



BUSINESS PLAN

ISO/TC 263

Coalbed methane (CBM)

EXECUTIVE SUMMARY

ISO/TC 263 develops international standards for Coalbed methane (CBM) and CBM substitutes from production to delivery and for all possible end users across the world. These standards include CBM exploration, development, production and utilization.

CBM international standards are of benefit to CBM exploration and exploitation companies, coal companies, transporters, consumers, equipment manufacturers, salespersons and research labs.

CBM resources worldwide are abundant, about half those of conventional natural gas. With the rapidly growing need for natural gas, CBM is emerging as a potential substitute for conventional natural gas. In 2009, CBM production amounted to 100 billion m³ worldwide and the number of CBM wells is estimated at over 100,000. Despite its rapid growth and future potential, there are few CBM standards to regulate the CBM industry. CBM international standards can promote CBM trade and communication and the overall development of the CBM industry.

The ISO/TC 263 technical committee was established in 2011, with 8 P-members and 13 O-members. Chengfuji was appointed chairman of this committee and Peihua Zhao as its secretary.

1 INTRODUCTION

1.1 ISO technical committees and business planning

The extension of formal business planning to ISO Technical Committees (ISO/TCs) is an important measure which forms part of a major review of business. The aim is to align the ISO work programme with expressed business environment needs and trends and to allow ISO/TCs to prioritize among different projects, to identify the benefits expected from the availability of International Standards, and to ensure adequate resources for projects throughout their development.

1.2 International standardization and the role of ISO

The foremost aim of international standardization is to facilitate the exchange of goods and services through the elimination of technical barriers to trade.

Three bodies are responsible for the planning, development and adoption of International Standards: [ISO](#) (International Organization for Standardization) is responsible for all sectors excluding Electrotechnical, which is the responsibility of [IEC](#) (International Electrotechnical Committee), and most of the Telecommunications Technologies, which are largely the responsibility of [ITU](#) (International Telecommunication Union).

ISO is a legal association, the members of which are the National Standards Bodies (NSBs) of some 140 countries (organizations representing social and economic interests at the international level), supported by a Central Secretariat based in Geneva, Switzerland.

The principal deliverable of ISO is the [International Standard](#).

An International Standard embodies the essential principles of global openness and transparency, consensus and technical coherence. These are safeguarded through its development in an ISO Technical Committee (ISO/TC), representative of all interested parties, supported by a public comment phase (the ISO Technical Enquiry). ISO and its [Technical Committees](#) are also able to offer the ISO Technical Specification (ISO/TS), the ISO Public Available Specification (ISO/PAS) and the ISO Technical Report (ISO/TR) as solutions to market needs. These ISO products represent lower levels of consensus and have therefore not the same status as an International Standard.

ISO offers also the International Workshop Agreement (IWA) as a deliverable which aims to bridge the gap between the activities of consortia and the formal process of standardization represented by ISO and its national members. An important distinction is that the IWA is developed by ISO workshops and fora, comprising only participants with direct interest, and so it is not accorded the status of an International Standard.

2 BUSINESS ENVIRONMENT OF THE ISO/TC

2.1 Description of the Business Environment

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

ISO/TC 263 focuses on standardization in the field of CBM industry, including CBM exploration, development, production and utilization.

As world energy consumption continues to rise and conventional natural gas reserves run low, CBM is emerging as a potential substitute for conventional natural gas. Furthermore, coal gas released from coal mines can cause severe air pollution and so greatly exacerbate the greenhouse effect. Also, to secure the safety of the mines, it is imperative that CBM be extracted before mining. If CBM is handled correctly, the energy crisis can to some degree be eased, coal mines can be safer, and air pollution can be reduced.

The resources of CBM worldwide are being developed. Up to 2009, production of CBM worldwide amounted to 100 billion m³ and the number of CBM wells was estimated to have reached 100,000. The USA, Australia and Canada have quite prosperous CBM industries, while China, India and many other countries have begun CBM development and are developing their CBM industries fast.

Currently, many CBM developers are oil companies; they exploit CBM in much the same way as they exploit conventional natural gas. Though CBM shares some similarities with the conventional natural gas, there are still many differences. Under many circumstances, CBM developers take the oil & conventional natural gas standards as CBM ones and don't pay much attention to the difference, only when CBM standard is in need, the importance of CBM standards can draw attention. The lack of CBM standards is hampering the CBM's developing into a larger and more beneficial industry.

The main players in the CBM market are:

- exploration and production companies
- trading companies
- transportation companies
- distribution companies

- regulatory bodies
- coal developers
- industrial customers
- consultancy and certification bodies.

These players could participate in CBM international standardization through their national delegations

2.2 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 ISO/TC:

The major factors which may have an impact on the development of the market are:

- CBM technology and standards
- the recognition and support of society
- a clear strategy for CBM development
- the increasing need for clean gas energy as a potential substitute for conventional natural gas
- increasing concerns about environmental protection and the safety of coal mines

CBM technology and standards

Typically, the cleats of the coal are initially water saturated, most CBM, if not all, is adsorbed on the surfaces of the coal, and some CBM may be stored as free gas in the cleats and open pores, so its resource evaluation technology is different from that of conventional natural gas and therefore the exploitation of CBM is also quite different from that of conventional natural gas. Most CBM is obtained under low pressure from the well, so CBM transportation needs special equipment and technology. For those above and many other reasons, there is an urgent need for a great number of CBM standards. The following factors could promote CBM standardization.

