

# REFUEL: SAN DIEGO REGIONAL ALTERNATIVE FUEL COORDINATING COUNCIL

## *MEETING NOTICE AND AGENDA*

**Date:** Thursday, January 15, 2015

**Time:** 1:00 p.m. to 3:00 p.m.

**Location:** Energy Innovation Center  
4760 Clairemont Mesa Boulevard  
San Diego, CA 92117

**Staff Contact:** Kevin Wood  
Tel: (858) 244-7295  
Email: [kevin.wood@energycenter.org](mailto:kevin.wood@energycenter.org)

### **AGENDA HIGHLIGHTS**

- REFUEL SUBCOMMITTEE UPDATES
- REGIONAL ALTERNATIVE FUELS ASSESSMENT UPDATE
- REGIONAL BARRIERS TO ALTERNATIVE FUEL DEPLOYMENT

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[www.sdcleancities.org](http://www.sdcleancities.org)

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# Refuel

Thursday, January 15, 2015

ITEM #		RECOMMENDATION
1.	<b>WELCOME AND INTRODUCTIONS</b>	
2.	<b>PUBLIC COMMENT</b>	
	Members of the public shall have the opportunity to address Refuel: San Diego Regional Alternative Fuel Coordinating Council on any alternative fuel (AF) issue that is not on this agenda. Public speakers are limited to three minutes or less per person. Refuel members may provide information and announcements under this item.	
	<b>REPORT ITEMS</b>	
+3.	<b>APPROVAL OF MEETING MINUTES</b>	<b>APPROVE</b>
	Refuel: San Diego Regional Alternative Fuel Coordinating Council (Refuel) is asked to review and approve the minutes from its October 16, 2014, meeting.	
+4.	<b>SUBCOMMITTEE UPDATES</b>	<b>INFORMATION</b>
	Staff will provide a summary and discuss next steps resulting from each of the Refuel subcommittees that have met since October: Electricity, Propane, and Hydrogen. Staff also will provide a summary of any other meetings where Refuel was discussed.	
+5.	<b>REFUEL FORMATION DOCUMENTS</b>	<b>ACCEPT</b>
	Refuel is asked to review and accept the formation documents: (1) Charter; (2) Mission Statement; and (3) Goals.	
6.	<b>REGIONAL ALTERNATIVE FUEL ASSESSMENT UPDATE</b>	<b>DISCUSSION</b>
	One of the first deliverables for Refuel is to develop a regional alternative fuels assessment, which includes information gleaned from an existing conditions report and survey. Staff will share the survey distributed for completion, discuss findings to date, and next steps.	
+7.	<b>SAN DIEGO REGIONAL BARRIERS TO ALTERNATIVE FUEL DEPLOYMENT</b>	<b>DISCUSSION</b>
	Discussions at the October 2014 Refuel meeting guided the development of the AF barriers table. This table is a working document meant to be modified and updated as deliverables are met and barriers are addressed. This barriers table will guide Refuel activities and discussions moving forward.	
+8.	<b>UPCOMING MEETING DATES</b>	<b>INFORMATION</b>
	Staff will share information on upcoming subcommittee meeting dates.	
9.	<b>MATTERS FROM MEMBERS</b>	<b>INFORMATION</b>
	Time permitting; Refuel members are encouraged to discuss additional topics of general interest.	
10.	<b>ADJOURNMENT</b>	

+ next to an item indicates an attachment



# REFUEL: SAN DIEGO REGIONAL ALTERNATIVE FUEL COORDINATING COUNCIL

January 15, 2015

## OCTOBER 16, 2014 MEETING MINUTES

### 1. WELCOME AND INTRODUCTIONS

Chair Chris Schmidt (Caltrans), called the meeting to order at 1:03 p.m. and welcomed all to the kickoff meeting of the San Diego Regional Alternative Fuel Coordinating Council (Refuel). Refuel will be a formal committee structured similar to the San Diego Regional Electric Vehicle Infrastructure Working Group (REVI), but will address all alternative fuels.

### 2. MEMBER COMMENTS

Susan Freedman (San Diego Association of Governments (SANDAG)) announced that SANDAG has submitted a proposal to implement the San Diego Regional Plug-In Electric Vehicle (PEV) Readiness Plan under the California Energy Commission (CEC) Zero Emission Vehicle (ZEV) Readiness solicitation. She reported that SANDAG will find out relatively soon if the proposal will be awarded.

Brendan Reed (City of Chula Vista) announced that the City of Chula Vista will be receiving an AmeriCorps member through the CivicSpark program to work on implementing the San Diego Regional PEV Readiness Plan throughout Chula Vista and National City.

## REPORTS

### 3. CALIFORNIA ENERGY COMMISSION GRANT REQUIREMENTS (INFORMATION)

Anna Lowe (Co-Chair, SANDAG) discussed the CEC grant requirements for Refuel. These include toolkit development, the alternative fuel readiness plan, and the formation of a coordinating council. The coordinating council will include representation from local and regional government, public agencies, industry representatives, and education and research institutions. Refuel was established by SANDAG Board Resolution 2014-16 which acknowledged the CEC award and in-kind match provided by SANDAG and the San Diego Regional Clean Cities Coalition (SDRCCC). The draft resolution is included on page 4 of the agenda packet. The SANDAG grant application was prepared in collaboration with San Diego County Air Pollution Control District (SDAPCD) and the SDRCCC.

The aims of this two year project are to continue and expand the efforts of REVI, incorporate all alternative fuels through further deployment of alternative fuel vehicles (AFV) and alternative fuel infrastructure (AFI), and help the region achieve energy and climate goals.

4. INTRODUCTION TO REFUEL: SAN DIEGO REGIONAL ALTERNATIVE FUEL COORDINATING COUNCIL (INFORMATION)

Ms. Lowe presented an overview of the San Diego Regional Alternative Fuel Readiness Project. For further details on the project, review the executive summary on page 6 of the agenda packet. Ms. Lowe explained the following four project objectives.

1. Formation of Refuel to receive input from stakeholders and have peer-to-peer exchange of ideas.
2. Assess the current state of alternative fuels in the region. The assessment will cover each alternative fuel to understand each fuel market and gain insight on how to better encourage infrastructure development and vehicle use.
3. Create sector-specific toolkits to provide key stakeholders resources on alternative fuel readiness.
4. Compile work together into a San Diego Regional Alternative Fuel Readiness Plan that will address the identified challenges and provide action targeted recommendations.

