

MANAGING YOUR GREENHOUSE GAS EMISSIONS



Lloyd's Register Quality Assurance is a member of the Lloyd's Register Group



LRQA
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THE CLIMATE CHANGE OPPORTUNITY

The challenge of climate change has become a business reality. Companies face the growing prospect of voluntary and mandatory climate change programmes where they must account for their carbon usage and measure progress in reducing their footprint. For responsible companies, wanting to demonstrate their climate change credentials, this presents an opportunity to enhance their corporate reputation, improve performance and gain competitive advantage.

An effective climate change strategy, carefully designed to match the needs of your business, that is verified by a recognised independent party, will deliver significant business benefits. It will:

- provide a verifiable record of your greenhouse gas (GHG) management and emissions reductions;
- target areas where performance can be improved;
- address stakeholder demands for transparency; and
- bring credibility and trust to your emission reduction claims.

These benefits can translate into cost savings as well as opportunities to enhance your reputation with customers and supply chain partners, thereby securing and sustaining your business.

OUR SERVICES – YOUR BUSINESS ADVANTAGE

LRQA is trusted worldwide as a provider of validation, verification, certification, training and customised solutions. In the emissions management area, we help you to fulfil your objectives and meet the expectations of your stakeholders.

We deliver our emissions management services through an approach we call Business Assurance. At the heart of Business Assurance is our commitment to work to protect, safeguard and assure the interests of current and future stakeholders. Nowhere is this commitment more significant than in relation to climate change. That's why we invest in the recruitment and development of our people to give you access to the best and broadest range of technical expertise around the globe.

Our expertise in the regulated carbon market includes the following schemes:

- European Union Emissions Trading Scheme (EU ETS)
- Clean Development Mechanism (CDM)
- Joint Implementation (JI)
- Japanese Voluntary Emissions Trading Scheme (JV ETS)

In the voluntary carbon market we also provide services relating to:

- ISO 14064 -parts 1 and 2
- Voluntary Carbon Standard (VCS 2007)
- Gold Standard
- PAS 2050 – Assessing the carbon footprint of goods and services





Our aim is to help you define, refine and deliver your climate change credentials for your business advantage

Our climate change services can be delivered individually or as part of an integrated solution across your entire organisation or supply chain.

Gap Analysis – your systems under scrutiny

Are your current management systems capable of delivering your climate change goals or compliance needs?

Our verifiers will help you measure the gap between where you are now and where you need to be; they will ensure that you are using the most appropriate methodologies for monitoring emissions and confirm your compliance with the relevant voluntary or mandatory programmes.

Validation – fit-for-purpose assurance

Our climate change experts will ensure that your project design, data monitoring and system documentation are all properly aligned with your greenhouse gas removal or reduction objectives and scheme requirements. We offer rigorous assessment to help ensure that your process will deliver effectively whilst providing the assurance of third-party validation.

Verification – reporting integrity assured

To demonstrate that your climate change data, reports or assertions are true, fair and reliable, LRQA verifiers will provide you with the independent verification needed to satisfy your customers, regulatory bodies and other stakeholders.

Training – ahead of the game

Climate change issues, regulation and voluntary opportunities are constantly evolving. How does it impact upon your business and what opportunities will you identify to improve your performance?

Training from LRQA helps you to better understand the challenges and opportunities with a focus on improving business performance.

BEGINNING WITH YOUR BUSINESS STRATEGY

Using LRQA's Business Assurance approach we begin by first understanding your business objectives. We then work with you to ensure that your climate change strategy meets the needs of the appropriate industry regulators.

Alternatively, working with voluntary schemes, we can ensure that your operational systems are fully aligned with your climate change objectives, providing intelligent, critical judgement, based on experience gained worldwide across industries and sectors.

CHOOSING AN EXPERT PROVIDER

LRQA is part of the highly respected Lloyd's Register Group and has a worldwide reputation for pioneering climate change services for our clients.

The addition of Ryerson, Master & Associates Inc. (RMA) to the Lloyd's Register Group has greatly expanded our climate change services. RMA is accredited to verify emissions under the California Climate Action Registry (CCAR) and one of the first six verification bodies to attain initial American National Standards Institute (ANSI) accreditation for The Climate Registry (TCR) to ISO 14065.

RMA's services include preparing carbon footprints, carbon-reduction project verification, climate-action planning, sustainability programs, and renewable energy programmes.

With LRQA's growing network of climate change units and offices on all continents, we offer a truly global capability with the assurance of local knowledge.

Our experts, with their insight and experience of core industry issues, are also active in shaping the future of emissions trading and carbon standards through their involvement in technical committees. These include the International Standards Organisation (ISO), International Emission Trading Association (IETA) and the Emissions Trading Group (ETG). We were also responsible for authoring the Voluntary Carbon Standard (VCS).

