

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, October 17, 2018

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 June 27, 2018 and July 18, 2018 RMCP Committee meetings
(Kim Springer – Committee Staff) Action
4. Presentation by PG&E on electric grid integration and innovation
(Mark Esguerra, PG&E) Presentation, Discussion
5. Bay Area Water Supply and Conservation Agency update on current water supply and
conservation
(Adrienne Carr, BAWSCA) Presentation, Discussion
6. Update and discussion on San Mateo County Energy Strategy 2025 stakeholder meetings and
content development
(Kim Springer – Committee Staff) Presentation/Discussion
7. Presentation on 2050 Partners, Inc. Job Order Contracting feasibility study scope of work
(Kim Springer – Committee Staff) Presentation/Discussion
8. Update on C/CAG – PG&E 2019 contract and program development for the San Mateo County
Energy Watch
(Kim Springer- Committee Staff) Presentation/Discussion
9. Committee Member Updates
10. Next Meeting Date: November 21, 2018

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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

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Resource Management and Climate Protection Committee (RMCP)

Minutes of June 27, 2018 Meeting

In Attendance:

Maryann Moise Derwin, Committee Vice Chair, Mayor Portola Valley*
Diane Papan, Councilmember, San Mateo*
Pradeep Gupta, South San Francisco City Council*
Rick DeGolia, Town of Atherton*
Bill Chiang, PG&E*
Dave Pine, County Supervisor*
Terry Nagel, SSMC Board Member*
Robert Cormia, Professor Foothill-DeAnza*
Adrienne Carr, BAWSCA*
Sandy Wong, C/CAG
Kim Springer, County Office of Sustainability
John Allan, County Office of Sustainability
Malini Kannan, Clean Coalition
Justine Burt, Clean Coalition

Not in attendance:

Deborah Gordon, Committee Chair, Woodside Town Council*
Don Horsley, County Supervisor*
Ortensia Lopez, El Concilio of San Mateo County*

* Committee Member (voting)

1. Introductions

2. Public Comment

No public comments

3. Approval of Minutes from February 21, 2018, March 21, 2018, and April 18, 2018 Committee meetings.

- February 21, 2018 Minutes
 - Motion to approve – Gupta/ Second – DeGolia
 - No objections/abstentions
- March 21st, 2018 Minutes

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- Motion to approve – Carr/ Second Papan
- Bill abstains
- April 18th, 2018 Minutes
 - Motion to approve – Gupta/ Second - Carr
 - Bill Abstains

4. Presentation - Peninsula Advanced Energy Community Phase 1 delivered and proposed Phase 2.

Clean Coalition presented on Peninsula Advanced Energy Community CEC Grant (PAEC), Clean Coalition just completed final report which included the following:

- Looking at how to deploy 25mW of energy in southern SMC
- Findings from CEC for 21-month project
- How to accelerate deployment and development
- Co-benefits of energy efficiency, renewables, EV charging infrastructure, ZNE, energy storage, cost savings, minimizing new infrastructure, and integration with grid.
- Look at existing building stock, not just new construction

Southern SMC has 65MW of solar potential despite being a highly-developed area with dense tree canopy, include parking lots, schools, and parking structures. All sites identified have 100kw potential or more. In terms of emergency microgrids, key sites are hospitals, EMS, ICUs, etc.

Some key challenges are: life cycle cost assessments, which should be NPV positive, capital vs. operating costs, split incentives, falling renewables prices not falling quickly enough, need for economies of scale, limited financing programs, a “swiss cheese landscape” that doesn’t serve everyone

There are also policy challenges, which include inconsistent permitting and cumbersome interconnection approval processes.

PAEC key findings:

- potential projects are being ignored for better payback
- modeling of project bundling found significant IRR (~18-22%)
- model ordinances, vetting with NPV positive, could be shared with municipalities to make the process easier
- On Bill Financing is great to public and commercial buildings, but what about residential?
- Policy is needed to help streamline interconnection/permitting. Clean Coalition is working with PGE to streamline the process.
- Energy Storage is a newer technology but prices are coming down quickly.

Gupta – Are the results based on today’s prices or anticipated costs?

Burt – This is a 21-month project so prices may have fluctuated but I’m sure the numbers are up to date. However, verify data on clean-coalition website

Cormia– What’s the possibility of getting GIS students more involved?

Burt - It would be great to see other students getting involved.

Springer – In packet, you will find link to CC website, dozens of reports to go through, each with great new insight.

Malini Kannan, Clean Coalition Program Engineer, continued the presentation with a PAEC Master Community Design, which was the final task in the grant. The Design is intended to put together findings of the first 9 tasks and identifies several project sites in Redwood City and is called the Redwood City Community Microgrid, which includes a diverse set of use cases:

The Designed core sites are proposed to include: solar emergency grid, community microgrids, or largescale EV charging deployment, with the project aiming to bring resilience to the community and municipal sectors.

The key findings we that it makes sense to:

- bundling project for lower cost and bankability
- solar + storage is feasible
- involves looking at facility and right sizing power for critical loads.
- design microgrids for building that already have EE projects
- integrating batteries with EV charging is cost effective which helps reduce demand charges.

Cormia - Analysis at Foothill shows for every 14 cars at demand charge is \$1000. Cost comes to \$10/charging day

Kannan - Was energy storage required or considered? Often, daytime EV charging profile shows a peak at 9, but then trickles down. A campus scenario is probably different.

Sites where solar, storage and EVCI will be installed in redwood city includes community microgrids, combining multiple meters into one. It’s easier to do these projects behind the meter. When more than one meters are combined, there is more red tape. CPUC code makes this difficult.

The proposed approach is that sites are only connected during grid outages, and the Clean Coalition is working with PGE to develop pilot project.

Gupta – A microgrid is defined as a group of loads that can be separate. Usually just one connection. Has this design been done on paper or has it been approved on PGE? Where is it?

Kannan - Partially, let’s skip ahead and look at the Phase 2 projects.

The Phase 2 projects include:

- deploying 1.2 mw of solar interconnected using PGE tariff NEM2
- behind the meter
- potential for 2.1mw in addition.
- additionally, 2.8 mw hours of battery storage.

Please see PAEC Project website for further details on individual projects: <http://www.clean-coalition.org/our-work/peninsula-advanced-energy-community/>

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

Adrienne Carr presented on the current water supply conditions and groundwater basin reprioritization in San Mateo County.

At this time, the System is full, with the only reservoir that isn't full being Calaveras which is under construction. Hetch Hetchy precipitation is just below a median year and the snowpack got up to 75% of median but is fully melted at this point. Up-country – precipitation: March was huge which brought it up to just under the average, and the same is true with Bay Area stations.

SFPUC water deliveries we're still under 2017 deliveries and conservation continues. BAWSCA total water use is still 26% less than 2013 and conserving water.

In terms of new conservation legislation, is requiring that water suppliers calculate and report use, conduct annual assessments, comparing target to actual use. First reporting will be in 2023, and the target includes indoor/outdoor residential, efficient outdoor water use, water loss, and a potable reuse credit. Most agencies (especially in Bay Area) are far below target of 55 gallons/person daily.

Derwin - What about communities like Bear Gulch which use a lot of water?

Carr - There are estimates related to the amount of irrigable land which will be considered. The DWR is responsible for giving each agency a number and there will likely be an opportunity to respond

In terms of enforcement, the actions will be in the form of:

- 2023, information orders,
- 2024, written notice,
- 2025, conservation orders.

In terms of implementation deadlines:

- 2020, DWR to recommend standards and provide irrigable water data
- 2021, outdoor residential to SWRCB
- 2022, state board adopts standards
- 2023, first reporting.

BAWSCA is currently revising conservation strategic plan. The workplan includes a consultant contracts for water loss management program, an indoor-outdoor water use study for some agencies that need more help, and a starting pilot program for commercial and Industrial audits.

