

DOCKETED

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Load Shaping for renewable energy variability with Agricultural Land

Increase the Cost-Competitiveness of Renewable Generation Renewable Energy “ Low cost Load Shaping Tool

California is the largest agricultural producing state in the country and possibly the world. Each of our crops require significant amounts of energy during the full year to pump water to the crops and to pressurize the irrigation equipment.

This initiative proposal is based on the large volume of crops that always needs to be irrigated and soils ability to hold water. The goal of the initiative is to find technologies that will allow agricultural land to be used as a low-cost energy grid load shaping tool, with the ability to take both demand response calls and receive the variability energy spikes of renewable energy sources.

Due to the size of the agriculture industry, this initiative has great potential to work out the extreme variability as more renewable come on line

Additional submitted attachment is included below.

CALIFORNIA ENERGY COMMISSION

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The Energy Commission is currently soliciting ideas and stakeholder input for the 2018 – 2020 EPIC Triennial Investment Plan. For those that would like to submit an idea for consideration in the 2018-2020 EPIC Triennial Plan, we ask that you complete the form below. Submittals are due by **5:00 p.m. on February 10, 2017.**

Part 1. Initiative Description and Purpose:

1. Please provide a brief description of the proposed initiative:

2. What technical and/or market barriers would the proposed initiative help overcome? For scientific analysis and tools, what knowledge gaps would the proposed initiative help fill?

Part 2. Benefits and Impacts

3. If this initiative is successful, either fully or partially, what would be the expected impact?
Who are the primary users and/or beneficiaries?

4. Describe what quantitative or qualitative metrics or indicators would be used to evaluate the impacts of the proposed initiative:

5. Please provide a list of peer-reviewed references that support the responses for questions 3 and 4. Proposed initiatives that include peer-reviewed references will be given stronger consideration.

6. (For technologies only) What competitive advantages does the proposed technology solution have over current benchmark technologies? If the technology is beyond the prototype stage, what strategies do you suggest to bring to scale?

Part 3. Connection to Energy Commission’s EPIC Framework

Energy Commission staff have developed a draft strategic framework to guide the CEC’s planning and implementation of EPIC across triennial investment cycles. One of the objectives of the draft strategic framework is to communicate a consistent set of priorities for organizing current and future EPIC investments.

7. Please indicate which of the following strategic framework themes you feel the proposed initiative best fits within:

- Advance Technology Solutions for Deep Energy Savings in Building and Facilities
- Accelerate Widespread Customer Adoption of Distributed Energy Resources
- Increase System Flexibility from Low-Carbon Resources
- Increase the Cost-Competiveness of Renewable Generation
- Create a Statewide Ecosystem for Incubating New Energy Innovations
- Maximize Synergies in the Water-Energy-Food Nexus
- Develop Tools and Analysis to Inform Energy Policy and Planning Decisions
- Catalyze Clean Energy Investments in California’s Underrepresented and Disadvantaged Communities

If Other, Please Specify