

**MEMORANDUM OF UNDERSTANDING**  
**BETWEEN**  
**THE DEPARTMENT OF ENERGY**  
**OF THE UNITED STATES OF AMERICA**  
**AND**  
**THE KING ABDULAZIZ CITY FOR SCIENCE AND TECHNOLOGY**  
**OF THE KINGDOM OF SAUDI ARABIA**  
**IN THE AREAS OF RENEWABLE AND ALTERNATIVE ENERGY**

The Department of Energy of the United States of America (DOE) and the King Abdulaziz City for Science and Technology of the Kingdom of Saudi Arabia (KACST), hereinafter referred to as the “Participants;”

**NOTING** the Agreement between the Government of the United States of America and the Government of the Kingdom of Saudi Arabia on Science and Technology Cooperation, signed at Riyadh December 2, 2008;

**WISHING** to invigorate the bilateral cooperation between the United States and the Kingdom of Saudi Arabia in the areas of energy and the advancement of scientific knowledge;

**ACKNOWLEDGING** the strategic importance of promoting energy security through improving cooperation in renewable and alternative energy partnerships, experience with diverse energy sources and types, clean energy economic growth, and reduced global greenhouse gas emissions;

**TAKING INTO ACCOUNT** the longstanding history of cooperative bilateral relations between the Kingdom of Saudi Arabia and the United States of America;

**REAFFIRMING** the desire to work collaboratively to move to a sustainable global energy economy;

**ACKNOWLEDGING** the common goal and responsibilities to address climate change; and

**DECLARING** that bilateral activities will reinforce and complement joint participation in multilateral partnerships to achieve shared energy and climate change goals;

**HAVE REACHED THE FOLLOWING UNDERSTANDING:**

## **SECTION 1 OBJECTIVE**

The purpose of this Memorandum of Understanding (MOU) is to establish a framework for mutually beneficial energy cooperation and various forms of collaboration in the areas listed in Section 2.

## **SECTION 2 AREAS OF COOPERATION**

1. Priority areas of cooperation are the following:
  - a. Alternative energy technologies, development and investment;
  - b. Efficiency improvements in carbon capture, transportation, and sequestration technologies, while also protecting the environment by improving monitoring systems, using enhanced production standards to avoid emissions, and improving the assessment of production and injection related hazards;
  - c. Clean energy technology innovation;
  - d. Next-generation building envelop technologies and efficiency standards;
  - e. Cost-effective and efficient water desalination techniques and water purification and energy harvesting;
  - f. Biomass, including biofuels;
  - g. Technical demonstration, deployment, and commercialization of renewable and alternative energy and carbon capture and storage; and
  - h. Opportunities for co-investment in energy technologies and programs, such as photovoltaic technologies, engineered geothermal systems (also referred to as enhanced geothermal systems or EGS), co-generation of electricity from hot water from oil production, and other applications of solar and geothermal technologies.
2. The list of areas of cooperation may be expanded by the written consent of both Participants.
3. The Participants intend to develop a work plan to define activities to implement the areas of cooperation listed above.

### **SECTION 3 FORMS OF COOPERATION**

The forms of cooperation in the framework of this MOU may include:

1. Exchanges of experts, engineers, scientists, and other specialists as jointly determined by the Participants, including those from industry and other non-government sectors;
2. Exchanges of scientific and technical information as well as information on energy policy;
3. Organization of seminars, workshops, and other events on jointly selected topics;
4. Visits by a Participant's specialist teams or experts to the facilities of the other Participant, including field visits to research laboratories / scientific research institutes and industrial sites, for the exchange of technical information and experience;
5. Exchanges of professionals and students between universities in both Participants' countries to help develop capabilities and appropriate university programs and curricula in the Kingdom of Saudi Arabia related to renewable and alternative energy and carbon capture and sequestration;
6. Identification of areas and projects suitable for the possible future conduct of joint research and development and realization of pilot-scale and demonstration projects; and
7. Other forms of cooperation as determined by the Participants at a later time.

### **SECTION 4 COORDINATION**

1. *Principals.* Activities within the framework of this MOU are to be led by the U.S. Secretary of Energy and the President of King Abdulaziz City for Science and Technology.
2. *Coordinators.* Principals are to designate Coordinators to organize activities to implement cooperative initiatives within this MOU.
3. *Interaction.* The Principals and/or Coordinators may interact directly and/or through subsidiary bodies, such as expert groups created as appropriate, to advise and consult on priority areas for cooperation under this MOU.

4. *Work Plan.* Implementation of this MOU is to be based on a work plan which the Coordinators are to present to the Principals for their approval within two months from the date of signature of this MOU. This work plan should evolve as conditions and realities change.
5. *Reporting.* The Coordinators are to report to the Principals, or their respective representatives, on cooperative activities being conducted under this MOU in a to-be-determined timeframe mutually determined by the Participants.
6. *Annual Review.* The Principals, or their respective representatives, should meet at least once a year to review progress of cooperation under this MOU.

## **SECTION 5 PARTICIPATING ORGANIZATIONS**

Based on the mutual written determination of the Participants, DOE and KACST may include representatives from other government agencies or organizations in their respective countries to participate as full members in the activities under this MOU. As necessary, the Participants may bring in experts from other organizations to work within the framework of this MOU, including national laboratories or research centers.

## **SECTION 6 GENERAL PROVISIONS**

1. Each Participant is responsible for the costs of its participation in all cooperative activities carried out in the framework of this MOU, unless specified otherwise in writing by the Participants;
2. The conduct of cooperative activities under this MOU is subject to the availability of funds, technical resources, and personnel.
3. Each Participant should conduct the cooperative activities under this MOU in accordance with the laws and regulations in force in that Participant's State and international agreements to which its State is party.
4. This MOU does not create any legally binding obligations between the Participants.

**SECTION 7**  
**COMMENCEMENT, MODIFICATION, AND DISCONTINUATION**

1. Cooperative activities under this MOU may commence on the date of signing.
2. This MOU may be modified in writing by mutual determination of the Participants.
3. This MOU may be discontinued by the Participants' mutual consent in writing. A Participant who wishes to discontinue its participation in this MOU should endeavor to give the other Participant at least ninety (90) days advance written notice.

Signed at Riyadh, in duplicate, on this 22<sup>nd</sup> day of February, 2010.

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



**FOR THE KING ABDULAZIZ CITY FOR  
SCIENCE AND TECHNOLOGY OF THE  
KINGDOM OF SAUDI ARABIA:**