To find out how LRQA can help you with your climate change challenges, visit us at: www.lrq.com.au or e-mail us at enquiries-melbourne@lrqa.com or call us on +61 3 9864 1650.

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ISO 14064

In parallel with the emergence of regulated or mandatory schemes relating to monitoring, reporting and verification of Greenhouse Gases (GHG), organisations outside of these schemes are now increasingly wishing to monitor and report their emissions. In response to this demand and to provide an international standard against which such reports can be voluntarily verified, ISO 14064 has been developed.

ISO 14064 has been prepared in three parts:

ISO 14064, part 1 details the principles and requirements for designing, developing, managing and reporting organization level GHG inventories. It includes requirements for determining boundaries, quantifying emissions and removals, and identifying specific company actions or activities aimed at improving GHG management. It also includes requirements and guidance on quality management of the GHG inventory, reporting, internal auditing and the organization's responsibilities for verification.

ISO 14064, part 2 focuses on GHG projects or project based activities specifically designed to reduce GHG emissions or increase GHG removals. It includes principles and requirements for determining project baseline scenarios and for monitoring, quantifying and reporting project performance relative to that baseline and provides the basis for GHG projects to be validated and verified.

How can your organisation benefit from ISO 14064?

- It can help you prove your commitment to reducing your carbon emissions
- It can help you develop robust internal mechanisms for quantifying and reporting GHG emissions
- It can help you prepare legitimate GHG assertions, claims and reports
- It can help you quantify and report emission reductions from projects
- It can be used in conjunction with any regulated scheme, such as EUETS to manage your compliance requirements under the scheme

LRQA services

We offer a range of validation, verification and training services relating to ISO 14064, including:

- Public and in-house training related to ISO 14064
- Facilitated workshops aimed at training your organisation on how to develop a process to implement standard conforming quantification and reporting systems to manage these issues for the future.
- Gap analysis against ISO 14064 parts 1 or 2
- Verification of an organisation's GHG assertions, claims and reports against ISO 14064, part 1
- Validation and verification of GHG projects against ISO 14064, part 2.

LRQA helps you manage your climate change challenges to improve your environmental performance and meet your stakeholders' needs.

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VOLUNTARY CARBON STANDARD (VCS)

The voluntary carbon market consists of companies, organisations and individuals taking responsibility for their carbon emissions through the use of voluntary carbon offset schemes. The acceptance and effectiveness of the voluntary carbon market as a reliable means of battling climate change can only be accomplished once the market is seen as credible and transparent by all potential stakeholders.

The Voluntary Carbon Standard (VCS) provides a much needed quality assurance for certification of credible voluntary offsets.

The VCS is a robust, global standard with three key additional differentiating factors:

1. The integration of International Standards Organisation's ISO14064 part 2, the globally accepted greenhouse gas standard for quantification, monitoring and reporting of carbon emission reductions associated with projects, into the VCS.
2. Validation and verification must be performed by organisations accredited by the members of the International Accreditation Forum, using ISO 14065 or by a VCS approved GHG (green house gas) programme.
3. All voluntary carbon units must be held in a VCS approved registry, providing assurance against double counting and double trading of carbon credits.

How can you and/or your organisation benefit from the VCS?

The VCS can:

- help you prove your commitment to reducing your carbon emissions
- provide credibility to your voluntary offsets, providing your stakeholders with the assurance that your emissions reductions are real and additional
- provide credibility to your organisation's voluntary carbon scheme
- provide assurance that your voluntary carbon credits have not been double counted or double traded.

LRQA services

LRQA has a global team of Climate Change experts, members of which; Dr Anne-Marie Warris, have authored the VCS.

Our services in the voluntary market sector include:

- validation and verification against VCS 2007
- validation and verification against ISO14064 part 2
- validation and verification of project emissions, taking into account additional requirements such as the Gold Standard
- assurance of data generated by voluntary carbon schemes based on the VCS 2007 criteria
- public and in-house training related to the voluntary carbon market, including the VCS and ISO 14064

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THE KYOTO PROTOCOL

The Kyoto Protocol introduced three international mechanisms to supplement national actions to achieve greenhouse gas (GHG) emissions reductions:

1. Clean Development Mechanism (CDM): This relates to an emissions reduction project in a developing country where the investor is from an industrialised country. Both countries must be Kyoto Protocol signatory states.
2. Joint Implementation (JI): This relates to an emissions reduction project in an industrialised country where the investor is from an industrialised country. Both countries must be Kyoto Protocol signatory states.
3. International Emissions Trading (IET): one example of which is European Emission Trading Directive (EU ETS), see our EU ETS leaflet. CDM and JI credits are also being traded internationally.