Kevin Wood (SDRCCC) gave descriptions of each alternative fuel involved in the planning project. For additional information, descriptions of each fuel are provided on pages 8-9 of the agenda packet. Mr. Wood also displayed a table showing the potential alternative fuel fleet applications for each alternative fuel, which can be found on page 10 of the agenda.

Ms. Lowe then informed the group about previous regional alternative fuel planning efforts conducted by SANDAG, REVI, and SDRCCC. She presented a timeline of project deliverables and a draft meeting schedule for Refuel and subcommittees.

Timeline of Project Deliverables

1. Refuel will meet quarterly with subcommittee meetings in between.
2. Alternative Fuel Assessment consisting of a survey and an existing conditions report will be completed first quarter of 2015.
  - An alternative fuel survey will be created in October and distributed in November 2014.
  - Existing conditions report will be completed mid-January of 2015.
3. Sector-Specific Toolkits
  - Work on electric issues will start November 2014 with the first meeting of the electric subcommittee.
  - Toolkits will be complete and distributed by October 2015.
  - Outreach and distribution of toolkits will occur October 2015 to January 2016.
4. Regional Alternative Fuel Readiness Plan will be completed by April 2016.

Quarterly Refuel Meetings

1. October 16, 2014
2. January 15, 2015
3. April 16, 2015
4. July 16, 2015
5. October 15, 2015

Subcommittee Meeting Timeline

Electric: <ul style="list-style-type: none"><li>▪ 2014: November</li><li>▪ 2015: February, May, August</li></ul>	Hydrogen: <ul style="list-style-type: none"><li>▪ 2014: December</li><li>▪ 2015: March, June</li></ul>
Gaseous Fuels: <ul style="list-style-type: none"><li>▪ 2014: December</li><li>▪ 2015: February, March, June</li></ul>	Biofuels: <ul style="list-style-type: none"><li>▪ 2015: January, April, July</li></ul>

Refuel Members had the following questions and comments:

- Susan Freed (County of San Diego) asked about the target audience of the survey. Mr. Wood replied that the survey will be end user focused and broadly applicable.

5. REFUEL MEMBER RESPONSIBILITIES (INFORMATION)

Chair Schmidt reviewed the Refuel member responsibilities and basic rules of order for committee proceedings as specified on pages 13-14 of the agenda packet. Refuel will be a public sector planning effort with input from the private sector. He explained that this planning effort will be a collaborative process and a learning exercise to understand private sector wants and public sector facilitation.

Chair Schmidt mentioned that a draft Refuel membership list is on page 11 of agenda packet, which distinguishes between voting members and advisory members. He encouraged attendees to provide Ms. Lowe with contact information of those who should be involved in this project and are not already.

Ms. Lowe added that information regarding Refuel and the subcommittees, such as meeting summaries and agendas, will be posted on the SANDAG website. Also, additional information and communication with the group will be sent out via email.

6. REFUEL FORMATION DOCUMENTS (INFORMATION)

Chair Schmidt introduced the Refuel mission statement, goals, and charter on pages 15-18 of the agenda packet. He instructed the group to read over the documents and send comments to either Ms. Lowe or Mr. Wood prior to the January Refuel meeting, where committee members will vote to approve these items.

7. SAN DIEGO REGIONAL BARRIERS TO ALTERNATIVE FUEL DEPLOYMENT (DISCUSSION)

Mr. Wood informed the group that REVI used a barrier table containing challenges to be addressed and identified actions the committee could take to reduce those barriers. A similar barriers table will be made for Refuel. Mr. Wood started a group discussion on major barriers to alternative fuel vehicles (AFV) and alternative fuel infrastructure (AFI) deployment. Items from this discussion will be compiled into a barriers table that will be presented at the January Refuel meeting. The barriers table will continue to be modified and will serve as a guide to identify that issues need to be addressed and prioritize efforts of Refuel.

8. MATTERS FROM MEMBERS (INFORMATION)

Mike Grim (City of Carlsbad) asked how Refuel members would be communicating with one another. Chair Schmidt replied that we still need to figure out a method for peer-to-peer sharing. In the meantime, Chair Schmidt informed attendees to send any information to share with the group to Ms. Lowe.

Ms. Freed inquired how the subcommittees will be structured. Ms. Lowe replied that the subcommittees will have similar agenda packets as the main Refuel meetings. Subcommittee members will be asked to RSVP to meetings and industry representatives are encouraged to attend. Meeting summaries of each subcommittee will be sent to all Refuel members. To accommodate member's schedules, members may be able to call into the meetings. Ms. Lowe explained that the different fuel focused subcommittee meetings will occur concurrently to one another.

9. UPCOMING MEETINGS (INFORMATION)

The next Refuel meeting is scheduled from 1:00 p.m. to 3:00 p.m. on Thursday, January 15, 2015. And the first EV subcommittee meeting will be from 9:00 a.m. to 12:00 p.m. on Wednesday, November 19, 2014.

10. ADJOURNMENT

Chair Schmidt adjourned the meeting at 2:45 p.m.



**October 16, 2014, SAN DIEGO REGIONAL ALTERNATIVE FUEL COORDINATING COUNCIL MEETING  
ATTENDANCE**

<b>REPRESENTATION</b>	<b>JURISDICTION / ORGANIZATION</b>	<b>NAME</b>	<b>MEMBER / ALTERNATE</b>	<b>ATTENDING</b>
South County Subregion	City of Chula Vista	Brendan Reed	Member	YES
	Vacant			
North County Coastal Subregion	City of Carlsbad	Mike Grim	Member	YES
	City of Oceanside	Mo Lahsaie	Alternate	NO
North County Inland Subregion	City of Escondido	Jeff Wyner	Member	NO
	Vacant			
East County Subregion	TBD			
	TBD			
City of San Diego		Jacques Chirazi	Member	YES
County of San Diego		Susan Freed	Member	YES
San Diego Association of Governments	Anna Lowe, Co-Chair		Member	YES
	Susan Freedman		Alternate	YES
San Diego Regional Airport Authority		Paul Manasjan	Member	NO
Caltrans, District 11		Chris Schmidt, Chair	Member	YES
Unified Port District of San Diego	Michelle White		Member	YES
	Kellie Carlson		Alternate	YES
San Diego Gas & Electric	Randy Schimka		Member	YES
	Greg Haddow		Alternate	NO
Center for Sustainable Energy		Colin Santulli	Member	YES
University of California, San Diego		Jim Ruby	Member	NO
Miramar College, ATTE Program		Greg Newhouse	Member	NO
San Diego County Air Pollution Control District		Nick Cormier	Member	YES

