MEETING NOTICE AND AGENDA

REGIONAL ENERGY WORKING GROUP
The Regional Energy Working Group may take action on any item appearing on this agenda.

Thursday, January 28, 2016
11:30 a.m. to 1 p.m.
SANDAG, 7th Floor Conference Room
401 B Street, Suite 800
San Diego, CA 92101-4231

Staff Contact: Susan Freedman
(619) 699-7387
susan.freedman@sandag.org

AGENDA HIGHLIGHTS

• DRAFT SAN DIEGO REGIONAL ALTERNATIVE FUEL READINESS PLAN
• STATE OF DISTRIBUTED SOLAR IN SAN DIEGO
• ENERGY ROADMAP PROGRAM SERVICES FOR 2016

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Welcome to SANDAG. Members of the public may speak to the Working Group on any item at the time the Working Group is considering the item. Please complete a Speaker’s Slip, and then present the slip to the Clerk of the Working Group. Members of the public may address the Working Group on any issue under the agenda item entitled Public Comments/Communications/Member Comments. Public speakers are limited to three minutes or less per person unless otherwise directed by the Chair. The Working Group may take action on any item appearing on the agenda.

Public comments regarding the agenda can be sent to SANDAG via comment@sandag.org. Please include the agenda item, your name, and your organization. Email comments should be received no later than 12 noon, two working days prior to the meeting. Any handouts, presentations, or other materials from the public intended for distribution at the meeting should be received by the Clerk of the Working Group no later than 12 noon, two working days prior to the meeting.

In order to keep the public informed in an efficient manner and facilitate public participation, SANDAG also provides access to all agenda and meeting materials online at www.sandag.org/meetings. Additionally, interested persons can sign up for e-notifications via our e-distribution list at either the SANDAG website or by sending an email request to webmaster@sandag.org.

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Bicycle parking is available in the parking garage of the SANDAG offices.
**REGIONAL ENERGY WORKING GROUP**  
Thursday, January 28, 2016

<table>
<thead>
<tr>
<th>ITEM NO.</th>
<th>RECOMMENDATION</th>
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<tbody>
<tr>
<td>1.</td>
<td>WELCOME AND INTRODUCTIONS</td>
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<tr>
<td>+2.</td>
<td>APPROVAL OF MEETING MINUTES</td>
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<td>+2A. September 24, 2015, meeting.</td>
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<td>+2B. November 12, 2015, meeting.</td>
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<td>3.</td>
<td>PUBLIC COMMENTS/MEMBER COMMENTS</td>
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Members of the public shall have the opportunity to address the Committee on Regional Energy Working Group (EWG) on any issue within the jurisdiction of SANDAG that is not on this agenda. Anyone desiring to speak shall reserve time by completing a “Request to Speak” form and giving it to the meeting coordinator prior to speaking. Public speakers should notify the meeting coordinator if they have a handout for distribution to working group members. Public speakers are limited to three minutes or less per person. EWG members also may provide information and announcements under this agenda item.

**CONSENT**

<table>
<thead>
<tr>
<th>+4.</th>
<th>2016 MEETING SCHEDULE AND MEMBERSHIP ROSTER</th>
<th>INFORMATION</th>
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<td>Attached are the calendar year 2016 meeting dates and membership roster for the EWG.</td>
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**REPORTS**

<table>
<thead>
<tr>
<th>+5.</th>
<th>DRAFT SAN DIEGO REGIONAL ALTERNATIVE FUEL READINESS PLAN</th>
<th>DISCUSSION</th>
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<td></td>
<td>Refuel: San Diego Regional Alternative Fuel Coordinating Council (Refuel) was formed through a two-year, $300,000 grant from the California Energy Commission. Refuel has prepared a DRAFT San Diego Regional Alternative Fuel (AF) Readiness Plan that addresses barriers to the adoption and deployment of AF infrastructure. The DRAFT San Diego Regional AF Readiness Plan is attached.</td>
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<th>6.</th>
<th>STATE OF DISTRIBUTED SOLAR IN SAN DIEGO</th>
<th>INFORMATION</th>
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<td>California’s policy toward rooftop solar is changing with several policies up for discussion this year. Ben Airth, Senior Project Manager from the Center for Sustainable Energy will discuss the issues being addressed in the Net Energy Metering 2.0 proceeding at the state level and how those changes could affect San Diego’s burgeoning solar market. Mr. Airth also will discuss the mechanics of the recent passing of the Investment Tax Credit at the federal level.</td>
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A five-year contract to continue the Energy Roadmap program was approved by the SANDAG Board of Directors on December 22, 2015. Staff will present new outreach and implementation measures, and discuss an upcoming competitive procurement for technical support. Members are asked to provide feedback on the program and suggest any additional services that could support local government energy and climate efforts.

The next meeting of the EWG is scheduled from 11:30 a.m. to 1 p.m on Thursday, February 25, 2016.
AGENDA ITEM NO.: 2A

Action Requested: APPROVE

SEPTEMBER 24, 2015, MEETING MINUTES

File Number 3200300

1. WELCOME AND INTRODUCTIONS

Chair Chris Orlando (City of San Marcos), called the Regional Energy Working Group (EWG) to order at 11:30 a.m.

2. JUNE 25, 2015, AND JULY 23, 2015, MEETING MINUTES (APPROVE)

Action: Greg Newhouse (San Diego Regional Clean Cities Coalition) motioned to approve the meeting minutes from June 25, 2015 and Carrie Downey (City of Coronado) seconded the motion. The motion carried without opposition.

Yes: Chair Orlando, Mr. Newhouse, Ms. Downey, Len Hering (Center for Sustainable Energy [CSE]), Paul Webb (Sierra Club), Cameron Durckel (San Diego Gas and Electric [SDG&E]), Sharon Cooney (Metropolitan Transit System [MTS]), Dr. Don Mosier (City of Del Mar), Dave Weil (City of San Diego), Supervisor Dave Roberts (County of San Diego), Brendan Reed (San Diego County Regional Airport Authority). No: None. Abstain: Pamela Bensoussan (City of Chula Vista). Absent: City of Santee, City of Vista, San Diego Regional Chamber of Commerce, Cleantech San Diego, Environmental Health Coalition (EHC), Unified Port District of San Diego, North County Economic Development Corporation, and University of California, San Diego.

Action: Ms. Downey motioned to approve the meeting minutes from July 23, 2015, and Mr. Newhouse seconded the motion. The motion carried without opposition.

Yes: Chair Orlando, Mr. Newhouse, Ms. Downey, Len Hering (Center for Sustainable Energy [CSE]), Paul Webb (Sierra Club), Cameron Durckel (San Diego Gas and Electric [SDG&E]), Sharon Cooney (Metropolitan Transit System [MTS]), Dr. Don Mosier (City of Del Mar), Dave Weil (City of San Diego), Supervisor Dave Roberts (County of San Diego), Brendan Reed (San Diego County Regional Airport Authority). No: None. Abstain: Pamela Bensoussan (City of Chula Vista). Absent: City of Santee, City of Vista, San Diego Regional Chamber of Commerce, Cleantech San Diego, Environmental Health Coalition (EHC), Unified Port District of San Diego, North County Economic Development Corporation, and University of California, San Diego.

3. PUBLIC COMMENTS/MEMBER COMMENTS

John Wotzka (member of the public) discussed energy-related news and provided written comments that are summarized here: the Nuclear Regulatory Commission (NRC) has approved three ways to decommission nuclear plants in the United States; the first offshore wind farm in the United States, the Deepwater Wind Project, has been placed off the coast of Rhode Island; the recorded electricity usage of 45 gigawatts in the region for August 2015 was the highest since...
August 2012; Tesla Motors has been scheduled to build a battery storage system for three Escondido high schools that would save $100,000 per year in electric costs; General Electric’s new gas turbines was one of the world’s largest and most efficient, and would be operational by 2016; California Governor Brown has made a climate change goal to reduce carbon emissions and increase renewables to 50 percent by 2030; 1.6 million people a year are killed due to the air pollution in China; Senate Bill 350 (SB 350) (De Leon, 2015) Clean Energy and Pollution act of 2015, would raise the Renewable Portfolio Standard to 50 percent; a few countries and states from the U.S. have aspired to run 100 percent of their electricity on renewables by 2050; in 2015, U.S. usage of crude oil hit a high that had not been seen for 80 years.

Mike Grim (City of Carlsbad) shared with the EWG that the Carlsbad City Council approved the City’s Climate Action Plan (CAP), General Plan Update, and corresponding Environmental Impact Report (EIR). Implementation of the Plan would start in the next few months.

Chair Orlando mentioned that the City of San Marcos adopted its state mandated Streamlined Solar Permitting Ordinance pursuant to Assembly Bill 2188 (AB 2188) (Muratsuchi, 2015) Solar energy: permits.

Ms. Downey clarified the topic of painted bike markings discussed at its City Council meeting. She mentioned that city streets underwent construction, and the City would return to marking the suggested streets associated with the City’s Bike Master Plan.

Dr. Mosier shared that the NRC has cancelled a planned study of cancer related cases for those that live close to, the San Onofre Nuclear Generating Station, due to cost.

Mr. Reed mentioned that the Airport completed its commissioning of its 12 kV Micro-Grid. He shared that there would be an opportunity in the future for integrating batteries and renewable energy. He added that tours would be offered to members soon.

REPORTS

4. UPDATE ON LOCAL PROPERTY ASSESSED CLEAN ENERGY ACTIVITIES (INFORMATION)

Anna Lowe (SANDAG) and Cory Downs (City of Chula Vista) presented on this item. Ms. Lowe provided an update on available Property Assessed Clean Energy (PACE) programs and the latest data on PACE loans, projects, and energy savings. PACE programs were created to help finance energy efficiency and renewable energy improvements for residential and commercial properties. Ms. Lowe shared with the group PACE updates from the beginning of the year, and discussed: the voluntary California PACE Loss Reserve Program; the Presidential announcement to bring energy efficiency and renewables to U.S. households; and the Federal Housing Administration anticipated guidelines that included two new energy efficiency initiatives for homes.

Ms. Lowe stated that all cities in the region were enrolled in at least one PACE program and referenced the table of regional PACE participation in the agenda report. She added that two new pace providers would be coming online soon, Energy Efficient Equity and PACE Funding Group.

