



BOARD OF DIRECTORS
CLIMATE PROTECTION COMMITTEE
COMMITTEE MEMBERS

**BAY AREA
AIR QUALITY
MANAGEMENT
DISTRICT**

JAN PEPPER - CHAIR
TERESA BARRETT
JOHN GIOIA
KATIE RICE
SHIRLEE ZANE

JOHN AVALOS - VICE CHAIR
DAVID CANEPA
SCOTT HAGGERTY
MARK ROSS

**THURSDAY
NOVEMBER 19, 2015
9:30 A.M.**

**7th FLOOR BOARD ROOM
939 ELLIS STREET
SAN FRANCISCO, CA 94109**

AGENDA

1. CALL TO ORDER - ROLL CALL

The Committee Chair shall call the meeting to order and the Clerk of the Boards shall take roll of the Committee members.

2. PUBLIC COMMENT ON NON-AGENDA MATTERS

(Public Comment on Non-Agenda Items Pursuant to Government Code § 54954.3) Members of the public are afforded the opportunity to speak on any agenda item. All agendas for regular meetings are posted at Air District headquarters, 939 Ellis Street, San Francisco, CA, at least 72 hours in advance of a regular meeting. At the beginning of the regular meeting agenda, an opportunity is also provided for the public to speak on any subject within the Committee's subject matter jurisdiction. Speakers will be limited to three (3) minutes each.

Staff/Phone (415) 749-

3. APPROVAL OF THE MINUTES OF SEPTEMBER 17, 2015

Clerk of the Boards/5073

The Committee will consider approving the draft minutes of the Climate Protection Committee meeting of September 17, 2015.

4. CONSUMPTION-BASED GREENHOUSE GAS EMISSIONS INVENTORY

J. Roggenkamp/4646

jroggenkamp@baaqmd.gov

Staff will brief the Committee on the Air District's current collaboration with UC Berkeley researchers to develop a consumption-based greenhouse gas emissions inventory for the Bay Area.

5. **CALIFORNIA AIR RESOURCES BOARD DRAFT SHORT-LIVED CLIMATE
POLLUTANT STRATEGY**

J. Roggenkamp/4646
jroggenkamp@baaqmd.gov

Staff will brief the Committee on the Air Resources Board's draft Short Lived Climate Pollutant Strategy.

6. **COMMITTEE MEMBER COMMENTS / OTHER BUSINESS**

Any member of the Board, or its staff, on his or her own initiative or in response to questions posed by the public, may: ask a question for clarification, make a brief announcement or report on his or her own activities, provide a reference to staff regarding factual information, request staff to report back at a subsequent meeting concerning any matter or take action to direct staff to place a matter of business on a future agenda. (Gov't Code § 54954.2)

7. **TIME AND PLACE OF NEXT MEETING**

January 21, 2016, Bay Area Air Quality Management District Office, 939 Ellis Street, San Francisco, California 94109 at 9:30 a.m.

8. **ADJOURNMENT**

The Committee meeting shall be adjourned by the Committee Chair.

CONTACT:

MANAGER, EXECUTIVE OPERATIONS
939 ELLIS STREET, SAN FRANCISCO, CA 94109
mmartinez@baaqmd.gov

(415) 749-5016
FAX: (415) 928-8560
BAAQMD homepage:
www.baaqmd.gov

- To submit written comments on an agenda item in advance of the meeting. Please note that all correspondence must be addressed to the “Members of the Board of Directors” and received at least 24 hours prior, excluding weekends and holidays, in order to be presented at that Board meeting. Any correspondence received after that time will be presented to the Board at the following meeting.
- To request, in advance of the meeting, to be placed on the list to testify on an agenda item.
- **Accessibility and Title VI:** The Air District provides services and accommodations upon request to persons with disabilities and individuals who are limited-English proficient who wish to address Board matters. For accommodations or translations assistance, please call 415-749-5016 at least three days in advance of a meeting, so that arrangements can be made accordingly.

Accesibilidad y Título VI: El Distrito del Aire ofrece servicios y realiza las adaptaciones necesarias para las personas con discapacidades y para las personas con un dominio limitado del inglés siempre que estos servicios se soliciten y se deseen tratar asuntos relacionados con la Junta. Si necesita ayuda con algún tipo de adaptación o traducción, llame al 415-749-5016 como mínimo tres días antes de la reunión de manera que puedan realizarse las adaptaciones necesarias.

