

California Energy Commission  
**CONSULTANT REPORT**

# North Coast and Upstate Fuel Cell Vehicle Readiness Project

Task 2.2 Promotion of FCEV Use Summary Report

Prepared by: **Redwood Coast Energy Authority**



**California Energy Commission**

Edmund G. Brown Jr., Governor

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## PREFACE

Assembly Bill (AB) 118 (Núñez, Chapter 750, Statutes of 2007), created the Alternative and Renewable Fuel and Vehicle Technology Program (ARFVTP). The statute authorizes the California Energy Commission (Energy Commission) to develop and deploy alternative and renewable fuels and advanced transportation technologies to help attain the state's climate change policies. AB 8 (Perea, Chapter 401, Statutes of 2013) re-authorizes the ARFVTP through January 1, 2024, and specifies that the Energy Commission allocate up to \$20 million per year (or up to 20 percent of each fiscal year's funds) in funding for hydrogen station development until at least 100 stations are operational. The Energy Commission has an annual program budget of approximately \$100 million and provides financial support for projects that:

- Develop and improve alternative and renewable low-carbon fuels;
- Optimize alternative and renewable fuels for existing and developing engine technologies;
- Produce alternative and renewable low-carbon fuels in California;
- Decrease, on a full fuel cycle basis, the overall impact and carbon footprint of alternative and renewable fuels and increase sustainability;
- Expand fuel infrastructure, fueling stations, and equipment;
- Improve light-, medium-, and heavy-duty vehicle technologies;
- Retrofit medium- and heavy-duty on-road and non-road vehicle fleets;
- Expand infrastructure connected with existing fleets, public transit, and transportation corridors; and
- Establish workforce training programs, conduct public education and promotion, and create technology centers.

The California Energy Commission (Energy Commission) issued solicitation PON-14-607 to fund Zero Emission Vehicle (ZEV) Readiness activities. To be eligible for funding under PON- 14-607, the projects must also be consistent with the Energy Commission's ARFVT Investment Plan updated annually. In response to PON-14-607, the Redwood Coast Energy Authority (Recipient) submitted application number 11, which was proposed for funding in the Energy Commission's Notice of Proposed Awards on March 17<sup>th</sup>, 2015, and the agreement was executed as ARV-14-055 on May 8<sup>th</sup>, 2015.

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## ABSTRACT

This report presents a summary of FCEV promotion work conducted for the *North Coast and Upstate Fuel Cell Vehicle Readiness Plan Project*. FCEV promotion, as articulated in the ARV-14-055 grant agreement, involves outreach and educational activities to promote FCEVs across the project region. The work conducted for this report summarizes efforts made to satisfy these objectives.

**Keywords:** hydrogen, fuel, cell, vehicle, FCEV, station, fleet, hydrogen fueling infrastructure, planning, ARFVTP, AB 8, AB 118, North Coast, Upstate, Eureka, Redding, outreach, stakeholder engagement, education

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## EXECUTIVE SUMMARY

This *Task 2.2 Promotion of FCEV Use Summary Report* is an interim deliverable within the larger *North Coast and Upstate Fuel Cell Electric Vehicle Readiness Plan* project which covers an 8-county region in California.

To complete FCEV outreach, education, and promotional activities across the region, the project team proposed the following objectives in the ARV-14-055 grant agreement:

- Provide FCEV information at community events;
- Conduct media outreach and secure at least 4 earned-media spots highlighting regional FCEV activities;
- Engage with community organizations and/or municipal agencies through presentations on the potential benefits of FCEVs;

As implied in the final report for the *North Coast Plug-In Electric Vehicle Readiness Plan*<sup>1</sup>, most of the focus on early market development for FCEVs is in the state's metropolitan areas. However, there is a need to do education and outreach in the state's rural communities. Humboldt County, and surrounding counties, are rural communities that are anticipating the eventual rollout of FCEVs and are poised to become a rural model for successful FCEV market development. For the rural rollout to be successful, however, the public must be receptive to the incoming infrastructure and feel confident in the vehicle technology.

With this need in mind, the project team conducted a variety of community engagement efforts across the region, and developed a variety of materials and tools to successfully achieve the objectives outlined above. These efforts, materials, and tools are documented throughout this report.

While the term “community engagement” is often used broadly to refer to educating the public-at-large, it does imply the use of educational materials and communication methods that are uniquely tailored to each community. Engagement strategies that are effective in large, metropolitan areas may not resonate with a small, rural populace and vice versa: the political, economic, and social fabric of rural communities varies from that seen in larger cities. For example, speaking of FCEVs as a solution to climate change

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<sup>1</sup> Zoellick, Jim, Colin Sheppard, and Jerome Carman. Schatz Energy Research Center, 2014. *North Coast Plug-in Electric Vehicle Readiness Project Final Report*. California Energy Commission. Publication Number CEC-ARV-11-006.

may engage left-leaning city dwellers, but may not speak to the value system of a rural, agrarian community<sup>2</sup>.