Mr. Downs shared information on the history of acquiring PACE providers and the PACE programs that Chula Vista offers to its residents. The City joined the commercial program for CaliforniaFIRST, and selected Ygrene for its residential program in 2013. The City and Ygrene worked together to
form Clean Energy Chula Vista in 2014. He shared recent changes to program guidelines and that Clean Energy Chula Vista has expanded its offerings through two additional providers, HERO and FigTree.

EWG members and meeting attendees had the following questions and comments:

- Chair Orlando inquired if an appraisal was performed to determine indebtedness. Mr. Downs answered that Chula Vista’s PACE programs used the county assessed number as a default, but that property owners could pay for an appraisal to be performed instead.

- Joan McCaffrey (Clean Spark) asked if Chula Vista homeowners that did not have equity in their homes could participate in PACE. Mr. Downs responded that home equity was needed to participate in these particular programs, but PACE is just one of a number of financing tools available.

- Ms. Bensoussan added that the number of homes that were “upside down” had gone down and were typically the newer, more energy efficient homes on the east side of the city. Whereas the older homes, built before there were energy codes, are utilizing PACE and experiencing a larger savings benefit from integrating energy saving measures and rooftop solar while providing greater energy and greenhouse gas reductions for the city.

- Mr. Hering commented that local lenders have had trouble being subservient to other liens. He mentioned that it is important to continue to inform constituents so they do not become at risk if refinancing or selling their homes. Mr. Hering also added that CSE has heard from a high number of upset property owners across California who have stated that they are being harassed by telemarketers associated with PACE providers. He informed the EWG that CSE has been working with the State Attorney General’s Office to address this issue.

- Ms. Downey asked if the “hard-sell” approach is coming from a particular PACE provider or contractors. Mr. Hering explained that some contractors have hired telemarketing companies to increase sales. He suggested that cities include language in their requests for proposals that would deter this type of behavior.

- Mr. Downs spoke of some instances where this has happened in Chula Vista, and mentioned its PACE providers have informed the contractors that this would not be acceptable.

- Josh Brock (Renovate America) informed members that this type of behavior is a direct violation of program participation terms. He added that the HERO program has suspended and removed contractors that have been in violation of those terms. Mr. Brock offered support to Mr. Hering regarding the calls CSE receives regarding unacceptable marketing practices for PACE.

5. LOCAL ENERGY STORAGE APPLICATIONS (DISCUSSION)

Susan Freedman (SANDAG), Rebecca Feuerlicht (CSE), and Jeff Wyner (City of Escondido) presented on applications of energy storage systems and their use for peak demand reduction at commercial buildings and municipal facilities. Ms. Freedman emphasized that energy storage systems are an important resource to meet aggressive state and regional energy goals, and that they can be used to support large and small scale applications such as campus micro-grids, intermittent large-scale renewable resources, the transmission system, and vehicle to grid integration with mobile storage
through electric vehicles. She added that energy storage is referenced throughout the Regional Energy Strategy (RES) as a means to achieve multiple goals. The RES Goals that include energy storage are included as an attachment to this agenda report.

Ms. Feuerlicht spoke of the Self Generation Incentive Program (SGIP) offered through CSE. The SGIP has been a ratepayer funded program and overseen by the Public Utilities Commission (PUC) for the past 15 years. It has provided rebates and incentives for the installation of clean and efficient distributed energy resources and storage technology installed on customer’s side of the utility meter. Ms. Feuerlicht mentioned that SGIP has incentives for technologies in three main categories, with one of the highest incentives offered for funding advanced energy storage (AES) systems. She shared that AES has made the most sense for commercial applications. Many high schools, stores, supermarkets, and government buildings have installed these systems, and are realizing demand savings of 50 percent. Ms. Feuerlicht added that that SGIP is fully subscribed for this year but would re-open in 2016.

Mr. Wyner explained how the City of Escondido would implement AES at seven of their agency facilities once approval has been received from its City Council. The City was interested in the SGIP because there would be no cost to them, and there was little work that needed to be done on the part of the City. The City worked with Green Charge Network and identified ten sites, but eliminated three for AES. Mr. Wyner gave further explanation of two sites that were examined. He added that for the seven facilities, the City would save over $400,000 over 10 years; for the three eliminated sites, SDG&E would switch their rate to Distributed Generation Renewable and the City would save $500,000.

EWG members and meeting attendees had the following questions and comments:

- Mr. Reed asked if SGIP data would be accessible to the public. Ms. Feuerlicht encouraged members to visit the SGIP webpage via the CSE website and look at the program statistics.

- Mr. Hering asked if escalation was used in the City of Escondido’s savings calculations. Mr. Wyner responded that escalation was used to portray a 5 percent increase each year. In addition, Mr. Hering inquired if there was a point in the contract where a participant could buyout the vendor and own the equipment. Mr. Wyner responded that the City did not have a buyout option in the contract since they were putting in no capital.

- Ms. Downey asked if the City received an estimate from other vendors. Mr. Wyner answered that another vendor did present to the City but the Green Charge Network proposal was a better fit for their specific needs.

- Ms. McCaffrey inquired if the SGIP incentives were included in the project. Mr. Wyner responded that the incentives were built into it.

- Cesar Rios (energy consultant to the County of San Diego) voiced his concern that cities would be restricted to consumption. Mr. Wyner responded that certain adjustments to the building would be acceptable, but could not go beyond a certain point.
6. ENERGY ROADMAP PROGRAM CONTINUATION (DISCUSSION)

Ms. Freedman, SANDAG, shared the proposed Energy Roadmap Program for 2016 with the EWG. She informed members that all Local Government Partnerships (LGPs) in the region are preparing new scopes of work for five year contracts. The Energy Roadmap Program has offered engineering and planning services to all 16 eligible local jurisdictions and SANDAG continues to work collaboratively with the other regional LGPs of the county, the cities of San Diego and Chula Vista, and the Port of San Diego. She added that through this program all cities received Energy Roadmap Reports, and many have completed retrofits on agency facilities and started work on CAP planning. Ms. Freedman explained that the core services over the last five years were on energy engineering services, but asked EWG members to share what new services associated with saving energy at municipal sites, energy/climate planning, and community outreach would be of help to Roadmap cities.

EWG members and meeting attendees had the following questions and comments:

- Ms. Bensoussan asked what the status was of the Regional Energy Network (REN), and if REN work would be folded into the LGP scope. Ms. Freedman responded that the programs are separate, but would be complimentary. Preparation of a draft memorandum of understanding (MOU) is ongoing, continuing to take time to complete due to the high level of coordination that must occur amongst the five LGPs. She added that an item on the REN will return to the EWG once a draft MOU is agreed upon.

7. LEGISLATIVE STATUS REPORT (INFORMATION)

Allison Wood (SANDAG) provided an update on energy-related bills, as well as appropriations of cap-and-trade auction proceeds. Ms. Wood shared that the legislative session ended on September 11, 2015. She informed members cap-and-trade appropriations were not finalized by the Legislature, but there would still be a Transportation Special Session expected to meet in mid-October; this meeting would determine where remaining funding would be allocated. Ms. Wood shared that there would be a meeting at the California Air Resources Board (ARB) September 24, 2015, and September 25, 2015, that would consider draft guidelines for cap-and-trade funds for agencies administering programs.

Ms. Wood referenced Attachment 1 in the agenda of bills that made it through the legislature, but have yet to be signed by the Governor until October 11, 2015.

- Assembly Bill 802 (AB 802) (Williams, 2015), Public Utilities: Energy Efficiency, required energy benchmarking and access to data.

- AB 1236 (Chiu, 2015), Local Ordinances: Electric vehicle charging station, required local governments to adopt ordinances for EVCS and discussed permitting. The new Plug-In SD Program already has started work on EVCS permitting for the region.

- SB 350 (De Leon, 2015), Clean Energy and Pollution Reduction Act of 2015, removed the goal for 50 percent reduction of petroleum use; however, there were still many provisions regarding electrifying the transportation sector.
8. UP Coming MEETINGS (INFORMATION)

The EWG meeting for November has been moved to Thursday, November 11, 2015, and will be a joint meeting with SANDAG’s Technical Working Group (TWG). The meeting will be held in the 7th Floor Board Room from 1:15 to 3:15 p.m.

9. ADJOURNMENT

Chair Orlando adjourned the meeting at 12:59 p.m.
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<td>North County Inland Subregion</td>
<td>City of San Marcos</td>
<td>Hon. Chris Orlando, Chair</td>
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<td>City of Vista</td>
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<td>Brendan Reed</td>
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<td>Energy Non-Profits</td>
<td>Center for Sustainable Energy</td>
<td>Len Hering</td>
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<td>Energy Policy Initiatives Center, University of San Diego School of Law</td>
<td>Scott Anders, Vice Chair</td>
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**OTHER ATTENDEES:**
Josh Brock, Renovate America
Kimberly Burke, SDG&E
Keith Corry, County of San Diego
Cory Downs, City of Chula Vista
Raejean Fellows, CSE
Mike Grim, City of Carlsbad
Cheryl LaCombe, TRC
Joan McCaffrey, Clean Spark
Kevin O’Beirne, SDG&E
Cesar Rios, Energy consultant to the County of San Diego
Deanna Spehn, Representative for Tony Atkins
John Wotzka, member of public
Jeff Wyner, City of Escondido
Susan Freedman, SANDAG
Michelle Martinez, SANDAG
Allison Wood, SANDAG
NOVEMBER 12, 2015, MEETING MINUTES

Please note: Audio file of the meeting is available on the San Diego Association of Governments (SANDAG) website, sandag.org, on the Regional Planning Technical Working Group (TWG) page.

1. WELCOME AND INTRODUCTIONS

This joint meeting of the Regional Planning Technical Working Group (TWG) and Regional Energy Working Group (EWG) was co-chaired by TWG Chair Brad Raulston (City of National City) and EWG Chair Chris Orlando (City of San Marcos). The meeting was called to order by Chair Raulston, at 1:15 p.m. Chair Raulston informed the group that Rich Whipple (City of Poway) has moved to Buffalo, New York.

2. PUBLIC COMMENTS AND COMMUNICATIONS

There were no public comments or communications.

