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CITY/COUNTY ASSOCIATION OF GOVERNMENTS OF SAN MATEO COUNTY

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Agenda

Resource Management and Climate Protection Committee (RMCP)

Date: Wednesday, September 20, 2017

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

Location: 155 Bovet Rd. – Ground Floor Conference Room
San Mateo, CA

1. Introductions
2. Public Comment
3. Approval of Minutes from August 16, 2017 meeting
(Kim Springer – Committee Staff) Action
4. Presentation by Peninsula Clean Energy, San Mateo County's community choice aggregation program agency
(Dan Lieberman, PCE) Presentation, Discussion
5. Review and provide input on proposed guidelines, with comments, for a San Mateo County Energy Watch, capacity-building Call for Projects
(Kim Springer, County staff) Action
6. Presentation on University of California, San Diego's campus-wide microgrid
(Dave Weil, UC San Diego) Presentation, Discussion
7. Presentation on Governor Brown's September 2018 Global Climate Action Summit
(Kim Springer, County staff) Presentation, Discussion
8. Committee Member Updates
9. Next Regular Meeting Date: October 18, 2017

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.

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Resource Management and Climate Protection Committee (RMCP)

Minutes of August 16, 2017 Meeting

In Attendance:

Beth Bhatnagar, SSMC Board Member*
Deborah Gordon, Committee Chair, Woodside Town Council*
Ortensia Lopez, El Concilio of San Mateo County*
Pradeep Gupta, South San Francisco City Council*
Don Horsley, County Supervisor*
Maryann Moise Derwin, Committee Vice Chair, Mayor Portola Valley*
Dave Pine, County Supervisor*
Rick DeGolia, Town of Atherton*
Adrienne Carr, BAWSCA*
Kim Springer, County Office of Sustainability
Ted Ko, Stem (presenter)

Not in attendance:

Diane Papan, Councilmember, San Mateo*
Robert Cormia, Professor Foothill-DeAnza*
Bill Chiang, PG&E*
Michael Barber, Supervisor Pine's Office

* Committee Member (voting)

1. Introductions
2. Public Comment
3. Approval of Minutes from February 15, March 15, 2017, and June 28, 2017 meetings

Minutes passed (Lopez/Bhatnagar)

4. Presentation and update on San Mateo County Energy Watch program and new initiatives

Kim Springer delivered a short presentation on the San Mateo County Energy Watch program. The presentation has been posted on the C/CAG RMCP website.

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In reference to the Library Kits progress:

Horsley: Tagalog is prevalent in Daly City so we might want to consider that as a translation.

Springer: these is funding under Implementation, so we can do the translation.

General Comments:

Gupta: Somewhere along the lines, we need to look at how the various energy programs in the county align. SB 350 requires that the CPUC make sure that all their programs align, and PCE will need to create an integrated resource plan. It should include efficiency goals, and the effort of the SMCEW should be complimentary.

Pine: Meet with Jan Pepper and her team to make sure they know about your programs. PCE will soon be moving on to programming soon. They would benefit from knowing about all this work.

5. Presentation on integration of battery storage and intelligent controls for resilience and energy-rate protection

Ted Ko, Director of Policy, from a company called Stem in Millbrae, delivered a presentation on the battery storage and software integration provided by the company.

Stem has 150 employees, and has installed hundreds of systems in over 100 locations. The presentation has been posted on the C/CAG RMCP website.

Using Lithium Ion batteries, they support “peak shaving” for their customers using a cloud-base software, which is visible to the customer. The software allows other control for the customer. Mr. Ko listed off a number of customers in San Mateo County.

Benefits can also be provided to the grid via the batteries, when not in use for peak shaving for the customers. In general, the batteries at customer sites, can be used as a virtual power plant, and feed power into the grid during grid needs. In this case, the customer can be CAISO or other IOU’s. For instance, in the heat wave about a month ago in CA, CAISO called Stem about a dozen times to pull power. At this point, it’s more a demonstration. On the other side, as CAISO demand drops, they can recharge.

