# 1 BUSINESS ENVIRONMENT OF THE CEN/TC

## 1.1 Description of the Business Environment

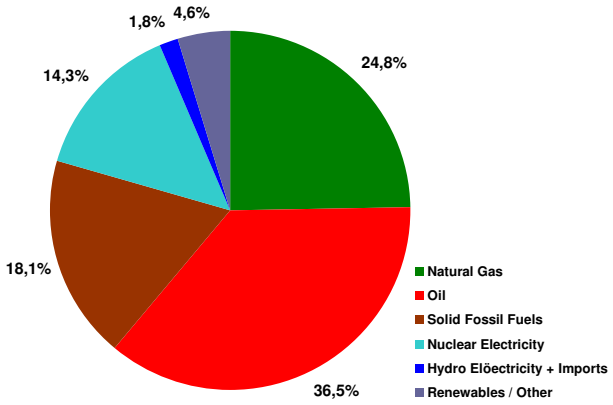
The following political, economic, technical, regulatory, legal, societal and/or international dynamics describe the business environment of the industry sector, products, materials, disciplines or practices related to the scope of this CEN/TC, and they may significantly influence how the relevant standards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

- The state of the art in the field of gas supply from the inlet of gas transmission system to the connection to gas appliances
- Relevant stakeholders are gas transmission/distribution/supply companies, construction companies, manufacturers of gas appliances, consumers and local communities also in the interest of public welfare.
- The stakeholders are interested in a safe and reliable gas supply with respect to environment and economy, including optimization of investment and operational costs.
- Technical safety of the gas systems; environmental friendly application and waste disposal of materials used for gas supply systems;
- Liaisons with the relevant CEN and ECISS Committees leads to a coherent system of standards for gas supply. Liasions to ISO Committees avoid overlappings and makes the implementation of the Vienna Agreement possible, as far as harmonization leads to preserving the EU safety level and decreasing the costs on investment and operation. Regarding voluntary initiatives, the TCs work is continuously supported by the Technical Association of the European Gas Industry Marcogaz. Liasions with other European organizations such as EASEE-gas are implemented where necessary.
- Besides for installations, CEN/TC 234 standards are mandated in the context of the EC Procurement Directive (90/531/EEC). Furthermore, the TCs work especially aims to implement the requirements of the EC Directive for a common gas market (2003/55/EC). Other relevant directives such as the EC Construction Products Directive (89/106/EEC), Energy EfficiencyPressure Equipment Directive (97/23/EC) are considered when necessary.

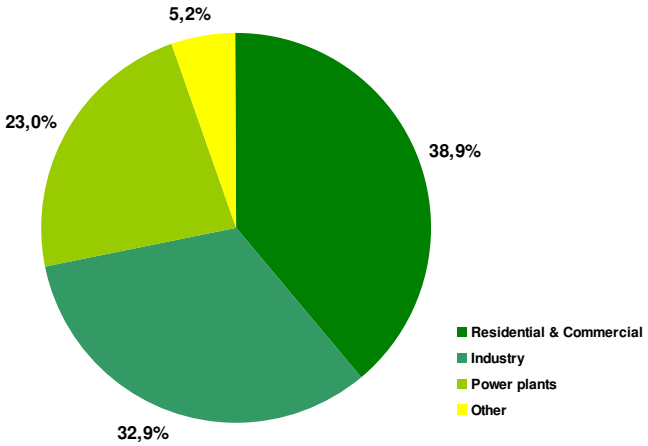
## 1.2 Quantitative Indicators of the Business Environment

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

Figures (Source: Eurogas statistics 2004-2005)




Primary Energy Consumption by fuel (EU25) in 2005




Natural Gas Sales by sectors (EU 25) in 2005

The total number of gas customers (domestic, commercial and industrial) in the EU25 increased by 1,2% to 102 million in 2005.

