



BOARD OF DIRECTORS
CLIMATE PROTECTION COMMITTEE MEETING

BAY AREA
AIR QUALITY
MANAGEMENT
DISTRICT

COMMITTEE MEMBERS

TERESA BARRETT – CHAIR
SCOTT HAGGERTY
DAVINA HURT
KATIE RICE
BRAD WAGENKNECHT

JOHN GIOIA – VICE CHAIR
DAVID HUDSON
LIZ KNISS
MARK ROSS
SHIRLEE ZANE

**THIS MEETING WILL BE CONDUCTED UNDER PROCEDURES AUTHORIZED BY
EXECUTIVE ORDER N-29-20 ISSUED BY
GOVERNOR GAVIN NEWSOM**

- **MEMBERS OF THE COMMITTEE MAY PARTICIPATE BY
TELECONFERENCE**
- **THE PUBLIC MAY OBSERVE THIS MEETING THROUGH THE WEBCAST
BY CLICKING THE LINK AVAILABLE ON THE AIR DISTRICT’S AGENDA
WEBPAGE FOR THE MEETING AVAILABLE AT**

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- **THE PUBLIC MAY PARTICIPATE REMOTELY VIA ZOOM AT THE
FOLLOWING LINK OR BY PHONE**

<https://bayareametro.zoom.us/j/82961744861>

(669) 900 6833 or (408) 638 0968

WEBINAR ID: 829 6174 4861

- **THOSE PARTICIPATING BY PHONE WHO WOULD LIKE TO MAKE A
COMMENT CAN USE THE “RAISE HAND” FEATURE BY DIALING “*9”. IN
ORDER TO RECEIVE THE FULL ZOOM EXPERIENCE, PLEASE MAKE
SURE YOUR APPLICATION IS UP TO DATE**

**THURSDAY
NOVEMBER 19, 2020
9:30 A.M.**

AGENDA

1. CALL TO ORDER - ROLL CALL

PLEDGE OF ALLEGIANCE

PUBLIC MEETING PROCEDURE

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

This meeting will be webcast. To see the webcast, please visit www.baaqmd.gov/bodagendas at the time of the meeting. Closed captioning may contain errors and omissions and are not certified for their content or form.

Public Comment on Agenda Items *The public may comment on each item on the agenda as the item is taken up. Members of the public who wish to speak on matters on the agenda for the meeting, will have three minutes each to address the Committee. No speaker who has already spoken on that item will be entitled to speak to that item again.*

2. APPROVAL OF THE MINUTES OF SEPTEMBER 30, 2020

Clerk of the Boards/5073

The Committee will consider approving the attached draft minutes of the Climate Protection Committee meeting of September 30, 2020.

3. AIR DISTRICT REGULATION OF APPLIANCES

J. Broadbent/5052

jbroadbent@baaqmd.gov

Staff will provide an overview of the Air District's regulatory authority with respect to sources inside buildings.

4. UPDATE ON THE STATE 2022 BUILDING ENERGY CODE UPDATE

J. Broadbent/5052

jbroadbent@baaqmd.gov

Staff will present on the status of the 2022 update to the California Building Energy Efficiency Standards (Title 24), including key elements of the update and opportunities for the Air District to engage in the update process.

5. **ECONOMIC IMPACTS OF TRANSITIONING TO ECONOMY-WIDE BUILDING DECARBONIZATION**
J. Broadbent/5052
jbroadbent@baaqmd.gov

A representative of Energy and Environmental Economics, Inc. (E3) will present on E3's recent studies on transitioning to non-fossil fuel energy economy-wide in California and the societal impacts on the economy, air quality and public health.

6. **PUBLIC COMMENT ON NON-AGENDA MATTERS**

Members of the public who wish to speak on matters not on the agenda for the meeting, will have three minutes each to address the Committee.

7. **COMMITTEE MEMBER COMMENTS**

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)

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

At the Call of the Chair.

9. **ADJOURNMENT**

The Committee meeting shall be adjourned by the Committee Chair.

CONTACT:

MANAGER, EXECUTIVE OPERATIONS
375 BEALE STREET, SAN FRANCISCO, CA 94105
vjohnson@baaqmd.gov

(415) 749-4941
FAX: (415) 928-8560
BAAQMD homepage:
www.baaqmd.gov

- 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 375 Beale Street, Suite 600, San Francisco, CA 94105, at the time such writing is made available to all, or a majority of all, members of that body.

Accessibility and Non-Discrimination Policy

The Bay Area Air Quality Management District (Air District) does not discriminate on the basis of race, national origin, ethnic group identification, ancestry, religion, age, sex, sexual orientation, gender identity, gender expression, color, genetic information, medical condition, or mental or physical disability, or any other attribute or belief protected by law.