Clean Development Mechanism

The Kyoto Protocol requires that to be eligible, a CDM project must be validated and verified. Validation relates to the project development phase, whereas verification relates to the project operation phase when emission credits are being generated. Validation and verification must be carried out by an accredited operating entity, i.e. a third party.

Validation is where a validator assesses the project design documentation (PDD); in particular the project's baseline, additionality, monitoring plan and compliance with relevant UNFCCC (United Nations Framework Convention on Climate Change) CDM and host party criteria. A validation report confirms that the project design - if implemented as documented - meets CDM requirements and will generate tradable emission credits. It also confirms that the baseline methodology and approach is sound and meets additionality requirements in the Kyoto Protocol and Marrakech Accords. Successful validation is a prerequisite for your project to be registered as a CDM project.

Verification confirms the emissions reductions that have been achieved by your project, and following verification, certified emission reductions are issued by the UNFCCC. Verification conventionally comes in two phases although these can be combined to one and frequently are.

The two verification phases are:

1. Initial: this confirms that project operations are installed/implemented as set out in the PDD, that the monitoring system is in place, conforms with the monitoring plan in the PDD and is fully functional, and that verifiable emission reductions can be expected to be generated. A verification report confirms that the project is in compliance with requirements, when it may start operations and the likelihood that the project will deliver the predicted emission reductions.
2. Periodic: this confirms that systems and monitoring are in compliance with those described in the PDD and monitoring and reporting plan, determines whether the GHG emission reduction data is 'free' from misstatements and that reported GHG emission data is sufficiently supported by evidence. A verification report confirms the completeness, comparability, accuracy and correctness of reported GHG emission reductions. Certification completes the verification activities by certifying (stating) the achieved emission reduction over the period. This is a prerequisite for the release of the CER (Certified Emissions Reductions) by the UNFCCC which can then be internationally traded.

In compliance with UNFCCC regulations and to avoid any integrity issues, accredited operating entities can only perform one of the above for each CDM project, i.e. either validation or verification. There are exclusions for small scale CDM projects.



THE KYOTO PROTOCOL

Joint Implementation

This scheme is an incentive to companies in industrialised countries to reduce emissions through co-operative efforts. It also encourages transfer of technology and know-how between co-operating countries.

Project validation (known as determination in JI) and verification under JI can follow two tracks: under track 1 the procedures of the host country are followed and under track 2 the procedures of the UNFCCC are followed, in a similar way to those previously described for CDM.

LRQA services

We offer CDM validation and verification services as well as determination of JI projects. LRQA has been accredited as a Designated Operational Entity (DOE) for CDM and is allowed to act provisionally as an accredited independent entity (AIE) for JI. For the applicable sectoral scopes, please ask us.

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THE INCLUSION OF AVIATION INTO THE EU ETS

Are you covered by the scheme?

- If you are an 'Aircraft operator' then you are the entity responsible for compliance.
- This excludes flights by state aircraft, flights under visual flight rules, circular flights, and flights for testing navigation equipment or for training purposes, rescue flights and flights by aircraft with a maximum take-off weight of less than 5,700kg.

As an aircraft operator, how will you be included?

- You will be administered by one Member State only (the state where an operating licence was issued OR the state in which the aircraft operator's emissions in a specific year are most attributable).
- You will be allocated a certain number of allowances.

When does the scheme come into effect?

- Monitoring and reporting requirements have taken effect from 1/1/2010, for both baseline tonne-kilometre data and annual emissions data
- 2010 and 2011 will be practice years for annual emissions monitoring, reporting and verification
- From 2012, emissions will be subject to a cap and aircraft operators will be required to surrender allowances to cover their annual emissions.

As an aircraft operator, what are you required to do?

- Applied for and have issued your baseline and annual emissions Monitoring Plan from your competent authority
- Apply for allowances by submitting to your administering Member State verified tonne-kilometre data for 2010 (using distance × payload) by 31st March 2011.
- Monitor your emissions of CO₂ and report them to your competent authority by 31st March of the following year (using fuel consumption × emission factor) commencing with 2010 data.
- Have your annual reports verified by an accredited verifier.
- Surrender the correct number of allowances by 30th April of the following year, commencing with 2012 data. (project credits from Clean Development Mechanism (CDM) and Joint Implementation (JI) can also be used).

LRQA Services

Through our experience in dealing with aviation specific schemes, including AS 9100 and the aviation sector's inclusion in the EU ETS, LRQA can offer you insight and expertise which can help your organisation better prepare for these new requirements. Specifically, LRQA can provide your organisation with:

- Briefings on the current status of developments in this area;
- Guidance on how to prepare for the scheme;
- Gap Analyses of your existing systems against the compliance and data calculation requirements; and
- Baseline and Annual verifications.

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