



AGENDA SUPPLEMENT No. 2

Supplemental Agenda Related Writings/ Documents Provided To A Majority Of The Ridgecrest City Council / Successor Redevelopment Agency Board Members After Distribution Of The July 2, 2014 Agenda Packet

- 1. Add attached supporting document to Item No. 6 of Discussion and Other Action Items.*

This information is available for viewing on
The City of Ridgecrest web page

<http://ci.ridgecrest.ca.us>

City Council Agendas

Memo

Dated: July 1, 2014

To: City Council and City Manager

Subject: Industrial Development New Funding Levels Worksheets

Staff has met with Pertexa, Cal UAS, and EH Group as directed by council. Attached you will find worksheets for each firm identifying a new reduced funding level for each. Also included is a funding plan for each which identifies milestones each has offered in order to gain each funding amount. These milestones would be verified by staff before any additional finding would be issued. These milestones and funding amounts will be included in the Grant Agreement that any selected firms will be required to sign.

Staff will also include within the Grant Agreement, the following additional items:

- 1) A requirement for the firm to perform ongoing operations within the city for a period of ten years, with the condition that if the firm chooses to relocate outside the city, it will repay the city any grant funds received in full. However the total amount of this refund will be reduced by 10% for each year it did operate within the city. For example: if a firm should choose to leave the city after being located in the city for 3 years it would only be required to pay back 70% of the grant funds received.
- 2) All retail sales generated from these firms will occur within the city, thereby resulting in sales tax coming to the city.
- 3) The firms will provide guarantees, by way of assets or personal guarantee, for any funds advanced but not utilized as stated in its proposal.
- 4) The firms must meet a minimum of 60% of both new jobs and new sales as presented in their proposals or the city will be able to request that the firm pay back to the city a percentage of the grant amount received, equal to the difference between the actual amount of jobs or sales and the amount stated in their proposals for the five year period.
- 5) The city shall have the right to audit the firm's financial accounts and statements to confirm both that the grant funds are being correctly utilized and milestones are being met, at least quarterly.
- 6) Should the firm be sold prior to the ten year period, the city shall receive two times the grant amount funded or received, or 5% of the sales proceeds, whichever is more.

Summary

Staff feels that, in some cases, the reduction of funds has resulted in more grant funds being requested before any milestones have been reached (ie. at initial grant agreement signing), and also far less milestones provided (therefore less benefit to the city). In other words, a simple way to look at these grants is that the city is paying for the production of new jobs and new city tax revenue with these funds, and therefore should choose the best way to spend its money.

The new funding total levels being requested by each firm is as follows

Pertexta		\$875,000
CAL UAS		\$720,000
Subtotal		\$1,595,000
EH Group	Hydrogen	\$350,000
	Or	
	Biomass	\$420,000
	Or	
	Solar	\$600,000
WEDA		\$147,000

Total new funding plan available from the city would be the following:

\$1,000,000 from Economic development tab funds for industrial development

\$100,000 from economic development tab retail development funds

\$75,000 from economic development tab code enforcement funds

\$500,000 from Ridgecrest Blvd. Contingency funds

\$500,000 from the Ridgecrest specific plan / Walmart project

Providing a total of \$2,175,000 for grant funding

This could for example allow the council to grant at the new reduced funding levels

PERTEXA	at	\$875,000
CAL UAS	at	\$720,000
EH Group	at	\$420,000 (biomass project)
WEDA	at	\$147,000
	Total	\$2,162,000

Another alternative would be to only fund each proposer up to 20% of the amount requested with the provision that it can only be used as a loan grantee to obtain bank or private loans for the remaining amount. Since all of the firms are asking that a large amount of the funding they receive is available at the signing of the grant agreement; the city will not have seen any milestones completed. This would result in the city being placed in the awkward position of asking for the return of funds should the firm not meet their goals/benefits as stated in their proposals and grant agreement.

