



BAY AREA  
AIR QUALITY  
MANAGEMENT  
DISTRICT

BOARD OF DIRECTORS  
STATIONARY SOURCE AND CLIMATE IMPACTS COMMITTEE

COMMITTEE MEMBERS

JOHN BAUTERS – CO-CHAIR  
TERESA BARRETT – VICE CHAIR  
JOHN GIOIA  
ERIN HANNIGAN  
DAVINA HURT  
MARK ROSS

KAREN MITCHOFF – CO-CHAIR  
RICH CONSTANTINE  
CAROLE GROOM  
DAVID HAUBERT  
TYRONE JUE

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

- **THE PUBLIC MAY OBSERVE THIS MEETING THROUGH THE WEBCAST BY  
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**MONDAY  
APRIL 19, 2021  
9:00 A.M.**

## **AGENDA**

**1. CALL TO ORDER - ROLL CALL**

**PLEDGE OF ALLEGIANCE**

**PUBLIC MEETING PROCEDURE**

*The Committee Co-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](http://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.*

**Staff/Phone (415) 749-**

**2. APPROVAL OF THE MINUTES OF MARCH 15, 2021**

**Clerk of the Boards/5073**

*The Committee will consider approving the draft minutes of the Stationary Source and Climate Impacts Committee meeting of March 15, 2021.*

**3. COSTS AND FINANCING OPTIONS FOR BUILDING DECARBONIZATION IN THE BAY AREA**

**G. Nudd/4786**

**[gnudd@baaqmd.gov](mailto:gnudd@baaqmd.gov)**

*Staff and guest speakers will discuss cost estimates for large-scale building electrification and possible policy response to address these costs, especially among low-income households.*

**4. RULE DEVELOPMENT CONCEPTS FOR BUILDING APPLIANCE REGULATION**

**G. Nudd/4786**

**[gnudd@baaqmd.gov](mailto:gnudd@baaqmd.gov)**

*The Committee will receive information regarding staff's intended direction for amending Regulation 9, Rule 4: Nitrogen Oxides from Fan Type Residential Central Furnaces and Regulation 9, Rule 6: Nitrogen Oxides from Natural Gas-Fired Boilers and Water Heaters.*

5. **SOURCE TEST 101**

E. Ko/4604  
[eko@baaqmd.gov](mailto:eko@baaqmd.gov)

*The Committee will receive an overview of the Air District's Source Testing Division.*

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 Committee, 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**

*Monday, May 17, 2021 at 9:00 a.m., via webcast pursuant to procedures authorized by Executive Order N-29-20 issued by Governor Gavin Newsom.*

9. **ADJOURNMENT**

*The Committee meeting shall be adjourned by the Committee Co-Chair.*

## **CONTACT:**

**MANAGER, EXECUTIVE OPERATIONS**  
**375 BEALE STREET, SAN FRANCISCO, CA 94105**  
[vjohnson@baaqmd.gov](mailto:vjohnson@baaqmd.gov)

**(415) 749-4941**  
**FAX: (415) 928-8560**  
**BAAQMD homepage:**  
[www.baaqmd.gov](http://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 Air 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](http://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, Terri Levels, at (415) 749-4667 or by email at [tlevels@baaqmd.gov](mailto:tlevels@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

#### APRIL 2021

<u>TYPE OF MEETING</u>	<u>DAY</u>	<u>DATE</u>	<u>TIME</u>	<u>ROOM</u>
Board of Directors Stationary Source and Climate Impacts Committee	Monday	19	9:00 a.m.	Webcast only pursuant to Executive Order N-29-20
Board of Directors Administration Committee	Wednesday	21	9:30 a.m.	Webcast only pursuant to Executive Order N-29-20
Board of Directors Legislative Committee	Wednesday	21	1:00 p.m.	Webcast only pursuant to Executive Order N-29-20
Board of Directors Mobile Source and Climate Impacts Committee	Thursday	22	9:30 a.m.	Webcast only pursuant to Executive Order N-29-20

