

<b>DOCKETED</b>	
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<b>Project Title:</b>	2020 Miscellaneous Proceedings.
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<b>Document Title:</b>	Staff Workshop on the Proposed Development for Long Duration Energy Storage Scenarios
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**CALIFORNIA ENERGY COMMISSION**

1516 Ninth Street  
Sacramento, California 95814

Website: [www.energy.ca.gov](http://www.energy.ca.gov)

CEC-70 (Revised 5/2020)

*IN THE MATTER OF:*

*Proposed Development for Long Duration  
Energy Storage Scenarios*

Docket No. 20-MISC-01

NOTICE OF REMOTE-ACCESS  
WORKSHOP

RE: Storage Scenarios

**Notice of Staff Workshop**  
**June 30, 2021**  
1:00 PM – 3:00 PM  
**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 is assessing the role of energy storage, including long duration energy storage, in meeting California's future clean energy goals.

The workshop will be held remotely, consistent with Executive Orders N-25-20 and N-29-20 and the recommendations from the California Department of Public Health to encourage physical distancing to slow the spread of COVID-19. The public can participate in the workshop consistent with the direction in these executive orders. Instructions for remote participation via Zoom are below.

**Agenda**

E3's project team will present their baseline 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 preliminary scenarios to assess California's energy storage needs.

The presentation will:

1. Propose preliminary analysis scenarios to study the value of long-duration storage under different policy futures.

2. Establish resource and demand sensitivities, such as variability due to climate change or other external factors, or due to use of alternatives to storage such as load flexibility in the scenario design.
3. Provide an update on emerging technology review and data development.
4. Explore the preliminary analysis & modeling experiments to understand the value of long-duration storage.

CEC staff and the E3 project team will seek feedback from the public, stakeholders, and attendees. In particular, please consider the following questions:

- Are any additional sensitivities needed to study the value of long-duration storage?
- Which other specific items should be added, if at all, to the technology review?
- What are your thoughts about initial cost projections and operational characterization of emerging technologies?
- What questions do you have about the analysis plan as presented?

## **Background**

California has established aggressive goals for greenhouse gas (GHG) reductions, both in the electric sector and economywide. 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% or more in the electricity sector are achievable with today's technology at a projected reasonable cost. This includes a mix of solar PV, wind resources from in state and out of state as well as offshore, and existing energy storage technologies such as lithium-ion batteries and pumped hydro or compressed air. However, reaching a GHG reduction of 100% 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 renewable hydrogen, carbon capture and sequestration (CCS), renewable natural gas (RNG), and advanced nuclear energy such as small modular reactors (SMRs). 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 which will be necessary to assess the growing portfolio of energy technologies.

## **Remote Attendance**

Participants may join the workshop by clicking on the link below. To comment use the "raise your hand" feature and the facilitator will open your line and indicate when you can speak.

## **Workshop Link:**

<https://energy.zoom.us/j/94383134094?pwd=Mm5CdVQwZ0FVaFQ2RHNXUIA1dE1BZz09>

**Workshop Password:** 558490

**Workshop ID:** 994 8681 2534

If you experience difficulties joining, contact Zoom at (888) 799-9666 ext. 2, or the Public Advisor's Office via email or phone.

**To Participate by Telephone:**

To participate by telephone, dial (213) 338-8477 or (888) 475-4499 (toll free). When prompted, enter the Zoom ID for the session: 994 8681 2534. To comment, dial \*9 to "raise your hand" and \*6 to mute/unmute your phone line.

**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. See detailed instructions below.

**Written comments** must be submitted to the Docket Unit by 5:00 p.m. on July 14, 2021. 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 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 also be submitted by email.** Include docket number 20-MISC-01 and "Initial Public Workshop for Comments on Long Duration Energy Storage Scenarios" in the subject line and email to [docket@energy.ca.gov](mailto:docket@energy.ca.gov).

A paper copy may also be sent to:

California Energy Commission  
Docket Unit, MS-4  
Docket No. 20-MISC-01  
1516 Ninth Street  
Sacramento, California 95814-5512

**Public Advisor and Other CEC Contacts**

The CEC's Public Advisor's Office provides the public with assistance in participating in CEC proceedings. For information on participation or to request interpreting services or reasonable

accommodations, please contact the Public Advisor's Office at [publicadvisor@energy.ca.gov](mailto:publicadvisor@energy.ca.gov), or by phone at (916) 654-4489, or toll free at (800) 822-6228. Requests for interpreting services and reasonable accommodations should be made at least five days in advance. The CEC will work diligently to accommodate all requests.

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

**Direct 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 [e-comment page 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: Thursday, June 16 2021, at Sacramento, California

List Servers:  
epic  
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