The major benefits to the city of this alternative approach are that it would greatly reduce the risk of loss, it would utilize the services of a bank for underwriting the venture, and it would reduce the total amount of TAB funds used by these firms therefore making funds available for other opportunities.

The drawback of this approach is how to deal with both WEDA and the ER Group since they could not involve a bank loan for their requests. Also some firms may not be able to get private financing even with city grant funds as an incentive, or may not wish to do so there by resulting in their potential relocation to another community.

Finally another issue would be the establishment of a foreign trade zone which would need to be, at a minimum, jointly funded with the city. This particular item would be able to benefit several firms over time, and therefore should not be placed on just one firm to fund.

Funding under this method would be as follows:

<u>Firm</u>	<u>Original Funding Request</u>	<u>Amount At 20%</u>
Pertexa	\$1,450,000	\$290,000
Cal UAS	\$1,196,000	\$239,200
EHGroup	\$1,450,000	\$420,000
		(choice to fund one or more of the three project types)
WEDA	\$147,000	\$102,000
		(could chose to reduce service level and funding amount)
	Example of Total investment of TAB funds	\$1,051,200

PERTEXA Work Sheet

6/23/2015

New funding levels

\$600,000 due at signing of Grant agreement

\$ 275,000 due at completion of
Prototype and

All milestones Listed above

Milestones

Public announcement of firm's
being located in Ridgecrest

Establishment of firm's proposed
site location within the city

Formal submittal of foreign trade
zone application (FTZ)

Establishment of operational call
center

All expenditures of grant funds to
be from proposal asset list

2-3 full time jobs to be produced at
end of 6 months

Construction of ROBODOC

All expenditures of grant funds to
be from proposal asset list

Start of full production of ROBODOC

Call center to come on line

15 jobs to be produced by the end
of 18 months from the signing of the
grant agreement

\$ 575,000 due when and if additional funds are made available by the city, and completion of all the milestones listed above

All expenditures of grant funds to be from proposal asset list

Call center fully staffed and operating

Sales of ROBODOC in the amount of 28 million are under way with new sales taxes coming to the city

300 -500 new jobs produced

NOTES:

At the end of a five year period from signing of the grant agreement the following will have occurred:

The production of 300 to 500 new full time jobs will have been produced in the city of Ridgecrest

The establishment of a new FTZ (foreign trade zone) will have occurred

Retail sales of 28 to 280 million dollars annually will be occurring

The firm will be in its fifth year of its agreement to stay in Ridgecrest for a minimum of ten years from the original signing of the grant agreement which will state that, if the firm relocates its operations to another location outside the city, it will pay all grant funds back to the city with 10% of the total grant funds reduced for each year it is located within the city

Pertexa has requested that the timing of receiving the grant funds be changed from their original proposal moving more money to the first funding at grant agreement signing from the original \$250,000 to \$600,000.

