

C/CAG

CITY/COUNTY ASSOCIATION OF GOVERNMENTS OF SAN MATEO COUNTY

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Agenda

Resource Management and Climate Protection Committee (RMCP)

Date: Wednesday, January 20, 2021

Time: 3:00 p.m.

Location: Remote meeting via Zoom link below

On March 17, 2020, the Governor issued Executive Order N-29-20 suspending certain provisions of the Ralph M. Brown Act in order to allow for local legislative bodies to conduct their meetings telephonically or by other electronic means. Pursuant to the Shelter-in-Place Order issued by the San Mateo County Health Officer on March 16, 2020, the statewide Shelter-in-Place Order issued by the Governor in Executive Order N-33-20 on March 19, 2020, and the CDC's social distancing guidelines, which discourage large public gatherings, C/CAG meetings will be conducted via remote conferencing. Members of the public may observe or participate in the meeting remotely via one of the options below.

Join Zoom Meeting

<https://smcgov.zoom.us/j/93762635177?pwd=UVFIYllkUUxheGk5SXovYlZOSW9UUT09>

Meeting ID: 937 6263 5177

Passcode: 017723

Find your local number: <https://smcgov.zoom.us/j/93762635177?pwd=UVFIYllkUUxheGk5SXovYlZOSW9UUT09>

Persons who wish to address the RMCP Committee on an item to be considered at this meeting, or on items not on this agenda, are asked to submit comments in writing to kspringer@smcgov.org by 5:00 PM on Tuesday, January 19, 2021, per the guidelines below.

Emailed public comments should note the specific agenda item on which you are commenting, note that your comment concerns an item that is *not* on the agenda, or note that it is *specific to* an agenda item. Members of the public are limited to one comment per agenda item. The length of the emailed comment should be commensurate with the two minutes customarily allowed for verbal comments, which is approximately 250-300 words. Staff will read the public comments addressing matters on this agenda received before the deadline of 5:00 PM on January 19, 2021 at the time the matter is called. Staff will read the public comments addressing items *not* on this agenda received before the deadline of 5:00 PM on January 19, 2021 during agenda item 2 "Public comments." Comments received after the deadline but before the end of the meeting will be provided to the RMCP Committee after the meeting.

Meeting Agenda

1. Roll Call - Introductions
2. Public Comment
3. Approval of Minutes from November 18, 2020 RMCP Committee meeting
(Kim Springer – Committee Staff) Action
4. Results of Presidio Graduate School-led single-family home electrification systems mapping project
(Susan Wright, County OOS) Information/ Discussion
5. Presentation draft criteria for selection of approximately ten homes for electrification case studies
(Kim Springer, Committee staff) Information/ Discussion
6. Presentation on water agency Urban Water Management Plans and alternative water supply projects currently in planning with the SFPUC
(Tom Francis, Committee member) Information/ Discussion
7. Presentation on value of resiliency to support critical loads in community or site microgrids
(Craig Lewis, Clean Coalition) Information/ Discussion
8. Committee Member Updates
9. Next Scheduled Meeting Date: February 17, 2021

PUBLIC NOTICING: Due to the impact of the Coronavirus (COVID-19), All notices of C/CAG regular Board meetings, standing committee meetings, and special meetings will be posted at C/CAG's website at: <http://www.ccag.ca.gov>.

All notices of C/CAG regular Board meetings, standing committee meetings, and special meetings will be posted at the San Mateo County Transit District Office, 1250 San Carlos Ave., San Carlos, CA, and on C/CAG's website at: <http://www.ccag.ca.gov>.

PUBLIC RECORDS: Public records that relate to any item on the open session agenda for a regular Board meeting, standing committee meeting, or special meeting are available for public inspection. Those public records that are distributed less than 72 hours prior to a regular Board meeting are available for public inspection at the same time they are distributed to all members, or a majority of the members, of the Board. The Board has designated the City/County Association of Governments of San Mateo County (C/CAG), located at 555 County Center, 5th Floor, Redwood City, CA 94063, for the purpose of making public records available for inspection. Such public records are also available on C/CAG's website at: <http://www.ccag.ca.gov>.