#### MAY 2021

<u>TYPE OF MEETING</u>	<u>DAY</u>	<u>DATE</u>	<u>TIME</u>	<u>ROOM</u>
Board of Directors Special Meeting Budget Hearing	Wednesday	5	9:30 a.m.	Webcast only pursuant to Executive Order N-29-20
Board of Directors Special Meeting	Wednesday	5	10:00 a.m.	Webcast only pursuant to Executive Order N-29-20
Board of Directors Community Equity, Health and Justice Committee	Thursday	6	9:30 a.m.	Webcast only pursuant to Executive Order N-29-20
Board of Directors Stationary Source and Climate Impacts Committee	Monday	17	9:00 a.m.	Webcast only pursuant to Executive Order N-29-20
Board of Directors Administration Committee	Wednesday	19	9:30 a.m.	Webcast only pursuant to Executive Order N-29-20
Board of Directors Legislative Committee	Wednesday	19	1:00 p.m.	Webcast only pursuant to Executive Order N-29-20
Board of Directors Mobile Source and Climate Impacts Committee	Thursday	27	9:30 a.m.	Webcast only pursuant to Executive Order N-29-20
Board of Directors Technology Implementation Office (TIO) Steering Committee	Friday	28	1:00 p.m.	Webcast only pursuant to Executive Order N-29-20

**BAY AREA AIR QUALITY MANAGEMENT DISTRICT**

Memorandum

To: Chairpersons John Bauters and Karen Mitchoff, and Members  
of the Stationary Source and Climate Impacts Committee

From: Jack P. Broadbent  
Executive Officer/APCO

Date: April 14, 2021

Re: Approval of the Minutes of March 15, 2021

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RECOMMENDED ACTION

Approve the attached draft minutes of the Stationary Source and Climate Impacts Committee (Committee) meeting of March 15, 2021.

DISCUSSION

Attached for your review and approval are the draft minutes of the Stationary Source and Climate Impacts Committee meeting of March 15, 2021.

Respectfully submitted,

Jack P. Broadbent  
Executive Officer/APCO

Prepared by: Marcy Hiratzka  
Reviewed by: Vanessa Johnson

Attachment 2A: Draft Minutes of the Stationary Source and Climate Impacts Committee Meeting of March 15, 2021

## AGENDA: 2A – ATTACHMENT

Draft Minutes – Stationary Source and Climate Impacts Committee Meeting of March 15, 2021

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  
Stationary Source and Climate Impacts Committee Meeting  
Monday, March 15, 2021

**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

Stationary Source and Climate Impacts Committee (Committee) Co-Chairperson John Bauters called the meeting to order at 9:01 a.m.

Present: Committee Co-Chairpersons John Bauters and Karen Mitchoff; Vice Chairperson Teresa Barrett; and Directors Rich Constantine, John Gioia, Carole Groom, Erin Hannigan, David Haubert, Davina Hurt, Tyrone Jue, and Mark Ross.

Absent: None.

Also Present: None.

#### 2. APPROVAL OF THE MINUTES OF THE STATIONARY SOURCE COMMITTEE MEETING OF DECEMBER 17, 2020

##### Public Comments

No requests received.

##### Committee Comments

None.

##### Committee Action

Director Groom made a motion, seconded by Director Hannigan, to approve the Minutes of the Steering Committee Meeting of December 17, 2020; and the motion carried by the following vote of the Committee:

AYES: Barrett, Bauters, Constantine, Gioia, Groom, Hannigan, Haubert, Hurt, Jue, Mitchoff.  
NOES: None.  
ABSTAIN: None.  
ABSENT: Ross.

**3. UPDATE ON THE DEVELOPMENT OF AMENDMENTS TO REGULATION 6, RULE 5 (RULE 6-5): PARTICULATE EMISSIONS FROM PETROLEUM REFINERY FLUIDIZED CATALYTIC CRACKING UNITS (FCCU) (OUT OF ORDER, ITEM 4)**

Co-Chair Bauters reported that the Air District held a virtual Public Workshop on Draft Amendments to Rule 6-5 on February 4, 2021, which featured “Control Scenario A” and “Control Scenario B”. Since the public workshop, Air District staff has a new proposal, which includes a third possible approach, “Stair Step approach for early reductions” (Path 3”).