Recently, DWR reprioritized groundwater basins, based on new data in CASGEM. Older data was used for original rankings back in 2014, and they used a more standardized way to evaluate basins, (water quality, pumping). In San Mateo County, the new method proposed Medium and High priority for San Mateo Plain and Westside Basin, and Half Moon Bay Terrace, respectively.

Kannan – What is efficient water loss?

Carr - each agency must report loss; the state will make a ruling on what is considered efficient. This includes leaks on utility/agency side.

6. Update and discussion on San Mateo County Energy Strategy 2025 content, DNV GL scope of work, stakeholder assignment effort, and project schedule

Kim Springer gave an update on continuing progress of launching the update of the San Mateo County Energy and Water Strategy 2025. The original Strategy was written by the USTF task force in 2006 to 2008. This time around, the RMCP Committee will receive updates and review the text of the document, but the stakeholder work will be completed outside of the Committee. Staff will insure additional levels of stakeholder review.

Springer presented updates to the stakeholder lists for both Energy and Water and presented the proposed launch date for the first joint stakeholder meeting to be on July 26.

Springer suggested that Goals, Actions, and then Strategies was the form of the original document and asked the Committee if this should be the same approach for the 2025 update.

Gupta - the framework is fine, topics are necessary to help our understanding but given PCE community programs, Clean Coalition and CEC grants, intercity/ community projects, there should be an action plan or suggested action plan.

Springer - This report is a transition. We should look back to where we were and look to where we're going. In this report, buildings are a larger player. (plus, the CCA). We also focused little on transportation in the last report. An action plan is a good idea.

The DNV GL Scope of Work to the support this project was approved. The scope proposed a framework for High level activities. (Please see presentation)

In terms of outreach already completed: there was a presentation to RICAPS a few months ago, then a presentation to the C/CAG board, and presentation to RICAPS at PCE again last month. The RICAPS presentation was structured so PCE outlined strategy to meet goals such as demand response or electrification, and PCE could outline objectives important to PCE and what their timeline looks like.

This project is an opportunity to bring that all together but we've got a long way to go.

Nagel - will this include WWTP and SLR, as well as portable water and energy generation?

Springer – Energy water nexus is to be included, but Adaptation is very broad. In terms of SPR and flooding, etc., there’s another CCAG committee working on that. But we could and probably should include threats to infrastructure and possible energy implications, such as relocating WWTPs.

Kannan – Has energy resilience come up?

Springer – Microgrids are included.

Derwin – So when is the launch meeting, the first of eight?

Springer – Tentatively July 26th

Maryanne – First meeting will be the both stakeholder groups, following meetings will be separate.

Gupta – It may not be related but I see some related issues with SLR, namely given water quality control plants, which focus on gravity control. I see potential to focus on how flow will be maintained. Longer term project but hugely important given land requirements and technical complexity.

Carr – There’s a “living levy” project which protects WWTP from SLR and provides storm and flood protection.

7. Report on State Energy Efficiency Collaborative Forum

Kim Springer reported that the State Energy Efficiency Collaborative Forum was the previous week (SEEC), that therefore the Committee meeting is always pushed to the fourth week in June. This year there was great concern over the recent CPUC decision, which will affect SMC Energy Watch program, but that staff is still unsure how much in 2019.

An opening meeting was with PGE to be brought up to speed on potential changes, mainly caused by the CPUC’s adopted higher cost effectiveness requirement, the TRC. The TRC is the equation that the CPUC used to determine cost effectiveness of EE programs. The adopted, higher, TRC will have effect on types of customers served by programs. PGE has portfolio of different programs (DI, LGP, Industrial, residential) which must meet TRC requirement.

CY 2019 will be a transition year and there are many unknowns in terms of programs, post CY 2019. PG&E offered three possible scenarios that LGPs could consider: resource focused, non-resource focused, or hybrid, the latter being the current form of the SMCEW program.

It is expected that the LGPs will start working more closely to address challenges caused by the CPUC decision.

Springer provided a sampling of SEEC conference sessions: Regulations and Legislation Impacting Local Government Energy Programs, Partnering with Chambers of Commerce to Reach the Business Community, EE Incentive Programs: Evolving Policy Requirements and Challenges, and Youth Engagement for Climate Action Implementation:

8. Committee Member Updates

Cormia - Foothill De Anza college district is preparing new facilities master plan. Huge insight on emissions. Emissions in 2017 were same as 1990 levels. 80% of residual energy was going to co-gens. FDCCD can reach 80% below 1990 levels by swapping out boilers. They want to commit to becoming carbon free by 2030. Not going out for bond this November, but still on that path. Urges us to think about at what point as a region do we want to make those big commitments and be a

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demonstration project for the region

9. Next Meeting Date: July 18, 2018

Meeting was adjourned.

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Resource Management and Climate Protection Committee (RMCP)

Minutes of July 18, 2018 Meeting

In Attendance:

Deborah Gordon, Committee Chair, Woodside Town Council*
Ortensia Lopez, El Concilio of San Mateo County*
Dave Pine, County Supervisor*
Maryann Moise Derwin, Committee Vice Chair, Mayor Portola Valley*
Diane Papan, Councilmember, San Mateo*
Adrienne Carr, BAWSCA*
Sandy Wong, C/CAG
Kim Springer, County Office of Sustainability
Danielle Lee, Office of Sustainability
Deborah Hirst, Supervisor Horsley
Derek Hansen, Mynt Systems
Misti Bucceri, PG&E Consultant

Not in attendance:

Rick DeGolia, Town of Atherton*
Beth Bahtnagar, SSMC Board Member*
Robert Cormia, Professor Foothill-DeAnza*
Pradeep Gupta, South San Francisco City Council*
Don Horsley, County Supervisor*

* Committee Member (voting)

1. Introductions

2. Public Comment

No public comments

3. Approval of Minutes from June 27, 2018 Committee meeting

- No quorum, postponed to next meeting

4. Update on Governor's Global Climate Action Summit and Affiliate Event

Kim Springer gave an update on the effort to connect the County and C/CAG with this event in San

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Francisco. Springer shared the presentations slides from the C40 website and the GCAS websites. There will be approximately 3000 visitors to San Francisco for the event.

Gordon: Precourt is going to hold its first annual event on climate and gathering the climate commitments and having an annual update on tracking those commitments. This will both help see these through and give Governor Brown a foot into Stanford to continue ongoing work.

There are several challenge areas for which governments can make pledges, mainly the larger cities of the world. There is a new pledge around mobility, the Fossil Fuel Free Streets declaration. Keeping track of the progress of the event is difficult.

Although C/CAG nor the County was able to designate an Affiliate Event, Joint Venture was able to, and staff has been working with JV to support the event. Tentatively, the event will be held at Genentech, and staff is also considering asking Proterra to help bus participants to and from the event.

Pine: How many affiliate events are there: Springer: there are about 300 and they stretch from LA to Seattle.

5. Presentation on Split Incentive with Integrated Approaches to Deep Energy Retrofits and Green Leases

Kim Springer gave an introduction of the topic and Derek Hansen, co-founder of Mynt Systems, and shared that he would also be participating in the Energy Water Strategy stakeholder group.

Mynt System focuses on B and C Class of buildings, existing buildings that have been built in the last 20-30 years. Derek's previous experience as a contractor showed him that there was desire to make building more sustainable, but that the "players" were unable to coordinate the approach. In general, the process reverse engineers the outcome of shared benefit for the tenant and landlord, while making the building new zero net energy. Mynt specializes in working with all parties to run the financial and energy analysis so that all the parties can understand the outcome prior to any work being completed. The goal is to model the entire project financially, energy, and human factors, so that all parties bought in. Generally, the project will provide savings back to the tenant and they will generally extend their lease. On the property owners side, the reduced operation cost is shifted into higher rent, by having the tenant pay not utility cost, but slightly higher rent instead. The net to the property owner is higher rent, which raises the property value of the building.

Papan: How does Mynt make money? Hansen: as a general contractor, we get paid on back end of the project.

Gordon: What drives you to complete and audit? Hansen: The utilities to include incentives in the payback.