Magagamit na Tulong at Título VI: Nagbibigay ang Air District ng mga serbisyo at mga akomodasyon, kapag hiniling, sa mga taong may kapansanan at mga taong limitado ang kakayahan sa Ingles na gustong magpahayag tungkol sa mga usapin sa harap ng Lupon. Para sa mga tulong sa akomodasyon o sa pagsasalin, mangyaring tumawag sa 415-749-5016 nang tatlong araw man lamang na una pa sa miting, para makapaghandang ayon sa pangangailangan.

可及度及標題VI: 空氣管理局根據申請為殘障人士和英語熟練程度有限但卻希望參與董事會事宜的人員提供服務和住宿。關於住宿或者翻譯幫助，請至少在會議之前三天致電 415-749-5016，以便作出相應安排。

Tạo Khả Năng Truy Cập và Chương VI: Đặc Khu cung cấp dịch vụ và phương tiện đáp ứng, khi có yêu cầu, cho những người bị khuyết tật và cho những cá nhân không thông thạo Anh ngữ muốn được tham gia các vấn đề của Hội Đồng. Để được phương tiện đáp ứng hoặc trợ giúp phiên dịch, xin gọi số 415-749-5016 ít nhất ba ngày trước khi có hội thảo, để tiện bố trí các phương tiện

Any writing relating to an open session item on this Agenda that is distributed to all, or a majority of all, members of the body to which this Agenda relates shall be made available at the District’s offices at 939 Ellis Street, San Francisco, CA 94109, at the time such writing is made available to all, or a majority of all, members of that body.

BAY AREA AIR QUALITY MANAGEMENT DISTRICT
939 ELLIS STREET, SAN FRANCISCO, CALIFORNIA 94109
FOR QUESTIONS PLEASE CALL (415) 749-5016 or (415) 749-4941

EXECUTIVE OFFICE:
MONTHLY CALENDAR OF AIR DISTRICT MEETINGS

NOVEMBER 2015

<u>TYPE OF MEETING</u>	<u>DAY</u>	<u>DATE</u>	<u>TIME</u>	<u>ROOM</u>
Board of Directors Executive Committee <i>(Meets on the 3rd Monday of each Month)</i> - CANCELLED	Monday	16	9:30 a.m.	Board Room
Board of Directors Stationary Source Committee <i>(Meets on the 3rd Monday of each Month)</i> - CANCELLED	Monday	16	10:30 a.m.	Board Room
Board of Directors Nominating Committee <i>(At the Call of the Chair)</i> - CANCELLED	Wednesday	18	9:30 a.m.	Room 716
Board of Directors Regular Meeting <i>(Meets on the 1st & 3rd Wednesday of each Month)</i>	Wednesday	18	9:45 a.m.	Board Room
Board of Directors Climate Protection Committee <i>(Meets 3rd Thursday of every other Month)</i>	Thursday	19	9:30 a.m.	Board Room
Board of Directors Budget & Finance Committee <i>(Meets on the 4th Wednesday of each Month)</i> - CANCELLED	Wednesday	25	9:30 a.m.	Board Room
Board of Directors Mobile Source Committee <i>(Meets on the 4th Thursday of each Month)</i> - CANCELLED	Thursday	26	9:30 a.m.	Board Room
Board of Directors Special Meeting <i>(Meets on the 3rd Monday of each Month)</i>	Monday	30	9:45 a.m.	Board Room

DECEMBER 2015

<u>TYPE OF MEETING</u>	<u>DAY</u>	<u>DATE</u>	<u>TIME</u>	<u>ROOM</u>
Board of Directors Regular Meeting <i>(Meets on the 1st & 3rd Wednesday of each Month)</i> - CANCELLED	Wednesday	2	9:45 a.m.	Board Room
Advisory Council Meeting <i>(At the Call of the Chair)</i>	Thursday	3	9:30 a.m.	Board Room
Board of Directors Budget & Finance Committee <i>(Meets on the 4th Wednesday of each Month)</i>	Monday	7	9:30 a.m.	Board Room
Board of Directors Mobile Source Committee <i>(Meets on the 4th Thursday of each Month)</i>	Monday	14	9:30 a.m.	Board Room
Board of Directors Regular Meeting <i>(Meets on the 1st & 3rd Wednesday of each Month)</i>	Wednesday	16	9:45 a.m.	Board Room
Board of Directors Executive Committee <i>(Meets on the 3rd Monday of each Month)</i>	Monday	21	9:30 a.m.	Board Room
Board of Directors Stationary Source Committee <i>(Meets on the 3rd Monday of each Month)</i> CANCELLED	Monday	21	10:30 a.m.	Board Room
Board of Directors Budget & Finance Committee <i>(Meets on the 4th Wednesday of each Month)</i> - CANCELLED	Wednesday	23	9:30 a.m.	Board Room
Board of Directors Mobile Source Committee <i>(Meets on the 4th Thursday of each Month)</i> - CANCELLED	Thursday	24	9:30 a.m.	Board Room

MM – 11/5/15 (4:19 p.m.)

