

BOARD OF DIRECTORS  
STATIONARY SOURCE COMMITTEE  
December 10, 2025

COMMITTEE MEMBERS

KEN CARLSON– CHAIR  
DIONNE ADAMS  
JOHN GIOIA  
GABE QUINTO  
STEVE YOUNG

LYNDA HOPKINS – VICE CHAIR  
BRIAN COLBERT  
RICO MEDINA  
LENA TAM

**MEETING LOCATION(S) FOR IN-PERSON ATTENDANCE BY  
COMMITTEE MEMBERS AND MEMBERS OF THE PUBLIC**

Bay Area Metro Center  
1st Floor Yerba Buena  
375 Beale Street  
San Francisco, CA 94105

Office of Contra Costa County  
Supervisor John Gioia  
Conference Room  
11780 San Pablo Ave., Suite D  
El Cerrito, CA 94530

Santa Rosa Junior College Campus  
Doyle Library, Room 148  
1501 Mendocino Ave.  
Santa Rosa, CA 95401

Alameda County  
Board of Supervisors District 3  
101 Callan Ave., Suite 103  
San Leandro, CA 94577

**THE FOLLOWING STREAMING OPTIONS WILL ALSO BE PROVIDED**

These streaming options are provided for convenience only. In the event that streaming connections malfunction for any reason, the Stationary Source Committee reserves the right to conduct the meeting without remote webcast and/or Zoom access.

The public may observe this meeting through the webcast by clicking the link available on the air district's agenda webpage at [www.baaqmd.gov/bodagendas](http://www.baaqmd.gov/bodagendas).

Members of the public may participate remotely via Zoom at <https://bayareametro.zoom.us/j/86734759142>, or may join Zoom by phone by dialing (669) 900-6833 or (408) 638-0968. The Webinar ID for this meeting is: 867 3475 9142

**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 a matter on the agenda will have two minutes each to address the Committee on that agenda item, unless a different time limit is established by the Chair. No speaker who has already spoken on an item will be entitled to speak to that item

again.

The Committee welcomes comments, including criticism, about the policies, procedures, programs, or services of the District, or of the acts or omissions of the Committee. Speakers shall not use threatening, profane, or abusive language which disrupts, disturbs, or otherwise impedes the orderly conduct of a Committee meeting. The District is committed to maintaining a workplace free of unlawful harassment and is mindful that District staff regularly attend Committee meetings. Discriminatory statements or conduct that would potentially violate the Fair Employment and Housing Act – i.e., statements or conduct that is hostile, intimidating, oppressive, or abusive – is *per se* disruptive to a meeting and will not be tolerated.

# STATIONARY SOURCE COMMITTEE MEETING AGENDA

WEDNESDAY, DECEMBER 10, 2025

10:00 AM

Chairperson, Ken Carlson

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. **Pledge of Allegiance**

**CONSENT CALENDAR (Item 3)**

3. Approval of the Draft Minutes of the Stationary Source Committee Meeting of November 12, 2025

*The Committee will consider approving the Draft Minutes of the Stationary Source Committee Meeting of November 12, 2025.*

**INFORMATIONAL ITEM(S)**

4. Update on Comments on Regulation 11, Rule 18 - Reduction of Risk from Air Toxic Emissions at Existing Facilities

*The Committee will discuss an update on public comments received on the amendments to Regulation 11: Hazardous Pollutants, Rule 18: Reduction of Risk from Air Toxic Emissions at Existing Facilities (Rule 11-18). The summary provided at the most recent Committee meeting did not include comments from Communities for a Better Environment (CBE) due to an issue with email delivery. Air District staff will provide information about CBE's comments to ensure a complete understanding of all comments received. This item will be presented by Gregory H. Nudd, Deputy Executive Officer of Policy.*

5. Update on Regulation 9, Rule 6 - Consideration of Concepts for Affordability and Availability Amendments

*The Committee will discuss an update on potential amendments to Regulation 9: Inorganic Gaseous Pollutants, Rule 6: Nitrogen Oxides Emissions from Natural Gas-Fired Boilers and Water Heaters (Rule 9-6). Air District staff will present information about the Concepts Paper that was released for public comment on*

October 24, 2025. The Concepts Paper included information on affordability and availability considerations for small water heaters that are currently subject to the January 1, 2027, zero NOx emissions standard. The presentation will provide information on potential avenues for future amendments to address affordability and availability concerns, summarize public feedback received and ask for input from the Committee on the considerations presented. This item will be presented by Jennifer Lam, Assistant Manager in the Regulatory Development Division.

## **OTHER BUSINESS**

### **6. Public Comment on Non-Agenda Matters**

*Pursuant to Government Code Section 54954.3, members of the public who wish to speak on matters not on the agenda will be given an opportunity to address the Committee. Members of the public will have two minutes each to address the Committee, unless a different time limit is established by the Chair. The Committee welcomes comments, including criticism, about the policies, procedures, programs, or services of the District, or of the acts or omissions of the Committee. Speakers shall not use threatening, profane, or abusive language which disrupts, disturbs, or otherwise impedes the orderly conduct of a Committee meeting. The District is committed to maintaining a workplace free of unlawful harassment and is mindful that District staff regularly attend Committee meetings. Discriminatory statements or conduct that would potentially violate the Fair Employment and Housing Act – i.e., statements or conduct that is hostile, intimidating, oppressive, or abusive – is per se disruptive to a meeting and will not be tolerated.*

### **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**

*Wednesday, February 11, 2026, at 10:00 a.m. The meeting will be held in-person at the Bay Area Metro Center and at satellite locations as may be specified on the meeting agenda using a remote teleconferencing link. Members of the Stationary Source Committee and the public may attend at any of those in-person locations, and members of the public may also attend virtually via webcast.*

9. Adjournment

*The Committee meeting shall be adjourned by the 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**  
**Air District 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 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, Diana Ruiz, Acting Environmental Justice and Community Engagement Officer at (415) 749-8840 or by email at [druiz@baaqmd.gov](mailto:druiz@baaqmd.gov).

**BAY AREA AIR DISTRICT**  
**375 BEALE STREET, SAN FRANCISCO, CA 94105**  
**FOR QUESTIONS PLEASE CALL (415) 749-4941**

**EXECUTIVE OFFICE:**  
**MONTHLY CALENDAR OF AIR DISTRICT MEETINGS**

**DECEMBER 2025**

<b><u>TYPE OF MEETING</u></b>	<b><u>DAY</u></b>	<b><u>DATE</u></b>	<b><u>TIME</u></b>	<b><u>ROOM</u></b>
Advisory Council Meeting	Monday	8	10:00 a.m.	1 <sup>st</sup> Floor Board Room
Advisory Council Meeting - CANCELLED	Monday	8	1:00 p.m.	1 <sup>st</sup> Floor Board Room
Board of Directors Stationary Source Committee	Wednesday	10	10:00 a.m.	1 <sup>st</sup> Floor, Yerba Buena Room
Board of Directors Community Equity, Health, and Justice Committee - CANCELLED	Wednesday	10	1:00 p.m.	1 <sup>st</sup> Floor, Yerba Buena Room
Board of Directors Policy, Grants and Technology Committee	Wednesday	17	10:00 a.m.	1 <sup>st</sup> Floor Board Room
Board of Directors Finance and Administration Committee	Wednesday	17	1:00 p.m.	1 <sup>st</sup> Floor Board Room
JMB 12/3/25 – 9:29 a.m.				G/Board/Executive Office/Moncal

**BAY AREA AIR DISTRICT**  
Memorandum

To: Chairperson Ken Carlson and Members  
of the Stationary Source Committee

From: Philip M. Fine  
Executive Officer/APCO

Date: December 10, 2025

Re: Approval of the Draft Minutes of the Stationary Source Committee Meeting of  
November 12, 2025

RECOMMENDED ACTION

Approve the Draft Minutes of the Stationary Source Committee Meeting of November 12, 2025.

