

DOCKETED

Docket Number:	19-ERDD-01
Project Title:	Research Idea Exchange
TN #:	240252
Document Title:	Notice of Staff Workshop on Cloud Seeding for Precipitation Enhancement
Description:	November 16, 2021; 9:00 a.m.
Filer:	Patty Paul
Organization:	California Energy Commission
Submitter Role:	Commission Staff
Submission Date:	11/4/2021 11:28:58 AM
Docketed Date:	11/4/2021

CALIFORNIA ENERGY COMMISSION

715 P Street
Sacramento, California 95814

energy.ca.gov

CEC-70 (Revised 2/2021)

*IN THE MATTER OF:*

*Cloud Seeding for Precipitation
Enhancement in California*

Docket No. 19-ERDD-01

NOTICE OF REMOTE-ACCESS
WORKSHOP

RE: Workshop on Cloud Seeding

Notice of Staff Workshop on Cloud Seeding for Precipitation Enhancement

November 16, 2021

9:00 a.m. – 12:00 p.m.

Remote Access Only

The California Energy Commission (CEC), in collaboration with the California Department of Water Resources (DWR), will host a workshop to explore the science and current practice of cloud seeding for precipitation enhancement for augmenting water resources and hydropower potential in California.

The workshop will be held remotely, consistent with Assembly Bill 361 (Rivas, Chapter 165, Statutes of 2021) to improve and enhance public access to state agency meetings during the COVID-19 pandemic and future emergencies by allowing broader access through teleconferencing options. The public can participate in the meeting 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

The workshop will provide an opportunity for government agencies, utilities, the public, and other stakeholders to learn about and comment on scientific advances in cloud seeding, the use of cloud seeding to increase precipitation in California, and considerations regarding developing research on potential future applications to address climate-related challenges in managing California's energy and water resources. Presentations will be given by staff from research institutions, state agencies, energy and water utilities, a non-profit, and the cloud seeding industry. There will also be a panel discussion about frontiers in cloud seeding research and technical aspects of its application.

A detailed meeting agenda will be posted before the workshop to the [19-ERDD-01 Docket](https://efiling.energy.ca.gov/Lists/DocketLog.aspx?docketnumber=19-ERDD-01) at <https://efiling.energy.ca.gov/Lists/DocketLog.aspx?docketnumber=19-ERDD-01>

Background

As applied in California, cloud seeding is the strategic dispersal of aerosols in clouds to stimulate more precipitation than would otherwise occur. Wintertime orographic cloud seeding has been practiced in the state since the 1950s ([DWR 2016](#)),¹ typically by energy and water utilities. The CEC has sponsored cloud seeding research in the past (e.g., [Hunter 2007](#)),² but important research questions remain.

Recent scientific advances provide a much better ability to understand the mechanisms of cloud seeding and assess its effectiveness compared to a decade ago (e.g., [Flossmann et al. 2019](#)).³ These discoveries raise the possibility of renewed scientific investigation of cloud seeding in California for the purpose of augmenting available hydropower and water resources under climate change.

Remote Attendance Instructions

The workshop may be accessed by clicking the Zoom link below or visiting [Zoom](#) 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 or by phone at (916) 957-7910

Link to Workshop: [Cloud Seeding in California](#) at

<https://energy.zoom.us/j/97397796162?pwd=NVDibk1nM1k5b2lwKzQvWU9iQ0V0QT09>

Workshop ID: 973 9779 6162

Workshop Password: cloud

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.

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 closing out of the “live transcript” or selecting the “hide subtitle” icon. [1](#)

¹ California Department of Water Resources. 2016. *Precipitation Enhancement: A Resource Management Strategy of the California Water Plan*. July 29th.

² Hunter, S.M., 2007. *Optimizing Cloud Seeding for Water and Energy in California*. CEC-500-2007-008. Prepared for the California Energy Commission.

³ Flossmann, A. I., Manton, M., Abshaev, A., Brientjes, R., Murakami, M., Prabhakaran, T., & Yao, Z. 2019. Review of Advances in Precipitation Enhancement Research, *Bulletin of the American Meteorological Society*, 100(8), 1465-1480.

To Participate by Telephone, dial (213) 338-8477 (Toll) or (877) 853-5257 (Toll Free) or (888) 475-4499 (Toll Free). International numbers are available at: <https://energy.zoom.us/j/acz60Zxfks>. When prompted, enter the ID: 973 9779 6162. 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.

Written comments must be submitted to the Docket Unit by 5:00 p.m. on November 29, 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=19-ERDD-01>) for [this docket](#). Enter your contact information and a comment title describing the subject of your comment(s), such as "Cloud Seeding for Precipitation Enhancement". 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 19-ERDD-01 and Cloud Seeding for Precipitation Enhancement in the subject line and email to docket@energy.ca.gov.

A paper copy may be sent to:

California Energy Commission
Docket Unit, MS-4
Docket No. 19-ERDD-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 via email at publicadvisor@energy.ca.gov or by phone at (916) 957-7910. 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 or (916) 654-4989.

Direct technical subject inquiries to Mithra Moezzi at mithra.moezzi@energy.ca.gov or (916) 891-8619.

Direct general inquiries regarding the Workshop on Cloud Seeding to Mithra Moezzi at mithra.moezzi@energy.ca.gov or (916) 891-8619.

Availability of Documents

Documents and presentations for this meeting will be available at docket number [19-ERDD-01](#) at <https://efiling.energy.ca.gov/Ecomment/Ecomment.aspx?docketnumber=19-ERDD-01>. When new information is posted, an email will be sent to those on the list servers provided below in this notice. Manage existing list servers or sign up for others at [CEC List Servers](#), at <https://ww2.energy.ca.gov/listservers/index cms.html>.

Dated: November 3, 2021 at Sacramento, California



Jonah Steinbuck
Deputy Director

List Servers: climate change, research