

<b>DOCKETED</b>	
<b>Docket Number:</b>	17-HYD-01
<b>Project Title:</b>	Renewable Hydrogen Transportation Fuel Production
<b>TN #:</b>	227420
<b>Document Title:</b>	Notice of WEBINAR2 Renewable Hydrogen Production Plant Deployment Roadmap – Interim Findings and Implications
<b>Description:</b>	(Superseded by TN 227417) NOTICE: April 4, 2019 1 PM Webinar 2 Under ARFVTP Agreement 600-17-008, UC Irvine Advanced Power and Energy Program (APEP) is reporting on a research study gathering California commercial hydrogen fueling data to support a mapping model with several scenarios that will produce optimized 5-year forecasts on commercial renewable hydrogen production needs in California.
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<b>Organization:</b>	California Energy Commission
<b>Submitter Role:</b>	Commission Staff
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**CALIFORNIA ENERGY COMMISSION**

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In the matter of:	)	Docket No. 17-HYD-01
	)	
Renewable Hydrogen Generation Plant	)	NOTICE OF WEBINAR
Deployment Roadmap	)	Renewable Hydrogen Production
	)	Plant Deployment Roadmap –
	)	Interim Findings and Implications

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## Notice of Webinar on Renewable Hydrogen Production Plant Deployment Roadmap

The California Energy Commission will conduct the second public webinar with the Advanced Power and Energy Program (APEP) at the University of California, Irvine (UCI) to report on the interim findings and forecasted implications of the California Renewable Hydrogen Production Plant Deployment Roadmap (Roadmap).

The Energy Commission is seeking input from stakeholders to inform the finalization of the Roadmap.

The workshop will be held on:

**April 4, 2019**

1:00 p.m. – 3:00 p.m.

**Remote Access by Computer or Phone via WebEx™**

### Background

Some hydrogen as a fuel for zero emission vehicles is made from fossil fuel, while some is renewable. Senate Bill 1505 (Lowenthal, Chapter 877, Statutes of 2006) requires 33.3 percent of hydrogen dispensed at refueling stations operating in California to be renewable. Recent research suggests California will need between 5,500 and 7,400 kg/day of retail renewable hydrogen in the near term. In 2018, grant funds from the Energy Commission Alternative and Renewable Fuel and Vehicle Technology Program (ARFVTP) were competitively awarded as incentives for the commercial development of two renewable hydrogen generation facilities to make 1,000 kg/day of renewable hydrogen in California. As follow-up, the ARFVTP supported a contract to explore the local renewable hydrogen needs of the various California regions for retail fueling which is detailed in a Renewable Hydrogen Production Plant Deployment Roadmap. Under ARFVTP Agreement 600-17-008, UCI is conducting a

research study gathering California commercial hydrogen fueling data to support a mapping model with several scenarios that will produce optimized 5-year forecasts all the way to 2050. The Roadmap will incorporate lessons learned from existing industry initiatives and projects to develop renewable hydrogen production facilities in California and forecast modeling techniques to make heat maps by year. These scientific estimates support both the Air Resources Board and Energy Commission activities, including the allocation of ARFVTP funding and reporting to the Legislature.

This meeting will provide the public with an update on this active research project. The Roadmap is expected to be finished during 2019. UCI researchers defined the technologies and ingredients used to make renewable hydrogen in a November 2018 webinar, contents of which are found in the moderated public internet bulletin board called a “docket” at <http://www.energy.ca.gov/altfuels/2017-HYD-01/>.

In this second webinar, UCI researchers will report on the interim findings and implications of the study after completing 40 interviews with hydrogen industry companies and experts. They will explain the study’s preliminary, non-optimized results for only one 5-year projection, including a hydrogen demand forecast, organic feedstock supply, feedstock cost, electricity cost for electrolyzers, environmental credit scenarios, capital investment requirements, hydrogen pump price scenarios, and siting scenarios for each production technology.