Mynt begins with a simple audit and, once best opportunities are identified, will next move to investment grade audit, which is used run all the project specs and financials.

Papan: What is the cost per square foot for the retrofit? Hansen: The last project was about \$3M and was about 80,000 square feet.

Papan: Did you do the BiRite in Brisbane? Hansen: No, but these kinds of projects are getting a lot of notoriety.

Lee: Have you worked with public agencies and have they also been right on the money in terms of projected savings. Hansen: They have been very close to predicted.

6. Update on the San Mateo County Energy and Water Strategy 2025

Kim Springer provided an update on progress on the San Mateo County Energy and Water Strategy 2025 update. Staff has been working on building to stakeholder workgroups, one for Energy and one for Water. Springer listed the types of stakeholders and the organizations and individuals that will take part.

The first meeting will be next week and will be the launch of the project with the stakeholders.

Gordon: Is Gilead included as a stakeholder. If not, we should try to connect with them.

Papan: I met a guy from Ohm Connect and he may be a good candidate for a stakeholder.

The stakeholder group for the first energy strategy was the RMCP Committee. This time around, the new stakeholder group will bring the ideas together, but there will be review by both the RMCP Committee and there will be a larger circle of stakeholders as well, to comment on the content of the document.

Pradeep Gupta and Adrienne Carr will provide some perspective to the stakeholder group next week, we'll review the guiding principles and some historical perspective, and then the meeting will continue a review of the outline of the document. The meeting will be facilitated by the project consultant, DNV GL.

7. Report on Office of Ratepayer Advocate's Application for Rehearing of CPUC Decision and C/CAG's possible response

Kim Springer provided a report to the Committee, an overview of the challenges that C/CAG is trying to address with regard to the San Mateo County Energy Watch, Local Government Partnership program.

The Office of Ratepayer Advocates is trying to get the CPUC to move back to a higher TRC. Staff believes this is a mistake and that it will leave many ratepayers in San Mateo County behind.

C/CAG will work with other organizations that are planning to submit a joint response to the ORA's request, to the CPUC. Mainly, this update is to make the Committee aware of the challenges facing the SMCEW program and it moves into the 2019 program calendar year. Local Government Partnerships across the State are starting to coordinate on an approach to maintaining LGP programs.

Springer also noted that working to get comments into the CPUC, navigating their process, is very difficult for local governments. A future plan might be to work with the State legislature to make revisions to the Public Utilities Code to create support of local government programs.

8. Committee Member Updates

There were no member updates.

Meeting was adjourned.

9. Next Meeting Date: August 15, 2018

C/CAG AGENDA REPORT

Date: October 17, 2018
To: Resource Management and Climate Protection Committee
From: Mark Esguerra, Director, Integrated Grid Planning and Innovation
Subject: Presentation by PG&E on electric grid integration and innovation
(For further information contact Kim Springer at 650-599-1412)

RECOMMENDATION

Receive a presentation by PG&E on electric grid integration and innovation.

FISCAL IMPACT

None

BACKGROUND/DISCUSSION

PG&E's history of installing and managing electricity grid infrastructure goes back well over 100 years, and there have obviously been many changes to the size, capacity, and technology of the grid over that time. For instance, the first electric meters were installed by PG&E in San Francisco in 1912 and the first all-electric model home was built in 1920. Future years included tying the PG&E grid to other electric company grids in southern California and Oregon, energy efficiency efforts that began in the 1970s, and deployment of smart meters in the 2000s.

Today, PG&E and its customers are faced with multiple challenges as the electric grid has more and more demands placed on it. At the same time, the California Independent System Operator (CAISO) is challenged by the "duck curve", the challenge of ramping up non-solar energy supply in the later afternoon-evening hours to compensate for the sun setting on the growing number of grid-connected solar panels in California, and demand increases during those hours. In addition, there is considerable effort to transition both the transportation and building sectors to electrification.

PG&E's Director of Integrated Grid Planning and Innovation, Mark Esguerra, will provide a presentation on example projects and initiatives, on which his team is working. These include: streamlining interconnection of rooftop PV, developing public maps of the grid to support interconnection of distributed energy resources (DERs), and identification and installation of DER sites that can serve as alternatives to utility investments or upgrades.

ATTACHMENTS

None

C/CAG AGENDA REPORT

Date: October 17, 2018
To: Resource Management and Climate Protection Committee
From: Adrienne Carr, BAWSCA, RMCP Committee Member
Subject: Bay Area Water Supply and Conservation Agency update on current water supply and conservation

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

RECOMMENDATION

Receive an update on current water supply 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 June 27, 2018 meeting. Adrienne Carr, Senior Water Resources Specialist, will provide an update again at this meeting on the current conditions and other potential water supply topics.

ATTACHMENTS

None

C/CAG AGENDA REPORT

Date: October 17, 2018
To: Resource Management and Climate Protection Committee
From: Kim Springer, RMCP Committee Staff
Subject: Update and discussion on San Mateo County Energy Strategy 2025 stakeholder meetings and content development

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

RECOMMENDATION

Receive an update and discussion on San Mateo County Energy Strategy 2025 stakeholder meetings and content development.

FISCAL IMPACT

Staff time is paid for by funding under the C/CAG – PG&E Local Government Partnership (LGP) agreement and from Congestion Relief Funds for staffing of the RMCP Committee.

BACKGROUND/DISCUSSION

At the February 21, 2018 RMCP Committee meeting, the Committee decided 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 (than 10 years).

At the March 21, 2018 RMCP Committee meeting, staff presented a draft workplan and time line for the San Mateo County Energy Strategy 2025 update project.

At the April 18, 2018 RCMP Committee meeting, staff presented two documents for review and discussion, a list of Guiding Principles for the project, and a comparison of the topics covered in the original energy strategy to what's proposed for the 2025 version. That document also included a list of proposed stakeholders. Both documents have been updated, based on feedback received at the meeting and are provided as attachments to this staff report.

At the June 27, 2017 RMCP Committee meeting, staff presented the scope of work proposed for consultant DNV GL. Since the June meeting, staff has held three stakeholder meetings; a project launch meeting, and two meeting to review and gather input on the first two sections of the

This month, staff will update the Committee on progress to date and review the draft organizing framework and document outline (included in attached documents) for the San Mateo County Energy Strategy 2025 document.

ATTACHMENTS

- A. Draft Organizing Framework – Energy Strategy 2025
- B. Draft Energy Strategy Outline
- C. Guiding Principles

OPPORTUNITIES IN A CHANGING ENERGY LANDSCAPE

[background}

Key to categorizing actions

Policy or Policy support	
Outreach/Marketing	
Programs and Partnerships	
Smart Grid Infrastructure	
Technology	
Financing/ Incentives	

Goal E1. Optimize & Reduce

STRATEGY E1.1: Leverage passive design and smart building technologies to optimize and reduce energy use in existing buildings


















	Actions	SMC	City	PCE	Other
1.	Provide resources, work force development trainings for installers and building owners, managers to analyze building energy use to maximize energy, cost and emissions savings opportunities through a combination of measures.				PG&E
2.	Pursue development of local benchmarking and energy use disclosure ordinances, with County support for cities to develop policies and set EE goals				
3.	Leverage utility and PCE program incentives for energy efficiency and demand side management, such as a monitoring based commissioning program that works similar to Savings by Design for existing building retrofits..				
4.	Develop programs which encourage retrofits and smart home, real-time monitoring including sub-				

	metering, along with passive (efficiency) design features for major remodels.				
5.	Engage real estate and property management to address split-incentive issues, including developing tenant improvement guidelines and green lease contracting templates.				
6.	Leverage public-private partnerships and multisector resources support efforts like innovative pilots including a smart/efficient building design competitions. Secure partnerships with partners such as Nest, Mynt, OhmConnect.				











