

| <b>DOCKETED</b>         |  |
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| <b>Docket Number:</b>   | 20-MISC-01   |
| <b>Project Title:</b>   | 2020 Miscellaneous Proceedings.  |
| <b>TN #:</b>            | 242296   |
| <b>Document Title:</b>  | Notice of Staff Workshop on Research to Assess Long-duration Energy Storage Deployment Scenarios   |
| <b>Description:</b>     | The California Energy Commission (CEC) will host a workshop to receive comments on research activities for the grant agreement "Assessing Long-duration Energy Storage Deployment Scenarios to Meet California's Energy Goals" awarded to Energy and Environmental Economic, Inc. (E3) under the Electric Program Investment Charge (EPIC). This grant assesses the role of energy storage, including long duration energy storage, in meeting California's clean energy goals. - March 29, 2022; 10:00 a.m. |
| <b>Filer:</b>           | Jeffrey Sunquist   |
| <b>Organization:</b>    | California Energy Commission   |
| <b>Submitter Role:</b>  | Commission Staff   |
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**CALIFORNIA ENERGY COMMISSION**715 P Street  
Sacramento, California 95814[energy.ca.gov](http://energy.ca.gov)

CEC-70 (Revised 11/2021)

*IN THE MATTER OF:**Analyzing Long Duration Energy Storage Scenarios*

Docket No. 20-MISC-01

NOTICE OF REMOTE-ACCESS  
WORKSHOP

RE: Storage Scenarios

**Notice of Staff Workshop on Research to Assess Long-duration Energy Storage Deployment Scenarios  
March 29, 2022**

10:00 a.m. – 12:00 p.m.

**Remote Access Only**

The California Energy Commission (CEC) will host a workshop to receive comments on research activities for the grant agreement "Assessing Long-duration Energy Storage Deployment Scenarios to Meet California's Energy Goals" awarded to Energy and Environmental Economic, Inc. (E3) under the Electric Program Investment Charge (EPIC). This grant assesses the role of energy storage, including long duration energy storage, in meeting California's clean energy goals. This workshop builds upon E3's presentation at the June 30, 2021, workshop entitled "Proposed Development for Long Duration Energy Storage Scenarios," which can be found on the CEC's [event page](https://www.energy.ca.gov/event/workshop/2021-06/staff-workshop-proposed-development-long-duration-energy-storage-scenarios) at <https://www.energy.ca.gov/event/workshop/2021-06/staff-workshop-proposed-development-long-duration-energy-storage-scenarios>.

The workshop will be held remotely, consistent with Assembly Bill 361 (Rivas, Chapter 165, Statutes of 2021) as extended by Governor Newsom's Executive Order (EO) N-1-22 to improve and enhance public access to state agency meetings during the COVID-19 pandemic. The public can participate in the workshop consistent with the direction provided below. Please note that the CEC aims to begin promptly at the start time posted and the end time is an estimate based on the agenda proposed. The workshop may end sooner or later than the posted end time depending on various factors.

**Agenda**

E3's project team will present their preliminary scenario analysis of California's energy grid with respect to the need for energy storage, including long-duration energy storage, to reach California's clean energy goals established by Senate Bill 100 (SB 100) (De León, 2018). Input from

vendors, researchers, community stakeholders, and other interested parties will guide the team's upcoming development of the final scenario to assess California's energy storage needs.

The presentation will:

1. Review the project scope and the purpose of the preliminary bulk system scenario analysis
2. Deliver results of the preliminary analysis
3. Provide lessons learned from the preliminary analysis to inform New Modeling Toolkit functionality
  - Initial demonstration of New Modeling Toolkit functionality
4. Deliver results of the preliminary University of California, San Diego Zero-Carbon Microgrid Cases Study

CEC staff and the E3 project team will seek feedback from the public, stakeholders, and attendees on the following questions:

1. What feedback do you have for the New Modeling Toolkit?
2. What questions do you have about the final scenario as presented?

## **Background**

California has established aggressive goals for greenhouse gas (GHG) reductions, both in the electric sector and economy wide. In 2018, Governor Brown extended those goals by signing SB 100, which requires all retail electricity to be supplied by zero-carbon resources by 2045, and an executive order calling for the state to achieve carbon neutrality by 2045 (EO B-55-18). Previous studies by E3 have indicated that GHG reductions of 90 percent or more in the electricity sector are achievable with today's technology. This includes a mix of solar photovoltaics; wind resources from in state, out of state, and offshore; and existing energy storage technologies such as lithium-ion batteries and pumped hydro or compressed air. However, reaching a GHG reduction of 100 percent may require newer technologies, including different types of long-duration energy storage.

