

Status Update of Daimler's Fuel Cell Vehicle Activities in California

California Energy Commission

DOCKETED

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TN # 66129

JULY 02 2012

Mercedes-Benz RDNA, Inc.

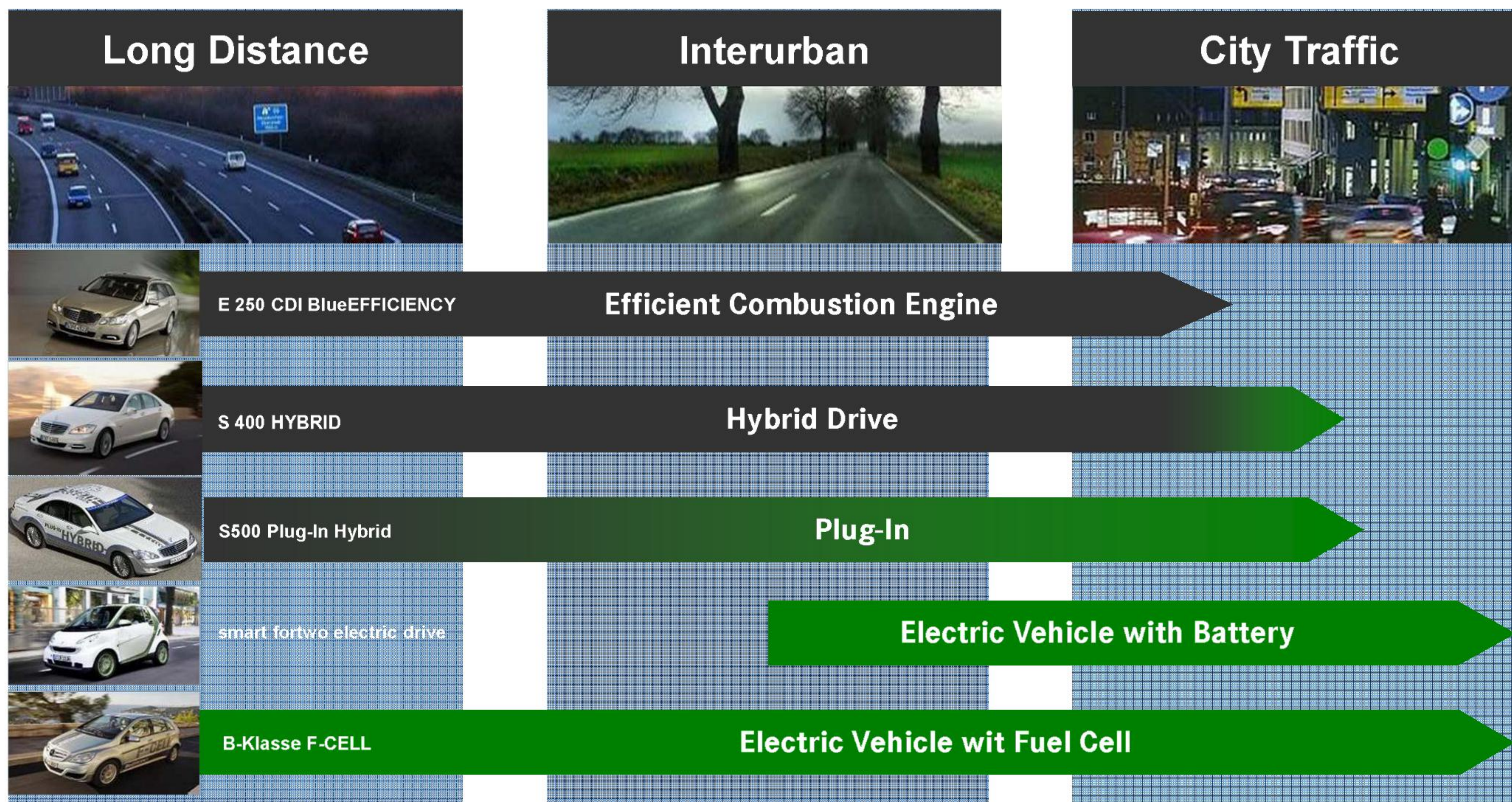
John Tillman

Presentation to the California Energy Commission

June 22, 2012

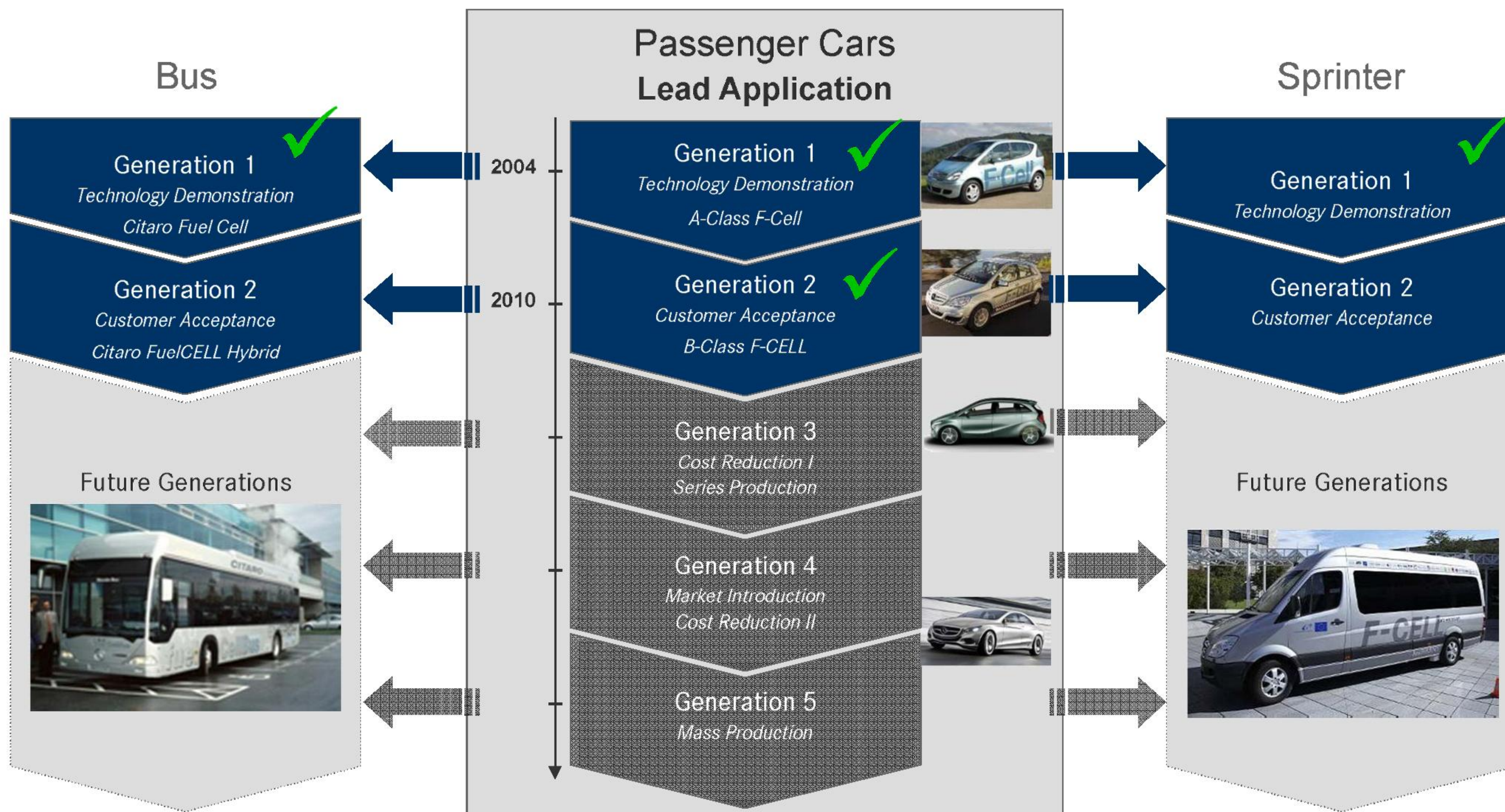
Drive Portfolio for the Mobility of Tomorrow

Different mobility scenarios



 Combustion drive
  Emission free mobility

Daimler's Fuel Cell Technology Roadmap



Daimler is dedicated to commercialize electric vehicles with fuel cell

Vehicle Deployments in California



F-Cell Customers Depend On Existing Hydrogen Stations

- 44 F-CELLs customers as of June 2012
- 5 stations accessible to them
- Special Access at LAX station given lack of 700 bar station in West LA/Santa Monica

