In response to reducing greenhouse gases governments and industries around the globe are setting targets to bring about reductions in greenhouse gas (GHG) levels. The reliability of the data from which such targets are set, and which emission reduction claims are based on, is vital. Paul Reed looks at recent developments in international GHG assurance standards.

The ISO 14064 and ISO14065 standards are aimed at injecting credibility and assurance to GHG emissions reports and claims made in regard to reductions or removal of GHGs. The standards are not aligned with any particular scheme; rather they are independent and may be used by organizations participating in a number of trading, project or voluntary emissions reduction mechanisms. The standards may also be applied to all GHG types and are not limited to CO2.

ISO 14065:2006

ISO 14064:2006 is a three part standard comprising a set of GHG accounting and verification criteria. The standards define international best practice in the management, reporting and verification of the greenhouse gas information and data. The use of standardized approaches for the accounting and verification of emissions data should ensure that one tonne of CO2, for example, is always the same wherever it occurs. Uncertainties surrounding the emissions statements should thus be comparable throughout the globe and end user groups such as governments, market traders and other stakeholders may rely upon the data presented and the claims made. The three part standard is structured thus:

- ISO 14064 part one details the principles and requirements for designing, developing, managing and reporting organization or company-level GHG inventories. It includes requirements for determining GHG emission boundaries, quantifying an organization's GHG emissions and removals and identifying specific company actions or activities aimed at improving GHG management. Also detailed are management system requirements and guidance on GHG inventory quality management, reporting, internal auditing and the organization's responsibilities in verification activities
- ISO 14064 part two focuses on GHG projects specifically designed to reduce GHG emissions or increase GHG removals such as wind power or carbon sequestration and storage projects. It includes principles and requirements for determining the project baseline and for monitoring, quantifying and reporting the project performance relative to the baseline
- ISO 14064 part three describes the actual validation or verification process. It specifies requirements for components such as verification planning, assessment procedures and the evaluation of GHG assertions. ISO 14064-3, therefore, can be used by organizations or independent third parties to validate or verify GHG reports and claims.

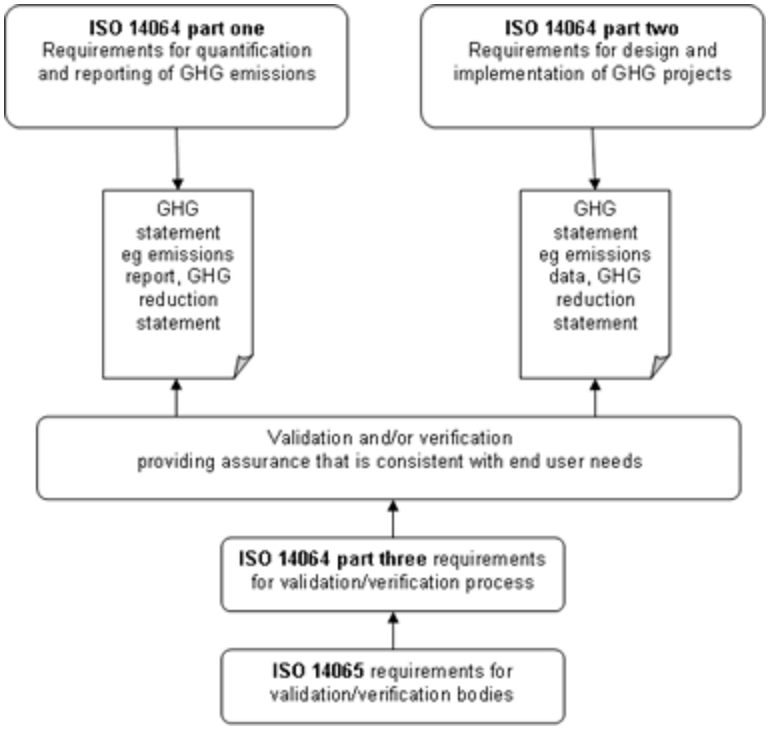
ISO 14065:2007

The more recent ISO 14065:2007 has been developed to deliver assurance in the verification and validation process itself and defines requirements for companies performing greenhouse gas

validation and verification. These companies may be performing verification of data managed in compliance with the ISO 14064-3 standard or to other specific criteria such as those in emissions trading scheme or corporate standards, for example.

General requirements in the standard relate to matters such as legal and contractual arrangements, responsibilities, the management of impartiality and issues of liability and financing. More specific requirements include provisions related to structures, resource requirements and competencies, information and records management, validation and verification processes, appeals, complaints and management systems. The standard target audience, therefore, is predominantly GHG programme administrators, regulators and accreditation bodies. The standard provides them with a basis for assessing the competence of validation and verification companies.

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



Note:
Validation - a systematic, independent and documented process for the evaluation of a GHG assertion related to a GHG project plan against agreed validation criteria.
Verification - systematic, independent and documented process for the evaluation of a GHG assertion against agreed verification criteria.

The release of these standards would appear to be well-timed, with what seems to be daily claims from high profile organizations regarding their GHG performance or their plans to improve and reduce climate change impacts. Terms such as 'carbon footprint' and 'carbon neutrality' have entered common parlance and it would appear the market in GHG verification and validation should be rapidly expanding to meet current demands and future opportunities.

What they mean for you

For the auditor, these standards provide a means by which consistency can be introduced into the complicated area of GHG verification. GHG accounting and management systems may be assessed to the standard's requirements following the ISO 14064-3 process. Organizations wishing to make credible claims on issues such as their carbon footprint, carbon neutrality or significant reductions in emissions as a result of improvement programs can be independently verified.

In a rapidly developing field the area of verifier competence is a particularly important one and is addressed in ISO 14064-3 and ISO 14065. This will be of particular interest to those auditors and organizations wishing to move into GHG verification/validation field. The competence requirements described are wide ranging and detailed. They may offer future potential for a scheme of verifier registration.

Both ISO 14964-3 and ISO 14065 require verifiers to be familiar with GHG measurement and reporting methodologies, as well as understanding the auditing of GHG information and data. Competencies in data sampling methodologies incorporating distinct levels of assurance, materiality and detailed verification or validation plans are also required. Verifiers should have a technical knowledge of GHG sources, sinks and activities that produce GHG pertinent to the particular organization concerned.

The complete competency requirements will present a significant challenge to those individuals and organizations wishing to undertake verification work and there have been some initiatives to address this with a draft standard curriculum for the training of GHG verifiers.

The uptake of these two standards would appear to be linked to at least two potential drivers. First, the referencing of the standards in guidance and policy initiatives such as the EU emissions trading scheme, Canadian carbon offsets and US greenhouse gas registry (among others), should ensure adoption by participating organizations. In addition, their use by organizations that are voluntarily making emissions reductions without any structured policy scheme should provide a second group of users. Given the growth in these two areas, and in public concern over climate change, it would seem that these two standards should find a receptive and enthusiastic following.

Paul Reed is MD of En-Vision (UK) Ltd, a company he founded in early 2005. The company has built upon expertise in environmental management systems and emissions verification to develop further in the fields of environmental training, energy renewable and GHG emissions trading. For more information contact e: paul.reed@en-visionuk.com or visit: www.en-visionuk.com