DER Research Roadmap Meeting Notes (September 17, 2019)

These notes summarize the action items, meeting highlights, and attendees to the September 17 Distributed Energy Resources Research Roadmap Public Workshop facilitated by Navigant and Gridworks. For further information on this initiative visit the [Gridworks DER Research Roadmap page](#).

Action Items:
- Plan the next DER Research Roadmap Workshop of Q1 2020

Background:

The overall goal of the Distributed Energy Resources Research Roadmap is to address climate change by strengthening renewable and distributed energy in California, of which SB100 is part of the means to that goal, and ratepayer benefits categories are meant to include environmental, disadvantaged community, and general benefits. The timeframe that the DER Research Roadmap is operating on is for the 2022-2026 investment window, with the Roadmap wrapping up in early 2020. This workshop was open to the public and held at the Google Community Space in San Francisco.

The purposes of this workshop were threefold:
- Review the [Research Needs](#) identified at the initiative's previous workshop and through subsequent stakeholder outreach
- Review results of a Technical Advisory Committee survey providing [preliminary data](#) to help prioritize those Research Needs.
- Identify, define and name rational and well-organized categories of Research Needs, building the categories around what stakeholders find to be the most urgent Research Needs

The morning started with a review of the Roadmap methodology and a targeted presentation on the funding needs of Vehicle Grid Integration research. Dean Taylor (CalETC) and Lance Atkins (Nissan) made the case that due to the cross-industry nature of VGI and the need to fund VGI research systematically, California is need of more pathways to VGI research funding. While the interagency VGI Working Group is currently operating outside of EPIC funding, EPIC could potentially be used to fill funding gaps that the Working Group cannot supply. Furthermore, they feel that VGI research suffers from too little coordination between players, often because such efforts are carried out on volunteer labor. EPIC may be applicable to VGI research we view as a whole system of research working across systems, not as a collection of disassociated projects.

The group then reviewed the normalized results of the DER Research Roadmap Research Needs prioritization survey that was issued in late August to the project's Technical Advisory Committee. Attendees were led through a focused discussion about the Research Need review process and trends in the data. Major points of discussion were:

- The need to recognized top-down policy goals alongside these bottoms-up derived Research Needs
- Questioning if the identified Research Needs anticipate future challenges or only current ones
- Could this roadmap consider DER integration and research in markets outside of California and the United States?
- If the survey will have weight in EPIC research prioritization, should it be extended to professionals beyond the DER Research Roadmap TAC members?
  - Survey results were informative, but some attendees voiced concerns that they were not representative of a sufficiently diverse cross-section of stakeholders

The afternoon sessions consisted of two workshop sessions: *Defining and Naming Research Need Categories* and *Identifying Urgent Research Needs*. Using a consensus-based categorization technique, attendees collectively defined these priority areas of DER research*:

- Communications and Layered Controls
- Validation and Large-Scale Demonstrations
- Customer and Critical Infrastructure Resiliency

- Local Distribution Impact and Optimization
- Operational Flexibility Potential and Value
- Data, Analytics and Planning

Attendees were asked their most urgent Research Needs – these received multiple votes:

- Valuing Operational Flexibility (5)
- Demonstrate DER Grid Balancing Services (3)
- VGI Data Program (2)

Attendees listed anticipating the needs of the future, allowing customers (esp. DAC) to monetize DER, protection from cybersecurity and infrastructure threats, and meeting the state's climate commitments as the primary drivers of research urgency. The group resolved to articulate a clear vision of how these urgencies should influence the roadmap, demonstrate the unique value that DER can provide and be inclusive and tangible when proposing future DER research.

* see attached Appendices for a comprehensive graph of Research Need categorization.

Participants in Attendance:

- **Liet Le (CEC)**

- **Eric Ritter (CEC)**

- **Matt Fung (CEC)**
- **Gabriel Taylor (CEC)**
- **Gregg Ander (Navigant)**
- **Vania Fong (Navigant)**
- **James Hansell (Navigant)**
- **Karin Corfee (Navigant)**
- **Matthew Tisdale (Gridworks)**
- **Mac Roche (Gridworks)**
- **Dean Taylor (CalETC)**
- **Lance Atkins (Nissan)**
- **Peter Klauer (CAISO)**
- **Peter Cattanaeo (Spin Storage)**
- **Keta Suzuki (Nissan)**

- **Tim Drew (Cal Advocates)**
- **Jill Powers (CAISO)**
- **Marc Gaulier (Olivine)**
- **Mehdi Ganji (IEEE)**
- **Bill Peter (PG&E)**
- **Kurt Johnson (Center for Climate Protection)**
- **Mithra Moezzi (QQForward)**
- **David Chassin (SLAC)**
- **Lillian Mirviss (ohmconnect)**
- **Karim Farhat (PG&E)**