ADVISORY MEMBERS			
City of Coronado	Bill Cecil	Advisory	YES
City of Del Mar	Kristen Crane	Advisory	NO
City of El Cajon	Matt Lyer	Advisory	NO
City of Encinitas	Bryce Wilson	Advisory	NO
	Richard Phillips	Advisory	YES
City of Imperial Beach	Chris Helmer	Advisory	NO
City of La Mesa	Howard Lee	Advisory	NO
City of Lemon Grove	Mike James	Advisory	NO
City of National City	Ray Pe	Advisory	NO
City of Poway	Eric Heidemann	Advisory	NO
City of San Marcos	Lisa Fowler	Advisory	YES
City of Santee	Kathy Valverde	Advisory	NO
City of Vista	Lyn Dedmon	Advisory	NO
Metropolitan Transit System		Advisory	NO
North County Transit District		Advisory	NO
Department of Defense/Military		Advisory	NO
San Diego Regional Clean Cities Coalition	Kevin Wood	Advisory	YES
Energy Policy Initiatives Center	Nilmini Silva-Send	Advisory	NO
University of San Diego	Michael Catanzaro	Advisory	NO
San Diego Regional Chamber of Commerce	Mike Evans	Advisory	YES
CleanTECH San Diego	Jason Anderson	Advisory	YES

**Other Attendees**

Kelly Mills, Roush CleanTech  
 Carolyn Duggan, carzgo  
 Bill Bayne, Kearny Pearson Ford  
 Dale Snow, Mossy Auto  
 Mike Lewis, Pearson Fuels  
 Marc Deutsch, Nissan  
 Steve Moore, Expo Propane  
 Jack Hogan, Clean Energy  
 Michelle Heaton, AmeriGas Propane  
 Keith Malone, California Fuel Cell Partnership

# REFUEL: SAN DIEGO REGIONAL ALTERNATIVE FUEL COORDINATING COUNCIL

## ELECTRIC SUBCOMMITTEE MEETING

JANUARY 15, 2015

NOVEMBER 19, 2014 MEETING SUMMARY

File number 3200900

### 1. WELCOME AND INTRODUCTIONS

Anna Lowe (SANDAG) called the meeting to order at 9:06 a.m. Ms. Lowe provided an overview on the San Diego Regional Alternative Fuel Coordinating Council (Refuel) and the goal of the Electric Subcommittee. She mentioned that with the establishment of Refuel, a main task of the San Diego Regional Alternative Fuel Readiness Project is complete. Refuel will help guide and shape the products of this project, and each alternative fuel subcommittees will devote further attention to each fuel.

The aims of the Electric Subcommittee are to continue conversations held during and after the San Diego Regional Electric Vehicle Infrastructure Working Group (REVI) and address the current barriers to electric vehicle (EV) infrastructure development. REVI facilitated in developing the San Diego Regional Plug-In Electric Vehicle Readiness Plan (PEV Readiness Plan), which was completed January 2014.

## REPORTS

### 2. REVI: ELECTRIC INFRASTRUCTURE BARRIERS (INFORMATION)

Ms. Lowe discussed EV barriers established by REVI, included in the PEV Readiness Plan. REVI generated a barriers table with 11 barriers to EV adoption and infrastructure deployment. Ms. Lowe will send out the barriers table to the group. She requested that the group review the table and provide feedback on which barriers have been resolved, are still an issue, and any new barriers that Refuel should address.

### 3. REGIONAL INFRASTRUCTURE UPDATES SINCE REVI (INFORMATION)

Kevin Wood (San Diego Regional Clean Cities Coalition (SDRCCC)) presented data and GIS maps on the EV infrastructure growth since the conclusion of REVI. Based on the listing from the Department of Energy Alternative Fuel Data Center (AFDC), from December 2013 to November 2014 the following additional chargers were developed: 12 Level 1, 64 Level 2, and 3 DC Fast.

Refuel members had the following questions and comments:

- Andy Hoskinson (NRG EvGo) denoted that when determining where stations should be placed, a path of travel analysis is important especially for DC Fast chargers (DCFC). Mr. Hoskinson stressed a ratio of charger types to vehicles to track the building and installing of charging stations, so as to not overbuild or under build.
- Mike Evans (San Diego Regional Chamber of Commerce) mentioned that an infrastructure analysis involving EV implementation and adoption rates should be taken into account.

- Susan Freed (County of San Diego) spoke on a grant the County received to place electric infrastructure at ten sites. Ms. Freed added that the County's partnership with its manufacturer could be a good model for local governments to follow. Ms. Lowe inquired if the County could give presentation/discussion on logic, benefits, progress, and lessons learned. Ms. Freed agreed and this talk will take place early 2015.
- Mr. Hoskinson brought to the attention of the subcommittee that installation of combo SAE DC fast chargers in the region will be completed by the end of 2014. Although product constraint is seen as a barrier to quicker installation, there is a charging station in Fenton Market Place in Mission Valley which will have this combo and be made public by early December 2014.
- Allison Wood (SANDAG) shared that SANDAG is starting to look at work that has been done in the Bay Area dealing with alternative fuel infrastructure/implementation in order to replicate processes and results for this region. When a thorough analysis of this work is completed it will be brought to the Refuel group.
- Ms. Lowe commented that there should be conversations on the value of Level 1 chargers. She recommended that these types be considered as well if they are a valuable option.
- Jacques Chirazi (City of San Diego) explained that workplace Level 1 charging would be cost effective, and many could look into DCFC as a reserve. He felt that areas of focus would be those that are lacking in infrastructure and have fewer EVs, explaining that if people see this infrastructure, they might be willing to explore EV purchasing. Mr. Chirazi added that many might be concerned with its rate structure. EV owners would want to know the best times to charge and how to get the best value for their money.
- Jeff Wyner (City of Escondido) emphasized the need to think about the placement of the meter in order to compliment future conduit implementation. Mr. Evans responded that those installing EV infrastructure would need to make sure conduits are sufficient for future use.
- Ms. Freed asked how cities accurately predict what they will need in the future. Mr. Chirazi said that many are overbuilding to adjust for the future.
- Mr. Hoskinson mentioned that there is a new National Electrical Code (NEC) code regarding automatic load management which can have positive effects on future infrastructure. He explained that EVs are growing at a strong rate, and now could be an appropriate time to codify building development and infrastructure.
- Ms. Lowe shared that Climate Action Plans (CAPs) are becoming more commonplace, and these are pushing many conversations geared towards alternative fuels which can encourage policy.