CHAIR’S REPORT

3. UPDATE TO THE GENERAL PLAN GUIDELINES FOR THE STATE OF CALIFORNIA

Chair Raulston informed the group that the Governor’s Office of Planning and Research has released an update to the General Plan guidelines and shared information regarding upcoming workshops in the San Diego region.

REPORTS

4. SAN DIEGO FORWARD: THE REGIONAL PLAN: ENERGY AND CLIMATE CHANGE COMPONENTS (INFORMATION)

Chair Orlando stated that the SANDAG Board of Directors approved San Diego Forward: The Regional Plan (Regional Plan) last month. Phil Trom (SANDAG) acknowledged both working groups for their participation in the development of the Regional Plan. The projects included in the Regional Plan aim to protect the environment, enhance quality of life, and promote job growth. The Regional Plan and its Environmental Impact Report (EIR) can be found on sdforward.com.
Allison Wood (SANDAG) highlighted the energy and climate change components of the Regional Plan. The vision is to provide innovative mobility choices and planning, and support a sustainable and healthy region, a vibrant economy, and an outstanding quality of life for all. Ms. Wood explained the importance of energy and climate change planning in achieving the vision and goals. Members of the TWG and the EWG were involved in various energy and climate change aspects that led up to the adoption of the Regional Plan—the Plug-in Electric Vehicle Readiness Plan, Regional Energy Strategy update, greenhouse gas inventory, and the Climate Change White Paper. Ms. Wood listed various actions included in the plan, both near term and continuing, that focus on energy and climate change. Ms. Wood also informed members of mitigation measures that were included as part of the EIR. She added that some efforts to implement the Regional Plan are already in place and will be expanded; other efforts will implement new programs.

Working Group members and meeting attendees had the following questions and comments:

- Bill Chopyk (City of Solana Beach) asked how SANDAG would assist local agencies with their Climate Action Plans (CAPs). Ms. Wood responded that SANDAG would offer assistance through the proposed extension of its Energy Roadmap Program. This program would include services to conduct regular greenhouse gas emissions inventories and assistance with CAP monitoring. Ms. Wood also mentioned that there is language in the EIR mitigation measures to make grant funding available for CAPs through the Smart Growth Incentive Program.

- Van Collinsworth (Preserve Wild Santee) encouraged all jurisdictions to take action on climate change and produce strong CAPs. Mr. Collinsworth highlighted the massive emissions gap between policies at the global level and where they need to be in order to keep the planet inhabitable.

5. DRAFT ALTERNATIVE FUEL READINESS TOOLKITS (INFORMATION)

Anna Lowe (SANDAG) and Kevin Wood (Center for Sustainable Energy [CSE]) introduced the Draft Alternative Fuel Readiness Toolkits prepared through the San Diego Regional Alternative Fuel Coordinating Council (Refuel San Diego). SANDAG, CSE, and the San Diego Air Pollution Control District partnered on the two-year, $300,000 grant from the California Energy Commission (Energy Commission) to reduce regional barriers to alternative fuel deployment. Refuel San Diego was created to inform the development of the Alternative Fuel Readiness Toolkits and the Alternative Fuel Readiness Plan. The toolkits are currently available while the plan is to be considered for acceptance by the SANDAG Board of Directors in early 2016.

Ms. Lowe shared past alternative fuel planning efforts, such as the Regional Energy Strategy and the Energy Roadmap Program. With the adoption of the Regional Plan, regional alternative fuel plans and actions were identified to help reduce greenhouse gas emissions and to support the state’s Advanced Clean Cars Program, which calls for 1.5 million zero-emissions vehicles on the road by 2025. Ms. Lowe added that the transportation sector accounts for more than 40 percent of our region’s greenhouse gas emissions. She provided a table indicating the various jurisdictions, public agencies, and academic institutions that have incorporated alternative fuel strategies within their climate action plans or policies.
Mr. Wood discussed the various alternative fuels addressed by Refuel San Diego and their applications: electricity, hydrogen, natural gas, propane, ethanol and biodiesel. He added that much of the shift towards alternative fuels in the region are being driven by state policies and funding incentives. In the last five years, the San Diego region has been awarded nearly $20 million from the Energy Commission to support alternative fuel planning and infrastructure.

Working Group members and meeting attendees had the following questions and comments:

- Carrie Downey (City of Coronado) asked how members could give input on the Readiness Plan before it would be brought before the public. Ms. Lowe responded that any of the upcoming meetings for Refuel San Diego and the EWG, including the public workshop, would be opportunities to provide input. Ms. Lowe emphasized that the document will not be final until it has been approved by the SANDAG Board of Directors. Ms. Downey inquired that once the consumer toolkit has been accepted, would it be available online. Ms. Lowe answered that the toolkits, as well as information from previous meetings, could be found at sdcleanities.org and sandag.com/refuel.

- Chair Orlando asked about the environmental impact, market penetration, and technology with regard to each alternative fuel. Mr. Wood responded that electricity has been the most mature in the light-duty vehicle market; hydrogen has entered the light-to-medium duty vehicle market, with the first public station in the San Diego region opening in early 2016 in Carmel Valley and more to come in future years; natural gas is a great opportunity for heavy-duty vehicles; propane has been utilized on airport shuttle buses and has proven easier to deploy than natural gas; ethanol has opportunity with many flex-fuel cars on the road, but stations providing ethanol are limited; and biodiesel and renewable diesel are great opportunities for vehicles that run on diesel. Overall, there is a role for each listed alternative fuel and the toolkits would assist in determining that role.

- Sharon Cooney (Metropolitan Transit System [MTS]) mentioned that the California Air Resources Board has pushed for renewable natural gas. Ms. Cooney asked if it is important to separate biogas from petroleum. Mr. Wood replied that renewable natural gas would be very important because of its offerings for reduced greenhouse gas emissions comparable to those of electricity. Renewable natural gas was mentioned in the toolkits, but a bigger emphasis should be placed upon renewable natural gas upfront. Ms. Cooney mentioned that MTS will be 100 percent biogas by 2016.

- Dr. Don Mosier (City of Del Mar) added that in order to meet the state’s 2050 emissions reduction goals, all vehicles will need to run on electricity or hydrogen. Dr. Mosier added that the region must make the difficult decisions now to combat climate change and greenhouse gas emissions.

- Len Hering (Center for Sustainable Energy) said that while the transportation goals for the region are aggressive, the federal government accounts for a big portion of the sector and should be involved in order to truly address greenhouse gas emission reductions.
A member of the public asked about the criteria used for alternative fuel and its availability within the plan. Mr. Wood responded that SANDAG’s efforts are bounded by state and national policy. Ms. Lowe added that the main purpose of these toolkits is to inform key stakeholders on all fuel types and describe the considerations and best applications for each.

Mr. Collinsworth made a comment to encourage electric use by the transportation sector. He stated that we should not be greatly dependent upon natural gas due to its production and greenhouse gas emissions.

6. **PLUG-IN SD: ELECTRIC VEHICLE READINESS PROGRAM (INFORMATION)**

Ms. Wood, SANDAG, informed the group of the new Plug-In Electric Vehicle (PEV) Readiness grant called “Plug-In SD” that was awarded to SANDAG and CSE in July 2015. She shared the purpose of the grant along with its goals. Ms. Wood reiterated that the state goal for zero-emissions vehicles (ZEVs) is for 15 percent of new car sales to be ZEVs by 2025 and have 1.5 million ZEVs on the road by 2025. She mentioned that some goals of the grant coincide with new requirements of Assembly Bill 1236 (Chiu, 2015): to streamline the electric vehicle permitting process, improve the installation process, improve workplace and multi-unit dwelling sites and improve PEV awareness. Ms. Wood emphasized that resources are available for interested stakeholders in order to implement and meet these regulations. Under Plug-In SD, some of these resources include best practices reports, permit correction sheets, standardized language for websites, and technical assistance. Ms. Wood also informed the group that in 2016, SANDAG will be hosting sub-regional workshops for local jurisdiction staff. Ms. Wood added that the Permitting and Inspection Best Practices Report and additional information can be found at: sandag.org/pluginsd.

7. **BEACON AWARD PROGRAM (INFORMATION)**

Michelle Martinez (SANDAG) shared information on the Institute for Local Government’s Beacon Award Program and informed the group on how jurisdictions could become involved. The Beacon Award Program, established in 2013, is administered by the Institute for Local Governments (ILG) and the Statewide Energy Efficiency Collaborative. The program currently recognizes 76 cities and counties throughout the state for their work towards saving energy, reducing greenhouse gas emissions, and promoting sustainability. In 2014, SANDAG was named the Beacon Program Champion for the region and aims to help interested local jurisdictions apply for participation.

Ms. Martinez discussed the process of applying for the program. She shared how SANDAG would assist interested jurisdictions in documenting their sustainable activities and gathering data to submit for awards. Ms. Martinez explained the types of awards Beacon participants can receive for their work in agency energy and natural gas savings, agency and community greenhouse gas reductions, and completed activities in the ILG’s best practice activities. In 2015, SANDAG assisted the City of Solana Beach and National City through the Beacon Award Process. These two jurisdictions received awards for agency energy savings and best practice activities. Ms. Martinez shared information on the five Beacon participants from the San Diego region, and the types of awards they have received since 2013. Ms. Martinez encouraged jurisdictions to contact her for assistance with applications.
Working Group members and meeting attendees had the following questions and comments:

- Chair Raulston expressed gratitude for SANDAG support in the Beacon Award application process, and stressed that participation is not only good for recognizing efforts but also to raise awareness in the community and increase political will.

- Dan King (City of Solana Beach) shared that if jurisdictions were worried about staff resources and getting through the process, Ms. Martinez’s assistance with the application process was beneficial and the awards received reflected well on the community.

- Mo Lahsaie (City of Oceanside) echoed these sentiments. He emphasized the amount of assistance received and recognition given to the city’s sustainable efforts.