STRATEGY E1.2: Promote policy and high efficiency design approaches for zero net carbon in new construction

	Actions	SMC	City	PCE	Other
1.	Support regional approaches to promoting reach codes for new construction to go beyond state ZNE goals, including templates, pilots and case studies focusing on Net Zero Carbon (NZC), also known as all-electric. Partner with utilities around all electric infrastructure planning.	 	 		PG&E
2.	Adopt local reach codes and other green building policies focusing on Net Zero Carbon, beyond state ZNE codes. County to provide templates for NZC reach codes and outreach materials.				
3.	Aggressively promote all-electric new buildings including accessory dwelling units and funding for net zero carbon pilots.		 	 	
4.	Increase customer education and training for the trades around net zero carbon buildings, including efficiency and heat-pump (all-electric) heating/cooling systems.				Regional
5.	Integrate resilience assessments with energy audits for planning with new developments to ensure longevity, including consideration of future climate impacts (increasing heat, flooding, etc).				

STRATEGY E1.3: Leverage new technologies related to building electrification such as heat pump water and space Heater for water heating efficiency and reduced emissions












	Actions	SMC	City	PCE	Other
1.	Create Heat Pump Water Heater (HPWH) program – SMC supports cities and PCE to create HPWH education, training and outreach.	 			 
2.	Create public private partnership around mid-stream incentives and/or group buy of HPWH (similar to Sunshares). Work with utility or PCE to set up on-bill or easy financing solution.				 Regional & State
3.	With utility and PCE, explore opportunity to pilot a fleet of grid-enabled heat pump water heaters in multi-family new construction or large scale retrofit.				 Developer, Manufact.
4.	Promote workforce development opportunities related to building electrification, including cross-training of plumbing and electrical trades; engage manufacturers to provide trainings for all electric technologies (including stoves, heaters, etc).				
5.	Develop model reach codes for all electric building measures and streamline permitting processes for heat pump technology.				

STRATEGY E1.4: Align energy demand (loads) with renewable energy generation for grid stability












	Actions	SMC	City	PCE	Other
1.	Analyze buildings for demand response and load shaping opportunities; considering rolling out alongside Energy Benchmarking program launch.				
2.	Promote permanent shifts of load to times when renewable energy is plentiful through energy and thermal storage, load timing/controls, precooling/pre-heating and other measures				 Utility
3.	Promote automated demand response solutions/technologies to curtail customer demand (e.g., AC load control, etc)				

Goal E2. Decarbonize and shift to clean energy







STRATEGY E2.1: Support rapid community shift to 100% GHG-free electricity

	Actions	SMC	City	PCE	Other
1.	Create codes, partnerships, awareness campaigns and incentives to maximize opportunities for local rooftop PV and carport PV systems combined with energy storage for residential and commercial buildings.				
2.	Enhance building reach codes to support community scale smart solar projects with energy storage, and multifamily dwelling units electric vehicle charging infrastructure.				
3.	Promote ECO100 for all local government municipal operations and throughout the community. Municipalities also work to support direct access program to reach 100% renewables, for example, setting up a regional PPA.				
4.	Research seasonal and time dependent impacts on grid				
5.	Plan for regional or municipal emergency centers to site battery storage.				






STRATEGY E2.2: Electrify transportation

	Actions	SMC	City	PCE	Other
1.	Initially focus on fleet electrification opportunities (e.g., school buses, transit, municipal fleets, etc). Work with TDMs, transportation network companies to electrify commuter fleets. Provide fleet manager trainings.				
2.	Accelerate adoption of electric vehicles in the community: Provide incentives and expand bulk buy opportunities. Promote through municipal channels as well as ride and drive events				 State
3.	State and regional partnerships to promote and incentivize EVs, and include low emission biofuel for existing vehicles, and off-road equipment alternatives.				 PG&E









STRATEGY E2.3: Increase EV charging infrastructure countywide

	Actions	SMC	City	PCE	Other
1.	Develop an organized charging infrastructure strategy that incorporates expansion throughout the region including curbside, workplace, fast chargers and at home charging. Include tools for assessment and policy templates				
2.	Work with PG&E on EV2Grid strategies for load shaping.				
3.	Provide model charging rates policies and information to cities.				
4.	Develop model ordinances and policies for EVCI in multi-unit dwellings and low income communities				

STRATEGY E2.4: Participate in Building Electrification Advocacy

	Actions	SMC	City	PCE	Other
1.	Support building electrification through regional and statewide advocacy				 NGOs
2.	Research gas line issues, gas data and policy pathways to expose the facts on methane leaks and dangers, and true costs				

STRATEGY E2.5: Foster innovative local energy sources

	Actions	SMC	City	PCE	Other
1.	Explore waste to energy and district options				
2.	Promote food waste to energy projects such as landfill methane capture				
3.	Explore opportunities for renewable gas, including biogas, digester gas and landfill gas, and pyrolysis for unrecyclable plastic waste				
4.	Study wind, tidal and other renewables in region				
5.	Develop a partnership program or regional collaboration for R&D, investments and opportunities in local alternative/clean energy businesses				

Goal E3. Modernize the grid for resilience and decarbonization

STRATEGY E3.1: Support integrated distributed energy resources (DER) solutions for resilience and optimization

	Actions	SMC	City	PCE	Other
1.	Support microgrids for community resilience, including community awareness and public-private partnerships with municipal buildings and assets				
2.	Explore opportunities to monetize multiple benefits associated with battery storage				
3.	Streamline permit processes (city, county, state, utility) for new DER technologies including for storage and electric vehicle charging infrastructure				

STRATEGY E3.2: Utilize equity tools to expand access to clean energy projects and job opportunities

	Actions	SMC	City	PCE	Other
1.	Outreach to local organizations and communities of concern to identify workforce development and training needs				
2.	Partner with San Mateo Community College District, PCE, PG&E and other organizations to develop new training and workforce development programs				

STRATEGY E3.3: Leverage open data and big data opportunities to transform energy systems locally

	Actions	SMC	City	PCE	other
1.	Develop an integrated map of DER on easy to access shared platform (e.g., with multiple information layers a la Google, Kevala, etc.)				
2.	Support utility distribution maps (PAEC, PG&E, etc.) to show solar potential, hosting capacity, and other grid analyses,				
3.	Including Clean Coalition assets to map county load capacity				
4.	Lean on utility leadership to make strategic plan (specifically construction time lines) transparent in order to prioritize improvement (ideally electrify in lieu of new 50-year gas distribution strategy)				

STRATEGY E3.4: Explore and develop innovative financing and funding models for advanced energy community solutions



















	Actions	SMC	City	PCE	Other
1.	Advocate for new gas taxes to raise funds for electrification				
2.	Utility user tax (UUT) - Support natural gas tax				
3.	Explore new opportunities to leverage private capital for decarbonization initiatives				

REALIZING THE VISION OF ONE WATER

















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Goal 1. Enhanced conservation















STRATEGY W1.1: Expand residential and commercial programs for indoor water conservation

	Actions	SMC	BAWSCA	Retailer	City
1.	Promote self-audit approaches to identifying water efficiency opportunities				
2.	Implement and evaluate cost-effective commercial/industrial water efficiency measures				
3.	Design program for remaining residential water efficiency opportunities				
4.	Work with city inspectors to ensure enforcement of state requirements for water efficient fixtures and appliances for new buildings and retrofits				
5.	Update mandatory ordinances for water efficiency above state requirements				

STRATEGY W1.2: Expand programs for outdoor water use efficiency












	Actions	SMC	BAWSCA	Retailer	City
1.	Provide standardized landscape conversion designs (e.g., Lawn-Be-Gone programs)				
2.	Provide efficient irrigation standards to assist property owners with landscape decisions				
3.	Promote Bay Friendly Landscape Guidelines and other resources for new buildings and landscape replacement				
4.	Explore workforce development opportunities for landscape professionals to understand technologies and strategies for water conservation				

STRATEGY W1.3: Provide better real-time water consumption data to improve public information on individual customer water use and reduction opportunities







	Actions	SMC	BAWSCA	Retailer	City
1.	Support advanced metering infrastructure (AMI) and smart meters for water				
2.	Develop new programs to provide real-time water consumption data to residents and business owners to influence behavioral usage				
3.	Support pilots for utilizing phone-enabled customer engagement approaches				
4.	Encourage submetering in new construction				
5.	Fund and develop leak detection at the building level				