BACKGROUND

None.

DISCUSSION

Attached for your review and approval are the Draft Minutes of the Stationary Source Committee Meeting of November 12, 2025.

BUDGET CONSIDERATION/FINANCIAL IMPACT

None.

Respectfully submitted,

Philip M. Fine  
Executive Officer/APCO

Prepared by: Marcy Hiratzka  
Reviewed by: Vanessa Johnson



ATTACHMENT(S):

1. Draft Minutes of the Stationary Source Committee Meeting of Nov 12, 2025

Bay Area Air Quality Management District  
375 Beale Street, Suite 600  
San Francisco, CA 94105

Stationary Source Committee Meeting

Wednesday, November 12, 2025

## **DRAFT MINUTES**

*This meeting was webcast, and a video recording is available on the website of the Bay Area Air Quality Management District at [www.baaqmd.gov/bodagendas](http://www.baaqmd.gov/bodagendas)*

### **CALL TO ORDER**

1. **Opening Comments:** Stationary Source Committee (Committee) Chairperson, Ken Carlson, called the meeting to order at 10:01 a.m.

#### **Roll Call:**

Present, In-Person (Bay Area Metro Center, 1st Floor Yerba Buena Room, 375 Beale Street, San Francisco, CA 94105): Chairperson Ken Carlson; Directors Rico E. Medina; and Gabe Quinto.

Present, In-Person Satellite Location: (Benicia City Hall - Conference Room 2, 250 East L Street, Benicia, CA 94510): Director Steve Young.

Present, In-Person Satellite Location: (Alameda County, Board of Supervisors District 3, 101 Callan Ave., Suite 103, San Leandro, CA 94577): Director Lena Tam.

Present, In-Person Satellite Location: (Pittsburg City Hall, 65 Civic Ave., Room, 301A, Pittsburg, CA 94565): Director Dionne Adams.

Absent: Vice Chairperson Lynda Hopkins; and Directors Brian Colbert and John Gioia.

2. **PLEDGE OF ALLEGIANCE**

### **CONSENT CALENDAR**

3. **APPROVAL OF THE DRAFT MINUTES OF THE STATIONARY SOURCE COMMITTEE MEETING OF JULY 9, 2025**

#### **Public Comments**

No requests received.

### Committee Comments

None.

### Committee Action

Director Medina made a motion, seconded by Director Quinto, to **approve** the Draft Minutes of the Stationary Source Committee meeting of July 9, 2025; and the motion **carried** by the following vote of the Committee:

AYES:	Adams, Carlson, Medina, Quinto, Tam, Young.
NOES:	None.
ABSTAIN:	None.
ABSENT:	Colbert, Gioia, Hopkins.

## **INFORMATIONAL ITEMS**

### **4. OVERVIEW OF SOCIOECONOMIC ANALYSES FOR AIR DISTRICT RULEMAKING**

Leonid Bak, Economist/Senior Advanced Projects Advisor, gave the staff presentation *Overview of Socioeconomic Analyses for Air District Rulemaking*, including: outline; rule development requirements; statutory requirements; overview of socioeconomic analyses; socioeconomic analysis; current process; limitations of analysis; additional information for decision making; health and equity assessments and examples; 2021 Amendments to Rule 6-5: Refinery Fluidized Catalytic Cracking Units (FCCUs) – Modeled Particulate Matter (PM)<sub>2.5</sub> levels and residential demographics, exposure disparities, and health benefits; expanded socioeconomic impact analysis: example and potential future work.

### Public Comments

Public comments were given by Tim Sbranti, Contra Costa Building and Construction Trades Council; Mark Williams, Jr., Environmental Justice League; Tina Flores, Environmental Justice League; Yvonne Eashman, Environmental Justice League; Camika Robinson, Environmental Justice League; Mark Williams, Sr., Environmental Justice League; and Adrianna Williams, Environmental Justice League.

### Committee Comments

The Committee and staff discussed committee members' support for applying analysis to the proposed zero-NOx appliance rules and the need to understand equity and cost burden, particularly for low-income households; the suggestion of incorporating county disparity studies and past state level socioeconomic data to assess employment, affordability, and demographic impacts of upcoming Air District rules; how the analysis can help assess and adjust for first-cost impacts across communities, leveraging the analysis as appliance rules roll out; the desire for the market to align with community circumstances and partnerships with manufactures ; the hope that the Air District applies a strong equity lens in future rulemakings, noting that many communities that are facing poverty, foreclosures, job loss and rising energy

costs, may be unable to absorb the cost of new regulations; the desire for the Air District to collaborate closely with labor, industry, and community partners to ensure the clean-energy transition remains affordable; whether requirements beyond the Health & Safety Code guide the Air District's socioeconomic analysis; the importance of using the Air District's rulemaking history to better understand consumer cost impacts and the need to quantify consumer costs, health and economic benefits; interest in developing a formal Board policy on socioeconomic analysis requirements that goes beyond the Health & Safety Code and exploring an ad hoc committee that can develop such a baseline policy; support for developing a clear foundational policy with accessible data for the Board and the community; the request that staff bring the issue back to the Committee for further review and include a comparison of the trade proposal, with the goal of developing a workable socioeconomic analysis policy framework.

#### Committee Action

No action taken.

### **5. UPDATE ON AMENDMENTS TO RULE 11-18**

Dr. Andrea Anderson, Senior Air Quality Specialist, gave the staff presentation *Update on Amendments to Rule 11-18*, including: outline; background of Rule 11-18: Reduction of Risk from Air Toxic Emissions at Existing Facilities (overview of Rule 11-18, air toxics in the Bay Area, major steps in the Rule 11-18 process, feedback on Rule 11-18 driving amendments, Air District actions, rule development process); draft amendments (overview, Health Risk Assessments (HRA), Risk Reduction Plans (RRP), overview of implementation procedures, general, Dispute Resolution Panel); public comments and next steps (public engagement overview, community, industry, change of Emissions Inventory review timing); and next steps.

#### Public Comments

Public comments were given by Peter Okurowski, California Council for Environmental and Economic Balance.

#### Committee Comments

The Committee and staff discussed industry's objection to the 14-day turnaround response time, and whether 30 to 60 days would be more reasonable depending on the scope of revisions; and who would be responsible for conducting the Health Risk Assessments (HRAs).

#### Committee Action

No action taken.

### **OTHER BUSINESS**

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

No requests received.

**7. COMMITTEE MEMBER COMMENTS**

None.

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

Wednesday, December 10, 2025, at 10:00 a.m. The meeting will be held in-person at the Bay Area Metro Center and at satellite locations as may be specified on the meeting agenda using a remote teleconferencing link. Members of the Stationary Source Committee and the public may attend at any of those in-person locations, and members of the public may also attend virtually via webcast.

**9. ADJOURNMENT**

The meeting was adjourned at 11:34 a.m.

Marcy Hiratzka  
Clerk of the Board

**BAY AREA AIR DISTRICT**  
Memorandum

To: Chairperson Ken Carlson and Members  
of the Stationary Source Committee

From: Philip M. Fine  
Executive Officer/APCO

Date: December 10, 2025

Re: Update on Comments on Regulation 11, Rule 18 - Reduction of Risk from Air  
Toxic Emissions at Existing Facilities

**RECOMMENDED ACTION**

None; the Committee will discuss this item, but no action is requested at this time.

**BACKGROUND**

Regulation 11: Hazardous Pollutants, Rule 18: Reduction of Risk from Air Toxic Emissions at Existing Facilities (Rule 11-18) was adopted by the Air District in 2017 to address facilities whose emissions of toxic air contaminants result in significant risks to nearby residents and workers. The purpose of Rule 11-18 is to focus on existing facilities causing the highest health impacts across the Bay Area and require these facilities to reduce those impacts.