NOTED PRESENT: Director Ross was noted present at 9:07 a.m.

Greg Nudd, Deputy Air Pollution Control Officer of Policy, gave the staff presentation *Update on the Development of Amendments to Rule 6-5*, including: outcome; outline; requested action; background; most recent draft amendments (Control Scenarios A and B - estimated impacts and health impacts); study area for health impacts; public workshop; public comments; key comments and issues; possible new approach; potential paths forward; next steps for Paths 1 or 2; next steps for Path 3; and feedback requested/prompt.

Public Comments

Public comments were given by Brian Nippa, Martinez Refining Co.; Andres Soto, Communities for a Better Environment (CBE); Rhoda Fry, Cupertino resident; Sarah Theiss, Richmond resident; Jed Holtzman, 350 Bay Area; Meredith Lewis, PBF Energy; Kevin Olson, Chevron; Dr. Cynthia Mahoney, Climate Health Now; Chris Palacio, PBF Energy; Tyler Earl, CBE; Bob Brown, Western States Petroleum Association; Kris Keener, Martinez Refining Company (MRC); Patrick Owens; Dr. Tompkins, African-American Community Health Equity Council; Michael Coody, Rodeo Citizens Association; Gordon Johnson, PBF Energy; Jeff Kilbreth, Richmond resident; Nick Plurkowski, PBF Energy; Steve Nadel, Sunflower Alliance; Floy Andrews, Richmond resident; Jessica Scheiber, MRC; Paula Kapfenstein, MRC; Todd Snyder; Bettina Hughes, 350 Bay Area; Janet Johnson, Sunflower Alliance; Jean Tepperman, Sunflower Alliance; Steve (last name unknown); Ann Vorderbrueggen, MRC; Jennifer Wood, PBF Energy; LaDonna Williams, All Positives Possible; heather Slinde, MRC; Gabriel Goffman, Democratic Socialists of America; Nancy Peace, Richmond resident; Ada Marquez, California State University at San Jose; Eduardo Martinez, Richmond City Council; Dan Sakaguchi, CBE; Todd Osterberg, Chevron; Richard Gray, 350 Bay Area; Jackie Garcia Mann, 350 Contra Costa; Marilyn Bardet, Benicia resident; Susan Nelson, PBF Energy; Marc Wright, MRC; Janet Pygeorge, Rodeo resident; Jan Warren, Interfaith Climate Action Network of Contra Costa County; David McCoard, Sierra Club; Kathy Kerridge, Benicia resident; Rob Jaques, San Francisco resident; Greg Karras, Community Energy resource; Tyler Brown, Oakland resident; Suzanne Castalano, Chevron; Brandon Matson, MRC; Shirley Shelangoski; Pamela Meigs; Jackie Barshak; Charles Davidson, Hercules resident; Lisa Jackson,



350 Contra Costa; Dr. Bret Andrews; John Middleton, Richmond resident; and Frances Keeler, California Council for Environmental and Economic Balance.

### Committee Comments

The Committee and staff discussed concerns that pursuing Path 3 would delay implementation of wet gas scrubber (WGS)-equivalent control level, and how long it would take to get the rule ready for Board Approval; which of the three potential paths will be presented to the Board; Congressman Mark DeSaulenier’s new energy transition model (from fossil fuel); allegations that the Air District used inaccurate modeling data to determine localized Particulate Matter<sub>2.5</sub> health impacts in Richmond and Martinez; Path 3’s objective of achieving early PM reductions, and whether the refineries will be able to monitor themselves and conduct their own source testing under this approach; the projected increase on gas prices under Path 2 (Control Scenario B); whether Path 2 (Control Scenario B) would achieve the highest reduction of PM at refineries; projected water usage per year under Path 2 (Control Scenario B), concerns about water resources, and whether that water may be recycled or desalinated for use in a wet scrubber; why Control Scenario B is anticipated to take longer than Control Scenario A; whether costs to refineries who have installed wet gas scrubbers have exceeded 10% of estimated plant profits; the comparison between implementation costs for Path 2 (Control Scenario B) and Path 3; the required effective dates of Path 2 (Control Scenario B) and Path 3; whether the Air District is required to support wet gas scrubbers under Assembly Bill 617 Expedited Best Available Retrofit Control Technology (BARCT) Implementation requirements; the comparison of costs for wet scrubbers at different refineries; the effectiveness of electrostatic precipitator technology versus wet gas scrubbing technology; concern about potential job loss at refineries; whether safer technology should be considered; and the concern that the longer the delays, the more expensive construction work and retrofitting will cost.