Goal 2. Alternative sources of water








STRATEGY W2.1: Encourage water reuse

	Actions	SMC	BAWSCA	Retailer	City
1.	Increase education and outreach related to potable and non-potable reuse opportunities,				
2.	Support development of on-site non-potable reuse regulatory/implementation framework including model ordinances for new construction				
3.	Provide additional incentives and resources for non-potable reuse (e.g., greywater, rainwater, stormwater) for landscape irrigation, including demonstration projects and trainings				

STRATEGY W2.2: Support expanded use of utility-supplied recycled water

	Actions	SMC	BAWSCA	Retailer	City
1.	Promote use of recycled water in pre-plumbing and landscape				
2.	Bring awareness and outreach for potable reuse				
3.	Promote potable reuse pilots				

STRATEGY W2.3: Continue to explore new innovative technologies for alternative water

	Actions	SMC	BAWSCA	Retailer	City
1.	Support investigation of innovation desalination or brackish greywater projects				
2.	Explore opportunities related to surface water management and integrated water management on the coast side				
3.	Support innovative water technologies (fog, condensation, recycled water and energy)				

Goal 3. Systemic improvements

STRATEGY W3.1: Engage with stakeholders countywide on Integrated Regional Water

	Actions	SMC	BAWSCA	Retailer	City
1.	Support awareness and community outreach related to water supply, wastewater treatment, flood and stormwater management and impacts of climate change				
2.	Promote school programs focused on water efficiency and conservation				

STRATEGY W3.2: Support resilience of regional wastewater treatment plants

	Actions	SMC	BAWSCA	Retailer	City
1.	Leverage countywide sea level rise vulnerability assessment to identify largest risks				
2.	Identify opportunities to reduce backflow utilizing strategies such as horizontal levees				

STRATEGY W3.3: Leverage green infrastructure for improved urban environments and complete streets that support groundwater recharge

	Actions	SMC	BAWSCA	Retailer	City
1.	Expand requirements and incentives for installing permeable pavement				
2.	Promote vegetated stormwater features (e.g., bioretention, bioswales)				
3.	Promote disconnection of impervious surfaces (e.g., gutters drain to vegetated area instead of pavement)				
4.	Provide design guidelines and incentives for streetscape improvements that incorporate green				

	infrastructure for stormwater management and groundwater recharge				
5.	Include stormwater and flooding conveyance and impoundments in city planning				

STRATEGY W3.4: Encourage innovation for water utilities

	Actions	SMC	BAWSCA	Retailer	City
1.	Assess water rates and ensure true cost of water as part of stakeholder engagement				
2.	Improve leak detection on utility side of the meter				
3.	Explore opportunities for open data related to water consumption to spur innovation in water efficiency programs and management practices				

ENERGY AND WATER STRATEGY 2025

BACKGROUND: A SUSTAINABLE COUNTY’S STORY

- A. Energy Strategy 2012
- B. Desired Outcomes
- C. Guiding Principles
- D. How to Use this Strategic Plan

CONTEXT: ENERGY

- A. Role of Energy
- B. Regulatory framework
 - SB 32 to 2030 and EO B 30 15 to 2050. CalTrain Electrification. CAFÉ standards. ZNE. 5,000,000 million EVS on the road by 2030. RPS.
- C. Specific Issues and Challenges
 - CCAs! PCE launched and x% of households are now using 100% renewable energy. Electric vehicles... ZNE... Energy landscape is changing.
 - New Tariffs – net metering, demand management, feed-in tariff programs,
 - Engagement in local utility commission proceedings
- D. Past and Current Data and Trends
 - Energy consumption trends in San Mateo County – solar PV, EV penetration, etc.
 - Sunshares, Microgrids, innovation in the County







CONTEXT: WATER

- A. Role of Water
- B. Regulatory framework
- C. Specific Issues and Challenges
- D. Past and Current Data and Trends
- E. Energy-Water Nexus: Collaborative Impact
 - a. Important Examples: Partnering to bring about a sustainable energy future is more promising than ever, between the county, the cities, PCE and the dedicated NGOs and businesses in the region. These are our key implementation and resource partners: NGO, Biz, foundations, CBOs, Academic Institutions, Networks, Peer networks, utilities, CCAs.
 - b. Specific Issues and Challenges

OPPORTUNITIES IN A CHANGING ENERGY LANDSCAPE

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Key to categorizing actions

Policy or Policy support	
Outreach/Marketing	
Programs and Partnerships	
Smart Grid Infrastructure	
Technology	
Financing/ Incentives	

Goal E1. Optimize & Reduce














STRATEGY E1.1: Leverage passive design and smart building technologies to optimize and reduce energy use in existing buildings

Actions	SMC	City	PCE	Other
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1.	Provide resources, work force development trainings for installers and building owners, managers to analyze building energy use to maximize energy, cost and emissions savings opportunities through a combination of measures.				PG&E
2.	Pursue development of local benchmarking and energy use disclosure ordinances, with County support for cities to develop policies and set EE goals				
3.	Leverage utility and PCE program incentives for energy efficiency and demand side management, such as a monitoring based commissioning program that works similar to Savings by Design for existing building retrofits..				
4.	Develop programs which encourage retrofits and smart home, real-time monitoring including sub-metering, along with passive (efficiency) design features for major remodels.				
5.	Engage real estate and property management to address split-incentive issues, including developing tenant improvement guidelines and green lease contracting templates.				
6.	Leverage public-private partnerships and multisector resources support efforts like innovative pilots including a smart/efficient building design competitions. Secure partnerships with partners such as Nest, Mynt, OhmConnect.				

STRATEGY E1.2: Promote policy and high efficiency design approaches for zero net carbon in new construction

	Actions	SMC	City	PCE	Other
1.	Support regional approaches to promoting reach codes for new construction to go beyond state ZNE goals, including templates, pilots and case studies focusing on Net Zero Carbon (NZC), also known as all-electric. Partner with utilities around all electric infrastructure planning.	 	 		PG&E
2.	Adopt local reach codes and other green building policies focusing on Net Zero Carbon, beyond state ZNE codes. County to provide templates for NZC reach codes and outreach materials.				

3.	Aggressively promote all-electric new buildings including accessory dwelling units and funding for net zero carbon pilots.			 	
4.	Increase customer education and training for the trades around net zero carbon buildings, including efficiency and heat-pump (all-electric) heating/cooling systems.				Regional 
5.	Integrate resilience assessments with energy audits for planning with new developments to ensure longevity, including consideration of future climate impacts (increasing heat, flooding, etc).				

STRATEGY E1.3: Leverage new technologies related to building electrification such as heat pump water and space Heater for water heating efficiency and reduced emissions

	Actions	SMC	City	PCE	Other
1.	Create Heat Pump Water Heater (HPWH) program – SMC supports cities and PCE to create HPWH education, training and outreach.	 			 
2.	Create public private partnership around mid-stream incentives and/or group buy of HPWH (similar to Sunshares). Work with utility or PCE to set up on-bill or easy financing solution.				 Regional & State
3.	With utility and PCE, explore opportunity to pilot a fleet of grid-enabled heat pump water heaters in multi-family new construction or large scale retrofit.				 Developer, Manufact.
4.	Promote workforce development opportunities related to building electrification, including cross-training of plumbing and electrical trades; engage manufacturers to provide trainings for all electric technologies (including stoves, heaters, etc).				
5.	Develop model reach codes for all electric building measures and streamline permitting processes for heat pump technology.				