The project team aspired to incorporate approaches and messaging that spoke to the unique value systems of both urban and rural communities, as applicable. In some cases, the societal value of “energy security” was emphasized more than the value of “climate resilience.” In other cases, CO<sub>2</sub>e abatement was emphasized more than the economic growth that has come from domestic hydrogen production. Through the course of the project, lessons were learned that can inform more tailored approaches moving forward.

In pursuit of introducing the topic of FCEVs and hydrogen fuel in a culturally-nuanced way, the project team partnered with local government entities based in each of the 8 counties. While RCEA intended to partner with nine counties initially, only eight counties executed Memorandums of Understanding for this project. Colusa and Lake Counties were unable to commit due to fires that devastated their region in 2015. Shasta County was added as they expressed interest in being a part of the project. The 8 entities that signed MOUs include:

- County of Glenn Air Pollution Control District (Glenn County)
- Mendocino Council of Governments (Mendocino County)
- North Coast Unified Air Quality Management District (Humboldt, Del Norte, and Trinity Counties)
- Shasta Regional Transportation Authority (Shasta County)
- Siskiyou Economic Development Council (Siskiyou County)
- Tehama County Air Pollution Control District (Tehama County)

These organizations are long-established and knowledgeable about the political, social, and economic climate of their community. The advantages of partnerships such as these are plentiful. One positive outcome includes forging new alliances and support for FCEV technology. For example, one County’s local Tea Party chapter was particularly supportive of FCEV technology. Without the MOU partnerships, this potential alliance may have escaped notice.

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<sup>2</sup> Leiserowitz, Anthony, Edward Maibach, Connie Roser-Renouf, Seth Rosenthal, and Matthew Cutler. *Climate Change in the American Mind*: November 2016. Publication. Yale Program on Climate Change Communication, Yale University and George Mason University. New Haven, CT, 2017.



A more pragmatic benefit includes cost and labor savings. Each organization already holds a network of local contacts for community events and presentations. This made distributing the RFI and scheduling outreach events a more streamlined and culturally favorable exercise, as opposed to an outside entity building-up a local social network from scratch.

To coordinate engagement efforts across the region, RCEA consulted with project partners to create a stakeholder engagement and FCEV promotion plan (Appendix A).

In addition to summarizing the results of this plan, the goals of this report include:

- Briefly summarize the team's outreach activities including a list of all events, publications, media coverage, and presentations achieved.
- Centralize the information associated with stakeholder outreach efforts to inform future engagement efforts in the region to avoid duplicate efforts and to improve promotional efforts based-on lessons learned.
- Document next steps needed to build on and further these efforts.

As the nascent FCEV market creeps its way toward the North Coast and Upstate, the efforts documented here have set a foundation in each County that should accelerate the community's trust in this technology. The stakeholders listed in each of the chapters will hopefully be leveraged again in the future. The presentation slides and flyers included in the appendix, will hopefully be reviewed and refined. A record of the community events, presentations, and earned media are included in the following chapters and should be referred to by future entities promoting FCEVs and fueling infrastructure in the region.

# CHAPTER 1: Community Events

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FCEVs and infrastructure planning efforts were promoted via handouts (Appendix B), banners (Appendix C), tabling events (Appendix D), and even a hydrogen-fueled shuttling service (Appendix E) at 21 different events from September 2015 through October 2018.

This project took advantage of BEV-specific promotion efforts in the region to inform the public about the project. Unfortunately, there are no locally-available FCEVs on the market and SERC's vehicle testing contracts ended in December 2015, which made subsequent FCEV expos difficult to host. The project team did engage with mobile refueling companies, but the cost to bring a mobile refueler to the region far exceeded the project budget, unfortunately. In lieu of showing vehicles, the project team purchased wind-to-hydrogen kits to demonstrate renewable hydrogen production pathways. These kits were used at several community events and served as effective avenues for engaging the public in conversation. Additional photos from engagement events can be found in the appendix. Note that not all events which took place were photographed.



Jessica from the Redwood Coast Energy Authority explains renewable hydrogen production to the citizens of Del Norte County on a windy 4<sup>th</sup> of July in Crescent City.

Completed events are as follows; please note that many of these events were reported in the project partner reports and their specificity varies:

**Table 1: List of ARV-14-055 Community Events**

<b>Stakeholder Group/Event</b>	<b>Location</b>	<b>Date</b>	<b>Summary</b>
North Country Fair (Humboldt County)	Arcata, CA (Humboldt County)	September 2015	Through partnerships with Hyundai and Toyota, an FCEV and FCHV participated in an EV Ride and Drive event. The FCEVs served as shuttles between a local annual fair and the ride and drive venue.
Sustainable Living Expo	Arcata, CA (Humboldt County)	October, 2015	Through partnership with Toyota, demonstrated the Toyota Highlander FCHV and educated the general public.
Redwood Acres Home Garden and Recreation EV Expo (Humboldt County)	Eureka, CA (Humboldt County)	April 2016	Distributed FCEV program information (FCEV fueling network and available models) at EV expo event.
Eureka Natural Foods EV Expo	Eureka, CA (Humboldt County)	April 2016	Distributed FCEV program information (FCEV fueling network and available models) at EV expo event.
Oyster Fest	Arcata, CA (Humboldt County)	June 2017	Distributed FCEV program information at EV expo event.

