

**MEMORANDUM OF COOPERATION**  
**BETWEEN**  
**THE MINISTRY OF ECONOMY, TRADE AND INDUSTRY OF JAPAN**  
**AND**  
**THE DEPARTMENT OF ENERGY OF THE UNITED STATES OF AMERICA**  
  
**CONCERNING**  
**COLLABORATION IN THE FIELD OF GEOTHERMAL ENERGY**

The Ministry of Economy, Trade and Industry of Japan (METI) and the Department of Energy of the United States of America (DOE), hereinafter referred to collectively as the "Participants",

NOTING the U.S.–Japan Joint Leaders' Statement of April 16, 2021, the U.S.–Japan Climate Partnership, the U.S.–Japan Competitiveness and Resilience (CoRe) Partnership, and the Japan-U.S. Clean Energy and Energy Security Initiative (CEESI) in which geothermal energy is recognized as renewable energy technology that Japan and the United States can work together to advance;

RECOGNIZING the commitment of Japan and the United States to addressing climate change and working together towards the realization of green growth by enhancing cooperation on innovation, including in such areas as geothermal energy, which in turn will also promote the development, deployment, and utilization of climate friendly and adaptive infrastructure because of geothermal's unique capabilities with respect to grid optimization, demand response, and energy efficiency;

RECOGNIZING their cooperation on accelerating the transition to a decarbonized society in third countries through multilateral fora, such as the International Energy Agency Geothermal Technology Collaboration Programme; and

DESIRING through this Memorandum of Cooperation (MOC) to enhance collaboration in the field of geothermal energy and direct use as well as enabling a decarbonized grid,

Have reached the following recognition:

## **Section 1 SCOPE**

Collaboration under this MOC may include, but is not limited to, the following fields:

1. Supercritical / superhot enhanced geothermal systems;
2. Enhanced geothermal systems reservoir access, characterization, creation and sustainability technologies and methodologies;
3. Geothermal direct use;
4. Social license to operate; and
5. Other fields as the Participants may jointly decide in writing.

## **Section 2 FORMS OF COLLABORATIVE ACTIVITIES**

Collaboration under this MOC may include, but is not limited to, the following forms:

1. Collaborative research and development (R&D) activities, under appropriate written arrangements between the Participants;
2. Facilitation of prospective projects in areas identified under Section 1 of this MOC in Japan, the United States, or a third country as the Participants may jointly decide;
3. Exchange of information on and identification of opportunities to improve business environment (e.g., related regulations and funding sources) for development of technologies identified under Section 1 of this MOC;
4. Exchange of relevant unclassified scientific and technical information and results of research and development in areas identified under Section 1 of this MOC;
5. Organization of seminars, workshops, and other meetings on specific topics;
6. Exchange of samples, materials, instruments, and components for testing, under appropriate written arrangements between both entities involved in the exchange;
7. Visits by specialist teams of individuals from an entity located in the country of one Participant to facilities located in the country of the other Participant, under appropriate written arrangements between both entities;
8. Cooperation in relevant international conferences;
9. Cooperation in multilateral fora to accelerate the worldwide advancement of technologies identified under Section 1 of this MOC, including (but not limited to) innovation catalyzation for geothermal energy and direct use expansion; and
10. Other specific forms of cooperation as may be added by written arrangement of the Participants.

The Participants intend to conduct the following joint activities:

1. Dedicate at least one joint workshop to pursuing joint opportunities for the advancement of technical research areas identified under Section 1 of this MOC; and
2. Organize at least one joint seminar or workshop with the goal of building markets for clean energy resources, such as enhanced geothermal systems and direct use.

### **Section 3 MANAGEMENT**

1. METI's Fuel Policy Planning Office Director and DOE's Geothermal Technologies Office Director are designated as co-Lead Coordinators to supervise the cooperation under this MOC. Each Participant should also designate a Technical Coordinator and a Project Coordinator to assist its Lead Coordinator in carrying out activities under this MOC.
2. The Lead Coordinators should meet each year, or as otherwise jointly decided. At those meetings, the Lead Coordinators should evaluate the status of cooperation under this MOC. This evaluation should include a review of the past year's activities and accomplishments and of the activities planned for the coming year. In addition, the Lead Coordinators should consider and act on any major new proposals for collaboration. Technical and Project Coordinators may, at the discretion of the Lead Coordinators, participate in these annual meetings.
3. The Project Coordinators should hold a meeting in a timely manner with representative public and/or business sectors as necessary to pursue prospective projects in areas identified under Section 1. If participants in this meeting anticipate sharing business-confidential information, the Participants should consult with each other and make appropriate written arrangements for the protection of such business-confidential information.

### **Section 4 INTELLECTUAL PROPERTY; BUSINESS-CONFIDENTIAL INFORMATION**

The Participants do not anticipate that this MOC will result in the creation of intellectual property or the exchange of business-confidential information. If the Participants determine that a particular activity under this MOC may result in the creation of intellectual property or the exchange of business-confidential information, they intend to consult with each other and make appropriate written arrangements for the protection of such intellectual property and business-confidential information, as well as the allocation of rights for such intellectual property.

**Section 5  
FUNDING**

1. Unless jointly decided otherwise in writing, any costs arising from the conduct of activities under this MOC are the responsibility of the Participant that incurs such costs.
2. Collaboration under this MOC is subject to the availability of appropriated funds, personnel, and other resources.

**Section 6  
GENERAL CONSIDERATIONS**

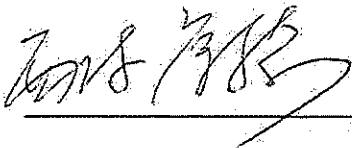
1. Each Participant should conduct the cooperation contemplated by this MOC in accordance with the applicable laws and regulations to which it is subject.
2. This MOC is not legally binding upon either Participant.

**Section 7  
COMMENCEMENT, MODIFICATION, AND DISCONTINUATION**

1. Collaboration under this MOC may commence upon signature by both Participants.
2. This MOC may be modified from time to time by both Participants through written arrangements.
3. The Participants may discontinue their collaboration under this MOC at any time in writing by their mutual written decision. A Participant that wishes to discontinue its participation in this MOC may do so at any time and should endeavor to provide at least 90 days prior written notice to the other Participant.

Signed at Sapporo, in duplicate in the English language, this 15th day of April, 2023.

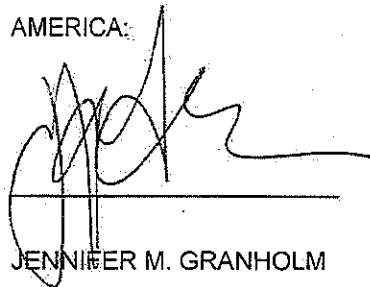
FOR THE MINISTRY OF ECONOMY,  
TRADE, AND INDUSTRY OF  
JAPAN:



NISHIMURA YASUTOSHI

MINISTER OF ECONOMY, TRADE  
AND INDUSTRY

FOR THE DEPARTMENT OF ENERGY  
OF THE UNITED STATES OF  
AMERICA:



JENNIFER M. GRANHOLM

SECRETARY OF ENERGY