Gupta: If you commit to providing power to CAISO, you can’t also provide it to your customers. How does that work?

The batteries at customer sites are not being used about 75% of the time. Therefore, Stem calls battery storage a software business, not a hardware business. Stem owns the batteries. They call it storage as a service.

Gupta: From Stem’s business perspective, storage is expensive, so how do you handle the cost of the batteries? Also, the peak curves can shift.

The shaving of the peaks and other value streams will be able to overcome the cost of the batteries. There is risk with changes in peak charges, but there are other possibilities for the business. Stem can also help with the belly of the duck curve, but they don’t have a mechanism for Stem storing, which is an increase in demand.

Gordon: You are not dependent on any particular battery storage technology?

If the storage technology allows Stem to integrate its software, the technology or chemistry doesn't matter.

Springer: Does your software do anything with building energy management systems?

Stem just announced a partnership with C-Power. They do a lot with demand response and the idea is that Stem and C-Power will approach customers together with a more integrated system. The value proposition with CCA's is that we can approach their customers to help with the local grid and energy supplier contracts, so the CCA's benefit.

Gupta: You mentioned designing your own inverters. Why?

The technical specs of a bidirectional inverter for our service needs wasn't available. We were not looking at ancillary services or reactive powers.

Springer: How do customers see the savings or benefits and given discussion we had on lease language, there is a real argument for energy efficiency and solar, is part of your model to implement this kind of programs?

Stem doesn't focus on energy efficiency, but they do work with Sunpower to install a combined system.

Pine: We need to get you connected with PCE right away.

6. Bay Area Water Supply and Conservation Agency update on current water supply and conservation

Adrienne Carr presented on current water supply and conditions. The presentation has been posted on the C/CAG RMCP website.

All the reservoirs and the water bank is full for our system. Only a few aren't full, those being tied to maintenance. The rest of the reservoirs in CA are all above historical average.

Gupta: Are we looking for additional storage?

There may be some opportunities in the valley, but only after their compliance with SGMA and with the agricultural community. There is Prop 1, which has \$2.7B for these purposes, and there are 12 new reservoir projects that have applied. They will probably not hear until next June.

Pine: Are these proposals for new reservoirs or just enlargements?

There are proposals for new ones, and they will probably run into some EIR challenges. It will be the California Water Commission who will be making the selection of which projects get funded.

We had record water and snow pack years, but not the highest on water. BAWSCA water use is still tracking over 20% less than pre-drought trends.

BAWSCA is compiling a drought report that documents the drought response actions of BAWSCA and the state. The goal is get into history what transpired. There is a link in the presentation to that report.

7. Presentation about August 21, 2017 solar eclipse effect on California's solar power resources
(Kim Springer, County staff) Presentation, Discussion

Kim Springer made a short presentation on the efforts on the part of the County on the upcoming eclipse. The presentation is posted on the C/CAG RMCP website.

The eclipse will be from 9:00 to noon on August 21, and the CPUC has sent out a few press releases to conserve energy. The County's Office of Sustainability put together a poster and some language suggesting city departments participate in reducing demand during the eclipse and learn to use less energy in the future. The poster and language has been distributed to the cities.

8. Committee Member Updates

Chair Gordon shared that Governor Brown just announced that there will be an event September 2018, near his final few months in office, on climate action. C/CAG and the County should begin a discussion with his office about, not only hosting such an event, but also presenting our accomplishments.

Lopez: We could consider also adding the work done in disadvantaged communities in San Mateo County.

Gordon: Governor Yakushev of Tyumen, has met with Governor Brown and is working on sustainability. He will be coming back in a few months for further discussions. As we start thinking about this as a global event, we should consider him as an addition. He will be visiting Stanford in October. If there are any venues that we could offer up, it would be a worthwhile opportunity.

Kim Springer shared that, starting September 5th, he would be reporting to work in Mountain View, for the next three months.