As this was not an action item. Following discussion, the Committee directed staff to prepare a rule and staff report for Path 2 (Control Scenario B) for consideration by the Board of Directors.

### Committee Action

None; receive and file.

## **4. DISCUSSION ON STATIONARY SOURCE AND CLIMATE IMPACTS COMMITTEE MISSION STATEMENT AND SCHEDULE FOR 2021 (ITEM 3)**

Damian Breen, Senior Deputy Executive Officer of Operations, gave the staff presentation *Mission Statement and Schedule for 2021*, including: outcome; outline; requested action; background; previous committees’ missions statements; committee calendar; and feedback requested/prompt.

### Public Comments

Public comments were given by Janet Pygeorge, Rodeo resident; Rhoda Fry, Cupertino resident; and Jed Holtzman, 350 Bay Area.

Committee Comments

The Committee and staff discussed ways in which the Air District engaged with communities about the Proposed 2021 Stationary Source and Climate Impacts Committee Workplan.

Committee Action

Vice Chair Mitchoff made a motion, seconded by Director Hannigan, to recommend the Board approve the following mission statement and workplan with the addition of a statement around equity to be added by staff and approved as an amendment to the administrative code by the Full Board.

**Proposed Stationary Source and Climate Impacts Committee Mission Statement**

*“The Stationary Source and Climate Impacts Committee will consider and recommend policies to the Board of Directors relating to stationary sources. The Committee shall recommend positions to the Board of Directors on stationary source policy issues affecting the implementation of the State and Federal Air Quality Management Plans and key planning policy issues such as federal and State Air Quality Management Plan development and air quality and economic modeling. The Committee shall review and make recommendations to the Board of Directors regarding major stationary source programs including: permitting, compliance, small business assistance, toxics, source education, and rule development. The Committee shall recommend to the Board of Directors positions concerning federal and state regulations that affect stationary sources. The Committee shall recommend policies to the Board of Directors for disbursement of supplemental environmental project grants.*

*The Committee will also consider and recommend to the Board of Directors policies and positions of the District relating to climate protection activities and funding relative to stationary sources. The Committee will keep itself informed on actions and proposed actions by local, regional, state, federal, and international agencies and organizations relating to climate protection relative to stationary sources.”*

**Proposed 2021 Stationary Source and Climate Impacts Committee Workplan**  
*revised by Stationary Source and Climate Impacts Committee on March 15, 2021*

Meeting Schedule	Topics
March	<ul style="list-style-type: none"> <li>• Update on Amendments to Regulation 6, Rule 5: Particulate Emissions from Petroleum Refinery Fluidized Catalytic Cracking Units (Rule 6-5)</li> </ul>
April	<ul style="list-style-type: none"> <li>• Building De-Carbonization Discussion</li> <li>• Overview of Datacenters in the Bay Area</li> <li>• Source Test 101</li> </ul>
May	<ul style="list-style-type: none"> <li>• Update on Potential Modifications to the Air District’s Permitting Program</li> <li>• Update on the Air District’s CEQA Thresholds</li> </ul>

