

ERA-Net Smart Energy Systems

POLICY BRIEF 2017

INTRODUCTION

The ERA-Net SES Knowledge Community unites scientific experts in smart energy systems. On the basis of their profound expertise, these researchers develop an informed opinion of key aspects which, according to their perspective, should be considered by policy makers. With its working groups, ERA-Net SES provides a platform for initiating and developing the expert discussions regarding the **messages of the research community to the policy makers**.

This document is the **condensed version** of the ERA-Net SES Policy Briefs.

Policy makers and regulators are invited to review the **full text** and share their perspective in the [living document](#) on the ERA-Net SES **Knowledge Community platform expera**, so the knowledge can be exchanged and evolve. If you are not an expera expert member yet, upgrade your follower account or [register](#) for access.

1 SYSTEM ARCHITECTURE & IMPLEMENTATION MODELLING AND INTEROPERABILITY & STANDARDISATION

- SGAM (Smart Grid Architecture Model as developed under mandate M /490): complete and generalize SGAM to include other domains (e.g. heat, gas); join domains „bulk generation“ and DER; issue a new mandate and ensure co-creation of extended model on international level; bring greater awareness for SGAM to projects
- Reference Architectures: develop and agree upon a joint terminology/ontology at international level; communicate IEC TC 57 as a common framework; discuss practice-oriented models (e.g. “Link Paradigm”) on an international level
- Interoperability and Standardisation: with reference to IEC standards, develop standards for more use cases, particularly to support network codes, interfaces between Smart Grids and customers (incl. Smart Homes) and interoperability of testing methodologies and so called Basic Application Profiles (BAPs)

2 STORAGE & CROSS ENERGY CARRIER SYNERGIES

- Energy storage needs: develop the EU regulatory framework to reduce legislative and market-barriers – attributes: technology-neutrality and reflecting all types of storage, applications and time-frames; treatment of cross-energy carriers or sectorial interfaces
- Harmonization of storage use in grids: end current double taxation of energy storages and do not discriminate any specific energy storage technology by taxation and fees; reduce ancillary services-based grid fee burden, regional frequency control-based real estate taxes and peak power fees
- Facilitation of cross-sector energy storage integration in order to increase the hosting capacity for renewables: develop innovative and fair commercial models including respective regulation

3 REGULATORY & MARKET DEVELOPMENT

- To provide fair access for small-scale distribution-level resources: adjust ancillary services markets’ framework with regard to activation period, minimum bid sizes, asymmetric bidding and frequency of contracting phase
- Rules and monitoring practices enabling grid-oriented service provision: allow for sharing data between DSO and market parties; lower barriers for small-scale actors to

participate in flexibility trading; allow flexibility service procurement between DSOs and TSOs

- Establishment of local electricity markets: define and regulate new actors and their relationship including concepts and features, different voltage levels and services, ancillary services and remuneration, responsibilities within the market

4 CONSUMER & CITIZEN INVOLVEMENT

- Complexity of human behavior: since economic incentives are not always first choice, broaden the portfolio of measures for fostering sustainable and system-friendly behaviour in the energy domain and investigate other instruments
- Organizational framework: remove barriers for engaging in sustainable and system-friendly behaviour (e.g. allow for remuneration of flexibility)
- Visibility of progress: showcase good examples of consumers' and citizens' contributions to energy transition and the benefits for society and individuals