

# Selecting Locations for Hydrogen Infrastructure

Presentation requested by the  
California Energy Commission

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# AQMD Support for H<sub>2</sub> & Fuel Cells

- In 1989, the AQMD co-funded \$2.4M with the DOE to develop a fuel cell/battery powered transit bus
- In 1991, the AQMD cofunded \$1M to the first Ballard Fuel Cell Bus project
- In 1992, the first-ever commercial stationary fuel cell unit was installed at the AQMD





# Hydrogen Infrastructure Support

- 1<sup>st</sup> southern California CaH2Net station at AQMD (2004)
- 21 co-funded stations
- \$9M funded to date
- Recent co-funding \$1.25M for CEC stations awarded in 2010





***What defines the optimal hydrogen station location?***

- We should not be *optimizing* at this nascent stage
- “Optimal” implies fine-tuning of several variables; we don’t yet have enough experience
- Best possible location is where it will be utilized by vehicles and has a willing operator





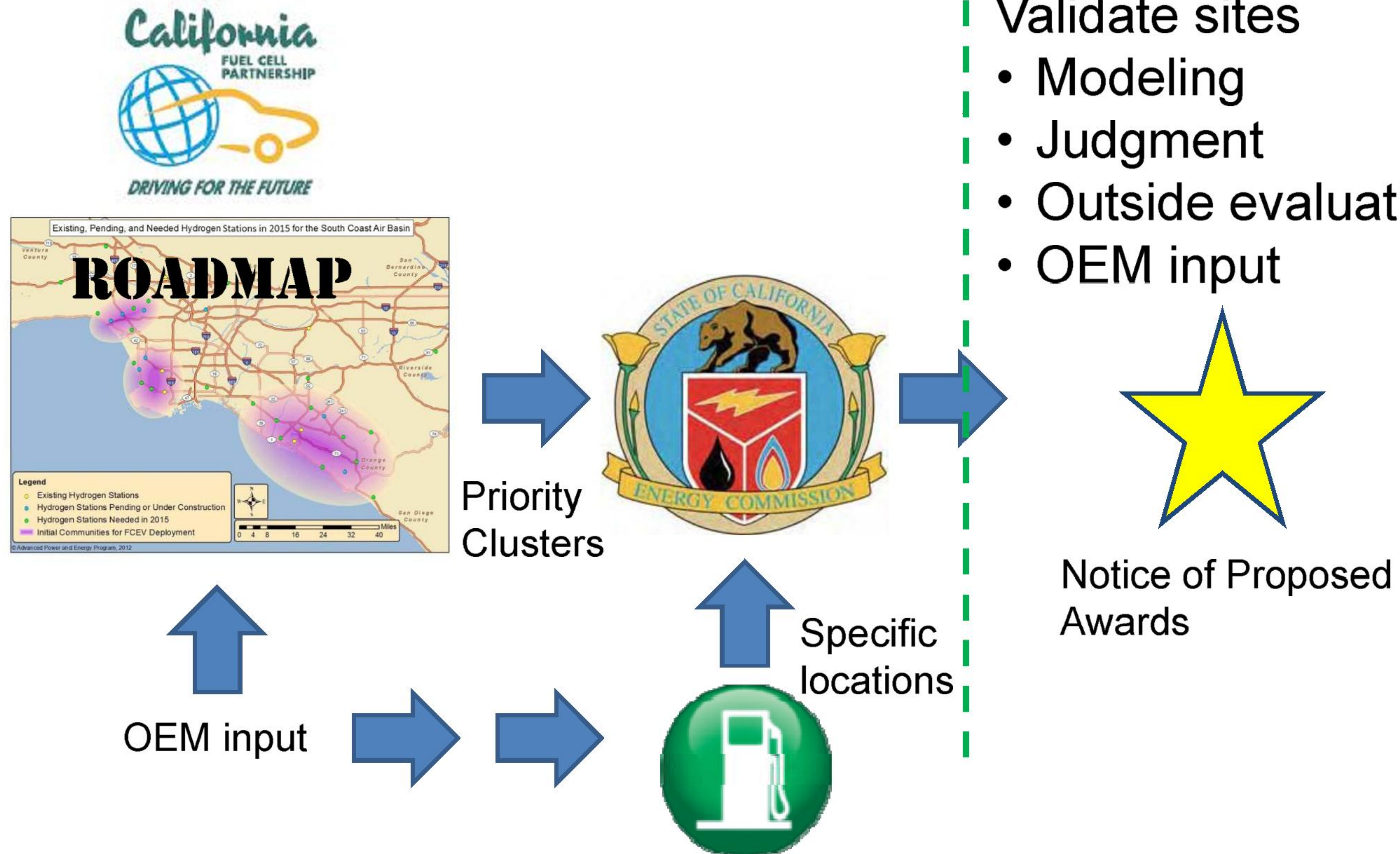
# *What is the best approach for selecting site locations for stations in the future?*

- Leverage existing resources, CaFCP and Hydrogen Infrastructure Trust activities – “Roadmap”
  - OEM input for market clusters
  - Prioritization of regions
  - Coverage vs. capacity
- Rely on station operators (proposers) for specific locations
- Validate desirable locations





# Potential Process





# Recommendations

- Leverage resources – CaFCP Roadmap process
  - Cluster locations
  - Coverage
- CEC to decide on specific sites based on
  - Proposals received
  - Modeling
  - Judgment (e.g., site visits)
  - “Blind” OEM input

} Ranking based on location\*
- Solicit external technical review panel
  - CARB, DOE, NREL, AQMDs

\* Other factors need to also be evaluated – experience, cost-share, understanding of scope, etc.



# Thank You



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