June	<ul style="list-style-type: none"> <li>• Update on the Implementation of Regulation 11, Rule 18: Reduction of Risk from Air Toxic Emissions at Existing Facilities (Rule 11-18)</li> <li>• Next Steps on the Particulate Matter Strategy</li> </ul>
<b>July</b>	<ul style="list-style-type: none"> <li>• Update on Amendments to Regulation 6, Rule 5: Particulate Emissions from Petroleum Refinery Fluidized Catalytic Cracking Units (Rule 6-5)</li> </ul>
August – No Meeting	
September	<ul style="list-style-type: none"> <li>• Update on Building De-Carbonization Efforts</li> <li>• Update on Amendments to Regulation 8, Rule 5: Storage of Organic Liquids (Rule 8-5);</li> </ul>
October	<ul style="list-style-type: none"> <li>• Update on the South Bay Odor Study</li> <li>• Update on Methane Strategy Implementation</li> <li>• F-Gas Strategy Discussion</li> </ul>
November	<ul style="list-style-type: none"> <li>• Updates on Rules from Community Emission Reduction Plans</li> </ul>
December	<ul style="list-style-type: none"> <li>• Update on the Implementation of Regulation 11, Rule 18: Reduction of Risk from Air Toxic Emissions at Existing Facilities (Rule 11-18)</li> <li>• Overview of Bay Area Woodsmoke Impacts</li> <li>• Update on Amendments to Regulation 8, Rule 8: Wastewater Collection and Separation Systems (Rule 8-8)</li> <li>• Update on Amendments to Regulation 8, Rule 18: Equipment Leaks (Rule 8-18)</li> </ul>

The motion carried by the following vote of the Committee:

- AYES: Barrett, Bauters, Constantine, Gioia, Hannigan, Haubert, Hurt, Jue, Mitchoff, Ross.  
 NOES: None.  
 ABSTAIN: None.  
 ABSENT: Groom.

**5. SOURCE TEST 101**

This presentation was continued to April 19, 2021.

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

Public comments were given by LaDonna Williams, All Positives Possible; and Rhoda Fry, Cupertino resident.

**7. COMMITTEE MEMBER COMMENTS**

None.

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

Monday, April 19, 2021 at 9:00 a.m., via webcast pursuant to procedures authorized by Executive Order N-29-20 issued by Governor Gavin Newsom.

**9. ADJOURNMENT**

The meeting adjourned at 12:55 p.m.

Marcy Hiratzka  
Clerk of the Boards

**BAY AREA AIR QUALITY MANAGEMENT DISTRICT**

## Memorandum

To: Chairpersons John Bauters and Karen Mitchoff, and Members  
of the Stationary Source and Climate Impacts Committee

From: Jack P. Broadbent  
Executive Officer/APCO

Date: April 14, 2021

Re: Costs and Financing Options for Building Decarbonization in the Bay Area

**RECOMMENDED ACTION**

None; receive and file.

**BACKGROUND**

Natural gas use in 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 achieving carbon neutrality by 2045, natural gas use in buildings will have to be significantly reduced, if not eliminated. As community choice energy programs serving the Bay Area continue fast-tracking the elimination of fossil fuels from the electricity supply, switching from natural gas to low-carbon electricity in the building sector becomes an increasingly critical component of the Air District's climate protection strategy.

In July 2019, the City of Berkeley became the first jurisdiction in the country to adopt an ordinance banning the use of natural gas in new construction. Other local governments immediately began following Berkeley's example. To date, municipal governments across the state have been implementing policies to phase-out natural gas use. In the Bay Area, thirty-six local jurisdictions have adopted ordinances to limit or outright ban natural gas use in new buildings. These policies are critical to curb the expansion of natural gas infrastructure to new buildings, but the bulk of the challenge rests with the building stock that already exists. Transitioning existing buildings from natural gas to low- or zero-carbon energy poses an enormous challenge for state, regional and local governments.

The Air District supports such local efforts through its region-wide Building Decarbonization Initiative to support the transition to carbon-free buildings. In 2018 the Air District awarded \$4.5 million in Climate Protection Grants to Bay Area cities and counties to reduce GHG emissions, with many of the grants addressing emissions from building energy use. Several of these grant projects are accelerating the electrification of indoor appliances such as space and water heaters by providing financial incentives to property owners. Developing new policies and reach codes is often challenging to local government staff who may not have the requisite expertise or resources available. To help local governments meet this challenge, the Air District collaborated with the Building Decarbonization Coalition to develop the Clean Building Compass

(<https://www.buildingdecarb.org/compass.html>), a centralized clearinghouse of policy tools on building decarbonization for local governments. The Air District is also a supporting partner in The Switch Is On (<https://www.switchison.org/>) statewide effort to educate and inspire the public on the benefits of efficient and electric home appliances, and to connect interested residents to contractors, rebates, and other resources.