8. COMMUNITY CHOICE AGGREGATION (DISCUSSION)

Ms. Lowe, SANDAG, and Mr. King (City of Solana Beach) provided updates on active Community Choice Aggregations (CCAs) in California and local CCA efforts. A CCA is a program that enables local governments to aggregate electricity demand of their communities in order to supply electricity. CCAs buy or develop power for those in their jurisdiction while the local Investor Owned Utility continues to distribute the power to consumers. Ms. Lowe discussed various reasons jurisdictions would establish a CCA, and spoke of three different models jurisdictions could follow to establish a CCA. Ms. Lowe highlighted the states throughout the country that are enabling CCAs. There are three active CCAs in California: (1) Marin County; (2) Sonoma County; and (3) the City of Lancaster. Within the San Diego region, various jurisdictions are exploring the possibility of a CCA for their residents and businesses. Mr. King informed the group on City of Solana Beach’s experience in working towards developing a CCA. He emphasized that City of Solana Beach would be open to having a regional CCA, or building a coalition with other cities in the region to develop a CCA. Currently, the City of Solana Beach is working with Peter Rumble (California Clean Power [CCP]) to conduct a feasibility study of a CCA.

Mr. Rumble discussed the work CCP has provided to Solana Beach to explore a CCA. He emphasized that customers in a jurisdiction with a CCA would have the opportunity to opt out, if desired. Mr. Rumble commented that there is an environmental and economic urgency behind CCAs because they would assist in greenhouse gas emissions reductions, increasing revenues, and job creation. Mr. Rumble explained that there is significant interest in developing CCAs throughout the state; however, progress has been stifled due to various challenges.

Working Group members and meeting attendees had the following questions and comments:

- Ms. Downey asked if the third party model for CCA would be done on a limited-term, contract basis, or if it would be a lifelong commitment. Mr. Rumble responded that a city, or group of cities, could eventually operate a CCA on their own, but emphasized that cities would likely always have some sort of contract.

- Amanda Rigby (City of Vista) inquired if there is automatic enrollment of customers into a CCA. Mr. Rumble answered that within a CCA, all rate payers would be defaulted customers of the CCA. However, customers can opt out of the program, even before service starts. Mr. Rumble clarified that it would be up to the particular CCA whether there would be a fee for consumers desiring to opt out.
• Brendan Reed (San Diego Regional Airport Authority) asked about the timeline for developing a CCA, from the feasibility study to serving customers. Mr. Rumble responded it typically would take six to nine months. He mentioned it is possible to prolong the process in order to continue deliberation, if a community desires.

• Chair Raulston asked if there was any benefit for Joint Powers Authorities (JPAs) if the jurisdictions are contiguous. Mr. Rumble responded that the CCA in Sonoma has been limited to Sonoma County, while the Marin County CCA has expanded outside of Marin County boundaries. Mr. Rumble clarified that there may be an economic benefit to contain the CCA within a certain region so that revenue from a CCA is contained within the community.

• Richard Barrera (San Diego and Imperial Counties Labor Council) expressed interest in working with SANDAG and local jurisdictions in the discussion and development of CCAs.

• Mr. Lahsaie asked if the City of Solana Beach has approached the County of San Diego in order to form a group CCA. Mr. King mentioned that the County is aware of the City’s progress on this; however, Mr. King emphasized that all options are open at this time and the City would be interested in working with local jurisdictions.

• Kristen Crane (City of Del Mar) asked if cities handle their own rate setting process for a CCA. Mr. Rumble responded that it is an annual rate setting process that the governing board would be responsible for.

• Mr. Collinsworth commented in favor of CCAs in order to address greenhouse gas emission reductions and climate issues. He stressed that the region needs good leadership and political will at the local level to combat the climate crisis.

• Mr. King added that some jurisdictions may be wondering if it is better to develop a CCA as a single jurisdiction or as a JPA. He pointed out that a JPA would be beneficial for economies of scale and large population; however, there may be potential issues with deciding rates for a JPA.

• Mr. Rumble added that with a JPA, the revenue earned stays with the JPA, not with the jurisdiction. In addition, there has to be coordination between jurisdictions in a JPA and the rates would have to be consistent amongst them.

• Dave Weil (City of San Diego) added that the City of San Diego’s Sustainability Advisory Board has been looking into a CCA. The City has contracted with CSE to help solicit firms to conduct a feasibility study. Mr. Weil added that the City is taking written public comments on this topic until November 19, 2015. Chair Raulston asked if the City has considered the JPA model and if there are ways for other local jurisdictions within the region to join. Mr. Weil responded that a model has not been identified yet; but are open to either the JPA or the enterprise model.

• Dr. Mosier added that one uncertainty with a CCA is the cost of clean energy and asked how these plans deal with economic uncertainty. Mr. Rumble responded that CCAs can increase the amount of renewable energy available. Ms. Lowe added that some existing CCAs are working towards getting longer contracts to get those rates stable.
• Cameron Durckel (SDG&E) added that SDG&E has similar goals for renewable energy and reiterated that SDG&E is currently at 33 percent renewable, and hopes to be over 40 percent in the next 18 months.

• Chair Raulston asked who initiated the conversation on CCAs for the City of Solana Beach and the City of San Diego. Mr. King mentioned that a resident on the City’s green team initiated the conversation and garnered the support for a CCA. Mr. Weil shared that the conversation for a CCA in the City of San Diego was community driven.

9. ADJOURNMENT AND NEXT MEETINGS (INFORMATION)

The December EWG and TWG meetings are canceled. The next TWG meeting is on Thursday, January 14, 2016, from 1:15 to 3:15 p.m. The next EWG meeting is on Thursday, January 28, 2016, from 11:30 a.m. to 1 p.m. Chair Raulston adjourned the joint meeting at 3:20 p.m.
### NOVEMBER 12, 2015, JOINT REGIONAL PLANNING TECHNICAL WORKING GROUP AND ENERGY WORKING GROUP MEETING ATTENDANCE

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<td>City of San Marcos</td>
<td>Hon. Chris Orlando, Chair</td>
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<td>Len Hering</td>
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<td>Energy Policy Initiatives Center, University of San Diego School of Law</td>
<td>Scott Anders, Vice Chair</td>
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**OTHER ATTENDEES:**
Kimberly Burke, SDG&E  
Jerry Butkiewicz, SDG&E  
Van Collinsworth, Preserve Wild Santee  
Kristen Crane, City of Del Mar  
Crystal Crawford, Ygrene  
Sarah Favrot, Atkins  
Brian Haines, SDG&E  
Kevin Wood, CSE  
Jeff Wyner, City of Escondido  
Anna Lowe, SANDAG  
Michelle Martinez, SANDAG  
Rob Rundle, SANDAG  
Allison Wood, SANDAG
Introduction

This report outlines the Regional Energy Working Group (EWG) meetings for calendar year 2016 and provides the Membership Roster.

EWG Meetings for 2016

Energy Working Group (EWG) meetings are generally held at SANDAG on the fourth Thursday of each month, from 11:30 a.m. to 1 p.m. in Conference Room 7. The EWG is scheduled to meet on the following days in 2016:

- January 28
- February 25
- March 24
- April 28
- May 26
- June 23
- July 28
- August 25
- September 22
- October 27
- November 17*
- December 15*

*One week early due to national holiday.

EWG Membership Roster

The EWG Membership Roster is attached (Attachment 1). Any updates or corrections to the roster should be forwarded to SANDAG staff.

Attachment: 1. Regional Energy Working Group Membership Roster

Key Staff Contact: Susan Freedman, (619) 699-7387, susan.freedma@sandag.org
MEMBERSHIP

The Regional Energy Working Group advises the Regional Planning Committee on issues related to the coordination and implementation of the Regional Energy Strategy and tasks of the Regional Energy Planning Program. The Working Group consists of elected officials from the City of San Diego, County of San Diego, and the four subareas of the region. In addition to elected officials, the Working Group includes stakeholders representing business, energy, environment, economy, education, and consumer interests.

The Energy Working Group generally meets at 11:30 a.m., on the fourth Thursday of the month.

Staff contact: Susan Freedman, (619) 699-7387; susan.freedman@sandag.org

CHAIR
Chris Orlando
Councilmember, City of San Marcos

VICE CHAIR
Scott Anders
Energy Policy Initiatives Center, USD School of Law

MEMBERS

Chris Orlando
Councilmember, City of San Marcos

Don Mosier
Councilmember, City of Del Mar

Pamela Bensoussan
Councilmember, City of Chula Vista

Rob McNelis
Councilmember, City of Santee

Sherri Lightner
Councilmember, City of San Diego

Dave Roberts
Supervisor, County of San Diego

Sharon Cooney
Metropolitan Transit System (MTS)

Brendan Reed
San Diego County Regional Airport Authority

Michelle White
Unified Port District of San Diego

William Torre
University of California, San Diego

Thomas Brill
San Diego Gas & Electric

ALTERNATES

Amanda Rigby
Councilmember, City of Vista

Lesa Heebner
Councilmember, City of Solana Beach

Carrie Downey
Councilmember, City of Coronado

Vacant

David Alvarez/Dave Weil
Councilmember, City of San Diego

Noah Alvey
County of San Diego

Vacant

North County Transit District (NCTD)

Brett Caldwell
San Diego County Regional Airport Authority

Renee Yarmy
Unified Port District of San Diego

Heather Honea
San Diego State University

Cameron Durckel
San Diego Gas & Electric
Len Hering  
Center for Sustainable Energy

Scott Anders  
Energy Policy Initiatives Center, USD School of Law

Greg Newhouse  
San Diego Regional Clean Cities Coalition

Vacant  
Environmental Health Coalition

Paul Webb  
Sierra Club

Mike Evans  
San Diego Regional Chamber of Commerce

David Lloyd  
North County Economic Development Council

Jason Anderson  
Cleantech San Diego

Jack Clark  
Center for Sustainable Energy

Nilmini Silva-Send  
Energy Policy Initiatives Center, USD School of Law

Jennifer Case  
San Diego Regional Clean Cities Coalition

Vacant

Dave Grubb  
Sierra Club

Sean Karafin  
San Diego Regional Chamber of Commerce

Vacant

Cody Becker  
Cleantech San Diego
DRAFT SAN DIEGO REGIONAL ALTERNATIVE FUEL READINESS PLAN

Introduction

At the Joint Meeting of the Regional Technical Working Group and Regional Energy Working Group (EWG) on November 12, 2015, members discussed regional alternative fuel planning, the Draft Alternative Fuel Toolkits (AF Toolkits), and the Refuel: San Diego Regional Alternative Fuel Coordinating Council (Refuel San Diego). Refuel San Diego was established through a grant awarded to SANDAG by the California Energy Commission (Energy Commission). Refuel San Diego informed the development of the grant deliverables in partnership with the San Diego Regional Clean Cities Coalition (SDRCCC) and the San Diego Air Pollution Control District (SD APCD). For more background on Refuel San Diego, please refer to the report included in the November EWG Agenda.

