

C/CAG

CITY/COUNTY ASSOCIATION OF GOVERNMENTS OF SAN MATEO COUNTY

*Atherton • Belmont • Brisbane • Burlingame • Colma • Daly City • East Palo Alto • Foster City • Half Moon Bay • Hillsborough • Menlo Park
Millbrae • Pacifica • Portola Valley • Redwood City • San Bruno • San Carlos • San Mateo • San Mateo County • South San Francisco • Woodside*

Agenda

Resource Management and Climate Protection Committee (RMCP)

Date: Wednesday, October 21, 2015

Time: 2:00 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 September 16, 2015 meeting
(Susan Wright – Committee Staff) Action
4. Presentation on Microgrid Projects in California and Associated Challenges
(Joe Herr – PG&E) Information, Discussion
5. Presentation on Joint Venture Silicon Valley, Smart Energy Enterprise Development Zone
(Don Bray – Joint Venture) Information, Discussion
6. Presentation on C/CAG Alternative Fuel Readiness Plan and Draft Summary Document for
Review and Discussion
(Ashley Henderson – Life Cycle Associates) Information, Discussion
7. Update on Current Water Supply and Drought Conditions
(Adrienne Carr - BAWSCA staff) Information, Discussion
8. Committee Member Updates
9. Next Regular Meeting Date: November 18, 2015

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RESOURCE MANAGEMENT AND CLIMATE PROTECTION TASK FORCE
Minutes from the 9-16-2015 Meeting

In attendance:

Adrian Almaguer, County of San Mateo and BAWSCA – Climate Corps Bay Area fellow
Michael Barber, Supervisor Pine’s office
Beth Bhatnagar, Sustainable San Mateo County
Adrienne Carr, BAWSCA
Bob Cormia, Foothill De Anza Community College
Brandi de Garneau, Town of Portola Valley
Jim Eggemeyer, County of San Mateo
Jacki Falconio, County of San Mateo
Kirsten Pringle, County of San Mateo
Maryann Moise Derwin, Committee Vice Chair, Portola Valley Town Council*
Deborah Gordon, Committee Chair, Woodside Town Council*
Pradeep Gupta, South San Francisco City Council*
Deborah Hirst, Supervisor Horsley’s office
Joe La Mariana, County of San Mateo RecycleWorks
Kathy Lavezzo, PG&E
Kim Springer, County of San Mateo RecycleWorks (staff)
Virginia Thompson, CAISO
Sandy Wong, C/CAG
Susan Wright, County of San Mateo RecycleWorks (staff)

Not in attendance:

Rick DeGolia, Town of Atherton*
Don Horsley, San Mateo County Board of Supervisors*
Jorge Jaramillo, San Mateo County Hispanic Chamber of Commerce
Alex Palantzas, San Mateo County Hispanic Chamber of Commerce
Dave Pine, San Mateo County Board of Supervisors *
Barbara Pierce, Redwood City City Council*
Nicole Sandkulla, BAWSCA
Eric Sevim, A+ Japanese Auto Repair
*=elected official member

1) Introductions

Attendees introduced themselves and their organizations.

2) Public Comment

There was no public comment.

3) Approval of Minutes

The minutes from the July 15, 2015 meeting were approved.

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

4) Update on Current Water Supply and Drought Conditions (Adrienne Carr, BAWSCA)

Adrienne Carr provided the following information in response to questions:

- Calaveras doesn't relate to our supply. They're leaving it low because they're rebuilding the dam.
- Demands are the lowest since 1977. It has never been a drier year. This is the driest 4-year period.
- El Nino is weakly correlated to high precipitation in Northern California.
- Everyone is meeting their water conservation targets every month throughout the State.
- Regarding the SF Chronicle article about the SFPUC an Turlock water rights issues: We're already sending water downstream because of fish flow requirements. We have a water bank in Don Pedro because of where the water bank is. If next year is dry, it will go to zero. If it's dry next year, the state might mandate more cuts. We're hurting, but other parts of the state are hurting worse.
- On a normal year, Hetch Hetchy fills and spills three times.

Comments from attendees:

- It would be nice to send out an acknowledgement thanking people for working so hard to save water.
- PG&E is having a big issue with dead and dying trees because of the lack of water. PG&E is trying to be proactive, but it's a sensitive issue. A big tree in unincorporated Redwood City fell yesterday, taking down a pole and wires. It wasn't getting regular water from nearby lawns it was used to.
- Last week in South San Francisco, two redwood trees fell. Established trees get benefits from lawn sprinklers.