Asset Costs

ROBODOC				
VALUE ADDED SHOP COSTS				
BUILDING AND OFFICE SPACE	Units	Unit Cost	Final Cost	Notes
Production and Assenbly Facilities	1	\$0.65	\$156,000	20,000 sqft ,1 yr Lease (5 Yr Lease Agreement most likely)
Conference Room and Office Facilities	1	\$0.95	\$45,600	4,000 sqft, 1 yr Lease (5 Yr Lease Agreement most likely)
Call Center Facilities	1	\$1.50	\$225,000	12,500 sqft (Capacity to 50 Employees with built in cost)
Production Cubicles	5	\$3,000	\$15,000	For Engineering
Production Furnitute	5	\$2,000	\$10,000	For Engineering
Office Cubicles	8	\$3,000	\$24,000	For Sales and Support
Office Furniture	8	\$2,000	\$16,000	For Sales and Support
Call Center Installation	*	\$10,000	\$10,000	
Shop Floor Installation			\$30,000	Includes computing, Internet and Certifications
Sub-Total			\$531,600	
INTERNET & COMPUTING	Units	Unit Cost	Final Cost	Notes
Cable/Dsl Modem	7	\$200	\$1,400	Could be free with contract
Wireless Access Point	7	\$150	\$1,050	For wireless internet access
IP Phones+inrastructure	1	\$10,000	\$10,000	Phone system/w 20 phones
Security appliance/firewall	2	\$1,000	\$2,000	Sonicwall or Juniper
Gigabit switch 24port	2	\$300	\$600	Cisco
HP Proliant Server	2	\$2,000	\$4,000	For Domain/Fileshare
Windows Smalll Business Server Software	2	\$1,050	\$2,100	Server software w/5 licenses
Server 5 licenses	3	\$500	\$1,500	5x3 = 15 licenses
Battery Backup	2	\$500	\$1,000	Server Power backup
Backup Drive/s	2	\$150	\$300	Databackup
Mid End Desktop	7	\$600	\$4,200	Administrative etc workstations
High end Desktop	5	\$1,000	\$5,000	Engineering etc workstations
Monitors	15	\$150	\$2,250	Display and Control devices
Windows 7 Prof. Software	15	\$130	\$1,950	Operating system for desktops
Microsoft Office	12	\$200	\$2,400	Administrative software
Other misc software	12	\$75	\$900	Accounting, graphics etc
CAD Software	2	\$10,000	\$20,000	Does not Include Support and Maintenance
Color Laser Printer	2	\$700	\$1,400	General Office printers
Network setup costs	1	\$10,000	\$10,000	Initial Setup of equipment
Wiring	1	\$8,000	\$8,000	
Sub-Total			\$80,050	
SHOP & TEST EQUIPMENT:	Units	Unit Cost	Final Cost	
Robot, Kuka KR 200	2	\$75,000	\$150,000	
Robot, Kuka KR 100	2	\$50,000	\$100,000	
Conveyer Automation System	2	\$30,000	\$60,000	
Pick and Place Robot, KR90 R2700	2	\$25,000	\$50,000	
Part Feeders, Funic M-KiAT	2	\$40,000	\$80,000	
Packaging Dispenser	1	\$10,000	\$10,000	
Boxing Machine	1	\$50,000	\$50,000	
Accessory Tooling and Attachments Kits	1	\$37,500	\$37,500	
Overhead Crane	1	\$36,500	\$36,500	
Oscilloscope	2	\$1,200	\$2,400	
Signal Generator	2	\$500	\$1,000	
Hand Tools	1	\$4,000	\$4,000	
Shop Installation & Setup			\$15,000	
Scissor Lift Pallet Jack	1	\$2,500	\$2,500	
Machine Lathe	1	\$14,500	\$14,500	
Milling Machine (Bridgeport)	1	\$15,000	\$15,000	
Sub-Total			\$628,400	
EQUIPMENT & ENVIRONMENTAL CONTR	Units	Unit Cost	Final Cost	
Container Moving-Stacking Machine	1	\$15,000	\$15,000	
Forklift-(electric)	1	\$10,000	\$10,000	
Compressor	2	\$2,000	\$4,000	
Air Filtration System	1		\$35,000	
Clean Room Facility (300 Sqft)	1		\$110,000	
Industrial A/C Units	1		\$45,000	
Sub-Total			\$219,000	
TOTAL ASSET COSTS			\$1,459,050	

CAL UAS Work Sheet

6/25/2015

New funding levels

\$452,425

Due at signing of Grant agreement

Milestones

purchase/ lease all manufacturing and training center equipment

Establishment of firm's proposed site location within the city

Establishment of operational manufacturing, training, sales and administrative offices

All expenditures of grant funds to be from proposal asset list

7 full time jobs to be produced at end of 6 months

\$ 277,700 due at completion of all milestones listed above

Sales, and production of UAS units

All expenditures of grant funds to be from proposal asset list

Total of 11 full time jobs produced

Estimated sales of \$ 3.5 million by year 3

\$730,115 TOTAL funds requested in 12 to 18 months

NOTES:

