





Responding to the EU Mandate M/441 on smart metering standards in Europe

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Legislative background

- Directive 2004/22/EC on measuring instruments (MID)
- Standardisation Mandate M/374 of 20th October 2005 as base for to developing standards for utility meters
- Directive 2006/32/EC on energy end-use efficiency and energy services (art.13)
- Directive 2009/72/EC & 2009/73/EC ('Third Energy Package') provisions on 'intelligent metering' in electricity & gas (article 3, Annexe I for both)
- Standardization Mandate M/441 of 12th March 2009 on development of an open architecture for utility meters











M/441 – General objective

The general objective of the mandate is to ensure European standards that will enable interoperability of utility meters (water, gas, electricity, heat), which can then improve the means by which customers' awareness of actual consumption can be raised in order to allow timely adaptation to their demands







Mandate issued to the European Standards Organisations (CEN/CENELEC/ETSI) in March 2009 for:

- the development of an open architecture for utility meters (software & hardware)
- involving communications protocols (bi-directional)
- enabling interoperability
- allowing advanced information and management & control systems for consumers and suppliers

Objectives:

- To create European standards that will enable the interoperability of utility meters (in electricity, gas, water, heat)
- Must permit fully integrated solutions, modular and multi-part solutions
- Architecture must be scalable and adaptable to future communications media
- Must allow secure data exchange







M/441 formally accepted by the ESOs in July 2009

Formation of Smart Meter Co-ordination Group

- Advisory & co-ordination group of ESOs and European stakeholder representatives
- Wide representation, including Commission, ERGEG, Eurogas, Eurelectric, Marcogaz.....
- ANEC will represent European consumers

1st action: formation of 2 ad hoc groups to help identify requirements

- Communications (e.g. data exchange protocols)
- Additional Functionalities (e.g. AMR, advanced tariffing, information display)

Report to the Commission finalised on 6th November 2009, outlining how work will be approached

• Responsibility allocation







Comments

• Standardisation in this context does not mean imposing identical solutions on all projects in the Member States

- Aim is to ensure that what a Member States may want to do in smart metering is covered by suitable standards
- Member States can have their own priorities & there will be differences between electricity, gas, water & heat, but need to take solution out the one common standards "suitcase"

• Does not cover 'back office' or other industry IT systems impacted by smart meters but work will have implications on these







Communications

Main findings and positions

- Standards for communications are not a best practice solution or recommendations but an interoperability and quality statement for technical solutions
- There is an existing standardisation procedure in Europe, active and reliable
- There is a set of existing standards available and maintained by the relevant ESOs
- The 'European Standard for [smart metering] communication' shall mean a report on existing and available standards plus a roadmap how to improve and maintain these standards for at least the next decade







Additional functionalities

Six high-level additional functionalities identified

- 1. Remote reading of metrological register(s) and provision to designated market organisation(s)
- 2. Two-way communication between the metering system and designated market organisation(s)
- 3. To support advanced tariffing and payment systems
- 4. To allow remote disablement and enablement of supply
- 5. Communicating with (and where appropriate directly controlling) individual devices within the home / building
- 6. To provide information via web portal/gateway to an in-home/building display or auxiliary equipment







Additional functionalities

Notes on additional functionalities

- Functionalities are expressed in broad terms, so they can be related to electricity, gas, heating/cooling and water
- Not all functionalities will necessarily feature in all applications
- Not all functionalities will necessarily feature in all Member States
- Many of the functionalities potentially applicable to gas, heat and water meters are critically subject to availability of sufficient power – battery life is currently a major constraining factor
- List of functionalities is not a minimum list of smart meter functionalities







Coordination diagram









Next steps

- Submission SM-CG Report to relevant Technical Bodies and European Commission
 - → CENELEC has already approved it
 - \rightarrow CEN and ETSI expected by the end of 2009
- Meeting with co-ordinating TC Chairmen (SM-CG Chairmen's Advisory Group) 11th January 2009

→ to ensure the follow-up of the recommendations identified in the SM-CG Draft Report and the smooth co-ordination and co-operation between relevant technical bodies.

• Next SM-CG meeting: 28th January 2010 in Brussels







Approach

- SM-CG to formally report to ESO Joint Presidents' Group but will work under the umbrella of CEN/BT, CLC/BT and ETSI Board for technical (standardization) aspects
- Intention to use the channel of the already established ESO technical bodies
- Benefit to be taken from the existing and ongoing standardization activities and deliverables in the respective ESO
- Start with existing EU & international standards
- Update / extend existing European standards to cover smart metering; develop new standards if necessary









Thank you for your attention