#### 4. LAWS AND REGULATIONS (INFORMATION)

Mr. Wood discussed current laws and regulations pertaining to alternative fuel and infrastructure.

- Senate Bill 1275, "Charge Ahead California", gives preference to PEV installation in disadvantaged communities. This will also help achieve the Governor's goal of one million EVs on the road by 2020.

- Senate Bill 880 “Common Interest Developments: EV Charging Stations” of 2013, affirms the right of residents in multi-unit dwellings (MuD) to have access to charging, without unreasonable restrictions from the Home Owner’s Association (HOA).
- Assembly Bill 2565, “Rental Property: EV Charging Stations”, reserves the right for renters to ask for installation of charging infrastructure, at residents cost; if this is not met, the lease on the place of residence can be broken.
- Assembly Bill 2414, “Parking Facilities: EV Charging”, provides free charging as a reasonable gift of public funds.
- Assembly Bill 1092, “Building Standards: EV Charging Infrastructure”, asks for the next update to Title 24 to have mandatory prewiring for three to five percent of all systems.

Mr. Wood encouraged the development of a one page document discussing AB 1092. If this bill becomes mandatory, the document created can facilitate earlier conversations.

#### 5. CALIFORNIA ENERGY COMMISSION FUNDING (INFORMATION)

Ms. Wood informed Refuel that on November 17, 2014, the Energy Commission sent out a notice of proposed awards and SANDAG, in partnership with CSE, received an award for implementation of the PEV readiness plan developed through REVI. There are activities that must be met, and these include hosting sub-regional workshops for staff within permitting and inspection processes, having an EV expert in the region to assist agency on installation process, development of a checklist for the contractor community, citing for installation of charging stations, providing information to MuD, and information sessions on PEV awareness for consumers.

The total funding amount that was awarded was \$300,000 over a two year period. This work will start in mid-2015 and Ms. Wood would like to use this subcommittee and Refuel to help guide these activities.

Refuel members had the following questions and comments:

- Ms. Freed suggested that a web tool be created to help local governments to determine whether a site is a good opportunity to install infrastructure.
- Mr. Hoskinson emphasized there are no maps for cities to project anticipated infrastructure, but cities can add a conduit which is an inexpensive alternative. He supported the creation of toolkits from each subcommittee in order to provide guidance to cities regarding each alternative fuel type.
- Mr. Wood voiced his curiosity on how much cities have used the Plug-In Electric Vehicle (PEV) Readiness Plan. He agreed that having a toolkit with a table depicting easy targets would be of more use than a lengthier document.
- Ms. Lowe encouraged the revisiting of a citing map for infrastructure. Also, it was added that having a clear understanding on which technologies would not interfere with cameras would be beneficial.

## 6. SUBCOMMITTEE OPEN DISCUSSION (DISCUSSION)

- Mr. Wood informed Refuel that in early 2015 about \$10 to \$15 million of Energy Commission funding will have similar terms and conditions, and goals as last the round of funding. Many projected projects include DCFC corridor infrastructure, Level 2 destination charging, workplace and multi-unit charging.
- It was mentioned that the Energy Commission is putting funding towards loan loss reserve financing programs for non-public agencies. This financing program will be available by the second quarter of 2015. It is important to note that the money is subject to private lenders requirements, but can be used to match other projects that have funding.
- The want for OEM's like BMW, KIA, and Nissan to be present at future electric subcommittee meetings was stressed.
- Ms. Freed shared concerns with the cost of implementing EV infrastructure to existing sites. She mentioned that projects are costing more than previously thought, and feels that additional funding would be required to finance projects. She inquired if there was more that could be done with temporary fixes.
- Nick Cormier (San Diego County Air Pollution Control District (SDAPCD)) suggested PV to EV charging infrastructure because they are movable and can be rented. He felt that it can be an interesting solution to these challenges and is worth having a conversation about.
- Another area of concern proposed by Ms. Freed was time of use rates. She emphasized energy storage as a good option in times when demand should be cut.
- Mike Carella (GreenChargeNetworks) provided information on energy storage. He mentioned that the cost of shifting loads from expensive to non-expensive can be offset. He shared that GreenChargeNetworks can come and offset the cost, and help with building of infrastructure.
- Mr. Hoskinson mentioned that demand charges can be very expensive, averaging a few thousand a month even if less than ten people use the infrastructure. He emphasized that energy storage is a critical element to EV charging, especially in regards to DCFC.

## 7. PEVC: PLUG-IN ELECTRIC VEHICLE COLLABORATIVE (INFORMATION)

Mr. Wood shared information on the Plug-In Electric Vehicle Collaborative (PEVC). The PEVC is a public/private organization accelerating the adoption of plug-in electric vehicles to meet California's economic, energy and environmental goals. The PEVC is currently working on documenting MuD case studies and furthering outreach and education for MuD and workplace charging through 2015. Future PEVC activity includes Drive the Dream 2015, an event to accelerate corporate commitments to workplace charging. The Collaborative is also active on statewide policy issues in order to draft guidance coming out of the state. Toolkits that come out of Refuel should reference these materials, local context, and clear guidance into action for local governments to take.

## 8. BARRIERS AND TOPICS FOR NEXT MEETING (DISCUSSION)

Ms. Lowe encouraged the EV subcommittee to identify barriers that can be addressed in its toolkit. The following barriers were addressed:

- Use citing to update maps of current infrastructure to show where locations are, identify gaps, and determine if Level 1 chargers are adequate for workplace charging.
- Identify underserved communities and challenges to increasing EV numbers in these areas. Keep in mind that leased electric vehicles are becoming a cheaper alternative.
- Address government fleet issues of vetting and purchasing vehicles. Explore the possibility of EV ride sharing for government fleets until EVs can be widely adopted.
- Increase alternative fuel adoption and acknowledge barriers of purchasing alternative fuel vehicles for consumers. Address what this subcommittee and EV dealers can do to this. Bring car dealers into the conversation to see how they are pushing these cars would be beneficial
- Educating salespeople on the value of EVs and how to market them. Stress that previously leased EVs are becoming less expensive to prospective owners.

