



ETIP SNET

EUROPEAN TECHNOLOGY AND INNOVATION PLATFORM  
SMART NETWORKS FOR ENERGY TRANSITION

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# ETIP SNET WORKING GROUP I

*Reliable, economic and efficient smart grid system  
Central Region Workshop, Oct 11-12 2018, Brussels*

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# ETIP SNET, working group 1: Reliable, economic and efficient smart grid system

- 1 → GHG free power system maintaining required levels of security of supply, reliability and resiliency
- 2 → New regulation and market rules suitable for RES generation and prosumers
- 3 → Maximise efficiency in energy systems
- 4 → competitive energy-climate-transport industrial sectors, emphasizing scientific education, R&D support and innovation cooperation



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# ETIP SNET, working group 1: Reliable, economic and efficient smart grid system, Flexibility options

- New transmission and distribution technologies
- Interfaces with storage
- Demand Response
- Flexible generation
- Synergies with other energy networks



Sunday, July 01, 2018 - 12:31

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## 2. : Set up new regulation and market rules

- suitable for RES generation and prosumers,
- enabling widest competitive participation,
- allowing transparent peer-to-peer transactions,
- exploiting digitalisation and new business models

***Social acceptance is key***



## KEY RESEARCH AND DEMONSTRATION ACTIVITIES, *some examples*

- **Deployment of efficient new services in the electricity retail markets**
- **Standardised interactions among electricity stakeholders**
- **Technical framework will empower real customers with higher quality and quantity of information on their energy consumptions**
- **Evaluate close to real time metering data, made available by DSOs - under customer consent - and in a standardised and non-discriminatory way to all players in the electricity retail markets (e.g. electricity retailers, aggregators, ESCOs and end consumers)**
- **Facilitate the emergence of new markets for energy services, enhancing competitiveness and encouraging the entry of new players and benefitting energy customers**



## KEY RESEARCH AND DEMONSTRATION ACTIVITIES, *some examples*

- **Find answers and propose new practical solutions to the increasing integration of Renewable Energy Sources in the existing electricity transmission network.**
- **Ancillary services provided from distribution network to the whole system**
- **Optimise the TSO-DSO interface to enable real-time coordination will be needed between the different actors**
- **Evaluate architectures of the real time markets and regulatory implications**
- **Compare TSO-DSO interaction modalities on the basis of national key case**



## KEY RESEARCH AND DEMONSTRATION ACTIVITIES, *some examples*

- **Observability and control of LV grid**
- **Extensive use of AMI Infrastructure**
- **Enhance the role of DSOs to facilitate and open market for services**
- **Participation of customers, distributed generation and energy storage in network management**





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**Marcin Delegacz (Electrum) *The Rural Intelligent Grid Project in Poland***

**Portia Murray (ETH Zürich) *The integration of sustainable Multi-energy-hub Systems at neighbourhood scale (IMES) in Switzerland***

**Frederik Loeckx (Flux50) *The Microgrid services for Local Energy Communities in Belgium.***



**Thank you for your attention!**