

MOU Number: MOU-15-426

MEMORANDUM OF UNDERSTANDING

Between

The National Renewable Energy Laboratory
Managed and Operated by the Alliance for Sustainable Energy, LLC
For the United States Department of Energy

And

Dalian Institute of Chemical Physics

For coordination on anion exchange membrane based energy conversion devices including alkaline membrane fuel cells and electrolyzers

INTRODUCTION

The National Renewable Energy Laboratory (NREL) is a national laboratory managed and operated by the Alliance for Sustainable Energy, LLC for the United States Department of Energy (DOE) under Contract No. DE-AC-08GO28308.

The Dalian Institute of Chemical Physics (DICP) is a national research institute managed and operated by the Chinese Academy of Sciences.

Integral to its mission for DOE, NREL conducts research and development on anion exchange membrane based energy conversion devices including alkaline membrane fuel cells and electrolyzers. This work at NREL is supported by the DOE Fuel Cell Technologies Office.

Integral to its mission for the Chinese Academy of Sciences, the DICP conducts research and development on anion exchange membrane based energy conversion devices including alkaline membrane fuel cells and electrolyzers. This work at DICP is supported by the Chinese Academy of Sciences.

NREL or DICP is each referred to as a "Participant". Both NREL and DICP are collectively referred to as "Participants."

The purpose of this MOU is to encourage coordination in areas of mutual interest and benefit to both Participants. Based on the principles of equality and reciprocity, this MOU is intended to serve as a general framework for planned coordination between the two Participants and is intended to facilitate discussions for the development of a more specific planned program of research and development collaboration. Any specific program of collaboration or sharing of confidential information is to be implemented through an appropriate written contract between the Participants.

Section 1: Scope of Coordination

1. The coordination activities planned under this MOU are focused on cooperation to maximize the benefit to their respective institutional interests including the following selected topics:
 - understanding performance and/or durability of alkaline membrane fuel cells
 - understanding performance and/or durability of alkaline membrane electrolyzers
 - understanding performance losses and limitations due to anion exchange membrane specific concerns, including water management and carbonate poisoning
 - understanding anion exchange membrane based energy conversion devices, specifically critical areas of performance losses and durability of alkaline membrane fuel cells and electrolyzers
 - Sharing potential non-proprietary joint publications/presentations in the technical area
 - encouragement of visits and personnel exchanges between the two Participants.

Section 2: Funding

1. The scope of planned activities under this MOU should be mutually determined in light of time, resources and/or funds available at both institutions for the types of coordination undertaken and by such other financial assistance as may be obtained by either Participant from external sources.
2. Unless the Participants otherwise determine in a separate written agreement, each Participant is to be responsible for the costs it incurs in participating in the coordination contemplated by this MOU, including all administrative costs, overhead expenses, labor costs, insurance costs, travel expenses and similar costs.

Section 3: Researcher Exchanges

1. Each Participant is to be responsible for its own personnel in relation to researcher exchanges to carry out coordination under this MOU.
2. Each Participant's personnel is to abide by the regulations, policies, and procedures of the host Participant in carrying out activities under this MOU, including protection of business proprietary information, protection of intellectual property, conditions of coordination and decorum, health, safety, and security requirements, and all other terms under which personnel are authorized to participate in researcher exchanges at the host Participant's facility. Such activities may require entry into separate written agreements.
3. Each Participant is to be solely responsible for its own personnel in relation to matters such as visa and travel formalities, appropriate insurance (medical insurance and medical evacuation and repatriation insurance), travel expenses, and suitable living accommodation and expenses.
4. To the extent possible, the host Participant should assist in facilitating travel arrangements of the other Participant's personnel in relation to researcher exchanges in accordance with its applicable procedures governing foreign national access to the host Participant's facility.

Section 4: Dissemination of Information

Each Participant intends to participate in the coordination in a manner that facilitates exchanges of publicly available, non-proprietary business information. Subject to applicable laws and regulations of its country, each Participant may disseminate information, data, and reports of the coordination carried out under this MOU.

Section 5: Use of Information

Any information transmitted by one Participant to the other Participant under this MOU should be accurate to the best knowledge and belief of the transmitting Participant. Neither Participant makes any warranty, express or implied, nor assumes any responsibility for the accuracy, completeness, or usefulness of any information, apparatus, product, or process disclosed, nor represents that its use would not infringe upon privately owned rights.

Section 6: Intellectual Property

The Participants do not anticipate the transfer of rights in intellectual property or the sharing of confidential information under this MOU. If it appears that a particular activity may lead to the creation of intellectual property or the disclosure or exchange of confidential information, the Participants should enter into an appropriate written agreement therefor.

Section 7: Future Collaborations

Any specific future research and development collaboration or the transfer or commitment of funds is to be implemented through an appropriate written contract between the Participants. Any such contract should include a work plan, staffing requirements, cost estimates, funding sources, the adequate and effective protection and allocation of intellectual property rights, and other arrangements or conditions; and must be authorized under NREL's and DICP's Management and Operating Contract.

Section 8: Review of Coordination

The Participants intend to review the coordination undertaken under this MOU as a means to ascertain their effectiveness, document achievements and lessons learned, recognize technical personnel, and identify and plan areas for potential future collaboration that involves the conduct of collaborative research and development. This review should take the form of periodic meetings of representatives of each Participant to discuss ongoing coordination and to identify and plan future collaboration that involves the conduct of collaborative research and development activities.

Section 9: Contacts

One or more designated representatives from each Participant should oversee, manage and facilitate implementation of this MOU in cooperation with each other on behalf of their respective institutions. All notices, communications and coordination should involve, at a minimum, the following individuals, their successors and/or designees as follows:

(a) For the National Renewable Energy Laboratory:

Bryan Pivovar
15013 Denver West Parkway
Golden, CO 80401
Tel: 1 303 375-3809
Bryan.pivovar@nrel.gov

(b) For the Dalian Institute of Chemical Physics:

Hongmei Yu
457 Zhongshan Road
Dalian, Lioaning
Tel: 86 411 84379051
hmyu@dicp.ac.cn

Section 10: General Considerations

1. This MOU is not intended to create any legally binding obligations between the Participants.
2. Each Participant should conduct the coordination contemplated by this MOU in accordance with applicable laws and regulations to which it is subject and international agreements to which its government is party.

Section 11: Commencement, Modification and Discontinuation

1. Coordination under this MOU may commence upon signature, and may continue for an initial period of two (2) years, unless discontinued in accordance with paragraph 3 of this section.
2. The Participants may modify this MOU at any time by mutual consent in writing.
3. The Participants may discontinue this MOU at any time by mutual consent in writing. Alternatively, a Participant that desires to discontinue its participation in this MOU should endeavor to provide the other Participant at least 90 days advance written notice.

Signed in duplicate.

For
National Renewable Energy Laboratory

Martin Keller

Martin Keller
Director

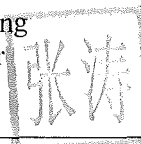
6/22/16
Date

Golden, CO
Place

For
Dalian Institute of Chemical Physics



TaoZhang
Director



3.25.2016
Date

Dalian, China
Place