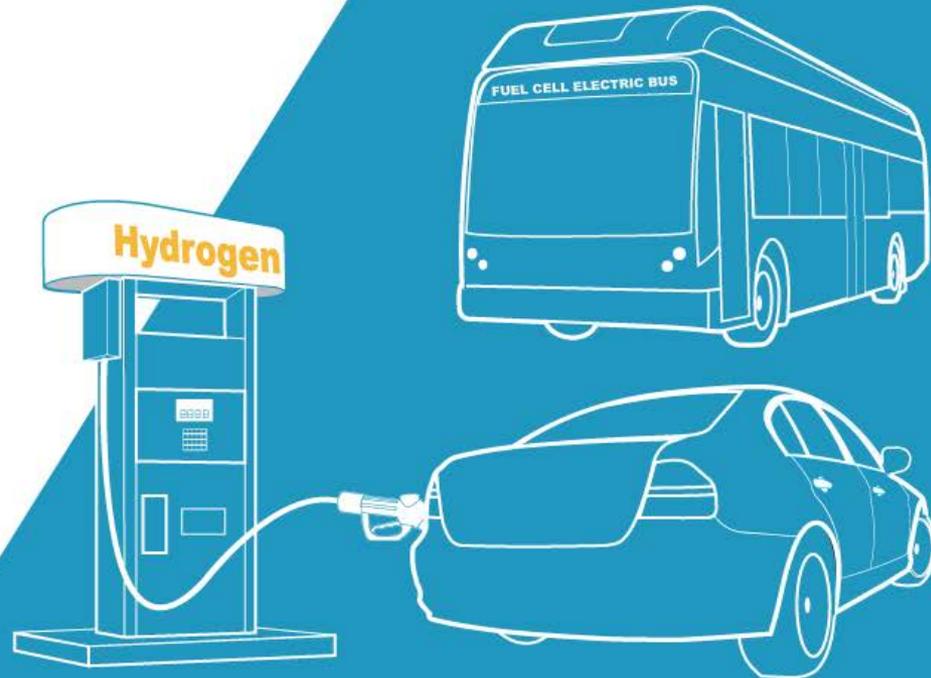


Hydrogen Stations

Chris White

Communications Director





1,500 cars and counting...

Hydrogen Fuel Cell Electric Vehicles sold in the U.S. (March 2017): **143**
 Hydrogen Fuel Cell Electric Vehicle Take-Rate: **0.01%**

U.S. Hydrogen Fuel Cell Electric Vehicle sales for March 2017

Mfgr	Model	3-17 Sales	vs. 2-17	vs. 3-16	CY 2017	CY 17 vs 16	CY 2016	Current Month US Share
Toyota	Mirai	118	↑ 7.3%	↑ 187.8%	311	220.6%	97	82.52%
Honda	Clarity	23	↑ 85.2%	N/A	92	N/A	-	16.08%
Hyundai	Tucson	2	↑ 40.0%	↓ -75.0%	9	0.0%	9	1.40%
	Total Fuel Cell	143	↓ -99.3%	↑ 191.8%	412	↑ 288.7%	106	