At the end of a five year period from signing of the grant agreement the following will have occurred:

The production of 55 new full time jobs will have been produced in the City of Ridgecrest

The establishment of a new manufacturing facility and administrative offices

Retail sales of \$3.5 to 6.5 million dollars annually will be occurring

The firm will be in its fifth year of its agreement to stay in Ridgecrest for a minimum of ten years from the original signing of the grant agreement which will state that, if the firm relocates its operations to another location outside the city, it will pay all grant funds back to the city with 10% of the total grant funds reduced for each year it is located within the city

Cal UAS Design and Fabrication

Purchase

Lease Lease of 543 Graaf Street in Ridgecrest \$36,565.00

Network Infrastructure IT and Security \$38,000

CAD \$165,000

4 Design Workstations/ 2 Laptop
AutoCAD Design Suite Software License
Large format printer
Research Laptops
Schematic Capture/Layout Software (x2)
Plotter
Laser Printer
Software Development Tools
Furniture Desks, Tables, Chairs, Files, Book Cases

Electronics Fabrication \$64,000

Soldering Station Hakko FX-951 (x2)
Rework Station w/Hot Air Aoyue 2703A
Microscope AmScope SM-3BZ-80S (x2)
Soldering Tools - solder, flux, pliers, cutters, strippers,
tweezers....
Signal Generators and Oscilloscope for Ground Station
Fume Removal System - Sentry Air
ESD-Safe Workbench with 1000 lb Weight Capacity,
Rolled Front Edge, Instrument Shelf and Accessories, 30 x
60" (x2)
BenchPro LNT-UC Deluxe Polyurethane Cleanroom Lab
Chair/Workbench Stool with Footring, 300 lbs Capacity,
18.5" Width x 23"-33" Height x 18" Depth (x2)

Test Equipment \$24,300

Oscope Rigol MSO 4034
Oscope Rigol DS1204B (x2)
Spectrum Analyzer Rohde & Schwarz FSL6.16
Signal Generator (x2) Rigol DG1062Z

Multimeters Klein Tools MM2000 (x3)
Power Supply Instek GPD-3303S (x2)
HD Monitor Samsung SMT-2730 (x3)

Fabrication Tools

\$5,200

10" Drill Press (x2) Sears Craftsman
Layout Table, Apron Table, pneumatic stools
Genie Lift SLA20
Band Saw Craftsman 14-Inch
Pallet Jack
30 In. Shear, Press Brake, And Slip Roll
Hand Tools - Hammers, drivers, wrenches.....

Pick and Place

\$82,350

Pick and Place Machine Mancorp CR-3000 (\$80K)
Basic SMD Reel Stock - DigiKey (\$32K)
Furniture

SMD Reflow Ovens

\$37,000

Benchtop (x2) Mancorp MC-301
Production - Mancorp CR-4000C
Furniture
Vendor/Installation Support

\$452,415.00

Manufacturing

3D Routing/Milling Stations

\$111,200

3D Milling Machine (x2) Roland MDX-540SA
3D Router CNC-Step (x2) T-Rex 1224
Dust Removal System Sentry Air SS-400SKY
Raw Materials - McMaster-Carr
Furniture - Layout tables, apron table

3D Printing Stations

\$72,500

Additive 3D Printer - Envision Tex Extreme 3SP
Stereo Lithography Printer - 3D Systems Project 7000
Raw Materials and Chemicals - McMaster-Carr
Furniture - Layout tables, apron table

Battery Charging Station

\$4,200

Battery Chargers (4) - Hyperion 500W
Fire Suppression System - Hoormart
Furniture

Assembly Stations

\$14,300

Furniture (Layout tables, Diversified Woodcrafts Plain Apron
Table, Stools and pneumatic stool
Vendor Installation and Support