Pony Express Days	McKinleyville, CA (Humboldt County)	June 2017	Distributed FCEV program information at EV expo event.
Hybrid and Electric Drag Race	Samoa, CA (Humboldt County)	June 2017	Distributed FCEV program information at EV expo event.
Fish Festival	Trinidad, CA (Humboldt County)	June 2017	Distributed FCEV program information at EV expo event.
Eureka 4 <sup>th</sup> of July Festival	Eureka, CA (Humboldt County)	July 2017	Distributed FCEV program information (FCEV fueling network and available models) at EV expo event.
Turtle Bay Expo	Redding, CA (Shasta County)	August 2017	RCEA partnered with the Siskiyou Economic Development Council to provide FCEV program information (FCEV fueling network and available models) at an EV expo event.
Siskiyou County Chamber of Commerce Business Expo	City name N/A (Siskiyou County)	February 2018	<p>Staff educated the public on how FCEVs work, the benefits of FCEVs, and also informed them about all alternative fuels planning projects that SEDC is working on.</p> <p>Staff provided the public with several handouts, including a summary slide from the RCEA train-the-trainer presentation as well as other resources from the</p>

			California Fuel Cell Partnership.
Humboldt State University Career Fair	Arcata, CA (Humboldt County)	February 2018	Discussed FCEV technology, status of hydrogen fueling infrastructure, and project developments with 25-50 students.
Samoa Open House	Samoa, CA (Humboldt County)	March 2018	Discussed FCEV technology, current available models, status of hydrogen fueling infrastructure, and project developments with members of the public.
Glenn County Fair	City name N/A (Glenn County)	May 2018	The Glenn County Department of Agriculture maintained a booth at the Glenn County Fair from May 17-20th in Orland, Ca. Prominently displayed on the booth was information specific to FCEV's. The rotating staff members of the booth were given resources to answer the public's questions. Feedback was generally good.
Crescent City 4 <sup>th</sup> of July Celebration	Crescent City, CA (Del Norte County)	July 2018	Staff educated the public (100+ individuals) about renewable hydrogen production using the wind-to-hydrogen kit. Staff provided hand-outs educating the public about available models, FCEV versus BEV technology, costs of vehicles, and other FAQs.

Siskiyou County 4 <sup>th</sup> of July Event	City name N/A (Siskiyou County)	July 2018	Discussed FCEV technology, current available models, status of hydrogen fueling infrastructure, and project developments with members of the public.
Siskiyou County Trail Town Celebration	City name N/A (Siskiyou County)	July 2018	See above.
Eureka 4 <sup>th</sup> of July Celebration (Humboldt County)	Eureka, CA (Humboldt County)	July 2018	Staff educated the public (100+ individuals) about about available FCEV models, FCEV versus BEV technology, costs of vehicles, and other FAQs.
Humboldt State University Alternative Transportation Fair (Humboldt County)	Arcata, CA (Humboldt County)	August 2018	HSU hosted an Alternative Transportation Fair for incoming freshman. Staff educated 100+ freshman about FCEV technology and fueling infrastructure, using the wind-to-hydrogen kit to discuss production pathways. Staff had an EV on display and used it to compare BEV to FCEV technology.
Shasta Lake Farmer's Market	City name N/A (Shasta County)	September 2018	Used wind to hydrogen educational kit to perform demos for the public about hydrogen production. Shared information about FCEV models, planning efforts, and current infrastructure.

## CHAPTER 2: Earned Media

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Educating and promoting new technology requires a multi-faceted approach. Attending community events builds rapport with the general public. This rapport is key when discussing plans that may affect that community. Seeking public input early-on results in increased buy-in to said idea. In this case, hydrogen fueling stations and vehicles will ultimately be present in communities throughout the project region; the public has concerns regarding the safety of the vehicles and infrastructure. Addressing these concerns requires tactful and personable communication. Meeting individuals on their terms, rather than expecting them to attend a meeting during the middle of the work day, also increases the likelihood of positive engagement and education. For all these reasons, tabling at community events is a frequently used approach.

Of course, tabling at community events is not always the most effective way to reach a large demographic. This is where earned media earns a place at the table. Generally speaking, there are three types of media: owned, paid, and earned. Owned media is “[m]edia activity related to a company or brand that is generated by the company or its agents in channels it controls.” Paid media is “[m]edia activity related to a company or brand that is generated by the company or its agents.” Earned media is “[m]edia activity related to a company or brand that is not directly generated by the company or its agents but rather by other entities such as customers or journalists.”<sup>3</sup>

Earned media is advantageous when compared to the other two forms as it is free, results in more impressions, and tends to be less influenced by the biases of the information generator, which mitigates the risk of miscommunication and mistrust of the content.

The following earned media events were successfully secured, in accordance with grant objectives:

- 1) The project team was interviewed by Channel 3 News (Humboldt County TV station) about the FCEV shuttles used for Oyster Fest in June 2015 (no file found in archives)
- 2) The project was featured in an article in the Schatz Energy Research Center newsletter distributed in October 2018
- 3) The project team was interviewed in an episode of Access Humboldt’s “Community Voices” program. This episode was televised and broadcasted via radio in October 2018.