PUBLIC PARTICIPATION: Public comment is limited to two minutes per speaker. Persons with disabilities who require auxiliary aids or services in attending and participating in this meeting should contact Mima Guilles at (650) 599-1406, five

working days prior to the meeting date.

If you have any questions about this agenda, please contact C/CAG staff:

Executive Director: Sandy Wong (650) 599-1409

RMCP Committee Staff: Kim Springer (650) 599-1412

C/CAG

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Meeting Minutes

Resource Management and Climate Protection Committee (RMCP)

Date: Wednesday, November 18, 2020

In Attendance:

Janet Borgens, Councilmember Redwood City*
Bill Chiang, PG&E*
Maryann Moise Derwin, Portola Valley, Committee Chair*
Ortensia Lopez, El Concilio*
Tom Francis, BAWSCA*
Christine Kohl-Zaugg, Sustainable San Mateo County*
Doug Silverstein, Thrive Alliance*
Donna Colson, Burlingame Councilmember*
Diane Papan*
Rick DeGolia*
Kim Springer
Susan Wright
John Allan
Sandy Wong

Not in Attendance

Don Horsley*
Drew Combs*

1. Roll Call - Introductions
2. Public Comment
No public comments.
Committee member Borgens announced that this will be her last meeting as a member of this committee.
3. ACTION: Approval of Minutes from October 21, 2020 RMCP Committee meeting
Motion to approve – Kohl-Zaugg – 2nd by Lopez
Bill Chiang abstained. All other approved. Passed
4. ACTION: Review and approval of RMCP Committee meeting dates through January 2022.
Motion to approve: Francis - 2nd: Chiang
All present approve. Passed
5. INFORMATION: Update on Presidio Graduate School-led single-family home electrification

systems mapping project.

Susan Wright provided a brief overview of the benefits of electrification and the landscape of organizations involved in electrification efforts. She included specific efforts around a “systems mapping” study funded by BayREN and in partnership with the Presidio Graduate School.

Stakeholder workshops began in October and included a mix of homeowners and trade professionals. All workshops and focus groups were held virtually. Key research questions focused on financing, the role of contractors and relators and how equity factors into residential electrification. Upcoming workshops in December will look at the barriers and opportunities to residential electrification, especially heat pump water heaters.

Looking ahead to the next stakeholder workshop and the final report, there are a few options for how to present the results. Wright asked the committee for their input on the ideal outcome of this mapping project.

Kohl-Zaugg suggested that this effort could include a pilot project or neighborhood as a follow-up.

Borgens asked whether there was an opportunity to provide incentives to low-income communities from an equity perspective. Borgens further asked whether equipment manufacturers are on board and able to handle the change in demand.

Chiang suggested that individual cities in San Mateo County can work together to vet a list of reputable contractors to complete electrification projects. In addition, the first step should always be to engage PG&E early so that there are no difficulties further down the road.

Francis wanted to know whether this effort and any subsequent pilot projects would focus on individual equipment or whole-home retrofits

Ortensia Lopez mentioned that substantial retrofits may trigger Title-24 and would disproportionately affect low-income communities that generally live in older, less efficient homes.

6. INFORMATION: Presentation on Public Safety Power Shutoff grid improvements to reduce customer impacts.

Bill Chiang provided an overview of data related to the most recent PSPS events on October 14th through 16th. The outages affected 19 counties and 40,574 service addresses (on average multiply service address by 3 to get number of people affected. The PSPS events are in response to weather, winds of 38mph in SMC near Sears Ranch, and Santa Clara County 53 mph at Mt. Madonna.

Prior to these events, PG&E has been working to ensure that PSPS events are smaller shorter and smarter. They’ve installed over 600 devices to help sectionalize the grid and allow for more targeted PSPS events. The October event was 82% smaller with their new tools and improvements compared to the 2019 events. In SMC 1,680 addresses were affected primarily in the hills.

