

C/CAG

CITY/COUNTY ASSOCIATION OF GOVERNMENTS OF SAN MATEO COUNTY

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Millbrae • Pacifica • Portola Valley • Redwood City • San Bruno • San Carlos • San Mateo • San Mateo County • South San Francisco • Woodside*

Agenda

Resource Management and Climate Protection Committee (RMCP)

Date: Wednesday, March 21, 2018

Time: 2:00 p.m. to 4:00 p.m.

Location: 555 County Center – 5th Floor, WARConference Room
Redwood City, CA

1. Introductions
2. Public Comment
3. Approval of Minutes from February 21, 2018 Committee meeting
(Kim Springer – Committee Staff) Action
4. Presentation on California plans for deployment of Hydrogen vehicles
(Keith Malone – CA Fuel Cell Partnership) Presentation
5. Presentation of a Work Plan for development of San Mateo County Energy Strategy 2025 for
review and comment (Km Springer – Committee Staff) Presentation/Discussion
6. Update on current water supply conditions and recent State actions
(Adrienne Carr – BAWSCA) Presentation/Discussion
7. Update on Governor’s Climate Summit, city information-gathering effort, for comment
(Kim Springer – Committee Staff) Presentation/Discussion
8. Committee Member Updates
9. Next Meeting Date: April 18, 2018 – Redwood City location

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Minutes

Resource Management and Climate Protection Committee (RMCP)

Date: Wednesday, February 21, 2018

In Attendance:

Maryann Moise Derwin, Committee Vice Chair, Mayor Portola Valley*

Deborah Gordon, Committee Chair, Woodside Town Council*

Rick DeGolia, Town of Atherton*

Adrienne Carr, BAWSCA*

Don Horsley, County Supervisor*

Beth Bhatnagar, SSMC Board Member*

Kim Springer, County Office of Sustainability

Andrea Chow, County Office of Sustainability

Rachael Londer, County Office of Sustainability

Dave Pine, County Supervisor*

Michael Barber, Supervisor Pine's Office

Diane Papan, Councilmember, San Mateo*

Janet Borgens, City Council of Redwood City

Sandy Wong, C/CAG

Betty Seto, DNV GL

Not in attendance:

Pradeep Gupta, South San Francisco City Council*

Ortensia Lopez, El Concilio of San Mateo County*

Bill Chiang, PG&E*

Robert Cormia, Professor Foothill-DeAnza*

* Committee Member (voting)

1. Introductions

Committee members and guests made introductions.

2. Public Comment

There were no public comments.

PUBLIC NOTICING: All notices of C/CAG Board and Committee meetings are posted at:
San Mateo County Transit District Office, 1250 San Carlos Ave., San Carlos, CA.

3. Approval of Minutes from January 17, 2018 Committee meeting **Action**

Horsley/Derwin - Passed

4. Presentation on Energy Efficiency Program Updates for Member Agencies in San Mateo County **Presentation**

Andrea Chow, County Office of Sustainability gave a presentation on the BayREN Energy Home Upgrade program and the San Mateo County Energy Watch, and the customer segments they each serve. The Committee is familiar with the SMCEW program, and Chow presented more details on the Single-family and Multi Family Upgrade programs. She also presented the Codes and Standards, and other elements of the program under BayREN. The presentation included outcomes since FY 2013, and a review of program outcome update reports that will be provided to cities in San Mateo County, served by these two programs.

Gordon: Does this report show the actual savings in kWh as program results?

Chow: It's not currently included, but we can provide that information.

Chow explained that the report would be going out to staff at cities shortly.

5. Presentation on DNV GL's Global and Regional Forecast of the Energy Transition to 2050 **Presentation**

Betty Seto presented global work on the part of researchers, independently at DNV GL, a prediction of likely global energy markets through 2050, The Energy Transition Outlook. The report considers where we were in 2015 and projects into the future. The report is one piece of a total of four reports on different energy markets, the Transition document being one of the four. DNV GL has 13,000 employees worldwide, and so is a large consultant in the energy sector.

Gordon: With 13,000 employees, what markets does DNV GL serve?

