

MEMORANDUM OF UNDERSTANDING
BETWEEN
NATIONAL GRID TRANSMISSION SERVICES CORPORATION
AND
THE PACIFIC NORTHWEST NATIONAL LABORATORY OPERATED
BY BATTELLE MEMORIAL INSTITUTE
CONCERNING
RESEARCH COOPERATION IN THE AREAS OF ELECTRIC TRANSMISSION NETWORK
MODERNIZATION AND ENERGY STORAGE TECHNOLOGIES

I. PARTICIPANTS

This Memorandum of Understanding (“MOU”) is between National Grid Transmission Services Corporation, a Massachusetts corporation (“National Grid Transmission”) and subsidiary of National Grid PLC in the United Kingdom, and the Pacific Northwest National Laboratory (“PNNL”) operated by Battelle Memorial Institute under U.S. Department of Energy Contract No. DE-AC05-76RL01830, located in Richland, WA. U.S.A. National Grid Transmission and PNNL are sometimes referred to in this MOU, collectively, as the “Participants” and each, individually, as a “Participant”.

II. PURPOSE

The purpose of this MOU is to document the intention of the Participants. Under this MOU the Participants intend to explore future cooperation to enhance the ability of the Participants to achieve their respective research missions through sharing of information and the cooperation of staff, to the extent contemplated in this MOU, and to promote the enhancement of the quality of science, technology, education, and industrial development in the areas of electric transmission network modernization and energy storage technologies.

III. AREAS OF COOPERATION

The Participants intend to cooperate in the area(s) of electric transmission network modernization, including, but not limited to, the following selected topics:

- A. Grid-scale energy storage;
- B. Advanced transmission and distribution system controls;
- C. Transmission system monitoring and grid utilization;

- D. Advanced integration of distributed energy resources (e.g. batteries, distributed renewable generation, intelligent loads in buildings, etc.); and
- E. Enhanced grid cyber protection.

IV. OBJECTIVES

The planned cooperative efforts may include, but are not limited to, the following:

- A. Communication and exchange between researchers;
- B. Planning collaborative research opportunities, with any specific future research and development collaboration to be implemented only pursuant to an appropriate mutually acceptable written agreement therefor;
- C. Holding workshops, joint lectures, and symposia; and
- D. Exchange of publicly available information and materials.

V. NON-BINDING COMMITMENTS

This MOU does not create any legally binding obligations between the Participants and shall not be construed to provide any cause of action for or by any person or entity. This MOU is neither a fiscal nor a funds obligation document. Nothing in this Agreement authorizes or is intended to obligate the Participants to expend, exchange, or reimburse funds, services, or supplies, or transfer or receive anything of value. As the need may arise, specific details of support to be furnished by each of the Participants may be developed separately from this MOU in specific, mutually acceptable, agreements or contracts, subject to the availability of funds.

VI. INTELLECTUAL PROPERTY

The Participants do not anticipate the transfer of rights in intellectual property under this MOU and nothing in this MOU shall be construed as a transfer of any intellectual property rights. If the Participants decide that a particular activity may lead to the creation of intellectual property, they should consult with each other and make appropriate, mutually acceptable, written arrangements with respect thereto.

VII. PROPRIETARY AND NON-PUBLIC INFORMATION

In the event that any activities under this MOU would benefit from one Participant's use of another Participant's proprietary or non-public information, the Participants will enter into good faith negotiations to produce a mutually acceptable written agreement regarding the obligations and terms associated with the exchange of any such proprietary or non-public information.

VIII. DISCLAIMER

Neither Participant makes any representations or warranties, express or implied, with respect to any information disclosed in connection with this MOU or with respect to any activities conducted in connection with this MOU, including, without limitation, any representations or warranties as to the quality, accuracy, completeness or reliability of any information exchanged.

IX. PUBLIC AFFAIRS AND EXTERNAL COMMUNICATIONS

If a Participant desires to make a public announcement or disclosure in connection with this MOU, that Participant shall consult with the other Participant prior to issuing or making such statement or disclosure, and allow the other Participant a reasonable opportunity to comment on the content of, any public statement or disclosure with respect to the subject matter of this MOU, and to provide written consent for such statement or disclosure.

X. NOTICES AND COMMUNICATION

All notices, requests and demands to or upon the respective Participants hereto to be effective shall be in writing (including by telecopy), and shall be deemed to have been duly given or made when delivered by hand, or upon actual receipt or, in the case of electronic notice, when confirmation is received, or, in the case of a nationally recognized overnight courier service, one business day after delivery to such courier service (charges prepaid), addressed to the addresses set forth below or to such other address as may be designated by any Participant in a written notice to the other Participant hereto.

If to National Grid
Transmission:

National Grid Transmission Services Corporation
40 Sylvan Road
Waltham, MA 02451
Attn: Terron P. Hill
Terron.Hill@nationalgrid.com

If to PNNL:

Pacific Northwest National Laboratory
902 Battelle Blvd
Richland, WA 99352
Attn: Jud Virden
Jud.Virden@PNNL.GOV

XI. DURATION, MODIFICATION, AND DISCONTINUATION

Collaboration under this MOU may commence following the execution hereof by both Participants and may only be amended or modified upon mutual written agreement of the Participants. This MOU shall remain in effect until terminated by either Participant upon 30 days' advance written notice to the other Participant.

XII. NO JOINT VENTURE

By execution of this MOU, the Participants are not creating any partnership, joint venture, agency, or fiduciary obligations between them. Rather, the Participants are independent contractors and neither Participant has any power to bind the other Participant for any purpose. Nothing contained in this MOU shall be construed to constitute either Participant as the agent, attorney in fact, or partner of the other Participant.

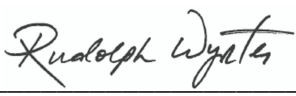
XIII. ASSIGNMENT

Neither Participant shall assign or transfer any of its rights or obligations under this MOU to any person or party without the express prior written consent of the other non-assigning Participant.

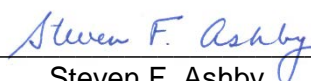
XIX. ENTIRE AGREEMENT

This MOU constitutes the full and final understanding of both Participants on all subjects contained within it. All prior negotiations, understandings, and agreements are merged into this Agreement.

**On behalf of NATIONAL GRID
TRANSMISSION SERVICES
CORPORATION**

By 
Rudolph L. Wynter
President & COO - FERC
Regulated Business and New
Energy Solutions

**On behalf of THE PACIFIC
NORTHWEST NATIONAL
LABORATORY OPERATED BY
BATTELLE MEMORIAL INSTITUTE**

By 
Steven F. Ashby
Laboratory Director

Date _____

Date: 11/10/17