STRATEGY E1.4: Align energy demand (loads) with renewable energy generation for grid stability

Actions	SMC	City	PCE	Other
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1.	Analyze buildings for demand response and load shaping opportunities; considering rolling out alongside Energy Benchmarking program launch.				
2.	Promote permanent shifts of load to times when renewable energy is plentiful through energy and thermal storage, load timing/controls, precooling/pre-heating and other measures				Utility
3.	Promote automated demand response solutions/technologies to curtail customer demand (e.g., AC load control, etc)				








Goal E2. Decarbonize and shift to clean energy

STRATEGY E2.1: Support rapid community shift to 100% GHG-free electricity







	Actions	SMC	City	PCE	Other
1.	Create codes, partnerships, awareness campaigns and incentives to maximize opportunities for local rooftop PV and carport PV systems combined with energy storage for residential and commercial buildings.	 	 	 	
2.	Enhance building reach codes to support community scale smart solar projects with energy storage, and multifamily dwelling units electric vehicle charging infrastructure.				
3.	Promote ECO100 for all local government municipal operations and throughout the community. Municipalities also work to support direct access program to reach 100% renewables, for example, setting up a regional PPA.	 	 		
4.	Research seasonal and time dependent impacts on grid				
5.	Plan for regional or municipal emergency centers to site battery storage.				

STRATEGY E2.2: Electrify transportation






	Actions	SMC	City	PCE	Other
1.	Initially focus on fleet electrification opportunities (e.g., school buses, transit, municipal fleets, etc.). Work with TDMs, transportation network companies to electrify commuter fleets. Provide fleet manager trainings.				

2.	Accelerate adoption of electric vehicles in the community: Provide incentives and expand bulk buy opportunities. Promote through municipal channels as well as ride and drive events				 State
3.	State and regional partnerships to promote and incentivize EVs, and include low emission biofuel for existing vehicles, and off-road equipment alternatives.				 PG&E



STRATEGY E2.3: Increase EV charging infrastructure countywide







	Actions	SMC	City	PCE	Other
1.	Develop an organized charging infrastructure strategy that incorporates expansion throughout the region including curbside, workplace, fast chargers and at home charging. Include tools for assessment and policy templates				
2.	Work with PG&E on EV2Grid strategies for load shaping.				
3.	Provide model charging rates policies and information to cities.				
4.	Develop model ordinances and policies for EVCI in multi-unit dwellings and low income communities				

STRATEGY E2.4: Participate in Building Electrification Advocacy

	Actions	SMC	City	PCE	Other
1.	Support building electrification through regional and statewide advocacy				 NGOs
2.	Research gas line issues, gas data and policy pathways to expose the facts on methane leaks and dangers, and true costs				

STRATEGY E2.5: Foster innovative local energy sources

	Actions	SMC	City	PCE	Other
1.	Explore waste to energy and district options				
2.	Promote food waste to energy projects such as landfill methane capture				

3.	Explore opportunities for renewable gas, including biogas, digester gas and landfill gas, and pyrolysis for unrecyclable plastic waste				
4.	Study wind, tidal and other renewables in region				
5.	Develop a partnership program or regional collaboration for R&D, investments and opportunities in local alternative/clean energy businesses				

Goal E3. Modernize the grid for resilience and decarbonization

STRATEGY E3.1: Support integrated distributed energy resources (DER) solutions for resilience and optimization

	Actions	SMC	City	PCE	Other
1.	Support microgrids for community resilience, including community awareness and public-private partnerships with municipal buildings and assets				
2.	Explore opportunities to monetize multiple benefits associated with battery storage				
3.	Streamline permit processes (city, county, state, utility) for new DER technologies including for storage and electric vehicle charging infrastructure				

STRATEGY E3.2: Utilize equity tools to expand access to clean energy projects and job opportunities

	Actions	SMC	City	PCE	Other
1.	Outreach to local organizations and communities of concern to identify workforce development and training needs				
2.	Partner with San Mateo Community College District, PCE, PG&E and other organizations to develop new training and workforce development programs				

STRATEGY E3.3: Leverage open data and big data opportunities to transform energy systems locally

	Actions	SMC	City	PCE	other
1.	Develop an integrated map of DER on easy to access shared platform (e.g., with multiple information layers a la Google, Kevala, etc.)				

2.	Support utility distribution maps (PAEC, PG&E, etc.) to show solar potential, hosting capacity, and other grid analyses,				
3.	Including Clean Coalition assets to map county load capacity				
4.	Lean on utility leadership to make strategic plan (specifically construction time lines) transparent in order to prioritize improvement (ideally electrify in lieu of new 50-year gas distribution strategy)				

STRATEGY E3.4: Explore and develop innovative financing and funding models for advanced energy community solutions



















	Actions	SMC	City	PCE	Other
1.	Advocate for new gas taxes to raise funds for electrification				
2.	Utility user tax (UUT) - Support natural gas tax				
3.	Explore new opportunities to leverage private capital for decarbonization initiatives				

REALIZING THE VISION OF ONE WATER

















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Goal 1. Enhanced conservation















STRATEGY W1.1: Expand residential and commercial programs for indoor water conservation

	Actions	SMC	BAWSCA	Retailer	City
1.	Promote self-audit approaches to identifying water efficiency opportunities				
2.	Implement and evaluate cost-effective commercial/industrial water efficiency measures				
3.	Design program for remaining residential water efficiency opportunities				
4.	Work with city inspectors to ensure enforcement of state requirements for water efficient fixtures and appliances for new buildings and retrofits				
5.	Update mandatory ordinances for water efficiency above state requirements				

STRATEGY W1.2: Expand programs for outdoor water use efficiency












	Actions	SMC	BAWSCA	Retailer	City
1.	Provide standardized landscape conversion designs (e.g., Lawn-Be-Gone programs)				
2.	Provide efficient irrigation standards to assist property owners with landscape decisions				
3.	Promote Bay Friendly Landscape Guidelines and other resources for new buildings and landscape replacement				
4.	Explore workforce development opportunities for landscape professionals to understand technologies and strategies for water conservation				

STRATEGY W1.3: Provide better real-time water consumption data to improve public information on individual customer water use and reduction opportunities







	Actions	SMC	BAWSCA	Retailer	City
1.	Support advanced metering infrastructure (AMI) and smart meters for water				
2.	Develop new programs to provide real-time water consumption data to residents and business owners to influence behavioral usage				
3.	Support pilots for utilizing phone-enabled customer engagement approaches				
4.	Encourage submetering in new construction				
5.	Fund and develop leak detection at the building level				

Goal 2. Alternative sources of water








STRATEGY W2.1: Encourage water reuse

	Actions	SMC	BAWSCA	Retailer	City
1.	Increase education and outreach related to potable and non-potable reuse opportunities,				
2.	Support development of on-site non-potable reuse regulatory/implementation framework including model ordinances for new construction				
3.	Provide additional incentives and resources for non-potable reuse (e.g., greywater, rainwater, stormwater) for landscape irrigation, including demonstration projects and trainings				

STRATEGY W2.2: Support expanded use of utility-supplied recycled water

	Actions	SMC	BAWSCA	Retailer	City
1.	Promote use of recycled water in pre-plumbing and landscape				
2.	Bring awareness and outreach for potable reuse				
3.	Promote potable reuse pilots				

STRATEGY W2.3: Continue to explore new innovative technologies for alternative water

	Actions	SMC	BAWSCA	Retailer	City
1.	Support investigation of innovation desalination or brackish greywater projects				
2.	Explore opportunities related to surface water management and integrated water management on the coast side				
3.	Support innovative water technologies (fog, condensation, recycled water and energy)				

Goal 3. Systemic improvements

STRATEGY W3.1: Engage with stakeholders countywide on Integrated Regional Water

	Actions	SMC	BAWSCA	Retailer	City
1.	Support awareness and community outreach related to water supply, wastewater treatment, flood and stormwater management and impacts of climate change				
2.	Promote school programs focused on water efficiency and conservation				

STRATEGY W3.2: Support resilience of regional wastewater treatment plants

	Actions	SMC	BAWSCA	Retailer	City
1.	Leverage countywide sea level rise vulnerability assessment to identify largest risks				
2.	Identify opportunities to reduce backflow utilizing strategies such as horizontal levees				

STRATEGY W3.3: Leverage green infrastructure for improved urban environments and complete streets that support groundwater recharge

	Actions	SMC	BAWSCA	Retailer	City
1.	Expand requirements and incentives for installing permeable pavement				
2.	Promote vegetated stormwater features (e.g., bioretention, bioswales)				
3.	Promote disconnection of impervious surfaces (e.g., gutters drain to vegetated area instead of pavement)				
4.	Provide design guidelines and incentives for streetscape improvements that incorporate green infrastructure for stormwater management and groundwater recharge				
5.	Include stormwater and flooding conveyance and impoundments in city planning				

STRATEGY W3.4: Encourage innovation for water utilities

	Actions	SMC	BAWSCA	Retailer	City
1.	Assess water rates and ensure true cost of water as part of stakeholder engagement				
2.	Improve leak detection on utility side of the meter				

3.	Explore opportunities for open data related to water consumption to spur innovation in water efficiency programs and management practices				
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INNOVATION AND ECONOMY

Funding

Partnerships and Collaboration

LEADERSHIP, IMPLEMENTATION, AND NEXT STEPS

How progress will be tracked? Who leads? County will....