Dave Pine shared the C/CAG Water Committee met this morning and at some point, there should be some update to RMCP. There seems to be some opportunities around education and other work around water.

9. Next Regular Meeting Date: September 20, 2017

C/CAG AGENDA REPORT

Date: September 20, 2017
To: Resource Management and Climate Protection Committee
From: Dan Lieberman, Director of Marketing and Public Affairs, PCE
Subject: Presentation by Peninsula Clean Energy, San Mateo County's community choice energy aggregation agency

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

RECOMMENDATION

Receive a presentation by Peninsula Clean Energy, San Mateo County's community choice energy aggregation agency.

FISCAL IMPACT

None

BACKGROUND/DISCUSSION

After development and review of feasibility studies, which started in 2014, Peninsula Clean Energy Authority (PCE) was formed by unanimous vote of its members in March 2016, as a joint powers authority. Membership includes the County of San Mateo and all 20 cities in San Mateo County. PCE is the community choice energy program (CCE or CCA) in San Mateo County. There are others in the US and a growing number in California, which, like PCE, can aggregate demand of a group of customers, and offer options for sources of energy. PCE was formed to provide cleaner and greener electricity for residential, commercial, and municipal customers in San Mateo County.

PCE offers two choices of clean energy, 50% renewable called ECOPlus, and a 100% renewable option called ECO100. PG&E continues to provide the infrastructure, service issue response, and billing for electricity delivery. PCE contracts for the sources of electricity on behalf of its customers. PCE serves about 290,000 accounts with power that saves customers money while reducing greenhouse gas emissions by about 40% compared to PG&E.

PCE has completed its first year with impressive results, including profitability, and is beginning to develop new energy-related programs, while staying focused on its core work of sourcing clean and cost-competitive electricity.

Dan Lieberman, Director of Marketing and Public Affairs, will provide a presentation on the organization's history, composition, progress to date, and the process underway to develop new programs, some of which may launch in 2018.

ATTACHMENT

None

C/CAG AGENDA REPORT

Date: September 20, 2017
To: Resource Management and Climate Protection Committee
From: Kim Springer, County Staff
Subject: Review and provide input on proposed guidelines, with comments, for a San Mateo County Energy Watch, capacity-building Call for Projects
(For further information contact Kim Springer at 650-599-1412)

RECOMMENDATION

Review and provide input on proposed guidelines for a San Mateo County Energy Watch, capacity-building Call for Projects.

FISCAL IMPACT

SMCEW program staff costs are paid for by funding under the C/CAG – PG&E Local Government Partnership (LGP) agreement. Additional matching funds, specifically for transportation-related Climate Action Planning efforts, come from C/CAG Congestion Relief Funds.

BACKGROUND/DISCUSSION

The SMCEW launched a new program cycle on January 1, 2016. The new program cycle runs through December 2018. The total budget for the three-year program is \$2,093,778, broken out as follows:

Fund Description	Annual	Three-year
Administration	\$41,578	\$124,734
Marketing	\$69,301	\$207,904
Implementation	\$387,046	\$1,161,140
Strategic Energy Resources	\$200,000	\$600,000
Total	\$697,926	\$2,093,778

As reported at the August 16, 2017 RMCP Committee meeting, the SMCEW program is nearly meeting its expected energy-saving goals. However, the program is underspending considerably, especially in the use of implementation funds. To date, more than a year and a half into the three-year program cycle, it's projected the implementation funds will be underspent by approximately \$350,000 at the end of CY 2017. The Program also tracks the cost effectiveness of the kilowatt hour savings it achieves as cost per kilowatt hour.

With these two attributes (surplus funding and cost effectiveness) in mind, along with the rules for how implementation funds can be spent by the program, PG&E and staff are proposing to use funding to support staff capacity at cities, specifically for identifying, assessing, and

implementing energy efficiency projects.

The attached draft guidelines are for Committee review. Staff recommends that the Committee review and provide input on the proposed guidelines with comments.