Seto: Advisory service, due diligence, renewable energy project valuation, independent engineering, climate and energy programs, and some CEQA and environmental compliance.

In contrast to some other studies, this report is about the most likely future of energy worldwide. The prediction is environmentally positive, highlighting population and GDP will continue to increase worldwide, but still, energy and GHG emissions peak around 2030 and begin to decrease. The analysis is based on a model which includes multiple inputs.

A few of the outcomes show that, for instance, EV will reach cost parity around 2020. In the building sector, the energy use per square foot will continue to decrease at about 1.2% per year. World energy demand is predicted to flatten out over time through 2030. There are other indicators that lead to the conclusions in the report.

Gordon: does the model include transition to electric and other alternative fuels.

Seto: Yes, it's predicted that there will be a steady transition, and fuel switching in other sectors is also expected, and energy use worldwide is expected to be carbon free by 2050.

DeGolia: Do you consider nuclear and hydro to be carbon free.

Seto: Yes

Gordon: Are you expecting countries, even China to move away from Coal without going through a

long-term phase of nuclear?

Seto: The model says that we will even be moving away from nuclear as a carbon-free energy source by 2050.

Seto shared that all of this is good news, but there is some bad news related to the two-degree C goal under the Paris Agreement. There is a range in the prediction, but the model predicts that there will be an overshoot of that two-degree limit globally.

Seto moved on to explain both the national and state outcomes from the research. The research shows that the duck curve is exacerbated by the addition of additional renewables and the increase use of EVs. This is an issue that will need to be addressed. When DNV GL mapped the existing CA policy energy and climate policy goals to national goals, projected North American outcomes pretty much matched the CA goals.

Gordon: Do you do sensitivity analysis on your results, and have you looked to see if something disruptive changed, how would it change the results?

Seto: I don't have an answer to that, but we did look at learning curves for adoption.

Gordon: It would be good to know because it could greatly affect the time frames in the results.

Seto: I believe that change is battery density, for instance, was included in the model, and this is where the scenario analysis is most useful.

The model is set up and the plan is to run the model again in a couple of years.

DeGolia: Battery is a huge issue and where batteries are placed and how they are used has a huge impact. For instance, we want to hold off on the investment of batteries if the density is going to change. The question is where to encourage investment. Also, what are the best DERs and where do we focus on energy generation. We need to understand the costs and benefits.

Gordon: We need to look at what is the best in terms of battery ownership.

DeGolia: We should also look at used auto batteries as a resource for local renewable. We should do some analysis on these topics.

6. Discussion about RMCP Committee priorities for calendar year 2018 Discussion

Kim Springer introduced a discussion on potential projects that the Committee could undertake in 2018. Springer suggested that, regarding the Energy Strategy, it may make sense to update the document in five-year cycles given the uncertainty in energy technologies. Springer also mentioned the Governor's Conference.

Comments were:

Papan: Does the Energy Strategy need to have the same elements?

Springer: Not necessarily.

Papan: I think we should consider exploring the planning and investment in storage.

Gordon: I agree that this should be considered and evaluated with San Mateo County specifically in mind.

Pine: Should we look at developing the next strategy out to five years, or maybe further?

Springer: The baseline has changed so much. The first round was written by a consultant, and we couldn't even mention climate. We should probably involve more stakeholders around grid issues and storage, and DER.

DeGolia: It's a very provocative idea to be considering these topics and building a plan around it.

Gordon: It makes sense to consider the economics in these issues, like DNV GL did in their analysis.

DeGolia: We completed this 8-9 years ago. No doubt we need a good energy strategy and we now have PCE, and there is PG&E. Maybe a first step would be to have a discussion between PG&E and PCE and this Committee.

Springer suggested that at the next meeting, staff come back with a work plan to help move the effort forward.

About the Governor's Climate Summit, the Committee considered the letter and suggested it be sent to city council members, city managers, and SAMCEDA staff.

7. Review and approve RMCP Committee meeting dates for calendar year 2018 Action

The Committee moved to include all monthly meeting dates for 2018: Derwin/Carr – Passed.