## 9. UPCOMING MEETINGS

Ms. Lowe informed the electric subcommittee that materials from the meeting will be sent by email and posted onto the Refuel websites between meetings. A general assessment and survey will be created in December, and be distributed to cities soon after.

The next Refuel Coordinating Council will be held on Thursday, January 15, 2015 from 1:00-3:00 pm, and the next electric subcommittee meeting will be held in March 2015.

### **Attendees**

- Mike Carella – Green Charge Network
- Jacques Chirazi – City of San Diego
- Nick Cormier – San Diego APCD
- Mike Evans – San Diego Regional Chamber of Commerce
- Susan Freed – County of San Diego
- Andy Hoskinson – NRG EvGo
- Brendan Reed – City of Chula Vista
- Bryce Wilson - City of Encinitas
- Jeff Wyner – City of Escondido
- Anna Lowe – SANDAG
- Michelle Martinez - SANDAG
- Allison Wood – SANDAG
- Kevin Wood – San Diego Regional Clean Cities Coalition





# REFUEL: SAN DIEGO REGIONAL ALTERNATIVE FUEL COORDINATING COUNCIL

## PROPANE SUBCOMMITTEE MEETING

JANUARY 15, 2015

JANUARY 8, 2015 MEETING SUMMARY

File number 3200900

### 1. WELCOME AND INTRODUCTIONS

The meeting began with introductions and an overview of the San Diego Regional Alternative Fuel Coordinating Council (Refuel) and the goal of the Propane Subcommittee. Refuel will help guide and shape the products of this project, and each alternative fuel subcommittees will devote further attention to each fuel.

### 2. BACKGROUND ON PROPANE

There are many propane applications and an increasing number of vehicles available that use propane. General information about propane:

- Over 17 million vehicles in the world use "Propane Autogas" – it is the world's most widely used alternative fuel.
- Examples of Propane Autogas users in the region:
  - San Diego Old Town Trolley Tours
  - San Diego Airport shuttles
  - UPS
- Propane is nontoxic and does not pollute groundwater
- Propane is domestically-produced
- Propane is excellent for light- to medium-duty trucks and is a common fuel for forklifts and provides a clean energy option for landscaping equipment. There are engines that can power vehicles up to 33,000 lbs. (school buses, beverage trucks, etc.)
- There are systems that will blend diesel and 20-25% propane for off-road purposes: helps reduce emissions.

#### *How to Buy Propane*

There are four ways to buy propane and over 15,000 places to buy it. However, most places don't fuel vehicles.

1. Service station or U-Haul or RV place
2. Propane bulk plant
3. Station like EXPO propane that is open 24 hours (public station)
4. Own private station (fleet use)

#### *Propane Stations*

Propane stations come in two sizes: small and large. General station information:

- Propane tanks are above ground, held horizontally or vertically
- New nozzles allow for smooth connection and disconnection; stops automatically when vehicle is full
- Tank is approximately 25 ft. from a building

- Propane Autogas is a liquid sold by the gallon
- Propane tank pressure is about 109 psi

Station Specs by Size	Small Stations	Large Stations
Size of Tank (Gallons)	2,000	18,000 – 30,000
Vehicles Serviced	25 – 50	50+
Filling Dispensers	1 – 2	2 – 4

### *Permitting Process*

The following are some of the issues, challenges, and variables that may arise when trying to permit a propane station as described by propane industry representatives:

- Biggest concern about the permitting process is its variability city to city.
- Some planners have expressed concerns over the aesthetics of a propane tank. Mostly urged to hide the propane tanks, which is not practical in most cases.
- Usually it takes about 2-3 months to get a tank installed and operating.
- The pumping mechanism for propane autogas tank is more powerful than the propane tank found at most gas stations (for filling up BBQ tanks) and is optimized for liquids; therefore a propane station for BBQs cannot easily accommodate vehicles.
- Often cannot include propane autogas tank at a gas station because many service stations do not offer the proper setbacks for the tanks (usually not designed for a 2,000 gallon tank).
- Cost of all permits is over \$5,000:
  - Fire Department Permit (\$1,000)
  - Building Department Permit (\$1000-2000)
  - Hazmat fire permit from County, separate from Fire Department permit (\$500-1000)
  - State Department of Safety and Health – Pressure Vessel Section. Inspection required. (\$250)
- San Diego APCD does not require any extra permits for a propane station; however, some air districts such as South Coast AQMD does require an extra permit.

### *Questions/Comments*

- Ms. Lowe asked if the County had explored propane landscaping equipment for agricultural activity in the region (namely, the unincorporated parts).
- Nick Cormier, San Diego APCD, notes that there has been interest about converting irrigation engines to be running on propane. APCD might be able to offer something through the Carl Moyer program.
- Mr. Cormier discovered that the CARB website, [driveclean.ca.gov](http://driveclean.ca.gov) does not mention the option of Propane as an alternative fuel vehicle.
- Mike Rivers, County of San Diego, noted that it is very hard to get a propane autogas station installed in rural areas of the County to support a propane fleet; therefore, the County has not been able to deploy propane vehicles as part of the County's fleet. The County already has a policy with language allowing for clean vehicle purchases but in order to get propane vehicles, they need to have the infrastructure. Mr. Rivers identified the most important step as identifying available vehicle types, the purpose they serve as in relation to the fleet needs of the County, and how to justify the cost.

### 3. NEXT STEPS

The following are next steps identified by the propane subcommittee:

- Create a flowchart on processes; catalyst to standardized more permitting suggestions, education (safety, efficiencies)
- CSE to put together a factsheet and toolkit
- Michelle Heaton, AmeriGas, to send factsheet and stats to County Fleet and to the committee for inclusion in toolkit. Ms. Lowe informed the propane subcommittee that materials from the meeting will be sent by email and posted onto the Refuel websites between meetings. A general assessment and survey will be created in December, and be distributed to cities soon after.

The next Refuel Coordinating Council will be held on Thursday, January 15, 2015 from 1:00-3:00 pm.