Shipping/Receiving/Parts Storage

\$21,500

Workstations, furniture, steel shelving

Training Center

\$54,000

HDMI Projector (x2) - Epson 8345
14 Tables -Balt Flipper Base
14 Table Tops - Bale
28 Chairs
Mobile Field Station (Delivery Van)
Vehicle - Local Auto Dealer Ford E-150 XL
HD Monitor - Samsung SMT 2730
Video RX Equipment
Command & Control Equipment

\$277,700

\$730,115 \$730,115.00

E H GROUP

New funding levels

Milestones

Hydrogen fueling project

(Fuel stations and production facility)

\$350,000 total grant request

Phase 1 3 months amount \$50,000

Conduct pre-development application and permitting analysis with the California Energy Commission (see attached Management approach)

Decision to proceed or not

Permits and site location

Phase 2

At 18 months, amount \$300,000

Site selection, System selection, USDA Renewable Energy loan Guarantee program application submitted.

Hydrogen fuel cell vehicle grant application prepared and submitted for city vehicles

Hydrogen production and
fueling station development
application submitted

(See management approach
attached for details)

Phase 3 6-12 months

(Private sector funded) Site
development and system
installation

Bio-mass refinery system

\$500,000 total grant request

Phase 1 \$80,000, 6-12 months to determine

Feasibility

Decision to proceed or not

Phase 2 \$300,000, 24 -36 months

Obtain Permits for site location

Obtain Industrial development
bond financing and provide for
city new revue source

Development of Truck and rail

transportation system into and out Ridgecrest

Phase 3 \$120,000, 36 -60 months

Establishment of plant and production

Production of 55 New Jobs by year five

Solar and energy storage system

\$600,000 total grant request

Phase 1 \$ 100,000, 12-24 months

Conduct feasibility Study.

Decision to proceed or not

Phase 2 \$300,000, 24 -60 months

Land acquisition

Permits and site development

Power transmission facility

Phase 3 \$200,000, 60 – 72 months

Development of solar fields

Competition of transmission
agreements and lines if needed

Power purchase agreements
for local new industry use

NOTE: City can choose one or any combination of three the projects offer
above

June 30, 2014

To: City Of Ridgecrest, CA
Mr. Gary Parsons
100 West California Ave
Ridgecrest, CA 93555

Re: Proposal Addendum

This letter and the enclosed proposal addendum from the EH Group, Inc. are in response to your request for a scaled down version of our original comprehensive renewable energy project plan. I did agree, during our conversation on June 24, 2014, to submit a scaled version and also highlighted that the end result would also be scaled in direct correlation to the project we felt would be best for successful execution under the new parameters.

As we discussed, this proposal addendum is a fraction of our original proposed approach. It focuses directly on the hydrogen initiative discussed in our broader proposal. We have not adjusted, changed, or abridged any of the estimates from our more comprehensive proposal. Through an iterative process the City of Ridgecrest can still establish itself as that renewable energy center, it will however take longer to realize the employment gains as subsequent phase are brought into play.

We chose the hydrogen initiative as the lead project due to market timing. The State's investment money in the Hydrogen Highway is there on the table. California is the lead FCEV market in the United States and has the attention of every automobile manufacturer introducing FCEVs in the coming year. Ridgecrest is in an ideal location to serve as the first connector station, and the region has an abundance of resources to become a significant player in the hydrogen energy market as it expands over the next several decades.

The hotel and restaurant sector in Ridgecrest will see tangible impact as the FCEV owners first trickle and then flow into the town on weekends and holidays.

Thanks you for the opportunity to submit this alternative approach. If you have any questions, please contact me at any time.

Sincerely,



Edward Hackett
President, EH Group, Inc.

Proposal Addendum

Compliance

To meet the request of the City Of Ridgecrest Office of Economic Development, the EH Group offers this addendum to The Ridgecrest Energy Project proposal submitted May 13th 2014.

