



# GMLC Project Communications Summary

Date: July 7, 2020

Project Title: Future Electric Utility Regulation

Project Number: 1.4.29

Principal Investigator: Peter Cappers (LBNL)

Person Completing this Document: Peter Cappers (LBNL)

1. What problem is the project solving or what opportunity is it addressing?

This project assisted states in addressing regulatory, ratemaking, financial, business model and market issues related to grid modernization in the power sector. Specifically, the project addressed the following set of issues:

- adapting electric utility regulation and ratemaking to new technologies and utility service offerings;
- assessing infrastructure investments that align utility earnings opportunities with increases in consumer value, improvements in economic efficiency, and achievement of other public policy goals; and
- quantifying potential financial impacts on utility shareholders and customers from such regulatory and ratemaking alternatives as well as infrastructure investments.

2. Who collaborated on this project? (e.g. labs, universities, utilities, vendors, others)

- LBNL, NREL, SNL, PNNL, and NETL.

3. What is the solution or outcome that the project delivered?

- Provided technical assistance directly to 13 state PUCs TA and indirectly to 20 states through regional workshops, many of which resulted in some form of a publicly available deliverable or publication;
- Analyzed the financial impacts of DERs on ratepayers and utilities; and

- Wrote 7 multi-perspective reports on evolving issues in utility regulation and ratemaking, utility business models and electricity markets, with webcast and conference presentations.
4. How does the solution/outcome break new ground or how is it differentiated from other R&D projects?
- Although particular DOE offices fund foundational research and technical assistance activities that support their area of focus (e.g., solar, wind, energy efficiency, transmission planning), this is the only DOE-funded activity focused exclusively on supporting PUCs grappling with regulatory and utility business model related issues.
  - As a result of the project, states will be better able to consider alternative regulatory and ratemaking approaches for utility investments in grid modernization.
  - The approaches states choose will better tie utility earnings to public policy goals like value to consumers and economic efficiency.
  - States will be better able to provide utilities with guidance and incentives to efficiently deploy capital to achieve grid modernization goals.
5. How is the deliverable or outcome of the project being used?
- The technical assistance activities directly supported regulatory proceedings in 13 state and indirectly in 20 states through regional workshops.
  - The foundational analysis is heavily relied upon by regulators, policymakers, and stakeholders across the United States to create more and better informed dialogue around state regulatory proceedings and initiatives associated with regulatory and utility business model related issues.

6. Impact metrics – has project impacted grid modernization in any quantifiable way? (E.g. reliability, resiliency, efficiency, DER integration, event response, etc.)
  - The technical assistance activities directly supported regulatory proceedings in 13 states and indirectly in 20 states through regional workshops.
  
7. What IP and/or industry recognition or adoption has the project resulted in?
  - 16 technical reports (10 published, 4 awaiting DOE review for publication, 2 filed directly with State PUC only);
  - 3 peer-reviewed journal articles (1 accepted, 2 awaiting DOE review for submission); and
  - 4 conference/workshop presentations.
  
8. If you look ahead 5-10 years, how do you see the work of this project impacting grid planning and operations in the U.S.?
  - Grid planning and operations are contingent on the type, capabilities, and volume of resources that support a reliable and resilient electric grid. The foundational research and technical assistance undertaken through this project will allow state regulators to provide utilities with better guidance and improve incentives to efficiently deploy capital for planning and operation of the electric grid that better align with the state's grid modernization goals.