Concerns from community groups and Air District committees have highlighted delays in implementing Rule 11-18, particularly in finalizing health risk assessments (HRAs) and Risk Reduction Plans (RRPs). Additionally, the Richmond-North Richmond-San Pablo Path to Clean Air Community Emission Reduction Plan (PTCA CERP), calls for improvements in Rule 11-18 to improve efficiency and transparency. In response, the Air District is developing amendments to expedite risk reduction and improve program implementation.

To address these needs, the Air District is developing amendments to Rule 11-18 in two phases:

- Phase 1 (current): focused on procedural improvements and implementation efficiency; and
- Phase 2 (future): focused on evaluating and potentially increasing rule stringency.

## DISCUSSION

The Air District published draft amendments to Rule 11-18, draft Rule 11-18 Implementation Procedures, and a Preliminary Staff Report in August 2025 for public review and comment. The draft amendments aim to streamline program administration to implement the risk reduction components of the rule as soon as feasible.

The Air District conducted a virtual public workshop on October 2, 2025 and held a public comment period on these materials through October 13, 2025. Air District staff provided a presentation at the Stationary Source Committee on November 12, 2025 with an overview of the draft amendments to Rule 11-18 and a summary of public engagement and comments received to date. The Air District is providing an updated summary of the comments received, which are available on the Air District website.

At the most recent Stationary Source Committee meeting on November 12, 2025, Air District staff provided an update on proposed rulemaking to streamline implementation of Regulation 11: Hazardous Pollutants, Rule 18: Reduction of Risk from Air Toxic Emissions at Existing Facilities (Rule 11-18).

As part of that presentation, staff presented a summary of comments received on the proposed rule amendments. That summary did not include comments from Communities for a Better Environment (CBE) due to an issue with email delivery. To correct this omission, CBE's comments are summarized below and will be discussed during the meeting.

CBE opposes facility-prepared Health Risk Assessments (HRAs) and instead recommend that the Air District hire and oversee third-party vendors.

They are also requesting an additional comment period on the final HRA if there are substantial changes after the comment period on the preliminary HRA

CBE also requests additional detail on limits to Risk Reduction Plan (RRP) submission extensions and the requirement for interim risk reduction goals in the RRP.

In addition, they propose inclusion of non-routine emissions in emissions inventory for the HRA.

With respect to the Dispute Resolution Panel (DRP), they requested that risk reduction measures not be delayed by the DRP proceedings and that those proceedings be transparent and include the opportunity for public comments along with Air District responses.

BUDGET CONSIDERATION/FINANCIAL IMPACT

None.

Respectfully submitted,

Philip M. Fine  
Executive Officer/APCO

Prepared by: David Joe  
Reviewed by: Gregory H. Nudd

ATTACHMENT(S):

None



**BAY AREA AIR DISTRICT**  
Memorandum

To: Chairperson Ken Carlson and Members  
of the Stationary Source Committee

From: Philip M. Fine  
Executive Officer/APCO

Date: December 10, 2025

Re: Update on Regulation 9, Rule 6 - Consideration of Concepts for Affordability  
and Availability Amendments

**RECOMMENDED ACTION**

None; the Committee will discuss this item, but no action is requested at this time.

**BACKGROUND**

In March 2023, the Air District Board of Directors adopted amendments to Regulation 9, Rule 4 and Regulation 9, Rule 6 (“building appliance rules”) which included zero nitrogen oxides (NOx) emissions standards starting in 2027, 2029, and 2031 depending upon the appliance type and size. The amendments to Rules 9-4 and 9-6 are projected to result in substantial health benefits to Bay Area residents as NOx from buildings are a significant source of emissions.

In December 2024, Air District staff presented an update to the Board of Directors to convey current understanding of the implementation readiness of the zero NOx building appliances rules. The information presented in this report was gathered through significant stakeholder engagement and was focused on the January 1, 2027 requirement in Rule 9-6 for water heaters less than 75,000 BTU/hr. This presentation concluded that while significant progress has been made toward successful implementation of Rule 9-6, Air District staff see benefits in further amending the rule to provide increased flexibility in areas where challenges remain.

In April 2025, Air District staff gave a presentation to the Stationary Source Committee laying out potential pathways for amendments to Rule 9-6 to address remaining implementation challenges.

**DISCUSSION**

Air District staff released a Concepts Paper related to addressing affordability and availability concerns for Rule 9-6 for public comment on October 24, 2025. Comments were accepted until November 24, 2025. Over 370 public comments were received.

The concepts paper laid out Air District staff's current thinking on how to address affordability and availability concerns discussed in the December 2024 report for small water heaters. These include:

- Exemption for water heaters less than 35 gallons
- Limited certified exemptions for project constraints including:
  - High heat demands
  - Emergency replacements
  - Hydronic systems
  - Electrical constraints and space constraints
- Certified exemptions for applicants including low-income applicants

Air District staff will discuss the current concepts and the public comments received during the comment period and will ask the committee for feedback on the concepts and potential thresholds at which exemptions would be set and other potential changes to the existing rule.

Next steps include developing draft amendment language and hosting a public workshop in early 2026. Air District staff intends to bring amendments to the Board of Directors for adoption in 2026, ahead of the 2027 implementation date currently in Rule 9-6.

#### BUDGET CONSIDERATION/FINANCIAL IMPACT

None.

Respectfully submitted,

Philip M. Fine  
Executive Officer/APCO

Prepared by: Jennifer Lam  
Reviewed by: Victor Douglas

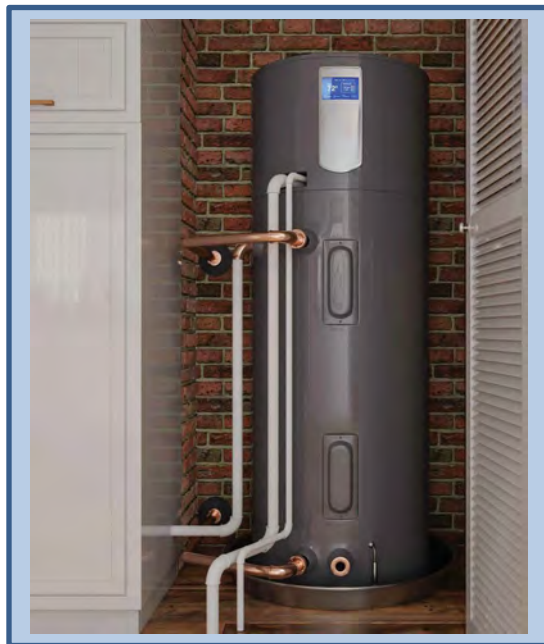
#### ATTACHMENT(S):

1. Rule 9-6 Concepts Paper
2. Rule 9-6 Concepts Paper Presentation



# Bay Area Air District

## **CONCEPTS FOR RULE 9-6 AMENDMENTS: Affordability and Availability Considerations for Zero NOx Small Water Heaters**



**October 2025**

***Prepared By:***

**Poornima Dixit, Senior Air Quality Engineer,  
Eric Lara, Senior Air Quality Specialist, and  
Amy Dao, Senior Environmental Planner**

**REGULATORY DEVELOPMENT DIVISION  
& PLANNING & CLIMATE PROTECTION DIVISION**

## **List of Appendices**

Appendix A: Letter from Bay Area Clean Air (BACA) Group

Appendix B: Myths vs. Facts Document

## I. Executive Summary:

### A. General Background

In 2019, **emissions from residential natural gas combustion accounted for more NOx emissions than either fuel refining or passenger vehicles in the Bay Area.** Furnaces and water heaters accounted for about 90 percent of the total emissions from residential building appliances. Through the reduction of NOx and secondary particulate matter emissions, **the zero NOx amendments passed in 2023 were projected to prevent up to 85 premature deaths and save up to \$890 million in health impacts annually.**