CONCLUSION

Why what we do here matters. San Mateo County leading the way

A. Guiding Principles-:

Energy and Water supply in San Mateo County will be:

- **Sustainable**
Support positive environmental impact with the lowest possible carbon footprint for delivered and consumed energy and water
- **Equitable**
Ensure energy and water is accessible to all, regardless of socioeconomic or other status
- **Abundant**
Provide water and energy at a capacity to serve current and future needs
- **Reliable**
Build and maintain infrastructure so that energy and water is there when you need it
- **Resilient**
Prepare for the effects of climate change to ensure that energy and water is there when you need it
- **Affordable**
Provide energy and water at a cost that is competitive or economically stable
- **Safe**
Ensure energy and water is safe to consume, cybersecure, and does not pose a hazard for the community.

C/CAG AGENDA REPORT

Date: October 17, 2018
To: Resource Management and Climate Protection Committee
From: Kim Springer, RMCP Committee Staff
Subject: Presentation on 2050 Partners, Inc. Job Order Contracting feasibility study scope of work

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

RECOMMENDATION

Receive a presentation on 2050 Partners, Inc. Job Order Contracting feasibility study scope of work.

FISCAL IMPACT

Funding for the feasibility study, in the amount of \$35,000, comes from the PG&E Local Government Partnership implementation funds.

BACKGROUND/DISCUSSION

The process of implementing energy efficiency measure at local government sites, requires a multi-step process that, depending on the project scope, can take between six months and two years. The follow steps are (generally) required to implement successful projects: initial project identification meeting, preliminary walkthrough, comprehensive audit, development of measure list and costs proposal, follow up meeting with site staff to review proposal and select measures to be implemented, development of project specifications, procurement of contractor to install selected measures, installation, final walkthrough and processing of incentives. One of the longest and most time-consuming steps for city staff is the three to four months required for procurement of contractors.

Job Order Contracting (JOC) is a method that can greatly reduce the time to move from specifications to installation. JOC involves establishing a list of contracting services, such as installing lighting fixtures or replacing heating and air conditioning systems, into a book of services that multiple contractors can bid on all at once, and in advance of the need for services.

C/CAG recently contracted with 2050 Partners, Inc. to perform a feasibility study to evaluate the opportunity to develop a multi-city job order contracting approach for energy efficiency project at municipal buildings across San Mateo County. Staff will provide a presentation on the scope of work for this project.

ATTACHMENTS

2050 Partners, Inc. – Scope of Work

Exhibit A

CONSULTANT BILLING RATES

Hourly billing rates for 2050 Partner, Inc., as shown below, are consistent with billing rates used for the Pacific Gas and Electric Company.

<u>Labor Classification</u>	<u>Billing Rates (\$/Hr)</u>
Principal II	\$229.00
Principal I	\$205.00
Director	N/A
Subject Matter Expert	N/A
Engineer Manager	\$184.00
Engineer Section Head	\$167.00
Engineer Project Leader	\$156.00
Engineer III	\$137.00
Engineer II	\$124.00
Engineer I	\$101.00
Architect I	N/A
Project Manager, Senior	\$149.00
Project Manager	\$135.00
Training Development Consultant	N/A
Education Consultant	N/A
Senior Instructional Design Consultant	N/A
Instructional Design Consultant	N/A
Junior Instructional Design Consultant	N/A
Senior Technical Support Specialist	N/A
Technical Support Specialist	N/A
Junior Technical Support Specialist	N/A
Managing Consultant	N/A
Consultant	N/A
Associate	N/A
Senior Analyst	N/A
Analyst	\$99.00
Administrative Assistant	\$65.00
Intern	\$40.00

2050 Partners Personnel	Labor Classification
Ted Pope	Principal II
Chris Vance, Jenn Fox, Gypsy Achong	Engineering Section Head
Whitney Pope	Senior Project Manager

Exhibit B

SCOPE OF WORK

Background

The City/County Association of Governments of San Mateo County (C/CAG) is the Local Government Partnership (LGP) to PG&E for energy efficiency services to the cities and County in San Mateo County. For the LGP program, the San Mateo County Energy Watch (SMCEW), the cycle of identifying and finalizing the installation of energy efficiency projects at municipal buildings in San Mateo County requires considerable chronological time. One of the time-consuming contributors to the process for cities and the County, is the RFP and review process typical in government contractor procurement by staff, for contracts to install specified energy efficiency measures, such as lighting and HVAC. C/CAG believes that Job Order Contracting (JOC) provides a procurement option that can streamline the process, reducing city and County staff time and reducing the chronological time to final project installation.

An Energy Efficiency JOC Program would help cities and other public agencies accelerate the construction bidding process, obtain quality contractors with energy efficiency experience, and control project costs while meeting state competitive bidding requirements. If successful, the program could significantly decrease the energy use and Greenhouse Gas Emissions of participating Cities by helping them complete identified projects and realize energy savings.

This contract is to study the feasibility of establishing a cooperative, multi-city job order contracting “tool” for cities in San Mateo County. Specifically, the Consultant will provide expert advice and assist SMCEW with assessing the feasibility of establishing an energy efficiency JOC program for public agencies in San Mateo County.

Definitions

Job Order Contracting (JOC): a unique indefinite quantity type of contract that enables facility owners to accomplish a large number of repair and construction projects with a single, competitively bid on-call contract that can be awarded before any projects are identified.

The Gordian Group (TGG): provides innovative construction procurement solutions that simplify the bidding process, optimize cost savings, increase construction quality, and keep projects on schedule.

Sourcewell: a national public service agency governed by a board of locally elected directors that has the legal authority to facilitate cooperative procurement for a variety of services and equipment on behalf of public sector agencies, including competitively bid contracts for construction that conform to the joint powers authority law within each state.

Construction Task Catalog (CTC): A published catalog used by the JOC program that contains pre-set unit prices for detailed construction tasks, the pricing of which is based upon local wages and materials. The Gordian Group refers to the catalogs as the “Construction Task Catalog”.

Scope of Work

Task 1: Solicit input from Key Stakeholders

1.1 Kick-Off Meeting with SMCEW

Consultant will meet with SMCEW Program Manager to clarify objectives, goals, tasks, schedules, and responsibilities of team members. This meeting will be an important first step in understanding SMCEW’s objectives and discussing the overall strategy for soliciting input from key stakeholders and prioritizing personnel to employ from the various cities. This task includes preparation and travel time as well as an approximately two-hour meeting at SMCEW’s main office. Consultant will provide a summary of the key points discussed in the meeting.

1.2 Develop Stakeholder Input Method, Contacts and Questions

Consultant will work with the SMCEW Program Manager to determine the method, contacts, questions, and script that will be used to conduct the stakeholder interviews and analysis. The intent of this task is to refine the approach for assessing the key program stakeholders including their relative level of interest or influence on the program’s feasibility, design and success. Consultant will conduct research and collect any additional information on the legal justifications used by other cities to access JOC contracts in California as necessary in order to help educate personnel selected for interviews. Consultant will review information on energy projects proposed by the cities within San Mateo County if provided by the SMCEW Program Manager.