It is the Air District's policy to provide fair and equal access to the benefits of a program or activity administered by Air District. The Air District will not tolerate discrimination against any person(s) seeking to participate in, or receive the benefits of, any program or activity offered or conducted by the Air District. Members of the public who believe they or others were unlawfully denied full and equal access to an Air District program or activity may file a discrimination complaint under this policy. This non-discrimination policy also applies to other people or entities affiliated with Air District, including contractors or grantees that the Air District utilizes to provide benefits and services to members of the public.

Auxiliary aids and services including, for example, qualified interpreters and/or listening devices, to individuals who are deaf or hard of hearing, and to other individuals as necessary to ensure effective communication or an equal opportunity to participate fully in the benefits, activities, programs and services will be provided by the Air District in a timely manner and in such a way as to protect the privacy and independence of the individual. Please contact the Non-Discrimination Coordinator identified below at least three days in advance of a meeting so that arrangements can be made accordingly.

If you believe discrimination has occurred with respect to an Air District program or activity, you may contact the Non-Discrimination Coordinator identified below or visit our website at www.baaqmd.gov/accessibility to learn how and where to file a complaint of discrimination.

Questions regarding this Policy should be directed to the Air District's Non-Discrimination Coordinator, Rex Sanders, at (415) 749-4951 or by email at rsanders@baaqmd.gov

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

375 BEALE STREET, SAN FRANCISCO, CA 94105

FOR QUESTIONS PLEASE CALL (415) 749-4941

EXECUTIVE OFFICE: MONTHLY CALENDAR OF AIR DISTRICT MEETINGS

NOVEMBER 2020

<u>TYPE OF MEETING</u>	<u>DAY</u>	<u>DATE</u>	<u>TIME</u>	<u>ROOM</u>
Board of Directors Nominating Committee	Wednesday	18	9:00 a.m.	Webcast only pursuant to Executive Order N-29-20
Board of Directors Regular Meeting	Wednesday	18	9:30 a.m.	Webcast only pursuant to Executive Order N-29-20
Board of Directors Mobile Source Committee – CANCELLED AND RESCHEDULED TO THURSDAY, DECEMBER 3, 2020 AT 11:30 A.M.	Thursday	19	9:30 a.m.	Webcast only pursuant to Executive Order N-29-20
Board of Directors Climate Protection Committee	Thursday	19	9:30 a.m.	Webcast only pursuant to Executive Order N-29-20
Board of Directors Budget & Finance Committee	Monday	23	9:30 a.m.	Webcast only pursuant to Executive Order N-29-20
Board of Directors Stationary Source Committee – CANCELLED	Monday	23	11:30 a.m.	Webcast only pursuant to Executive Order N-29-20

DECEMBER 2020

<u>TYPE OF MEETING</u>	<u>DAY</u>	<u>DATE</u>	<u>TIME</u>	<u>ROOM</u>
Board of Directors Regular Meeting	Wednesday	2	9:30 a.m.	Webcast only pursuant to Executive Order N-29-20
Board of Directors Legislative Committee	Thursday	3	9:00 a.m.	Webcast only pursuant to Executive Order N-29-20
Board of Directors Mobile Source Committee	Thursday	3	11:30 a.m.	Webcast only pursuant to Executive Order N-29-20
Board of Directors Ad Hoc Committee on Equity, Access, and Inclusion	Monday	14	9:30 a.m.	Webcast only pursuant to Executive Order N-29-20
Board of Directors & Advisory Council Joint Meeting	Wednesday	16	9:30 a.m.	Webcast only pursuant to Executive Order N-29-20
Board of Directors Stationary Source Committee	Thursday	17	11:30 a.m.	Webcast only pursuant to Executive Order N-29-20

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

Memorandum

To: Chairperson Teresa Barrett and Members
of the Climate Protection Committee

From: Jack P. Broadbent
Executive Officer/APCO

Date: November 12, 2020

Re: Approval of the Minutes of September 30, 2020

RECOMMENDED ACTION

Approve the attached draft minutes of the Climate Protection Committee (Committee) meeting of September 30, 2020.

DISCUSSION

Attached for your review and approval are the draft minutes of the Committee meeting of September 30, 2020.

