

Draft Consensus Position:

Geological Storage Quantification Standards for Section 45Q Compliance

Background

The federal Section 45Q tax credit is the foundational domestic policy mechanism to promote nationwide commercial deployment of carbon management technologies. The Greenhouse Gas Reporting Program (GHGRP), administered by the US Environmental Protection Agency (EPA), is a regulatory program essential to demonstrating compliance with the Section 45Q tax credit. Regulations promulgated by the US Department of the Treasury in 2021 require taxpayers claiming the 45Q tax credit to verify the claimed quantity of carbon dioxide (CO₂) captured and stored using the GHGRP's Subpart RR (Geologic Sequestration of Carbon Dioxide) methodology and reporting. In the case of geological storage via an enhanced oil or natural gas recovery project (EOR), the International Organization for Standardization (ISO) 27916:2019 quantification standard may alternatively be used with certification by a qualified independent engineer or geologist.¹

The EPA's proposed repeal of the GHGRP has therefore created an urgent need for new guidance from the Internal Revenue Service (IRS) on requirements to quantify and verify secure geological storage in order to qualify for the Section 45Q tax credit. The need for new guidance was partially addressed for 2025 through IRS Notice 2026-1, which provided a safe harbor for qualified carbon oxide captured and disposed of in secure geological storage for calendar year 2025.²

ISO 27914:2026 Carbon dioxide capture, transportation, and storage — Geological storage

First published in 2017, ISO 27914:2026 establishes requirements for the non-EOR geological storage of CO₂. Updates and revisions published earlier this year include standard requirements for quantification of stored CO₂ using a mass-balance approach. This has

¹ The Coalition supports the use of ISO 27916 as an alternative, equivalent reporting standard so long as there are accompanying public transparency requirements. In 2024, EPA adopted 40 CFR Part 98 Subpart VV for EOR), which applies to facilities engaged in CO₂-EOR and electing CSA/ANSI ISO 27916:19 as a method of quantifying geologic sequestration. Subpart VV went into effect in 2025.

² See [RE: Notice 2026-1 Safe Harbor for the Credit for Carbon Oxide Sequestration under Section 45Q for Qualified Carbon Oxide Disposed of in Secure Geological Storage in Calendar Year 2025](#), Carbon Capture Coalition and Carbon Research Utilization Council, Feb. 2026.

raised the question of whether that standard could be used for demonstrating secure geological storage for the purpose of complying with Section 45Q, similar to the existing ISO 27916:2019 quantification pathway for EOR. However, the scope of the ISO 27914:2026 standard is significantly broader than that of ISO 27916:2019, which is more narrowly focused on quantification.

ISO 27914:2026 broadly contains legal and regulatory considerations related to the permitting, construction, operation, and closure of geologic storage sites. Many of the considerations in ISO 27914:2026 are duplicative or overlapping with EPA’s compliance measures under the Underground Injection Control (UIC) Class VI program, which are mandatory and enforceable regulations. Indeed, the International Energy Agency (IEA) has summarized that some experts suggest the ISO 27914 standard could be seen as more of a best practice guide that may be difficult to implement for real projects due to the large number of requirements.³ In addition, requiring taxpayers to use ISO 27914:2026 would result in duplicate regulatory compliance and reporting (see Table 1 below), substantially increasing compliance costs.

³ IEAGHG Technical Report 2022-11, [Applying ISO Standards to Geologic Storage and EOR Projects](#) (Sept 2022).

Table 1: Scope and applicability of ISO and Subpart RR geological storage quantification standards

	ISO 27916:2019 (EOR)	ISO 27914:2026 (non-EOR)	Subpart RR
Description	Treasury regulations promulgated in 2021 established ISO 27916 as an equivalent quantification mechanism to Subpart RR for quantifying geologic storage associated with CO₂ EOR for the purposes of electing the 45Q tax credit. EPA established Subpart VV of the GHGRP to provide data transparency for those taxpayers opting in to ISO 27916.	Provides both a comprehensive project framework and mass balance quantification for geologic storage of CO₂. Covers regulatory requirements of both Class VI and Subpart RR, but does not include data transparency.⁴	Subpart RR of the GHGRP, established under the Clean Air Act, is focused on accurately quantifying and reporting the amount of CO₂ permanently stored underground in geological formations.
Scope	Quantification of geological storage in association with EOR projects.	All aspects of non-EOR geologic storage projects, including site screening, feasibility investigation, characterization, design, modeling, operation, project and risk management, monitoring, and project termination. Many aspects are duplicative of compliance measures under the UIC Class VI program (such as site screening, feasibility investigation, characterization, design, modeling, operation, project and risk management,	Quantification of geological storage in wells that inject CO₂ for long-term containment, including via EOR or Class VI wells.