Newport Beach: 33 Users



UC Irvine: back-up station



Burbank: 4 Users



Torrance: 33 Users



Santa Monica Blvd (350 bar): 15 Users



More cars have not been deployed due to lack of stations and limited station capacity

F-Cell Customer Fueling Options in Southern CA

	Station
1	UC Irvine
2	Torrance
3	West LA
4	Fountain Valley
5	Newport Beach
6	Burbank
7	CSU LA
8	Harbor City



- F-Cell fleet timed to arrive at same time as ARB and CEC Station Deployments
- Stations did not arrive as promised. Result: chronic complaints from F-Cell customers
- Not able to deploy F-Cells to Beverly Hills area (#1 market in CA). Cause: area stations 2 years late!



Mercedes-Benz

October 10, 2010 : CEC PON-09-608 Notice of Award

STATE OF CALIFORNIA - NATURAL RESOURCES AGENCY
CALIFORNIA ENERGY COMMISSION
1515 NINTH STREET
SACRAMENTO, CA 95814-5512
www.energy.ca.gov

ARNOLD SCHWARZENEGGER, Governor



NOTICE OF PROPOSED AWARD

Alternative and Renewable Fuel and Vehicle Technology Program
Grant Solicitation PON-09-608
Hydrogen Fuel Infrastructure

October 21, 2010

On June 2, 2010, the California Energy Commission (Energy Commission) released a Grant Solicitation Application Package entitled "Hydrogen Fuel Infrastructure" under the Alternative and Renewable Fuel and Vehicle Technology Program. This grant solicitation was an offer to fund projects that develop infrastructure necessary to dispense hydrogen transportation fuel. The grant solicitation announced that the maximum funding available for this solicitation was \$19.0 million.

The attached table, "Notice of Proposed Awards", identifies each applicant selected and recommended for funding by the Energy Commission's Transportation Committee, the amount of recommended funding, and scoring information. This notice is being mailed to all parties who submitted a proposal to this solicitation and is also posted on the Energy Commission's web site at: <http://www.energy.ca.gov/contracts/index.html>.

Funding of proposed projects resulting from this solicitation is contingent upon the approval of these projects at a publicly noticed Business Meeting at the Energy Commission in Sacramento, California.

Questions should be directed to: Sarah Williams, Grants Officer
California Energy Commission
1515 NINTH STREET
SACRAMENTO, CA 95814-5512
(916) 654-4334

OEM's expectation in 2010:

~ 10 additional stations by January 2012

2012 Reality:

Stations will begin slowly coming online January 2013 (best case scenario)

BUT Santa Monica is not first priority!