Regulation 9: Inorganic Gaseous Pollutants, Rule 6: Nitrogen Oxides Emissions from Natural Gas-Fired Boilers and Water Heaters (Rule 9-6) sets nitrogen oxides (NOx) emissions standards for newly sold and installed water heaters and boilers in the San Francisco Bay Area. Rule 9-6 amendments adopted in March of 2023 currently require newly installed natural gas-fired water heaters under 75,000 BTU/hr to meet zero NOx emissions standards if they are manufactured after January 1, 2027. Water heaters and boilers between 75,000 and 2 million BTU/hr must meet the same requirement for a 2031 or later manufacture date.<sup>1</sup> The Rule applies at the point of sale and installation and does not require retrofitting or pre-emptive replacement of existing equipment. **Rule 9-6 does not apply to any other residential appliances other than water heaters.** Air District Rule 9-4, which also has zero NOx requirements with different compliance dates, **does not apply to any other residential appliances other than furnaces for space heating.**

The 2023 amendments to Rule 9-6 require Air District staff to work with knowledgeable stakeholders to prepare a readiness report for the Board of Directors at least two years prior to the zero NOx compliance date. The intent of this report was to give the Air District time to make modifications to the rule as necessary to ensure equitable and technically feasible implementation. An Implementation Working Group (IWG) of more than 40 stakeholders was convened in 2023-2024 following the adoption of the zero NOx standards to help develop this report. Air District staff provided an update to the Board of Directors (Board) in December 2024 that summarized the findings of the IWG.<sup>2</sup> The report found that **average upfront incremental cost to install a heat pump water heater (HPWH) compared to a new NOx emitting gas water heater, based on thousands of Bay Area**

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<sup>1</sup><https://www.baaqmd.gov/rules-and-compliance/rules/reg-9-rule-6-nitrogen-oxides-emissions-from-natural-gas-fired-water-heaters>

<sup>2</sup> <https://www.baaqmd.gov/en/community-health/building-appliances-rule-implementation/building-appliances-implementation-working-group>

**installations, was between \$1,840 and \$3,496,<sup>3</sup> depending upon the baseline appliance (tanked and tankless vs. tanked only), before incentives.** Some of the findings included ongoing challenges for “edge case” projects with high costs significantly greater than average; an uncertain incentive landscape for lower-income purchasers; and a need for emergency replacement loaners at a regional scale.

**Staff intends to recommend that the Board of Directors amend Rule 9-6 and introduce targeted flexibility provisions to address affordability and implementation challenges for existing homes and buildings.** This concepts paper provides a high-level overview of potential future amendments that reduce implementation burdens by allowing exemptions for the most difficult and costly projects while progressing toward zero NOx compliance and maximizing NOx emissions reductions and public health benefits.

## B. High-Level Summary of Concepts

Following is a brief overview of staff’s recommended concepts for amendments to address affordability and flexibility.

### i. Equipment-Type Based Exemptions

Create a separate category for small-capacity units with a delayed zero NOx compliance date of 2031.

### ii. Limited Certified Exemptions

Allow post-2027 installations of NOx-emitting units only with Air District registration and/or contractor/resident self-certification for specified reasons, including high-cost electrical or space constraints, hydronic heating use, high-heat business demands, low-income status and emergency replacement.

## C. Potential Impacts

### • Health and Air Quality Impacts

Transitioning to zero NOx emissions from household appliances will have substantial benefits for public health, with the full replacement of water heaters and furnaces in the Bay Area by zero NOx options expected to prevent up to 85 premature deaths per year. The planned amendments discussed in this Concept Paper seek to maintain these public health benefits as much as possible while balancing accessibility and affordability of replacements.

Since the regulations only require replacement with compliant equipment at the end of the existing equipment’s useful life, the emissions benefits phase in over

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<sup>3</sup> [https://www.baaqmd.gov/~/media/files/community-health/building-appliance-implementation/task1\\_electrificationcosts-pdf.pdf?rev=3cb66a09f3094f94b35fa7fc90cfd4ec&sc\\_lang=en](https://www.baaqmd.gov/~/media/files/community-health/building-appliance-implementation/task1_electrificationcosts-pdf.pdf?rev=3cb66a09f3094f94b35fa7fc90cfd4ec&sc_lang=en)

several years with full benefits not expected until after 2050. If some equipment is fully or temporarily exempted from the zero NOx standards, that would slow the rate at which these health benefits are achieved. Policy determinations made by the Board of Directors, with public input, could determine the extent of affordability exemptions and therefore the impact on the projected emission reductions.

- Implementation Considerations

There are approximately 120,000 small water heater replacements in the Bay Area every year. Under the current rule, with no exemptions, the Air District can work with manufacturers and distributors to ensure only compliant equipment is shipped to and sold in the Bay Area. This would not require substantial additional resources and is consistent with the way these rules have been enforced for decades. If the Board determines that it is prudent to provide affordability exemptions for some cases, there could be a mechanism to track those exemptions and ensure that they are only utilized when appropriate and in compliance with the Rule. If the exemptions cover about 20% of installations, that results in approximately 24,000 exemptions per year. The effort to track and enforce exemption provisions would likely require an automated system to process and issue exemption requests. A robust enforcement program could also include an auditing process. Setting up and operating a system to implement the exemptions process would require time and a sustained source of funding.

If low-income property owners are exempt from the requirements of the rule, that could have health equity impacts. The Air District's analysis showed that low-income communities of color are disproportionately impacted by pollution from residential appliances. Continued installation of polluting equipment in those communities could extend and worsen the disproportionate exposure to air pollution in those communities. If the cost to clean up pollution from these sources is not borne by property owners, other sources of funding could be needed to make sure these communities don't continue to be disproportionately impacted by pollution. While significant funding is currently available from state sources, it may only address short-term needs. The Board decision about where to set the threshold for a low-income exemption could determine the extent of the need for additional funding. Other Air Districts in the state have required mitigation fees on non-compliant equipment to create a funding source to advance deployment of compliant units, especially where costs are unaffordable. The Board decision about where to set the threshold for a low-income exemption could determine the extent of the funding needs.

## D. Next Steps

The Bay Area Air District is releasing this Concept Paper to **solicit public comments** on the concepts for potential amendments to Rule 9-6. Following the public comment period, staff intends to **present to the Stationary Source Committee of the Bay Area Air District Board of Directors in December 2025**. Staff will consider input received from the Committee and the public and plan to **release draft amendment language and a Preliminary Staff Report for consideration in early 2026**.

## II. Introduction and Background:

### A. Background, Purpose, and Scope

- 2019 emissions from residential natural gas combustion accounted for more NO<sub>x</sub> emissions than either fuel refining or passenger vehicles in the Bay Area. Furnaces and water heaters account for about 90 percent of the total emissions from building appliances. In 2023, the Air District Board of Directors passed zero NO<sub>x</sub> amendments to existing space and water heating rules, which were projected annually to prevent up to 85 premature deaths and save up to \$890 million in health impacts due to the reduction of NO<sub>x</sub> and secondary particulate matter.<sup>4</sup>
- Rule 9-6 establishing zero NO<sub>x</sub> standards for all new water heaters up to 2 million btu/hr via phased dates:
  - 2027 for small residential units 75,000 btu/hour and below; and
  - 2031 for larger residential/commercial units.
- Rule 9-6 does not apply to any other residential appliances other than water heaters. Air District Rule 9-4, which also has zero NO<sub>x</sub> requirements with different compliance dates, does not apply to any other residential appliances other than furnaces for space heating.
- The purpose of the Concept Paper is to outline targeted flexibilities limited to existing buildings that reduce implementation and cost burdens while progressing toward zero NO<sub>x</sub> compliance, maximizing NO<sub>x</sub> emissions reductions and public health benefits, and minimizing delay. These flexibilities are not intended for new construction, where the installation of zero NO<sub>x</sub> appliances is consistent with streamlined and cost-effective building practices.

