

**DOCKETED**

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**IN THE MATTER OF:** )  
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 Energy Storage Research ) Staff Workshop  
 ) RE: Energy Storage Research  
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**NOTICE OF STAFF WORKSHOP ON ENERGY STORAGE RESEARCH NEEDS IN CALIFORNIA**

California Energy Commission (CEC) staff will conduct a workshop at the San Diego Convention Center, November 5-7, 2019, during the Energy Storage North America (ESNA) 2019 Conference and Exhibition. This workshop is to share results of previously funded energy storage research projects, review anticipated upcoming energy storage research opportunities under the Electric Program Investment Charge (EPIC) program, and solicit input from stakeholders. This workshop will help the CEC’s Research and Development Division assess the current state of energy storage technology development globally and better understand the future research needs related to increasing energy storage deployments in California. Individuals who are not registered for ESNA 2019 may attend this workshop at no cost by pre-registering as defined later in this announcement. The workshop will be:

**November 7, 2019**  
 10:00 AM – 12:30 PM  
 San Diego Convention Center  
 Room 7B  
 111 W. Harbor Drive  
 San Diego, California  
 (Wheelchair Accessible)

Remote access is available by computer or phone via WebEx.™  
 (Instructions below)

**Agenda**

This workshop will provide information for future research investment plans in the energy storage technical area. The agenda for the workshop is:

1. Overview of the energy storage experience the CEC has gained from over a decade of funding energy storage research grants. (CEC staff)
2. Summary of the anticipated upcoming energy storage research opportunities in 2019 under the Electric Program Investment Charge (EPIC) program. (CEC staff)

3. Panel session with industry representatives who have firsthand experience at receiving and managing CEC energy storage research grants. The panel will discuss the CEC grant process, the value to individual companies of receiving CEC on research grants, and the impact of future commercialization from these grants. (Panel of industry representatives with discussion led by CEC staff)
4. Open discussion with workshop attendees on the highest priority energy storage research needs that can support increased energy storage technology capability and flexibility for California. (Discussion led by CEC staff)

Research suggestions can be provided to our Research Idea Exchange:  
(<https://efiling.energy.ca.gov/Ecomment/Ecomment.aspx?docketnumber=19-ERDD-01>).

## **Background**

California has set aggressive goals for achieving a low carbon future. Recent legislation Senate Bill 100 (De León, Chapter 312, Statutes of 2018) requires 100 percent zero carbon electricity by 2045. Energy storage will play a significant role in helping the state meet these new goals. The state has also established energy storage goals under AB 2514 (Skinner, Chapter 469, Statutes of 2010) and AB 2868 (Gatto, Chapter 681, Statutes of 2016) for the California Investor Owned Utilities (IOUs) to procure up to 1,825 megawatts of energy storage by 2020. Currently, there are a limited number of energy storage options for either in front of or behind the meter applications, and it is not expected that these systems can scale to the production level or price range necessary to help California meet its goals. New, more capable energy storage technologies or improvements to existing technologies are needed to address these growing utility grid and transportation system needs. Additionally, as technologies approach commercialization, manufacturers may need independent testing to demonstrate performance in targeted applications to obtain the necessary financing for commercial deployment.

The California Public Utilities Commission (CPUC) established the purposes and governance for the EPIC Decision 12-05-037 for Rulemaking 11-10-003 on May 24, 2012. In this decision, the CPUC designated the CEC as one of four administrators of the program and required administrators to submit coordinated investment plans to the CPUC for consideration no later than November 1, 2012. The other designated administrators are Pacific Gas and Electric Company (PG&E), San Diego Gas & Electric Company (SDG&E), and Southern California Edison Company (SCE), each of which are charged with administering a portion of the EPIC program funding.

The portion of the EPIC program administered by the CEC will provide funding for applied research and development, technology demonstration and deployment, and market facilitation for clean energy technologies and approaches for the benefit of ratepayers of PG&E, SDG&E, and SCE through a competitive grant solicitation process. Projects must address strategic objectives and funding initiatives as detailed in the appropriate EPIC Investment Plan. The EPIC program is currently executing the Third

Triennial EPIC Investment Plan. A copy of this plan can be reviewed at: <https://efiling.energy.ca.gov/getdocument.aspx?tn=217347>.

The CEC has funded a dozen energy storage projects since 2010, advancing a diverse set of energy storage technologies and working to provide California the most cost effective and best performing technologies to meet the needs of the future. The research includes energy storage technologies helping to move technologies closer toward commercial success by providing critical information on the performance characteristics of the different technologies. The EPIC program is approved to receive approximately \$133 million annually to execute the Third Triennial EPIC Investment Plan. Historically, the EPIC program invests ten to twenty percent of the available funding on energy storage related research. This workshop will share research results from previous projects and review the anticipated upcoming energy storage related research opportunities as defined in the approved Third Triennial EPIC Investment Plan.

Energy Storage North America (ESNA) is the largest conference, exhibition and networking event covering all applications of grid storage in North America. ESNA connects over 2,500 utilities, developers, energy users, policy makers and other key stakeholders from around the world to advance understanding and deployment of energy storage, and ultimately build a cleaner, more affordable and more resilient grid. ESNA 2019 will be on November 5-7, 2019 in San Diego, California. To learn more, visit [www.esnaexpo.com](http://www.esnaexpo.com). The Energy Commission's Research and Development Division is holding this workshop in the same facilities as ESNA to engage the large, diverse number of energy storage event attendees so they can learn about the EPIC program, and consider participating in future open solicitations in the energy storage technical area offered by the EPIC program.