California Energy Commission Alternative and Renewable Fuel and Vehicle Technology Program Solicitation PON-09-608 Hydrogen Fuel Infrastructure Notice of Proposed Awards									
Proposal Number	Applicant	Project Title	Total Funds Requested	Cost Share Requested	Total Proposed Award	Eligible Cost Share	Proposed Award Per Station	Score	Rank
Proposed Awards									
1	Individual Station Locations & Proposed Award Amount	UC Irvine Station located at 19172 UC Irvine Station located at 19172 Santa Monica Boulevard	\$1,100,000.00	75%	\$825,000.00	\$825,000.00	\$825,000.00	78.1%	Awarded
	Beverly Hills Station located at 1004 S La Cienega Boulevard, Los Angeles, CA 90035			75%	\$1,080,222.00	\$1,080,222.00	\$1,080,222.00	78.1%	Awarded
	West Los Angeles Station located at 11261 Santa Monica Boulevard, Los Angeles, CA 90025			75%	\$1,075,848.00	\$1,075,848.00	\$1,075,848.00	78.1%	Awarded
	Hermosa Beach Station located at 1131 Pacific Coast Highway, Hermosa Beach, CA 90254			75%	\$1,068,788.00	\$1,068,788.00	\$1,068,788.00	78.6%	Awarded
	Irvine North Station located at 4162 Trabuco Road, Irvine, CA 92602			75%	\$1,015,989.00	\$1,015,989.00	\$1,015,989.00	78.6%	Awarded
	Diamond Bar Station located at 21866 E. Copley Drive, Diamond Bar, CA 91765			75%	\$1,070,482.00	\$1,070,482.00	\$1,070,482.00	79.3%	Awarded
	Hawthorne Station located at 5230 Rosecrans Avenue, Hawthorne, CA 90250			75%	\$993,788.00	\$993,788.00	\$993,788.00	79.3%	Awarded
	Laguna Hills Station located at 33871 B Yoro Road, Laguna Hills, CA 92653			75%	\$0.00	\$0.00	\$0.00	72.8%	Not Awarded ²
	Carroll Station located at 820 Birmingham Drive, Carroll, CA 92007			75%	\$0.00	\$0.00	\$0.00	68.7%	Did Not Pass
2	South Coast Air Quality Management District (AQMD) Hydrogen Station	The South Coast Air Quality Management District (AQMD) Hydrogen Station	\$1,488,938.00	50%	\$724,469.00	\$724,469.00	\$724,469.00	70.6%	Not Awarded ²
3	City of Burbank Hydrogen Station	City of Burbank Hydrogen Station	\$940,000.00	50%	\$470,000.00	\$470,000.00	\$470,000.00	64.7%	Did Not Pass
4	Linde LLC	Linde West Sacramento and Laguna Niguel Hydrogen Fueling Stations	\$3,395,209		\$3,395,209	\$3,395,209	\$3,395,209		
	Individual Station Locations & Proposed Award Amount	Linde West Sacramento Station located at 30012 West Sacramento, CA 95691		65%	\$1,775,133	\$1,775,133	\$1,775,133	78.1%	Awarded
	Linde Laguna Niguel Station located at 251 West Orange Ave, Laguna Niguel, CA 92653			65%	\$1,620,076	\$1,620,076	\$1,620,076	78.1%	Awarded
	Port Commission Hydrogen Fueling Complex	Port Commission Hydrogen Fueling Complex	\$30,000.00	10%	\$2,970,000	\$2,970,000	\$2,970,000	78.7%	Awarded
	Project location: At the south boundary of San Francisco International Airport property adjacent to Millbrae and the Route 101			10%	\$687,000	\$687,000	\$687,000	78.7%	Awarded
TOTAL			\$22,706,287.00		\$12,448,583.00	\$12,448,583.00	\$12,448,583.00		

Expiration Date: 11/1/2010

Questions Posed by the CEC for the Workshop

- What is the best approach for selecting site locations for stations in the future?
- What defines the optimal hydrogen station location?
- How would you recommend to get your market data into the CEC selection process for hydrogen station location?

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

The CaFCP Roadmap document identifies hydrogen station locations which are seen by industry to have a very high value.

Selecting station sites using these recommendations is a good starting point.

Communication with the CaFCP OEM Working Group is encouraged.

