

Memorandum of Understanding

between the

United States Geological Survey

and the

United States Department of Energy
Office of Fossil Energy and Carbon
Management

I. Background and Purpose

The purpose of this Memorandum of Understanding (MOU) between the United States Department of Energy, Office of Fossil Energy and Carbon Management (DOE/FECM) and the United States Geological Survey (USGS) is to establish an arrangement for cooperation regarding assessments of global, regional, and national carbon dioxide storage resources. The information gathered through this collaborative effort may be used by governments, investors (including the global financing community), academia, and the research and development community to better understand the potential resources and reserves of Carbon Capture and Storage (CCS) to contribute to clean energy and climate change goals and to help identify research, development, demonstration, and deployment (RDD&D) and other commercial investment opportunities for CCS projects.

DOE/FECM and USGS may be referred to individually as “Participant” and jointly as “Participants.”

II. Legal Authority

DOE is acting pursuant to the Department of Energy Organization Act (Pub. L. 95-91), codified as amended at 42 U.S.C. §§ 7101 et seq. Section 646, codified at 42 U.S.C. § 7256, provides that the DOE has authority to enter into and perform such contracts, leases, cooperative agreements, or other similar transactions with public agencies and private organizations and persons.

USGS is acting pursuant to the USGS Organic Act of March 3, 1879, codified as amended at 43 U.S.C. §§ 31 et seq. Section 36c provides that the USGS has authority to prosecute projects in cooperation with other agencies, Federal, State, or private.

III. Funding

The Participants intend to coordinate their activities under this MOU with each Participant providing funding for its own activities. There will be no exchange of funds by the Participants for this effort.

IV. Specific Projects

The work performed under this MOU may include the following:

- The USGS and DOE/FECM may collect and share relevant non-proprietary international data, publications, or resource assessment estimates related to geologic carbon dioxide storage. This effort may include discussions and interactions with multiple international governments, geologic surveys, and other organizations.
- The USGS and DOE/FECM may work to review the relevant methodologies and resource assessment systems published by various countries, research institutions, industry organization, and others to generate data and other information that could be used with various methodologies for quantification of both resources and reserve estimates of carbon dioxide storage. Ideally, there would be convergence around a common methodology/methodologies that could be used to compare storage capacity across jurisdictions.
- The USGS and DOE/FECM may individually or jointly meet with other governments or international entities to evaluate the current state of existing international (both regional and national) carbon dioxide storage assessments, the availability of data, and identification of data gaps needed for geologic carbon dioxide storage resource assessments.
- DOE/FECM will work with USGS to facilitate engagement with multilateral organizations and initiatives. For example:
 - DOE/FECM fosters and coordinates global technical cooperation in prominent energy organizations and efforts, such as the International Energy Agency (IEA) Carbon Capture, Utilization, and Storage (CCUS) Unit, IEA Working Party on Fossil Energy, the International Centre for Sustainable Carbon, the IEA Greenhouse Gas Technology Programme, the IEA Hydrogen Technology Collaboration Programme, Asia-Pacific Economic Cooperation (APEC) Expert Group on Clean Fossil Energy, the Carbon Sequestration Leadership Forum, and the Clean Energy Ministerial (CEM) CCUS Initiative.
 - DOE/FECM has existing relationships with these organizations, as well as with other groups such as the Global CCS Institute and the Oil and Gas Climate Initiative (through the CEM CCUS Initiative). DOE/FECM also engages bilaterally with countries with experience and equities in CCUS, such as Norway, the United Kingdom, Japan, Saudi Arabia, and Canada.
- USGS and DOE may use the data collected under this MOU to support other countries' efforts to evaluate the geologic carbon dioxide storage resources and reserves for individual basins, countries, or global regions.
- Relevant findings within the scope of this MOU may lead to efforts by the Participants

and other parties working collaboratively on this effort to jointly publish results of the investigations described above in technical journals or other appropriate scientific publications.

V. Intellectual Property

The Participants do not expect or intend this undertaking to result in the creation of any intellectual property (including copyright, trademark, or patent) other than data, which is to be handled in accordance with Section VII below. If either Participant believes or has reason to believe that intellectual property might be created through the activities under this MOU, they will immediately notify the other Participant to establish a formal intellectual property agreement. The Participants intend that any intellectual property that is owned or controlled by a Participant prior to the commencement of cooperation under this MOU, or which is acquired or developed by either Participant during this MOU, is to remain at all times owned or controlled by said Participant.

VI. Third Party Claims

It is the Participants' intention that each Participant will be responsible for claims, losses, damages, and expenses that are proximately caused by the acts or omissions of that Participant or its employees, agents, or representatives acting within the scope of their employment.

VII. Information Sharing

- A. Any data produced as a result of this MOU shall be managed and controlled by the Participant who generated the data. Control shall include making decisions related to the sharing, publishing, third party uses of and third party claims against the produced data. In the case of the joint production of data, the Participants can select a Participant to exercise control over the jointly produced data.
- B. The Participants intend that all data and information produced as a result of this MOU will be available for use by the USGS, DOE/FECM, and the United States Government in connection with their ongoing programs. This includes publication of results, where appropriate, except in cases prohibited by patenting, proprietary, or security considerations. If any such considerations are present, the Participant seeking to publish shall inform the other Participant of the desire to publish with sufficient time for the Participants to determine a mutually-agreeable path forward, including filing a patent application.
- C. The Participant transmitting the data and information under paragraph A of this section is responsible for informing the receiving Participant of any restrictions or

caveats that apply to or protect that data, and is also responsible for marking the data when transmitted with any proper restrictive marking. The Participant sending the data acknowledges that if it fails to include restrictive markings on the data transmitted then the data may not be able to be protected.