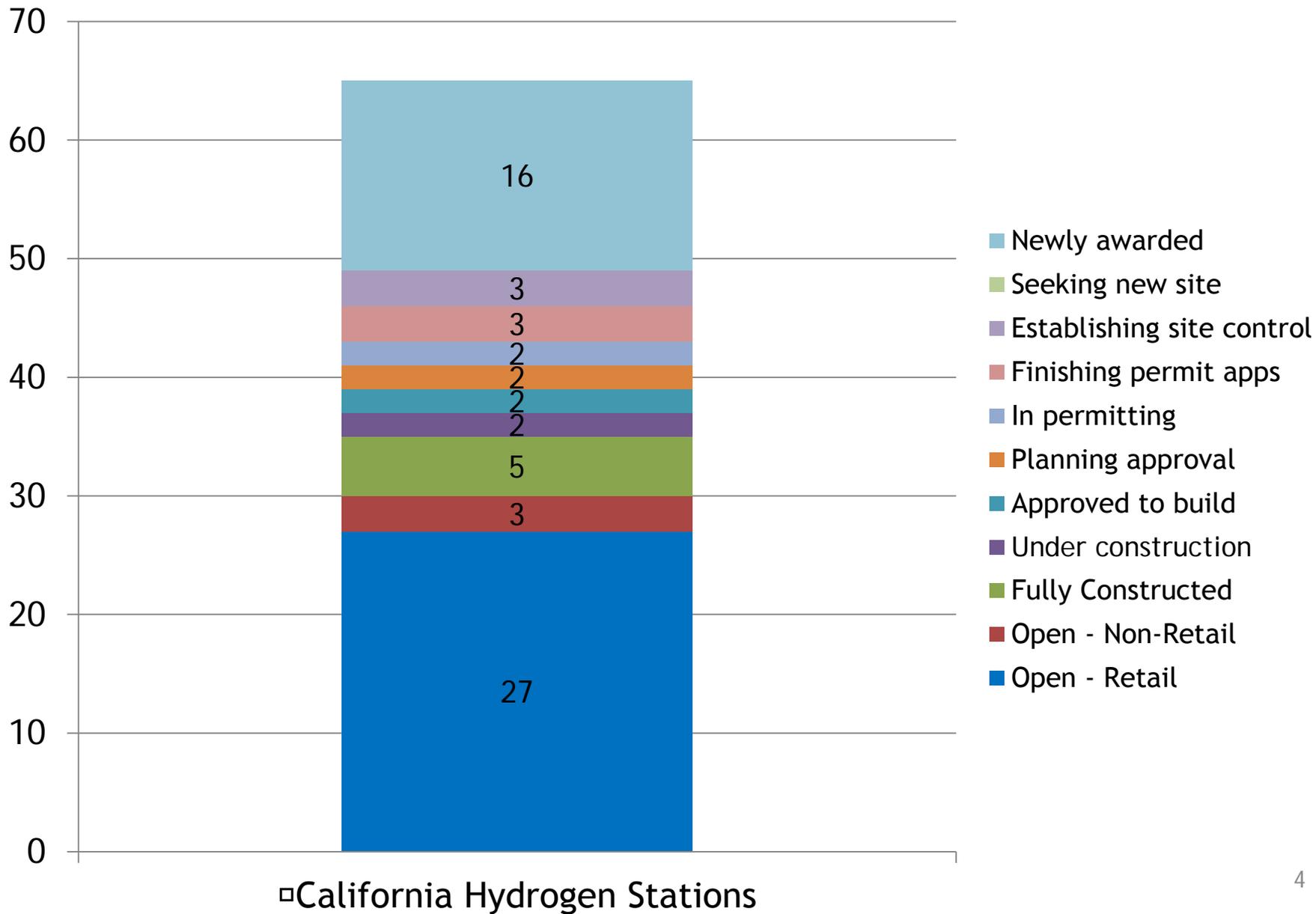
Source: HybridCars.com

1,074 IN 2016 + 412 IN 2017 = SO CLOSE TO 1,500!





