

Main R&D challenges and opportunities **InnoGrid2020+**

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Main R&D challenges and opportunities – Panel session

- Why do we need Smart Grid?
 - Smart Grid helps balancing RES by enabling demand response according to price signals from the power market. Smart Grid create interaction between DSO and TSO for substituting grid investments with intelligent grid operation.
 - Smart enables the TSO for better use of assets, integration of new technologies and optimization of operation.
 - Smart Grid is not a “quick fix” to reduce the huge need for investments in the transmission grid tomorrow and in the years to come towards 2020 – but investments will be smarter!
- What are the main R&D challenges?
 - Enabling the grid to integrate very high RES penetration
 - Technical operation at all voltage level of the grid with critical share of inverted based production and declining synchronous generation capacity
 - New products to improve market functions and costumer services.
- What are the main non-R&D challenges?
 - Regulatory framework to enhance investments in the ICT backbone, Smart Meters and novel monitoring systems for system awareness and optimal operation cross border and cross DSO/TSO system areas
- The European Energy review wrote that Smart Grid are now moving from R&D to early industrialization, do you think we are there yet?
 - Only in limited areas. The lack of common and harmonized standards prevent a break through for mass production of components based on open standards and high interoperability



Main R&D challenges and opportunities – Panel session

- What are the main barriers and opportunities for both TSOs and DSOs when developing Smart Grid?
 - Converting socio economical benefit of Smart Grid to DSO/TSO business cases for Smart Components and Smart Operation control architecture in stead of traditional grid investments
 - Investments in cross-technology cohered energy systems with storage opportunities
- How can the EU help you to overcome the obstacles previous mentioned?
 - Harmonized regulatory framework of RD&D investments
 - Funding schemes for cross-cutting technology platforms allowing for optimization between electricity, gas, transportation, heating/cooling.
- How should demonstration projects be articulated between national and European level?
 - EU co-funding of demonstration projects with pan European impact
 - MS co-funding of cross-border projects
 - TSO/DSO permission for necessary RD&D budgets – to meet the 20-20-20 goals
- How much, and what kind, of support is needed from public authorities?
 - Harmonized funding schemes for R&D and large Demonstration projects
 - Long term planning of new generation capacity within the overarching climate and energy goals
 - Fast track procedure for planning procedures, environmental assestment and public acceptance of new grid infrastructure



Thank you for your attention