The second event happened on October 25th through 28th. This was a much larger event, which affected 35 counties and 34,5470 total addresses. For SMC, 4,458 service addresses in a very similar geography yet somewhat expanded from the previous event. The highest wind gust was 50 mph at Sears Ranch. Santa Clara County recorded 65 mph in Poverty. This event was 46% smaller compared to 2019 totals, which would have affected over an estimated 600,000 addresses.

In addition to updated tools, substations were prepared with backup power in case there was a need

to reduce power at the transmission level.

Borgens asked for clarification the substation effort.

Chiang: This was an off-season effort to install equipment at prioritized substations. The generators needed to power the substations are the size of 20-foot shipping containers.

Francis asked how aware the public sector is of these improvements.

Chiang replied that cities and towns are close partners and are aware of the improvements but will work with Tom on reaching out to water districts.

Derwin thanked PG&E for their efforts in improving the PSPS events.

Bill Chiang next brought up CAISO rolling outages. August 14th was the first night in 20 years of rolling outages. CAISO gave PG&E 10-11 minutes to reduce large amounts of energy load. The Bay Meadows Substation was shutdown leaving residents on the peninsula without power. Additional warnings followed but there were no additional shutdowns, due to energy conservation measures.

The rolling outage was a result of widespread heat across the western United States with many people running A/C late into the evening and no available supply from surrounding states in similar situations.

7. INFORMATION: Bay Area Water Supply and Conservation Agency update on current water supply conditions and weather projections for the coming winter season.

Tom Francis provided an update on available water supply for BAWSCA member agencies including the SF Regional Water System which supplied two thirds of the water for member agencies.

Over the last 10 years, water use is down 19% overall. This is a result of conservation as well as recycled water use.

Tom provided a walkthrough of the local and regional reservoirs that contribute to our water supply. Statewide, reservoir storage levels are at or under their historical averages. Tom pointed out that under statewide drought conditions, the governor could take additional actions to require conservation and reallocate supply as necessary.

As of November 2020, total system storage is at 81.2% and the recent rains will drive this number up. Locally, Crystal Springs is at 88% of maximum storage.

Looking at precipitation in the upper Hetch Hetchy system, there was no rain in October and the small amount of rainfall so far in November isn't close to the historic 4+ inches usually experienced. Comparing the current precipitation patterns to historic trends, the pattern aligns with low-rainfall years. Locally in the bay area, precipitation is trending under historic averages and it's starting out to be a dry year.

Updated NOAA 1-month precipitation outlook forecasts an average amount of rainfall for November which we aren't seeing, and the updated three-month precipitation outlook predicts below-average rainfall. The NOAA seasonal drought outlook anticipates that drought will persist for most of California and additional portions of the state will enter drought status as well.

Tom also provided an update on total deliveries and how they may have been affected by the pandemic. On average it seems that any drop in commercial water use has been offset by residential use after initial pandemic impacts. There was significant use in late February and early March, most likely due to abnormally warm weather rather than the pandemic as the spike happened before shelter-in-place orders.

Water conservation efforts continue to be successful. While we're using more water than we were in 2015 during the peak of the drought, our consumption still hasn't returned to pre-drought levels and is likely to stay there until population increases raise the volume of water consumed.

Kohl Zaugg: Considering the lack of drop in usage during the pandemic, is it possible that large customers with cooling towers or other equipment kept demand up.

Francis: Speaking with water providers, it seems like it's really the residential use that's gone up drastically.

Silverstein: Question about snowpack and how that affects supplies.

Francis: Provided a description of how the snowpack serves as a natural reservoir to keep our reservoirs full into the summer months. With climate change and a reduced snow pack, we may lose that natural reservoir and our storage reservoirs will have release water during the winter to prevent overflow.

Springer: How many recycled water projects are there in San Mateo County?

Francis: BAWSCA is embarking on a new study for potable reuse projects to expand beyond existing operation at SVCW, Redwood City and Daly City. Daly City and Colma are working together to see if they can reduce the amount of groundwater that the cemeteries are using. Would be happy to explore future opportunities for collaboration

Borgens: Are the recycled water facilities treating to tertiary requirements?

Francis: There are some projects in place that treat water and re-inject into aquifers for additional treatment. There are also projects being explored to indirectly inject treated water into crystal springs reservoir.