Respectfully submitted,

Jack P. Broadbent
Executive Officer/APCO

Prepared by: Marcy Hiratzka
Reviewed by: Vanessa Johnson

Attachment 2A: Draft Minutes of the Committee Meeting of September 30, 2020

AGENDA: 2A – ATTACHMENT

Draft Minutes – Climate Protection Committee Meeting of September 30, 2020

Bay Area Air Quality Management District
375 Beale Street, Suite 600
San Francisco, California 94105
(415) 749-5073

DRAFT MINUTES

Summary of Board of Directors
Climate Protection Committee Meeting
Wednesday, September 30, 2020

This meeting was conducted under procedures authorized by executive order N-29-20 issued by Governor Gavin Newsom. Members of the committee participated by teleconference.

1. CALL TO ORDER – ROLL CALL

Climate Protection Committee (Committee) Chairperson, Teresa Barrett, called the meeting to order at 932 a.m.

Present: Chairperson Teresa Barrett; Vice Chair John Gioia; and Directors Scott Haggerty, David Hudson, Davina Hurt, Liz Kniss, Mark Ross, and Brad Wagenknecht.

Absent: Directors Katie Rice and Shirlee Zane.

Also Present: None.

2. APPROVAL OF THE MINUTES OF JUNE 18, 2020

Public Comments

No requests received.

Committee Comments

None.

Committee Action

Director Wagenknecht made a motion, seconded by Director Kniss, to **approve** the Minutes of June 18, 2020; and the motion carried by the following vote of the Committee:

AYES: Barrett, Gioia, Haggerty, Hudson, Hurt, Kniss, Ross, Wagenknecht.
NOES: None.
ABSTAIN: None.
ABSENT: Rice, Zane.

3. PRESENTATION ON THE CLEAN BUILDING COMPASS

Abby Young, Climate Protection Manager, gave the staff presentation *Clean Building Compass*, featuring both the Air District’s building decarbonization strategy and a virtual walk-through of the Clean Building Compass website.

Public Comments

Public comments were given by Diane Bailey, MenloSpark; Jed Holtzman, 350 Bay Area; Jan Warren, Interfaith Climate Action Network of Contra Costa County; Debbie Mytels, Palo Alto resident; Bruce Naegel, Sustainable Silicon Valley; Martin MacKerel, San Francisco resident; Bret Anderson, Carbon Free Palo Alto; Scott Shell, EHDD Architects; Jennifer C, Alameda resident; Judy Windt, Menlo Park resident; Diane Schrader, thirdACT; Dawn Kwan; Kelly Hamel, 350 Bay Area; Helena Birecki, San Francisco Climate Emergency Coalition; Betty Kissilove, San Francisco resident; Martin Kupferman, Sebastopol resident; Terry Nagel, Sustainable San Mateo County; Rani Fischer, Peninsula Interfaith Climate Action; and Jennifer Feng.

Committee Comments

The Committee and staff discussed which entity/organization maintains the website; the number of times the website has been visited; the suggestion that equity be addressed when considering the socioeconomic diversity among jurisdictions, and that an environmental justice component be added; whether the website contains language that focused on emission reduction benefits or purpose; whether an abbreviated version of the website’s information is offered; the suggestion that this tool be presented to city and county staff in the Bay Area; whether the Air District has authority to regulate indoor air quality; retrofits versus new construction; and the need for a grant program to fund retrofit projects for low-income households.

Committee Action

None; receive and file.

4. OUTREACH ON CLIMATE AND FOOD

Greg Nudd, Deputy Air Pollution Control Officer of Policy, introduced Lisa Fasano, External Affairs Officer, who gave the staff presentation *Outreach on Climate and Food*, including: Climate and Food program; public webinar series; “Healthy Plate – Healthy Planet” webinar series; and upcoming climate and food activities.

Public Comments

Public comments were given by Richard Gray, 350 Bay Area; and Jan Warren, Interfaith Climate Action Network of Contra Costa County.

Committee Comments

The Committee and staff discussed how to view the documentary *The Invisible Vegan*, which is being promoted by Acterra.

Committee Action

None; receive and file.

5. PUBLIC COMMENT ON NON-AGENDA MATTERS

Public comments received via electronic mail, and read aloud by Vanessa Johnson, Manager of Executive Operations, were submitted by Woody Hastings, The Climate Center.

6. COMMITTEE MEMBER COMMENTS / OTHER BUSINESS

None.

7. TIME AND PLACE OF NEXT MEETING

Thursday, November 19, 2020, at 9:30 a.m. via webcast, pursuant to procedures authorized by Executive Order N-29-20 issued by Governor Gavin Newsom.

8. ADJOURNMENT

The meeting adjourned at 11:10 a.m.

Marcy Hiratzka
Clerk of the Boards

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

Memorandum

To: Chairperson Teresa Barrett and Members
of the Climate Protection Committee

From: Jack P. Broadbent
Executive Officer/APCO

Date: November 12, 2020

Re: Air District Regulation of Appliances

RECOMMENDED ACTION

None; receive and file.

