SMART GRIDS TASK FORCE (SGTF)
EXPERT GROUP 3 – REGULATORY ISSUES

WORKSHOP SMART HOMES AND BUILDINGS

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AIM

The aim of this Workshop was to share experiences and discuss the challenges and opportunities of "smart homes and buildings", for consumers, National Regulatory Authorities, local authorities, distributed power generators, suppliers, grid operators, technology suppliers and manufacturers, energy services industries and aggregators.

The workshop was opened by the Commission followed by a number of presentations for steering the subsequent discussions, which were structured into three sessions: *visions*; *experiences from pilot projects*; *policy and regulation – key challenges & recommendations*. The main conclusions from the event, based on the rapporteurs' account, are summarised below.

CONCLUSIONS

The considerable opportunities of "smart homes and buildings" for consumers and industry, became clear in the vision statements of speakers from European technology providers and a representative of the Covenant of Mayors during session 1.

A 25% reduction in energy consumption is attainable, as examples given from the pilot projects Inertia, Smart Demo Grid or Hoog Dalem during session 2 have shown. This will help consumers in saving costs and the Commission and Member States in meeting their energy and climate obligations.

Discussions showed that attention to a number of drivers or challenges is necessary to implement this vision, for example:

- Consumers must be at the heart of smart development; they need to be aware and content with how it works. Providing consumers with information and empowering them through information is key.
- In general, consumers prove to be happy with the new energy related applications they are offered.
- Interoperability is needed for all home energy technologies and relevant processes are currently on-going; moreover, data access (e.g. accessible real time readings) and data portability need to be ensured,, notably to reduce costs for the consumers and empower them to have an active role in the grid and the energy markets.
- Utilities need to understand their roles in moving forward: a lot of things can be done in a liberalised market where competition can be effectively stimulated and demand response and flexibility mobilised but liberalisation is not implemented yet fully in Europe.
- Collaboration between different market players is essential together with the right business model approaches that deliver smart, connected markets and actual results on the high level political objectives.

- These developments may have some unintended consequences such as:
    - need for higher degree of aggregation for different market models to work. Some type of aggregation of flexibility, especially in residential customer segment will be required, and it needs to be considered how this aggregation can work and bring benefit to consumers with today's evolving market models;
    - questions arising whether current electrical equipment and installations are sufficiently fit for purpose in a smart solutions environment considering that they were designed for non-smart technologies;
    - need for DSOs to think of the technologies they have in their models and what the impact of these technologies on the way they operate their grid will be.

Next steps should include, among other:

- continue to push for a full smart metering roll out with consumer interfaces;
- re-consider the use cases to ensure that they are still relevant, in line with latest technologies and cover the recent consumer and utility requirements;
- ensure that future directives or on-going revisions of existing legislation take into account the role of digitisation and smart technologies now and in the future, with a customer-centric vision, that increases customer rights and gets nearer to the investment houses;
- consider how to develop a package of consumers' 'energy rights' similar to digital rights, with the right to open energy use data being particularly relevant;
- consult with all home/building energy technology industry groups and the rest of stakeholders potentially affected by smart or connected homes and buildings (including storage, PV, solar thermal, smart controls, smart appliances, both HVAC and white goods etc.); all of these need to be engaged in the process and need to understand how their products can best be part of the connected smart buildings and local grids of the future. For instance augment the information of smart-readiness of buildings or homes which might be inserted in the buildings' energy performance certificates (i.e. via EPBD review);
- recognise that markets across Europe develop at different speeds and different ways, regulation should provide steering, not over regulation;
- engage with all grid and network stakeholders so that they have the ability to adjust in time.

Overall we need to establish a collaborative approach including 'smart legislators', and reactive and innovative industry players.

Next EG3 workshop will be held on 1 June 2016 on the issue of incentives.