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STEPS CALIFORNIA CAN TAKE TO CREATE A SUSTAINABLE HYDROGEN ECONOMY

California State Capitol
1021 O Street, Room 2200
Wednesday, August 16, 2023 10:00am

I. 10:00 AM - Welcome and Introductions
- Senator Bob Archuleta, Chair, Select Committee on Hydrogen Energy

II. 10:10 AM - Lawrence Berkeley National Laboratory
- Adam Weber, Senior Scientist and Hydrogen and Fuel Cell Technologies Lab Lead & Acting Chief Technology Officer, ARCHES

III. 10:25 AM - Energy Independence Now
- Brian Goldstein, Executive Director

IV. 10:35 AM - Linde
- Wladimir Sarmiento-Darkin, Director of Clean Hydrogen

V. 10:45 AM – Air Products & Chemicals, Inc.
- Lorraine Paskett, Executive Director, Advanced Clean Hydrogen

VI. 10:55 AM – SoCal Gas
- Neil Navin, Vice President Clean Energy Innovations & Chief Clean Fuels Officer

VII. 11:05 AM - Boilermakers
- Timothy Jefferies, Boilermakers International Representative

VIII. 11:15 AM - First Element Fuels
- Matt Miyasato, Ph.D., Vice President, Strategic Growth & Government Affairs

IX. 11:25 AM – Universal Hydrogen
- Rachael Hall, Head of Community Engagement, Universal Hydrogen

X. 11:35 AM – Toyota
- Michael Lord, Executive Engineer

XI. Committee Members Q&A

XII. Public Testimony

XIII. Close Out

BACKGROUND

- **<u>Steps California can take to create a sustainable hydrogen economy.</u>**

  California can take several steps to create a sustainable hydrogen economy:

  <u>*Establish Supportive Policies*</u>: California can develop and implement policies that provide incentives and support for the production, distribution, and use of hydrogen. This can include financial incentives, tax credits, grants, and regulations that encourage investment in hydrogen infrastructure and technology.

  <u>*Invest in Research and Development*</u>: Allocating resources to research and development efforts can drive innovation in hydrogen production, storage, and utilization technologies. By fostering collaboration between academia, industry, and research institutions, California can accelerate advancements in hydrogen-related technologies and promote their commercialization.

  <u>*Develop Hydrogen Infrastructure*</u>: Building a comprehensive hydrogen infrastructure is crucial for a sustainable hydrogen economy. California can invest in the development of hydrogen production facilities, storage and distribution networks, and refueling stations for hydrogen-powered vehicles. This infrastructure will facilitate the widespread adoption of hydrogen as an energy source.

  <u>*Encourage Public-Private Partnerships*</u>: Collaboration between the public and private sectors can help accelerate the growth of a sustainable hydrogen economy.

California can foster partnerships with industry leaders, energy companies, vehicle manufacturers, and other stakeholders to jointly invest in hydrogen projects, share expertise, and promote technology deployment.

Support Education and Workforce Development: Investing in education and workforce development programs focused on hydrogen technologies can ensure a skilled workforce is available to support the growing hydrogen industry. This can include training programs, educational initiatives, and partnerships with educational institutions to provide specialized curricula and research opportunities.

Promote Demonstration Projects: California can support the implementation of demonstration projects to showcase the viability and benefits of hydrogen technologies. These projects can include pilot-scale hydrogen production facilities, hydrogen-powered vehicle fleets, and integrated energy systems that utilize hydrogen as a clean energy source.

Collaborate with Other Regions: Collaborating with other states, countries, and international organizations can foster knowledge sharing, best practices, and joint initiatives in building a sustainable hydrogen economy. By participating in global hydrogen partnerships and initiatives, California can leverage international expertise and accelerate the transition to a hydrogen-based energy system.

Prioritize Environmental Sustainability: Ensuring that hydrogen production and utilization are environmentally sustainable is crucial. California can establish stringent environmental standards for hydrogen production processes, promote renewable energy sources for hydrogen generation, and encourage the use of hydrogen in sectors with significant carbon emissions, such as transportation and

industrial applications.

❖ **Summary**

The goal of this select committee hearing is to hear directly from the hydrogen industry in regards to what they see as the most important steps California should take to create a robust and sustainable hydrogen economy, driving the transition towards a cleaner and more diversified energy landscape.