

C/CAG

CITY/COUNTY ASSOCIATION OF GOVERNMENTS OF SAN MATEO COUNTY

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Resource Management and Climate Protection Committee (RMCP)

Minutes of March 21, 2018 Meeting

In Attendance:

Dave Pine, County Supervisor*
Diane Papan, Councilmember, San Mateo*
Pradeep Gupta, South San Francisco City Council*
Maryann Moise Derwin, Committee Vice Chair, Mayor Portola Valley*
Rick DeGolia, Town of Atherton*
Adrienne Carr, BAWSCA*
Michael Barber, Supervisor Pine's Office
Keith Malone, California Fuel Cell Partnership
Kim Springer, County Office of Sustainability
Danielle Lee, County Office of Sustainability
Andrea Chow, County Office of Sustainability

Not in attendance:

Deborah Gordon, Committee Chair, Woodside Town Council*
Don Horsley, County Supervisor*
Bill Chiang, PG&E*
Robert Cormia, Professor Foothill-DeAnza*
Beth Bhatnagar, SSMC Board Member*
Ortensia Lopez, El Concilio of San Mateo County*

* Committee Member (voting)

1. Introductions
2. Public Comment
3. Approval of Minutes from February 21, 2018 Committee meeting: No Quorum – postpone to following meeting

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.

4. Presentation on California plans for deployment of Hydrogen vehicles

Keith Malone delivered a presentation on the California Fuel Cell Partnership (CaFCP), the planned deployment of Hydrogen fueling infrastructure, and expected growth of HFC vehicles in CA.

CaFCP is a public private partnership since 1999 with a variety of public agencies (local, regional, federal) and fuel cell operators and manufacturers. They provide a variety of services to members including emergency response training, legislative outreach; with the mission of collaborating to advance fuel cell technology.

Electric Vehicles (EVs) have either battery or fuel cell technologies. Fuel cells are comprised of thin metallic wafers, stacked like a loaf of bread and range in size from smaller transportation fuel cells to larger fuel cells that provide combined heating and power for homes. Fuel cells can rely on a variety of fuels, for Fuel Cell Electric Vehicles they rely on Hydrogen.

Gupta: What is the average life expectancy of a fuel cell?

Malone: Roughly 5,000 hours, 100,000-150,000 miles of life expectancy.

Gupta: What wears out in a fuel cell after 5,000 hours?

Malone: Probably material builds up on the plates, but not completely sure.

Pine: What is the main powering mechanism in the FCEV?

Malone: The vehicle is fuel cell dominant, meaning the fuel cell provides electricity directly to the drive system, and the battery is used to balance energy supply.

Fuel Cell Vehicles achieve roughly 350 miles on a fill up; New Fuel Cell vehicles include the Toyota Murai, Honda Clarity, and Mercedes. Others, soon to come to market with include Nissan and Huyandi

Gupta: Is there a dominant manufacturer of the fuel cells themselves?

Keith: Most companies develop and work on their fuel cells in house, with the exception of Volkswagen that uses Ballard Power Systems in Canada.

The goal for California is to install 100 stations by 2025, with Hydrogen station most likely to be installed at existing gas stations.

DeGolia: Who pays for the pumps?

Malone: At this point, Hydrogen stations are 95% funded by the State of California, and there is currently a solicitation open from the CEC for new stations.

Gupta: Have the potential hazards with pumping hydrogen been resolved?

Malone: CaFCP focuses on firefighting training and emergency response. Hydrogen escapes quickly, rising into the air at a high speed, unlike gasoline, which pools. Fuel Cell Vehicles have undergone testing to ensure that the fuel cells are difficult to penetrate.

Lee: What is the timing for the development of a hydrogen station?

Malone: 18-24 months for design.

Pine: How do these station locations get chosen?

Malone: Funders look for the highest concentration of early Hydrogen adopters. Automakers have also influenced the station locations.

Michael: How much is a typical fill up?

Malone: \$16/kg at about 4-5kg per tank, so around \$70 per fill up.

DeGolia: How does a gallon of gasoline compare in terms of the amount of energy?

Malone: 1kg equals about 1 gallon of gas in terms of energy.

Currently, 21 Hydrogen buses are in services and 32 more are funded. Some users are: AC Transit and Orange County Transportation authority. Trucks are still a work in progress but can also be run on Hydrogen.

Hydrogen is on a renewable pathway CA requires 33% of hydrogen fuel to be renewable?