- D. Each Participant agrees to comply with the markings, confidentiality requirements, restrictions on transfer, and information handling and protection requirements applicable to any information shared with such Participant.
- E. All information provided to the Participants will be handled in accordance with all applicable Federal laws, rules or regulations, including the Trade Secrets Act (18 U.S.C. § 1905), the Federal Records Act (44 U.S.C. § 3101 et seq.), the Freedom of Information Act (5 U.S.C. § 552) (“FOIA”).

VIII. Communications

The Participants have designated the points of contact listed below:

DOE/FECM Contacts:

Darin Damiani
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USGS Technical Contacts:

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Supervisory Research Geologist
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USGS Administrative Contacts:

Shirlie McManus, Administrative Officer
U.S. Geological Survey

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James Mosley, Program Analyst
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Reston, VA 20192
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The administrative contacts are to serve as the communication link between the Participants. The technical contacts are to coordinate activities conducted under this MOU to ensure their effective implementation. The Participants are encouraged to keep each other apprised of any changes in the Point of Contact or contact information.

IX. Administrative Provisions

- A. This MOU does not impose any legally binding obligations upon either Participant; it is an internal tool between the two parties to document a common understanding made in good faith. Nothing in this MOU prevents either Participant from taking steps that it feels are necessary to comply with its legal obligations. This MOU neither expands nor contracts the legal authorities of either Participant, nor restricts in any way the authority of the Participants to pursue independent efforts under their own authorities (including in the same subject matter). It has no legal effect and is not binding on either of the Participants. Neither the Participants nor any other third person has any private right or cause of action to enforce any of its terms. This MOU cannot be enforced by anyone in any court of law. Any disputes between the Participants should be attempted to be resolved at the lowest possible level. If a dispute cannot be resolved at lower levels, and the dispute needs resolution, the action officers should escalate the matter up their respective hierarchies.
- B. Nothing in this MOU may be construed to obligate the USGS, DOE/FECM, or the United States Government to any current or future expenditure of resources either in advance of the availability of appropriations from Congress or when funds are available. Participants are responsible for their own costs in pursuance of the goals of this MOU, including but not limited to travel and personnel costs. This MOU does not authorize the transfer of any personnel to work for another Participant.
- C. To the extent the Participants wish to transfer personnel to work under another Participant, such can be done only by a separate agreement. Any endeavor involving

reimbursement or contribution of funds between the Participants to the MOU will be handled in accordance with applicable laws, regulations, and procedures. Such endeavors will be outlined in separate interagency agreements and proper fiscal documents that shall be made in writing by representatives of both Participants and shall be independently authorized by appropriate statutory authority.

This MOU does not create an actual or implied intention, or requirement for, the USGS or DOE/FECM to enter into a contract or an assistance agreement (e.g., grant or cooperative agreement).

- D. The Participants intend to cooperate, as feasible, to release jointly to the public the data or interpretations resulting from these activities. To the extent there are any inquiries as to this MOU or efforts thereunder—through the Freedom of Information Act, a media inquiry, a subpoena or warrant, or any other mechanism—the Participants agree to use best efforts to coordinate with the other Participant before responding.
- E. The Participants intend to acknowledge their cooperation in publications resulting from collaborative activities under this MOU, and in presentation of material in advance of publication. In the event a Participant intends to separately publish such information, that Participant should seek prepublication review wherein the non-publishing Participant shall provide within thirty (30) days any written objections to be considered by the publishing Participant, and provide a courtesy copy of any such publication to the other Participant within thirty (30) days of its release.
- F. The data produced under this MOU may be subject to the requirements of the Office of Science and Technology Policy (OSTP) February 22, 2013, Memorandum entitled “Increasing Access to the Results of Federally Funded Scientific Research” and the Office of Management and Budget (OMB) May 9, 2013, Memorandum M-13-13 entitled “Open Data Policy-Managing Information as an Asset” and the U.S. Geological Survey developed Instructional Memorandum (IM) OSQI 2015-03 – Fundamental Science Practices: Review and Approval of Scientific Data for Release.

X. Commencement, Modification, and Discontinuation

- A. Cooperative activities under this MOU may commence upon last signature of the Participants and continue for a five (5) year period, unless renewed in writing at least thirty (30) days before the expiration of the MOU or terminated in accordance with paragraph C of this section. The signatories to this MOU may sign separate signature pages, which has the same effect as if they had signed on the same page. Electronic signatures have equal validity with ink signatures.

- B. This MOU may be modified in writing by the Participants' mutual consent.
- C. Each Participant may discontinue its cooperation under this MOU at any time. A Participant that wishes to discontinue its cooperation under this MOU should endeavor to provide thirty (30) calendar days written notice to the other Participant. Termination of this MOU does not require either Participant to return information that the other Participant has already transferred to it.

ACCEPTANCE:

FOR United States Geological Survey:

FOR United States Department of Energy,
Office of Fossil Energy and Carbon
Management:

BY: _____

BY: _____

Sarah J. Ryker, Ph.D.
Associate Director for Energy and Minerals
Resources

Jennifer Wilcox, Ph.D.
Acting Assistant Secretary for Fossil Energy
and Carbon Management