

BUREAU OF INDIAN STANDARDS

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Draft Indian Standard

**CARBON DIOXIDE CAPTURE, TRANSPORTATION AND
GEOLOGICAL STORAGE – QUANTIFICATION AND
VERIFICATION**

भारतीय मानक मसौदा

**कार्बन डाइऑक्साइड कैप्चर, परिवहन और भूवैज्ञानिक भंडारण -
मात्रा निर्धारण और सत्यापन**

ICS 13.020.40

Environmental Management Sectional Committee, CHD 34

Last date for Comments: 20 June 2024

NATIONAL FOREWORD

(Formal clauses shall be added later)

This standard is a review of current practices and requirements, for the Q&V of carbon dioxide captured, transported and geologically stored as well as for direct and indirect GHGs that can arise from integrated CCS project activities associated with injection of carbon dioxide into geological formations for the purpose of isolation from the atmosphere (and ocean) over the long term. While carbon dioxide (CO₂) is the primary target of the capture process, other GHGs (such as methane, CH₄) may be entrained in the capture stream, and emissions can include GHGs other than CO₂.

Its scope cover all components of the CCS chain (e.g. capture, transport, storage) and includes a lifecycle assessment approach to estimating project level emission reductions from project assessment, construction and operation, through to completion and post-closure activities. This standard considers the following at the project level:

- A variety of Q&V related boundaries applicable to all components of a CCS project;
- The composition of the CO₂ stream, including its purity and requirements for measuring and verifying the physical and chemical state of the CO₂ stream in CCS projects;
- Identification and quantification of GHG emissions and reductions across integrated CCS components;

- Monitoring objectives, methodologies, and sampling strategies, including locations, periods, and frequencies;
- GHG data collection and reporting;
- Verifying GHG expectations with agreed verification criteria;
- Life cycle assessment (LCA) of CCS projects

The text of ISO Standard has been approved as suitable for publication as an Indian Standard without deviations. Certain conventions are, however, not identical to those used in Indian Standards. Attention is particularly drawn to the following:

- a) Wherever the words 'International Standard' appears referring to this standard, they should be read as 'Indian Standard'.
- b) Comma (,) has been used as a decimal marker, while in Indian Standards, the current practice is to use a point (.) as the decimal marker.