Objective

Establish a hydrogen production facility and fueling station for hydrogen fuel cell electric vehicles (FCEVs) in the City of Ridgecrest.

Introduction

EH Group, Inc. is committed to delivering a comprehensive economic development initiative based in the renewable energy sector. With a population of over 38 million people and the largest economy in the nation, California has faced many challenges and opportunities for its renewable energy economy. To support the growth of the sector, the state has enacted ambitious policies, like its 33% renewable portfolio standard. With these policies, California state agencies have also introduced significant incentive programs to spur investment and quicken the pace of renewable energy development. No other state in the Union has leaned as far forward as California for creating the market infrastructure to support the commercial deployment of the hydrogen fuel cell vehicle. California is not the only jurisdiction investing in hydrogen. Mutually beneficial efforts exist in Germany, Japan, the U.K., Scandinavia, and South Korea.

With the potential commercial numbers of hydrogen fuel cell vehicles on the road, the business of selling hydrogen fuel is very attractive. These stations are needed before the vehicles can be sold in commercial numbers, however substantial financial losses for the early years of these first hydrogen stations are likely. The opportunity exists to leverage public and private dollars to build an economic bridge to financial viability.

California's Hydrogen Highway

Background

The California Hydrogen Highway Network (CaH₂Net) was initiated in April of 2004 by Executive Order (EO) S-07-04 under Governor Arnold Schwarzenegger. The mission was to assure that hydrogen fueling stations were in place to meet the demand of fuel cell and other hydrogen vehicle technologies being placed on California's roads.¹

¹ California Environmental Protection Agency. Historical Activities, Hydrogen Vehicle Infrastructure. (2013, August 20). Retrieved from http://www.arb.ca.gov/msprog/zevprog/hydrogen/hydrogen_cah2net.htm

In September 2013, Governor Jerry Brown signed Assembly Bill 8 into law, extending the programs that accelerate the turnover of older vehicles and equipment and invest in the development and deployment of advanced technologies that are necessary to achieve the California’s air quality, climate, and energy goals until January 1, 2024. The bill includes a provision to fund at least 100 hydrogen stations with a commitment of up to \$20 million a year from the Alternative and Renewable Fuel and Vehicle Technology Program.²

The Fuel Cell Electric Vehicle (FCEV)

Automakers consider FCEVs complementary to their other advanced vehicle technologies such as plug-in electric vehicles (PEVs), although FCEVs are seen as being the most capable of replacing their gasoline counterparts as a household’s primary vehicle as Figure 1 represents. Unlike PEVs, however, fuel cell electric vehicles are reliant on hydrogen refueling outside the home. For this reason, the first FCEV customers need to see stations before they will consider buying an FCEV instead of a gasoline vehicle.²



Figure 1. California Fuel Cell Partnership Vision of Vehicle Market

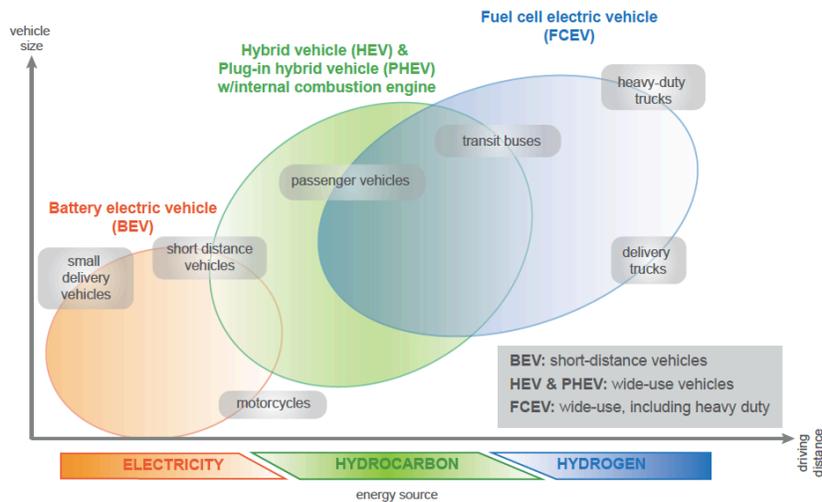


Figure 1 visually describes the driving range, vehicle size and energy source of various electric vehicles. Fuel cell electric vehicles, for example, occupy the top right of the chart, offering the greatest vehicle range and vehicle size, from passenger to transit buses and heavy-duty trucks. This figure is a modified version of a Toyota graphic used in the technical version of A California Road Map.

