New market opportunities and increased efficiency of the market
  - Empowerment of consumers

**All these challenges call for the restructuring of the grids, e.g. the structure of generation, market and the use of electricity**

# Legal framework.

- **Energy Efficiency Directive (2006/32/EC, Annex3)** has identified smart meters as one of the main measures, contributing to the overall energy efficiency improvement.
- **Renewables Directive (2009/28/EC, Art16)** views Smart Grids as an enabler for integration of increasing renewable energy into the grid and obliges the Member States to develop transmission and grid infrastructure towards this aim.
- **3rd Package for the internal energy market (Directives 2009/72/EC+ 2009/73/EC), among others:**
  - defines tasks and provisions for the organisation of the electricity and gas sectors relevant for the implementation of Smart Grids
  - encourages decentralised generation and energy efficiency
  - imposes an obligation of roll-out of smart metering by 2020

# Obstacles to SG deployment

## Why has large-scale deployment not happened yet?

- Limited pilot experiences so far and limited statistical quantification of benefits achieved in these experiences
- Existing uncertainties regarding the level of required global investments, market models and the technology needed
- Consumer issues: data protection and change of behaviour
- Expected services, functionalities and standards

# EU activities for development and deployment of Smart Grids

## ➤ Technology push

- RTD&D projects since 2003, c.a. €400 Million EU support
- European Technology Platform, launched in 2006
- Strategic Energy Technology Plan – European Electricity Grids Initiative, launched in June 2010

## ➤ Market push

- Market regulation: 3rd energy package, adopted in August 2009
- Task Force for Smart Grids, launched in November 2009
- European Infrastructure Package, planned for November 2010
- Energy Efficiency Action Plan, planned for 2011.

## ➤ International cooperation

- EU-US Energy Council
- International Grid Action Network (ISGAN), under the Clean Energy Ministerial Conference.



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**[http://ec.europa.eu/energy/gas\\_electricity/smartgrids/taskforce\\_en.htm](http://ec.europa.eu/energy/gas_electricity/smartgrids/taskforce_en.htm)**