This project will evaluate scenarios with different mixtures of existing and emerging long-duration storage technologies, including thermal, kinetic, and chemical energy storage. The scenarios may also include other emerging energy technologies, including offshore wind, electrolytic hydrogen, carbon capture and sequestration, and renewable gas. Each of these technologies has different characteristics in terms of performance, location (optimal siting), cost, and other externalities and energy system impacts. In addition to developing scenarios, E3 is conducting further development of grid modeling tools that will be necessary to assess the growing portfolio of energy technologies.

## **Remote Attendance Instructions**

The meeting workshop may be accessed by clicking the Zoom link below or visiting [Zoom](https://join.zoom.us) at <https://join.zoom.us> and entering the ID and password for the workshop listed below. If you

experience difficulties joining, contact Zoom at (888) 799-9666 ext. 2, or the Public Advisor at [publicadvisor@energy.ca.gov](mailto:publicadvisor@energy.ca.gov) or at (916) 957-7910.

**Link to Workshop:**

<https://energy.zoom.us/j/92265314298?pwd=Uk04VUluUFNESWpEMHZORUJyMVZnQT09>

**Workshop ID:** 92265314298

**Workshop Password:** storage

Use the “raise hand” feature to indicate you want to speak and the event facilitator will indicate when your line is open and ready for you to make comment.

**To Participate by Telephone**, dial (213) 338-8477 or (877) 853- 257 (Toll Free). When prompted, enter the ID: 92265314298. To comment, dial \*9 to “raise your hand” and \*6 to mute/unmute your phone line.

**Zoom’s closed captioning service** will be enabled for the meeting. Attendees can use the service by clicking on the “live transcript” icon and then choosing either “show subtitle” or “view full transcript”. The closed captioning service can be stopped by exiting out of the “live transcript” or selecting the “hide subtitle” icon. Closed captioning cannot be exited by phone.

**Public Comment**

**Oral comments** will be accepted at the end of the workshop. Comments may be limited to three minutes or less per speaker and one person per organization. If participating via Zoom’s online platform, use the “raise hand” feature so the administrator can announce your name and unmute you. If you are participating by telephone, press \*9 to “raise your hand” and \*6 to mute/unmute.

**Written comments** must be submitted to the Docket Unit by 5:00 p.m. on April 12, 2022.

Written and oral comments, attachments, and associated contact information (including address, phone number, and email address) will become part of the public record of this proceeding with access available via any internet search engine.

The CEC encourages the use of its electronic commenting system. Visit the [e-commenting page](https://efiling.energy.ca.gov/EComment/EComment.aspx?docketnumber=20-MISC-01) at <https://efiling.energy.ca.gov/EComment/EComment.aspx?docketnumber=20-MISC-01>, which links to the comment page for this docket. Enter your contact information and a comment title describing the subject of your comment(s). Comments may be included in the “Comment Text” box or attached as a downloadable, searchable document in Microsoft® Word or Adobe® Acrobat®. The maximum file size allowed is 10 MB.

Written comments may be submitted by email. Include docket number 20-MISC-01 and 2020 Miscellaneous Proceeding in the subject line and email to [docket@energy.ca.gov](mailto:docket@energy.ca.gov).

A paper copy may be sent to:

California Energy Commission

Docket Unit, MS-4  
Docket No. 20-MISC-01  
715 P Street  
Sacramento, California 95814

### **Public Advisor and Other CEC Contacts**

The CEC's Public Advisor provides the public with assistance in participating in CEC proceedings. For information about how to participate in this workshop or to request interpreting services or other reasonable modification and accommodations, reach out by phone at (916) 957-7910 or via email at [publicadvisor@energy.ca.gov](mailto:publicadvisor@energy.ca.gov). Requests for interpreting services, reasonable modifications and accommodations should be made as soon as possible, but at least five days in advance of the workshop. The CEC will work diligently to meet all requests based on the availability of the service or resource requested.

**Direct media inquiries** to [mediaoffice@energy.ca.gov](mailto:mediaoffice@energy.ca.gov) or (916) 654-4989.

**Direct general or technical subject inquiries** to Jeffrey Sunquist at [jeffrey.sunquist@energy.ca.gov](mailto:jeffrey.sunquist@energy.ca.gov) or (916) 776-0816.

### **Availability of Documents**

Documents and presentations for this meeting will be available at the CEC's [docket log](#) for docket number 20-MISC-01 at <https://efiling.energy.ca.gov/Lists/DocketLog.aspx?docketnumber=20-MISC-01>.

When new information is posted, an email will be sent to those on the epic and research list servers. To receive these notices, manage list server subscriptions at [CEC List Servers](#), <https://ww2.energy.ca.gov/listservers/index cms.html>.

Dated: March 15, 2022, at Sacramento, California

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Jonah Steinbuck  
Deputy Director, Energy Research and Development Division

List Servers: epic, research