

DOCKETED

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**On Lessons Learned and Best Practices from Seven EPIC Funded
Micogrids Awarded in 2015**

Additional submitted attachment is included below.

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May 8, 2019

California Energy Commission

Docket Unit, MS-4

Docket No. 19-ERDD-01

Via email to: docket@energy.ca.gov

Re: Docket No. 19-ERDD-01; Lessons Learned and Best Practices from Seven EPIC Funded Microgrids Awarded in 2015 --- Comments from Blue Lake Rancheria

To All This May Concern:

On behalf of the Blue Lake Rancheria tribe (BLR), we thank the California Energy Commission (CEC) for holding the "Lessons Learned and Best Practices from Seven EPIC Funded Microgrids Awarded in 2015" workshop on April 26, 2019. As requested during that workshop, the following are comments on lessons learned and recommendations for next steps and investments in the microgrid sector in California, including the Electric Program Investment Charge (EPIC) program. To address the "overcoming integration challenges" and "developing commercialization pathways" phases of the CEC investment approach to microgrids, BLR proposes the following.

1) Create Microgrid Center(s) of Excellence / Research Laboratories

To help accelerate replication of microgrids in concert with the macro grid, with appropriate technologies, and to further leverage the expertise gained via prior CEC investment in microgrids, the CEC could consider investing in "microgrid center(s) of excellence." A microgrid center of excellence would serve the sector as a "one-stop-shop" research and policy laboratory for stakeholders, particularly decision-makers, investor-owned utilities (IOUs), and project developers. Microgrid center of excellence activities would include:

- a. Microgrid feasibility, planning and design
- b. Project technical assistance
 - E.g., interconnection process support; Integration engineering review
- c. Hardware-in-the-loop testing
- d. Cyber-security laboratory (design and best-practice operations)
- e. Microgrid data capture, analysis, and reporting
- f. Policy and tariff development based on data analysis from existing operational microgrids
- g. Knowledge transfer activities to guide the market and further investments
- h. Outreach for governments, agencies, and other public institutions exploring microgrid development
- i. Clearinghouse for IOU research and programs

BLR recommends creating 1-3 microgrid center(s) of excellence in California. Site(s) could be based on size/scale of microgrid projects readily accessible in that region to access expertise and operational microgrid systems for tours, use as learning laboratories, and trainings. For example:

- One microgrid center of excellence in Humboldt County in Northern California, where microgrids at the facility, campus, community (e.g., Blue Lake Rancheria), and small utility (e.g., Redwood Coast Regional Airport) scales have been built successfully
- One microgrid center of excellence in Southern California where microgrids at the larger community and utility scales (e.g., Borrego Springs) have been built successfully

2) Funding to aggregate data and provide data analysis from all microgrid projects to guide further investment and policy

The investment to date in microgrids by the CEC via its EPIC program and project partners such as the IOUs has been considerable. BLR recommends designating one contractor to aggregate historic and ongoing data from these projects into data analysis to inform and guide further investment, appropriate technologies, business cases, tariff structures, and related decision-making. There is a tremendous amount of data that can be mined to ensure cost effective best practices in the microgrid sector moving forward, but currently there is no method to extract and use that data. (See also microgrid center of excellence discussion in #1 above.)

3) Invest in 5-10 more microgrid projects at various scales

BLR recommends 5-10 more microgrid demonstration projects at various scales, e.g., residential, facility, campus, community, small utility, large utility, in front of the meter (IOU owned), behind the meter (individual owner/operator).

4) Reimbursement of EPIC application preparation costs for funded projects

The application for EPIC program is comprehensive, and for demonstration projects requires essentially a ~30% engineered design for a successful application and budget. This design work during the application phase has a commensurate amount of related personnel and other costs that are currently borne entirely by application/project partners. Because application costs are significant (we estimate between \$20,000 - \$50,000 or more, depending on the complexity of the project) we suggest allowing for application cost reimbursement for funded projects, as a partial mitigation of the up-front investment risk by successful applicants. Application cost reimbursements could be a separate fund under EPIC, or could be included in the proposed project budget. Eligible reimbursement amounts could be actual costs, actual costs up to a cap, or a set amount per application.

5) Streamline microgrid expansion(s) behind an IOU-approved point of common connection

Microgrids offer an accelerated pathway to increase investment in a lower-carbon, resilient grid. Limitations on many tribal government and local government infrastructure budgets will force microgrid development to occur in phases. Expanding zero-carbon/zero-emission generation, battery storage, and other components within a microgrid where owned and operated by an individual entity (e.g., tribal government) should be carefully reviewed and supported where possible. Expensive interconnection costs for expansions may make them untenable. If there is no change in impact to the larger grid with the expansion, microgrids should be enabled to expand in a modular fashion. Especially in terms of adding zero-emission/zero-carbon generation and/or battery storage, microgrids and internal expansions will result in climate, resilience, and demand-response benefits.

6) Support for outreach activities for microgrid feasibility for local/tribal governments, prioritizing disadvantaged communities

Because of its successful microgrid projects, BLR is approached daily by prospective microgrid developers (e.g., other tribal governments, local governments, universities, public agencies, utilities) requesting information that would inform feasibility of microgrids throughout California. The information requested includes technical operation, onsite tours, and wraparound context (e.g., investment rationale, co-benefits such as savings continuity of operations, GHG reductions, overall resilience). BLR and its project partners have supported and funded these outreach activities, but the numbers of interested parties are increasing. We recommend supporting technical outreach activities, potentially prioritizing assistance to public entities (e.g., governments, educational institutions) and disadvantaged communities that have been historically underserved in terms of low quality electricity, electricity from sources with pollutant emissions, and/or no access to grid electricity. (Please see also recommendation #1, h. above.)

BLR would not have the co-benefits of its microgrids were it not for its partners, including the research, development, and deployment support from the California Energy Commission, particularly the Electric Program Investment Charge. These programs are successfully transforming California's energy and transportation sectors to zero carbon. Please contact Jana Ganion, BLR Sustainability and Government Affairs Director, for further information at jganion@bluelakerancheria-nsn.gov. Thank you for your consideration of these comments.

Sincerely,

/ s /

Claudia Brundin
Chairperson