G/Board/ExecutiveOffice/Moncal

BAY AREA AIR QUALITY MANAGEMENT DISTRICT
Memorandum

To: Chairperson Jan Pepper and Members
of the Climate Protection Committee

From: Jack P. Broadbent
Executive Officer/APCO

Date: November 5, 2015

Re: Approval of the Minutes of September 17, 2015

RECOMMENDED ACTION

Approve attached draft minutes of the Climate Protection Committee (Committee) meeting of September 17, 2015.

DISCUSSION

Attached for your review and approval are the draft minutes of the Committee meeting of September 17, 2015.

Respectfully submitted,

Jack P. Broadbent
Executive Officer/APCO

Prepared by: Sean Gallagher
Reviewed by: Maricela Martinez

Attachment: Draft Minutes of the Committee Meeting of September 17, 2015

Draft Minutes – Climate Protection Committee Meeting of September 17, 2015

Bay Area Air Quality Management District
939 Ellis Street
San Francisco, California 94109
(415) 749-5073

DRAFT MINUTES

Summary of Board of Directors
Climate Protection Committee Meeting
Thursday, September 17, 2015

1. CALL TO ORDER – ROLL CALL

Chairperson Jan Pepper called the meeting to order at 9:39 a.m.

Present: Chairperson Jan Pepper; Vice-Chairperson John Avalos; and Directors Teresa Barrett, John Gioia, Scott Haggerty, Katie Rice and Mark Ross.

Absent: Directors David J. Canepa and Shirlee Zane.

Also Present: None.

2. PUBLIC COMMENT ON NON-AGENDA MATTERS:

Patti Weisselberg, Families for Clean Air, addressed the Climate Protection Committee (Committee) in support of revisions to the proposed wood smoke rule to require all landlords to install non-wood burning devices for heat sources regardless of locale within the Bay Area and to revise the sole source of heat exemption so that only those residences that truly have no other heat option.

NOTED PRESENT: Director Ross was noted present at 9:40 a.m.

3. APPROVAL OF THE MINUTES OF MAY 21, 2015

Committee Comments: None.

Public Comments: No requests received.

Committee Action:

Director Rice made a motion, seconded by Director Avalos, to approve the minutes of May 21, 2015; and the motion carried by the following vote of the Committee:

AYES: Avalos, Barrett, Gioia, Pepper and Rice.
NOES: None.
ABSTAIN: None.
ABSENT: Canepa, Haggerty, Ross and Zane.

4. COMMUNITY CHOICE AGGREGATION (CCA)

Jean Roggenkamp, Deputy Executive Officer, introduced Shawn Marshall, Director, LEAN [Local Energy Aggregation Network] Energy US, who gave the presentation *Community Choice Energy (CCE) in California*, including an explanation of how it works; CCE around the country; policy framework and available programs in California; CCE momentum in the Bay Area; likely growth in California; CCE reduction of greenhouse gases (GHGs); emissions rate comparison of San Mateo County CCA versus Pacific Gas & Electric; possible San Mateo County resource mix; 2014 emission profiles for Sonoma Clean Power (SCP) and MCE (Marin Clean Energy); CCE generation rate comparison; MCE and SCP financial conditions; CCE collective value in the Bay Area; and CCE green multiplier effects.

NOTED PRESENT: Director Haggerty was noted present at 9:56 a.m.

Committee Comments:

The Committee and Ms. Marshall discussed what the Air District can do to help, including capital for startups, support for obtaining credit guarantees at initial launch, analysis of the impacts of participating to better inform potential participant cities, and the development of best practices guidelines; the nexus of the smaller-than-expected 10% opt out rate in Sonoma County and the likely reasoning behind opting out as a personal decision; major contributing factors to the rate savings shown on slide 5, *3 Programs in California... so far*; further explanation of the figures on slide 15, *CCE's Collective Value in the Bay*; the experience in Sonoma County in the build-up to launch and the impact on the opt out rate; background information relative to slide 16, *CCE's Green Multiplier Effects...*, bullet 2, "New power projects use PLAs [Project Labor Agreements] and union labor;" whether renewable energy credits accompany CCE power generation units and if they are able to and currently are selling them; start-up costs as a hurdle to CCE establishment that the Air District may be able to assist with through incentive funding for initial planning work; the differing results of out-of-county cities joining existing an CCE and aggregating with cities in its county; the broader challenges facing CCEs; reports that energy demand is flat in the face decreased GHG emissions; support on the Committee for Air District support of CCEs through initial planning work and legislative action.