SANDAG staff and the SDRCCC Coordinator, Kevin Wood, Center for Sustainable Energy (CSE), will deliver a presentation on the Draft San Diego Regional Alternative Fuel Readiness Plan (Draft Readiness Plan). The Draft Readiness Plan is available for review and download on the Refuel San Diego website: sandag.org/refuel and the SDRCCC website: www.sdcleancities.org/refuel. The Executive Summary and Introduction of the Draft Readiness Plan are provided as Attachment 1. The EWG is encouraged to ask questions and provide feedback at the meeting.

Discussion

On January 14, 2016, Refuel San Diego held a public workshop at CSE to share information about the Preliminary Draft Readiness Plan. Refuel San Diego provided background on regional alternative fuel (AF) efforts and solicited input on the Preliminary Draft Readiness Plan. Feedback from the public workshop was captured (Attachment 2) and incorporated into the Draft Readiness Plan before being accepted with edits (Attachment 3) at the Refuel San Diego meeting on January 21, 2016. Refuel San Diego considers the accepted Readiness Plan a regional resource to help further the adoption of AF vehicles and infrastructure in support of Federal, State, regional, and local clean fuel and greenhouse gas (GHG) emissions reduction policies.

The Readiness Plan includes a thorough assessment of existing and potential AF infrastructure by fuel type for the San Diego region. This information is depicted in a series of maps showing the level of access businesses and residences have to each fuel type, followed by the level of access that would be needed to consider the region ready for widespread AF vehicle adoption. The Readiness Plan also identifies the barriers to AF deployment, ways the AF Toolkits address them, and ongoing needs. The AF Toolkits are intended to serve as the foundation of the Readiness Plan functioning as a single resource and providing actionable steps for overcoming the unique AF barriers faced by
each of the five audiences (public agencies, fleet managers, consumers, first responders, and fuel marketers).

The Readiness Plan concludes with five recommendations articulating ways the region can further the advancement of AF vehicle and infrastructure deployment. Each recommendation identifies lead parties and strategies to implement them.

1. Continue to emphasize alternative fuels as a key strategy in the region’s GHG reduction efforts.

2. Continue to align alternative fuel policies across all local agencies in support of regional air quality attainment and other goals.

3. Seek new funding sources for alternative fuel and infrastructure deployment.

4. Enhance education and outreach efforts to promote awareness of alternative fuel options.

5. Accelerate market growth through workforce development, training, and local entrepreneurship.

San Diego Forward: The Regional Plan (The Regional Plan) recognizes regional AF programs, policies, and plans as a means to reduce GHG emissions and support the State’s Advanced Clean Cars Program that calls for 1.5 million zero-emission vehicles on California’s roads by 2025. The Regional Plan Environmental Impact Report includes mitigation measure GHG-4D, to “Adopt a Plan for Transportation Fuels that Reduce GHG Emissions.” This Readiness Plan can satisfy the criteria for that measure.

**Next Steps**

To satisfy the obligations set forth within the grant funding requirements, the SANDAG Board of Directors must consider acceptance of the San Diego Regional Alternative Fuels Readiness Plan. The planned schedule for consideration is as follows.

- **February 5, 2016**: Regional Planning Committee to consider recommending the Draft Readiness Plan to the SANDAG Board of Directors for SANDAG acceptance.

- **February 26, 2016**: Board of Directors to consider the Draft Readiness Plan for SANDAG acceptance.

Key Staff Contact: Anna Lowe, (619) 595-5603, anna.lowe@sandag.org

Attachments:  
1. Draft San Diego Regional Alternative Fuel Readiness Plan Executive Summary and Introduction
2. Refuel San Diego Public Workshop Comments (January 14, 2016)
3. Refuel San Diego Meeting Comments (January 21, 2016)
Draft Report

San Diego Regional
ALTERNATIVE FUEL READINESS PLAN
Addressing the Barriers to Alternative Fuel Deployment

January 28, 2016
1. Executive Summary

The San Diego Regional Alternative Fuel Readiness Plan (Readiness Plan) was developed to accelerate the deployment of alternative fuel vehicles (AFV) and alternative fuel infrastructure (AFI) in the San Diego region by identifying regional barriers and developing resources to overcome them. This Readiness Plan expands upon previous plug-in electric vehicle (PEV) planning efforts to include all alternative fuels.

The state has established aggressive goals and targets for greenhouse gas (GHG) emissions reductions and adoption of AFV and AFI is essential in helping the region meet these, and other local and federal goals. Through Refuel: San Diego Regional Alternative Coordinating Council (Refuel San Diego), local government, public agencies, academia, fuel industry, vehicle manufacturers, and other interested stakeholders convened to discuss challenges and best practices in the deployment of AFV and AFI, offer peer-to-peer information exchange, and help inform this Readiness Plan.

A Regional Alternative Fuel Assessment (Assessment) was prepared as part of Refuel San Diego project, to identify available alternative fuel training, infrastructure, policy, and funding gaps in the region within different sectors. The Assessment helped inform the development of regionally consistent and accepted resources in the form of Sector-Specific Alternative Fuel Toolkits (Alternative Fuel Toolkits). The standalone Alternative Fuel Toolkits include audience-specific information about each of the different fuel types and how they are used, and include tools for determining costs, available funding opportunities, and why they are relevant to each of the following sectors:

- Alternative Fuels for Consumers
- Alternative Fuels for Public Agencies
- Alternative Fuels for Fleets
- Alternative Fuels for First Responders
- Alternative Fuels for Fuel Marketers and Retailers

Table 1-1 names and describes each barrier to AFV and AFI deployment identified by Refuel San Diego. It also highlights how the barrier was addressed through the Alternative Fuel Toolkits, within this Readiness Plan, or through Plug-in SD, which is the implementation project for the San Diego Regional Plug-in Electric Vehicle (PEV) Readiness Plan (January 2014).

Table 1-1: Refuel San Diego Barriers and Recommended Resources

<table>
<thead>
<tr>
<th>Barrier</th>
<th>Description</th>
<th>Refuel Tools and Resources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lack of public knowledge on alternative fuels</td>
<td>Lack of knowledge and misconceptions about alternative fuels, and advanced vehicle technology.</td>
<td>Alternative Fuels for Consumers Toolkit</td>
</tr>
<tr>
<td>Training and education for municipal staff</td>
<td>Lack of training and education about alternative fuels, and advanced vehicle technology and how to plan for and service</td>
<td>Alternative Fuels for Public Agencies Toolkit Alternative Fuels for Fleets</td>
</tr>
<tr>
<td>Barrier</td>
<td>Description</td>
<td>Refuel Tools and Resources</td>
</tr>
<tr>
<td>---------</td>
<td>-------------</td>
<td>---------------------------</td>
</tr>
<tr>
<td>Training and education for emergency personnel and transportation fleet staff</td>
<td>Lack of safety and technical training for AFV and AFI.</td>
<td>Alternative Fuels for First Responders Toolkit</td>
</tr>
<tr>
<td>Time-of-use (TOU) utility rates/grid integration</td>
<td>Discourage PEV charging during high-cost peak hours and support of TOU pricing to ensure grid reliability. High demand charges impact utility bills and expensive metering options to access TOU rates.</td>
<td>Plug-in SD</td>
</tr>
<tr>
<td>Station development: codes and permitting</td>
<td>Need for increased guidance on alternative fuel station installation processes, and how city staff and station developers can work together to ease the station deployment process.</td>
<td>Alternative Fuels for Public Agencies Toolkit</td>
</tr>
<tr>
<td>Station development: site assessment</td>
<td>Station developers encounter site specific challenges to installations, including right of way and easement issues. Station locations should consider fleet routes.</td>
<td>Alternative Fuels for Public Agencies Toolkit</td>
</tr>
<tr>
<td>Access to public alternative fuel stations</td>
<td>Lack of AFV adoption due to limited fueling infrastructure within proximity to fleets and the public. Lack of station access for heavy-duty vehicles.</td>
<td>Alternative Fuels for Public Agencies Toolkit</td>
</tr>
<tr>
<td>Electric vehicle charging stations (EVCS) at multi-unit dwellings (MuDs)</td>
<td>Lack of knowledge by MuD property owners and residents about the installation of EVCS. Coordinate with Home Owners Associations to identify and find solutions to unique building challenges.</td>
<td>Plug-in SD</td>
</tr>
<tr>
<td>Workplace charging</td>
<td>Lack of understanding regarding benefits and approaches to workplace charging.</td>
<td>Plug-in SD</td>
</tr>
<tr>
<td>Infrastructure costs</td>
<td>Need justification/incentives due to lack of capital for higher station construction and operation costs.</td>
<td>Recommendation 3 Alternative Fuel Toolkits - all</td>
</tr>
<tr>
<td>Selecting appropriate AFVs</td>
<td>Advise municipal staff and businesses on identifying alternative fuels that will meet fleet needs.</td>
<td>Alternative Fuels for Public Agencies Toolkit</td>
</tr>
<tr>
<td>Procuring and financing AFVs</td>
<td>Initial higher costs of AFVs are a barrier to adoption; more information about incentives for procuring AFVs.</td>
<td>Alternative Fuel Toolkits - all</td>
</tr>
<tr>
<td>Barrier</td>
<td>Description</td>
<td>Refuel Tools and Resources</td>
</tr>
<tr>
<td>---------------------------------------------</td>
<td>------------------------------------------------------------------------------</td>
<td>-------------------------------------</td>
</tr>
<tr>
<td>Converting conventional vehicles to an alternative fuel</td>
<td>Lack of understanding about conversion regulations, conversion kits, or companies that provide conversion services.</td>
<td>Alternative Fuels for Fleets Toolkit</td>
</tr>
<tr>
<td>AFV technology</td>
<td>Lack of comfort with emerging AFV technology is a barrier causing consumers to delay investment until there is confidence in reliability.</td>
<td>Alternative Fuels for Consumers Toolkit</td>
</tr>
</tbody>
</table>

Although the Alternative Fuel Toolkits offer resources to address the barriers identified by Refuel San Diego, continued efforts are needed to ensure that the region can support greater deployment of AFVs. This Readiness Plan includes recommendations to further the growth of alternative fuel vehicles and infrastructure and establish the San Diego region as the most comprehensive zero emissions infrastructure network in the country.