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<sup>4</sup> [https://www.baaqmd.gov/~media/files/board-of-directors/2023/bod\\_presentation\\_031523\\_v2\\_final\\_op-pdf.pdf?rev=31d959e50a20499eb034ee7e8d1f3997&sc\\_lang=en](https://www.baaqmd.gov/~media/files/board-of-directors/2023/bod_presentation_031523_v2_final_op-pdf.pdf?rev=31d959e50a20499eb034ee7e8d1f3997&sc_lang=en)



## B. Summary of IWG Process

- The Air District convened an external Implementation Working Group (IWG) comprised of over 40 members to identify and compile potential solutions to identify implementation barriers. The IWG's focus areas included technology readiness, costs, permitting, workforce, grid capacity, and equitable access to incentives and financing. Over twenty IWG meetings were held between May 2023 and August 2024 that informed staff's December 2024 Board update.<sup>5</sup>

## C. Consultants Research and Recommendations

- The Air District commissioned technical work to evaluate challenging use cases and emerging solutions for zero NOx appliances and permitting pathways for heat pump water heaters (HPWHs) and other compliant installations. These reports supported the IWG deliberations and Board updates. Key challenges consistently identified in the reports included panel capacity constraints (esp. <100-amp service), space/ventilation needs for HPWHs, and emergency replacement logistics. As an existing solution, emerging 120-volt HPWH options were noted to mitigate panel upsizing needs in some cases.<sup>8,6,7</sup>

## D. Statewide Rule Development:

- The California Air Resources Board (CARB) is developing statewide zero-greenhouse gas emission standards for new space and water heaters, not affecting the use, maintenance, or repair of existing equipment. These standards are a key action in California's climate strategy outlined in the 2022 Scoping Plan to achieve carbon neutrality targets and a measure in the 2022 State Strategy for the State Implementation Plan to meet federal ozone requirements under the Clean Air Act. Statewide zero-GHG emission standards are intended to align with regional zero NOx rules with respect to equipment size and capacity. In response to public engagement learnings, CARB staff are exploring alternative regulatory approaches to a 100% new sales requirement. These approaches include sales targets, credit programs, and registration requirements for emissive equipment. Staff are currently evaluating these approaches to see how they might offer flexibility, address

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<sup>5</sup>[https://www.baaqmd.gov/~media/dotgov/files/rules/reg-9-rule-4-nitrogen-oxides-from-fan-type-residential-central-furnaces/2021-amendments/documents/20241127\\_board-report-dec-2024-pdf.pdf?rev=f9b89cc7ceb54588b5c505d6f20635e3&sc\\_lang=en](https://www.baaqmd.gov/~media/dotgov/files/rules/reg-9-rule-4-nitrogen-oxides-from-fan-type-residential-central-furnaces/2021-amendments/documents/20241127_board-report-dec-2024-pdf.pdf?rev=f9b89cc7ceb54588b5c505d6f20635e3&sc_lang=en)

<sup>6</sup>[https://www.baaqmd.gov/~media/dotgov/files/rules/reg-9-rule-4-nitrogen-oxides-from-fan-type-residential-central-furnaces/2021-amendments/documents/20221220\\_sr\\_appd\\_rg09040906-pdf.pdf?rev=2c9ddef1ee9e4d5f8fafea0f68c9c932&sc\\_lang=en](https://www.baaqmd.gov/~media/dotgov/files/rules/reg-9-rule-4-nitrogen-oxides-from-fan-type-residential-central-furnaces/2021-amendments/documents/20221220_sr_appd_rg09040906-pdf.pdf?rev=2c9ddef1ee9e4d5f8fafea0f68c9c932&sc_lang=en)

<sup>7</sup>[https://www.baaqmd.gov/~media/files/community-health/building-appliance-implementation/task-4\\_permitting-memo\\_september\\_clean-pdf.pdf?rev=253de7628661465eae8a086861032e1c&sc\\_lang=en](https://www.baaqmd.gov/~media/files/community-health/building-appliance-implementation/task-4_permitting-memo_september_clean-pdf.pdf?rev=253de7628661465eae8a086861032e1c&sc_lang=en)

potential concerns, and minimize end user impacts. CARB staff plan to introduce a revised regulatory concept for additional public feedback in late 2025 or early 2026.

## E. Summary of Recent Engagement

- Staff provided informational implementation updates to the Board of Directors in December 2024, including IWG discussion and findings, and conducted public learning sessions and equity-focused engagement with the Community Advisory Council and community-based organizations in 2023–2024.
- Additionally, Air District staff continue to coordinate with CARB and staff from other air districts to align with state and regional actions on zero-emission/zero NOx appliance standards and timelines.

## III. Impetus/ Problem Statement

### A. High-Level Summary of Air District’s Current Targeted Concerns

- Infrastructure Readiness  
Many existing homes and small businesses may face panel capacity limitations, electrical measures requiring an electrician and permitting complexity that impede immediate HPWH replacements, particularly during emergencies.
- Space Constraints  
Space and ventilation requirements for HPWHs can be difficult in some older homes and certain multifamily homes.
- Equity and Affordability  
Upfront costs for equipment, electrical work, and space modifications can disproportionately impact low-income households and small businesses.
- Emergency Replacements  
Sudden equipment failures can necessitate temporary solutions to avoid extended loss of hot water. While structured, time-limited exemptions and contractor “loaner” programs could offer relief, they may encourage permanent noncompliant installations.
- Market/Workforce  
Retailer/distributor systems, contractor training, and supply chains need time to transition to zero NOx, especially for specialized use cases.

### B. Brief Summary of Current Compliant Technology

Currently, HPWHs are the main zero NOx option available on the market. HPWHs use refrigerant cycles to transfer heat from ambient air to water, achieving two to three

times the efficiency of conventional electric resistance water heaters. Successful HPWH deployment requires adequate electrical capacity, proper ventilation, condensate drainage, and sufficient clearance space. In some cases, significant physical modifications may be needed to install a HPWH in existing buildings that lack these prerequisites.

The growth of 120-volt models can reduce electrical upgrade needs at the possible expense of capacity; while split systems and commercial-grade solutions are evolving but not yet available for all use cases.<sup>8</sup> Standard 240-volt models require dedicated electrical circuits and professional installation, while growing 120-volt plug-in model availability offers simplified installation, but may not produce enough hot water for some households.

Based on over four thousand projects installed in the Bay Area across various incentive programs, the average upfront incremental cost before incentives to install a new HPWH compared to a new NOx emitting gas water heater is between \$1,840, and \$3,496, depending upon the baseline appliance (tanked and tankless vs. tanked only).<sup>9</sup>

Manufacturers are developing hybrid systems, split configurations, and specialized commercial applications to address space and capacity constraints. However, market maturity and availability remain limited, and costs for HPWHs in these market segments remain significantly higher than conventional gas water heaters.

## IV. Overview of Draft Concepts for Potential Rule Amendments

The following section outlines draft concepts for potential rule amendments to address the remaining rule implementation challenges described above. As discussed in Section III, objectives include ensuring affordability, flexibility, simplicity for timely compliance for regulated parties, efficient monitoring and enforcement from the Air District, and maximizing emissions reductions. At this time, these are only concepts that are still subject to the rulemaking process, stakeholder feedback, and consideration for adoption by the Air District's Board of Directors.