1.3 Support Discussions and Coordination with Gordian Group and Sourcewell

Consultant will provide support to SMCEW Program Manager to gather information and facilitate discussions with The Gordian Group and Sourcewell for their expertise in public procurement options for JOCs in the State of California. Consultant will help coordinate activities with The Gordian Group as necessary, including participation in the stakeholder interviews, input on the analysis of the interviews, and development of program design

recommendations. Consultant will summarize key information obtained from The Gordian Group pertaining to the feasibility and approach for establishing an energy efficiency JOC program for the SMCEW for inclusion in the final report.

1.4 Conduct Stakeholder Interviews and Solicit Stakeholder Input

Consultant will conduct meetings with key personnel from C/CAG and the cities within San Mateo County at SMCEW's direction to solicit input on their level of knowledge, interest and other topics related to the feasibility of using an energy efficiency JOC program to implement energy retrofits on their facilities. Key City personnel will be identified by SMCEW Program Manager and may include City Manager, Public Works Director, and procurement, legal, and facility operations staff. The method for soliciting input will include facilitating individual meetings with key personnel from individual cities primarily using a web-based Zoom platform, or in-person interviews, at the direction of the SMCEW Program Manager, as the budget allows. The budget allows for up to 30 hours of meetings and conversations not including travel time and assumes the SMCEW Program Manager will help facilitate outreach to selected contacts.

Topics and questions for input may include:

a. What kinds of energy projects is the City interested in implementing via JOCs. This will be helpful in determining the range and kinds of Job Order Contracts that would need to be solicited and established.

- i. Lighting (beyond simple Direct Install type projects)
- ii. Mechanical
- iii. Street Lighting
- iv. Other (process, water, etc.)
- v. Renewable and Power Storage

In general, what path would the City pursue to implement the projects without the use of JOCs? How long does that typically take?

b. What kinds of additional technical assistance might the City need to assist it in implementing meaningful energy projects using Job Order Contracts for construction?

- c. What options do procurement staff and legal counsel believe they have available to them to “piggy back” on the open, competitive procurement process undertaken by another agency? Are they familiar with Job Order Contracting? How do they view the following options for accessing competitively solicited cooperative contracts for Job Order Contracting construction services?
- Solicitation conducted by San Mateo County; contracts accessed via justification using Section 4217.10, et seq., of the Government Code (ability to implement conservation measures in an expedited manner), or Section 6500, et seq., of the Government Code known as the Joint Exercise of Powers Act.
 - Solicitation conducted by C/CAG; contracts accessed via justification using Section 4217.10, et seq., or Section 6500, et seq., of the Government Code.
 - Solicitation conducted by Sourcewell (formally the National Joint Powers Alliance); contracts accessed via justification using Section 4217.10, et seq., or Section 6500, et seq., of the Government Code.
 - Other strategies and justifications not yet identified?

1.5 Summarize Stakeholder Input and Analysis Results

Consultant will provide a brief summary of the stakeholder analysis results consisting of a table listing key stakeholder answers to the questions and their level of importance, influence, and positive or negative interests or impacts in regards to the proposed EE JOC program. This information will inform the assessment of the program feasibility and design recommendations.

Task 1 Deliverable (s) | Due Date (s):

- Deliverables:
 - Kick-off meeting notes.
 - List of questions to be used when conducting the interviews.
 - Table summarizing answers to key questions.
 - Analysis and summary of results pertaining to program strategy and design.
 - Summary of key information obtained from The Gordian Group for inclusion in Final Report.
- Date Due: Specific deliverables will be due according to SMCEW direction, but the Consultant will strive to complete Task 1 by the end of November 2018 depending on the availability of key contacts to be interviewed under SMCEW direction.

Task 1 Total Budget:

NTE \$22,621

Task 2: Develop EE JOC Program Strategy and Program Design

Based upon the input solicited during task 1 above, Consultant will work with SMCEW Program Manager and The Gordian Group to determine:

- Range of JOC contracts for use by C/CAG Members.
- Procurement strategy that identifies the types of parties involved, the responsibilities they would assume, the lead agency responsible for procuring the contracts, and recommended legal justification(s) the cities may use to access the JOC contracts.
- Technical assistance support needs for various cities and options for meeting these needs.
- Program set up cost and annual operating costs.

Consultant, in coordination with The Gordian Group, will assess the general level of updates required to the Construction Task Catalog and Specifications Book (Specs) so they can be synchronized with PG&E energy efficiency measure codes.

Consultant will estimate the program set up cost and the annual operating costs associated with the recommended program design, to be included in the draft and final reports.

Task 2 Deliverable (s) | Due Date (s):

- Deliverable: Documents under direction from SMCEW as allowed within the remaining budget. (Note: most of the information gathered during Task 2 will be summarized in the draft and final reports.)
- Date Due: Specific deliverables will be due according to SMCEW direction.

Task 2 Total Budget: NTE \$6,699

Task 3: Prepare Report on Recommended EE JOC Program Strategy

Consultant will prepare a report that summarizes the findings from Task 1 and Task 2 above, and outlines the overall recommended strategy, the parties involved, the responsibilities they would assume, and the kinds of JOC contracts that would be solicited in order to establish an energy efficiency JOC program for the SMCEW. The report will describe the main steps, timeframe including estimated set up time, and the annual program operating costs. Consultant will deliver a draft report for review by the SMCEW Program Manager, A final report will be delivered within one week of receiving comments on the draft report.

Task 3 Deliverable (s) | Due Date (s):

- Deliverable: Draft and Final Reports
- Date Due: Specific deliverables will be due according to SMCEW direction. Consultant will strive to complete the draft report one week after completing Task 2. The final report will be due one week after receiving comments on the draft report.

Task 3 Total Budget:

NTE \$5,026

Other Direct Costs: \$654

Budget Summary:

Task	Decription	Total Cost
Task 1	Solicit input from key Stakeholders	\$ 22,621
Task 2	Develop EE JOC Program Strategy	\$ 6,699
Task 3	Prepare Report on Recommended EE JOC Program Strategy	\$ 5,026
	Subtotal	\$ 34,346
	Other Direct Costs (Travel, Mileage)	\$ 654
	Total Cost	\$ 35,000

C/CAG AGENDA REPORT

Date: October 17, 2018
To: Resource Management and Climate Protection Committee
From: Kim Springer, RMCP Committee Staff
Subject: Update on C/CAG – PG&E 2019 contract and program development for the San Mateo County Energy Watch

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

RECOMMENDATION

Receive an update on C/CAG – PG&E 2019 contract and program development for the San Mateo County Energy Watch (SMCEW).

FISCAL IMPACT

Staff time is paid for by funding under the C/CAG – PG&E Local Government Partnership (LGP) agreement and from Congestion Relief Funds for staffing of the RMCP Committee.

BACKGROUND/DISCUSSION

The CPUC adopted Decision D.18-05-041 at the end of May 2018. This decision defined the program administrators (PAs) for the rolling portfolio ratepayer programs, which starts in CY 2019. The San Mateo County Energy Watch local government partnership is one of these programs. It also established guidelines for administration of the ratepayer energy efficiency programs.

Among many other changes in the adopted Decision, is a change to the requirements for cost effectiveness, or the Total Resource Cost (TRC) of the PAs portfolios of programs and contracts providing energy efficiency services for the territories they serve. The TRC was raised from 1.0 to 1.25. PG&E's response, to meet this new "portfolio TRC", is to reduce local government partnership budgets.

Since a presentation at the June 27, 2018 RMCP Committee meeting on ongoing decisions and responses by C/CAG to both the CPUC and PG&E, C/CAG and PG&E have been in negotiations for the contract package for calendar year 2019. In addition, staff have been working on formulating both the budget and program design for the same. Staff will provide an update on both the contracting progress and program design changes for calendar year 2019.

ATTACHMENTS

None