Springer said he would post the 2018 meeting dates and send out calendar dates to the committee.

8. Committee Member Updates

Committee member Pine provided information on the Water Summit scheduled for March 30th at Canada College.

9. Next Meeting Date: March 21, 2018

All presentations have been posted on the C/CAG RMCP website.

C/CAG AGENDA REPORT

Date: March 21, 2018
To: Resource Management and Climate Protection Committee
From: Keith Malone, California Fuel Cell Partnership
Subject: Presentation on California plans for deployment of Hydrogen vehicles

(For further information contact Kim Springer at 650-599-1412)

RECOMMENDATION

Receive a presentation on California plans for deployment of Hydrogen vehicles.

FISCAL IMPACT

None

BACKGROUND/DISCUSSION

The RMCP Committee regularly receives presentations on projects that affect use of energy and generation of greenhouse gas emissions. Fuel Cell Electric Vehicles (FCEVs) are closely tied to both aspects of the Committee's work. FCEVs consume Hydrogen, which consumes electricity in its production, renewable or not. Hydrogen can also be used for energy storage, generating Hydrogen and storing it in tanks or pipelines. The current California requirement is that 33% of Hydrogen generated is renewable.

The fuel cell electric vehicle passenger market launched in 2016 with Honda and Toyota. Hyundai is coming to market in the fourth quarter of this year and Mercedes-Benz in 2019.

Most of the hydrogen fueling infrastructure at this time is supported with co-funding from the California Energy Commission with some additional co-funding coming from the air quality districts.

Keith Malone, Public Affairs with the California Fuel Cell Partnership, will give an update on State efforts for deployment of vehicles and infrastructure.

ATTACHMENTS

1. FCEV Sales
2. Hydrogen Fueling Stations

FCEV SALES 2015

	CY2015
Total	110

FCEV SALES 2016

	Jan-16	Feb-16	Mar-16	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	CY2016*
Total	26	30	41	45	44	48	60	373	73	103	105	125	1073

* Q1 Sales data for Tucson FCV not available

FCEV SALES 2017

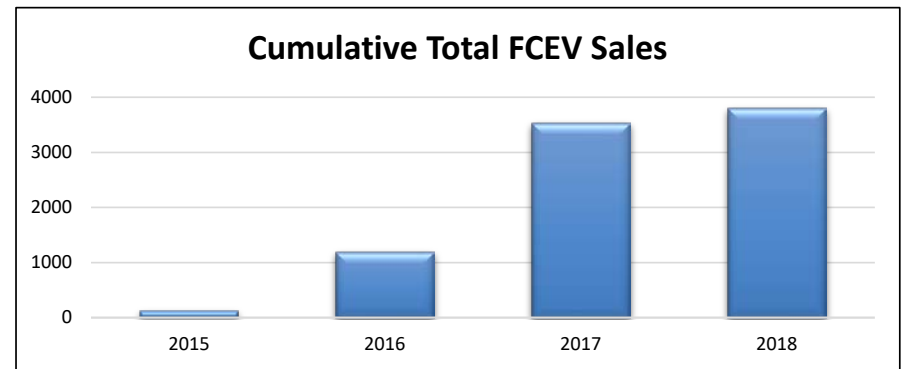
	17-Jan	17-Feb	17-Mar	17-Apr	17-May	17-Jun	17-Jul	17-Aug	17-Sep	17-Oct	17-Nov	17-Dec	CY2017
Total	127	142	143	145	285	180	165	111	218	286	249	297	2348

FCEV SALES 2018

	18-Jan	18-Feb	18-Mar	18-Apr	18-May	18-Jun	18-Jul	18-Aug	18-Sep	18-Oct	18-Nov	18-Dec	CY2018
Total	270	0	0	0	0	0	0	0	0	0	0	0	270

	CY2015	CY2016	CY2017	CY2018
Total	110	1073	2348	270
	2015	2016	2017	2018
Cululative	110	1183	3531	3801

Hyundai Tucson FCV data from HybridCars.com
 Toyota Mirai and Honda Clarity data from carsalesbase.com