Public Comments:

Jed Holtzman, 350 Bay Area, addressed the Committee regarding his organization's work in support of CCEs; to summarize the advantages to communities for establishing CCEs; to request Air District vigilance in defending CCEs at the legislative level; and to request Air District support for CCEs by adopting a resolution supporting the expansion of local CCEs; serving as a clearing house for city and county governments to build capacity for CCEs; providing grants and/or funding for studies in support of building and staffing CCEs; organizing a group of representatives from CCEs and Air District to collaborate to meet GHG goals; and providing startup funding.

Committee Comments (continued):

The Committee and Ms. Marshall discussed Air District collaboration with the California Air Resources Board (ARB) on new legislation focused on GHG reduction metrics.

Committee Action: None; receive and file.

5. AIR DISTRICT ACTIVITIES TO MONITOR, ANALYZE AND REDUCE METHANE EMISSIONS

Ms. Roggenkamp introduced Phil Martien, Exposure Assessment and Emissions Inventory Manager in the Planning and Climate Protection Division, who gave the staff presentation *Air District Activities to Monitor, Analyze and Reduce Methane Emissions*, including methane sources; a fast-action methane strategy; quantification of the warming potential of methane; 2015 Bay Area GHG emissions on both 20- and 100-year time frames; 2015 Bay Area GHG emissions by source and pollutant; reconciliation of methane emissions; summaries of phase 1, enhanced methane measurements, and phase 2, mobile monitoring and near-source methane sampling; expected outcomes from enhanced methane measurements; initial proposed climate rulemaking; additional activities to reduce methane emissions; and next steps.

The Committee and staff discussed, at slide 4, *Quantifying Methane's Warming Potential*, how to reconcile the 20- and 100-year projected time frames with an earlier statement regarding the shorter lifetime of methane.

Dr. Martien concluded the presentation.

Committee Comments:

The Committee and staff discussed whether monitoring will occur near individual facilities that are significant emitters of methane and what will steer the emissions sampling process; whether methane is less expensive and easier to mitigate than carbon dioxide; and the sources of nitrous oxide in the Bay Area.

Public Comments:

Jed Holtzman, 350 Bay Area, addressed the Committee to suggest that, while the effort to better address methane emissions is commendable, it is a disproportional response given its contribution to global warming in comparison to carbon dioxide; to provide additional information on the systemic underreporting of methane emissions at many levels; and in support of accelerating the rulemaking timeline to run parallel to other climate change work already underway.

Laura Mintzer, Chevron, addressed the Committee regarding the history of reduced criteria pollutants; to suggest that California regulations are the most stringent in the U.S. and the gasoline is more expensive in California than elsewhere; to speculate that a further strengthening of regulations will likely result in the closing of Bay Area refineries, which will result in an import market that will be detrimental to the global climate cause due to the less strict regulations in place elsewhere.

Committee Action: None; receive and file.

6. SUMMARY OF KEY CALIFORNIA CLIMATE LEGISLATION IN 2015

Ms. Roggenkamp introduced Thomas Addison, Senior Policy Advisor, who delivered the staff memorandum *Summary of Key California Climate Legislation in 2015*, including the debates on a number of significant climate change issues, such as what mandates after 2020 are appropriate for reductions in GHG emissions, increases to renewable power, building energy efficiency and expenditure of cap-and-trade revenues.

Committee Comments:

The Committee and staff discussed ARB authority over the cap-and-trade program up to and after 2020; and additional legislative history regarding Senate Bill (SB) 32 Pavley.

Public Comments:

Jed Holtzman, 350 Bay Area, addressed the committee to summarize the legislative session experience with regards to SB 350 and request that Air District staff consider ways to prevent the last minute gutting-and-amending of legislation that negatively impacts CCAs and detracts from efforts to meet air quality goals.

Committee Action: None; receive and file.

7. Committee Members' Comments/Other Business: None.

8. Time and Place of Next Meeting

Thursday, November 19, 2015, Bay Area Air Quality Management District Headquarters, 939 Ellis Street, San Francisco, California 94109 at 9:30 a.m.