BACKGROUND

Air District staff is undertaking a review of its rules related to growing local, regional and international interest in building decarbonization. Building decarbonization efforts seek to address the air pollution (criteria, toxic, and greenhouse gas emissions (GHGs)) associated with the operation of buildings. In most cases, decarbonization is achieved through electrification of all building operations, phasing out fossil fuel combustion.

Implementation of building decarbonization policies is addressed at different levels by a variety of agencies and impacts a variety of types of building uses (residential, commercial, industrial) and ages (new construction, existing retrofits, or improvements). The entities involved in the development and implementation of building decarbonization policies include federal agencies (U.S. Environmental Protection Agency, U.S. Department of Energy), state agencies (California Air Resources Board, California Energy Commission, and the California Public Utility Commission), and local governments such as municipalities and air districts. Approximately two dozen municipalities in the Bay Area have instituted “reach codes” above and beyond the California Energy Commission’s Building Energy Efficiency Standards (Title 24), under which new construction must be all electric or electric-ready.

DISCUSSION

The Air District has used well-established authority to set air pollution performance standards for appliances such as water heaters and furnaces that exhaust to the outside air. These are point-of-sale requirements prohibiting the sale of equipment that doesn’t meet pollution standards, for oxides of nitrogen (NO_x), which is harmful both in itself and as it combines with other pollutants to form ozone and PM_{2.5}. Staff is reviewing whether support exists to adopt a rule that prohibits the sale of equipment that emits NO_x (and associated toxic and GHG emissions) at any level.

A main source of air pollution associated with the buildings sector is natural gas combustion for the operation of in-building appliances. The Air District's existing rules related to the combustion of fossil fuels within buildings include:

- Regulation 9, Rule 4 (Rule 9-4) for residential furnaces;
- Regulation 9, Rule 6 (Rule 9-6) for boilers and water heaters; and
- Regulation 9, Rule 7 (Rule 9-7) for industrial boilers and process heaters

Staff will present information on these existing rules, as well as rules from other air districts in California. This discussion will also include relevant information on potential emission impacts, equipment costs, and other technical considerations associated with these sources and potential control approaches.

BUDGET CONSIDERATION/FINANCIAL IMPACT

None.

Respectfully submitted,

Jack P. Broadbent
Executive Officer/APCO

Prepared by: Jennifer Elwell
Reviewed by: Elizabeth Yura/Greg Nudd

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

Memorandum

To: Chairperson Teresa Barrett and Members
of the Climate Protection Committee

From: Jack P. Broadbent
Executive Officer/APCO

Date: November 12, 2020

Re: Update on the State 2022 Building Energy Code Update

RECOMMENDED ACTION

None; receive and file.

BACKGROUND

California has adopted aggressive greenhouse gas (GHG) emission reduction targets, including returning to 1990 levels by 2020, reducing emissions 40 percent below 1990 levels by 2030, and achieving carbon neutrality by 2045. Although California has met its 2020 target, the road to carbon neutrality will be more challenging and will require emission reductions across all sectors of the economy. In support of these goals, the State has set in motion sweeping policy initiatives focused on decarbonization of the electricity and transportation sectors. In order for California to meet its climate goals, the State must also decarbonize the built environment. Any new building construction moving forward that relies on fossil fuels deepens the challenge of decarbonizing the sector and meeting long-term climate goals.

The California Building Standards Commission created Title 24 in 1978 to create minimum energy efficiency standards for new residential and non-residential buildings. The California Energy Commission (CEC) updates the Building Energy Efficiency Standards (Title 24, Parts 6 and 11, referred to here as the Energy Code) every three years, the last time in 2019. While the CEC manages the updating and implementation of the statewide Energy Code, cities and counties are able to adopt local building codes that exceed Energy Code requirements. So far, 35 jurisdictions statewide – 30 from the Bay Area – have already adopted local policies limiting natural gas use in new construction.

DISCUSSION

The CEC has begun its triennial update of the Energy Code, with pre-rulemaking for the 2022 update underway. The 2022 Energy Code will go into effect on January 1, 2023 and will apply to building permit applications submitted on or after that date. The 2022 Energy Code will improve upon the 2019 Energy Code by revising and updating energy efficiency standards for newly constructed buildings, and additions and alterations to existing buildings. Specifically, the 2022 update is focused on encouraging greater use of electric heat pump technologies for residential and selected non-residential buildings.