Northern CA Hydrogen Stations

Retail: Open

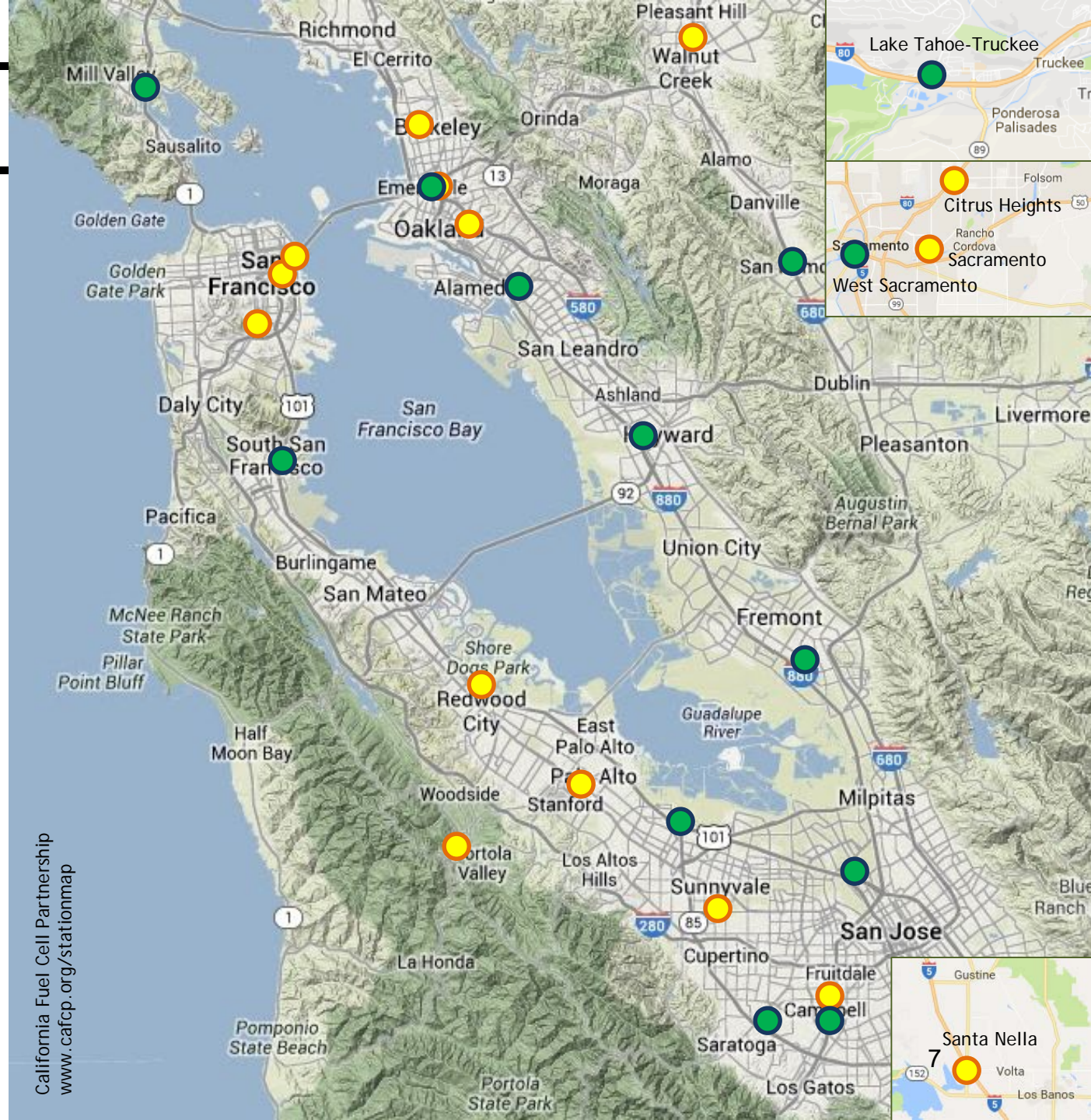
- Campbell - Winchester Blvd
- Fremont
- Hayward
- Mill Valley
- Mountain View
- San Jose
- San Ramon
- Saratoga
- South San Francisco
- Lake Tahoe-Truckee
- West Sacramento