5) Presentation on California Independent System Operator and Western Energy Imbalance Market (Virginia Thompson)

Virginia Thompson shared the following information:

- CAISO is a nonprofit public benefit corporation that runs the wholesale grid. It has three primary functions:
 1. reliability – real-time grid management
 2. infrastructure planning and resource interconnection
 3. run the market for wholesale electricity
- It's part of North American Electric Reliability Corporation (NERC). California is one of 14 states in the Western Electricity Coordinating Council (WECC).
- CAISO operates 85% of the state. Others are balancing authority areas. They rebalance every four seconds. There are embedded control areas within the boundaries of CAISO.
- Regulatory structure
 - 5-member governing board
 - regulated by FERC – Federal Energy Regulatory Commission
 - compliant with NERC
 - WECC – reliability standards
 - independent, but coordinate with state agencies

6 divisions

1. Market and infrastructure development
2. Market quality and renewable integration (are the outcomes reasonable?)
3. Technology

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4. Operations
5. General counsel
6. Policy and client services (everything public facing, government affairs)

Boards – audit committee, market surveillance, committee, EIM transitional committee

CAISO doesn't own anything but has full operational control

Markets – supply and demand curves that set prices

- Day-ahead energy market. Price for every hour of the day based on projected demand
- Real-time energy market (intra-day market). This allows adjustment from what you thought you needed. Can do on hourly, 15-minute basis, or 5-minute basis. This includes the energy imbalance market.

There have been a lot of changes since the Enron days. Back then, California didn't have enough native generation to supply needs. We've added peaker plants and other supply. We've added resource adequacy (1-year forward obligation). Do we have enough contracted supply to meet demand? They have to procure 115% of peak demand load.

Question: How can we be sure that a CCA wanting clean energy gets clean energy?

Virginia: If a utility purchased 100% of the supply with clean supply, you're essentially displacing a brown unit from running. It's the duty of the CCA to check it out. The supplier must attest that every megawatt must have a renewable energy rec. The rec tells that energy was actually physically produced in that particular facility.

Question: How do economics tie in? We pay a certain cost for the energy going on to the grid. What is the cost to the customer?

Virginia. The cost of energy changes every five minutes of the day. It levelizes.
Cost of power itself + cost of transmission + administration = Retail rate.

Challenges & opportunities

- Wind and solar have variable output based on weather
- The net load curve of a typical day in March could be too much generation, not enough demand on the system. An EV in 2020 would need to be plugged in at work, not overnight.
- If you have over demand, you curtail power or turn off generators. It will cause negative prices – it will cost you money to put energy on the grid at certain times.
- Certain generators have to run 24 hours a day because it's more expensive to turn them on and off. That sets the floor on how much you can consume. Gas-fired units take a few hours to turn off/turn on.
- Renewable curtailment in 2024 at 40% RPS is significant. Solutions would be retrofitting existing power plants to lower the lower minimum energy, and increase storage.
- Large-scale grid storage is next frontier

Energy imbalance market - Deepening regional coordination – based on economics

- PacifiCorp coordination started in 2014 – considering being a full market participant
- NV Energy next month
- Puget Sound – joining in 2016
- Energy imbalance market – intraday

- California is summer peaking; northwest is winter peaking; in Arizona the sun rises earlier
- There are economies of scale. The bigger it gets, the more cost effective it is. ISO was formed 10 years ago. It would be pretty difficult for other orgs to unbundle. Contractual structures may make it difficult, but it may still make sense for them to join.

Question: If PacifiCorps comes in and becomes a full partner, they will abide by full tariff. Given a steady state of maximum amount of renewable, wind, etc., is that calculated, planned for?

- Energy Commission does long-term forward look.

Does load calculation get considered in large building land use issues?

- Yes.

Kathy Lavezzo: PG&E is required to serve all new customers. A big part of their job is reliability.

Virginia: With the fires in northern California, so far they have lost a few smaller lines. The large line —California/Nevada intertie is still intact. It brings in large hydro power. They work with CalFire closely.

Question: Smart grid. What is the planning and projections with “smart grid”?

Virginia: They’re piloting some micro grids down south. The ability to “island” is a big part of that. Distributed generation (behind the meter) is handled by the utilities. CAISO works closely with IOUs. Edison was adding 7% every quarter. ISO sees it as a load modifier. PacifiCorps is the control operator and they have two utilities under them. If they join, they would have to get approval from all the states’ PUCs.

Question: What will be the impact on the grid with an increase in EV charging?

Virginia: There’s a state goal of one million EV vehicles on the road by 2020. 2020 will be tipping point. It’s a real-time load modifier. Zero emissions vehicles can be hydrogen fuel cells can be zero emissions, too. There’s a lot of flexibility for when hydrogen is generated.

6) San Mateo County Energy Watch Program Updates and Zero Net Energy Strategic Planning (Susan Wright and Jacki Falconio)

After Jacki Falconio’s presentation about Energy Watch’s Zero Energy Strategic Plan, the following comments were made:

Question: Are there incentives for building to ZER?

