

企業碳足跡服務

CORPORATE CARBON FOOTPRINT

企業碳足跡驗證， 實現永續的低碳發展

全球氣候暖化使世界各國面臨嚴峻的挑戰，推行低能耗、低污染、低排放的低碳經濟以減少溫室氣體排放成為國際工商業發展的主要趨勢。隨著企業環保意識的日益增強，越來越多企業開始關注自身的碳足跡，碳足跡評估是一種新開發的指標，用於測量每日消耗能源產生的二氧化碳排放對環境的影響，從而瞭解在生產營運過程中的碳耗用量，並根據實際情況制定相應的減排策略和減排目標。ISO 14064 是國際上廣泛認可的環境標準，旨在提供一套透明且可稽核的要求，幫助組織機構量化、管理、彙報及確/查證溫室氣體的排放，並尋求潛在的減排和清除的機會。

德國萊因 TÜV 基於 ISO 14064 為企業提供專業的碳足跡評估服務，幫助企業全面瞭解自身的溫室氣體排放狀況和可能的責任與風險，在提升能源與物料使用效率、降低營運成本的同時，挖掘最具成本效益的減排機會。進行碳足跡評估展現了企業良好的社會責任意識，為推動企業實現永續的低碳發展奠定基礎。

德國萊因 TÜV，值得您信賴的合作夥伴

- 我們幫助您提高排放資料的公開與透明度，包括減量目標達成的程度，以增加公司股東等利害關係人的信心
- 我們幫助您展現溫室氣體量化、監測和報告的可信度、一致性和透明度，藉此增強您的可靠性
- 碳足跡是評估減量目標與重新設定減量目標的基礎，有助於未來溫室氣體管理策略和計畫的發展和實施
- 我們幫助企業改善內部的溫室氣體資訊、流程及資料的管理
- 獨立第三方的碳足跡評估是企業參與溫室氣體排放交易的必要過程

ISO 14064, the way towards sustainable low-carbon development

Global warming has become a major concern worldwide, with many societies now focusing on the development of a low-carbon economy characterised by low levels of energy consumption, pollution and emissions. The ever-growing awareness of the need for environmental protection means greater numbers of enterprises have begun to pay attention to the carbon footprint they produce during production and operation. Carbon footprint assessment is a relatively new measure of the impact of greenhouse gas (GHG) emissions on the environment through the daily consumption of energy. ISO 14064 is an internationally recognised environmental standard that provides a set of transparent and auditable requirements to help enterprises to quantify, manage, report and validate/verify their GHG emissions.

TÜV Rheinland provides carbon footprint services based on ISO 14064, thereby helping enterprises to learn more about the conditions of, and possible liabilities and risks associated with, their GHG emissions. Carbon footprint assessment assists companies in improving their energy efficiency with lower operating costs, and helps them to identify the most cost-effective opportunities for emission reduction, which ultimately allows them to demonstrate their corporate social responsibility (CSR) and promote sustainable low-carbon development.

TÜV Rheinland is your reliable partner

- We help you to achieve your emission reduction objective and improve the transparency of your emission data, thereby boosting stakeholder confidence
- We help you to increase reliability by demonstrating the credibility, consistency and clarity of GHG quantifying, monitoring and reporting
- Carbon footprint assessment serves as a basis for the development and implementation of a future GHG management strategy
- We help to improve the management of internal GHG data and processes
- The third-party verification of GHG emissions is a necessary step to participate in emissions trading

我們的服務

德國萊因 TÜV 在溫室氣體減排方面擁有豐富的經驗與專業能力，為國際性和國家的溫室氣體減排計畫提供確證及查證服務。

Our services

Our extensive expertise allows us to engage in the validation and verification of GHG emissions in both international GHG programmes and national schemes.



ISO 14064 標準概述

ISO 14064標準規定了國際上廣泛認可的溫室氣體資料和資料管理、彙報和確/查證模式。透過使用標準化的方法計算和確/查證排放量數值，使排放聲明不確定度的計算在全世界得到一致。ISO 14064 由三部分組成：

Key aspects of ISO 14064

ISO 14064 specifies an internationally accepted mode for managing, collecting and validate/verify GHG information and data. It employs a standardised method of calculating and validate/verify emission data, thus alleviating the uncertainty surrounding emission statements and promoting international consistency. ISO 14064 comprises the three following parts.

標準 Standard	範圍 Scope	內容 Content
ISO 14064-1	公司 Organisations	詳細規定了設計、開發、管理和報告的組織或公司 GHG 清單的原則和要求 Specification with guidance at the organisational level for the quantification and reporting of GHG emissions and removal
ISO 14064-2	專案 Projects	著重討論旨在減少 GHG 排放量或加快其清除速度的 GHG 專案 Specification with guidance at the project level for the quantification, monitoring and reporting of GHG emission reductions and removal enhancements
ISO 14064-3	確證和查證 Validation and Verification	闡述了實際確證和查證過程 Specification with guidance for the validation and verification of GHG assertions

ISO14064 應用範圍

- 公司的風險管理：如界定出風險和管理機會
- 自願行動：如加入自願性的溫室氣體登記和報告行動
- 溫室氣體市場：對溫室氣體配額和信用額度的買賣
- 法律法規或政府部門要求提出報告

Applied scope

- Risk management, such as identifying risks and managing opportunities
- Implementation of voluntary GHG reduction, such as joining a voluntary GHG registration and reporting scheme
- Explore possibilities of GHG market, such as the trading of GHG quotas and credits
- Mandatory regulations, such as at the governmental level

企業碳足跡評估步驟

- 第一步：企業估算碳排放量
基於企業基本資料，對碳排放量做初步估算
- 第二步：企業編製溫室氣體排放清單並核算排放量，確定減排目標和減排機會
準確瞭解公司的排放源和排放狀況，分析排放量模型和資料，確認成本效益最高的減排途徑
- 第三步：德國萊因 TÜV 對企業溫室氣體減排進行確證及查證

Carbon footprint assessment procedure

- Step 1: Company to evaluate GHG emissions
Preliminary evaluation based on the basic information
- Step 2: Company to prepare GHG emission checklist, calculate emissions, and identify the objective of and opportunities for emission reduction
Accurately ascertain the source of emissions, analyse emission model and data, and identify the most cost-effective way to reduce emissions
- Step 3: TÜV Rheinland to conduct validation and verification