9. Adjournment: The meeting adjourned at 11:41 a.m.

Sean Gallagher
Clerk of the Boards

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

Memorandum

To: Chairperson Jan Pepper and Members
of the Climate Protection Committee

From: Jack P. Broadbent
Executive Officer/APCO

Date: November 5, 2015

Re: Consumption-Based Greenhouse Gas Emissions Inventory

RECOMMENDED ACTION

None; receive and file.

BACKGROUND

The Air District uses emissions inventories as an essential tool for air quality and climate planning; an inventory provides the empirical foundation for the development of regulations and emission control strategies. The Air District developed its first regional greenhouse gas (GHG) inventory in 2006, and updated the GHG inventory in 2010 and 2015. Like inventories for ozone precursors and particulate matter, the GHG inventory is a production-based inventory that quantifies the emissions produced within the Air District's boundaries.

Emission inventories can also characterize and quantify emissions on the basis of goods and services that are *consumed* within a given area. A consumption-based GHG inventory (CBEI) quantifies the emissions embedded in the production of all goods and services consumed within a given area. CBEIs are especially relevant for purposes of climate action planning since greenhouse gases and climate change are global in scale, and because, in modern integrated economies, goods and services are often produced outside the area where they are consumed. Therefore, a consumption-based GHG inventory can provide additional data and a complementary perspective to guide climate planning.

A number of entities have developed consumption-based GHG inventories in recent years, including King County (Seattle area) in the state of Washington, the State of Oregon, the City and County of San Francisco, and New York City. Staff of the Energy Resources Group at UC Berkeley are leading practitioners in the field of consumption-based GHG analysis via their *Cool Climate Network* program.

DISCUSSION

In fall 2014, the Air District joined the *Cool Climate Network* as a “Partner Member.” As one of the membership benefits, the UC Berkeley Energy Resources Group agreed to prepare a consumption-based GHG inventory for the Bay Area based upon the *Cool Climate Network* methodology. The *Cool Climate Network* methodology analyzes full life-cycle emissions, (from materials extraction, production, use, and disposal,) for goods and services consumed within the region. Air District staff worked with UC Berkeley researchers to define the inventory parameters, to ensure that the inventory is based upon the most accurate input data for the Bay Area, and to prepare maps that display the consumption-based GHG inventory data in a user-friendly format.

The CBEI will help to inform the development of the Regional Climate Protection Strategy. It will also be valuable for the purpose of educating Bay Area residents about the most effective actions they can take to reduce their GHG footprint, and it will provide information that staff of local jurisdictions can use in their climate action planning efforts.

Air District staff will describe the CBEI methodology and summarize key findings for the Committee.

BUDGET CONSIDERATION / FINANCIAL IMPACT

The Air District provided \$60,000 for a two-year membership in the Cool Climate Network, using funds in the Fiscal Year Ending (FYE) 2015 budget.

Respectfully submitted,

Jack P. Broadbent
Executive Officer/APCO

Prepared by: David Burch
Reviewed by: Henry Hilken

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

Memorandum

To: Chairperson Jan Pepper and Members
of the Climate Protection Committee

From: Jack P. Broadbent
Executive Officer/APCO

Date: November 5, 2015

Re: California Air Resources Board Draft Short-Lived Climate Pollutant Strategy

RECOMMENDED ACTION

None; receive and file.

BACKGROUND

Short-lived climate pollutants (SLCPs) are climate forcers that have a relatively short lifetime in the atmosphere but play a major role in heating the climate. Their relative potency, when measured in terms of how they heat the atmosphere, can be tens, hundreds, or even thousands of times greater than that of carbon dioxide (CO₂). Because of their relatively short atmospheric lifetime and their high global warming potential, reducing SLCP emissions offers an effective means to reduce GHG emissions in the near term, along with strategies to reduce emissions of longer-lived CO₂.

In 2014, Governor Brown signed SB 605 into law, requiring the California Air Resources Board (ARB) to develop a statewide plan to reduce SLCPs by the end of 2015. Air District staff has followed the development of ARB's Draft SLCP Strategy, including providing comments on the initial concept and on the current draft.

DISCUSSION

Staff will present on ARB's Draft SLCP Strategy, including key elements of the Strategy and proposed approaches to reducing SLCP emissions in California. Staff will include discussion of how ARB's Draft SLCP Strategy may impact GHG emissions in the Bay Area, and how the Air District's Regional Climate Protection Strategy will complement and support ARB's efforts.

BUDGET CONSIDERATION / FINANCIAL IMPACT

None.

Respectfully submitted,

Jack P. Broadbent
Executive Officer/APCO

Prepared by: Abby Young
Reviewed by: Henry Hilken