- Savings by Design is a PG&E program that provides incentives for going above code.

Pradeep: PG&E is trying to reduce the benefits for solar. That’s going in the wrong direction.

Jacki: It’s going to be the hardest to reach the existing buildings goal

Bob Cormia: This industry needs a solar decathlon challenge – There should be a contest around energy use intensity.

Jacki: We’re focusing on the efficiency of the building – high performance, not on the amount of solar. It takes a while to get the building to perform to the right level – 1 year of monitoring and tweaking.

Kim: it requires a project team on the front end. There needs to be a discussion of the goal at the beginning of the project so everything works together.

Jacki: If you start from the beginning and set an EUI goal, it’s not very expensive. If you wait until

later, it's more expensive.

7) Presentation on State Energy Efficiency Collaborative Forum 2015, California Climate Action Planning Conference, and the California Climate Change Symposium (Kim Springer and Susan Wright)

Because there wasn't much time left, the presentation was cut short. These main ideas from the California CAP conference were shared:

- Connecting health with climate action
- LA CleanTech Incubator
- Transportation funding in San Luis Obispo now reflects mode share goals

Bob Cormia: Santa Clara did a workshop about sea level rise. Flooding isn't abstract. It's hard getting people to think decades out.

8) Committee Member Updates

Pradeep Gupta: ABAG is updating the One Bay Plan for 2040. They're now setting goals and targets. Legislature gave 2 targets:

1. Climate protection based on design of transportation.
2. Make sure housing is enough for everyone in these nine counties.

Those 2 legislated priorities have been expanded to 11 now. Each one needs a quantifiable target. The big struggle is adequate housing. At the end of the 2013 plan BIA filed a lawsuit saying there wasn't enough housing included in the Plan to take migration into account. They settled with ABAG and MTC outside of court.

Plan based on assumption that there will be no net increase in migration in comparison to base year 2013. The Board's struggle is that it can't legislate in-migration, but it can do housing if they need it. Affordable housing is one of the 11.

Look at lawsuit or facts as the guiding line. There was a recent proposal made by MTC ED – all the planning of ABAG should divert back to MTC. MTC would do all planning needs – trans, housing etc. ABAG board is unhappy about that. Meeting tomorrow at the board about this. Encourage city government people to make their voices are heard. Don't want to reinvent wheels, have to make correction later. Huge need for housing, affordable housing.

Michael Barber: The CCE process is moving along. A comprehensive tech study should be released later this month. All cities have a rep. There is a policy working group – Oct. 7, 9 am to noon. It will be for City Council and City Managers. Part of the vulnerability study. Study complete by early summer next year. Contract is with Arcada, funded by Coastal Conservancy funds.

Pradeep: We need some time after the study comes out to review study with other council – special study session.

Deborah: Will be a full Committee looking at this? There will be a full retreat with elected, city mgrs. looking at this. No date for that yet.

9) Next Regular Meeting Date: October 21, 2015

Attachments:

Presentation from this meeting have been posted on the C/CAG RMCP website.

C/CAG AGENDA REPORT

Date: October 21, 2015

To: Resource Management and Climate Protection Committee

From: Kim Springer, County staff to RMCP Committee

Subject: Presentation on Microgrid Projects in California and Associated Challenges
(for further information contact Kim Springer at 650-599-1412)

RECOMMENDATION

Receive a presentation on micro grid projects in California and associated challenges for committee discussion.

FISCAL IMPACT

Staffing of the RMCP Committee is contracted to the County of San Mateo, Department of Public Works and paid for by C/CAG from Congestion Relief funds.

BACKGROUND/DISCUSSION

Different agencies in California are exploring solutions to the transition to more efficient use of energy, energy resilience as part of adaptation planning, and a higher mix of renewable sources. To that end, many have looked to the concept of microgrids. However there are challenges and a lot to learn as new microgrids projects are developed.

Microgrids are locally designed grid infrastructures that may have the ability to disconnect from the traditional grid to operate autonomously. Often, the concept is to help mitigate grid disturbances and to strengthen grid resilience. Microgrids can also support the integration of new renewable sources of energy such as solar and wind and distributed energy resources such as combined heat and power, energy storage, and demand response.

Joseph Herr, Customer Strategic Planner, Principal at PG&E, who presented to the Committee almost exactly a year ago on PG&E efforts to meet the state renewable portfolio standard, will make a presentation highlighting his experience with microgrid projects in California.

ATTACHMENT

None

C/CAG AGENDA REPORT

Date: October 21, 2015

To: Resource Management and Climate Protection Committee

From: Kim Springer, County staff to RMCP Committee

Subject: Presentation on Joint Venture Silicon Valley, Smart Energy Enterprise Development Zone
(for further information contact Kim Springer at 650-599-1412)

RECOMMENDATION

Receive a presentation on Joint Venture Silicon Valley, Smart Energy Enterprise Development Zone (SEEDZ) initiative for discussion.