Air District staff and external subject matter experts have presented to the Board's former Climate Protection Committee on different aspects of building decarbonization, including costs to individual homeowners, available technologies, and emerging policies. Board Members have requested continued discussion on the economics and potential financing for accelerating the transition to a decarbonized building stock.

## DISCUSSION

Two external subject matter experts will present on the economic challenges to decarbonize existing buildings in the Bay Area, and on innovative financing approaches as potential solutions to these challenges.

Jeanne Clinton has served as a Special Advisor to the Governor for Energy Efficiency (Gov. Newsom) and Clean Energy (Gov. Schwarzenegger) to the California Public Utilities Commission (CPUC). Currently as a consultant to the Building Decarbonization Coalition, Ms. Clinton advises on state policies and regulations on energy efficiency and distributed renewable resources, with a focus on market mobilization. Her work addresses policy and market engagement strategies for clean energy issues, sustainable development, and climate mitigation. Ms. Clinton will present on the regional costs of upgrading from natural gas to electric space and water heating, and state and utility funding and financing programs that support this transition.

Colin Bishopp is the Executive Director of PACENation, a national non-profit organization that works to expand access to Property Assessed Clean Energy financing. He has also served as Deputy Director of the Clean Economy Development Center, a non-profit organization that helps public officials and community leaders create jobs through clean energy projects. In these positions, Mr. Bishopp has developed expertise in advancing low-carbon energy alternatives through innovative financing options for property owners. Mr. Bishopp will present on some of the challenges in financing building decarbonization, particularly in lower-income communities, and approaches to tapping into new revenue streams to overcome these challenges.

## 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: Chairpersons John Bauters and Karen Mitchoff, and Members  
of the Stationary Source and Climate Impacts Committee

From: Jack P. Broadbent  
Executive Officer/APCO

Date: April 14, 2021

Re: Rule Development Concepts for Building Appliance Regulation

**RECOMMENDED ACTION**

None; receive and file.

**BACKGROUND**

Air District staff reviewed various California air district rules applicable to emission sources from commercial and residential buildings. Staff's review indicates that Bay Area oxides of nitrogen (NO<sub>x</sub>) emissions from residential natural gas combustion were roughly equal to Air District light duty automobile emissions in 2019 and greenhouse gas emissions were roughly half of 2019 light duty automobile emissions.

Based on this review, staff identified two rules for update under this effort. Regulation 9, Rule 4 (Rule 9-4) Nitrogen Oxides from Fan Type Residential Central Furnaces and Regulation 9, Rule 6 (Rule 9-6) Nitrogen Oxides Emissions from Natural Gas-Fired Boilers and Water Heaters govern point of sale emission standards for small, typically residential and commercial, water and space heating systems. This memo and presentation will provide the Committee with staff's intended direction for amending these two rules.

The regulation of larger units used in industrial processes are addressed through Regulation 9, Rule 7 (Rule 9-7) Nitrogen Oxides and Carbon Monoxide from Industrial, Institutional and Commercial Boilers, Steam Generators, and Process Heaters and the Air District permitting process. Staff intends to address revisions to Rule 9-7 in a separate rule development process as the technical challenges and stakeholders associated with this effort are largely separate from those of Rule 9-4 and Rule 9-6.