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<sup>8</sup> [www.baaqmd.gov/~media/files/community-health/building-appliance-implementation/challenging-use-cases-and-emerging-solutions-for-zero\\_nox-appliances-final-08012024-pdf.pdf?rev=ec22a136aca846f49512f5e3f7659997&sc\\_lang=en](https://www.baaqmd.gov/~media/files/community-health/building-appliance-implementation/challenging-use-cases-and-emerging-solutions-for-zero_nox-appliances-final-08012024-pdf.pdf?rev=ec22a136aca846f49512f5e3f7659997&sc_lang=en)

<sup>9</sup> [https://www.baaqmd.gov/~media/files/community-health/building-appliance-implementation/task1\\_electrificationcosts-pdf.pdf?rev=3cb66a09f3094f94b35fa7fc90cfd4ec&sc\\_lang=en](https://www.baaqmd.gov/~media/files/community-health/building-appliance-implementation/task1_electrificationcosts-pdf.pdf?rev=3cb66a09f3094f94b35fa7fc90cfd4ec&sc_lang=en)

## A. Continued sales of smaller units

**35 gallon and less tanked size.** There are currently no 35-gallon or smaller heat pump water heaters available in the US market.<sup>10</sup> Based on this market gap, NOx emitting 35-gallon and smaller tanked water heaters could continue to be allowed for sale and installation.

Retailers, distributors, purchasers and installers could be allowed to sell, purchase and install water heaters in this category until an extended compliance date of January 1, 2031. For units manufactured after January 1, 2031, sales of NOx-emitting water heaters in this category could be subject to the same requirements as other larger units.

## B. Certified exemptions with documentation and attestation required for purchase and installation.

To address other cost and affordability challenges for the more common larger units, staff anticipates the need for some exemptions to the zero NOx sales and installation requirements. An exemption provision in the rule could likely require the development of an application, documentation and certification process to ensure that exemptions are consistent with those outlined in the rule.

### Based on Applicant Qualifications

**1) Low-income program homeowners.** Rule amendments could provide for installations at properties owned by low-income program participants. In this scenario, the owner could apply for a self-certification exemption. The Air District could make the self-certification available in multiple languages. The extent of these exemptions could depend on the income limit set by the Board of Directors. Eligibility could also be documented by demonstrating participation in other programs for low-income households such as the Family Electric Rate Assistance (FERA) or California Alternative Rates for Energy (CARE) programs. The appropriate documentation could be dependent on the income threshold and/or program participation set by the Board through the rulemaking process.

Exempting low-income property owners from compliance with the zero NOx requirement could reduce the rate at which emissions are reduced in low-income communities. This would continue and worsen the current pattern of disproportionate

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<sup>10</sup> <https://www.energystar.gov/productfinder/product/certified-heat-pump-water-heaters/> Accessed September 2025.

pollution exposure in those communities. Ideally, a sustainable longer-term funding source could be identified alongside a concierge service program to ensure these communities benefit from clean technology water heaters. The self-certification process could be designed to ensure that low-income homeowners are made aware of their zero-NOx options and benefits, as well as the incentive programs available to them.

## 2) Businesses with specialized applications and high hot water demand

Small business types with operational requirements for high hot water needs and/or health and safety codes to provide hot water at specified temperatures<sup>11</sup> could be eligible to apply for self-certification exemption. The list below provides some examples of business types that could be covered by this exemption. The self-certification process could be designed to ensure that businesses are made aware of their zero-NOx options and benefits, and any incentive programs available to them.

Restaurant, Food service
Laundry, Dry cleaner
Healthcare, Assisted living facilities

## 3) Emergency Replacement Loaners

Approximately 75 percent of TECH Clean CA HPWH single-family projects statewide take just one day for installation.<sup>12</sup> For Bay Area HPWH single-family projects installed within two days, the number rises to 82 percent.<sup>13</sup> With greater availability of 120-volt plug-in HPWHs, including a new “dual voltage” convertible HPWH that can operate at either 120- or 240-volts,<sup>14</sup> a growing number of emergency replacements can be served with zero NOx options. However, for some emergency replacement scenarios, including consideration for health needs or technical changes with longer timelines, a temporary gas-fired NOx emitting water heater may be needed. To meet this limited demand, licensed contractors could be allowed to apply for and purchase a certain number of NOx emitting water heaters to utilize as temporary loaners. Some documentation or certification process for these contractors could be prudent to ensure this exemption is used in a way that is consistent with the Board’s intent.

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<sup>11</sup> <https://law.justia.com/codes/california/code-hsc/division-104/part-7/chapter-7/article-1/section-114192/>

<sup>12</sup> [https://opiniondynamics.com/wp-content/uploads/2024/12/TECH\\_Interim\\_Process\\_Evaluation\\_Final\\_Report.pdf](https://opiniondynamics.com/wp-content/uploads/2024/12/TECH_Interim_Process_Evaluation_Final_Report.pdf)

<sup>13</sup> <https://techcleanca.com/heat-pump-data/download-data/>

<sup>14</sup> <https://www.geappliances.com/geospring-water-heater>

## Based on Project Constraint

- 1) **Hydronic Systems.** Standard HPWHs are generally not a suitable direct replacement for a dedicated hydronic heating system. HPWHs lack the additional heat rating provided by natural gas fired units to operate as part of a recirculating, closed-loop hydronic system. Thus, staff recommends that projects in homes with existing hydronic water/space heating systems be eligible for an exemption with some documentation of eligibility.
- 2) **Space Constraints.** Water heater relocation within the home is a major driving factor in the high-cost cases<sup>15</sup> and is one of the most significant impediments in HPWH installations. In order to provide a rule exemption in such cases, someone must verify that there is an actual space constraint leading to high costs. One approach could be for licensed contractors to be eligible to apply for the space constraint exemption, categorized into insufficient space for ventilation, or lack of physical space.
- 3) **Electrical Constraints.** In homes and buildings with outdated or limited electrical infrastructure, staff has identified several constraints that may justify an exemption.

The home/building has knob and tube wiring.
The electrical panel is less than 100 amps (single-family) or less than 60 amps (multi-family)
New 240-volt connection requires more than 25' of wiring/conduit.
The electrical panel does not have enough circuit or breaker space.

The revised regulation may need to address how these constraints may be documented as part of the exemption process. One approach could be to require the exemption application be filed with the concurrence of a certified contractor.

There are existing and emerging technologies to address these constraints, for example 120-volt HPWH could be suitable in many cases. The certification process could be designed to ensure that contractors must make homeowners aware of their zero-NOx options and benefits, as well as the incentive programs available to them. Future rule amendments would need to balance implementation complexity with the need to maximize emissions reductions.

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<sup>15</sup> [https://www.baaqmd.gov/~media/dotgov/files/rules/reg-9-rule-4-nitrogen-oxides-from-fan-type-residential-central-furnaces/2021-amendments/documents/20241127\\_board-report-dec-2024-pdf.pdf?rev=f9b89cc7ceb54588b5c505d6f20635e3&sc\\_lang=en](https://www.baaqmd.gov/~/media/dotgov/files/rules/reg-9-rule-4-nitrogen-oxides-from-fan-type-residential-central-furnaces/2021-amendments/documents/20241127_board-report-dec-2024-pdf.pdf?rev=f9b89cc7ceb54588b5c505d6f20635e3&sc_lang=en)

## V. Limitations to Exemptions

The Air District Board, through the rulemaking process and with substantial public input, may need to determine the scope of any exemptions. For example, the rule could limit some or all exemptions to one per property or dwelling unit. This could mean that while a non-compliant water heater may be installed for its useful life under one of the accepted exemptions, once a property address is used for an Exemption Certificate, the address would not be eligible for the exemption again. Another option could be to sunset some or all of the exemptions after the average useful life of a natural gas-fired water heater.

## VI. Processing and Mitigation Fees

The exemptions listed above could result in the need to issue tens of thousands of Exemption Certificates every year. There may need to be some mechanism to fund this ongoing program. One option for doing this is to charge a processing fee for exemption requests. The amount of that fee may be dependent on the final design of the rule. It is expected that the fee should not apply for low-income exemptions. The processing fee would be limited to cost recovery and therefore would be dependent on the nature of the exemptions allowed in by the Board's amendments to the rule.