Beginning in 2015, major automakers will introduce fuel cell electric vehicles to the commercial market in California and other parts of the world, most likely in Germany, Japan, South Korea and the Scandinavian countries. Two automakers currently lease vehicles in Southern California and others are in fleet programs. In addition, three transit agencies across the state currently operate fuel cell electric buses.

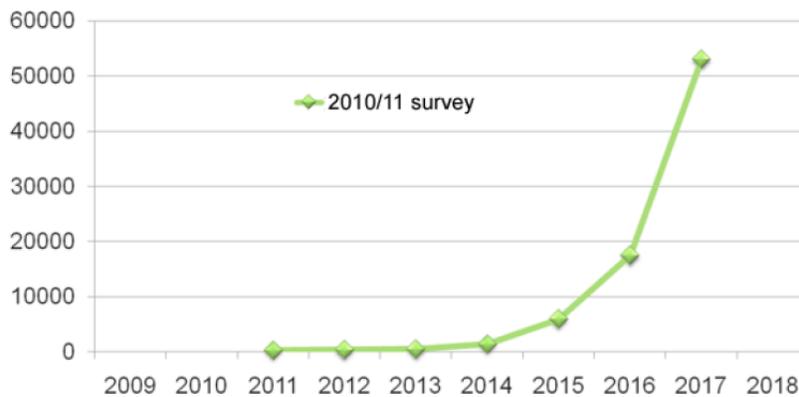
² California Fuel Cell Partnership. “A California Roadmap, Bringing Hydrogen Fuel Cell Electric Vehicle To The Golden State.” July 20, 2012

Building a Network of California Hydrogen Fuel Stations

Through a collaborative process substantiated by research, data and modeling, CaFCP members determined that a network of 68 stations operating statewide by 2015 will enable the launch of the early commercial market of 10,000-30,000 fuel cell electric vehicles. Only 37 public stations are currently in operation, about half of what is needed.

It is recognized that the first stations will not be fully utilized and profitable in the early years, even as vehicle sales increase. Currently, most stations in California are supported through funding from the California Energy Commission and its Alternative and Renewable Fuel and Vehicle Technology Program (AB 118). This program, funded by vehicle licensing fees, provides approximately \$100 million annually to develop fueling infrastructure for alternative and low-carbon fuels, including hydrogen.

Figure 2. Anticipated FCEV On The Road 2011-2017



The California Energy Commission grants will open 28 new hydrogen stations and one mobile refueler in the state. California, with just nine public hydrogen stations open and 17 in development, announced a program last year worth as much as \$200 million to create a 100-station network over a decade.³

Ridgecrest The Connector Station

Ridgecrest is ideally positioned within the planned Hydrogen Highway system as a long range connector station. A connector station is refueling station having low average throughput, but high peak requirements necessary to fuel FCEV trips between northern and southern California.⁴ Sitting at the confluence of the Highways 395/14, Ridgecrest is located at a prominent node as private fuel cell vehicular traffic extends

³ Ohnsman, Alan. "Toyota Joins California Hydrogen Push in Station Funding." Bloomberg May 2, 2006.

⁴ Eckerle, Tyson and Garderet, Remy. "Hydrogen Network Investment Plan." Energy Independence Now, 2013

beyond the local neighborhood. Ridgecrest is also positioned well to be a future hydrogen fuel supplier throughout the region north to Bishop, over to Death Valley, and south to Barstow.