#### **Attendees / Call-in Participates**

- Nick Cormier – San Diego Air Pollution Control District (SD APCD)
- Steve Moore – EXPO Propane
- Nilmini Silva-Send – University of San Diego, Energy Policy Initiatives Center
- Mike Rivers – County of San Diego, Fleet Services
- Michelle Heaton – AmeriGas Propane
- Anna Lowe – San Diego Association of Governments (SANDAG)
- Michelle Martinez - SANDAG
- Kevin Wood – Center for Sustainable Energy (CSE)
- Jessica Jinn – CSE



# REFUEL: SAN DIEGO REGIONAL ALTERNATIVE FUEL COORDINATING COUNCIL

## HYDROGEN SUBCOMMITTEE MEETING

JANUARY 15, 2015

JANUARY 12, 2015 MEETING SUMMARY

File number 3200900

### 1. WELCOME AND INTRODUCTIONS

The meeting began with introductions and an overview of the San Diego Regional Alternative Fuel Coordinating Council (Refuel) and the goal of the Hydrogen Subcommittee. Refuel will help guide and shape the products of this project, and each alternative fuel subcommittees will devote further attention to each fuel.

### 2. BACKGROUND ON HYDROGEN

There are many fuel cell electric vehicles (FCEV) being announced by automakers.

- Honda and Toyota have new vehicles coming to market; Hyundai already has a FCEV.

#### *Basic information about FCEVs*

- Water vapor is the only tailpipe emission from FCEVs
- Takes 3-5 minutes to fill a FCEV tank
- Most FCEVs get 300-450 miles on one tank of fuel

#### *Hydrogen Fuel Stations*

- Currently there are nine hydrogen fuel stations in California; no two are the same.
  - This makes it difficult to obtain a permit for installing hydrogen stations because each station is very different and new installations cannot necessarily point to a "standard" type.
- Hydrogen stations are expensive, but the CEC has helped enable growth.
  - \$90 million given to hydrogen projects
  - May 2014 – first hydrogen CEC solicitation to be over-subscribed. This indicates market growth.
- When leasing a FCEV, the fuel is included in the price because there is not yet a standard for dispensing/selling fuel by weight.
  - Cal State LA station will be the first to sell hydrogen by weight
  - Conventional metering for fuel volume (similar to what is used to dispense natural gas) is difficult for hydrogen because the molecules are very small; therefore the meter is less accurate than gasoline meter. (+/- 4% accuracy for hydrogen; +/- 0.5% accuracy for gasoline.)

#### *Future for Hydrogen Education*

- Need to extend existing PEV Readiness Plans and partnerships to include FCEVs and hydrogen
- Local governments should include high-level policy objectives about ZEVs (which includes FCEVs) in general plan updates and other relevant policy documents
- Should emphasize that ZEVs include not just battery electric vehicles and plug-in hybrid electric vehicles, but fuel cells electric vehicles as well
  - Ensure local policies for battery vehicles extend to FCEVs as well

### Questions/Comments

- Dale Snow, Mossy Auto Group, asked about how to get a hydrogen station installed on Mossy property in Pacific Beach.
  - Keith Malone will connect Mr. Snow with CAFCP staff managing station recruitment
- Mike Evans, Shell, believed more attention should be placed in the advocacy area to dispel public mistrust of hydrogen safety. He asked how CAFCP demonstrates how the benefits of hydrogen outweigh the disadvantages.
  - CAFCP conducts local outreach with city officials after building permits are acquired for the installation of a hydrogen station.
- Mr. Evans wanted more maps of current and future infrastructure.
  - Ideally, there would be siting analyses done for hydrogen stations similar to what was done for electric charging stations.
- Anna Lowe, San Diego Association of Governments (SANDAG), asked about the costs and process of getting a hydrogen station installed.
  - Hydrogen stations can cost from \$1.2 million for hydrogen delivered as a fuel to \$5 million if it contains a more complex system (such as using renewable energy processes to create hydrogen).
  - CEC will provide up to 70% of the funding for a station; 100% if the station uses renewable energy to generate hydrogen.
  - Former gas stations are good places to put stations. They need to be in a well-lit place with an area for buying food.
  - The basic steps to apply with the CEC for station funding:
    - Find a spot for the station (brightly lit, good location)
    - Find an equipment provider
    - Send proposal to CEC
  - Station visibility from the street is an important factor.
- It is stressed again that local governments should be distinct between FCEVs and battery electric vehicles when developing documents about ZEVs. Greater education for municipal staff is needed.

### 3. NEXT STEPS

The following are next steps identified by the hydrogen subcommittee:

- Begin preparation for upcoming hydrogen event
- Develop maps of infrastructure (current/future)
- CAFCP will provide information about fuel metering and sales

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### Attendees / Call-in Participates

- Mike Evans – Shell
- Dale Snow – Mossy Auto Group
- Nilmini Silva-Send – University of San Diego, Energy Policy Initiatives Center
- Keith Malone – California Fuel Cell Partnership (CAFCP)

- Chris White – CAFCP
- Anna Lowe – San Diego Association of Governments (SANDAG)
- Michelle Martinez - SANDAG
- Kevin Wood – Center for Sustainable Energy (CSE)
- Jessica Jinn – CSE

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## **Refuel: San Diego Regional Alternative Fuel Coordinating Council**

### **CHARTER**

#### **PURPOSE**

The purpose of the San Diego Regional Alternative Fuel Coordinating Council (Refuel) is to support innovative partnerships and to facilitate and develop a regional alternative fuel (AF) readiness plan that identifies, reduces and/or resolves barriers to promote the widespread deployment of AF infrastructure and vehicles across the San Diego region. Refuel shall undertake this effort in a manner that maximizes the benefits of AFs while further enhancing our quality of life, protecting our environment, promoting sustainability, and offering more mobility options for people and goods. Refuel was authorized in April 2014 by the San Diego Association of Governments (SANDAG) Board of Directors through Board Resolution 2014-16 and will be established on October 16, 2014. Refuel will function as a coordinating body for the sharing of information on AF readiness planning; the dissemination of best practices and AF deployment materials to stakeholders from the San Diego region, other regions and the state; and the development of policy approaches that reduce or remove barriers to region-wide AF readiness.

#### **RESPONSIBILITIES**

Refuel should provide input and direction to the development of a regional AF readiness plan and associated efforts to streamline and address barriers to AF adoption. Refuel planning activities should align with the objectives of the SANDAG 2050 Regional Transportation Plan and its Sustainable Communities Strategy and the California Climate Change Scoping Plan. Refuel shall provide periodic progress reports to the SANDAG Regional Energy Working Group and San Diego Regional Clean Cities Coalition. Refuel shall inform and provide direction toward the preparation of an AF readiness plan and toolkits for dissemination to the 19 jurisdictions of San Diego County, interested public agencies, Refuel members and stakeholders, and the SANDAG Board of Directors.

