



Launching of ISO 14064 for greenhouse gas accounting and verification

by Chan Kook Weng and Kevin Boehmer



ISO was preparing to launch its new international greenhouse gas (GHG) accounting and verification standards – the three-part ISO 14064 – when this issue of *ISO Management Systems* went to press.

ISO's goal in developing the standards is to provide a set of unambiguous and verifiable requirements or specifications to support organizations and proponents of GHG emission reduction projects. When they use ISO 14064 for quantification, reporting and verification, it will ensure that "a tonne of carbon is always a tonne of carbon."

ISO 14064 has resulted from several years of detailed study and engagement with the international community of governmental and business organizations with a stake in climate

Some **175 international experts from 45 countries and 19 liaison organizations** participated in developing **ISO 14064**

change. It has been developed by Working Group (WG) 5 on Climate Change of ISO Technical Committee (TC) 207, which is responsible for the ISO 14000 family of environmental management standards.

These high profile standards – which were presented at the United Nations Climate Change Conference in Montreal, Canada, in late 2005 – will provide clarity and consistency between those reporting GHG emissions and stakeholders.

ISO 14064 provides a solution to the problem brought to light

in 2002 by the ISO Technical Management Board's Ad Hoc Group on Climate Change. It observed that governments, business corporations and voluntary initiatives were using a number of approaches to account for organization- and project-level GHG emissions and removals with no generally accepted validation or verification protocols.

In response, the Department of Standards Malaysia (DSM – www.dsm.gov.my) and the Standards Council of Canada (SCC – www.scc.ca) proposed the development of ISO 14064 and have since managed some 175 international experts from 45 countries and 19 liaison organizations through eight international meetings to complete the standard.

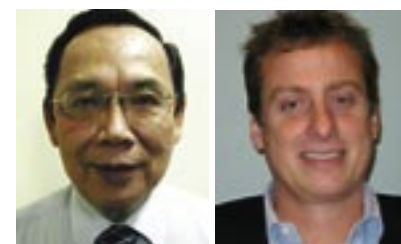
ISO 14064 objectives are to:

- enhance environmental integrity by promoting consistency, transparency and credibility in GHG quantification, monitoring, reporting and verification;
- enable organizations to identify and manage GHG-related liabilities, assets and risks;
- facilitate the trade of GHG allowances or credits; and
- support the design, development and implementation of comparable and consistent GHG schemes or programmes.

ISO 14064, *Greenhouse gases*, comprises three parts, respectively detailing specifications and guidance for the organizational and project levels, and for validation and verification.

Organizational level

Part 1: *Specification with guidance at the organization level for the quantification and reporting of greenhouse gas emissions and removals*, details principles and requirements for designing, developing, managing and reporting organizational- or company-level GHG inventories.



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It includes requirements for determining organizational boundaries, GHG emission boundaries, quantifying an organization's GHG emissions and removals, and identifying specific company actions or activities aimed at improving GHG management.

ISO 14064 will be complemented by ISO 14065 on accreditation of GHG verification or validation bodies

It also includes requirements and guidance on inventory quality management, reporting, internal auditing and the organization's responsibilities in verification activities.

Part 1 will be of interest to organizations participating in voluntary GHG registries or regulatory allowance-based schemes, or GHG scheme administrators designing such programmes or schemes.

Part 1 is consistent with best practice established in the Greenhouse Gas Protocol Corporate Accounting Standard developed by the World Business Council for Sustainable Development and the World Resources Institute.

Project level

Part 2: *Specification with guidance at the project level for the quantification, monitoring and reporting of greenhouse gas emission reductions and removal enhancements*, focuses on

GHG projects or project-based activities specifically designed to reduce GHG emissions or increase GHG removals.

It includes principles and requirements for determin-

ing project baseline scenarios and for monitoring, quantifying and reporting project performance relative to the baseline scenario and provides the basis for GHG projects to be validated and verified.

