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#### **CALIFORNIA ENERGY COMMISSION**

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Main website: www.energy.ca.gov



In the matter of:	) Docket No. 17-HYD-01
Renewable Hydrogen Production Plant Deployment Roadmap	) NOTICE OF WEBINAR ) Final California Renewable ) Hydrogen Production Plant) Deployment Roadmap

# Notice of Webinar on Renewable Hydrogen Production Plant Deployment Roadmap

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

The workshop will be held on:

**August 28, 2019** 10:00 a.m. – 12:00 p.m.

Remote Access by Computer or Phone via WebEx<sup>™</sup>

### **Background**

Hydrogen fuel cell electric vehicles (FCEVs) are expected to play an integral role in the Governor's target of achieving 5 million zero-emission vehicles on the road in California by 2030, and meeting the state's environmental goals of reducing greenhouse gas and criteria pollutant emissions from the transportation sector. While hydrogen refueling stations, largely co-funded by the Energy Commission, are being deployed to support the emerging retail market for light-duty FCEVs, the sources of hydrogen are immediately stressed due to existing demands from the industry.

Additionally, Senate Bill 1505 (Lowenthal, Chapter 877, Statutes of 2006) requires that 33.3 percent of the hydrogen fuel dispensed today by publicly-funded hydrogen refueling stations be derived from renewable sources, providing an additional challenge to the FCEV refueling industry.

Given these state goals and requirements, in 2018, the Energy Commission's Clean Transportation Program (also known as the Alternative and Renewable Fuel and

Vehicle Technology Program) entered into a contract with UCI APEP to explore the renewable hydrogen needs of California's retail fueling network until 2030. The goal of Agreement 600-17-008 was to perform a one-year research study to establish the Roadmap for the optimal deployment of renewable hydrogen production facilities in California.

To complete the Roadmap, APEP conducted the following activities:

- Collected relevant information and data on developed and proposed renewable hydrogen production projects.
- Characterized the current and projected state of relevant renewable hydrogen production technologies and systems, including both central and distributed generation.
- Used the spatial and temporal analyses capability embodied within the APEP's Spatially and Temporally Resolved Energy and Environmental Tool (STREET) to provide immediate insight into the size, location, technology, costs, feedstock supply and hydrogen distribution resources required to supply renewable hydrogen to the network of fueling stations planned to serve the early FCEV market through 2025.
- Developed a high-level roadmap consisting of a time-phased plan for the rollout
  of facilities required to serve the evolving renewable hydrogen market, including
  light-duty vehicles and other transportation sector uses (that is freight, ports, rail),
  and considering the impacts from other potential future markets for renewable
  hydrogen, such as petroleum refining.
- Created a plan for further research and development to support the buildout described in the Roadmap and identify steps required to refine the Roadmap.

In addition, APEP conducted two webinars to gain industry input and feedback. In the first webinar, conducted in November 2018, UCI researchers profiled the technologies used to make renewable hydrogen and estimated their cost and performance until 2030. In the second webinar, conducted in April 2019, UCI researchers reported on hydrogen 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 two webinar presentations are located at http://www.energy.ca.gov/altfuels/2017-HYD-01/.

In this third and final webinar, APEP will present the findings and conclusions of the Roadmap. The webinar will also present recommendations for market support and research to help enable successful evolution of renewable hydrogen production network.

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

The Energy Commission's Public Adviser's Office provides the public assistance in participating in Commission proceedings. For information on how to participate in this forum, please contact Acting Public Adviser Jennifer Martin-Gallardo at <a href="mailto:publicadviser@energy.ca.gov">publicadviser@energy.ca.gov</a> or (916) 654-4489, or toll free at (800) 822-6228.

Please direct requests for reasonable accommodation to Yolanda Rushin at

yolanda.rushin@energy.ca.gov or (916) 654-4310 at least five days in advance.

Media inquiries should be directed to the Media and Public Communications Office at mediaoffice@energy.ca.gov or (916) 654-4989.

Questions on the technical subject matter of this meeting should be directed to Akasha Kaur Khalsa at <a href="mailto:akasha.khalsa@energy.ca.gov">akasha.khalsa@energy.ca.gov</a> or (916) 657-4854.

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## **Availability of Documents**

Documents and presentations for this meeting will be available online at <a href="http://www.energy.ca.gov/altfuels/2017-HYD-01/">http://www.energy.ca.gov/altfuels/2017-HYD-01/</a>.

#### August 15, 2019, at Sacramento, California

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KEVIN BARKER,	
DEPUTY DIRECTOR	

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