FISCAL IMPACT

Staffing of the RMCP Committee is contracted to the County of San Mateo, Department of Public Works and paid for by C/CAG from Congestion Relief funds.

BACKGROUND/DISCUSSION

SEEDZ is a project launched by Joint Venture Silicon Valley January 2013 to explore the opportunities and relationships between smart energy elements, such as renewable energy, efficiency technologies, grid performance and others. For more specifics on the program elements, you can look to the SEEDZ website: <http://jointventure.org/initiatives/climate-prosperity/smart-energy-seedz>.

With the modern power network “becoming increasingly dynamic, SEEDZ ‘grid infrastructure’ activities are focused on development and deployment of new capabilities to improve power quality, reliability and resiliency on the distribution network.”

Don Bray, Executive Director, Smart Energy Enterprise Development for Joint Venture, will make a presentation highlighting the SEEDZ program elements being explored and share lessons learned.

ATTACHMENT

None

C/CAG AGENDA REPORT

DATE: October 21, 2015

TO: Resource Management and Climate Protection Committee

FROM: Kim Springer, County staff to RMCP Committee

SUBJECT: Presentation on C/CAG Alternative Fuel Readiness Plan and Draft Summary Document for Review and Discussion

(For further information please contact John Hoang at 650-363-4105)

RECOMMENDATION

Receive a presentation on C/CAG Alternative Fuel Readiness Plan and draft summary Document for review and discussion.

FISCAL IMPACT

\$275,810

SOURCE OF FUNDS

California Energy Commission Grant

BACKGROUND/ DISCUSSION

C/CAG received funding from the California Energy Commission (CEC) in June 2014 to develop the Alternative Fuel Readiness Plan (AFRP) for San Mateo County. The purpose of the AFRP is to prepare San Mateo County jurisdictions for the commercialization of alternative transportation fuels in the marketplace and serve as a resource for public agencies with permitting, deploying alternative fuel infrastructure, training personnel, and promoting the increased use of alternative fuels within the County. The scope of work, as prescribed by the Energy Commission, includes the following tasks:

- Analyze existing and potential incentives for increased usage of alternative fuels;
- Identify challenges and opportunities for sharing best practices for planning, permitting, deployment, maintenance and inspection of Alternative Fuel Infrastructure (AFI);
- Develop, or revised as necessary, training materials or classes for fleet operators, planners, first responders, and decision-makers regarding AFI development;
- Develop strategies and best practices to increase procurement of alternative fuels;
- Develop marketing analyses, marketing materials, and outreach strategies that communicate the benefits of alternative fuel usage to targeted groups such as fleet owners/operators; and
- Develop strategies to assist alternative fuel wholesalers/retailers, with the intent of increasing the availability and/or reducing the cost of alternative fuels.

Ashley Henderson with Life Cycle Associates, consultant assisting C/CAG to develop the AFRP, will provide a presentation on the elements of the plan and answers to related questions. C/CAG is currently finalizing the AFRP document, written by the consultant, and seeks input from the RMCP Committee.

The draft AFRP Summary Report will be posted by the end of the month of October. Staff will send a follow-up email to the committee with a link to the document, requesting comments at that time. Comments will be incorporated as the document moves to the CMEW and CMP TAC for their comments, in November.

ATTACHMENTS

None. The AFRP Draft Summary Report will be posted by the end of **October** and staff will send an email with the link to the document.

C/CAG AGENDA REPORT

Date: October 21, 2015
To: Resource Management and Climate Protection Committee
From: Adrienne Carr, BAWSCA, RMCP Committee Member
Subject: Update on Current Water Supply and Drought Conditions
(For further information contact Kim Springer at 650-599-1412)

RECOMMENDATION

Receive an update on current water supply and drought conditions.

FISCAL IMPACT

None

BACKGROUND/DISCUSSION

With ongoing dry conditions throughout California, the Bay Area Water Supply and Conservation Agency (BAWSCA), which represents the 26 wholesale customers of the Hetch Hetchy Regional Water System, is working with its member agencies to track water use, ongoing drought conditions, and progress towards mandatory water use reduction goals.

BAWSCA staff has been providing short updates of water supply conditions, monthly, to the RCMP Committee. The most recent update was at the September 2015 meeting. BAWSCA staff will provide an update again at this meeting on the current water supply outlook, conservation performance, the potential for El Niño to bring drought relief, and other topics.

Adrienne Carr, Senior Water Resources Specialist, will provide an update on current water supply and drought conditions.

ATTACHMENTS

None