Other: Open

- Emeryville - AC Transit
- Oakland - AC Transit

Retail: In Development

- Berkeley
- Campbell - East Hamilton Ave
- Citrus Heights
- Emeryville (Upgrade)
- Oakland - Grand Ave
- Palo Alto
- Redwood City
- Sacramento
- San Francisco - Third St
- San Francisco - Harrison St
- San Francisco - Mission St
- Santa Nella
- Sunnyvale
- Walnut Creek
- Woodside



California Fuel Cell Partnership
www.cafcp.org/stationmap

Southern CA Hydrogen Stations

● Retail: Open

- Anaheim
- Costa Mesa
- Del Mar
- Diamond Bar
- Fairfax-LA
- Harris Ranch
- Hollywood
- La Cañada Flintridge
- Lake Forest
- Lawndale
- Long Beach
- Playa Del Rey
- Riverside
- San Juan Capistrano
- *Santa Barbara
- Santa Monica - Cloverfield Blvd
- South Pasadena
- Torrance
- UC Irvine
- West LA
- Woodland Hills

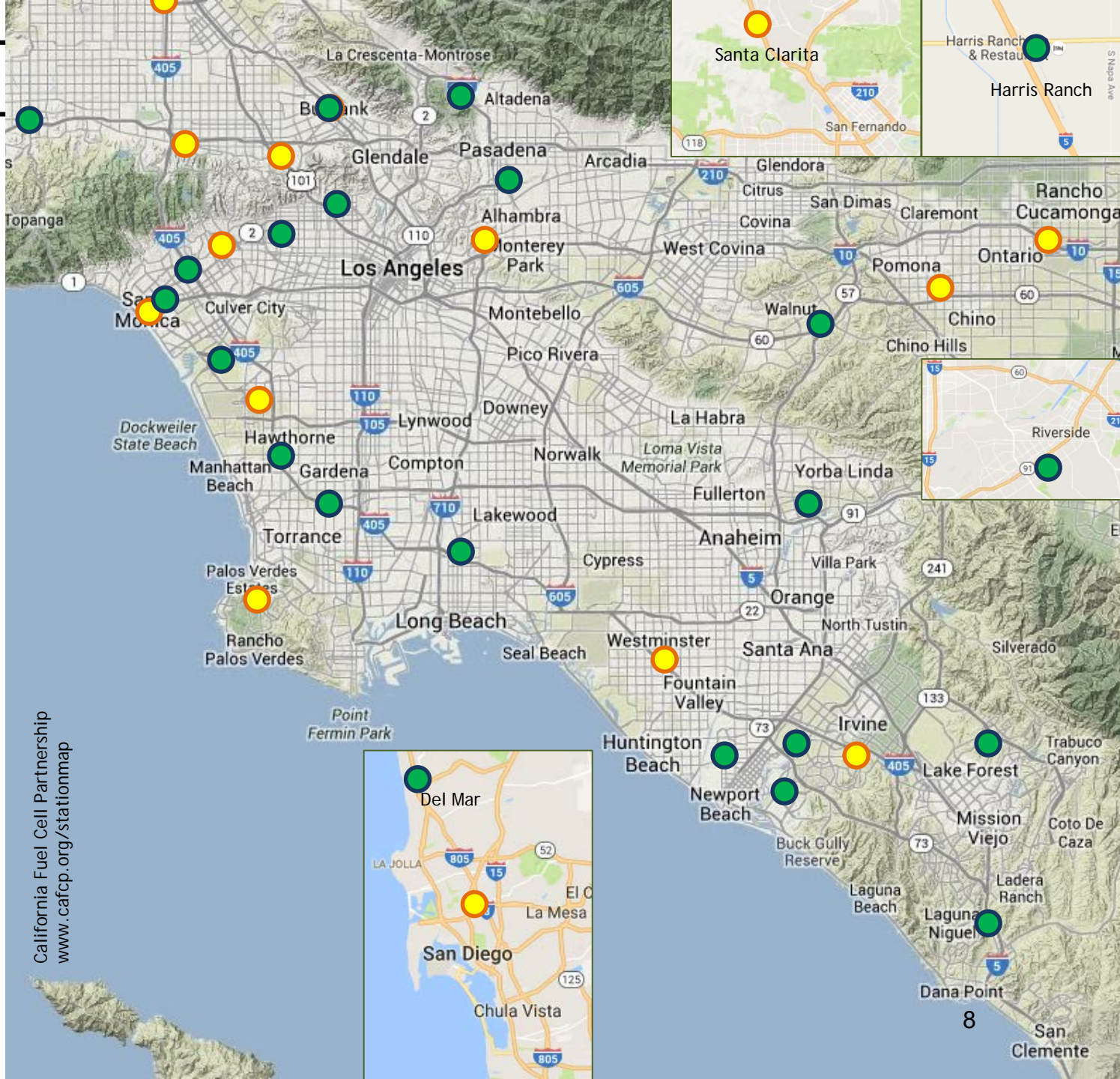
● Other: Open

- Burbank
- Newport Beach
- *Thousand Palms - SunLine Transit

● Retail: In Development

- Burbank (upgrade)
- Beverly Hills
- Cal State LA
- Chino
- Huntington Beach
- Irvine
- LAX (upgrade)
- Mission Hills
- Ontario
- Rancho Palos Verdes
- San Diego
- Santa Clarita
- Santa Monica - Lincoln Blvd
- Sherman Oaks
- Studio City
- *Thousand Oaks

**Not shown on map*



California Fuel Cell Partnership
www.cafcp.org/stationmap

C/CAG AGENDA REPORT

Date: March 21, 2018
To: Resource Management and Climate Protection Committee
From: Kim Springer, RMCP Committee Staff
Subject: Presentation of a Work Plan for development of San Mateo County Energy Strategy 2025 for review and comment
(For further information contact Kim Springer at 650-599-1412)

RECOMMENDATION

Receive a presentation of a Work Plan for development of San Mateo County Energy Strategy 2025 for review and comment.

FISCAL IMPACT

Staff time is paid for by funding under the C/CAG – PG&E Local Government Partnership (LGP) agreement. Additional funding comes from the BayREN program for this initiative.

BACKGROUND/DISCUSSION

At the February 21, 2018 RMCP Committee meeting, the Committee took action to move forward with an update to the San Mateo County Energy Strategy 2012 document, and there was discussion that the cycle of this and future updates may need to be more frequent.