#### **MEMBERSHIP**

Refuel is a staff coordinating council comprised of regional stakeholder organizations. It should include Voting and Advisory Member organizations. Refuel will have a maximum of 20 Voting Members. Each member organization should designate a primary and alternate representative. Refuel Voting Members are asked to commit to attending meetings consistently.

##### ***Voting Members***

Under the terms of the grant to establish Refuel, Voting Member organizations shall include staff representing SANDAG, Center for Sustainable Energy (CSE), San Diego County Air Pollution Control District, local governments from geographic sub-regions of the County, Unified Port District of San Diego, San Diego Regional Airport Authority, California Department of Transportation-District 11, San Diego Gas & Electric, University of California San Diego, and Miramar College.

##### ***Local Government Membership***

All 19 jurisdictions of San Diego County are invited to be Advisory Members. In addition, the six SANDAG designated sub-regions are asked to provide one Voting Member each: North County Coastal, North

County Inland, East County, South Bay, the City of San Diego and the County of San Diego. If the local government Voting Member cannot attend a Refuel meeting, that Voting Member should designate an alternate from its sub-region to serve as the Voting Member for the meeting in question. Members are encouraged to share information on Refuel and reducing AF readiness barriers at their individual jurisdictions and among partners.

### ***Advisory Members***

In addition to required participants, Refuel seeks broad stakeholder involvement. Advisory Members participate in meeting discussions and plan development but do not influence quorum or vote on agenda items. Representatives from the military; research institutions, social and business groups; vehicle and/or infrastructure original equipment manufacturers (OEMs); fuel providers; public transit agencies; and other organizations are asked to participate in an advisory capacity. In addition, several members of the Board of the San Diego Regional Clean Cities Coalition (SDRCCC) are represented on Refuel, some serving on behalf of their own organizations and some on behalf of the SDRCCC.

### **MEETING TIME AND LOCATION**

Beginning in October 2014, Refuel meetings are to be held quarterly on the third Thursday of the month from 1:00 – 3:00 p.m. at the Center for Sustainable Energy, 9325 Sky Park Court, Suite 100, San Diego, CA 92123. CSE is a central location within San Diego County. Refuel may hold meetings more frequently if necessary and subcommittee meetings between quarterly meetings.

**Refuel: San Diego Regional Alternative Fuel Coordinating Council**  
**MISSION STATEMENT**

*To support innovative partnerships and to facilitate and develop a San Diego regional alternative fuel (AF) readiness plan that identifies, reduces or resolves barriers to the widespread deployment of AF infrastructure and vehicles; thereby showcasing the San Diego region as a national leader in AF readiness.*









**Refuel: San Diego Regional Alternative Fuel Coordinating Council**  
**GOALS**


1. To establish a regional alternative fuel (AF) coordinating council to help streamline practices and address barriers to AF adoption as well as provide real-time learning and sharing across jurisdictions and to diverse stakeholders involved in AF readiness.
2. To provide input toward a regionally-accepted comprehensive AF Readiness Plan that leverages past planning efforts, addresses barriers and complexities, and lays the framework for future AF planning efforts.
3. To provide consistent messages across jurisdictions, agencies, dealerships, consumers, companies, educational institutions, fuel providers, and others about AFs.
4. To leverage and foster partnerships among government, business, academia, and other organizations to promote AF deployment and support economic development in the region.







## Regional Alternative Fuel Vehicle and Infrastructure Barriers

**Barrier Topics:** Education  AFI  AFV


Barrier: Education	Guidance Materials	Action Items
<p><b>1. Lack of Public Knowledge on Alternative Fuels</b></p> <p>- Lack of knowledge and misconceptions about alternative fuels and advanced vehicle technology.</p> <p>-Additional education on hydrogen is needed since it is a newer vehicle technology.</p> <p>Barrier pertains to:</p> <div style="display: flex; flex-wrap: wrap; justify-content: space-around;"> <div style="text-align: center;"> Gasoline</div> <div style="text-align: center;"> Ethanol</div> <div style="text-align: center;"> Electricity</div> <div style="text-align: center;"> Natural Gas</div> <div style="text-align: center;"> Propane</div> <div style="text-align: center;"> Hydrogen</div> </div>	<p>Consumer Alternative Fuels toolkit</p> <p>Toolkit will highlight environmental benefits, fuel savings, and incentives such as, rebates, environmental permits, and tax benefits. Aim of toolkit will be to address misconceptions public has on alternative fuels and worries of range anxiety.</p>	<ul style="list-style-type: none"> <li>• Review existing consumer outreach materials</li> <li>• Develop toolkits</li> </ul>

<p><b>2. Training and Education for Municipal Staff</b></p> <p>-Lack of knowledge about alternative fuels and advanced vehicle technology.</p> <p>-Need for education on procedures for servicing AFVs.</p> <p>-Additional education on hydrogen is needed since it is a newer vehicles technology.</p> <p>Barrier pertains to:</p> 	<p>Fleet Manager and City Planner Alternative Fuels toolkit Toolkit will highlight environmental benefits, fuel savings, and incentives such as, rebates, environmental permits, and tax benefits. Toolkit will have information geared towards municipal fleet managers and planning staff.</p>	<ul style="list-style-type: none"><li>• Review existing educational programs materials</li><li>• Review past and current training programs</li><li>• Develop toolkits</li><li>• Promote trainings</li></ul>
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<p><b>3. Training and Education for Emergency Personnel and Transportation Fleet Staff</b>                  -Lack of safety and technical training for AFVs and AFI.                  Barrier pertains to:</p>  	<p>Training Resources One-Pager                  This document will include contacts for training facilities within and near San Diego County as well as national training organizations. Additionally it will provide training courses/topic recommendations for each fuel type and by profession.</p>	<ul style="list-style-type: none"> <li>• Review past and current training programs</li> <li>• Develop training resources one pager</li> <li>• Promote trainings</li> </ul>
<p><b>4. TOU Utility Rates</b>                  -Need to discourage charging when electricity supplies are in high demand and cost more. Support of time of use (TOU) pricing.                  -High demand charges that impact EVSE host utility bills. Expensive metering options to access TOU rates.</p>  	<p>Education public on SDG&amp;E EV time of use rates.                  Promote Plug-In Electric Vehicle Collaborative materials and guidance documents from the PEV Readiness Plan.                  Information on minimizing utility charges from natural gas station operation</p>	<ul style="list-style-type: none"> <li>• Promote information and guidance on utility rates.</li> </ul>