If there are substantial exemptions in low-income communities, this could worsen existing inequitable pollution exposure in those communities. Some additional sources of funding may be needed to ensure those communities benefit from clean technology water heating. One option for providing this funding could be for property owners who qualify for project constraint exemptions to pay a fee to mitigate the impact of the additional pollution that their property is emitting as a result of not installing zero NOx equipment. This is an approach that has been taken by other jurisdictions in analogous situations. The amount of the mitigation fee, if any, could be determined by the Board considering factors such as the need created by the low-income exemption and the extent of other possible sources of funding.

## VII. Public Participation Process: What We've Heard

Staff initially presented flexibility concepts for Rule 9-6 to the Board of Directors Stationary Source Committee meeting in April 2025. Since that presentation, Air District staff has held a series of individual meetings with a range of various stakeholders, workforce, and industry representatives to discuss these concepts and ask for feedback. This includes various contractors, program administrators, manufacturer representatives, distributors, consultants, non-profit organizations, community-based groups, community choice aggregators, and workforce development partners.

These conversations have helped provide a range of perspectives on technical feasibility, costs, program design, and lessons learned. Staff have taken all comments into consideration and continued to refine the concepts accordingly. Staff have also met to discuss concepts with other local and state agencies, such as the California Air Resources Board, South Coast Air Quality Management District, and the California Energy Commission.

Staff have received additional written comments throughout 2025. This includes approximately 203 emails expressing concern about the financial impact of the appliance rules and 299 emails in support of the program. This also includes a letter from the Bay Area Clean Air (BACA) group, included as Appendix A. This letter outlines a series of recommendations and proposal for consideration by the Air District. Many of the emails opposing the rules are based on an incorrect understanding of the existing rules. The Air District has recently posted a Myths vs. Facts document that lays out information about Rule 9-6 and the opposing comments provided. That document is included as Appendix B. Additionally, staff believe that the amendment concepts discussed in this document provide flexibility that addresses many of the concerns raised in these communications. Staff look forward to receiving additional comments and feedback from the Bay Area public and other stakeholders in response to this concept paper and as the rulemaking process progresses into next year.

## VIII. Socioeconomic Impacts

The intent of the concepts in this document are to reduce the costs of implementation of Rule 9-6. Therefore, we do not expect any negative socioeconomic impacts. That said, any rule amendment would include a full socioeconomic analysis.

One policy question is how to structure any low-income exemption. Given the volume of expected exemption requests, relying on existing low-income programs would simplify implementation by relying on other systems to verify income. Income eligibility for low-income program participation varies by program and household number, however several federal programs in California including FERA utilize the 200 percent Federal Poverty Level (FPL) threshold. In 2023, 19 percent of the Bay Area's population lived in households with incomes below this 200 percent FPL threshold.<sup>16</sup> Unfortunately, given that the rates of home ownership for low-income households are likely low, further analysis may be required to better understand how the low-income threshold could impact the number of

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<sup>16</sup> <https://vitalsigns.mtc.ca.gov/indicators/poverty>



exemptions. The socioeconomic analysis for the 2023 amendments estimated that 44 percent of Bay Area households are renters.<sup>17</sup>

For renters, staff acknowledges risk of impacts including potential “renoviction.”<sup>18</sup> However, the introduction of exemptions such as those discussed in this Concept Paper reduces that risk by allowing flexibility for landlord-building owners to avoid higher cost projects. Additionally, landlord-building owners who are low income and/or low-income program participants may be able to apply for self-certification exemption.

## IX. Conclusion and Next Steps

Staff invite public comments on the draft concepts outlined in this draft proposal. The Air District will continue to refine these concepts through ongoing engagement with contractors, manufacturers, stakeholders, and the general public to ensure that implementation is clear, achievable, and supports a smooth transition.

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<sup>17</sup> [https://www.baaqmd.gov/~/media/dotgov/files/rules/reg-9-rule-4-nitrogen-oxides-from-fan-type-residential-central-furnaces/2021-amendments/documents/20221220\\_sr\\_appc\\_rg09040906-pdf.pdf?rev=0680bc8794e74d53909fc180e4936de0](https://www.baaqmd.gov/~/media/dotgov/files/rules/reg-9-rule-4-nitrogen-oxides-from-fan-type-residential-central-furnaces/2021-amendments/documents/20221220_sr_appc_rg09040906-pdf.pdf?rev=0680bc8794e74d53909fc180e4936de0)

<sup>18</sup>see section IV. Potential Housing Impacts. [https://www.baaqmd.gov/~media/dotgov/files/rules/reg-9-rule-4-nitrogen-oxides-from-fan-type-residential-central-furnaces/2021-amendments/documents/20241127\\_board-report-dec-2024-pdf.pdf?rev=f9b89cc7ceb54588b5c505d6f20635e3&sc\\_lang=en](https://www.baaqmd.gov/~/media/dotgov/files/rules/reg-9-rule-4-nitrogen-oxides-from-fan-type-residential-central-furnaces/2021-amendments/documents/20241127_board-report-dec-2024-pdf.pdf?rev=f9b89cc7ceb54588b5c505d6f20635e3&sc_lang=en)

## List of Appendices

Appendix A: Letter from Bay Area Clean Air (BACA) Group

Appendix B: Myths vs. Facts Document

Appendix A: Letter from Bay Area Clean Air (BACA) Group



September 26, 2025

Bay Area Air District  
375 Beale Street, Suite 600  
San Francisco, CA 94105

Subject: Recommendations for flexibility amendments to Rule 9-6

Dear Air District staff,

The organizations signed below write in support of an equitable transition to a clean-energy economy in the Bay Area and applaud the Air District for the policy leadership it showed by amending Rules 9-4 and 9-6 in March 2023 to reduce the significant emissions of smog-forming nitrogen oxides (NO<sub>x</sub>) from furnaces and water heaters. The region's gas-burning appliances in buildings emit more NO<sub>x</sub> pollution than all passenger vehicles<sup>1</sup>—and more than six times as much NO<sub>x</sub> as all the power plants in the region combined.<sup>2</sup> Eliminating this pollution is expected to avert 15,000 asthma attacks and up to 85 premature deaths each year, with total annual health benefits of up to \$890 million.<sup>3</sup>

Provisions of Rule 9-6 that impact the sale and installation of new gas tank water heaters (with a heat input rating up to 75,000 Btu/hour) are due to go into effect on January 1, 2027.<sup>4</sup> Following input from an Implementation Working Group that examined the issues and challenges surrounding a transition to zero-emission water heaters in 21 meetings between May 2023 and August 2024<sup>5</sup>—and responsive to the Board of Directors' discussion of staff's December 2024 interim readiness report<sup>6</sup>—the agency will soon undertake a rulemaking to introduce common-sense flexibility measures into Rule 9-6. These flexibility amendments will ensure that, as the region pursues its gradual transition to clean water heating, the Air District's regulation minimizes unintended harms to vulnerable communities, grants exceptions for infeasible installations, and provides additional workability for residents who need it.

Some recommendations for appropriate flexibility amendments to Rule 9-6 follow, focused on equipment covered under the January 2027 compliance date.

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<sup>1</sup> Bay Area Air Quality Management District (BAAQMD), [Final Staff Report: Proposed Amendments to Building Appliance Rules – Regulation 9, Rule 4: Nitrogen Oxides from Fan Type Residential Central Furnaces and Rule 6: Nitrogen Oxides Emissions from Natural Gas-Fired Boilers and Water Heaters](#), p.4, March 2023.

<sup>2</sup> U.S. Environmental Protection Agency, [2020 National Emissions Inventory](#), March 2023. Appliance emission estimates include residential & commercial emissions for the gas, oil, & other fuel categories, with commercial emissions adjusted to exclude certain non-appliance sources.

<sup>3</sup> BAAQMD, [Final Staff Report](#), pp. 30-31, 40.

<sup>4</sup> BAAQMD, ["Regulation 9: Inorganic Gaseous Pollutants, Rule 6: Nitrogen Oxides Emissions From Natural Gas-Fired Boilers and Water Heaters,"](#) March 2023.