| A | B | CH | CZ | D | DK | E | EE | EL | F | FIN | HU | I | IRL | L | LT | LV | NL | P | PL | S | SI | SK | UK | EU 15 | E |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1360 | 2700 | 472 | 2797 | 18850 | 360 | 6177 | 66 | 62 | 11425 | 36 | 3364 | 46060 | 539 | 84 | 533 | 434 | 6520 | 855 | 6386 | 55 | 117 | 1441 | 21963 | 86993 | 1( |

(in thousands rounded at 1 J

The natural gas industry in the EU25 mployed 208 700 people as of 1st of January 2006.

| A | B | CH | CZ | D | DK | E | EE | EL | F | FIN | HU | I | IRL | L | LT | LV | NL | P | PL | S | SI | SK | UK | EU 15 | E |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2700 | 3800 | 1620 | 5800 | 35000 | 1400 | 5733 | 315 | 1089 | 26000 | 335 | 5970 | 30000 | 714 | 210 | 1930 | 1306 | 9500 | 766 | 19009 | 200 | 410 | 4916 | 51600 | 168847 | 2( |

The European natural gas industry constructed an additional 25 150 km of pipelines between 2004 and 2005, bringing the total length of pipelines in the EU25 in 2005 to 1 812 067 km.

| A | B | CH | CZ | D | DK | E | EE | EL | F | FIN | HU | I | IRL | L | LT | LV | NL | P | PL | S | SI | SK | UK | EU 15 | E |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| _ | _ | 2190 | 3643 | _ | 1439 | 11600 | 0 | 994 | 36490 | 1030 | 5278 | 32300 | 2002 | 405 | 1800 | 1281 | 11600 | 1431 | 18020 | 530 | 980 | 2270 | 6891 | 106182 | 1: |
| _ | _ | 14447 | 69647 | _ | 17000 | 43695 | 2210 | 3393 | 187600 | 1570 | 79795 | 205000 | 9316 | 1960 | 6600 | 4339 | 135200 | 11021 | 101553 | 2000 | 2200 | 30566 | 274600 | 890885 | 11 |
| 33518 | 59300 | 16637 | 73290 | 390000 | 18439 | 55295 | 2210 | 4387 | 224090 | 2600 | 85073 | 237300 | 1318 | 2365 | 8400 | 5620 | 146800 | 12452 | 119573 | 2530 | 3180 | 32836 | 281491 | 1481355 | 18 |

(in km at 1 J

Number of gas customers, employees in gas industry and length of pipelines (EU 25) in 2005

Legal reference to standards

CEN/TC 234 standards are directly referenced in legislation in a number of Member States, such as:

- France
- Italy
- Belgium
- others

Normative References in European Standards

As the TC elaborates functional standards for the all different parts of the gas chain they are strongly related to each other, therefore, cross references are given in the whole set of the TC 234 standards.
Furthermore, the relevant product and functional standards related to gas supply refer to TC 234 standards, where appropriate.

## 2 BENEFITS EXPECTED FROM THE WORK OF THE CEN/TC

CEN/TC 234 elaborates functional standards and standards related to the safe and efficient operation of gas systems. These specify the function of technically complex systems, function meaning: "the work or activity something is designed to do". The functional standards for gas supply therefore cover the many activities related to the creation of gas supply systems, and to their proper operation and maintenance. Therefore, the term functional refers in broad terms to all of the technical and operational activities necessary to ensure that gas supply systems fulfill their purpose, ie to provide a safe, continuous and reliable supply of gas to consumers.

The CEN/TC 234 functional standards shall specify the common appropriate principles, taking the form of general recommendations, requirements, and the recognised practices concerning design, construction, operation and maintenance, all for the **safety and integrity of gas systems** (transmission, distribution, domestic, commercial and industrial installation) and therefore also for the common welfare.