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<sup>3</sup> Yu, Jim. 2013. “Earned Media Rising - The Earned Media Ripple Effect”. *Marketing Land*.

- 4) The project was featured in a Times Standard (newsprint and online publication) article titled, “Local energy partnership readying North Coast for hydrogen powered cars” in October 2018.

The project team was unable to retrieve a video file of the 2015 interview. The other earned media products can be found in Appendix F.

The nature of earned media tends to be serendipitous, but press releases and newsletters have proven to be a reliable way to capture the attention of local media outlets, which then are more likely to reach audiences outside of the local region. One example of this from the project came from the Times Standard article. After it was published, station developers and other entities outside the region reached out to the project team to learn more about the North Coast and Upstate project.

Attending community events lent itself to additional earned media opportunities as local outlets frequently cover community events, no matter how large or small. The lists of community events and outlets is not documented here, but can be shared on a case-by-case basis should localized community engagement be pursued in the future.



# CHAPTER 3: Presentations

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To round-out the trifecta of engagement methods, 14 presentations were delivered throughout the region to a variety of stakeholders.

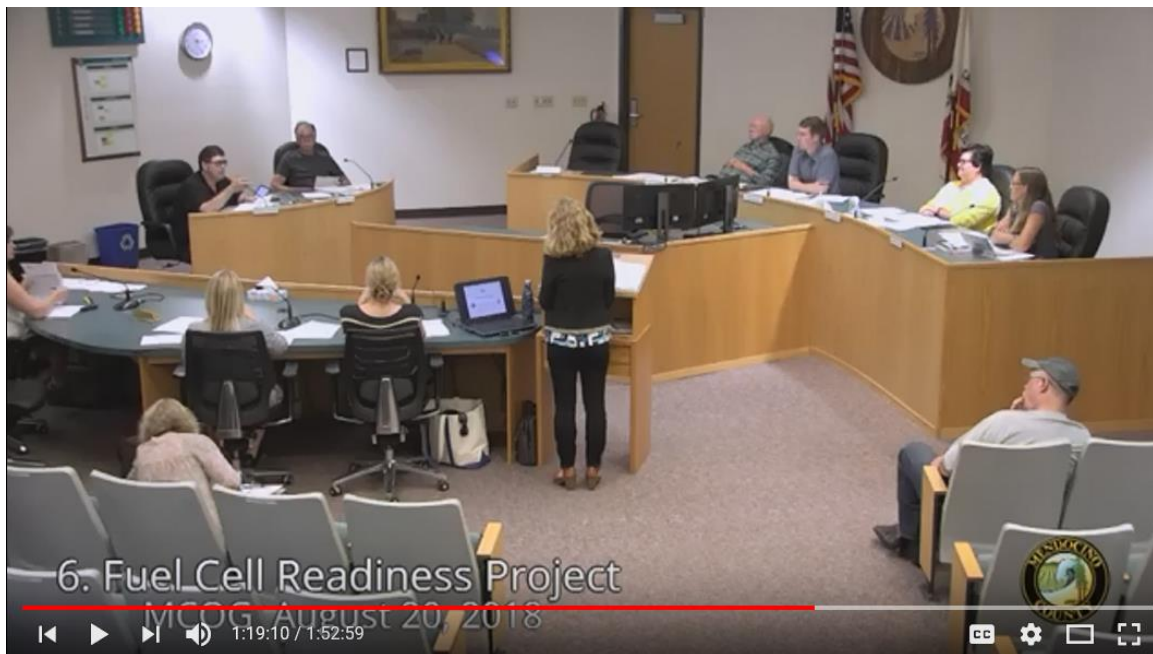
## **Train-the-Trainer Webinar**

RCEA created a Train-the-Trainer presentation (Appendix G). This presentation is a high level introduction to hydrogen fuel and fuel cell electric vehicles, and provides the audience with sufficient information to be ambassadors in their own communities. A comprehensive master slide deck was developed to facilitate the creation of different presentations for varying audiences.

After the Train-the-Trainer presentation, project partners were invited to submit questions and requests for additional materials to use in their engagement activities. Project partners were encouraged to use and adapt the presentation material to suit their own outreach goals and audiences.

## **Regional Presentations**

The Train-the-Trainer presentation was adapted by the project partners to conduct engagement in their own counties.



Janet Orth delivers a presentation about the fuel cell readiness planning project to the Mendocino Council of Governments Board of Directors.

Other targeted presentations were delivered during the project period as well. Presentation files, as available, are provided in the Appendix H.

Attendee numbers were recorded for some, but not all presentations. Specific city locations for presentations were also partially included. Where attendee counts and specific locations were recorded, they are included below.

