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# GHG Emissions Verifier Training (TCR) - 5 Days

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For further information, please call

**+44 (0)1675 446321**

Email us at

[futureperfecttraininguk@gpworldwide.com](mailto:futureperfecttraininguk@gpworldwide.com)

Visit our website

[www.gpsustainability.com](http://www.gpsustainability.com)

# GHG Emissions Verifier Training (TCR)

## Duration

5 days

## Overview

The objective of this course is to ensure that Verifiers have the required knowledge, understanding and skills to conduct robust verifications such that the verifier can provide a 'high level' of assurance in the reported results, and is aware of and can manage all relevant risks and liabilities.

Course participants can apply knowledge gained in this course to verifying Emissions Reports for the purposes of the Climate Registry and any future State and/or Federal Emissions Trading/Offset Mechanisms.

For individuals new to GHG verification, this course also serves as a preparation for understanding the requirements of the Climate Registry's program and protocols. Learning will cover objectives in key areas of awareness, knowledge and skills.

## Objectives

The key awareness objectives include:

- Understand the Climate Registry reporting and verification mechanisms including the role of Verifiers and the Registry; and demonstrate an understanding of the importance of third party review in protecting the environmental integrity of the Climate Registry and any future associated Emissions Trading/Offset Mechanisms
- Describe relevant protocols, guidance and supporting criteria
- Describe the implications of relevant International (ISO), USA (ASTM etc) and other standards of relevance to GHG accounting



The key knowledge objectives include:

- Describe the purpose of Emissions Accounting and the Climate Registry
- Describe the quality assurance and quality control requirements needed for high levels of control over inventory accounting and reporting processes and what to expect from operators/installations as part of their compliance with the Climate Registry requirements
- Explain the means of complying with the Climate Registry requirements including preparation and implementation of high calibre, verifiable monitoring plans; and any changes in monitoring plans
- Explain how to come to a verification conclusion and describe the content and consequences of a verification statement, both qualified and unqualified

The key skills to be acquired include:

- Assess compliance with the requirements of the Climate Registry Monitoring and Reporting Protocols, any relevant state/federal legal requirements and related guidance, relevant national and international standards, and installation/ operator Monitoring and Reporting Plans
- Assess the quality and robustness of accounting, monitoring and reporting systems, e.g. measurement systems, CEMS and laboratory processes
- Validate reported emissions data and information on the basis of checking and testing of source data generation, data accounting, data assurance and internal controls and information management & security systems/process



## Agenda

### DAY 1

09.00 - 09.15	Introductions
09.15 - 09.30	Why Audit
09.30 - 10.15	What is an audit
10.15 - 10.30	BREAK
10.30 - 11.15	Initiating an audit - Commissioning an audit - Scope of audit - Audit work flow
11.15 - 12.15	Discussion - links to GHG assurance
12.15 - 13.15	LUNCH
13.15 - 14.15	Conducting an audit a) Practically what does an audit entail? b) Commencing the audit c) Document review & planning Requirements How they are implemented Do they match requirements
14.15 - 15.00	Workshop 1 - Document review
15.00 - 15.30	Feedback discussions
15.30 - 15.45	BREAK
15.45 - 16.30	Audit planning
16.30 - 17.00	Workshop 2 - Preparation
17.00 - 17.15	Questions and close of the day



## **DAY 2**

09.00 - 09.15	Recap of Day 1 & Questions
09.15 - 09.45	Feedback discussions - Workshop 3
09.45 - 10.15	Starting the audit
10.15 - 10.30	BREAK
10.30 - 11.00	Collecting & Verifying Evidence
11.00 - 12.00	Workshop 3 - Effective interviewing
12.00 - 13.00	LUNCH
13.00 - 14.00	Workshop 4 - Video and questions
14.00 - 14.30	Audit Findings
14.30 - 15.15	Workshop 5 - Audit findings
15.15 - 15.30	BREAK
15.15 - 15.45	Feedback discussions
15.45 - 16.30	Completing the audit
16.30 - 17.00	Questions and close of the day