**Barriers/Solutions Being Addressed by California Energy Commission Alternative Fuel Readiness Project and Refuel**

Barrier: Alternative Fuel Infrastructure	Guidance Materials	Action Items
<p><b>5. Station Development: Codes &amp; Permitting</b></p> <p>-Need for increased guidance on EVSE, propane, natural gas, and hydrogen station installation processes.</p> <p>-Direction on how city staff and station developers can work together to ease station deployment process.</p> <p>Barrier pertains to:</p> 	<p>Alternative Fuel Station Installation Procedures: Frequently Asked Questions</p> <p>-Resource will contain for each fuel type frequently asked questions and their answers.</p> <p>-The frequently asked questions will be determined by responses to a survey distributed to municipal staff and contractors.</p> <p>Promote Best Practice documented generated through the California Statewide Alternative Fuels and Fleets project.</p>	<ul style="list-style-type: none"> <li>• Create survey to obtain frequently asked questions.</li> <li>• Assess survey results and gather final listing of frequently asked questions.</li> <li>• Research answers to questions and formulate toolkit.</li> </ul>

**6. Station Development: Site Assessment**

-Station developers have come across right of way and easement issues.

-Stations should be located along fleet routes.

Barrier pertains to:







Assist municipal staff through Clean Cities tools on zoning, station design, and assessment of station fueling needs.

Conduct fleet route assessment to determine best locations for AFI.



Promote electric, natural gas and hydrogen best practice documents generated through the California Statewide Alternative Fuels and Fleets project.




- Send out requests to fleet managers asking for their fleet routes and the fuel those fleets use.
- Analyze fleet routes and determine optimal locations for AFI.
- Promote resources and findings

<p><b>7. Access to Public Alternative Fuel Stations</b></p> <p>-Lack of AFV adoption due to limited infrastructure near where fleets need to refuel.</p> <p>-Lack of station access for heavy-duty vehicles.</p> <p>Barrier pertains to:</p> 	<p>Increase awareness of current and planned alternative fuel stations to fleet managers.</p> <p>Compile resource list of station locator maps.</p> <p>Guidance to station developers on building stations that are accessible to heavy-duty vehicles.</p>	<ul style="list-style-type: none"> <li>• Review existing resources and update as necessary</li> <li>• Promote information</li> </ul>
<p><b>8. EVSE at Multi Unit Dwellings</b></p> <p>-Consumer lack of knowledge regarding EVSE installation in these buildings. Need to educate and work with HOAs to identify and find solutions to unique building challenges.</p> 	<p>Promote California Plug-In Electric Vehicle Collaborative materials and guidance documents from the PEV Readiness Plan.</p>	<ul style="list-style-type: none"> <li>• Continue to promote information</li> <li>• Use new CEC award to increase level of assistance to MuD properties</li> </ul>

<p><b>9. Workplace Charging</b>                  -Lack of understanding regarding benefits and approaches to workplace charging.</p> 	<p>Promote Calstart's <a href="#">Best Practices for Workplace Charging</a> and the California Plug-In Electric Vehicle Collaborative guidance documents.</p>	<ul style="list-style-type: none"> <li>• Continue to promote information</li> </ul>
<p><b>10. Infrastructure Costs</b>                  -Lack of capital for station construction and operation costs.</p> <p>-Who pays for the upfront costs of the infrastructure? The grantee, ratepayer or end user.</p> <p>-Risk of investment.</p> <p>-Need justification/incentives for higher costs to build stations.</p> <p>-Need partners to justify investment.</p>  	<p>Create forum for stakeholders to discuss and form partnerships.</p> <p>Promote Clean Cities tools, such as CNG VICE Model which address payback period for natural gas vehicles and infrastructure.</p>	<ul style="list-style-type: none"> <li>• Evaluate and Promote existing tools</li> <li>• Provide forum for coordination</li> </ul>

**Barriers/Solutions Being Addressed by California Energy Commission Alternative Fuel Readiness Project and Refuel**

Barrier: Alternative Fuel Vehicles	Guidance Materials	Action Items
<p><b>11. Selecting Appropriate AFVs</b>                      -Advise municipal staff and businesses on isolating alternative fuels that will meet fleet needs.</p> 	<p>Clean Cities tools such as the Vehicle Cost Calculator and Vehicle Search.</p>	<ul style="list-style-type: none"> <li>Promote Clean Cities tools</li> </ul>
<p><b>12. Procuring and Financing AFVs</b>                      -Initial higher costs of AFVs barrier to adoption.</p> 	<p>Connect municipal staff, businesses and local residents to dealers and vehicle manufactures. Provide guidance on leasing vs. purchasing an EV.</p> <p>Educate public on available incentives.</p>	<ul style="list-style-type: none"> <li>Identify &amp; promote best resources on financing and procurement</li> </ul>

<p><b>13. Converting Conventional Vehicles to an Alternative Fuel</b>                  - Lack of understanding on the regulations, conversion kits available or companies that provide retrofit services.</p> 	<p>Information on CARB acceptable conversion kits and manufacturers.</p>	<ul style="list-style-type: none"> <li>• Provide guidance on CARB approved conversion kits</li> </ul>
<p><b>14. AFV Technology</b>                  -AFVs lifespan and range (mainly for EVs) in some cases is not competitive with conventional vehicles.                   -Technology will keep improving, people not making the investment until technology improves.</p>  	<p>Guidance on technology.                  Review leasing an EV and EV Car Sharing programs.</p>	<ul style="list-style-type: none"> <li>• Provide guidance on technology developments</li> </ul>





<b>Refuel: Meeting Schedule</b>		<b>Refuel Q - Mtgs</b>	<b>Subcommittee Meetings</b>					<b>Readiness Plan Public Workshop</b>
			<b>Electricity</b>	<b>Natural Gas</b>	<b>Propane</b>	<b>Biofuel</b>	<b>Hydrogen</b>	
2014	October	10/16/2014						
	November		11/19/2014					
	December							
2015	January	1/15/2015			1/8/2015		1/12/2015	
	February					Feb-15		
	March		Mar-15				Mar-15	
	April	4/16/2015		Apr-15				
	May		May-15			May-15		
	June						Jun-15	
	July	7/16/2015				Jul-15		
	August		Aug-15					
	September							
	October	10/15/2015						
	November							
	December							
2016	January							Jan-16
	February							
	March							