**Table 2: List of ARV-14-055 Presentations**

<b>Stakeholder Group / Event</b>	<b>Location</b>	<b>Date</b>	<b>Summary</b>
Combined Meeting of North Coast Super Region and CA Rural Counties Task Force (appendix)	Yreka, CA	September 2015	Provided an overview of the project to transportation planning agencies in the region.
Local Government Sustainable Energy Coalition Meeting	N/A	May 2016	Provided summary of alternative fuel activities
North Coast Super Region Meeting	Redding, CA	May 2016	Presented summary of Regional Hydrogen Infrastructure Plan to transportation planners and fleet operators in 16 county region
California Air Pollution Control Officers Association Annual Meeting (appendix)	Lake Tahoe, CA	May 2017	Presented hydrogen infrastructure planning summary to air pollution control officers
Coastal Partners Meeting (appendix)	Eureka, CA	August 2017	Met with the North Coast Unified Air Quality Management District and Mendocino Council of Governments to receive input on infrastructure planning approach and outcomes
Train-the-Trainer Webinar	N/A	April 2018	See previous description. All project partners attended; input from partners informed an extended FAQ sheet and additional stakeholder resources. Attendance was ~10 individuals.

North Coast Super Region Meeting	Clear Lake, CA	April 2018	Presented briefly on FCEV planning efforts. Attendance was ~10 individuals.
Siskiyou County Local Transportation Commission	N/A	June 2018	Generally speaking, the audience thought that FCEVs were still too early in the development stages to be embraced locally at present.
North Coast Air Quality Management District Board Meeting	Eureka, CA	September 2018	<p>NCUAQMD staff had questions about what micrositng entailed and why a consumer would choose FCEVs. The presenter and Board also discussed implementation ideas and if getting fleet interest prior to public interest would be beneficial to the adoption of FCEVs. The idea of seeing fleet vehicles (package delivery or Caltrans) supporting the technology may make consumers feel less anxiety about choosing an alternatively fueled vehicle.</p> <p>Information presented during the Train-the Trainer webinar and general knowledge about the Project provided answers to all staff questions.</p> <p>Attendance was ~8 individuals.</p>
Far North Regional GIS Council Meeting	Redding, CA	July 2018	The presentation was well-received, and attendees were interested in the information being presented. Most were unaware of efforts to bring FCEVs to the region, but were interested and intrigued by the information. The presentation was delivered in a casual manner, with opportunities for the attendees to ask questions throughout the presentation. This allowed for a collaborative, conversational presentation, and engaged the attendees. The questions received were expected (isn't this technology

			<p>dangerous, who is driving these vehicles, where are the vehicles, etc.). The presentation had several slides built in that addressed the questions.</p> <p>Attendance was ~20 individuals.</p>
Glenn County Fuel Cell Electric Vehicle Workshop	N/A	August 2018	<p>The Glenn County Air Pollution Control District hosted a workshop presenting information related to the technology and current status of the Fuel Cell Electric Vehicle industry. The invitation was distributed to fleet manager and fuel distributor contact lists as well as to the Transportation Commission and the public. The presentation given was a variation of the “train the trainer” presentation. Turnout was low but some good questions were asked.</p>
Tehama County Fuel Cell Electric Vehicle Workshop	N/A	September 2018	<p>The Tehama County Air Pollution Control District hosted a workshop presenting information related to the technology and current status of the FCEV industry. The invitation was distributed to fleet manager and fuel distributor contact lists as well as to the Transportation Commission and the public.</p> <p>Turnout was low but good questions were asked pertaining to vehicle and fueling technology.</p>
Mendocino Council of Governments Board Meeting	N/A	August 2018	<p>MCOG staff made a presentation to the Council’s board of elected officials representing the five local governments in the joint powers authority. There were about twelve engaged attendees and several good questions were asked regarding the technology. Overall, this was a good</p>

			introduction to the technology for policy-makers.
Sustainable Futures Speaker Series ZEV Panel Discussion	Arcata, CA	October 2018	<p>RCEA and SERC partnered to host a panel discussion as part of Humboldt State University's Sustainable Futures Speaker Series. The panel discussion focused on 2030 ZEV adoption goals in California, and panelists weighed-in on how the region could achieve said goals. The Fuel Cell Partnership was represented by 1 panelist and provided comprehensive information about the past, present, and future of fuel cell technology.</p> <p>Attendance was ~50 individuals and the content was well-received.</p> <p>The promotional flyer used for this event can be found in the Appendix I.</p>



Dr. Kevin Fingerman posing a question to the panelists at the Sustainable Futures Speaker Series panel discussion on California ZEV mandate implementation.

# CHAPTER 4: Lessons Learned and Next Steps

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## Lessons Learned

Throughout the three year course of this project, many lessons were learned that can energize future efforts to promote FCEVs and their fueling infrastructure in this region.

### Institutional Knowledge

- Read previous final reports from other recipients of CEC fuel cell readiness project awards. The *Tri-Counties Hydrogen Readiness Plan* is a particularly great resource. Rather than expend time and resources to recreate FCEV promotional strategies, it is more efficient to build-off other's work.
- The CEC should actively connect award recipients across the State at the beginning of the grant terms to avoid duplicate efforts and maximize best practices. The project team echoes the Tri-Counties call for a centralized State database of readiness plan reports and resources (i.e. collateral, contact information, etc.)

