Hydrogen Fuel Cell and Battery Electric Vehicle Stakeholder Charrette

Expanding Hawaii's Clean Transportation Solutions

Overview:

This conference will bring together stakeholders from the electric-drive industry [including, hydrogen fuel cell and plug-in battery electric vehicle (EV) sector representatives] to discuss funding; policy; and challenges and solutions of large scale infrastructure deployment and electric drive vehicle adoption. Conference presentations will review the current electric drive industry in Hawaii and discuss challenges and solutions to larger scale infrastructure development and vehicle deployment. Experts will provide critical information and case studies to help better align Hawaii with the wider electric drive industry and its anticipated development. The conference will also be used to gather feedback to support the development of a revised transportation plan under the Hawaii Clean Energy Initiative, which aims to achieve deep reductions in petroleum use in the State of Hawaii.

Background:

In 2014 the Hawaii State Energy Office has convened a planning process or "charrette" analysis to provide the underlying assessments, analysis, and recommendations for an updated Hawaii Clean Energy Initiative transportation plan to significantly reduce the consumption of petroleum products in Hawaii's transportation sector. The primary purpose of the Hydrogen Fuel Cell and Battery Electric Vehicle Stakeholder Charrette is to support the analysis with regards to the feasibility of implementing electric-drive infrastructure for several usages across the State of Hawaii that may also support grid balancing, and energy assurance objectives. Hydrogen fuel cell and plug-in battery EVs are complementary technologies and both are important strategies that will contribute towards the reduction of petroleum in ground transportation. The charrette will further explore the degree to which hydrogen fuel cell and plug-in battery EVs can contribute to reductions in petroleum-based fuels in the transportation sector. Moving forward with these advanced transportation technologies will greatly contribute to meeting this level of reductions.

Conference Structure:

The stakeholder conference is supported by the Department of Business, Economic Development & Tourism. Dr. Alan Lloyd, President Emeritus of The International Council on Clean Transportation (ICCT) will serve as lead facilitator.

January 13-14, 2015

International Trade Resource Conference Center
Hawaii Foreign Trade Zone #9 at Pier 2
Honolulu, Oahu

Hydrogen Fuel Cell and Battery Electric Vehicle Stakeholder Charrette
Expanding Hawaii's Clean Transportation Solutions

Day 1 – January 13, 2015
International Trade Resource Conference Center
Hawaii Foreign Trade Zone #9 at Pier 2

8:30 a.m. **Registration**

9:00 a.m. **Welcome, Introductions, Conference Background, Objectives, and Desired Outcomes**

Confirmed Speaker: Mark Glick, Energy Administrator, Hawaii State Energy Office

9:30 a.m. **Context for Focus on Electric Drive within Hawaii Clean Energy Initiative**

Confirmed Speakers: Dr. Alan Lloyd, President Emeritus, International Council on Clean Transportation (ICCT); Joshua Miller, Researcher, ICCT

10:00 a.m. **Current Status and Near Term Activities for Plug-in EVs in Hawaii**

Confirmed Moderator: Jeff Mikulina, Executive Director, Blue Planet Foundation
Confirmed Speakers: Marc Deutsch, EV Business Development Manager, Nissan North America; Carlos Perez, Manager of Customer Solutions, Hawaiian Electric Companies; Dexter Turner, President/CEO OpConnect; Michael Chang, Chief Innovations Architect & Technology Director, Hawaii Energy;

11:30 a.m. **Lunch**

1:00 p.m. **Current Status and Near Term Activities for Hydrogen Vehicles in Hawaii**

Confirmed Moderator; General Osserman, Executive Director, Hawaii Center for Advanced Transportation Technologies

Confirmed Speakers: Dr. Richard Rocheleau, Director, Hawaii Natural Energy Institute (HNEI); Paul Ponthieux, PhD, Chief Technology Officer, Blue Planet Research; Alex Keros, Manager, Advanced Vehicle and Infrastructure Policy, General Motors; Thorton Toma, Senior Vice President, Servco Hawaii

2:30 p.m. **Current and Proposed Legislation for Promotion of Electric Drive Vehicles**

Confirmed Speakers: Senator Mike Gabbard, Chair of the Committee on Energy and Environment (Oahu); Representative Mark Nakashima, Member of Transportation Committee (Hawaii)

3:00 p.m. **Day 1 Summary/ Day 2 Overview**

Confirmed Speaker; Dr. Alan Lloyd, President Emeritus, ICCT

4:00 p.m. **Networking Reception hosted by**

blue planet FOUNDATION

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Day 2 – January 14, 2015
International Trade Resource Conference Center
Hawaii Foreign Trade Zone #9 at Pier 2

9:00 a.m. **Welcome Remarks and Presentations from Invited Contributors Outside Hawaii**

Confirmed Moderators: Dr. Alan Lloyd, President Emeritus, ICCT;
Confirmed Speakers: Robert Rose, Executive Director, Fuel Cells 2000/Breakthrough Technologies Institute, Jaimie Levin, Director of West Coast, Center for Transportation and The Environment; Pete Devlin, Fuel Cell Technologies Program, U.S. Dept. of Energy; Eileen Wenger Tutt, Executive Director, California Electric Transportation Coalition; Tyson Eckerle, Zero Emissions Vehicle Infrastructure Project Manager, California Governor's Office of Business and Economic Development, Abas Goodarzi, President, U.S. Hybrid

10:30 a.m. **Break**

10:45 a.m. **Panel Discussion from Invited Contributors Outside Hawaii**

Confirmed Moderators: Dr. Alan Lloyd, President Emeritus, ICCT; Ken Kelly, National Renewable Energy Laboratory

12:30 p.m. **Lunch**

1:30 p.m. The afternoon session will be split into two tracks before reconvening as a whole group. Moderators will be asked to discuss and identify policy, economic development opportunities, budget needs and recommendations, conflict areas and synergies with hydrogen and plug-in EVs, and suggestions/solutions to fueling infrastructure and vehicle deployment.

Breakout Session 1: Hydrogen
Confirmed Moderator: Mitch Ewan, Hydrogen Systems Program Manager, HNEI

The primary purpose of this breakout session is to discuss the feasibility of implementing hydrogen infrastructure across the State of Hawaii. This session will explore specific goals for vehicle and infrastructure deployment including:

- *Fueling facility needs and timeframe*
- *Overall status and needs for all infrastructure*
- *Energy security and assurance*
- *Shortfalls and Remedies: Role of Government, OEMs*
- *Hydrogen/Electricity Suppliers*
- *Economic development opportunities*

Breakout Session 2: Plug-in EVs
Confirmed Moderator: Greg Gaug, Senior Associate, Ulupono Initiative

The primary purpose of this breakout session is to discuss innovative and implementable programs and technologies that can help to address barriers to mass EV adoption and charging infrastructure installation in Hawaii. This session will "talk story" with leading EV companies and local stakeholders who are paving the way for clean transportation options in Hawaii.

- *FreeWire*
- *PlugShare*
- *Volta*
- *EV Structure*

3:30 p.m. **Break**

3:45 p.m. **Breakout Session Report**

5:00 p.m. **Conclude Meeting**