8. Committee Member Updates

Silverstein provided an update on Thrive's effort on single use plastics. The new effort Circular SMC will bring together existing organizations to coordinate resources on single use plastic. Priority work will be pushing for reusable take-out containers in some cities. They'll also be looking at policy approaches to ban plastics in San Mateo County by the end of 2021.

Kohl-Zaugg announced that SSMC has an open call for nominations for sustainability and green building awards. Nominations are open now until Dec. 6.

9. Next Scheduled Meeting Date: December 16, 2020

C/CAG AGENDA REPORT

Date: January 20, 2021
To: Resource Management and Climate Protection Committee
From: Kim Springer, Committee Staff
Subject: Results of Presidio Graduate School-led single-family home electrification systems mapping project

(For further information contact Kim Springer at kspringer@smcgov.org)

RECOMMENDATION

Receive the results of Presidio Graduate School-led single-family home electrification systems mapping project.

FISCAL IMPACT

None. Funding for this project is provided by ABAG to the County Office of Sustainability.

BACKGROUND/DISCUSSION

The Bay Area Regional Energy Network (BayREN) is a collaboration of the nine counties in the San Francisco Bay Area. The program is led by the Association of Bay Area Governments (ABAG) and provides regional-scale energy efficiency programs, services, and resources. BayREN is funded by utility ratepayer funds through the California Public Utilities Commission, as well as other sources.

The County Office of Sustainability contracts for BayREN programs in San Mateo County. The Program is contracted through the current program cycle, calendar years 2020 - 2022. The BayREN program has several elements being delivered in San Mateo County, including: single family, green labeling, multifamily, water/energy nexus, commercial, and codes and standards.

A recent project, mentioned at the October 21 and November 18, 2020 RMCP Committee meetings is mapping the various stakeholders, their roles, and opportunities and challenges related to electrification of existing single-family homes. The County has contracted with Presidion Graduate School, using BayREN funds to facilitate this project. The project has recently been completed and a draft final report received, which is attached via the link provided below as an attachment to this staff report and can be found on the CCAG RMCP Committee website for this meeting.

Susan Wright, Senior Resource Conservations Specialist, County Office of Sustainability will provide an overview of the results of the project.

ATTACHMENTS

Link to draft final report: <https://ccag.ca.gov/wp-content/uploads/2021/01/Home-Electrification-Project-draft-final-report.v4.pdf>

C/CAG AGENDA REPORT

Date: January 20, 2021
To: Resource Management and Climate Protection Committee
From: Kim Springer, Committee Staff
Subject: Presentation draft criteria for selection of approximately ten homes for electrification case studies

(For further information contact Kim Springer at kspringer@smcgov.org)

RECOMMENDATION

Receive a presentation on draft criteria for selection of approximately ten homes for electrification case studies and provide comments.

FISCAL IMPACT

None. Funding is expected to be provided by ABAG for this project to the County Office of Sustainability.

BACKGROUND/DISCUSSION

The Bay Area Regional Energy Network (BayREN) is a collaboration of the nine counties in the San Francisco Bay Area. The program is led by the Association of Bay Area Governments (ABAG) and provides regional-scale energy efficiency programs, services, and resources. BayREN is funded by utility ratepayer funds through the California Public Utilities Commission, as well as other sources.

The County Office of Sustainability contracts for BayREN programs in San Mateo County. The Program is contracted through the current program cycle, calendar years 2020 - 2022. The BayREN program has several elements being delivered in San Mateo County, including: single family, green labeling, multifamily, water/energy nexus, commercial, and codes and standards.

As the County nears the completion of the project discussed in Item 4 on this agenda: Presidio Graduate School-led single-family home electrification systems mapping project, staff is preparing for a project to develop single-family home electrification case studies.

The case studies will evaluate the challenges, opportunities, and costs of individual electrification elements (heat pump water heater, electric dryer, etc.) as well as those for adding solar, battery storage, and electric vehicle charging. Staff are in the process of developing the criteria for selection of approximately ten homes to study.