### Timeline

- The growth of the FCEV market was slower than the project team had originally anticipated. For this reason, the project timeline slowed and adaptive management was needed to strategically complete outreach activities with this compacted timeline.
- Although the interaction between the project and the actual FCEV market posed hurdles; generally speaking, a three year timeline proved to be adequate for a comprehensive engagement strategy. It takes a while to determine the proper parties to engage on this topic, and some stakeholders only have meetings once or twice a year.
- A potential downside to longer grant terms, at least in this specific project, was lack of continuity among staff and stakeholders, which resulted in a loss of institutional knowledge. With lack of continuity, it takes additional time and resources to retrain staff which hinders project progression.
- As a result of continuity issues, project partners' assistance with outreach was not leveraged until later in the grant term. This can be seen by the previous lists of community events and presentations. If they had been engaged earlier, promotional efforts would be even more widespread and robust.

### Training

- Additional trainings specific to certain topics (i.e. fleet engagement, safety features, etc.) are recommended.
- The RCEA team was able to attend a conference which served as a great training opportunity on the latest FCEV market developments and an opportunity to network with station developers, government decision-makers, hydrogen producers, and other key stakeholders. Funding rural, government employee participation in conferences similar to these would result in more robust promotional efforts. Conferences tend to occur in Southern California and the

Bay Area; as such rural stakeholder have limited access to these educational opportunities. Scholarships to fund travel, or remote conferences, are potential solutions.

## **Collaboration with and Amongst State Organizations**

- State agencies are excellent partners and are key to the realization of a commercially-viable FCEV market and robust fueling network; however, agencies often work independently where collaborative goals amongst agencies would accelerate progress. For example, CARB, DGS, Caltrans, CEC, and the Department of Fish and Game share mandates and motivation for FCEV adoption and could benefit from inter-agency workshops where synergy is developed, and outreach coordinated.
- The early FCEV market is risk-laden, and these risks are often shifted to government agencies. This tends to prevent market spoilage once vehicles hit the larger retail market, but government agencies tend to be risk averse, which leads to a stalemate. More innovative private-public partnerships may address this hurdle. During the course of the project, the project team frequently served as a liaison between private and public entities. These relationships could be further nurtured and reinforced by state policies. CEC webinars seeking input on future FCEV solicitations tend to bring both parties to the table, but the goal of these meetings is not to actively facilitate relationships among local governments and station development companies, for example. A summit where the coordinating State agencies facilitate such meetings is another way to encourage public-private conversations that will accelerate market growth.
- Partnering with the FCP and other experts for outreach events would have made for more effective engagement. For example, the FCP participated in the Sustainable Futures Speaker Series panel. Due to their expertise and full-time role in FCEV public affairs, they were able to provide a depth and breadth of education that may not have been communicated otherwise.

## **Collateral and Engagement Strategies**

- Press release templates that publicize project partner hosted presentations, workshops, and events would have resulted in higher attendance and would have educated a larger audience about FCEVs.
- The use of the wind-to-hydrogen kit was a very successful educational and engagement strategy. Using interactive, hands-on demonstrations like this should be incorporated early on and used as frequently as possible among a variety of stakeholder groups. The project region didn't have access to actual vehicles, so employing other hands-on engagement made the topic of FCEVs more salient to the public.
- A centralized list of media outlets would have streamlined engagement efforts, and likely resulted in more earned media events.
- Adapting stock FCEV/infrastructure educational materials (i.e. those from the FCP and other fuel cell experts) to make the content localized is recommended.
- Having access to an FCEV, made possible by a mobile refueler despite our region's absence of infrastructure, would have easily eased people's concerns that this technology is a fixture of the future. Of course, there aren't FCEVs available on the local market, but emphasizing that the technology is in use across the rest of the state increases consumer confidence in the vehicles.
- Project partners were educated on content, but providing additional and well-designed physical materials for engagement is recommended. For example,

display board and banner templates. The materials and miscellaneous budget was great for this purpose, specifically the wind-to-hydrogen kits.

- Project partners, who were majorly local government agencies, don't often have graphic designers on staff. As such, providing aesthetically pleasing templates is important to capture the public's eye at community events.
- Earned media grabbed the attention of station developers and other private interests; the earlier media outlets can be engaged, the better. With social media, there are even more ways to achieve earned media opportunities, and these outlets should be maximized to increase awareness and collaboration opportunities.
- RCEA's physical presence at some of the project partner events would have been good to strengthen existing partnerships and offer support to bandwidth-challenged small local government agencies.
- Adoption of ordinances by local government entities to express commitment to FCEV adoption once the market matures is highly recommended; there was not time to incorporate this strategy into this project, unfortunately.

## Next Steps

As of the submission of this interim deliverable, the team has concluded all task 2.2 requirements.

