

H₂USA

HTAC Presentation

H2USA Founding Organizations



U.S. Department of Energy



Association of Global Automakers



American Honda Motor Company



Chrysler Group LLC



Fuel Cell & Hydrogen Energy Association



General Motors Holding LLC



Hyundai Motor America



Mercedes-Benz

Mercedes-Benz USA, LLC



Nissan North America R&D



Toyota Motor North America

H2USA Launch Organizations



U.S. Department of Energy



Air Liquide



American Gas Association



American Honda Motor Company



ARC: Hydrogen



Argonne National Laboratory



Association of Global Automakers



California Fuel Cell Partnership



Chrysler Group LLC



Electric Drive Transportation Association



Fuel Cell & Hydrogen Energy Association



General Motors Holding LLC



Hydrogenics



Hyundai Motor America



ITM Power



Massachusetts Hydrogen Coalition



Mercedes-Benz

Mercedes-Benz USA, LLC



National Renewable Energy Laboratory



Nissan North America R&D



Nuvera



Plug Power Inc.



Proton Onsite



Sandia National Laboratories



SCRA



Toyota Motor North America

Signatories on the Letter of Understanding



U.S. Department of Energy



State of California



Northeast States for Coordinated Air Use Management



Air Liquide



American Gas Association



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Hawaii Natural Energy Institute



Hydrogenics



Hyundai Motor America



Intelligent Energy Ltd.



ITM Power



Kobelco Compressors America, Inc.



Linde North America



Massachusetts Hydrogen Coalition



Mercedes-Benz USA, LLC



National Association of Convenience Stores



National Renewable Energy Laboratory



Nissan North America R&D



Nuvera



PDC Machines



Plug Power Inc.



Pacific Northwest National Laboratory



Volkswagen Group of America



Proton Onsite



Sandia National Laboratories



Savannah River National Laboratory

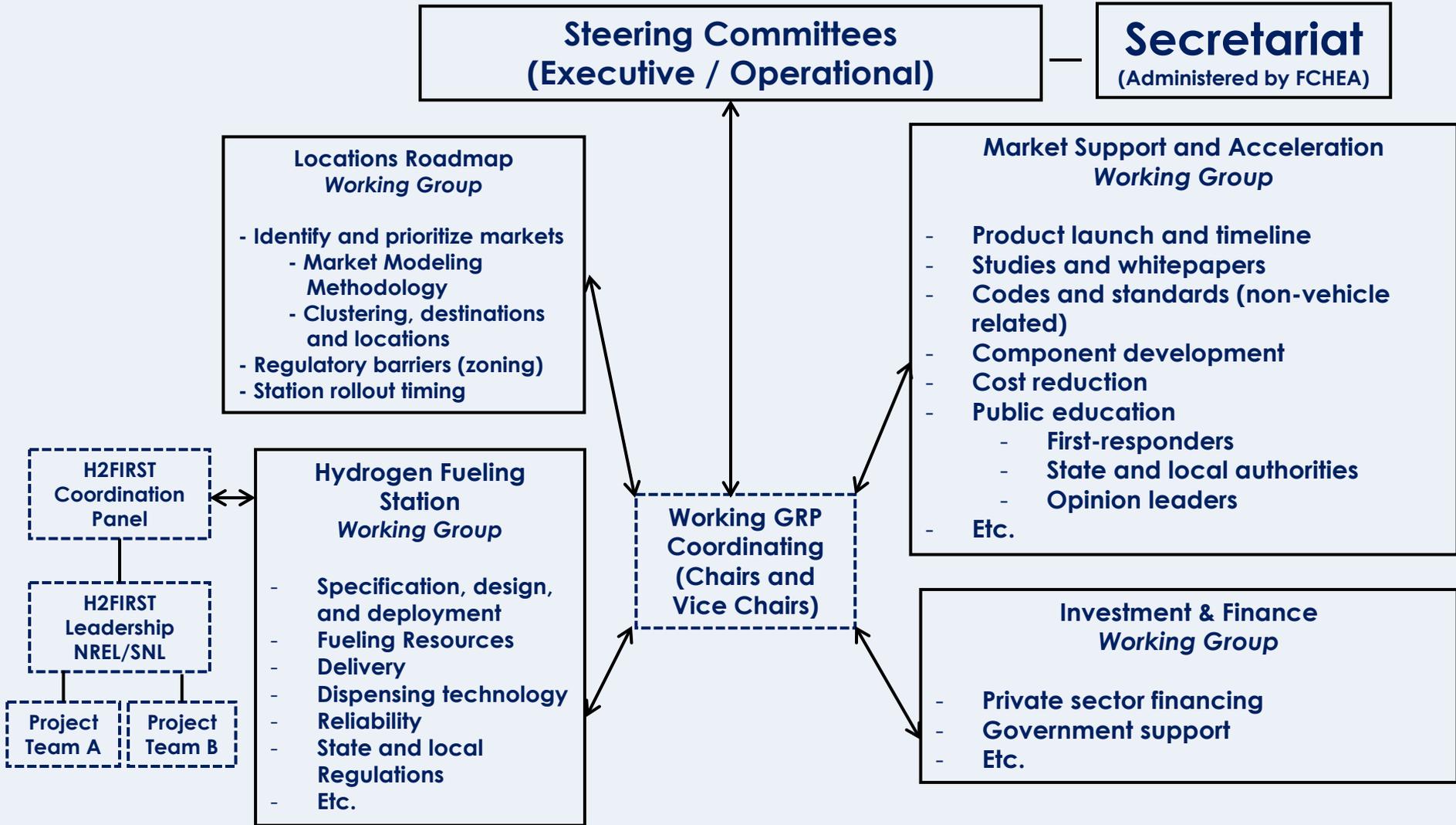


SCRA



Toyota Motor North America

H₂USA Organization Chart



Market Support & Acceleration Working Group

▶ Outreach Task Team

- Completed Frequently Asked Questions (FAQ) document for H2USA website
- Completed development of PowerPoint slide deck with FAQ talking points
- Completed development internal web and external H2USA website
- Held first outreach meetings with Western Governors Association and National Council for State Legislators

