

H₂USA



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Overview of **H₂USA** Activities

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H₂USA Participants



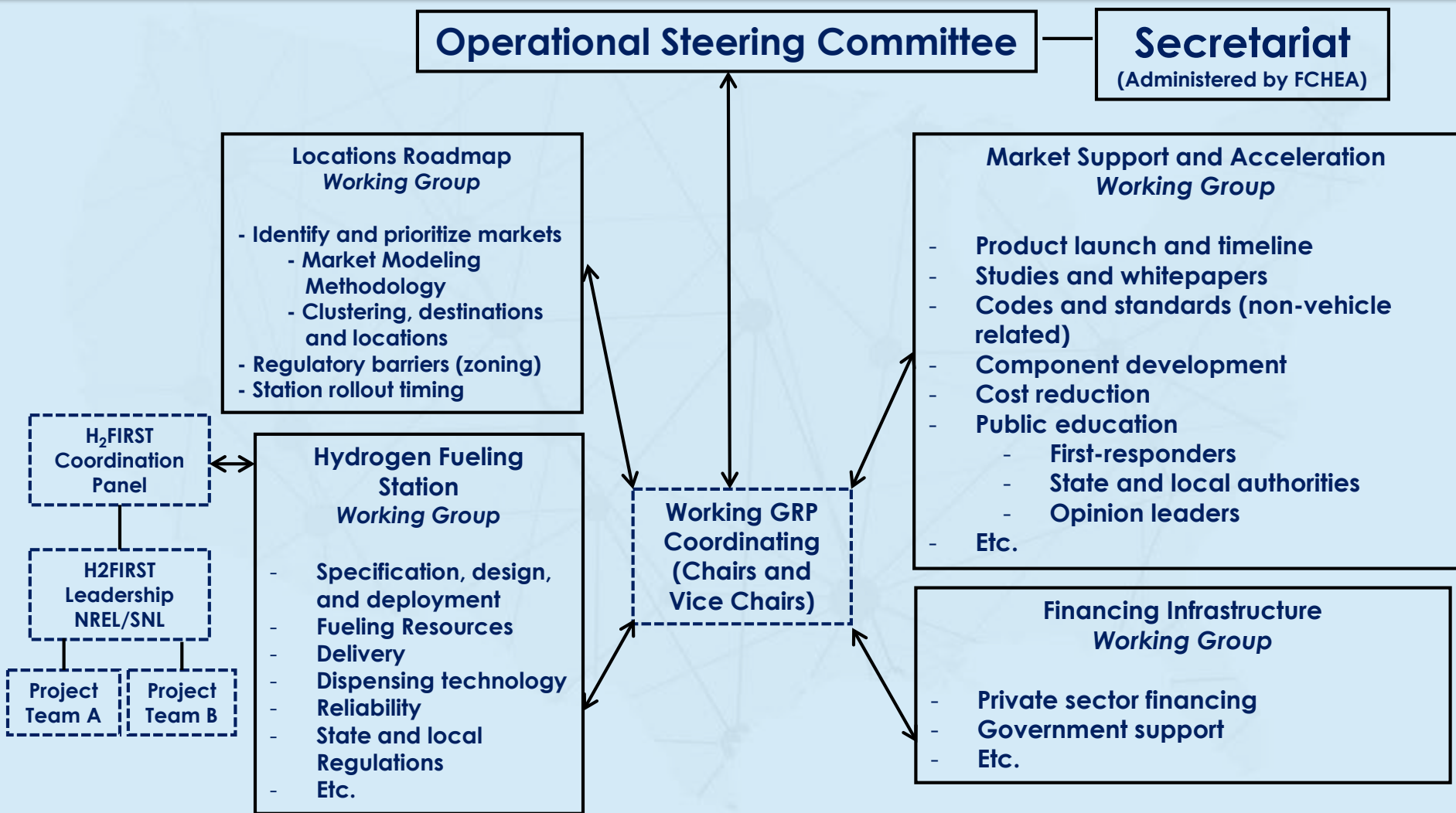
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New H₂USA Participants



- United Hydrogen - currently operates a bulk hydrogen manufacturing facility in Charleston, TN with more locations in development.
- Hydrogen-XT - a Houston, Texas-based company which has developed a small physical-footprint, scalable and standardized hydrogen fueling station

H₂USA Organization Chart



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Market Support and Acceleration Working Group

- Facilitating D.C. hydrogen refueling capability – Planned opening Q2 - Q3 2016
- Enhanced / updated outreach materials
- Preparing response document
- Outreach meetings with key stakeholder groups
- Developing national first responders training resource

Locations Roadmap Working Group

- Three models developed to provide a “toolkit” for states/regulatory/NGOs to answer “How many stations, where, and when”
- Northeast Regional Fuel Cell Fleet Deployment Action Plan
 - Collaboration with the Connecticut Center for Advanced Technology
 - Evaluating northeast fleet potential infrastructure deployment scenarios, including locations, demand potential, and timeframes
- Northeast Retail Modeling
 - Northeast retail customer approach developed by University of California, Irvine
 - Based on STREET modeling
- National “Scenarios” Modeling
 - Collaboration with the National Renewable Energy Laboratory
 - Identifies criteria for a successful initial market and for potential to follow on market regions most suitable for FCEV adoption
 - Based on SERA Model

Investment & Finance Working Group

- Conducting outreach to the investment community at events, auto shows, conferences, as well as direct meetings and communications
 - New York Auto Show Investor Walkthrough and Briefing
- Developed Hydrogen Fueling Financing Analysis Scenario Tool (H2FAST)
- Developed Hydrogen Refueling Stations Analysis Model (HRSAM)
- Developed the Business Case Scenario Tool (BCS)

Hydrogen Fueling Station Working Group

- Providing updates on Sensitivity Analysis to facilitate station design optimization activities
- Developing “Maintenance Best-Practices” paper for component R&D
- Joint Regulations, Codes & Standards Task Force with MSAWG - undertaking state and regional regulatory challenges such as bridge and tunnel issues
- Facilitating station improvement and deployment through coordination with H2FIRST

Hydrogen Fueling Infrastructure Research and Station Technology (H2FIRST)

- Launched by DOE Fuel Cell Technologies Office and National Labs
- Addresses technology challenges associated with commercial hydrogen fueling stations
- Identifying low-cost, high performance materials
- Task teams addressing key challenges
 - Hydrogen contamination
 - Reference station design
 - Hydrogen station equipment performance (HyStEP)



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Thank you

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