The following topics were emphasized in all engagement materials and were of most interest to the public. The following topics should continue to be emphasized in promoting FCEV technology to the public:

- Cost of maintenance, fueling and vehicles, compared to conventional ICE vehicles
- How the vehicles work (i.e. engine and other mechanical pieces)
- How the fueling process works
- Location of fueling stations
- Process for installing a station in the project region

Many members of the public were ultimately discouraged by the fact that there was no set installation date for a station in the Redding or Eureka region, which made the topic seem less salient than it is in other parts of the State. The small, rural project region is excited for this technology and should be on the radar of auto OEMs, developers, and other organizations seeking alliances to reach economies of scale for FCEVs.

An underlying theme for this work is that local government agencies are already tackling the impacts of climate change whether that is through their mission of promoting public transit or curbing greenhouse gas emissions from industrial point sources. Through this project and others, agencies continue to heighten their awareness, while also consuming already limited staff time and resources.

Unfortunately, without funding for additional outreach activities, the region will not be able to continue educating the populace about hydrogen fuel cell electric vehicle benefits and the status of fueling infrastructure.

The project team agrees with all the recommendations found on pages 63-65 of the *Tri-Counties Hydrogen Readiness Plan*, and especially echoes the suggestion to support an ombudsman for the region. The ombudsman would serve to coordinate future educational and infrastructure efforts in the North Coast and Upstate, and accelerate adoption by local consumers as well as local station development.



## REFERENCES

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- Yu, Jim. 2013. "Earned Media Rising - The Earned Media Ripple Effect". Marketing Land.
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# **APPENDIX A:**

## **Stakeholder engagement and FCEV promotion plan**

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### **ARV-14-055 Stakeholder Plan**

#### **Grant Goals:**

- 1) Promote FCEVs across 9-county project region
- 2) Provide FCEV information at community events
- 3) Conduct media outreach and secure at least 4 earned-media spots highlighting regional FCEV activities
- 4) Give presentations to community organizations and/or municipal agencies on the potential benefits of FCEVs
- 5) Conduct fleet analyses with municipal fleet managers and public transit operators (target those in Eureka and Redding areas)
- 6) Communicate potential fleet fuel demand to local fuel distributors and fueling site hosts

#### **Project Partners:**

- 1) North Coast Air Quality Management District (Humboldt, Del Norte, and Trinity)
- 2) Siskiyou County Economic Development Council
- 3) Tehama County Air Pollution Control District
- 4) Glenn County Air Pollution Control District
- 5) Mendocino Council of Governments
- 6) Shasta Regional Transportation Agency

#### **Project Partner Responsibilities (refer to MOU for details):**

- 1) Assist with developing regional plan for hydrogen fueling infrastructure
- 2) Represent specific needs of their community
- 3) ID and promote consistent program goals, designs, and plans across project region
- 4) Assist with engagement and outreach
- 5) Provide 2 week notice to RCEA of staff/ability changes
- 6) Submit activity and budget reports to RCEA by October 1, 2018

#### **RCEA Responsibilities (refer to MOU for details):**

- 1) Coordinate team meetings and project communication

- 2) Assist with stakeholder selection, outreach materials, and messaging
- 3) Provide technical assistance to support Agency's local outreach activities

## High-Level Stakeholder Plan

November 2017 (projected: 1 hour to review plan) RCEA share Final Regional Hydrogen Infrastructure Plan

Feb 2018 (projected: 1-2 hours to give presentation)

- RCEA present train-the-trainer webinar to project partners

March 2018 (projected: 1-4 hours to compile list and conduct interviews)

- Project partner develop list of fleet managers so RCEA can pursue fleet analyses

April 2018 (projected: 1-2 hours to compile list, 2-4 hours to disseminate RFI and compile responses for submission to RCEA)

- Project partner disseminate Request for Information in their County
- Project partner develop list of local fuel distributors and fueling site hosts

April 2018 (projected: 1-2 hours to compile list)

- Project partner develop list of community organizations and/or municipal agencies to present to

May 2018 (projected: 2 hours to prepare, 2 hours to present)

- Project partner give FCEV presentation

May 2018 (projected: 2 hours to compile list and complete event apps)

- Project partner develop list of community events

July 2018 (projected: 4 hours to prep and attend event)

- Project partner attend community events and provide information

September 2018 (projected 2-4 hours to compose and submit final report)

- Project partner submit final report

## APPENDIX B: Educational Hand-Outs

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- **California Fuel Cell Partnership Hydrogen Frequently Asked Questions Booklet**



FCEV\_factbooklet.pdf

- **California Fuel Cell Partnership How-It-Works Booklet**



HowItWorks-Fuel-Cell-Booklet.pdf

- **RCEA FCEV Educational Flyer (models, incentives, training resources)**



4-9-18 Fleet Handout for Project Partners.pdf

## APPENDIX C: Banner

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The banner pictured below was created by RCEA. Specifically, the banner on the right has images of a variety of FCEVs, BEVs, and PHEVs. The banner on the left demonstrates the maintenance and fuel savings that a driver can achieve by switching to an EV. The Center for Sustainable Energy also has banner files that can be used for promotional purposes by organizations. This was an effective method for drawing people to the table.



## APPENDIX D: Tabling Events

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The Shasta Regional Transportation Authority educating a member of the public about renewable hydrogen production at the Shasta Lake Farmer's Market.