⁴ UIC Class VI regulations were established by the EPA under the Underground Injection Control (UIC) Program that govern the permitting, construction, operation, monitoring, and closure of wells used for the geologic sequestration of CO₂.

		monitoring, and project termination) , which are mandatory and enforceable regulations.	
Verification methods	45Q tax credits require compliance with statute and regulations, and quantification can be submitted to EPA under GHGRP Subpart RR or certified by a qualified independent PG or PE for the ISO 27916 option. IRS has audit authority in all cases.	Voluntary standard. Compliance can be verified in a variety of ways, but must be declared as either: • Internal verification, by quantifying party; or • External verification by independent verifier or government agency.	Mandatory and enforceable by EPA. 45Q tax credits require compliance with statute and regulations, and quantification must be submitted to EPA under GHGRP Subpart RR. In the absence of an EPA requirement, Treasury Safe Harbor Notice 2026-1 provided a temporary safe harbor using Subpart RR quantification with certification by a qualified independent PG or PE.
Jurisdiction	Global.	Global.	United States. Designed specifically to complement the EPA UIC injection well regulations for the purpose of quantifying secure geological storage under Section 45Q and publicly reporting these quantities through the GHGRP.

The ISO 27914:2026 scope is broad and not fit-for-purpose in the US regulatory context.

- ISO 27914:2026 was developed by an international committee with a broad scope intended to be inclusive of all aspects of geologic storage projects, globally. In the US, it

essentially duplicates Underground Injection Control (UIC) Class VI regulations and Subpart RR (see Table 1). As such, it does not align with the US regulatory context.

- ISO 27914 is inclusive of all aspects of geologic storage projects, including those that are already governed by the UIC Class VI regulation (see Table 1).
- The Subpart RR methodology was specifically designed to complement UIC injection well regulations and provide a mass-balance quantification method for the purpose of complying with Section 45Q as well as public reporting.
- Paired with the EPA's UIC injection well regulations, Subpart RR is the only fit-for-purpose methodology for 45Q quantification currently available in the United States.

The quantification sections of ISO 27914:2026 are intertwined with the broader standard and cannot be readily isolated for use as a quantification standard.

Requiring ISO 27914:2026 would impose de facto duplicative regulation of secure geological storage.

This would impose requirements overlapping with EPA's UIC program jurisdiction, and that are not harmonized with the UIC Class VI regulation:

- ISO 27914:2026 has aspects that differ from the UIC Class VI regulation, including differing terminology, definitional and risk management frameworks, as well as different termination criteria, potentially enshrining conflicting regulatory requirements.
- ISO 27914:2026 also has additional requirements that are not part of UIC Class VI, including a project management plan, information management plan, project register, and additional modeling requirements.

This would culminate in a de facto double-regulation of the same activity.

Requiring ISO 27914:2026 for 45Q compliance would dramatically increase compliance burden.

- UIC Class VI permit applications typically include 1,000+ pages of documentation; an ISO 27914:2026 application is expected to require at least as much information.
 - This is because ISO 27914:2026 has aspects that differ from UIC Class VI regulations, as detailed above.
- Subpart RR MRV plans are typically approximately 50 pages. The information contained within the Subpart RR MRV plan complements the UIC Class VI permit application.

- **It is not possible to eliminate the duplication and overlap between ISO 27914:2026 and UIC Class VI requirements, as the terminology, framework, and criteria of ISO 27914:2026 differ from those established under Class VI.**

Requiring ISO 27914:2026 for claiming Section 45Q credits would impose an enormous increase in compliance burden compared to the existing system.

Coalition draft consensus position:

- In the US regulatory context, the Subpart RR methodology and ISO 27916:2019 EOR quantification standard are the only available fit-for-purpose standards to demonstrate secure geological storage under Section 45Q.
- The Subpart RR methodology for geological CO₂ storage, combined with certification by a qualified independent engineer or geologist, is a sustainable long-term solution for claiming the 45Q tax credit if the GHGRP is repealed. Operators are already complying with Subpart RR and are therefore familiar with the program; continuing the Subpart RR methodology provides important regulatory continuity critical to successful project development.
- **The Coalition recommends that Treasury extend the available safe harbor under Notice 2026-1 and address technical deficiencies as outlined in our [February letter](#).**
- Separately, the Coalition, alongside a broader group of stakeholders, continues to pursue legislative pathways to reinstate necessary transparency measures provided under Subparts RR and VV, to underpin public, taxpayer, and policymaker confidence in the 45Q tax credit.