▶ Codes & Standards Task Team

- Organized top down activity to develop station permitting guide

▶ Coordinating hydrogen refueling capability in the D.C. metro area

The screenshot displays the H2USA website. At the top, there is a navigation bar with the H2USA logo and several menu items: 'WHY HYDROGEN' (Benefits of H2), 'STATUS' (Progress, studies), 'OPPORTUNITIES' (Business case for H2), 'EDUCATION' (Education & training), and 'ABOUT US' (Who we are). Below the navigation is a large banner image of a hydrogen refueling station with several cars. A text overlay on the banner reads: 'H2USA accelerating progress toward hydrogen fueling to meet public demand and support the introduction of fuel cell electric vehicles nationwide. [Join us.](#)' Below the banner are four columns of content, each with an icon and a 'LEARN MORE' button: 'Why Hydrogen' (bar chart icon), 'Status' (flag icon), 'Opportunities' (book icon), and 'Education' (mobile phone icon). At the bottom, there is a section titled 'Hydrogen Fuel Cell Electric Vehicles' with three images of cars: a white Chevy Fuel Cell EV, a dark red Honda FCX Clarity, and a silver Mercedes-Benz B-Class F-CELL. Each image has a caption below it: 'Chevy Fuel Cell EV FCEVs', 'Honda FCX Clarity FCEVs', and 'Mercedes-Benz B-Class F-CELL FCEVs'.

Hydrogen Station Working Group

▶ **Coordination for H2FIRST**

- Developing technical and economically feasible fueling station designs
- Held coordination panel kick off meeting on November 10

▶ **Station Metrics Analysis Task Team**

- Providing support to locations roadmap working group

▶ **Cost & Utilization Modeling**

- Preparing to publish cost modeling information for H₂USA

▶ **Component Research & Development Task Team**

- Developed, implemented and began to analyze Kano questionnaire to assess what specific issues may need H₂USA support
- Gathered and began analyzing data from DOE funded hydrogen station projects
- Presenting findings at the Fuel Cell Seminar, feedback to shape future work

▶ **Joint Regulations, Codes and Standards (RCS) Task Team**

- Developed a new matrix for adopted codes in each major region of states of interest to H₂USA – on H₂USA Intranet

Locations Roadmap Working Group

▶ Automaker Surveys/OEM priorities

- Developed and distributed survey and transmittal letter for OEM data
- Developed procedure for secure transmittal of data

▶ Northeast Roadmaps

- CCAT has been developing "Roadmaps" for each of the states in the Northeast that identifies state goals and supportive state policy/incentives for the deployment of FCEVs and the hydrogen infrastructure
- CCAT has developed draft Roadmaps for CT, MA, NY, and ME - these draft documents are available for review on the CCAT website

Investment & Finance Working Group

▶ Incentives Task Team

◦ **Developing Business Case Scenarios**

- Working with National Renewable Energy Laboratory, scoped and developed the Business Case Scenario (BCS) module
- The BCS module links five industry-validated business cases to SERA's hydrogen production and delivery infrastructure optimization model. Together, SERA and BCS generate "blueprints" (e.g. maps) and financial products supporting hydrogen infrastructure build-out
- An expert panel of investment and finance professionals will review and comment on the module's current iteration - the module will be finalized based on the input

▶ Leadership Task Team

◦ **Outreach to the Investment Community**

- Developed potential investor contact list
- Made multiple presentations about H2USA to investment professionals
- Successfully recruited one investment company professional to join H2USA and the Investment & Finance WG

2015 Objectives Timeline

- ▶ **Identify H2USA spokesperson – MSAWG**
- ▶ **OEM Market Decisions Made – LRWG**
- ▶ **Creation of Tool Box – IFWG**
 - **Develop business cases (Investment Pieces)**
- ▶ **Articulating projections for vehicle/station market size / regions (LRWG / NESCAUM)**
 - **Target NY Auto Show (highlight investor community)**
- ▶ **Reach out to Investment community - IFWG**
- ▶ **Key Elements for Business – MSAWG**
 - **Available information about consumer views on ZEV acceptance**
 - **Customer Demographics, State motivation, etc.**

2015 Objectives Timeline

- ▶ **State / Stakeholder Outreach - MSAWG**
 - Meeting with staff first, attend meeting with principal second
 - Asks – support legislation, connect to ZEV action plan
 - WGA, NCSL, NGA, Conference of Mayors, NASEO, ECOS, Clean Cities?
- ▶ **Fueling Capability in DC Metro Area – FCHEA**
- ▶ **Event with Secretary Moniz – MSAWG**
- ▶ **Situational Analysis Version 2.0 – IFWG**
 - Current status and how to make h2 stations more affordable
 - State activity tracking - Develop a where we are doc for each NE state
- ▶ **Gathering existing cost data and articulating a target – HFSWG**
- ▶ **State codes and standards hydrogen matrix – HFSWG**
- ▶ **Begin projects on component R&D - HFSWG**
 - certification device, reference station design
- ▶ **Moving stations from projects to products – HFSWG**

Thank You