DOCKETED	
Docket Number:	19-ERDD-01
Project Title:	Research Idea Exchange
TN #:	224616
Document Title:	Notice of Staff Workshop - Research Needs for Thin-film Photovoltaic Technologies
Description:	September 7, 2018 Notice of Staff Workshop Research Needs for Thin-film Photovoltaic Technologies
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Organization:	California Energy Commission
Submitter Role:	Commission Staff
Submission Date:	8/28/2018 10:12:37 AM
Docketed Date:	8/28/2018



# Notice of Staff Workshop

California Energy Commission staff will conduct a scoping workshop to identify research needs and opportunities for thin-film solar photovoltaic (PV) systems and new high-value applications:

9:00 AM
9:00 AM
CALIFORNIA ENERGY COMMISSION
1516 Ninth Street
First Floor, Art Rosenfeld Hearing Room
Sacramento, California
(Wheelchair Accessible)

Remote Access Available by Computer or Phone via WebEx™ (Instructions below)

# **Background**

The 2018-2020 Electric Program Investment Charge (EPIC) Triennial Investment Plan under Strategic Initiative 4.1.1 "Advance the Material Science, Manufacturing Process, and In-Situ Maintenance of Thin-film PV Technologies" identified the need to facilitate technological advancements in thin-film solar PV systems, enable scaling while addressing constraints in cell efficiency, supply chain, materials scarcity and toxicity, and to create new market applications for thin-film PV technologies with unique properties to increase renewables penetration and to lower the levelized cost of energy (LCOE).

The Energy Commission plans to release a solicitation under the 2018-2020 EPIC Triennial Investment Plan to address the challenges faced by conventional thin-film PV technologies, including cadmium telluride, copper indium gallium selenide, and amorphous silicon, and emerging thin-film PV technologies, including perovskites,

organic/polymer, quantum dots, and III-V multi-junction solar cells. The purpose of this scoping workshop is to solicit feedback from stakeholders, experts, and general public to determine how the Energy Commission funding could leverage existing research efforts aiming to advance market readiness of thin-film technologies, reduce levelized cost of electricity (LCOE), and increase solar energy penetration in California.

## Agenda

The Energy Commission plans to discuss the following topics at this workshop to inform implementation of the 2018-2020 EPIC Triennial Investment Plan:

- Overview of the purpose and objectives of the future Energy Commission solicitation addressing Strategic Initiative 4.1.1. "Advance the Material Science, Manufacturing Process, and In-Situ Maintenance of Thin-film PV Technologies."
- 2. Prospective research concepts and strategies to support advancements of thinfilm PV technologies, extend their application range while increasing LCOE equivalence between PV systems and conventional sources of electricity.
- Expert opinion on research needs, performance metrics, and economic viability
  of conventional and emerging thin-film PVs in support of growth of their share on
  solar market.

#### **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 the Dockets Unit by 5:00 p.m. on September, 12, 2018. Written comments will be also accepted at the workshop, however, the Commission 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) become part of the viewable public record. This information may become available via Google, Yahoo, and any other search engines.

The Energy Commission encourages use of its electronic commenting system. Visit the website at <a href="https://efiling.energy.ca.gov/Ecomment/Ecomment.aspx?docketnumber=19-ERDD-01">https://efiling.energy.ca.gov/Ecomment/Ecomment.aspx?docketnumber=19-ERDD-01</a>.

This will take you to the page for adding comments to this docket. Please enter your contact information, any organization name, and a comment title describing the subject of your comments. You may include comments in the box titled "Comment Text" or

attach a file in a downloadable, **searchable format** in Microsoft® Word (.doc, .docx) or Adobe® Acrobat® (.pdf). Maximum file size is 10 MB.

Written comments may also be submitted by emailing them (include docket number 19-ERDD-01) to the Docket Unit at <a href="mailto:docket@energy.ca.gov">docket@energy.ca.gov</a>.

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

California Energy Commission
Docket Unit, MS-4
Re: Docket No. 19-ERDD-01
1516 Ninth Street
Sacramento, CA 95814-5512

### **Public Adviser and Other Commission Contacts**

The Energy Commission's Public Adviser's Office provides the public assistance in participating in Energy Commission proceedings. If you want information on how to participate in this forum, please contact the Public Adviser, Alana Mathews, at PublicAdviser@energy.ca.gov or (916) 654-4489, or toll free at (800) 822-6228.

If you have a disability and require assistance to participate, please contact Poneh Jones at poneh.jones@energy.ca.gov or (916) 654-4425 at least five days in advance.

Media inquiries should be sent to the Media and Public Communications Office at <a href="mediaoffice@energy.ca.gov">mediaoffice@energy.ca.gov</a> or (916) 654-4989.

If you have questions on the subject matter of this meeting, please contact Katharina Snyder at Katharina.Snyder@energy.ca.gov or (916) 327-2201.

#### Remote Attendance

You may participate in this meeting through WebEx, the Energy Commission's online meeting service. Presentations will appear on your computer screen, and you may listen to audio via your computer or telephone. Please be aware that the meeting may be recorded.

VIA COMPUTER: Go to <a href="https://energy.webex.com/ec">https://energy.webex.com/ec</a>. If this event is shown on the list of events, click on its "Join" link. If it is not listed, click the "Unlisted Events" link on the left of your screen and enter the meeting number 921 985 697. When prompted, enter your name and email address. No meeting password is needed.

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- 1. To call into the meeting: Select "I will call in" and follow the on-screen directions.
- 2. International Attendees: Click on the "Global call-in number" link.

- 3. To have WebEx call you: Enter your phone number and click "Call Me."
- 4. To listen over the computer: If you have a broadband connection, and a headset or a computer microphone and speakers, you may use VoIP (Internet audio) by going to the Audio menu, clicking on "Use Computer Headset," then "Call Using Computer."

<u>VIA TELEPHONE ONLY (no visual presentation)</u>: Call **1-866-469-3239** (toll-free in the U.S. and Canada). When prompted, enter the unique meeting number above. International callers may select their number from https://energy.webex.com/energy/globalcallin.php.

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Please be aware that WebEx audio and on-screen activity may be recorded. WebEx Technical Support is available at **1-866-229-3239**.

#### Muting

We greatly appreciate your cooperation in reducing unwanted 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, you may mute yourself by right clicking on your name in the panelists or attendees list and selecting "Mute." If you are only 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 online at <a href="https://efiling.energy.ca.gov/Lists/DocketLog.aspx?docketnumber=19-ERDD-01">https://efiling.energy.ca.gov/Lists/DocketLog.aspx?docketnumber=19-ERDD-01</a>.

August 28, 2018

Laurie ten Hope Deputy Director Energy Research and Development Division

Mail Lists: EPIC listserv Research listserv