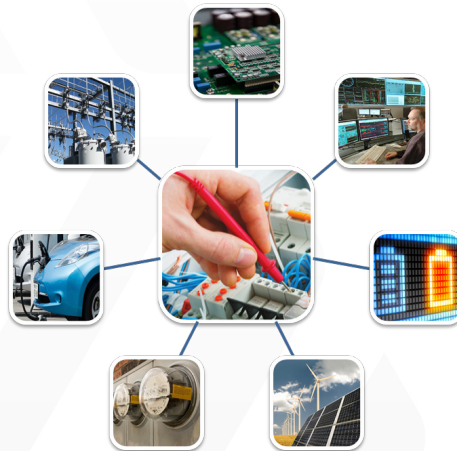


GMLC Testing Network

CHALLENGE

Models, testing capabilities, and related resources for emerging grid technologies exist across many organizations. However, these resources and information are not readily accessible to industry. To accelerate grid modernization, particularly as grid complexity and interdependency increases, access to lab-based testing capabilities, validated models and related testing and simulation resources is vital.



The GMLC Testing Network and Open Library will facilitate access to testing infrastructure and create a repository of available tools.

APPROACH

This project aims to improve coordination and cooperation among institutions working on grid testing and modeling to maximize value and inform strategic investments. Key activities include the following:

- **Establishment of a Grid Modernization Laboratory Consortium Testing Network** that will function as a coordinated lab-based resource for standards-based testing and validation of grid devices and systems. This resource will include a catalog of testing capabilities available at national laboratories, universities, utilities, and other industry groups, as well as a roadmap document identifying opportunities for strategic investment in testing capabilities. Relevant information will be organized by
 - testing facilities
 - capability categories
 - technology application areas.
- **Development and implementation of a Grid Modernization Laboratory Consortium Open Library** to serve as a public repository for component models, simulation tools, and testing resources. A key goal for the Open Library is to enable users to model the impact of new and emerging technologies on their systems.

At-A-Glance

PROJECT LEADS

- **Matthew Lave**
Sandia National Laboratories
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- **Rob Hovsapien**
Idaho National Laboratory
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PARTNERS

- Electric utility sector
- Universities and research institutes
- Independent testing laboratories
- Equipment manufacturers
- Software developers

BUDGET

\$3 million

DURATION

April 2016 – April 2018

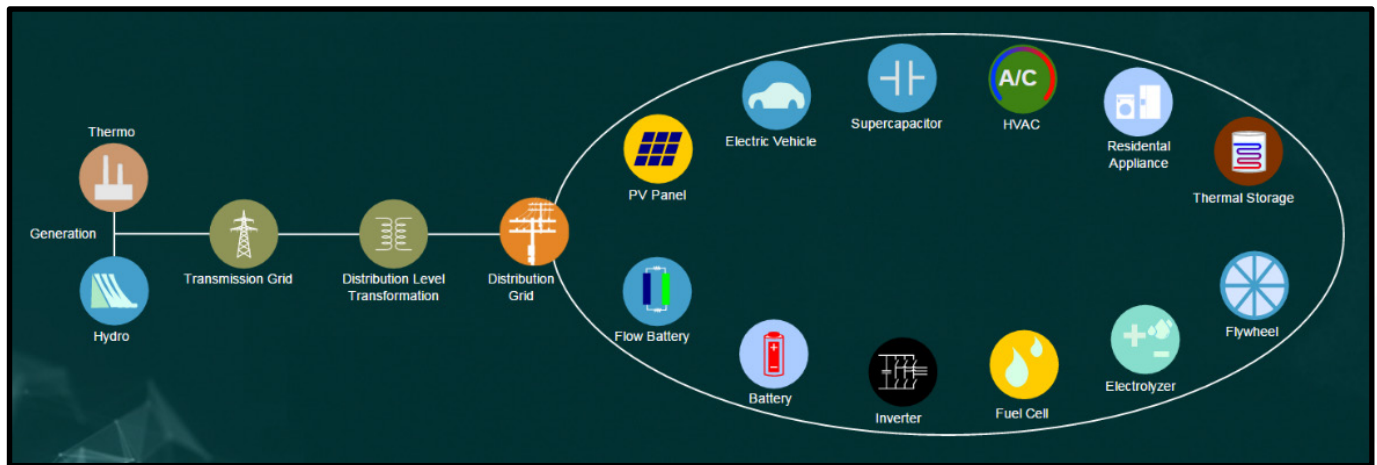
TECHNICAL AREA

Devices and Testing

Lead: Ben Kroposki

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Laboratory

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Proposed GMLC-Open Library Grid Model Taxonomy

EXPECTED OUTCOMES

This effort will accelerate grid modernization by fostering clear understanding of grid-related capabilities and models available at national laboratories and beyond, and giving stakeholders faster and easier access to those resources. The project will accelerate the development, validation, standardization, adoption, and deployment of new

grid technologies by enabling access to a comprehensive testing infrastructure and creating a repository of models and simulation tools. This project will also enable DOE and the national laboratories to drive grid technology innovation more effectively and synergistically.

LAB TEAM



Launched in November 2014 under the U.S. Department of Energy's Grid Modernization Initiative, the GMLC is a strategic partnership between DOE Headquarters and the national laboratories, bringing together leading experts and resources to collaborate on national grid modernization goals. The GMLC's work is focused in **six technical areas** viewed as essential to modernization efforts:

Devices and Testing | Sensing and Measurements | Systems Operations and Control
Design and Planning | Security and Resilience | Institutional Support