**Recommendations:**

1. Continue to emphasize alternative fuels as a key strategy in the region’s GHG reduction efforts.
2. Continue to align alternative fuel policies across all local agencies in support of regional air quality attainment and other goals.
3. Seek new funding sources for alternative fuel and infrastructure deployment.
4. Enhance education and outreach efforts to promote awareness of alternative fuel options.
5. Accelerate market growth through workforce development, training, and local entrepreneurship.

Implementation of this Readiness Plan can help increase the awareness, accessibility, and use of alternative fuels throughout the region while reducing GHG emissions and helping the state achieve its alternative fuel vehicle goals.
2. Introduction

The San Diego region has a long history planning for alternative fuels as a means for reducing local reliance on petroleum imports, improving air quality, and providing more fuel choices to consumers. These reasons remain important but the greenhouse gas emissions (GHG) reduction benefits of alternative fuels have prompted state, regional, and local governments to take more direct and immediate action to ensure their market growth. California’s Global Warming Solutions Act (Assembly Bill [AB] 32, Chapter 488, Statutes of 2006) established a goal to reduce statewide emissions to 1990 levels by the year 2020. As federal, state, regional, and local governments adopt more GHG reduction goals through Climate Action Plans (CAP) and other sustainability policies, a variety of measures for mitigating future emissions and achieving these goals are needed.

On-road transportation is a major contributor to urban air pollution, GHG emissions, and total energy use. It accounts for 42 percent of the San Diego region’s GHG emissions,\(^1\) providing a large opportunity for reducing emissions, improving air quality, and shifting reliance on oil to cleaner and more abundant fuel sources. State and local policies and programs have helped foster the current alternative fuel market and continue to drive industry growth. This San Diego Regional Alternative Fuel Readiness Plan (Readiness Plan) is a direct result of these efforts and builds upon broad goals to develop recommendations for ongoing local actions. It reviews the current state of alternative fuels in the region and provides methods to increase the deployment of alternative fuels.

The primary alternative transportation fuels currently available and addressed in the Readiness Plan are biodiesel, electricity, ethanol, hydrogen, natural gas, and propane autogas. Alternative fuels are used in a

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variety of applications ranging from light-duty passenger cars to heavy-duty trucks, as well as off-road equipment. As part of the Refuel San Diego project, Alternative Fuel Toolkits have been created to highlight the applications of each fuel, tailored for different audiences, and intended to address some of the barriers that inhibit growth in the alternative fuel market.

Policy Background

State Policy
In addition to AB 32, California has adopted numerous policies to address the use of alternative fuels as a means to reduce GHG emissions, petroleum dependence, and improve energy security with in-state fuel production. Table 2-1 identifies many of the key strategies enacted in California. Legislation and executive orders have created goals aimed at lowering the carbon content of fuels (S-01-07 Low Carbon Fuel Standard), increasing the efficiency of vehicles (AB 1493 [Pavley, 2007]), and expanding local production of biofuels (S-06-06).

Funding for the implementation of state transportation goals and requirements was created by the California Legislature with AB 118 (Núñez, Chapter 750, Statutes of 2007) and extended by AB 8 (Perea, Chapter 401, Statutes of 2013). AB 118 created the Alternative and Renewable Fuel and Vehicle Technology Program (ARFVTP), administered by the California Energy Commission (Energy Commission) to allocate funding to achieve energy goals associated with the transportation sector. AB 118 also established the Air Quality Improvement Program (AQIP), administered by the Air Resources Board to funding vehicle deployments and other projects with immediate air quality benefits.

Table 2-1: Alternative Fuel Oriented Strategies for California

<table>
<thead>
<tr>
<th>Strategy Origin</th>
<th>Year</th>
<th>Objectives</th>
<th>Goals and Milestones</th>
</tr>
</thead>
<tbody>
<tr>
<td>AB 1493 (Pavley regulations)</td>
<td>2002</td>
<td>GHG Reduction</td>
<td>17 percent reduction in climate change emissions from light-duty fleet by 2020 and 25 percent overall reduction by 2030.</td>
</tr>
<tr>
<td>Petroleum Reduction and Alternative Fuel Goals (Reducing California’s Petroleum Dependence)</td>
<td>2003</td>
<td>Petroleum Reduction</td>
<td>This document was developed in response to AB 2076 (Shelley). It set goals to reduce petroleum fuel use to 15 percent below 2003 levels by 2020, and recommended the State adopt a goal of 20 percent nonpetroleum fuel use in the year 2020.</td>
</tr>
<tr>
<td>AB 1007 (State Alternative Fuels Plan)</td>
<td>2005</td>
<td>GHG Reduction</td>
<td>Develop and adopt a plan that sets increased alternative fuel use goals for years 2012, 2017, and 2022.</td>
</tr>
</tbody>
</table>

[1] Reducing California’s Petroleum Dependence, an Energy Commission and ARB, joint agency report, August 2003, publication #P600-03-005F.
### Strategy Origin

<table>
<thead>
<tr>
<th>Strategy Origin</th>
<th>Year</th>
<th>Objectives</th>
<th>Goals and Milestones</th>
</tr>
</thead>
<tbody>
<tr>
<td>Executive Order S-3-05</td>
<td>2005</td>
<td>GHG Reduction</td>
<td>By 2010, reduce GHG emissions to 2000 levels; by 2020, reduce GHG emissions to 1990 levels; by 2050, reduce GHG emissions to 80 percent below 1990 levels.</td>
</tr>
<tr>
<td>AB 32 (Global Warming Solutions Act)</td>
<td>2006</td>
<td>GHG Reduction</td>
<td>Reduce GHG emissions to 1990 levels by 2020.</td>
</tr>
<tr>
<td>Executive Order S-06-06 (Bioenergy Action Plan)</td>
<td>2006</td>
<td>In-State Biofuels Production</td>
<td>Produce in California 20 percent of biofuels used in state by 2010, 40 percent by 2020, and 75 percent by 2050.</td>
</tr>
<tr>
<td>Executive Order B-16-2012</td>
<td>2012</td>
<td>ZEV Mandate</td>
<td>Accommodate 1 million zero-emission vehicles by 2020 and 1.5 million by 2025.</td>
</tr>
<tr>
<td>Governor Brown Inaugural Address 2015</td>
<td>2015</td>
<td>Petroleum Reduction</td>
<td>Reduce petroleum use in cars and trucks by up to 50 percent within the next 15 years (2030).</td>
</tr>
<tr>
<td>Executive Order B-30-15</td>
<td>2015</td>
<td>GHG Reduction</td>
<td>Reduce GHG emissions to 40 percent below 1990 levels by 2030.</td>
</tr>
</tbody>
</table>

### Regional and Local Policy

The State of California recognizes the critical role that regional and local governments play in meeting statewide GHG reduction targets. With the transportation sector representing the largest source of the region’s GHG emissions, the SANDAG Sustainable Communities Strategy and Regional Energy Strategy both call for SANDAG to undertake coordinated regional planning for electric vehicle charging and alternative fueling infrastructure. Locally, alternative fuel vehicles (AFV) and alternative fuel infrastructure (AFI) are playing a larger role in CAPs as a way to meet adopted GHG reduction targets. More than half of the jurisdictions in the San Diego region have prepared or are developing CAPs. These jurisdictions are moving toward CAP implementation, including how to advance alternative fuels in their communities. The SANDAG Climate Change Mitigation and Adaptation White Paper details local CAP and alternative fuel activities further and is included in San Diego Forward: The Regional Plan.

### Refuel San Diego Project

The San Diego region was awarded funding by the Energy Commission to expand on previous regional plug-in electric vehicle (PEV) planning efforts to address all alternative fuels. Led by the San Diego Association of Governments (SANDAG), and in partnership with the San Diego Regional Clean Cities Coalition (SDRCCC), and the San Diego Air Pollution Control District (SDAPCD), the region developed this project concept – Refuel San Diego Regional Alternative Fuel Coordinating Council.

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[Refuel San Diego Project Image]

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Draft San Diego Regional Alternative Fuel Readiness Plan 33
San Diego – to bring awareness to the barriers impeding increased alternative fuel use in the region, and to create Alternative Fuel Toolkits to address those barriers. Additionally, the comprehensive alternative fuel readiness plan was developed with expertise and input of the San Diego Regional Alternative Fuel Coordinating Council or Refuel San Diego. Refuel San Diego is a regional partnership made up of diverse stakeholders from local and regional public agencies, industry, fleet managers, and other interested parties. Appendix A and B contain the Refuel San Diego member list and meeting schedule, respectively.

**Composition of the Project**

The Refuel San Diego project leverages previous alternative fuel planning efforts to bring together stakeholders and advance alternative fuel deployment in the region. The Center for Sustainable Energy (CSE) serves as the SDRCCC Program Coordinator, and with SANDAG, helped to execute the project. The components of an alternative fuel barriers table, alternative fuel assessment, and Alternative Fuel Toolkits contribute to the development of this Readiness Plan for the San Diego region.

Alongside Refuel San Diego quarterly meetings, subcommittee meetings were held to focus on one fuel type and discuss it exclusively. The subcommittees were made up of regional stakeholders that have either had experience using the specific alternative fuel of topic, alternative fuel providers, or parties who were interested in learning more about the fuel in general. The subcommittees were instrumental in providing insight into real world challenges associated with using each fuel and providing the building blocks of information required to go into the Alternative Fuel Toolkits. These Alternative Fuel Toolkits will play a role in ongoing outreach after the Readiness Plan adoption.

As a culmination of the efforts of Refuel San Diego, this Readiness Plan identifies immediate needs as well as long-term planning objectives to prepare the San Diego region for the increased use of alternative transportation fuels. It also discusses past efforts in the San Diego region, captures existing conditions and current activities surrounding alternative fuel deployment, describes opportunities to continue increasing adoption into the future, and identifies additional challenges that need to be addressed to achieve stated goals.