It is anticipated that a County-hired contractor will work with homeowners to evaluate the homes, document options and decisions, and provide a short write up with costs for each element

individually, whole house electrification and, finally, the addition of solar, battery, and EV charging. The benefit to the participating homeowner will be the final report, which will be a road map to electrification of their home.

Staff believes that it will be important to choose a variety of homes to be evaluated, based on age of home, location, building style (ranch vs. two-story), condition, current energy use or building envelope, and even siting.

Kim Springer, Committee staff, will provide a draft selection criterion for consideration and comment by the Committee.

ATTACHMENTS

None.

C/CAG AGENDA REPORT

Date: January 20, 2021
To: Resource Management and Climate Protection Committee
From: Kim Springer, Committee Staff
Subject: Presentation on water agency Urban Water Management Plans and alternative water supply projects currently in planning with the SFPUC

(For further information contact Kim Springer at kspringer@smcgov.org)

RECOMMENDATION

Receive a presentation on water agency Urban Water Management Plans (UWMPs) and alternative water supply projects currently in planning with the SFPUC.

FISCAL IMPACT

None.

BACKGROUND/DISCUSSION

The Bay Area Water Supply and Conservation Agency (BAWSCA) represents the 26 wholesale customers of the San Francisco Regional Water System. BAWSCA staff who serve on the RCMP provide regular updates regarding their work and current efforts. Tom Francis last presented to the RMCP Committee on November 18, 2020 with a water update and precipitation outlook though approximately February 2021.

Urban Water Management Plans (UWMPs) are prepared by urban water suppliers every five years. These plans support the suppliers' long-term resource planning to ensure that adequate water supplies are available to meet existing and future water needs. Every urban water supplier that either provides over 3,000 acre-feet of water annually or serves more than 3,000 urban connections is required to submit an UWMP to the Department of Water Resources (DWR).

BAWSCA is currently working with water suppliers in San Mateo County to complete their UWMPs, which will need to be finalized in June 2021. The Plans will include alternative water supply projects

Tom Francis, Committee member and Water Resource Manager with BAWSCA, will provide a presentation on UWMP work underway by San Mateo County water providers and share some of the alternative water supply projects in planning.

ATTACHMENTS

None

C/CAG AGENDA REPORT

Date: January 20, 2021
To: Resource Management and Climate Protection Committee
From: Kim Springer, Committee Staff
Subject: Presentation on value of resiliency to support critical loads in community or site microgrids

(For further information contact Kim Springer at kspringer@smcgov.org)

RECOMMENDATION

Receive a presentation on value of resiliency to support critical loads in community or site microgrids.

FISCAL IMPACT

None.

BACKGROUND/DISCUSSION

A microgrid is an energy system that can continue service power to a specific community footprint, such as a college campus, hospital complex, business center, or neighborhood. They usually include one or more kinds of distributed energy (solar panels, wind turbines, combined heat & power, generators) that provide power, either in connection with the greater power grid or even isolated.

Though the concept and practice of locating, evaluating sites, and installing microgrids has grown considerably in past years, few studies have identified the value of a establishing a microgrid to the customers it serves.

The Clean Coalition has developed a straightforward value-of-resilience methodology (VOR123) to quantify the value of renewables-driven resilience at any facility type. The VOR123 methodology divides the total electrical load of a facility into three tiers:

1. Critical Loads: life-sustaining loads, which usually make up about 10% of the total electrical load,
2. Priority Loads: which normally account for 15% of the total load, and
3. Discretionary Loads: which generally make up the other 75% of the load.

They have tested the methodology at several sites and compared their model with the work of other studies, are sharing their results.

Craig Lewis, Founder and Executive Director at Clean Coalition, will present the methodology and share updates on how it has been tested and applied to projects Clean Coalition has been

developing in Central California. Links to Clean Coalition projects, as well a link to the VOR123 methodology are provide as attachments to this staff report.

ATTACHMENTS

- A. [value-of-resilience methodology, VOR123](#)
- B. [Solar Microgrids for the Santa Barbara Unified School District \(SBUSD\)](#)
- C. [Goleta Load Pocket Community Microgrid \(GLPCM\)](#)