



SGS Climate Change Solutions

GHG accounting and verification to help you meet your climate pledges

SAFER
GREENER
SMARTER

SGS

Towards net zero

It seems in today's business landscape every organization is talking about their 'pathway to net zero'. Greenhouse gas (GHG) emissions are no longer a fringe concern, with a growing number of consumers, investors and governments taking an active interest in how businesses plan to achieve net zero.

Changing drivers

Regulatory authorities around the world are responding to the need for greater action on GHG emissions. New legislation is being introduced to ensure organizations report their carbon footprint.

Simultaneously, investors' interest is shifting and while financial materiality remains core, environmental, social and governance factors are now also included in their decision-making process. A fundamental part of their assessment will consider GHG emissions and the ability to meet climate pledges.

Verified GHG emissions inventories provide confidence your data is accurate and allows for transparent disclosure of your progress in meeting Net Zero Targets.

Science-based

Stakeholders are looking for independent verification that organizations are meeting their net zero promises and on track with both near (2030) and long (2050) term targets.

STEP ONE – DEFINE YOUR GHG BASELINE

Depending on your industry, GHG emissions will include scope 1 and scope 2 emissions, plus any relevant scope 3 categories.

- Scope 1 – direct emissions– company facilities, vehicles, etc.
- Scope 2 – indirect energy-related emissions – purchased electricity, heating and cooling, etc.
- Scope 3 – other indirect emissions:
 - Investments
 - Franchises
 - Leased assets (upstream and downstream)
 - Purchased goods and services
 - Capital goods
 - Fuel and energy (not in scopes 1 and 2)
 - Transportation and distribution (upstream and downstream)
 - Operational waste
 - Business travel
 - Employee commutes
 - Processing of sold products
 - Use of sold products
 - End-of-life treatment of sold products

STEP TWO

The GHG inventory must be verified annually to demonstrate your progress against defined targets and it should follow an internationally accepted standard, for example ISO 14064-1 – International Standard for GHG Emissions Inventories and Verification – or the GHG Protocol.

Reporting

Your annual GHG inventory report should contain evidence of your data collection system, consolidation approach, operational boundaries, emissions and exclusions, base year recalculation policy and GHG calculations. Operating in line with ISO 14064-1 or the GHG Protocol will ensure it complies with generally accepted standards for GHG emissions reporting.

SGS verification

SGS GHG emissions verification is carried out in line with ISO 14064-3 requirements.

Benefits

- Identification of risks, errors and omissions in GHG emission reporting
- Understanding of impact on materiality
- Recommendation on improvements to meet compliance with GHG emissions accounting and reporting procedures
- Increased consistency and harmonization of approaches across operating companies with standardized checks

Net zero



UNDERSTAND YOUR EMISSIONS

Calculation of your GHG emissions should cover direct and indirect emissions, including value chain emissions both upstream and downstream. Value chain emissions are the hardest to tackle as they sit outside your direct control but, more often than not, represent your biggest impact. Scope 3 emissions' accounting is a journey that can start with approximations based on a robust methodology and consistent assumptions. SGS can help you with methodology and assumption to identify hotspots (Mapping) and design a purposeful data capture strategy. Delaying assessments of scope 3 emissions because data is not readily available will negatively affect your net zero ambition and blind investors.



UNDERSTAND YOUR PORTFOLIO EMISSIONS

Further quantification and data quality improvement on Scope 3 emissions can also be achieved, especially for manufacturing companies, carrying out Product Carbon Footprints or Lifecycle Assessments (LCA). While the organizational Scope 3 footprint has a more holistic approach to upstream and downstream impacts, the product footprint identified hotspots of specific products and allows for comparison with similar products. Organizational Scope 3 footprint and product footprint are complementary and mutually beneficial in assessing risks and opportunities linked to decarbonization of supply chains.



SET YOUR TARGETS

A robust baseline and a coherent carbon management and data collection system are the pre-requisite to set achievable and incremental reduction targets. The Net Zero Standard call for targets in line with science and sets near and long-term minimum ambition requirements. When setting targets, consider the feasibility of your decarbonization initiatives, place priority on those achievable in the near term.



IMPLEMENT AND COMMUNICATE

There is no one size fits all when it comes to implementing decarbonization plans as each industry faces different challenges. Nonetheless, some key initiatives are common to all: demand-side measures include lowering the demand for primary resources by increasing circularity, increase energy efficiency, consider the use of renewable energy, replace feedstock or fuels with more sustainable options, reduce water consumption and waste. Verify and disclose your progress data with confidence.

Case study: GHG emissions verification and additional services on-call basis

CONTEXT

An integrated national oil corporation developed and implemented an accounting and reporting system to monitor, control and, where possible, reduce GHG emissions from sites in a major gas industrial city. The accounting and reporting system covers direct emissions from CO₂, CH₄ and N₂O for onshore and offshore activities.

Annual, independent third-party verification of GHG emissions for each site within the city were required to ensure transparency and accuracy in the reporting of GHG emissions. Verification was conducted with reference to the EU Commission Implementing Regulation (EU) 2018/2066 on the monitoring and reporting of GHG emission under the EU Emissions Trading System (EU ETS).

Additional on-call capabilities included laboratory, measurement and on job- GHG training experts.

SGS SOLUTION

We applied our ISO 14065:2007 compliant management system for GHG verification, allowing us to operate under EU ETS. Our experts followed the generic verification procedure under ISO 14064-3:2006. GHG emission verification was conducted annually for a period of five years, with yearly site visits at each installation as part of the process analysis stage.

The inspectors reviewed:

- Metering points
- Calibration evidence
- Computer coding, where calculations are incorporated into the software
- Analysis of results and data
- Data capture, collation and manipulation process
- Site plans and schematics
- CEMS processes
- Documented procedure

An annual verification report and statement is then issued for each operating company.

CLIENT BENEFITS

The client received multiple benefits partnering with SGS during verification of its GHG emissions, including:

- Risks, errors and/or omissions were identified alongside an assessment of their impact on materiality
- Expert recommendations to improve compliance
- Greater consistency and harmonization across operating companies with standardized checks (i.e., gas chromatograph verification checks)
- Access at short notice to laboratory specialists to resolve potential issues relating to accuracy in fuel gas analysis
- Access at short notice to measurement specialists to resolve potential issues relating to flow measurements

WWW.SGS.COM

SGS Headquarters
1 Place des Alpes
P.O. Box 2152
1211 Geneva 1
Switzerland

industries.environment@sgs.com



SGS