### **DAY 3**

08.30 - 09.00	Registration & Coffee
09.00 - 09.30	Course Introduction
09.30 - 10.15	History and Context To include: <ul style="list-style-type: none"><li>- Background</li><li>- Legal Framework</li><li>- Guidance</li></ul>
10.15 - 10.45	The Climate Registry To include: <ul style="list-style-type: none"><li>- Registry Overview</li><li>- Protocols</li><li>- Reporting</li></ul>
10.45 - 11.00	BREAK
11.00 - 12.00	The Mechanics of TCR's Registry To include: <ul style="list-style-type: none"><li>- The role of the Registry</li><li>- CRIS</li><li>- Certification</li></ul>
12.00 - 12.45	Workshop 1 – Part 1 Emissions Calculations. Case study examples and data to calculate emissions and understand the process of calculation.  Feedback & discussions
12.45 - 14.00	LUNCH
14.00 - 14.15	Key players in the Registry Processes and their responsibilities to include: <ul style="list-style-type: none"><li>- Key Players</li><li>- Emissions Trading</li><li>- Financial implications</li></ul>
14.15 - 15.00	The Principles of Monitoring and Reporting (1) To include: <ul style="list-style-type: none"><li>- Definitions of emissions</li><li>- Calculation of emissions</li><li>- QA &amp; QC</li></ul>



- 15.00 - 15.30      The Principles of Monitoring and Reporting (2) To include:
- Boundary Issues
  - Baseline determinations
  - Monitoring & Reporting Plans
  - Periodic Emissions Reporting
- 15.30 - 15.45      BREAK
- 15.45 - 16.45      Issues around measurement systems
- 16.45 - 17.30      Workshop 2 Metering Definitions. Definitions to review the understanding of metering systems. Feedback & discussions.
- 17.30 - 17.45      Questions & Close of the Day



## DAY 4

08.30 - 08.45	Recap of Day 1 and Introduction to Day 2
08.45 - 09.15	Workshop 1 – Part 2 Emissions Calculations. Feedback & discussions.
09.15 - 09.45	The Role of the Verifier
09.45 - 11.15	What is verification? To include: <ul style="list-style-type: none"><li>- Definitions</li><li>- Issues around sampling</li><li>- Objective evidence</li><li>- Compliance Auditing</li></ul> <p>To include discussion session What does verification mean for the verification organization?</p> <p>To include discussion session Differences between system certification, verification and validation?</p>
11.15 - 11.30	BREAK
11.30 - 11.45	Overview of the Verification Process
11.45 - 12.45	Risk & Strategic Analysis High level overview of GHG accounting and reporting, analysis of controls and risks, planning of verification work.
12.45 - 13.45	LUNCH
13.45 - 14.30	Workshop 3A Risk Assessment. Case studies to assist in identifying key reporting and verification risks to be managed.
	Feedback & discussions
14.30 - 15.15	Workshop 3B Verification Planning. Case studies to assist in developing verification planning and data sampling.
15.15 - 15.30	BREAK
15.30 - 16.15	Workshop 3B Feedback & discussions
16.15 - 17.00	Key Principles of Verification Generally agreed principles - Accuracy, Completeness, Materiality etc. Plus audit techniques and tools.



17.00 - 17.30

Verifier competence requirements To include:

- Competence Requirements
- Approval processes

To include discussion session What do you think a verification team should know?

17.30 - 17.45

Questions & Close of the Day



## **DAY 5**

08.30 - 08.45	Recap of Day 2 and Introduction to Day 3
08.45 - 09.45	The Tools and Techniques of Verification
09.45 - 10.30	Workshop 4 - Missing Data. Scenarios and possible solutions.
10.30 - 10.45	BREAK
10.45 - 11.30	Feedback & Discussions. Data analysis - case studies - emissions reports for verification against detailed calculation spreadsheets. Understanding spreadsheets, formulae, emissions factor calculation etc
11.30 - 12.30	Workshop 5
12.30 - 14.00	LUNCH
14.00 - 14.30	Feedback & Discussions
14.30 - 15.00	Completing the Verification
15.00 - 15.30	Internal Technical Review
15.30 - 15.45	BREAK
15.45 - 16.30	End of course exam
16.30 - 16.45	Questions & Close of the Day
16.45	Course Close



## Further Information

The Climate Registry is starting to publish a number of other 'sector' focused protocols which amplify the General Requirements for monitoring and verification; these should be reviewed as they become available, but we will not be focusing on them specifically during the course.

These documents are all available on the Climate Registry's website:  
<http://www.theclimateregistry.org/reference.html>

The Registry's approach to GHG accounting is based originally on that outlined in the WRI/WBCSD Greenhouse Gas Protocol and as adapted by the California Climate Action Registry. If you would like further background information you should review the materials on the GHG Protocol website: [www.ghgprotocol.org](http://www.ghgprotocol.org)

You may also find it useful to familiarize yourself with ISO14064 - which relates to Greenhouse Gas accounting and verification.