## DISCUSSION

Staff currently intends to draft rule amendments that would include the following stages at the point of sale as governed by Rule 9-4 and Rule 9-6:

1. Updated “ultra-low” NO<sub>x</sub> standards that aligns with NO<sub>x</sub> standards in the South Coast Air Quality Management District and San Joaquin Valley Unified Air Pollution Control District with a short-term compliance schedule. Staff intends to:
  - a. Match “ultra-low” NO<sub>x</sub> standards currently required by these other air districts where it is practical and justified to simplify requirements for appliance manufacturers that supply the state and to achieve cost effective NO<sub>x</sub> emission reductions.
  - b. Develop amendments to additional sections of Rules 9-4 and 9-6 as appropriate and necessary. These amendments may include existing applicability requirements, exemptions, testing methodologies and alternative compliance pathways for certain units.
2. Introduction of a technology-forcing “near-zero” NO<sub>x</sub> standard with a longer-term compliance schedule. Staff believes that the introduction of a long-term future-effective standard at a “near-zero” NO<sub>x</sub> level would send the strong regional market signal required to expedite the development and implementation of electrified or otherwise low-emission space and water heating solutions.

Staff recognizes that the introduction of a technology-forcing standard presents unique challenges including those discussed below.

*Market readiness:* Emerging policies for building decarbonization (such as city and county “reach codes”) have greatly increased the market proliferation of “near-zero” solutions over the past five years, a trend that is expected to accelerate. Staff intends to coordinate with stakeholders throughout the rule development process and leading up to the “near-zero” standard compliance date. The recommended policy would complement efforts by state and local actors and help to harmonize standards and simplify requirements for contractors.

*Regulatory Off-ramp:* Staff recommends that the long term “near-zero” standard be accompanied by a regulatory “off-ramp” should the introduction of this standard face unforeseen challenges. Potential challenges include market failure to produce consumer-ready technology as well as financial obstacles. This “off-ramp” could consist of a waiver process to continue sales in the region for a limited length of time past the compliance date, but its ultimate structure will largely be informed by future stakeholder engagement.

*Cost of compliance:* In cases such as this, where the cost of compliance is borne by individual property owners, equity considerations must be kept at the forefront. The impact of these recommended rule amendments on interest groups such as renters, affordable housing administrators, and others must be adequately considered. Understanding and mitigating these

additional costs and differing cost burdens among Bay Area residents will continue to be a priority of Air District staff throughout the rule development process. Staff intends to conduct an equity analysis to evaluate these costs and other potential impacts of the intended amendments. This analysis is intended to be conducted in close consultation with community advocates over the course of this year.

*Rulemaking timeline:* Staff intends to present on this topic again to this Committee in September 2020. Staff anticipates hosting a public workshop prior to the September Committee meeting. In addition to the development of draft language, staff intends to discuss socio-economic and equity concerns associated with a potential technology-forcing standard at the public workshop. This discussion is intended to be part of a larger stakeholder feedback and equity analysis process. Staff currently projects that a Board Hearing for adoption of the regulatory concepts presented could occur in the second quarter of 2022.

#### BUDGET CONSIDERATION/FINANCIAL IMPACT

None.

Respectfully submitted,

Jack P. Broadbent  
Executive Officer/APCO

Prepared by: Jennifer Elwell  
Reviewed by: Victor Douglas and Elizabeth Yura

**BAY AREA AIR QUALITY MANAGEMENT DISTRICT**

Memorandum

To: Chairpersons John Bauters and Karen Mitchoff, and Members  
of the Stationary Source and Climate Impacts Committee

From: Jack P. Broadbent  
Executive Officer/APCO

Date: April 14, 2021

Re: Source Test 101

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RECOMMENDED ACTION

None; receive and file.

DISCUSSION

Source testing is a way to measure emissions of pollutants from industrial facilities, usually from a stack or vent. Data from source testing is used to support many of the Air District's programs, including permitting, health risk assessments, inspections, emission inventory and rule development. This presentation will be an introduction to source testing to provide background that will be relevant for upcoming discussions and decisions for the Board of Directors. Staff will present an overview of the Air District's source testing work, including:

- Types of sources and pollutants tested
- Basic source testing methodology
- How data is used and shared
- Assessing new measurement technology and methods
- Pros and cons of increasing the number of tests performed by Air District staff

BUDGET CONSIDERATION/FINANCIAL IMPACT

None.

Respectfully submitted,

Jack P. Broadbent  
Executive Officer/APCO

Prepared by: Elaine Ko and Jerry Bovee  
Reviewed by: Ranyee Chiang