This Readiness Plan ends with recommendations for a regional approach to encourage alternative fuel use. Strong regional support for alternative fuels can communicate to the market that the San Diego region is committed to, and seeks to attract, investment in AFV and AFI.
## REFUEL SAN DIEGO PUBLIC WORKSHOP COMMENTS (JANUARY 14, 2016)

<table>
<thead>
<tr>
<th>Comment</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Less than 50 percent of electric vehicles can use DC fast charging. It may be worth calling that out in the text of the plan.</td>
<td>This issue is addressed in the electricity portion of Section 4: Alternative Fuel Infrastructure Investment and Coverage.</td>
</tr>
<tr>
<td>2. Need one chart summarizing benefits, costs, and barriers/potential challenges for each fuel type.</td>
<td>Section 7: Future of Fuels – Technology Assessment includes tables that summarize these characteristics for each fuel type.</td>
</tr>
<tr>
<td>3. Consider stations within unincorporated areas of the County for all maps.</td>
<td>The GIS analysis in Section 4: Alternative Fuel Infrastructure Investment and Coverage included all of San Diego County and was based on the locations of residences and businesses.</td>
</tr>
<tr>
<td>4. Include other state agencies such as CARB and CEC as potential funding sources.</td>
<td>CARB and CEC funding programs are discussed several times throughout the Readiness Plan.</td>
</tr>
<tr>
<td>5. The San Diego region needs more public CNG infrastructure and the challenge is that a typical public access station costs about $1 million. A grant that would cover the cost of infrastructure would be very beneficial to the existing CNG fleets, as well as the growth of towing fleets and street sweepers, who primarily fuel in the public network.</td>
<td>“Infrastructure Cost” is listed as a barrier in Section 6: Addressing Alternative Fuel Barriers and potential funding sources are discussed in Section 8: Recommendations for Future Readiness.</td>
</tr>
<tr>
<td>6. Include outreach efforts to chambers of commerce.</td>
<td>Recommendation 5 in Section 8: Recommendations for Future Readiness includes outreach to chambers of commerce.</td>
</tr>
<tr>
<td>7. It is important to make the economic case for fleet managers.</td>
<td>The Alternative Fuels for Fleets Toolkit includes cost calculators and other resources for fleet managers to explore the economic case for alternative fuels.</td>
</tr>
<tr>
<td>8. Agree local fleet managers and mechanics may need training on new vehicles.</td>
<td>Recommendation 5 in Section 8: Recommendations for Future Readiness includes training for fleet managers and mechanics. Resources are also provided in the Alternative Fuels for Public Agencies Toolkit and Alternative Fuels for First Responders Toolkit.</td>
</tr>
<tr>
<td>9. Hold trainings for car salespeople.</td>
<td>Recommendation 4 in Section 8: Recommendations for Future Readiness includes partnerships with local vehicle dealers.</td>
</tr>
<tr>
<td>Comment</td>
<td>Response</td>
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</tr>
<tr>
<td>10. Identify healthy ratios of electric vehicles to charge stations. Utilization rates may not mean much in the big picture of growing penetration of adoption, unless stations are overburdened and not regularly available to the type of charging behavior necessary for deeper penetration of adoption.</td>
<td>Language will be added to Section 4: Alternative Fuel Infrastructure Investment and Coverage to discuss station utilization.</td>
</tr>
<tr>
<td>11. Vehicle charging needs – evaluate present utilization rates of DCFC and L2 charging to give a reality check to proposed infrastructure estimates.</td>
<td>Language will be added to Section 4: Alternative Fuel Infrastructure Investment and Coverage to discuss station utilization.</td>
</tr>
<tr>
<td>12. Explore potential to co-locate AFI siting.</td>
<td>Language will be added to Section 4: Alternative Fuel Infrastructure Investment and Coverage to mention co-location of alternative fuel infrastructure.</td>
</tr>
<tr>
<td>13. It’s critical to build out DCFCs along highway corridors and just as critical to make each location support multiple chargers.</td>
<td>Language will be added to Section 4: Alternative Fuel Infrastructure Investment and Coverage to call out the importance of DC Fast Charging along highway corridors.</td>
</tr>
<tr>
<td>14. Propane/gasoline dual fuel tech is available but manufacturers are discouraged from developing CA-legal tech due to CARB timelines of submittal for new engineering certifications by model year.</td>
<td>“Converting Conventional Vehicles to an Alternative Fuel” is listed as a barrier in Section 6: Addressing Alternative Fuel Barriers and language will be added to include dual fuel technologies.</td>
</tr>
<tr>
<td>15. Publication of alt fuel purchasing agreements to include infrastructure, vehicles, cooperative commodity agreements. Having access to these agreements allows public fleets to procure based on that contract authority where applicable. Also publicizing or creating a forum for other agencies that are looking to partner and increase purchasing power.</td>
<td>Recommendation 2 in Section 8: Recommendations for Future Readiness includes efforts to foster information sharing among public agencies and language will be added to include sharing of purchasing agreements and cooperative commodity agreements.</td>
</tr>
<tr>
<td>16. Reach out to HD vehicle vendors and car dealerships to define incentives that would help them sell more AFVs.</td>
<td>Recommendation 4 in Section 8: Recommendations for Future Readiness includes partnerships with local vehicle dealers and supporting “ride &amp; drive” events will be added as a potential strategy.</td>
</tr>
<tr>
<td>17. Have/develop a program for community colleges to offer a certificate program for their auto dept. (i.e. vocational program).</td>
<td>Recommendation 5 in Section 8: Recommendations for Future Readiness includes training programs and language will be added to specify community colleges and vocational programs as lead stakeholders.</td>
</tr>
<tr>
<td>18. Incorporate “ride &amp; drive” events of AFVs so potential buyers of AFVs can drive, sit, touch and test AFVs.</td>
<td>Recommendation 4 in Section 8: Recommendations for Future Readiness includes outreach in partnerships with local vehicle dealers and supporting “ride &amp; drive” events will be added as a potential strategy.</td>
</tr>
<tr>
<td>19. Palomar Community College linked to heavy truck manufacturers training and can help develop alt fuel training programs. Cuyamaca Community College linked to auto manufacturers Ford/GM.</td>
<td>Recommendation 5 in Section 8: Recommendations for Future Readiness includes training programs and language will be added to include specific examples of local institutions with existing programs.</td>
</tr>
<tr>
<td>Comment</td>
<td>Response</td>
</tr>
<tr>
<td>------------------------------------------------------------------------</td>
<td>------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>20. On CNG map, Fallbrook corridor station, Ramona CNG public/private use, Spring Valley/Rancho San Diego location.</td>
<td>Infrastructure siting is discussed broadly Section 4: Alternative Fuel Infrastructure Investment and Coverage and based on business locations. More specific station locations based on fleet needs should be the subject of ongoing efforts.</td>
</tr>
<tr>
<td>21. Advocate for use of GGRF funds for HD vehicles once the Prop 1B funds are exhausted, post-2017 (partner with APCD).</td>
<td>State funding programs such as GGRF and Prop 1B are discussed broadly in the plan and specific funding sources and needs should be the subjects of ongoing efforts.</td>
</tr>
<tr>
<td>22. Develop an outreach plan including goals, objectives for each fuel/sector, strategies, and partners.</td>
<td>Recommendations for future outreach efforts are included in Recommendation 4 in Section 8: Recommendations for Future Readiness and developing more specific goals and strategies will be the subject of ongoing efforts, such as those led by the San Diego Regional Clean Cities Coalition.</td>
</tr>
<tr>
<td>23. Effort to inform public in a bigger way.</td>
<td>Recommendations for future outreach and education are included in Recommendation 4 in Section 8: Recommendations for Future Readiness and ongoing efforts will be needed to keep the public informed.</td>
</tr>
<tr>
<td>24. Now you need an outreach and marketing (social media?) strategy to make the different audiences aware of the toolkits.</td>
<td>Recommendations for future outreach efforts are included in Recommendation 4 in Section 8: Recommendations for Future Readiness and developing more specific goals and strategies will be the subject of ongoing efforts, such as those led by the San Diego Regional Clean Cities Coalition.</td>
</tr>
<tr>
<td>25. PSAs or ads on public radio/TV. Other marketing tools/strategies.</td>
<td>Recommendations for future outreach efforts are included in Recommendation 4 in Section 8: Recommendations for Future Readiness and developing more specific goals and strategies will be the subject of ongoing efforts, such as those led by the San Diego Regional Clean Cities Coalition.</td>
</tr>
</tbody>
</table>
REFUEL SAN DIEGO MEETING COMMENTS (JANUARY 21, 2016)

### Already Addressed in the Readiness Plan

<table>
<thead>
<tr>
<th>Comment</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. It would be helpful to quantify emissions reduction potential for different applications and fuel types.</td>
<td>Information on best suited applications and emissions reduction potential for each fuel is available in Section 7: Future of Fuels – Technology Assessment as well as in other documents inventorying GHG emissions from various sectors.</td>
</tr>
<tr>
<td>2. To support local businesses, contracts with public agencies should allow for companies to keep profits rather than requiring cost-sharing.</td>
<td>Recommendations 2 and 3 in Section 8: Recommendations for Future Readiness call for creating public-private partnerships and sharing information between private and public organizations on best practices to complete successful projects.</td>
</tr>
</tbody>
</table>

### Will be Addressed in the Readiness Plan

<table>
<thead>
<tr>
<th>Comment</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>3. The distribution of the information in the plan and toolkits needs to be managed. Outreach staff must be trained to provide info on the business case of alt fuels to fleet managers.</td>
<td>Language will be added in Recommendation 4 of Section 8: Recommendations for Future Readiness to include training for outreach staff.</td>
</tr>
<tr>
<td>4. A local research institute at a higher education institute would help spark local entrepreneurship and provide deeper analysis on potential program costs and benefits.</td>
<td>Language will be added in Recommendation 5 of Section 8: Recommendations for Future Readiness to include looking for opportunities to support local transportation research.</td>
</tr>
<tr>
<td>5. It may be worth noting whether the infrastructure costs include costs beyond equipment and installation such as land and permitting.</td>
<td>Language will be added in Section 4: Alternative Fuel Infrastructure Investment and Coverage to specify what types of costs are included in the infrastructure cost estimates.</td>
</tr>
<tr>
<td>6. As more stations of any fuel type are built in the region, installation costs tend to decrease over time.</td>
<td>Language will be added in Section 4: Alternative Fuel Infrastructure Investment and Coverage to specify the source and methodology for the infrastructure cost estimates.</td>
</tr>
</tbody>
</table>

