

DOCKETED	
Docket Number:	20-MISC-01
Project Title:	2020 Miscellaneous Proceedings.
TN #:	235686
Document Title:	Initial Public Workshop for Comments on Long Duration Energy Storage Scenarios
Description:	The California Energy Commission (CEC) will host a remote-access workshop to receive public comments to inform research activities for two recently funded grants under the Electric Program Investment Charge (EPIC). These grants will be assessing the role of energy storage and long duration energy storage in meeting California's future clean energy goals.
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Submission Date:	11/18/2020 4:28:55 PM
Docketed Date:	11/18/2020

CALIFORNIA ENERGY COMMISSION

1516 Ninth Street
Sacramento, California 95814

Website: www.energy.ca.gov

CEC-70 (Revised 5/2020)



IN THE MATTER OF:

*Initial Public Workshop for Comments on
Long Duration Energy Storage Scenarios*

Docket No. [20-MISC-01](#)

NOTICE OF REMOTE-ACCESS
WORKSHOP

RE: [Storage Scenarios](#)

Notice of Staff Workshop
December 3, 2020
1:00 p.m. – 4:00 p.m.
Remote Access Only

The California Energy Commission (CEC) will host a remote-access workshop to receive public comments to inform research activities for two recently funded grants under the Electric Program Investment Charge (EPIC). These grants will be assessing the role of energy storage and 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

California Energy Commission (CEC) staff is seeking input from energy and environmental researchers, community stakeholders, and other interested parties to inform the direction of two grant projects, led by the University of California, Merced (EPC-19-060) and Energy and Environmental Economics, Inc. (EPC-19-056). The grants will assess the deployment needs for different durations of energy storage to optimally meet California's clean energy goals established by Senate Bill 100 (SB 100) (De León, 2018). The assessments will include developing and comparing different scenarios that evaluate emerging energy storage technologies with varying duration, performance, reliability, cost, and applications. The assessment will include the impact on future grid reliability, resiliency, and cost to ratepayers.

The two project teams will present on the following topics:

1. The role of long-duration energy storage in meeting the grid balancing, grid management, and overall grid reliability when the state achieves a 100 percent zero-carbon grid by 2045.

2. Determining reasonable cost targets for different long-duration energy storage technologies to be competitive in different applications and other alternatives to energy storage, such as additional generation, higher concentrations of distributed resources, and higher concentrations of demand response.
3. The role of customer-owned, third-party owned, and utility-owned energy storage systems, and how these different ownership models will impact cost, reliability and resilience in different scenarios.
4. A comparison of different long-duration energy storage systems to determine the best mix needed to support grid operations.
5. Practical and computational challenges in modeling grid conditions and interactions between various energy resources.
6. Project-specific tasks, timelines, and strategies for developing storage scenarios.

A detailed meeting [agenda](https://www.energy.ca.gov/event-calendar) will be posted prior to the workshop at <https://www.energy.ca.gov/event-calendar>.

Background

Energy storage, including different levels of long-duration energy storage, is expected to be a critical element in enabling the state to achieve its 100 percent zero-carbon electricity goal by 2045. Market research completed by CEC staff indicates that several emerging energy storage technologies may provide substantial cost savings when compared to the current energy storage cost. Research by the Department of Energy is aiming to support new and emerging technologies that can provide a price point that is equal to 20 percent of the current cost. This price point will allow different levels of long duration energy storage to make a substantial impact on the technology mix of the future grid. These two research grants will assess different combinations of energy storage durations to determine how to optimize the future selection of energy storage for beneficial grid operation, the cost of these energy storage systems, and the emerging technologies that show the most promise to best support the future California grid.

Prior to 2020, other than pumped-hydro energy storage, there has been minimal assessment of long-duration energy storage that captures the benefit expected from the many different emerging energy storage technologies. While California has completed studies to address how to reach its low and zero-carbon goals with existing technologies, the studies have not addressed long-duration energy storage or the use of a mix of energy storage technologies. Analysis is required to determine the amount of long-duration energy storage needed and the duration times of those systems to support a zero-carbon future. Such information is critical to establishing the energy storage market needed to meet the 2045 clean energy goals.

Public Comment

Oral Comments:

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:

Written comments must be submitted to the Docket Unit by 5:00 p.m. on December 17, 2020. 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.

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 Public Advisor Noemí O. Gallardo at publicadvisor@energy.ca.gov, 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.

Media inquiries should be directed to mediaoffice@energy.ca.gov or (916) 654-4989.

Technical subject inquiries should be directed to Jeffrey Sunquist at jeffrey.sunquist@energy.ca.gov or (916) 327-1623.

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/99486812534?pwd=MUROS3V3RTBkZEIzOXdiS8zK2p5Zz09>

Meeting ID: 994 8681 2534

Meeting password: 770443

The meeting may also be accessed at [Zoom](https://join.zoom.us), <https://join.zoom.us>, by entering the unique Meeting ID and password for each session listed above.

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

To Participate by Telephone Only:

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

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 serves. To receive these notices, manage list serve subscriptions at [CEC List Servers](#), <https://ww2.energy.ca.gov/listservers/index cms.html>.

Dated: Thursday, November 5, 2020, at Sacramento, California

List Servers:

epic listserv

research listserv