Management Approach

Phases

EH Group will conduct the project in three phases with a Go/NoGo milestone set at the end of Phase 1:

Phase 1. 3 months. \$50,000. Conduct pre-development application and permitting analysis with the California Energy Commission. During this initial phase EH Group will establish the conditions for the State of California to invest in the first California Hydrogen Highway connector station. Research and analysis will be completed to identify the appropriate hydrogen generation system to install in the Ridgecrest area. Site survey and engineering estimates will be completed. Hydrogen purchase agreements for future regional fuel stations will be initiated. Purchase agreements will be initiated with government agencies for establishing local hydrogen fuel cell vehicle fleet. Financing options for system purchase and site development will be determined in this phase.

Phase 1 Milestone Decision: California Energy Commission or Requisite Authority Site Approval

Phase 2. 18 months. \$300,000. Site selection. System Selection. USDA Renewable Energy Loan Guarantee program applications submitted. Hydrogen fuel cell vehicle grant applications prepared and submitted for city vehicles. Hydrogen production and fueling station development applications submitted to the State of California. Site selection engineering analysis completed and reports filed for permits and licensing. Engineering analysis and trade studies for system selection. Production analysis estimates developed for private sector capital raise. Teaming agreements initiated for expansion efforts with regional commercial fuel stations.

Phase 3. 6-12 months. (Private Sector Funded) Site Development and System Installation.

Risk Mitigation Plan

The table below outlines potential risks, and EH Group’s plan to mitigate such risks.

Potential Risk	Likelihood	Impact	Mitigation Plan
Permitting Risk			
Failure during State site selection eligibility	Low	High	EH Group will limit Phase 1 resources to \$50,000 pending site selection eligibility determination by California Energy Commission.

Potential Risk	Likelihood	Impact	Mitigation Plan
Finance Risk			
Unable to secure desired 100% state financing	Med	Low	Current State programs subsidize station development up to 60%. Federal Loan Guarantee Programs under the USDA create attractive incentive for private sector. USDA requires 40% capital to loan value.
Unable to secure private sector financing	Low	High	Major auto manufacturers have been investing in the fuel station development. Departments of the Federal Government and agencies of the State Government are investing in hydrogen vehicles for their objectives to meet “green energy” mandates. The project will partner with these organizations to create a local cottage industry of FCEV’s that can sustain the early operating years of the Ridgecrest production and fueling station.
Market Risk			
Uncertainty in vehicle sales	Low	Low	Ridgecrest Hydrogen system would be designed with alternative use paths as commercial vehicle sales come online throughout the state.

Feasibility of the Proposed Approach in Meeting and Exceeding City of Ridgecrest Goals

At the turn of the last century, gasoline was sold in open containers at pharmacies, blacksmith shops, hardware stores and other retailers looking to make a few extra dollars of profit. In 1905, a Shell subsidiary opened a filling station in St. Louis, Missouri, but it required attendants to fill a five-gallon can behind the store, then haul this to the customer’s vehicle for dispensing. Today, 152,995 gas stations dot the landscape, including 123,289 convenience stores. On average, each location sells about 4,000 gallons of fuel per day, quite a jump from the 30 gallons sold at the Gulf station in Pittsburgh on December 1, 1913.⁵ Through this initiative, EH Group will position the City of Ridgecrest to be on the leading edge of the FCEV commercial wave that will hit California beginning with the introduction in 2015 of production FCEV vehicles.

Corporate Technical Experience

The EH Group is a lean organization whose strength as a small company is derived from a corporate philosophy emphasizing planning and executing projects based upon realistic and achievable goals. Combining a highly skilled technical staff with a diverse level of experience enables EH Group to accurately predict resource allocation for research, development and commercialization projects.

⁵ American Oil & Gas Historical Society. Retrieved from <http://aoghs.org/transportation/first-gas-pump-and-service-stations/>