Stations by the numbers





Most recent stations



Mill Valley



Hollywood



Anaheim



Riverside

CaFCP's Station Map

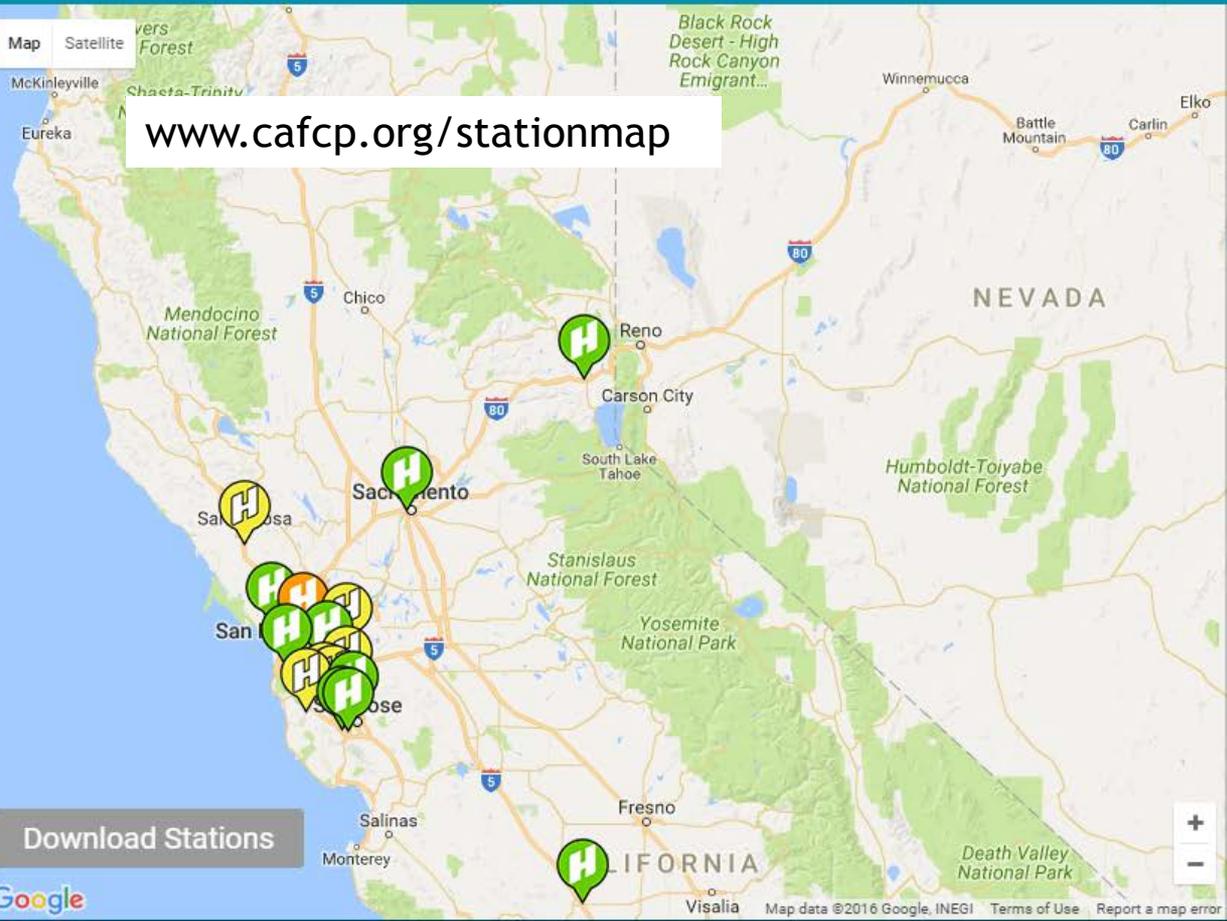
Search by Zip Code or Address

GO

Filter By

Station Types

www.cafc.org/stationmap



Download Stations

Google

RETAIL: OPEN

Lake Tahoe-Truckee

Open - Retail
12105 Donner Pass Road
Truckee, CA 96161

Details »



RETAIL: OPEN

West Sacramento

Open - Retail
1515 South River Road
West Sacramento, CA 95691

Details »



RETAIL: IN DEVELOPMENT

San Ramon

Under Construction
2451 Bishop Drive
San Ramon, CA 94583

Details »