In addition to reducing greenhouse gas emissions, a 2022 Energy Code that reduces natural gas use in buildings would improve air quality and health outcomes for the residents of California. In addition to carbon dioxide and methane, leakage and combustion of natural gas in buildings releases toxic air contaminants, nitrogen oxides, carbon monoxide and particulate matter, creating indoor and outdoor pollution that significantly harms air quality and public health.

Staff will present on the status of the CEC's 2022 update to the Energy Code. The presentation will address potential changes to the Energy Code, the timeline for public and stakeholder engagement and opportunities for the Air District to engage in the process.

BUDGET CONSIDERATION/FINANCIAL IMPACT

None.

Respectfully submitted,

Jack P. Broadbent
Executive Officer/APCO

Prepared by: Abby Young
Reviewed by: Henry Hilken

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

Memorandum

To: Chairperson Teresa Barrett and Members
of the Climate Protection Committee

From: Jack P. Broadbent
Executive Officer/APCO

Date: November 12, 2020

Re: Economic Impacts of Transitioning to Economy-Wide Building Decarbonization

RECOMMENDED ACTION

None; receive and file.

BACKGROUND

Natural gas use from residential and commercial buildings in the Bay Area represents approximately 11 percent of the region's greenhouse gas (GHG) inventory. To reach the Bay Area and the State of California goals of reducing GHG emissions 40 percent below 1990 levels by 2030 and 80 percent below 1990 levels by 2050, this natural gas use in buildings will have to be significantly reduced. Switching from natural gas to low-carbon electricity in the building sector is a critical component of the Air District's climate protection strategy.

Local and State government agencies are advancing complementary policies to reduce GHG emissions from buildings by electrifying buildings and by decarbonizing the electrical grid. Specifically, municipal governments are implementing policies to phase-out natural gas use. Cities such as Berkeley, Menlo Park, and others are adopting building codes that ban the use of natural gas in new buildings. In addition, community choice energy programs serving the Bay Area are also fast-tracking the elimination of fossil fuels from their electricity supply. Complementary State policy is ensuring that as more buildings transition from natural gas to electricity, the electricity provided is generated from renewable sources. Senate Bill 100 mandates that renewable energy and zero-carbon resources supply 100 percent of electricity by 2045, with an interim goal of 60 percent renewable energy by 2030. Because of the GHG reductions associated with the electricity grid, switching energy use in buildings from fossil fuels to electricity for space heating, water heating, cooking, and clothes drying will continue to fast-track a decarbonization of the building stock.

The transition from natural gas to electricity can support both sustainability and equity goals with appropriate public policy. Many studies suggest that while there are cost savings associated with constructing new homes as all-electric compared to gas or mixed-fuel homes, retrofitting existing homes to all-electric achieves lower cost savings. For new high-rise residential and commercial construction, there is a lack of cost-effective all-electric system options at this time. The California Energy Commission's report, *Fuel Substitution Forecasting Tools: Methods Supporting Senate Bill 350 Analysis* (Guidehouse May 2020) estimates that cumulative cost

between now and 2030 to electrify all end uses in new and existing buildings across California would be approximately \$98 billion (this includes costs for technology, installation, contractors, fuel, and electric panel upgrades). An equity concern associated with decreasing natural gas use is associated with stranded natural gas assets. There is a higher possibility that natural gas customers that can afford energy upgrades will electrify their buildings and disconnect from the natural gas system first, leaving the remaining customers to pay for the costs of the natural gas system. This could unequally burden lower-income and other vulnerable communities with higher natural gas costs. As such, a policy framework that ensures a cost effective, equitable, and politically viable transition away from natural gas for all stakeholders is necessary.

DISCUSSION

Energy and Environmental Economics, Inc. (E3) is an energy consulting firm that helps utilities, regulators, policymakers, developers, and investors make the best strategic decisions possible as they implement new public policies, respond to technological advances, and address customers' shifting expectations. Policymakers in California relied on E3's analysis to set the State's 2030 GHG reduction target and implement cap-and-trade for the electric sector. More recently, E3 has conducted studies on building electrification and transitioning from natural gas to electric end uses in California.

Amber Mahone, Partner at E3, will present on E3's studies on transitioning to non-fossil fuel energy economy-wide in California. E3's work examines costs, savings, and emissions for electric and gas appliances in six different home types in geographical areas covering over half the State's population. Unlike prior studies, E3's work closely evaluates the consumer cost perspective on building electrification, including upfront capital costs, energy bill impacts, and lifecycle savings and infrastructure costs.

BUDGET CONSIDERATION/FINANCIAL IMPACT

None.

Respectfully submitted,

Jack P. Broadbent
Executive Officer/APCO

Prepared by: Jakub Zielkiewicz
Reviewed by: Henry Hilken