The recognition and support of society

CBM has yet been widely used as a source of energy. It has mostly been wastefully discharged into the air in the course of mining coal. Initial CBM technology research and industry formation needs support from the government. The CBM industry also needs the active participation of interested parties.

A clear strategy for CBM development

First, CBM developers must develop good relationships with coal developers. Secondly, they must contain costs because, although the life of a CBM well is far longer than that of a conventional natural gas well, the CBM production for a single well is lower.

The increasing need for gas energy and a potential substitute for conventional natural gas

Conventional natural gas reserves in many countries are running low, while gas consumption continues to rise. CBM resources worldwide will play more important role. CBM development first boomed in the USA: up to 2008, CBM production in the USA exceeded over 50 billion m³, which helped greatly to satisfy energy demand in the USA. The example of the USA has encouraged many other countries to develop CBM as a potential substitute for conventional natural gas.

An increasing awareness of the need for environmental protection and safety

CBM from coal mines has usually been mostly released into the air, which is not only a great waste of energy but also a major cause of air pollution. The CBM greenhouse effect is almost 21 times stronger than that of CO₂. CBM in coal mines is and always has been the greatest potential safety hazarding coal mines. CBM exploitation before mining would address both these issues and convert a hazard into a beneficial source of energy.

3 BENEFITS EXPECTED FROM THE WORK OF THE ISO/TC

The standards developed by ISO/TC 263 are designed to facilitate the drawing up of contracts for coal bed methane. Instead of negotiating the CBM quality and measurement methods for each contract, easy reference to international standards can be made.

Referring to conventional natural gas that is similar to CBM, an inaccuracy in measurement of 1 % represents a value of 1 G USD. This illustrates the importance of clear agreements about the measurements of volume and quality (e.g. calorific value) of CBM. Harmonization of quality requirements by standardization enables cost effective realization of processing installations.

4 REPRESENTATION AND PARTICIPATION IN THE ISO/TC

4.1 The members of ISO/TC consist of P members and O members

http://www.iso.org/iso/home/standards_development/list_of_iso_technical_committees/iso_technical_committee_participation.htm?commid=638206

4.2 Analysis of the participation

The use of CBM is made possible by the activities of producers, carriers and distributors of CBM and the manufacturers of CBM appliances, all of whom recognize the significance of end users' demands. Proper functioning of the CBM market requires effective interaction between all parties.

The CBM industry has already recognized the need for standards. Moreover, it is willing to give both technical and organizational support to international standardization efforts. Existing co-operative bodies may be expected to give sufficient support.

In order to encourage participation by new countries, plenary meetings will be scheduled to take place in these countries.

5 OBJECTIVES OF THE ISO/TC AND STRATEGIES FOR THEIR ACHIEVEMENT

5.1 Defined objectives of the ISO/TC

ISO/TC 263 mainly provide standards for CBM.

The CBM industry in many CBM countries is at an early stage and CBM standards are urgently needed, especially standards based on the distinctive character of CBM. CBM has a series of particular methods of production and resource evaluation technologies.

CBM international standards can promote CBM trade, CBM technology communication and CBM development

Objectives of the ISO/TC

The objectives of ISO/TC are:

- to provide standards for CBM terminology, quality specification, methods of measurement, sampling, analysis and calculation, and tests. These standards promote CBM trade and make CBM technology communication easier.
- to provide standards for CBM utilization technology. CBM can be applied to power generation, heating, liquefaction, the chemical industry, residential usage etc.
- to provide standards for CBM environmental protection. Most CBM production is based on dewatering. The water produced during this procedure must be processed otherwise it will pollute the environment.

to provide standards for coal mine gas control and coal mine safety. Explosions caused by CH₄ in coal mines are and have always been the major hazard in the coal mining industry. This explosive gas should be extracted before mining in order to secure mine safety

5.2 Identified strategies to achieve the ISO/TC's defined objectives

These objectives will be achieved by:

- streamlining of all standardization activities for the CBM industry
- co-ordination of the work of all parties involved
- full exchange of information
- liaison with all relevant international organizations and other ISO technical committees

6 FACTORS AFFECTING COMPLETION AND IMPLEMENTATION OF THE ISO/TC WORK PROGRAMME

The following factors could place constraints on the realization of these objectives:

- In many countries development of CBM is at an early stage and CBM developers apply conventional natural gas & petroleum standards to CBM, failing to realize that CBM standards should be different.
- The ISO/TC CBM was established as recently as 2011 and is not widely known, which means that it may take some time to implement CBM international standardization.

7 STRUCTURE, CURRENT PROJECTS AND PUBLICATIONS OF THE ISO/TC

This section gives an overview of the ISO/TC's structure, scopes of the ISO/TCs and any existing subcommittees and information on existing and planned standardization projects, publication of the ISO/TC and its subcommittees.

7.1 Structure of the ISO committee

As newly established in 2011, the TC263 has not set up any subcommittees and a new work group is supposed to set up lately in need.

7.2 Current projects of the ISO technical committee and its subcommittees

TC263 has received 4 proposals, regarding to the comments of committee members, relative projects will be set up dealing with relevant and potential coalbed methane orientations.

7.3 Publications of the ISO technical committee and its subcommittees

No publications have come out yet.

Reference information

[Glossary of terms and abbreviations used in ISO/TC Business Plans](#)

[General information on the principles of ISO's technical work](#)