After review and input on the guidelines by the RMCP Committee, staff will formalize a draft Call for Projects document, and provide the document for review and comment to RMCP Committee members by the end of September (between RMCP Committee meetings). Staff will also work with city staff to identify barriers to energy efficiency project implementation. Results from this research, along with comments from Committee members, will be used to create a final draft for consideration by the C/CAG Board in October.

ATTACHMENT

Draft Proposed Guidelines for a Call for Projects



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DRAFT Proposed Guidelines for a Call for Projects San Mateo County Energy Watch Program

Call for Project Goal:

The Call for Projects goal is to support cities and the County to implement energy efficiency projects at their facilities, to deliver energy savings to meet the goals of the program, and to do so in a cost-effective manner. The San Mateo County Energy Watch has identified implementation funds available to support cities, town, and county staff, so that they focused on implementing these projects.

Background

- The San Mateo County Energy Watch is a PG&E ratepayer-funded program, contracted through C/CAG and administered by the County of San Mateo, Office of Sustainability.

Project Call

- The Call for Projects is to identify customers with “ready” energy efficiency projects and to provide those customers with funding for staff capacity to focus on implementation of those projects.

Eligible Applicants

- Only local governments (cities and towns) and the County in San Mateo County are eligible applicants for funding through the Call for Projects.

Eligible Projects

- Eligible energy efficiency projects may include interior or exterior lighting, HVAC, controls, and other measures that will generate energy savings for the customers and the San Mateo Energy Watch program. The Call for Projects will encourage multiple measures in a building or buildings, as is already encouraged through our Comprehensive Energy Recommendations efforts.

Eligible Activities

- Eventual grants will fund local government staff work, internally and with the SMCEW team, on energy efficiency project implementation. Eligible activities include completion of milestones by grantee staff, such as: setting project launch, facility audit, and audit findings review meetings. Other milestones include: analyzing financing options, developing or reviewing provided equipment specifications, procuring contractors, and completing implementation of the energy efficiency projects.

Funding Details

- There is approximately \$350,000 in Implementation funds in SMCEW program budget for the Call for Projects effort. Grant funds will be awarded as certain milestones are completed. It is anticipated that a maximum of \$50,000 will be awarded per applicant proposal.
- The eventual grant contract with a city or the County, will identify the milestones to project completion, and the grantee will be awarded as those milestones are reached.
- It is important that projects complete measure installation by October 1, 2018. Final invoices for reimbursement must be submitted by December 31, 2018.
- Cities or the County will need to reach project milestones to receive “progress payments” of grant funds as follows:
 - Complete project(s) launch meeting, facilitate audit, and receive, review and discuss audit and project(s) proposal, and consider project. Audits and meeting with Ecology Action and San Mateo County Energy Watch staff provided (no cost to city or County) \$5,000 Progress Payment
 - Request and receive equipment specifications and complete procurement process, through signed contract. Meet all requirements with PG&E for pre-inspections and no equipment purchases. \$25,000 Progress Payment
 - Facilitate completion of project by October 2018, and complete post-inspections with PG&E. \$20,000 Progress Payment

Mandatory Application Elements

- The following are the anticipated mandatory application elements:
 - City name, address, point of contact
 - Location and square footage of all proposed project locations, and the perceived energy saving measures identified at those locations. Estimations of energy-saving potential, counts of exiting lighting fixtures and existing fixture specifications, nameplate information of exiting systems needing upgrade, or other supporting documentation of energy-saving potential
 - Estimation of capital investment available to complete projects by October 2018
 - Interest in pursuing PG&E’s 0% On-Bill Financing program
 - Any completed actions in the list of milestones of funding that have been completed and when, for each of the project locations identified above
 - Any work completed through the SMCEW program for the identified locations
 - Names and positions of staff that will focus on achieving project milestones to completion

Evaluation Criteria

- In general, proposals submitted will be evaluate on the feasibility of project completion by October 2018 and the amount of savings opportunity
 - Completeness of the proposal
 - Evaluated potential of energy savings
 - Positions of city or County staff assigned to meet milestones
 - Availability of capital funding for the measures/locations and/or willingness to leverage PG&E’s On-Bill Financing program
- SMCEW will form an evaluation panel, composed of staff from PG&E and Ecology Action to review the proposals