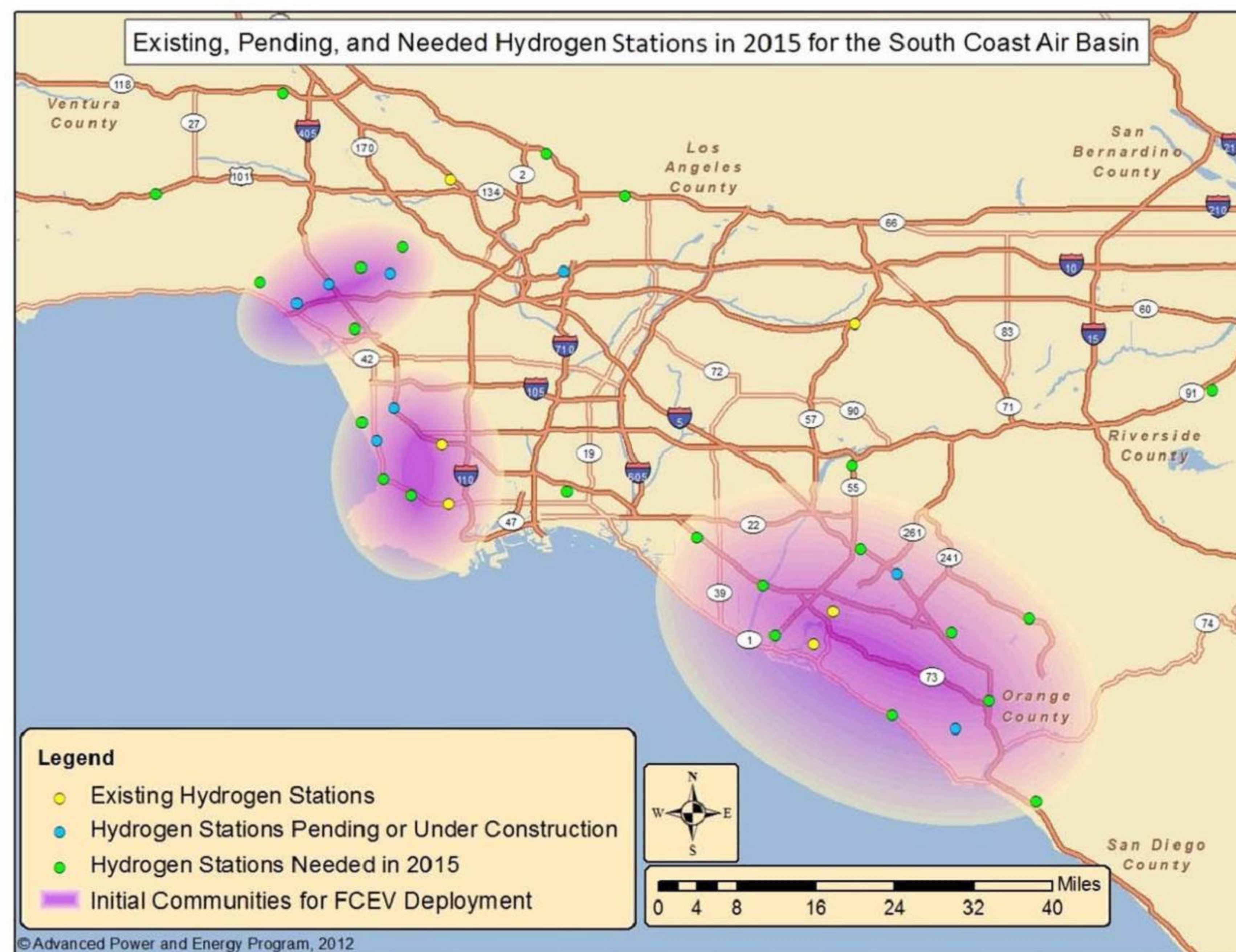


Figure AA Clusters in Greater Los Angeles Area

What defines the optimal hydrogen station location?

The optimal hydrogen station location is often hard to determine, and the method for determining the optimal location varies with each location. The process is not black and white.

For past PONs, the CaFCP OEM Working Group considered data such as, but not limited to: customer data, hand raiser data, commute patterns, traffic patterns, gasoline sales volume, space availability, proximity to freeways, proximity to major arterials, site visits, personal experience with the area, etc.

For best results, Communication with the CaFCP OEM Working Group to determine the optimal location for a hydrogen station is encouraged.

How would you recommend to get your market data into the CEC selection process for hydrogen station location?

For past PONs, each CaFCP OEM Working Group member independently considered internal and publicly available market data to determine which projects should get their support. Once completed, the CaFCP facilitated the aggregation of the individual OEM support into a consensus based Joint Letter of Support.

While Letters of Support may no longer be desired, this collaborative process which created them was highly successful and effective at determining the priority station locations.

It is the opinion of Mercedes-Benz that with slight modifications to the PON process, the requested data can be delivered in a way that satisfies their need for data, while giving the OEMs confidence that their station deployment needs will be met. This can be best done by open discussions.

Customer Expectations for Hydrogen Stations

Regardless of the process by which station projects are selected, the stations themselves must meet the expectations of future fuel cell vehicle customers in order to be truly successful.

Below are capabilities which must offered by future stations:

- Provide SAE J2601 H70 Type A Fills (including -40C precooling)
- Provide SAE J2601 H35 Type B Fills (including -20C precooling)
- Meet SAE J2719 fuel quality specifications
- Offer multiple dispensers per station, and both pressures at each dispenser
- Point of sale capable
- No access agreements or other contracts

Thank you for your attention!

Mercedes-Benz Museum

