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EUROPEAN COMMISSION
ENTERPRISE AND INDUSTRY DIRECTORATE-GENERAL

New Approach Industries, Tourism and CSR
Construction, Pressure Equipment, Metrology

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M/441 EN

Standardisation mandate to CEN, CENELEC and ETSI in the field of measuring instruments for the development of an open architecture for utility meters involving communication protocols enabling interoperability

Objective

The general objective of this mandate is to create 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 (commonly referred to as 'smart metering').

Background and justification

The Competitiveness Council on 25 September 2008[1] underlined that, in general, lack of standards, or the slow updating of existing standards hamper the uptake of innovation, whilst standardisation that is lively and strong has the power to accelerate the access of innovation to both domestic and global markets. It underlined the need for standardising bodies to act in a coordinated manner to promote European standards, to take better account of convergence of technologies and to involve all parties concerned in the a transparent manner. The Council invited industry and other stakeholders to accelerate their cooperation in the development, implementation and use of standards supporting innovation in relation to the sustainable industrial policy and other areas particularly relevant for innovation. It also recommended fully utilising synergies.

Directive 2006/32/EC on energy end-use efficiency and energy services[2] concerns achieving an overall indicative energy savings target by each Member State. National energy efficiency action plans showing how the target is to be met must be prepared by Member States, as provided for by the Directive. Article 13 mentions the need for providing final consumers with competitively priced individual utility meters that accurately reflect the final customer's actual energy consumption and that provide

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[1] Council Conclusions on standardisation and innovation , Competitiveness Council of 25 September 2008, http://ec.europa.eu/enterprise/standards_policy/standardisation_innovation/doc/councilconclusions_20080925_en.pdf

[2] OJ L 114/64 of 27.04.2006

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information on actual time of use, in so far as it is technically possible, financially reasonable and proportionate in relation to potential energy savings.

Article 13 of Directive 2006/32/EC is a performance-related requirement which must be satisfied as fully as possible by means of measures which need not be technical specifications.

Directive 2004/22/EC on measuring instruments (MID)[3] concerns full harmonisation of utility meters. It allows all functionalities that do not interfere with the metrological characteristics of the instrument. Most of these functionalities are not subject to any other limitations, i.e. MID allows any specification to be put into use. By means of Mandate M/374 of 20 October 2005 for Standardisation in the field of measuring instruments, CEN and CENELEC were invited to develop standards for utility meters.

There is fast technological development in the area of utility meters to provide customers with the necessary information to empower them through innovative management tools and services to optimize their energy use and to reduce their carbon emissions. It is possible to develop common solutions that enable interoperability which will enable mass production and full competition on the scale of the EU market to reduce the price of highly performing state of the art meters. However, the involvement of many different parties in the absence of harmonisation could result in a multitude of competing technological solutions, which although not fundamentally different, may nonetheless be mutually incompatible thereby fragmenting competition on the internal market. On the other hand, from a competitiveness point of view, Europe could become a market leader should harmonised solutions be developed, hence the need for European standardisation.

Standards already existing at the European level may not be sufficient for a full coverage, although they may be a useful base for future development. Proactive integration of various draft national standards may aid a rapid development.

Description of the mandated work

CEN, CENELEC and ETSI are requested to develop:

1. A European standard comprising a software and hardware open architecture for utility meters that supports secure bidirectional communication upstream and downstream through standardised interfaces and data exchange formats and allows advanced information and management and control systems for consumers and service suppliers. The architecture must be scalable to support from the simplest to the most complex applications. Furthermore, the architecture must consider current relevant communication media and be adaptable for future communication media. The communication standard of the open architecture must allow the secure interfacing for data exchanges with the protected metrological block.

2. European standards containing harmonised solutions for additional functionalities within an interoperable framework using where needed the above-mentioned open architecture for communication protocols. These solutions must be

[3] OJ L 135/1 of 30.04.2004

standardised to achieve full interoperability. Solutions meant to be installed in living quarters should be silent, non-intrusive and safe.

3.

The standards to be developed must be performance-based and permit innovation in the protocols that enable remote reading of utility meters and advanced information and management services for consumers and suppliers. In particular, the standards shall permit fully integrated instruments, modular and multi-part solutions. Standards developed under this mandate and M/374 should not conflict with each other and other standards and any overlaps should be indicated.

CEN, CENELEC and ETSI should take into account international, European and national standards that have already been developed or are under development.

Execution of the mandate

CEN, CENELEC and ETSI shall present a work programme to the European Commission within 3 months of the acceptance of the mandate. This work programme shall include the precise time schedules for the work as well as a full list of the European standards to be developed for additional functionalities. After notifying the Standing Committee under Directive 98/34/EC, the European Commission will without delay inform CEN, CENELEC and ETSI of the proposed standards it accepts as being covered by this mandate.

The deliverables shall nevertheless be presented to the European Commission as follows:

a. The European standard for communication shall be presented within 9 months of the acceptance of the mandate.
b. The harmonised solutions for additional functions (European standards) shall be completed within 30 months of the acceptance of the mandate.

CEN, CENELEC and ETSI shall provide a combined progress report on the mandated work by the end of October 2010.

It is requested that deliverables indicate where they cover requirements which are necessary to comply with Directive 2004/22/EC (notably Annex I points 7.6, 8.1-8.5 and 10.5). Also deliverables should take into account applicable legal requirements concerning the confidentiality of personal data protected under Directive 95/46/EC[4] and Directive 2002/58/EC[5].

Given the many parties involved, e.g. consumers, instrument producers, third party instrument owners, transportation monopolies and energy suppliers, special attention should be paid to transparency during the process of developing these standards.

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[4] OJ L 281/31 of 23.11.1995.

[5] OJ L 201/37 of 31.7 2002.

CEN, CENELEC and ETSI shall take the utmost account of any relevant developments in international standardisation when working on this mandate.

Acceptance by CEN of this mandate starts the standstill period referred to in Article 7 of the Directive 98/34/EEC of 22 June 1998[6].

Organisations to be involved

As appropriate, CEN, CENELEC and ETSI will invite the representative organisations of consumers' interests (ANEC), environmental protection (ECOS), workers (ETUI-REHS) and small and medium-size enterprises (NORMAPME) to take part in the standardisation work.

CEN, CENELEC and ETSI shall also invite WELMEC (authorities of member states) and the Open Meter Project, in so far as it is relevant for the development of standards requested by this mandate, to take part in the work.

[6] OJ L 204/37 of 21.7.1998