CEN/TC 234 was given a mandate by the European Commission to elaborate functional requirements in the field of gas supply (gas infrastructure). The mandate relates to measures taken by the EC for the opening up of **public procurement**, and in particular to Council Directive 90/531/EEC. As part of the establishment of the internal market, public contracts for the supply and installation of equipment for the transmission and distribution of gas must be subject to competition. Reference to common CEN/TC 234 standards contributes to the opening of such contracts to competition since it ensures that the technical aspects of procurement contracts are transparent and that economic operators can compete for such contracts on an equal basis.

Directive 90/531/EEC has been replaced by Directive 2004/17/EC.

With a view to current EC energy policy regarding liberalization of the gas market, interoperability of gas network and free trade of products and services, the CEN/TC 234 work especially supports the EC directive for a **common gas market** (2003/55/EC) but also other EC requirements:

The application of CEN/TC 234 exisiting and future standards

- safeguards and strengthens the European-wide safety of gas network;
- safeguards and strengthens the European-wide safety of industrial and non-industrial gas installations
- supports the EC requirement of non-discrimination and-transparence by technical harmonization of requirements for design, planning, construction, operation and maintenance;

Current discussions and projects

- responds to the EC goals to increase the use of renewable energies by preparing a standard to inject biogas in natural gas network by preparing a future standardisation project on biogas (2007);

- takes into account the discussions of the EC and Madrid Forum regarding gas qualities; (CEN/TC 234 will address Mandate 400 (gas qualities), if approved within CEN);
- leads to cost savings: unlike overall standards for several industry sectors, the gas branch specific standards allow to actually specify the need of the sector regarding safety and reliability of supply, necessary investments and environment;

Generally, the broad representation of the European gas sector in CEN/TC 234 by delegates from about 26 CEN Member States leads to a high recognition and broad willingness of implementation of the standards in the gas sector.

## 3 PARTICIPATION IN THE CEN/TC

All the CEN national members are entitled to nominate delegates to 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, the national standards organization in the given country is to be contacted..

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

### 4.1 Defined objectives of the CEN/TC

- Standardisation of functional requirements in the field of gas supply (gas infractructure) ;
- Standardisation of functional requirements in the field of gas installations;
- Periodical revision of the already published TC 234 standards;
- Elaboration of integrity management specifications
- To act as a focus for technical issues in the field of gas supply (gas infrastructure):

CEN/TC 234 elaborates a complete suite of functional standards for the gas sector (at present 22 documents). It covers all parts of the gas supply system from the input of gas to the transmission system up to the inlet connection of the gas appliances, whether for domestic, commercial or industrial purposes.

The CEN/TC 234 functional standards specify the common appropriate principles and the recognised practices concerning design, construction, operation and maintenance, all for the safety and integrity of gas supply systems, taking the form of general recommendations and/or requirements.

Recently, the requirements for gas installations have been detailed by revising the standard on gas installations in buildings up to and including 5 bar (EN 1775) and establishing a new standard for industrial installations over 0,5 bar and non industrial installations over 5 bar.

- Determination and coordination of the gas supply aspects in the technical work dealt with by other CEN / TCs and any other bodies, whether or not reporting to the Sector Forum Gas :

CEN/TC 234 elaborates functional standards for gas systems. Related product standard shall fit into the system. Therefore, liaisons are used to avoid overlaps and to bring the requirements in line with each other in an early phase of standardisation.

### 4.2 Identified strategies to achieve the CEN/TC's defined objectives.

General

CEN/TC 234 achieves it objectives by regular work in the active Working Groups (WG), supported by Plenary and Convenors Meetings and especially Resolution taking by correspondence.