### For Future Consideration

<table>
<thead>
<tr>
<th>Comment</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>7. The infrastructure investment table could be broken up into residential vs. business for each fuel based on its typical application and presented as reasonable scenarios for initial investments.</td>
<td>Table 4-2 is meant to define the order of magnitude of the total investment need to reach the identified coverage targets. Scenario analysis and more specific identification of short-term needs for each fuel should be the subject of ongoing efforts.</td>
</tr>
<tr>
<td>8. It would be nice to see existing station numbers in the infrastructure investment table and to identify the minimum investment to reach a tipping point/critical mass for each fuel is to start a real market.</td>
<td>Table 4-2 is meant to define the order of magnitude of the total investment need to reach the identified coverage targets. Scenario analysis and more specific identification of short-term needs for each fuel should be the subject of ongoing efforts.</td>
</tr>
<tr>
<td>9. The next step should be to combine the analysis in this plan with San Diego Forward: The Regional Plan to plan siting and infrastructure needs based on future growth patterns.</td>
<td>The analyses presented in the Readiness Plan are based on the latest available information and existing conditions. Planning for future growth should be the subject of ongoing efforts.</td>
</tr>
</tbody>
</table>
ENERGY ROADMAP PROGRAM SERVICES FOR 2016

Introduction

The Regional Energy Working Group (EWG) discussed the anticipated continuation of the Energy Roadmap Program (Roadmap Program) at the September 24, 2015, meeting. In recognition of past success and continued need, the Roadmap Program was awarded new funding through its Local Government Partnership (LGP) with San Diego Gas & Electric (SDG&E) for calendar years 2016-2020. The California Public Utilities Commission approved continuations of many energy efficiency programs, including the LGPs in Decision (D.) 14-10-046 within Rulemaking (R.) 13-11-005: Concerning Energy Efficiency Rolling Portfolios, Policies, Programs, Evaluation, and Related Issues.

The focus for the next five-year program iteration is derived from the Regional Energy Strategy Technical Update (2014) and San Diego Forward: The Regional Plan (2015). This report highlights Roadmap Program goals and resources to implement Energy Roadmaps through energy/climate action planning and municipal retrofits. The EWG is encouraged to provide additional program suggestions that could enhance and improve services, or increase program success as demonstrated by cost effectiveness, participation, customer experience, and/or other factors.

Discussion

The Roadmap Program vision is to leverage SANDAG’s unique role as the regional planning agency to facilitate the reduction of greenhouse gas (GHG) emissions by local jurisdictions and SANDAG by means of technical support, resources, and consistent approaches.

2020 Goals to Meet the Roadmap Program Vision

- SANDAG energy practices complement transportation-related GHG reductions identified in its Sustainable Communities Strategy pursuant to Senate Bill 375 (Steinberg, 2008) Sustainable Communities and Climate Protection Act of 2008, and provide comprehensive regional GHG emissions reductions in line with state targets.
- Roadmap cities are working to reduce GHG emissions in support of statewide targets.
- Roadmap cities are implementing energy saving and GHG reduction strategies and tracking their progress.
• Roadmap cities are on track to meet state zero net energy (ZNE) goals by 2030 by addressing integrated demand side management/integrated distributed energy resources (IDSM/IDER), in addition to energy efficiency.

• Roadmap cities are receiving state and national recognition for their efforts to use energy more efficiently and reduce GHGs.

• Roadmap cities are saving energy through water efficiency policies and programs.

• Roadmap cities experience economic growth in the clean energy field.

**Energy Roadmap Implementation**

*Energy and Climate Planning*

The Roadmap Program will expand its support for local climate action plan (CAP) development, implementation, and monitoring. SANDAG will oversee some projects that were previously done on a case-by-case basis through the SDG&E Emerging Cities Program (ECP) discussed later. The project types are bulleted below and will be prepared for all jurisdictions, region-wide, at regular intervals. In order to complement the funds available from the LGP with SDG&E, SANDAG has provided and will continue to seek funding from other sources to deliver more comprehensive climate planning services through the Roadmap Program, including transportation-related climate planning.

- Local and regional GHG inventories of municipal and community-wide emissions
- GHG emissions forecasts to 2020 and later dates
- Analysis of potential GHG emission reduction measures
- CAP monitoring reports

*Energy Engineering Audits, Project Management, and Monitoring*

Energy engineering and project management support to achieve actual energy efficiency (EE) savings at municipal sites remains a primary program objective for the Roadmap Program. SANDAG plans to continue and expand the energy engineering services to address IDSM/IDER and ZNE opportunities as well as performance monitoring.

- Project analysis and recommendations/feasibility studies for EE and IDSM/IDER
- Project management support for EE retrofits
  - Development of product/technology specifications
  - Support for contractor procurement
  - Completion and submittal of financing requirements
- EnergyStar® certification of facilities
• Performance monitoring at site level, for all sites within a municipality, program wide

**Consultant Services for the Roadmap Program**

SANDAG expects to release a competitive procurement this spring to obtain one or more consultants to assist SANDAG staff with Roadmap Program services in the areas of regional/local climate action planning and municipal retrofit assessments / implementation. All services dependent upon available funding.

**Emerging Cities Program**

In FY 2014-2015, eleven Roadmap cities received ECP support and resources. The ECP was a mini-grant program that provided resources to cities to implement components of their Energy Roadmaps via short-term projects that fell outside of the SANDAG scope. ECP funds were used to complete local GHG inventories, forecasts, CAP measures, community outreach events, and other tasks. In order to broaden local government participation and provide consistent data and tools, the Roadmap Program now includes energy and climate planning responsibilities formerly under ECP. Community engagement activities will continue through San Diego Regional Energy Partnership and ECP.

**Beacon Award Program for Local Governments**

In 2014, SANDAG became a Beacon Award Program Champion by committing to assist local cities in obtaining recognition for their sustainable activities and achievements. Participating jurisdictions were highlighted during the Joint Technical Working Group and EWG meeting on November 12, 2015. The Roadmap Program continues to assist interested Roadmap cities with applying for this statewide recognition and documenting their local efforts.

**Subregional Collaboration**

As a means to support consistent Roadmap implementation activities, SANDAG has participated in or established subregional networks for member agencies. In 2013, the City of Chula Vista launched a pilot subregional collaboration called the South Bay Energy Action Collaborative (SoBEAC) to facilitate Roadmap implementation with the cities of Coronado, Imperial Beach, and National City. SANDAG participates in SoBEAC and found the peer-to-peer network to be an effective mechanism to share information and support local sustainability efforts.

In 2015, SANDAG launched the North Coast Energy Action Collaborative (NCEAC) with the five North County coastal cities of Carlsbad, Del Mar, Encinitas, Oceanside, and Solana Beach. NCEAC meetings have been hosted at city locations and the SDG&E Energy Innovation Center. These staff-level meetings occur on a quarterly basis and the staff within the subregion decides on the agenda items that SANDAG then prepares. Based on the positive feedback from the participating cities, SANDAG plans to coordinate with city staff from the North County inland and East County subregions to establish similar peer networks over 2016 and 2017.
**Region-Wide and All Partner Collaborations**

*San Diego Regional Energy Partnership*

The Roadmap Program contributes to and facilitates the SDREP, a collaboration among SDG&E and the five LGPs: City of Chula Vista, City of San Diego, County of San Diego, Port of San Diego, and SANDAG. Since 2013, SDREP has funded a variety of projects ranging from trainings on home energy retrofits to local government best practice guides. The majority was performed by the Center for Sustainable Energy and can be viewed at the following link: energycenter.org/programs/san-diego-regional-energy-partnership.

SDREP activities planned for 2016 forward include:

- Outreach with the local real estate community to pursue adoption of a “Green” Multiple Listing Service to help capture market value for home energy performance.
- Outreach and education to support compliance with Assembly Bill 802 (AB 802) (Williams, 2015) Energy efficiency requirements addressing access to whole building energy use information and ways to leverage benchmarking data to encourage energy upgrades and savings.
- Community energy efficiency workshops/events and employee-based “home energy coaching” across the San Diego region.
- Continuation of ZNE webinars and technical support for local government staff. Webinars to be offered to architects, developers, and contractors.
- Support for local building departments in building internal capacity for implementing Title 24, Part 6 and 11 (CALGreen) via in-person and on-demand “energy code coach” support.

*San Diego Regional Climate Collaborative*

Through SDREP, the five partners along with SDG&E, the San Diego Foundation, and University of San Diego established the San Diego Regional Climate Collaborative (Climate Collaborative). SDREP continues to support the Climate Collaborative network, website, and staffing.

The Climate Collaborative is a network for public agencies that serve the San Diego region to share expertise, leverage resources, and advance comprehensive solutions to facilitate climate change planning. By partnering with academia, non-profits, and businesses, the Climate Collaborative works to raise the profile of regional leadership. In 2015, the Climate Collaborative was recognized by the United States Environmental Protection Agency with a Climate Leadership Award for innovative partnerships. More information is available at: www.sdclimatecollaborative.org.

**Roadmap Program Background**

The City of Chula Vista, City of San Diego, and County of San Diego have had LGPs with SDG&E since 2006. The Port of San Diego and SANDAG LGPs began in 2010. The SANDAG program was established to provide energy and climate planning resources as well as energy engineering and retrofit project support to the remaining 16 local governments.
Since 2010, the Roadmap Program has provided SANDAG member agencies with free energy assessments and energy management plans, or “Energy Roadmaps.” Each energy roadmap provides a framework for a local government to reduce energy use in municipal operations (through energy assessments, benchmarking, and identification of energy-saving measures) and in the community (through local planning measures and outreach efforts). Transportation components of the reports were prepared via non-LGP program funds within SANDAG. View Energy Roadmaps at: sandag.org/energyroadmap.

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