BUSINESS PLAN

CEN/TC 294
COMMUNICATION SYSTEMS FOR METERS

EXECUTIVE SUMMARY

The work of CEN/TC 294 encompasses standardization of communication systems for meters for all kind of fluids and energies distributed by network and not limited to household meters.

CEN/TC 294 establishes and maintains European Standards for remote reading of meters.

The standards of CEN/TC 294 are based on generic descriptions and communication protocol specifications based on a layered communication model ranging from physical to application layer specifications.

The suite of CEN/TC 294 standards shall guide Member States in the implementation of their national smart metering programmes taking into account distinctions between battery and mains-powered meters and differences between architectures that are linked to the particularities regarding the distribution in Member States.

CEN/TC 294 is also responsible for the support of secure communication covering data privacy as an inherent property, providing a scalable mechanism for security services, data integrity, authentication and confidentiality.

NOTE Electricity meters are not covered with this series of standards, as the standardisation of remote readout of electricity meters is a task for IEC/CENELEC.

Furthermore, CEN/TC 294 is responsible for the maintenance of

- **EN 1434-3,** *Heat meters — Part 3: Data exchange and interfaces*.

The market is dominated by a smaller number of major manufacturers and the buyers are generally utilities. There is significant cross border trade.

The Measurement Instrument Directive does not cover this area.

BUSINESS ENVIRONMENT OF THE CEN/TC

1.1 Description of the Business Environment

The following political, economic, technical, regulatory, legal, societal and/or international dynamics describe the business environment of the industry sector, products, materials, disciplines or practices related to the scope of this CEN/TC, and they may significantly influence how the relevant standards development processes are conducted and the content of the resulting standards:

- There is a general political will to be environmentally responsible and one way is to save the use of energy. One way to obtain this goal is to support/require the use of individual energy metering. In this area the economical and environmental interests are supplementing each other.

- The remote reading of meters has many advantages. One major is that it makes the whole registration and invoicing procedure much simpler and more effective, thereby giving further incitement to the general use of remote reading of meters.

- The remote reading is in itself also conserving energy as opposed to the manual reading and related transport.

- The standardization in this area will contribute to the development of cost efficient solutions, which is essential in a deregulated market.

- It should however be noted that the remote reading is not restricted to energy but can cover any type of consumption.

- It should furthermore be noted that the documents of CEN/TC 294 will support the Measuring Instruments Directive (2014/32/EU) even if this area is not covered by MID.

- The documents from CEN/TC 294 will also support the Directive 2006/32/EC of the European Parliament and of the Council of 5th of April 2006 on energy end-use efficiency and energy services. Member states shall take cost-effective, practicable and reasonable measures designed to contribute to the achievement of this target. These aims will be supported by the standardization work in CEN/TC 294.

- The 3rd Energy Package for electricity and gas internal markets (adopted 2009-06-25) will also be taken in consideration within the work items of CEN/TC 294.

- For public acceptance of smart metering, suitable privacy and data protection safeguards need to be in place so that consumers can be assured that their data is treated securely and that their privacy is not infringed. This is why CEN/TC 294 takes into account the following Directives of the European Parliament: 95/46/EC, 2002/58/EC, 2006/24/EC and their corresponding evolution and as appropriate the General Data Protetion Regulation (EU 2016/679).

- In addition, attention has to be given to address the vulnerability of smart metering systems in the context as critical infrastructure (Mandate M/487) and EU Directive 2016/1148 concerning measures for a high common level of security of network and information systems across the Union, also to be seen as part of smart grid systems.

1.2 Quantitative Indicators of the Business Environment

The following list of quantitative indicators describes the business environment in order to provide adequate information to support actions of the CEN/TC:

The European market for remote reading and communication with meters is huge – with a magnitude of 1 billion instruments.

There are relatively few manufacturers in Europe and customers are (generally) utilities.

2 BENEFITS EXPECTED FROM THE WORK OF THE CEN/TC

The standards reflect at any time the result of an intensive dialog between the manufacturers and the users.

The result of the work is and will be an agreed basis for the profitable dissemination of remote reading of meters, utilizing interoperable and interchangeable systems with appropriate levels of protection for data security and privacy.

The overall results of these standards are: Substantial savings in manpower and energy that will fulfill the requirements of a deregulated market.

3 PARTICIPATION AT THE CEN/TC

All CEN national members are entitled to nominate delegates into the CEN Technical Committees and experts to Working Groups, ensuring a balance of all interested parties. Participation as observers of recognized European or International organizations is also possible under certain conditions. To participate in the activities of this CEN/TC, please contact the national standards organization in your country.

4 OBJECTIVES OF THE CEN/TC AND STRATEGIES FOR THEIR ACHIEVEMENT

4.1 Defined objectives of the CEN/TC

CEN/TC 294 already specified a set of standards which are to be maintained and extended according to market needs,new technologies and maintainance of state of the art.

At the moment, CEN/TC 294 responds in its work to the EC/EFTA mandate M/441 in the fields of measuring instruments for the development of an open architecture for utility meters involving communication protocols enabling interoperability.

4.2 Identified strategies to achieve objectives defined by the CEN/TC

The strategy for obtaining the objective is to maintain and strengthen the interest from the market and thus be able to maintain a strong, well functioning TC with working groups with a very high level of technical expertise, capable of revising and developing the standards in the proper way.

Dedicated working groups have been established in order to carry out the revision of the existing standards and to specify new appropriate European Standards and to respond to the mandate M/441.

Further organization information acc. Working Groups, their title and work items can be obtained from www.cen.eu (CEN Home page > Sectors > Technical Committees and Workshops > List of Technical Committees, Workshops and other bodies > CEN/TC 294).

Standards of CEN/TC 294 do not impose identical solutions on all smart metering systems in Member States, nor are they a best practice solution or recommendations. The standards which have been developed should be seen as a common standards “toolbox” to facilitate smart metering deployments.

This approach recognises that Member States will have their own priorities and will undertake their own cost benefit analysis. Beside this, there are differences in national architectures for smart metering systems and between utility meters to be connected, taking into account technical constraints for interfacing communication systems.

To promote CEN/TC 294 strategies, liaisons with the following Technical Committees and European Associations were established.

Liaison with Technical committees:

- CEN/TC 92 "Water meters"
- CEN/TC 171 "Heat cost allocation"
- CEN/TC 176 "Heat meters"
- CEN/TC 234 "Gas infrastructure"
- CEN/TC 237 "Gas meters“
- CLC/TC 13 "Equipment for electrical energy measurement and load control"
- CLC/TC 205 "Home and building electronic systems"
- ETSI/TC/M2M "Machine to Machine"
- ETSI/TC/ERM "EMC & Radio Spectrum Matters"

Liaison with European Associations:

- AQUA "European Association of Water and Heat Meter manufacturers"
- ECOS "European Environmental Citizens' Organisation for Standardisation"
- Marcogaz "Technical association of the European natural gas industry"
- Zigbee Alliance

4.3 Environmental aspects

It should be noted that CEN/TC 294 specifies software and protocols which in itself are not directly linked to environmental aspects. In consequence, the elaboration of these standards does not have a direct impact on the environment but does indirectly allow energy savings. It should be noted that efficient communication protocols will reduce the load on batteries and therefore the committee considers lifetime issues/battery size.

5 FACTORS AFFECTING COMPLETION AND IMPLEMENTATION OF THE CEN/TC WORK PROGRAMME

There seems to be no significant risks regarding the work of CEN/TC 294. CEN/TC 294 standards are required for the market and there is a fair interest in having them developped.