CEN/TC234 installed 8 WGs reflecting the different activities in gas supply. They are listed below. Not all of the Working Groups are active. Additional WGs are planned to be formed to deal with new work items in the future (biogas, gas quality)

According necessity, work is carried out by correspondence or by physical meetings.

| | | |
|---|---|---|
| WG 1 | Gas installation | |
| WG 2 | Gas distribution | |
| WG 3 | Gas transmission | 4 task groups |
| WG 4 | Gas underground storage | (dormant) |
| WG 5 | Gas metering | (dormant) |
| WG 6 | Gas pressure regulation | (dormant) |
| WG 7 | Gas compression | |
| WG 8 | Industrial piping | |

Further approaches and aspects for the efficient TC work:

- Expert's task groups to WGs make the work most efficient;
- Discussions for decision making process are prepared in Convenor Meetings and Adhoc Groups, where appropriate; Strong Co-operation with the European Technical Association of European Gas Industry Marcogaz is considered as a supporting approach.
- Continously updated internal definition paper supports WGs to find common understandings in the group and in the harmonized use of terms while standard' drafting;
- Available European, national or international documents (standards, technical rules, IGU/EU studies) are used as basis of TC 234 deliverables, where useful;
- CEN/TRs and CEN/TSs are used to make recommendations available in short terms and to give technical advice to the gas sector;
- Future strategy will be defined in a Strategy Workshop (March 2007);
- A network of liasions (e.g. CEN/TCs 12, 155, 235, 237…) avoid overlaps and conflicts with other TCs. Co-operations (Marcogaz, EASEE-gas, ASME, NORMAPME,…. ) strengthens the consideration of the sectors current needs and increase the recognition of deliverables.
- Using one language (English) saves time for translations;

Expected deliverables are:

Approved by Formal Vote but not yet published:

- prTS 15399: 2006 "European Quality Assurance System for gas supply companies"

Already delivered to CEN/CMC for Formal vote, not yet launched

- prEN 1775:2006 "Gas pipework for buildings" (revision)

Last preparations before formal vote:

- prEN 15001:2007 "Gas installation pipework with OP greater than 0,5 bar for industrial and greater than 5 bar for industrial and non-industrial installations – almost ready for Formal Vote
  Part 1 "Design, materials, construction, inspection and testing"
  Part 2 "Operation and maintenance

Project preparations – Work item to be requested

- EN 1594:2000 "Pipelines greater 16 bar MOP" - amendment to add organisational issues)
- prTS supporting prEN 15001-1 regarding the application of materials in the context of PED
- EN 12732:2000 " Welding of steel piping" - revision)

Possible new work items

- Biogas injection into gas netork
- Requirement for National Gas H type characteristics (gas quality)

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

- Experts time resources: Following to the changing gas company structures in the context of the EC requirements it is currently rather difficult to engage experts for new work items.
- For prEN 1775:2005, the final draft was sent to CMC for Formal Vote in June 2005. In parallel a German manufacturer for equipment addressed a complaint to the EC that the standard would cause a trade barrier by certain sections in the informative annex. The FV procedurer was stopped.
  Additionally to the reaction of CEN/CMC (S. Russell) by a letter to EC, the TC 234 changed the phrasing considering the argumentation of the complaint; the manufacturer is still convinced that the standard causes trade barriers.
  However, the final draft of the standard has been sent to Formal Vote in August 2006 together with the correspondence in question. In parallel TC 234 Secretariat contacted CEN/CMC, S. Russell. Response is not yet available.
- For prEN 15001-1, the high number of technical comments during public enquiry, the harmonization process regarding EC Pressure Equipment Directive (97/23/EC) and the related consultation with the CEN PED Consultant caused a significant delay. A postponement of the deadline was effected by resolution 11/2006. Because of the still outstanding TC approval of the documents it is not sure that the new deadline 2007-04-01 is realistic. As prEN 15001-2 rely on part 1 of the standard postponement and TC approval apply also for this document.
- For EN 1594:2000 CEN/TC 234 confirmed the technical content by informal resolution (2005) and decided to add organizational requirements in the standard. This should be made by amendment. A draft has been worked out by the dedicated TGs. Unfortunately, TC 234 did not took advantage to ask a preliminary WI in 2005. Instead it became obvious now, that only revisions are possible after 3 years publication of the standard. The TC gets in contact with CMC to check if an exclusion is possible referring to the resolution taken in 2005.