

1 Greenhouse Gas Emissions Management for Facilities in the Pipeline Industry – A Practical Approach

1.1 Course Description

This course gives participants a holistic view of greenhouse gas (GHG) emissions, focused on pipeline facilities (e.g., compressors, pump stations). The course covers key concepts to align participants' understanding of GHGs, their impacts, and the drivers for effective management. With an emphasis on facilities-specific aspects of GHG emissions management, an industry-leading Subject Matter Expert instructor will guide participants through a combination of lectures and interactive learning activities associated with each phase of the GHG emissions management framework, enabling learners to practice key skills and apply course content through simplified scenarios or case studies.

In particular, this course allows participants temporary access to the *PRCI CO2 Economic Analysis Tool (PR-663-20208-Z03)* developed as a part of the CPS-17-06 project, for use during interactive learning activities.

Format: In-Person

Duration: 3 days

1.2 Learning Objectives

By the end of the course, participants should be able to:

1. Articulate the definition of GHGs and their associated impacts.
2. Identify the regulations, codes, and standards that create requirements or offer guidance for managing GHG emissions for pipeline facilities.
3. Explain, for facilities, the three primary sources of GHG emissions in the pipeline industry (i.e., combustion, vented, and fugitive) and their significance at each stage of the pipeline lifecycle.
4. Identify the four main methods for quantifying GHG emissions and their strengths and weaknesses.
5. Complete GHG emissions quantification example calculations based on idealized scenarios and datasets.
6. Identify key sources of uncertainty associated with GHG emissions-related regulations, codes, and standards for pipeline facilities.
7. Introduce a framework for GHG emissions management and practice using the framework via a case study/scenario.

1.3 Who Should Take This Course

The course is best suited for:

- Individuals with an engineering/technical background who are actively involved with the topic area, already have a basic understanding of concepts, and are looking to extend their skills through application.
- Individuals with a basic understanding of pipeline design, construction, and operation.

1.4 Course Topics

Main topic areas covered in this course include:

- Background
 - What are GHGs and their Impact
 - Why Manage GHG Emissions
 - Codes and Standards
- GHG Emissions Management in the Pipeline Industry
- A Framework for GHG Emissions Management

- Phase 1: Set the Boundaries of the GHG Emissions Management Program
 - Phase 2: Establish the Baseline Inventory and Quantify Emissions
 - Phase 3: Develop a Detailed GHG Emissions Management Plan
 - Phase 4: Implement the GHG Emissions Management Plan
- Q & R – Real World Example(s) and “Ask-Me-Anything” Session