**While there is a fee to attend all the events sponsored by ESNA, there is no fee to attend this CEC workshop; however, seating space is limited so to ensure space is available to attend this workshop, attendees are recommended to register through the ESNA conference website at:**

<https://www.eventbrite.com/e/cec-workshop-epic-grants-for-energy-storage-technologies-tickets-75012812341>.

## **Workshop Scope**

This workshop will provide an opportunity for the CEC's Energy Research and Development Division to meet with early stage and commercial energy storage developers, researchers, utilities, and end users to discuss challenges in the market. The CEC will share the results from over a decade of funding energy storage research grants under the EPIC and Public Interest Energy Research programs, review anticipated upcoming energy storage grant opportunities under the EPIC Third Triennial Investment Plan, and seek input from attendees on the highest priority energy storage research needs that can support increased energy storage technology capability and flexibility for California. The information may help identify research priorities for future

grant funding opportunities as the CEC plans future research activities for 2020 and beyond.

As part of this workshop, CEC staff will host a panel discussion with prior CEC energy storage grant recipients to discuss how these grants impacted their technology growth and increased their commercial growth opportunity. The panel will also discuss the future energy storage research needs of California as the state plans for meeting all the energy goals of SB-100, AB-2514, and AB-2868.

## **Public Comment**

**Oral comments.** Staff will accept oral comments during the workshop. Comments may be limited to three minutes per speaker. Any comments may become part of the public record in this proceeding.

**Written comments.** Written comments should be submitted to Mike Gravely at [Mike.Gravely@energy.ca.gov](mailto:Mike.Gravely@energy.ca.gov) by **4:00 p.m. on November 30, 2019**. Note: the maximum file size for attachments is 10 MB. Written comments will be also accepted at the workshop, however, staff may not have time to review them before the conclusion of the meeting.

Please note that your written and oral comments, attachments, and associated contact information (e.g., your address, phone number, email address, etc.) become part of the viewable public record. This information may become available via Google, Yahoo, and any other search engines.

If you prefer, you may send a paper copy of your comments to:

California Energy Commission  
Attn: Michael Gravely  
1516 Ninth Street, MS 43  
Sacramento, CA 95814-5512

## **Public Advisor and Other Commission Contacts**

The Energy Commission's Public Advisor's Office provides the public assistance in participating in Energy Commission proceedings. For information on how to participate in this workshop, please contact the Public Advisor, Noemí Gallardo, at [publicadvisor@energy.ca.gov](mailto:publicadvisor@energy.ca.gov), (916) 654-4489 or toll free at (800) 822-6228. Please direct requests for reasonable accommodation to Yolanda Rushin at [yolanda.rushin@energy.ca.gov](mailto:yolanda.rushin@energy.ca.gov) or (916) 654-4310 at least five days in advance. Media inquiries should be directed to the Media and Public Communications Office at [mediaoffice@energy.ca.gov](mailto:mediaoffice@energy.ca.gov) or (916) 654-4989.

If you have questions on the subject matter of this meeting, please contact Mike Gravely at [Mike.Gravely@energy.ca.gov](mailto:Mike.Gravely@energy.ca.gov) or call (916) 327-1370.

## Remote Attendance

WebEx is the Energy Commission's online meeting service. When attending remotely, presentations will appear on your computer/laptop/mobile device screen and audio may be heard via the device or telephone. Please be aware that the WebEx meeting may be recorded. WebEx technical support is available at 1-866-229-3239.

**Via Computer:** Go to <https://energy.webex.com/ec>. If this event is listed, click "Join." If not, click the "Home" tab on the top left of your screen and enter Event Number **928 914 299**. When prompted, enter your name and email address. No password is needed.

The "Join Conference" menu offers a choice of audio connections:

1. To call into the meeting, select "I will call in" and follow the on-screen directions.
2. International attendees, select "Global call-in number."
3. To have WebEx call you, enter your phone number and click "Call Me." This step will not work if your number has an extension.
4. For Internet audio: If you have a broadband connection, a headset, or a computer microphone and speakers, you may use VoIP (Internet audio). Go to the audio menu and click "Use Computer Headset," then "Call Using Computer."

**Via Telephone:** (no visual presentation): Call 1-866-469-3239 (toll free in the U.S. and Canada) and when prompted, enter the meeting number **928 914 299**. International callers may select a number from <https://energy.webex.com/energy/globalcallin.php>.

**Via Mobile Device:** Download the application from [www.webex.com/products/web-conferencing/mobile.html](http://www.webex.com/products/web-conferencing/mobile.html).

**Muting:** We greatly appreciate your cooperation in reducing background noise on the audio connection by muting your line when you are not speaking. Mute your line rather than placing your phone on hold. Using WebEx, right click on your name in the panelists or attendees list and select "Mute." If you are using a telephone connection, press "\*6" once to mute and again to unmute.

## Availability of Documents

Documents and presentations for this meeting will be available at <https://efiling.energy.ca.gov/Lists/DocketLog.aspx?docketnumber=19-ERDD-01>.

Dated: **October 22, 2019**, at Sacramento, California

Originally signed by:

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Laurie ten Hope  
Deputy Director

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