Barber: At \$16/kg; what efforts are upcoming to make this a more affordable/viable option

Malone: Currently 4000 vehicles on the road; Production volume should help to drive down costs.

Barber: Would you say that operations and maintenance is less or more than standard cars?

Malone: expectation that since there are less moving parts, should be cheaper but fuel cells are not cheap; e.g., brake system maintenance is cheaper since there is a reliance on regenerative braking systems.

The presentation for this item has been posted on the C/CAG RMCP website.

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

As a follow-up to the February meeting, Kim Springer prepared and presented a Workplan for development of the San Mateo County Energy Strategy 2025. Tentative timeline supports the meeting of working groups, RMCP committee feedback and city feedback during RICAPS meetings. If the work plan is followed, the updated San Mateo County Energy Strategy 2025 could begin to be presented for adoption by each city and town starting April 2019.

Gupta: The cities are the audience for the document, document should address issues that the cities face (e.g., microgrids, small nuclear)

Springer: With the original Energy Strategy, we focused on educating city staff and councils, so that any new policy worked with the goals and strategies outlined in the document.

Pine: Need to address PCE; does this address adoption of electric vehicles and clean transportation?

Springer: Yes, I think you can't talk about energy and the grid any longer without considering this.

As next steps, staff will develop suggested stakeholders for one energy and one water working group, and additional recommendations as a starting point for topics to be covered.

Papan: Suggest an approach where Energy and Watery supply act as substantive topics, but

leadership, collaboration and economics act as subject areas for each substantive topics.

Pine: There is a need for everyone to look at the existing Energy Strategy, highlight areas that cities/county can collectively work on together

Lee: How do climate action plans and the energy strategy interact? Climate Action Plans should include resilience and adaptation; resilience vs. mitigation.

Springer: The energy strategy is not really a climate action plan, as it doesn't set an emission reduction target.

Gupta: The strategy should focus on existing research to address actual issues?

Springer: I hope that it will also address, resilience of electric grid and critical infrastructure, microgrids, etc.

DeGolia: 2025 is a good target, within reach, CAPs focus on 2025 and 2030. The Strategy should look at County as a whole as opposed to City-level, as a CAP does. Is transportation within the reach of the Strategy?

Springer: Yes, I think it must be included.

Kim said that staff will review the existing Energy Strategy, identify topics for the update, and make some comparisons. Staff will also propose a list of stakeholders.

6. Update on current water supply conditions and recent State actions

Adrienne Carr delivered a presentation on water supply for the SFPUC and recent state actions.

Upcountry precipitation is likely to be above the median by end of week. In an average year, the entire Hetch Hetchy system fills.

Upcountry snow pack is approaching 75% of median due to recent storms but will likely not reach 100%. The total system storage is 73%, normally at 80% but maintenance at Cherry reservoir reduced the amount stored, which brings the average down. Other California reservoirs are at historical average.

In terms of water use, there has been an uptick of water consumption in 2017 since the last year of the drought (2016); outdoor water use rebounded and residential users are generally conserving less throughout the state.

Carr showed a chart of lowest water users in the Bay Area (residential per capita usage and South San Francisco has the lowest use.

The state has been working to enact legislation to make water conservation a way of life in California. 1) Use water more wisely 2) Eliminate Water waste (leak detection) 3) strengthen local drought resilience (Urban water management, drought action plans) and 4) improve agricultural water use efficiency and drought planning.

BAWSCA is helping agencies comply with proposed legislation, including studies of indoor vs. outdoor water usage, a commercial, industrial and institutional (CII) water users audit pilot

program, automated metering infrastructure (AMI) workshops and information sharing, and possible aerial measurements.

AB 1668 and SB 606 are current vehicles for long-term conservation. Legislation has improved but BAWSCA is concerned about a no variance process for agencies with minimal outdoor water use, ongoing costs for landscape area measurement, and administrative challenges.

The presentation for the item has been posted on the C/CAG RMCP website.

7. Update on Governor’s Climate Summit, city information-gathering effort, for comment

Kim Springer delivered an update on the efforts to collect information from cities for making a case for greater participation in the Governor’s Global Climate Action Summit in September 2018 in San Francisco. A letter from C/CAG went out to City Managers and Elected officials, and staff has heard updates from agencies that they are working on collecting this information. Once info is collected, staff will work on how to package the information.

The letter that was sent to the cities is included in the packet for this meeting.

8. Committee Member Updates

9. Next Meeting Date: April 18, 2018 – Redwood City location