

Memorandum of Understanding
between
The Regents of the University of California, as Management and Operating Contractor for
Lawrence Berkeley National Laboratory
and
HYDRO QUEBEC for
l’Institut de Recherche d’Hydro-Quebec

On Collaborations in the fields of Prototyping and Manufacturing Scale-up of Energy
Storage Systems, Materials, and Components

This Memorandum of Understanding (MOU) is between The Regents of the University of California (The Regents), in its capacity as manager and operator of Lawrence Berkeley National Laboratory (LBNL) and HYDRO-QUEBEC, operating l’Institut de recherche d’Hydro-Quebec, (IREQ), Research Institute of Hydro-Quebec. LBNL is a U.S. Department of Energy National Laboratory managed and operated by The Regents pursuant to DOE Contract No. DE-AC02-05CH11231 (Contract 31). HYDRO-QUEBEC (HQ) is a corporation constituted under the laws of Quebec, Canada and operates IREQ. IREQ is a pioneer and leader in the fields of energy storage research in the areas of electrochemical generators, cells, batteries, packs, storage systems, related components, materials, and scaling up battery manufacturing standards and methods.

The Regents and HYDRO-QUEBEC are collectively herein referred to as “Participants” or individually as a “Participant.”

1. Objective

The objective of this MOU is to explore collaboration between the Participants in the fields of electrochemical generators, cells, batteries, packs, storage systems and related components and materials. To further the acceleration of the 2050 energy use goals of California and the United States, and Quebec and Canada, the Participants will assess the feasibility of creating a California-based joint center focused on research and development and pilot scale manufacturing for product realization through which collaborative activities are conducted.

2. Proposed Areas of Collaboration

The Participants express their intention to collaborate in one or more of the following areas:

- A. Assess feasibility of creation of a joint next-generation battery technology and pilot-scale manufacturing center in California
- B. Development of funding sponsors for a next-generation battery technology development

- and pilot-scale manufacturing center.
- C. Development of a planned research portfolio and related works of authorship for next-generation battery technology.
- D. Jointly pursue funding solicitations from the Province of Quebec, the State of California, or other related funding opportunities that would support a next generation battery technology development and pilot scale manufacturing center..
- E. Exploration of organizational efficiencies and structures for the purpose of maximizing success of a next generation battery technology and pilot scale manufacturing center.

The scope of above activities and cooperation may be changed or extended to other areas by mutual written consent of the Participants.

3. Proposed Forms of Collaboration

The Participants expect to collaborate through mutual visits, the exchange of publicly-available information, exchanges of researchers and experts, training, and planning for potential future joint research, with any future collaborative research to be undertaken only pursuant to an appropriate written agreement therefor.

4. Proposed Mechanisms of Collaboration

- A. To administer the implementation of this MOU, each Participant should designate one or more principal coordinators to be in charge of the collaboration, through whom all requests and plans of that Participant should be made.
- B. The principal coordinators may hold meetings when necessary to discuss matters related to collaboration under this MOU.
- C. The principal coordinator for The Regents is intended to be Venkat Srinivasan, Staff Scientist, or, in the alternative, Rahul Chopra, Senior Advisor. The designated representative for HYDRO-QUEBEC is intended to be Karim Zaghib, Director, IREQ.

5. Commencement, Modification and Discontinuation

- A. Cooperative activities under this MOU may commence upon signature of all Participants and continue for a thirty-six (36) month period, unless discontinued in accordance with Paragraph B of this Section.
- B. The Participants may discontinue this MOU at any time by mutual written consent. Alternatively, a Participant that wishes to discontinue its participation in this MOU should endeavor to provide at least thirty (30) days written notice to the other Participant.
- C. This MOU may be modified, or cooperative activities hereunder may be extended for additional periods, by mutual written consent of the Participants.

6. Exchange of Information

The Participants do not anticipate the exchange of non-public information, including intellectual property or business-confidential information. If the Participants decide that a

particular activity may lead to detailed exchanges of non-public information, they should consult with each other and make appropriate written arrangements for the protection of such information.

7. General Terms

- A. Each Participant should conduct the activities contemplated by this MOU in accordance with all applicable laws, regulations and other requirements to which it is subject, including, without limitation, export control laws and environment, health and safety laws and regulations and international agreements to which its Government is a party.
- B. This MOU does not create any legally binding obligations between the Participants.
- C. The conduct of cooperative activities contemplated by this MOU is subject to the availability of funding, personnel, and other resources.
- D. Each Participant is responsible for the costs it incurs in participating in cooperative activities under this MOU.

Signed in duplicate.

FOR THE REGENTS OF THE
UNIVERSITY OF CALIFORNIA,
LAWRENCE BERKELEY NATIONAL
LABORATORY

By: Michael Witherell


Name: Dr. Michael Witherell

Title: Laboratory Director

Date 1 July 2016

Place Berkeley, CA USA

FOR HYDRO-QUEBEC

By: 

Name: Dr. Karim Zaghib

Title: Directeur SCE

Date 8/07/2016

Place Varenes, Qc, CANADA.