The Siskiyou Economic Development Council tabling at the 4th of July Celebration.

## APPENDIX E: Fuel Cell Shuttling Service

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One of the fuel cell vehicles SERC used as a public shuttle at Oyster Fest 2015 in Arcata, CA.



The other fuel cell vehicle SERC used as a public shuttle at Oyster Fest 2015 in Arcata, CA.



# APPENDIX F: Earned Media Products

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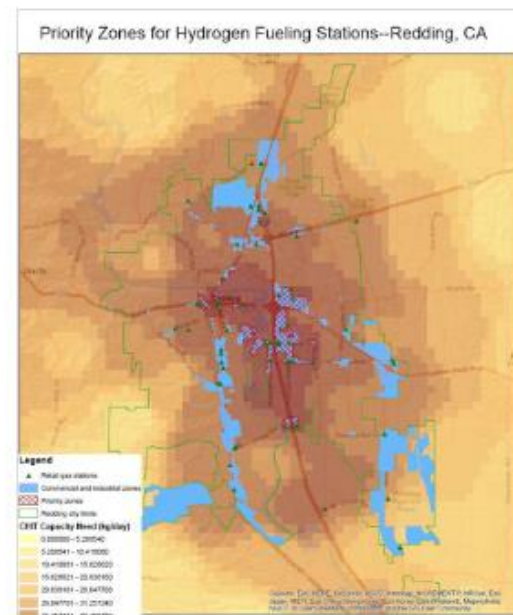
## Fuel Cell Vehicle Readiness: Project Update

Over the last three years, the Schatz Center has been a technical lead for the [North Coast and Upstate Fuel Cell Vehicle Readiness Project](#), in partnership with the Redwood Coast Energy Authority and six local government agencies across eight counties in Northern California. Funded by the California Energy Commission (PON-14-607), this project seeks to support the successful introduction of [fuel cell electric vehicles \(FCEVs\)](#), reduce barriers to the effective deployment of hydrogen fueling infrastructure, and help catalyze a robust regional market for FCEVs. This project is catalyzed by [aggressive California targets](#) to transition the on-road vehicle fleet to zero emission vehicles (ZEVs).

This year, the Center has led the completion of two key project deliverables. The first is a [Site Readiness Report](#) that provides recommendations for public fueling infrastructure, focusing on the cities of Eureka and Redding. Led by Greg Chapman P.E. with support from Jerome Carman, this report provides an overview of:

- state of the art of hydrogen fueling station design,
- current code and safety requirements,
- station design recommendations, and
- a list of recommended locations for the installation of hydrogen fueling infrastructure.

The second is a [Micrositing Summary Report](#) which documents past efforts and recommends next steps regarding potential



Map of recommended early market hydrogen fueling zones for the City of Redding, from the [Micrositing Summary Report](#) (Image courtesy of Redwood Coast Energy Authority)

*Schatz Energy Research Center newsletter; link to full article:*  
<http://www.schatzlab.org/news/2018/10/fuel-cell-vehicle-readiness-project-update/>



Grant manager Aisha Cissna discusses fuel cell readiness planning efforts with Dave Silverbrand on Access Humboldt's "Community Voices" show. Link to video and audio files:  
[https://archive.org/details/ah\\_media\\_lab\\_presents\\_community\\_aisha\\_cissna\\_evergreen](https://archive.org/details/ah_media_lab_presents_community_aisha_cissna_evergreen)



Local energy partnership readying North Coast...



NEWS > BUSINESS

## Local energy partnership readying North Coast for hydrogen powered cars

Hydrogen production facility among proposed ideas



By PHILIP SANTOS | psantos@times-standard.com |

PUBLISHED: October 12, 2018 at 9:54 pm | UPDATED: October 13, 2018 at 12:04 am



Guiding you to better banking

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**4.50%**

**4.514% APR\***

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No Origination fee

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\*APR - Annual Percentage Rate. APR is based on loan amount of \$200,000. Rates and terms effective 09/01/2018. All terms

Local newspaper, the Times Standard, featured an article in the print and online Saturday edition which covered the regional fuel cell readiness planning efforts. Full article can be found here:  
<https://www.times-standard.com/2018/10/12/local-energy-partnership-readying-north-coast-for-hydrogen-powered-cars/>

## **APPENDIX G: Train-the-Trainer Webinar**

Click on the icon below to access the PDF files for the presentation.



Train the Trainer Presentation.pdf

## APPENDIX H: Presentations

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Most presentations listed in the report were slightly adapted versions of the Train-the-Trainer presentation. Below are presentations that had a slightly different format and are good resources in addition to the Train-the-Trainer presentation. Of course, the Fuel Cell Partnership has a plethora of well-crafted presentations that can be adapted; these presentations were informed by a variety of sources and tailored to each local, specific audience.

- **Combined Meeting of North Coast Super Region and CA Rural Counties Task Force**



20150917-FCEV-North-State-Super-Region\_v2.pdf

- **California Air Pollution Control Officers Association Annual Meeting**



CAPCOA presentation slides\_final.pdf

- **Coastal Partners Meeting**



Project partner presentation aug 22\_final.pdf