Application Submission

- Applications should be submitted to:
San Mateo County Energy Watch
County of San Mateo, Office of Sustainability
455 County Center – 4th Floor, OOS102
Redwood City, CA 94063

Tentative Schedule for San Mateo County Energy Watch Pilot Program

Event	Date
Call for Projects Issued	October 2017
Application Workshop	October 2017
Applications Due	Mid-December 2017
Selection Panel Reviews Applications	December 2017
Evaluation Panel Review	January 2017
C/CAG Board Approves Evaluation Results	January 2017
Execute Funding Agreements with Project Sponsors for Awarded Projects	By March 1, 2018
Construction Complete	October 1, 2018
Final Reimbursement Requests Due	December 31, 2018

For any questions regarding the program or application process, please contact Kim Springer

C/CAG AGENDA REPORT

Date: September 20, 2017
To: Resource Management and Climate Protection Committee
From: Dave Weil, Director Sustainability and Carbon Neutrality, UC San Diego
Subject: Presentation on University of California, San Diego's campus-wide microgrid
(For further information contact Kim Springer at 650-599-1412)

RECOMMENDATION

Receive a presentation on University of California, San Diego's campus-wide microgrid.

FISCAL IMPACT

None

BACKGROUND/DISCUSSION

At the June 28, 2017 RMCP Committee meeting, committee member Pradeep Gupta, shared highlights of his six-hour tour of the microgrid research and program located at the University of California, San Diego campus in La Jolla. The campus supports a daily population of over 50,000 that includes faculty, staff, students, visitors and patients.

The university's microgrid has diverse sources for both energy generation and storage. For generation, the campus produces about 35 megawatts from a combination of renewable energy fuel cell, solar, and cogeneration. On the storage side, battery chemical, ultracapacitor, and thermal storage are used. These, and other systems, work in harmony to produce approximately 90% of the campus's energy needs on an annual basis. As a microgrid, the campus is still connected to San Diego Gas and Electric, through one electricity and one natural gas meter. However, as a Direct Access customer its electricity is actually provided by the UC's Energy Services Unit. The university has a goal of achieving carbon neutrality by 2025, through the microgrid and other campus programs.

Dave Weil, Director of Sustainability and Carbon Neutrality, UC San Diego, will provide a presentation on the systems, challenges and successes of the microgrid, as well as some of the funding received for research because of their long-term efforts.

ATTACHMENT

None

C/CAG AGENDA REPORT

Date: September 20, 2017
To: Resource Management and Climate Protection Committee
From: Kim Springer, County staff
Subject: Presentation on Governor Brown's September 2018 Global Climate Action Summit

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

RECOMMENDATION

Receive a presentation on Governor Brown's September 2018 Global Climate Action Summit and discuss participation by San Mateo County.

FISCAL IMPACT

None

BACKGROUND/DISCUSSION

At the August 16, 2017 RMCP Committee meeting, Deborah Gordon shared news that on July 6th, Governor Brown announced that there would be a Global Climate Action Summit in San Francisco, CA.

Governor Brown believes that, after President Trump's announcement to withdraw from the Paris Agreement, it is up to the subnational governments, businesses, investors, and society to demonstrate the sustainable efforts already underway and keep climate efforts moving forward, worldwide. "Senate President pro Tempore Kevin de León has also been a key partner and recently joined other state Senators to urge the Governor to convene the world's climate leaders in California."

During the short discussion at the August 16, 2017 RMCP Committee meeting, several suggestions were made about C/CAG's and the County's potential role, and the need to begin developing proposals for the Governor's office for consideration, if San Mateo County's efforts are to be recognized and leveraged.

Staff believes that the Committee should consider developing a proposal, so that county interests can be considered during the Summit planning process.

ATTACHMENT

None