RETAIL: OPEN

Hayward



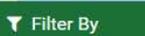
H2stationmap.com

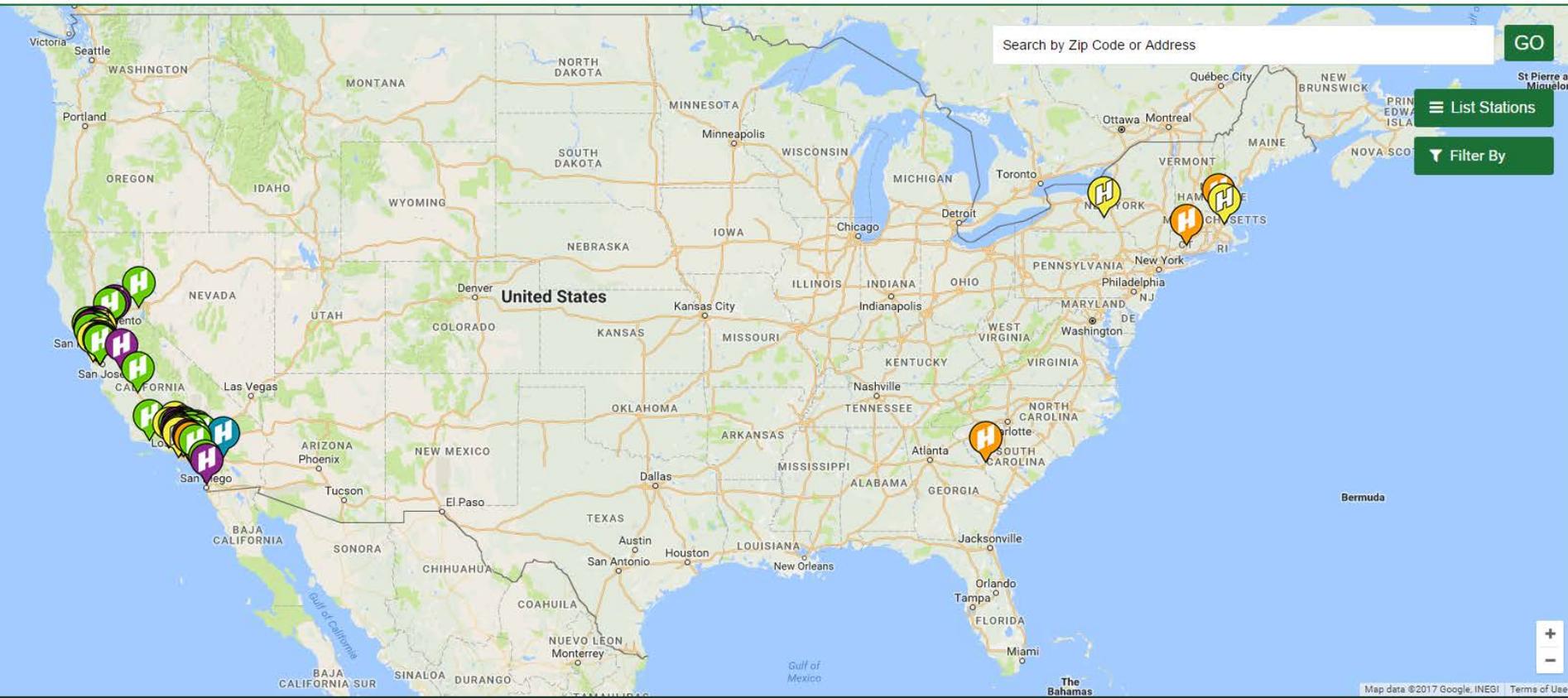


MAP HYDROGEN STATIONS DEPLOYMENT COSTS & FINANCING STATE SUPPORT ABOUT US



Search by Zip Code or Address GO

-  List Stations
-  Filter By

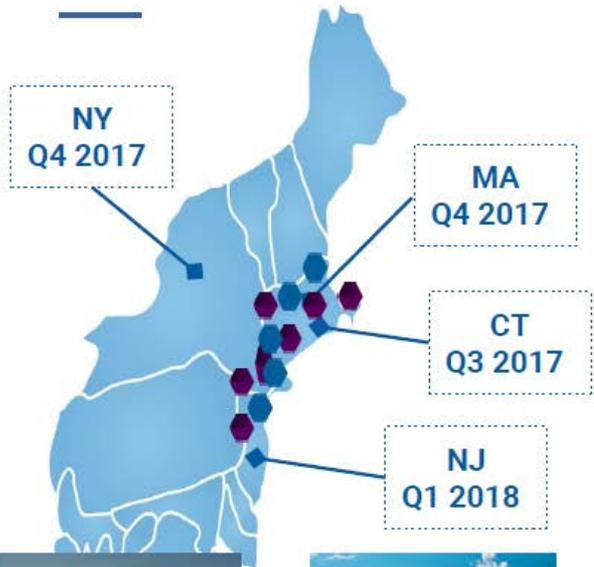


Map data ©2017 Google, INEGI Terms of Use



Northeast Stations

H2 Stations Covering the Northeast



Network of 12 Stations

Start-up over Q3-Q4 2017 and Q1 2018



Dedicated H₂ supply chain by



Project in collaboration with



New York

Bronx
Hempstead
Brooklyn
Site Location TBA



Connecticut

Hartford
Site Location TBA,



Massachusetts

Braintree
Mansfield



New Jersey

Lodi
Site Location TBA



Rhode Island

Site location TBA





Things that made a difference

1. Tracking station development
2. The Hydrogen Station Permitting Guidebook
3. Standardized and certified components
4. Incentives for expedited permitting and construction
5. HySTEP
6. O&M support
7. Using GIS for station locations
8. New stations will have larger capacity and multiple fueling positions



Priorities

- Reduce lead time for equipment, permitting, contracting, and electric upgrades
- Address issues with “location change” stations
- Increase station reliability
- Incorporate more inputs into GIS modeling
- Evaluate need for redundancy
- Share data and information with other states and countries



Opportunities

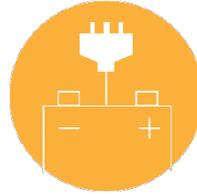
- Alternatives to grant funding; other mechanisms for incentives
- Consider the role of fleets and M/HD to increase demand
- Address hydrogen as energy storage as a way to reduce cost to fuel
- Equal utility rates for charging cars and making H₂
- Consider new models: temporary, mobile, and small fueling
- Reach into neighboring states

Emerging issue: Noise complaints





Emerging issue: Electricity



Not required

**33.3% renewable
required by law**



Special rates for charging

Commercial rates



Demand management income

**Not allowed for
demand management**



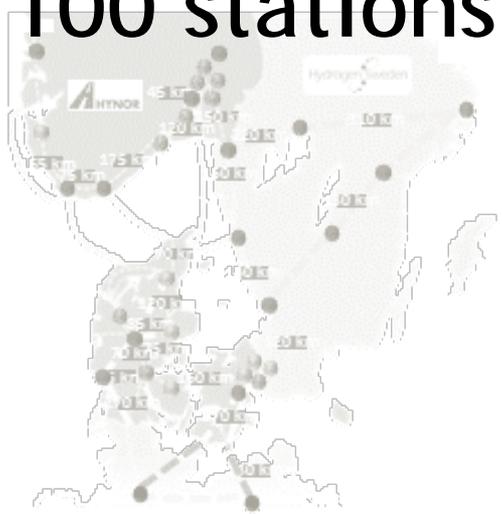
**IOU investment (rate payer funded)
VW settlement funding**

State funding



Bigger issue: A national vision

“The number of human hours it takes to deploy one station is too great without a vision of how 100 stations are deployed.”



What do we need to pay attention to with respect to hydrogen and fuel cell vehicle commercialization?

