

CEP1015: Preparing a Greenhouse Gas Inventory Module Outline “Self-directed” Online Training

Prerequisites

None

Recommended prior learning/experience

None

Description

This “self-directed” online training module covers the key principles of best practices for greenhouse gas inventories. It includes recognising important factors in identifying and measuring emission sources and removals, as well as data collection processes. Students will also compare and contrast direct and indirect emissions according to the ISO14064-1:2018 and GHG Protocol standards.

Additionally, they will evaluate various calculation methods and emissions factors used in greenhouse gas inventories. The module will also involve appraising critical components of an inventory, such as its intended uses and users, boundary setting, consolidation approaches, and inventory reporting.

Position and pathway

This module has an associated assessment which takes the form of an online examination. Success in the associated assessment is an element of CEP’s Certified Professional in Carbon professional qualifications.

Delivery mode

The training module consists of thirteen (13) videos, seven (7) progression quizzes and one (1) completion quiz. The progression quizzes serve as gatekeeper steps, requiring successful completion before participants can advance to the next lesson.

Hours

This module is split into thirteen (13) lessons and totals approximately four (4) hours of viewing time.

Students will be required to undertake seven (7) progression quizzes, which should take around five (5) minutes each.

Learning outcomes

By the end of the module, students should:

1. Interpret the principles behind best practice greenhouse gas inventories.
2. Recognise key considerations involved in identifying and measuring emissions sources and removals and data collection.
3. Compare and contrast direct and indirect emissions according to ISO14064-1:2018 and the GHG Protocol standards.
4. Evaluate calculation methods and emissions factors used in greenhouse gas inventories.
5. Appraise key components of a greenhouse gas inventory such as, but not limited to, intended use(s) and user(s), boundary setting and consolidation approaches, and inventory reporting.

Module Structure and Progression

Lesson Outlines	
Lesson 1	Understanding the standards and compiling the project team
	<p>Video duration: 20 minutes approximately.</p> <p>Content relates to learning outcomes 1:</p> <ul style="list-style-type: none"> • Introducing ISO 14064 Standard • Defining the Standard's intended use, and clarifying other common uses and relevant standards (e.g., GHG Protocol) • Key considerations to creating the project team
Progression Quiz 1	
Lesson 2	Purpose and intended users
	<p>Video duration: 15 minutes approximately.</p> <p>Content relates to learning outcomes 1, 2 and 5:</p> <ul style="list-style-type: none"> • Defining the concept of intended use(s) and user(s) • Explain how the intention behind GHG inventories is used as a guiding principle to address future challenges, e.g., what to include or exclude • Use key principles of the Standard in GHG inventory development and confirm alignment to the inventory's main purpose(s)
Progression Quiz 2	
Lesson 3	Organisation boundaries, reporting period and base year
	<p>Video duration: 20 minutes approximately.</p>

	<p>Content relates to learning outcomes 1, 2 and 5:</p> <ul style="list-style-type: none"> • Introducing consolidation approaches and how to best align with the intended use(s) and user(s) • How to map the organisation boundary • Definition of reporting period, base year, and how to approach re-baselining
Progression Quiz 3	
Lesson 4	Establish information management procedures
	<p>Video duration: 15 minutes approximately.</p> <p>Content relates to learning outcomes 1:</p> <ul style="list-style-type: none"> • ISO 14064 standard requirements for information management • Pros and cons of internal vs external software • Key considerations to record information as evidence
Lesson 5	Sources, sinks and their classification
	<p>Video duration: 10 minutes approximately.</p> <p>Content relates to learning outcomes 1, 2 and 3:</p> <ul style="list-style-type: none"> • Definition of GHG sources (emissions) and sinks (removals)
Progression Quiz 5	
Lesson 6	Identifying sources and sinks
	<p>Video duration: 20 minutes approximately.</p> <p>Content relates to learning outcomes 1, 2 and 3:</p> <ul style="list-style-type: none"> • Concept of direct vs indirect emissions sources as per the standard • Presenting visible vs hidden emissions sources and their typical materiality in the GHG inventory • List of emissions sources identification methods • ISO categorisation of emissions sources
Lesson 7	Models and calculation methods
	<p>Video duration: 15 minutes approximately.</p> <p>Content relates to learning outcomes 1, 2 and 4:</p> <ul style="list-style-type: none"> • How GHG emissions are modelled • Explain calculation methods, different data levels, and accuracy • Correlation between data level and accuracy

	<ul style="list-style-type: none"> Guiding principles to selecting emissions factors
Lesson 8	Data quality and selecting emissions factors
	<p>Video duration: 25 minutes approximately</p> <p>Content relates to learning outcomes 1, 2 and 4:</p> <ul style="list-style-type: none"> Explanation of primary vs secondary data, site vs non-site-specific, data flow and processing steps Correlation between value chain emissions categories and the relevant calculation methods per category Typical data sources, accuracy, completeness, embedded uncertainty Principles of data recording and using pre-verified data
Progression Quiz 5	
Lesson 9	Collecting data
	<p>Video duration: 25 minutes approximately</p> <p>Content relates to learning outcomes 1, 2 and 4:</p> <ul style="list-style-type: none"> Interpret the principles behind best practice greenhouse gas inventories Recognise key considerations involved in identifying and measuring emissions sources and removals and data collection Compare and contrast direct and indirect emissions according to ISO14064-1:2018 and the GHG Protocol standards
Progression Quiz 6	
Lesson 10	Calculating emissions and removals
	<p>Video duration: 20 minutes approximately</p> <p>Content relates to learning outcomes 1, 2 and 3:</p> <ul style="list-style-type: none"> Applying the appropriate emissions factors to the available data source Performing data sense checks Correlation between data sources and accuracy levels
Progression Quiz 7	
Lesson 11	Improve results
	<p>Video duration: 10 minutes approximately</p> <p>Content relates to learning outcomes 1, 2, 3 and 4:</p>

	<ul style="list-style-type: none"> • The method hierarchy • Introduction to leveraging activity and intensity levers • Benefits of supplier-specific emissions data and reduction opportunities • Prioritising suppliers for engagement • Key steps to engage with suppliers • Typical supplier data request and data appraisal process
Lesson 12	Reporting
	<p>Video duration: 15 minutes approximately</p> <p>Content relates to learning outcomes 1 and 5:</p> <ul style="list-style-type: none"> • ISO 14064 standard requirements for reporting and general recommendations • Preparing for audit • Key considerations to providing appropriate transparency • Presenting data in a meaningful way
Lesson 13	Summary
	<p>Video duration: 20 minutes approximately</p> <p>Content relates to learning outcomes 1 - 5:</p> <ul style="list-style-type: none"> • Review of content covered • Summary of key points and takeaways
Completion Quiz	CEP1015: Preparing a Greenhouse Gas Inventory

Assessment

This training module does not have a formal assessment. CEP runs a credential, assessed by examination for CEP1015: Preparing a Greenhouse Gas (GHG) Inventory, which operates independently of this training module. Completion of this module is not a pre-requisite for the formal assessment.

Completion

The module will be considered completed and a digital “Completion” certificate will be available when the student has achieved a score of 75% or above in the Completion Quiz.