Cluster Cities

According to the US Census, California has more than 100 cities with a population of at least 80,000 people. In 2011, CaFCP members used data to determine the most likely locations for FCEV customers, including:

- Demographic information, such as household income, cars per household, population and land use considerations
- Individual automaker market assessments, including FCEV hand-raiser data
- California Energy Commission/Air Resources Board Vehicle Survey for battery electric vehicles and plug-in hybrid electric vehicles, as noted in the 2011-12 Investment Plan
- Hybrid vehicle, plug-in hybrid electric vehicle, battery-electric vehicle and natural gas vehicle registrations
- Geographic distribution of the Air Resources Board's Clean Vehicle Rebate Program

CaFCP confidentially surveyed its automaker members to understand when they planned to have cars available (answer: 2015) and the numbers of cars available in the first two years (answer: thousands). As a result, CaFCP identified the first cluster communities as:

- Santa Monica/West Los Angeles, including Beverly Hills and West Hollywood
- Torrance and nearby coastal cities
- Irvine and southern coastal Orange County
- Berkeley
- San Francisco South Bay Area

Within these broad geographic descriptions, we needed to further define the number and locations of stations within each cluster. The number and locations of stations needed to serve two purposes:

1. Ensure a sufficient number of early adopters would purchase or lease an FCEV
2. Anchor geographic expansion so to increase the number of stations

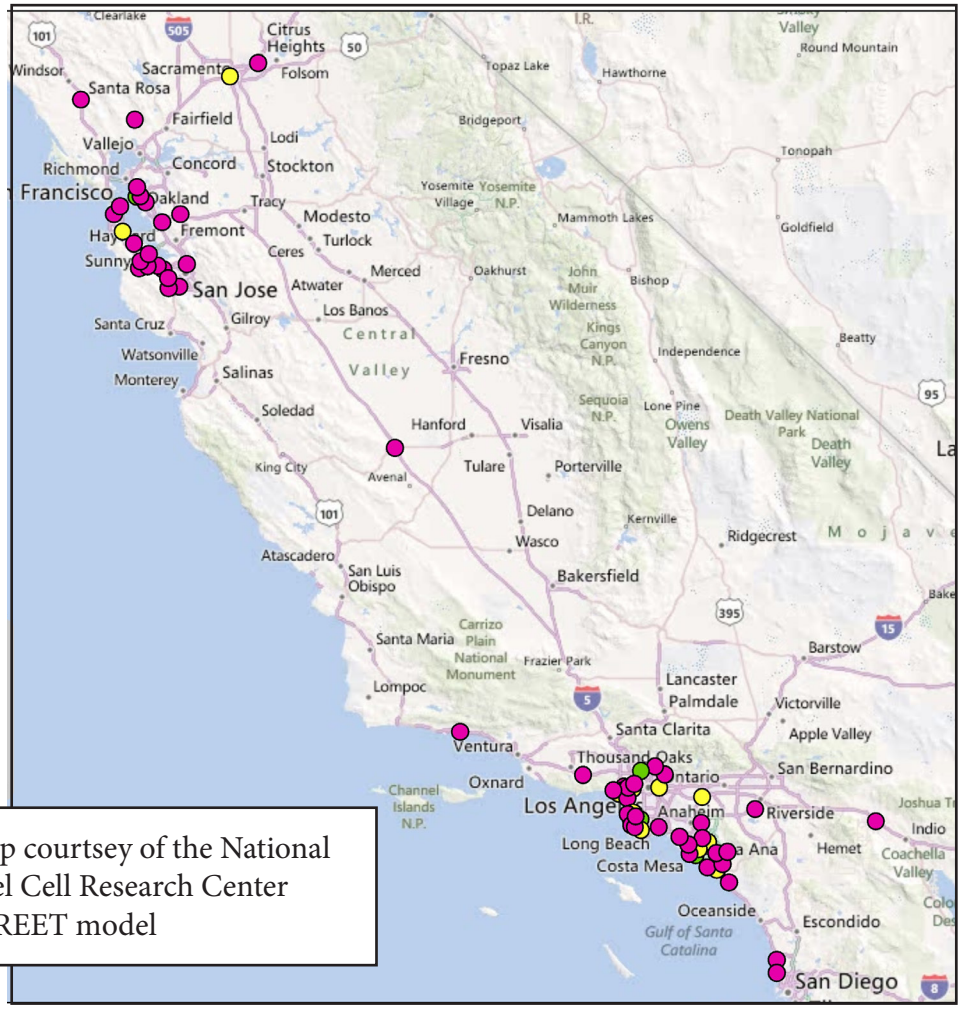
National Fuel Cell Research Center, a CaFCP member, analyzed the clusters with its Spatially & Temporally Resolved Energy & Environment Tool (STREET) model. STREET considered variables, including automaker market data, travel time, travel routes, existing gas stations and vehicle ownership density, and took hydrogen delivery routes and times into consideration. STREET identified that 45 stations distributed in the five cluster geographies would provide sufficient coverage to start market introduction of FCEVs.

Destinations and Connectors

Providing fuel for long-distance trips is essential to meet customer expectations. With a broad fueling network, FCEVs provide the same utility as gasoline vehicles. The stations maximize full use of the vehicles throughout the state and help FCEVs appeal to a broader audience by providing redundancy and consumer confidence. At the same time, these stations will seed the next clusters.

Stakeholders, using the aforementioned data, identified the following cities as emerging markets that will support the hydrogen station network.

- Anaheim
- Pleasanton
- Central Valley (Coalinga/Fresno)
- Riverside
- Diamond Bar
- Sacramento
- Hayward
- San Diego
- Truckee/Lake Tahoe
- San Fernando Valley
- Long Beach
- San Francisco
- Napa/Sonoma Wine Country
- Santa Barbara
- Palm Springs
- Sonoma
- Pasadena



Map courtesy of the National Fuel Cell Research Center STREET model