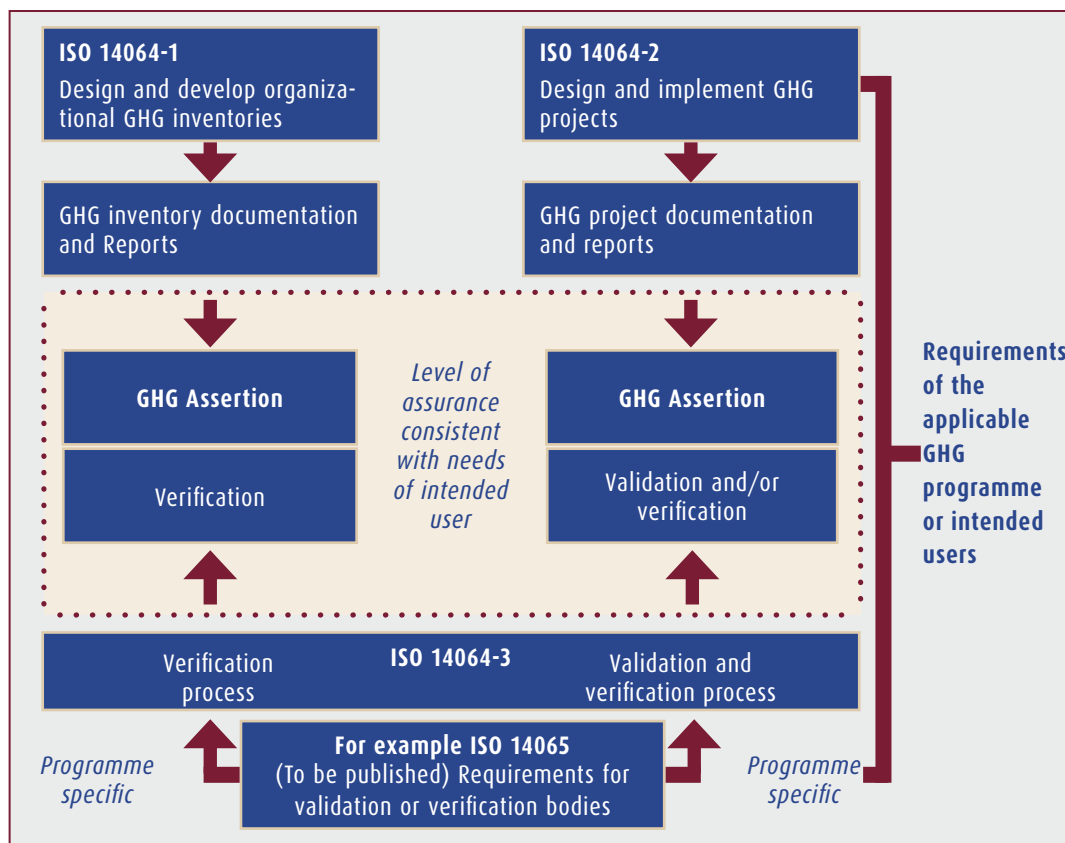


Figure 1 – The relationships between the three parts of ISO 14064 and ISO 14065.

The Part 2 standard will be of interest to project proponents participating in voluntary programmes or regulatory credit-based schemes, or GHG scheme administrators designing such programmes or schemes.

Part 2 of ISO 14064 requires users to select or establish relevant good practice guidance in fulfilling many of its requirements to ensure compatibility with existing (e.g., Clean Development Mechanism) or emerging practice.

Validation and verification

Part 3: *Specification with guidance for the validation and verification of greenhouse gas assertions*, details principles and requirements for verifying GHG inventories and

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validating or verifying GHG projects.

It describes the process for GHG-related validation or verification and specifies components such as validation or verification planning, assessment procedures and the evaluation of organization or project GHG assertions.

ISO 14064 Part 3 can be used by organizations or independent parties to validate or verify GHG assertions and establish new international best practice for the GHG validation or verification process.

ISO 14065

ISO 14064 will be complemented by ISO 14065, which specifies requirements to accredit or otherwise recognize bodies that undertake GHG validation or verification using ISO 14064 or other relevant standards or specifications.

ISO 14064 embodies the principles of regime neutrality, technical rigour, extensive participation and speed-to-market

ISO 14065 is being developed by the joint Working Group 6, which was set up in 2004 and comprises experts from ISO/TC 207 and ISO/CASCO, Committee on conformity assessment, managed by the South African Bureau of Standards (SABS – www.sabs.co.za) in partnership with the Standards Council of Canada. The standard is expected to be published in early 2007.

ISO 14064 process principles

Regime neutrality – ISO 14064 is GHG regime or scheme neutral. In other words, the developers of ISO 14064 balanced being “scheme sensitive” with becoming “scheme selective” or being “policy relevant” with becoming “policy prescriptive”.

Technical rigour – The developers of ISO 14064 recognized that anything short of a technically rigorous standard would lose market credibility and relevance. To this end, each Part of ISO 14064 treats technical best practice in its own way – Part 1 maintains consistency with existing best practice (eg, GHG Protocol), Part 2 is designed to be compatible with existing best practice or allows for the establishment and justification of new best practice, while Part 3 establishes new international best practice.

Extensive participation – WG 5 recognized that the credibility of ISO 14064 might be impacted by the extensiveness of participation in the standards development process. The participation of various countries, regions, stakeholder groups and technical experts was therefore encouraged to ensure different perspectives; needs and expertise were accounted for.

Speed-to-market – As a variety of GHG initiatives and schemes have been established, are under development or are being planned, WG 5 committed to an ambitious, but responsible schedule to complete the standard. WG 5 delivered ISO 14064 in about three-and-a-half years.

Table 1 – ISO 14064 process principles.

Figure 1 (preceding page) shows the relationships between the three parts of ISO 14064 and ISO 14065.

Challenges

The developers of ISO 14064, whilst taking advantage of ISO’s reputation and process

strengths, were not immune from the challenges of standardization in this sometimes complex and always political area. To help guide their work, WG 5 established and maintained the four principles of regime neutrality, technical rigour, extensive participation, speed-to-market (see **Table 1**).

ISO 14064 developers regularly revisited these process principles to help ensure that the standards would provide a variety of users with a flexible, credible and verifiable tool applicable across a variety of voluntary or regulatory GHG schemes.

WG 5 is not under the illusion that ISO 14064 will represent a “total solution” to GHG accounting and verification needs, but is confident that it represents an important “building block” to organizations or project proponents participating in various voluntary or regulatory initiatives, or to administrators responsible for designing and implementing GHG schemes or programmes.

Striking example

ISO Secretary-General Alan Bryden recently commented: “Claims made about reductions of the greenhouse gas emissions widely held responsible for climate change may have political and financial implications, in addition to environmental and technical ones. Ensuring their credibility is thus vital.

“ISO is combining its environmental and conformity assessment expertise to develop tools for measuring, validating and verifying such claims. This is a striking example of how ISO’s work can help to provide practical tools for meeting the global challenges that the international community is wrestling with.”