RMCP Committee staff is proposing that the update be called the San Mateo County Energy Strategy 2025. Staff will present the attached work plan for review and comment by the Committee.

Staff will also ask the committee to comment on stakeholders the Committee believes are important to the Energy Strategy update process, so that staff can develop a list for review and comment at the April meeting.

ATTACHMENTS

Draft – San Mateo County Energy Strategy Work Plan – Gantt Chart

San Mateo County Energy Strategy 2025 - Workplan																	
Action	Mar-18	Apr-18	May-18	Jun-18	Jul-18	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	
Develop, review, and comments initial Draft Workplan	Staff	RMCP															
Develop, review, and comments Sub workgroup List and Outreach Plan	Staff	Staff	RMCP														
Develop, review, and comments Table of Contents – Topics for Study and Strategy Elements.			Staff	Staff	RMCP												
Project Scoping and Contracting with DNV GL			Staff	Staff													
Monthly Sub workgroup Meetings (energy and water)																	
RICAPS and other Stakeholder Meetings			Launch				Update				Update						
Research, Study, and Writing of Energy Strategy Document			Consultant and Staff														
RMCP Committee Progress Review					RMCP	RMCP	RMCP	RMCP	RMCP	RMCP	RMCP	RMCP	RMCP	RMCP	RMCP	RMCP	
Circulate to Stakeholders for Review and Comment														Review			
Integrate Comments															Staff	Staff	
Presentation to City Managers and County Supervisors															Staff		
Adoption by Counties and Cities																Staff	Staff

C/CAG AGENDA REPORT

Date: March 21, 2018
To: Resource Management and Climate Protection Committee
From: Adrienne Carr, BAWSCA, RMCP Committee Member
Subject: Update on current water supply conditions and recent State actions

(For further information contact Kim Springer at 650-599-1412)

RECOMMENDATION

Receive an update on current water supply conditions and recent State actions.