The goal of this second webinar is for hydrogen industry stakeholders to hear about UCI’s ongoing work and for UCI to receive feedback on the implications of interim findings from stakeholders. The roadmap will provide immediate insight into: the size, location, technology, costs, and input feedstocks required for the early fuel cell electric vehicle (FCEV) market. The computer model will evaluate and present, in color-coded maps, comparisons of the distribution resources of on-road transportation versus pipeline distribution versus on-site generation based on existing resources and projections. Further, by the end of the project, the roadmap will have a range of projections about the mature FCEV market fuel supply facilities development and to meet the goals of SB 1505. Furthermore, some station developers have informed Energy Commission staff that it is their mission to dispense more renewable hydrogen than the minimum requirement, meaning even more sources of renewable hydrogen may be necessary.

## **Public Comment**

Oral comments will be accepted during the workshop. Comments may be limited to three minutes per speaker and any comments will become part of the public record in this proceeding.

Written comments should be submitted by 5:00 p.m. **April 18, 2019**. Please submit comments to the Energy Commission using the e-commenting feature by accessing the Commission’s TRANSPORTATION webpage, <http://www.energy.ca.gov/altfuels/2017-HYD-01/> and click on the “Submit eComment” link. A full name, e-mail address, comment title, and either a comment or an attached document (.doc, .docx, or .pdf format) is mandatory. After a challenge-response test

is used by the system to ensure that responses are generated by a human user and not a computer, click on the “Agree & Submit Your Comment” button to submit the comment to the Energy Commission’s Docket Unit.

Please note that written comments, attachments, and associated contact information included within the documents and attachments (e.g., your address, phone number, email address, etc.) become part of the viewable public record. This information may become available via Google, Yahoo and any other search engines.

Interested stakeholders are encouraged to use the electronic filing system described above to submit comments. If you are unable to submit electronically, a paper copy of your comments may be sent to:

California Energy Commission  
Re: Docket No. 17-HYD-01  
1516 Ninth Street, Docket Unit, MS-4  
Sacramento, CA 95814-5512

Or e-mail your comments to [docket@energy.ca.gov](mailto:docket@energy.ca.gov) and indicate the proceeding title – “Renewable Hydrogen Generation Plant Deployment Roadmap, Docket No. 17-HYD-01” or the abbreviation “UCI APEP RH2 Webinar2 17-HYD-01” in the subject line.

## **Public Adviser and Other Energy 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](mailto:publicadviser@energy.ca.gov) or (916) 654-4489 or toll free at (800) 822-6228. Media inquiries should be sent to the Media and Public Communications Office at [mediaoffice@energy.ca.gov](mailto:mediaoffice@energy.ca.gov) or (916) 654-4989. If you have questions on the subject matter of this meeting, please contact Akasha Kaur Khalsa at [akasha.khalsa@energy.ca.gov](mailto:akasha.khalsa@energy.ca.gov) or (916) 657-4854.

## **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.

### **To join a meeting:**

VIA COMPUTER: [energy.webex.com](http://energy.webex.com) and enter meeting number **928 541 372** or click this event address for attendees <https://energy.webex.com/energy/onstage/g.php?MTID=e1055565e4f4da03d8902b28d5c77f459> .

There is no password. When prompted, enter your name and email address.

The “Join Conference” menu will offer you a choice of audio connections:

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.”

VIA TELEPHONE ONLY (no visual presentation): Call 1-866-469-3239 (toll-free in the U.S. and Canada). When prompted, enter the unique meeting number: **928 541 372**. International callers may select their number from <https://energy.webex.com/energy/globalcallin.php>.

VIA MOBILE ACCESS: Access to WebEx meetings is now available from your mobile device. To download an app, go to [www.webex.com/products/web-conferencing/mobile.html](http://www.webex.com/products/web-conferencing/mobile.html).

If you have difficulty joining the meeting, please call the WebEx Technical Support number at 1-866-229-3239. This lecture starts with the audience muted. During the question session, 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: <http://www.energy.ca.gov/altfuels/2017-HYD-01/>.

March 25, 2019, at Sacramento, California

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KEVIN BARKER,  
DEPUTY DIRECTOR

Mail Lists: AltFuels; Bioenergy; Integrated Energy Policy Report; Transportation; Diversity