DOCKETED

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Implementation Strategies for Production of Renewable Hydrogen in California

Fuels & Transportation Division California Energy Commission

Art Rosenfeld Hearing Room, CEC January 30, 2017



Introduction

- Welcome
- Housekeeping/Logistics
 - Facilities
 - 2nd Floor Snack Shop
 - In case of emergency



Workshop Agenda

Welcome and Introductions Matthew Ong, Air Pollution Specialist, California Energy Commission 9:00 am

Opening Remarks Gia Brazil Vacin, ZEV Infrastructure Project Manager, GO-Biz

Renewable Hydrogen Roadmap Brian Goldstein, Executive Director, Energy Independence Now Kiran Srivastava, Program Director, Energy Independence Now

Renewable Electricity Generation Emily Chisholm, Renewable Energy Division, California Energy Commission

ARFVTP Biogas Production and Hydrogen Refueling Infrastructure Projects10:00 amJean Baronas, Hydrogen Unit Supervisor, California Energy CommissionElizabeth John, Biofuels Unit Supervisor, California Energy Commission



Workshop Agenda

Break	10:20 am
Biogas and Syngas Production Facilities Steve Kaffka, Director, California Biomass Collaborative Matt Hart, Director of Business Development, West Biofuels	10:30 am
Renewable Resources and Power-To-Gas Ron Kent, Advanced Technologies Development Manager, SoCalGas Marino Monardi, Corporate Strategy, PG&E Corporation Jack Brouwer, Associate Director, Advanced Power & Energy Program, UC Irvine	11:00 am
Lunch	12:00 pm



Workshop Agenda cont.

Renewable Hydrogen Production and Distribution Pere Margalef, Director of Advanced Technology Business Development, FuelCell En Jonathan Palacios-Avila, CEO, StratosFuel Steve Jones, Managing Director, ITM Power Mikael Sloth, Vice President of Business Development, Nel Hydrogen	1:15 pm ergy
Break	2:30 pm
Renewable Hydrogen Production and Distribution (cont.) Prabhu Rao, CEO, McPhy Energy NA Tim Brown, Chief Operations Officer and Principal, FirstElement Fuel	2:40 pm
Public Comment, Review of Public Comments Received	4:00 pm
Adjourn Workshop	5:00 pm



Commitment to Diversity

The Energy Commission adopted a resolution on April 8, 2015, to firmly commit to:

- Increase participation of women, minority, disabled veteran and LGBT business enterprises in program funding opportunities.
- Increase outreach and participation by disadvantaged communities.
- Increase diversity in participation at Energy Commission proceedings.
- Increase diversity in employment and promotional opportunities.



Commitment to Diversity

Fairness – Increase funding accessibility to all Californians.

Inclusion – Small businesses make up a significant portion of the U.S. economy.

Job Creation – Projects can create jobs for residents of the underserved communities.

Diversity of Ideas – Great ideas occur in a variety of areas.

Diversity in Communities' Needs – Needs vary widely from one area to the next (air quality, socioeconomic, etc.).



Diversity Survey

https://www.surveymonkey.com/r/CECDiversity-01-30-2017

Workshop Pa	ergy C irticipa	ommission tion Survey	
The Energy Commission is committed to en and diverse characteristics of California and information about the attendance of this w The information supplied will be used for pr overall attendance of diverse groups.	suringpa litspeop orkshop. ublicrepe	rticipation in its programs reflect the ric e. We are currently collecting voluntary orting purposes to display anonymous	
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Public Comment

- Accepting oral comments during this workshop.
- Please submit written comments to the Energy Commission using the e-commenting feature by accessing the Commission's TRANSPORTATION webpage, <u>http://www.energy.ca.gov/altfuels/2017-HYD-01/</u> by August 30, 2017.
- Submit email comments to: <u>docket@energy.ca.gov</u> and reference Docket No. 17-HYD-01 in subject line by August 30, 2017.



Workshop Objectives

- Discuss the current inventory and future demand for renewable hydrogen.
- Investigate biogas and renewable electricity projects that are candidates for renewable hydrogen generation.
- Estimate the quantity of renewable hydrogen needed to meet the demand and consider metrics to optimize the placement and capacity of a renewable hydrogen generation facility, along with distribution of output from the facility.
- Evaluate existing and future options for generating and distributing renewable hydrogen.