FISCAL IMPACT

None

BACKGROUND/DISCUSSION

The Bay Area Water Supply and Conservation Agency (BAWSCA), which represents the 26 wholesale customers of the San Francisco Regional Water System, continues to work with its member agencies to use water wisely and plan for future water supply reliability.

BAWSCA staff has been providing short updates of water supply conditions to the RCMP Committee. The most recent update was at the January 17, 2018 meeting. Adrienne Carr, Senior Water Resources Specialist, will provide an update again at this meeting on the current conditions.

ATTACHMENTS

None

C/CAG AGENDA REPORT

Date: March 21, 2018
To: Resource Management and Climate Protection Committee
From: Kim Springer, RMCP Committee Staff
Subject: Update on Governor's Climate Summit, city information-gathering effort, for comment
(For further information contact Kim Springer at 650-599-1412)

RECOMMENDATION

Receive an update on Governor's Climate Summit, city information-gathering effort, for comment.

FISCAL IMPACT

Staff time is paid for by funding for RMCP from Congestion Relief funds.

BACKGROUND/DISCUSSION

At the February 21, 2018 RMCP Committee meeting, the Committee suggested that staff move forward with sending a letter from the C/CAG Executive Director to the cities, the County, and SAMCEDA, to collect information to use to build a case for C/CAG and San Mateo County to have a role in the Governor's Global Climate Action Summit 2018. That role is yet to be determined. The letter, attached, requests that actions taken by cities toward climate action, and green tech leading companies in each city be provided to C/CAG. Staff will compile the information into a document that can be shared (in some form) with staff at the Governor's office working on this global summit.

RMCP Committee staff is requesting comment from the Committee into what form the information would be best compiled, so that staff can prepare the information before the next RMCP Committee meeting.

ATTACHMENTS

Letter from C/CAG Executive Director

C/CAG

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March 2, 2018

To: C/CAG Board Members
City/County Managers
Business Leaders in San Mateo County

Governor Brown and his staff are in the process of planning the first CA Global Climate Action Summit, an international event bringing together leaders from state, local governments, business and citizens to demonstrate how the tide has turned in the race against climate change, showcase climate action taking place around the world. The Summit will be held from September 12-14, 2018 in San Francisco. C/CAG believes success stories from San Mateo County jurisdictions as well as private green tech sectors should be showcased or represented at this Summit.

To help C/CAG in making a case with the Governor's Office to showcase San Mateo County efforts and achievements at the Summit, we are requesting that you or your staff provide the following information by March 30, 2018, to Kim Springer at kspringer@smcgov.org

1. A list of Green Tech or environmentally-focused businesses in your community, preferably with a mention of their success story. Here are some green tech-type businesses to consider: electric vehicle manufacturers and retailers, renewable energy or energy efficiency, "green" consulting, "green" biotech, composting or waste diversion, waste to energy, battery storage or microgrid, fuel cells, green building materials, water conservation, biofuels, regenerative farming or organic food production, etc.
2. A list of efforts and positive outcomes undertaken by your city, related to climate action planning, mitigation and adaptation. Please consider: completed plans, progress on initiatives for your government operations or in the community such as green building policy or ordinances, bikeshare, energy efficiency or water conservation projects, etc.

C/CAG staff will consolidate the information and work to engage the Governor's Office in a discussion to showcase San Mateo County as an example of outstanding local government-coordinated efforts on climate action. More information about the conference can be found online, here:

<https://globalclimateactions summit.org>

For more information about this request, please feel free to contact Kim Springer at (650) 599-1412, or Sandy Wong at (650) 599-1409.

With kind regards,



Sandy Wong
Executive Director of C/CAG