



DEPARTMENT OF ENERGY

Notice of Intent and Request for Information Regarding Computational Tools to Support Class VI Permitting

AGENCY: Office of Fossil Energy and Carbon Management, Department of Energy.

ACTION: Notice of intent (NOI); request for information (RFI).

SUMMARY: The Office of Fossil Energy and Carbon Management (FECM), Department of Energy (DOE or Department), on behalf of the National Energy Technology Laboratory, is issuing this NOI to notify interested parties of its intent to develop and release a revised and updated version of the report “Rules and Tools Crosswalk: A Compendium of Computational Tools to Support Geologic Carbon Storage Environmentally Protective UIC Class VI Permitting.” The Department also seeks input from all stakeholders through this RFI regarding additional relevant computational tools (or updated information on already documented tools) that should be considered as the authors prepare the new release of the aforementioned report.

DATES: Written comments and information are requested by [INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN THE *FEDERAL REGISTER*].

ADDRESSES: Interested parties may submit comments electronically to nrap@netl.doe.gov and include “Computational Tools to Support Class VI Permitting” in the subject line of the email. Responses must be provided as attachments to an email. Only electronic responses will be accepted. The report is available at: <https://www.netl.doe.gov/energy-analysis/details?id=af3aa712-dcea-4abd-b2a4-c52f2550ac74>.

FOR FURTHER INFORMATION CONTACT: Questions may be addressed to Brian Strazisar, brian.strazisar@netl.doe.gov or (412) 386-9218.

SUPPLEMENTARY INFORMATION:

I. Background

In 2022, the U.S. Department of Energy’s National Energy Technology Laboratory (NETL), in collaboration with representatives from the U.S. Environmental Protection Agency (U.S. EPA), Lawrence Berkeley National Laboratory, Lawrence Livermore National Laboratory, Los Alamos National Laboratory, Pacific Northwest National Laboratory, and four Regional Initiatives to Accelerate Carbon Capture, Utilization, and Storage (CCUS), released the report, “Rules and Tools Crosswalk: A Compendium of Computational Tools to Support Geologic Carbon Storage Environmentally Protective UIC Class VI Permitting,” available at

<https://www.netl.doe.gov/energy-analysis/details?id=af3aa712-dcea-4abd-b2a4-c52f2550ac74>.

This report was published on NETL’s website and posted on the U.S. EPA’s Underground Injection Control Program’s website for Class VI (Geologic Sequestration) Permit Application and Permitting Tools, available at: <https://www.epa.gov/uic/class-vi-geologic-sequestration-permit-application-and-permitting-tools>. The report summarizes computational tools and methods that may be used to address specific requirements of the Underground Injection Control (UIC) Class VI (Geologic Sequestration of Carbon Dioxide) permit application process and is intended to serve as a resource for stakeholders. The report highlights available computational tools that may have relevance to elements of the permit application, including siting, construction, operation, testing, monitoring, and closure of Class VI wells, as codified in the U.S. Code of Federal Regulations (40 CFR 146.81 *et seq.*). The compilation of computational tools is intended to be an informational resource for practitioners seeking to understand or develop a Class VI permit application and is not intended to be exhaustive. Reference to any computational tool should not be seen as an endorsement of that tool by the report coauthors or their organizations. Similarly, a lack of reference to any tool should not be seen as a repudiation of that tool by the coauthors or their organizations.

II. Notice of Intent

NETL intends to use feedback from this RFI, together with other gathered sources of information, to develop a revised and updated version of the report “Rules and Tools Crosswalk:

A Compendium of Computational Tools to Support Geologic Carbon Storage Environmentally Protective UIC Class VI Permitting.” The revised report will be made publicly accessible as a DOE NETL web-based product and may also be made available by other co-authoring institutions.

III. Questions for Request for Information

NETL and the U.S. EPA are seeking information from stakeholders on additional relevant computational tools (or updated information on already documented tools) that should be considered as the authors prepare a new release of this report. NETL specifically welcomes responses to the questions listed below. Responses received within 30 days of this notice will be considered for inclusion in the next release of this report; additional input will be accepted on an ongoing basis and considered for inclusion in any subsequent versions of the report.

Specific Information Requested

Tool Name

1. What is the commercial or common name for the tool?

Developer / Owner

2. What entity developed the tool and/or is responsible for its distribution?

Tool Type

3. Please specify the type of tool that is being described (numerical reservoir simulator, stochastic model, etc.)

Description

4. Provide a high-level description of the tool (please also include any relevant publicly available URLs).

Tool Licensing and Access

5. How is the tool licensed?
6. Where can it be downloaded or purchased?

Model Input

7. What type of information is needed to run the model?

Model Output

8. What type of information does the model produce?

Risks Behavior Considered

9. What kinds of risks or behaviors does the model simulate? (*e.g.*, leakage risk, environmental risk, induced seismicity, etc.)

Relevant Permitting Phase

10. During which phases of a Class VI permit would the tool be used? (*e.g.*, site screening, site characterization, injection, post-injection)

Class VI Permit Element Addressed

11. What specific aspects of a Class VI permit does the tool address? (*e.g.*, Area of Review, Post Injection Site Care, Monitoring Plan, etc.)

How the Tool is Used

12. Please provide general comments on how the tool can be used in a Class VI permitting workflow.

Last Updated

13. When was the tool last updated?

Ongoing Development

14. Is the tool still under development?
15. Does it have an active user community?
16. Support for the tool still available?

Ease of Use

17. Does the tool have a graphical user interface?
18. Do users need computer programming skills to use the tool?
19. What other skills may be needed to run the tool?

Computational Speed

20. Is the model designed for computational efficiency?
21. How long do simulations typically take to run?
22. Are computational speeds limiting in any way?

Tool Verification

23. Has the tool been verified for accuracy?
24. If so, where can this documentation be found?

Related References

25. Please provide a list of websites, manuals, and publications where additional information about the tool and its application can be found.

IV. Response Guidelines

NOI/RFI responses shall include:

1. NOI/RFI title and reference number;
2. Name(s), phone number(s), and email address(es) for the principal point(s) of contact;
3. Institution or organization affiliation and postal address; and
4. Clear indication of the specific information you are providing.

Responses including confidential business information will be handled per guidance in Section V.

V. Confidential Business Information

Pursuant to 10 CFR 1004.11, any person submitting information that he or she believes to be confidential and exempt by law from public disclosure should submit via email two well-marked copies: One copy of the document marked “confidential” including all the information believed to be confidential, and one copy of the document marked “non-confidential” with the information believed to be confidential deleted. Submit these documents via email. DOE will make its own determination about the confidential status of the information and treat it according to its determination.

Signing Authority:

This document of the Department of Energy was signed on June 17, 2024, by Bradford Crabtree, Assistant Secretary, Office of Fossil Energy and Carbon Management, pursuant to delegated authority from the Secretary of Energy. That document with the original signature and date is maintained by DOE. For administrative purposes only, and in compliance with requirements of the Office of the Federal Register, the undersigned DOE Federal Register Liaison Officer has been authorized to sign and submit the document in electronic format for publication, as an official document of the Department of Energy. This administrative process in no way alters the legal effect of this document upon publication in the *Federal Register*.

Signed in Washington, D.C., on June 18, 2024.

Treena V. Garrett
Federal Register Liaison Officer,
U.S. Department of Energy.

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