<sup>5</sup> BAAQMD, ["Building Appliances Implementation Working Group."](#)

<sup>6</sup> BAAQMD, [Informational Update Regarding Regulation 9, Rule 6: Nitrogen Oxides Emissions from Natural Gas-Fired Water Heaters less than 75,000 BTU/hr](#), December 2024.



### **Program Design Principles for Flexibility Measures**

The Air District's Implementation Working Group identified and studied a range of challenges that some buildings in the region could face in making the transition to zero-emission water heating equipment. Some examples of these challenges include:

- Finding appropriate compliant equipment that fits the current physical space constraints, or needing to relocate equipment;
- Providing the airflow needed for heat pump water heaters (HPWHs) in tightly enclosed spaces;
- Upgrading or upsizing building electrical panels or wiring, in cases when employing Power Efficient Design choices to avoid these costs and delays proves infeasible; and
- Funding and/or financing the incremental upfront cost of compliant equipment.

It's critical that the amended rule includes enough flexibility to address cases where challenges like these make compliance genuinely infeasible, while still providing a strong, clear market signal that drives critical emission reductions. As such, these principles are important for the Air District to consider as it crafts flexibility measures for Rule 9-6:

- **Prioritizing market transformation at the outset will increase emission reductions over time** – To meet air quality goals, an expedient effort to install zero-emission equipment at scale is vital. Allowing exceptions as the region initially eases into the program would change the overall emission reduction trajectory minimally and would support the proper market conditions for a successful program in the long term by avoiding infeasible install scenarios and averting negative experiences with zero-emission equipment.
- **Prioritize low- and moderate-income (LMI) households** – Flexibility measures should serve the purpose of easing the region's transition to zero-emission equipment, but housing conditions may lead to more LMI households qualifying for exceptions, potentially leaving them to shoulder the burden of stranded gas assets and increasing gas rates in the coming decade. New and existing resources, including direct install programs, incentive programs, and other supportive policies and programs should be prioritized for LMI residents to ensure they share in the benefits of clean equipment.
- **Craft positive customer, installer, and supplier experiences** – Flexibility measures should be designed to work smoothly for customers, contractors, and other supply chain actors without creating undue burden. Exceptions should be granted swiftly so residents do not experience an extended delay in having reliable hot water. Good experiences with the transition to clean equipment will compound, maintaining public support for the program and minimizing negative impacts.
- **Education will drive compliance** – While it's important that flexibility be available in cases of infeasibility, strong public education to multiple targeted audiences must be built into the exception process to ensure that residents are informed on the benefits of zero-emission technology and the available solutions to common feasibility concerns.
- **Collect data on exceptions** – The Air District's exception process should be designed so that useful data is collected on any situations requiring noncompliance, allowing complementary programs to be tailored to address the most salient conditions driving exceptions.

Anonymized data should be made publicly available so that third parties can also target work on enabling reforms.

Building upon the framework that staff introduced in their April 2025 update to the board's Stationary Source Committee,<sup>7</sup> the following recommendations on Rule 9-6 flexibility measures cover two categories of exceptions:

- 1) **Equipment-Based Exceptions** that extend the opportunity for residents to purchase certain categories of polluting equipment where zero-NOx models could use additional time for product development and commercialization; and
- 2) **Project-Based Exceptions** that take into account case-by-case hardship barriers that impact feasibility of compliance for owners of existing buildings.

### **Equipment-Based Exceptions**

As adopted, Rule 9-6 subjects all gas water heating equipment with a heat input rating of 75,000 Btu/hour or less to the same regulatory requirements. It would be appropriate to identify specific equipment and installation types within that broader category that could use additional time for product development and commercialization—and to postpone effective dates for that specific equipment to allow market actors to better prepare for successful implementation.

#### **1. Water heaters 35 gallons and smaller**

Some stakeholders have expressed concern that units of this size may have increased difficulty transitioning because space constraints can preclude the installation of standard HPWH form factors of that size class in certain building configurations. The Northwest Energy Efficiency Alliance's Hot Water Innovation Prize is focused on the development and commercialization of novel split system HPWHs in this size category that will address such space-constrained installs.<sup>8</sup> Prize winners will be announced in late 2026 or early 2027, with demonstration projects planned for 2027 to 2028. According to the Advanced Water Heating Initiative, customers should have good options for split system HPWHs of 35 gallons and smaller by 2029.<sup>9</sup>

With knowledge of the work underway to innovate solutions for this size category, an extension of the Rule 9-6 effective date from January 2027 to January 2030 would be prudent for water heating equipment up to 35 gallons. This extension will provide useful time for the market to develop and commercialize extremely efficient, zero-emission small water heaters.

#### **2. Water heaters utilized for high-temperature applications (i.e., above 160°F)**

Based on a survey of specification sheets for available equipment, standard HPWHs with a heat input rating of 75,000 Btu/hour or less have a maximum outlet water temperature of 140–160°F. Older hydronic heating systems in residential buildings may require higher output temperatures than this for effective performance, so an extension of the Rule 9-6 effective date from January 2027 to January

<sup>7</sup> BAAQMD, "Stationary Source Committee Meeting - Wednesday, April 9, 2025 - Approved Minutes," April 2025.

<sup>8</sup> Northwest Energy Efficiency Alliance, "Hot Water Innovation Prize."

<sup>9</sup> J. Holtzman, Personal communication, March 20, 2025.



2030 may be needed for these specific changeouts to allow for additional product development. Conversely, many households have retired their legacy hydronic heating in favor of air-source heat pumps—so, as the Air District considers future implementation of Rule 9-4's provisions on zero-emission *space* heating in January 2029 and beyond, it should investigate the feasibility and affordability of transitioning legacy hydronic heating systems using NOx-emitting boilers to zero-emission space heating options.

Important commercial and institutional end uses like food service, health care, laboratories, and dry cleaners may also require higher output water temperatures for their business processes. An extension of the Rule 9-6 effective date from January 2027 to January 2030 for this high-temperature equipment would be reasonable if needed.

It is unclear, however, to what extent these commercial and institutional settings employ equipment with a heat input rating of 75,000 Btu/hour or less. These end users more likely utilize larger equipment covered by the January 2031 effective date of the rule, and it would be premature at this time to introduce flexibility measures that are based on *current* market conditions for rule provisions that are still more than five years away from implementation. Air District outreach to potentially affected high-temperature business sectors will be important to assess the degree to which they will be impacted by the rule's January 2027 effective date and require flexibility.

### **Project-Based Exceptions**

Along with the equipment-based exceptions recommended above, it would be prudent to target some exceptions based on site-level conditions on a case-by-case basis to avoid undue hardship for owners of existing buildings where compliance would be infeasible. Continued market transformation and solution development will reduce the need to utilize these exceptions as implementation progresses.

Exceptions should only be needed for equipment replacements in existing buildings. Because new buildings can be designed from the start to meet equipment requirements—and doing so is more cost-effective<sup>10</sup>—project-based exceptions aren't necessary for this market segment.

#### **1. Emergency replacements**

Since most water heaters are replaced upon failure, it is imperative that hot water service be restored as quickly as possible.<sup>11</sup> When a challenge prevents the quick installation of comparable non-emitting equipment, Rule 9-6 should allow for "loaner equipment" to be installed on a temporary basis for up to 6 months to allow time for addressing any physical or electrical issues preventing compliance. Loaner programs should encourage the use of 120-volt HPWH units wherever feasible, but allowing for NOx-emitting equipment to be utilized for up to 6 months will provide wide flexibility to building owners as they complete any needed work to ameliorate physical or electrical barriers to compliance..

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<sup>10</sup> RMI, *The Economics of Electrifying Buildings: Residential New Construction*, 2022.

<sup>11</sup> CalNEXT, *Emergency Replacement Heat Pump Water Heater Market Study*, June 2024.

The development of a coordinated program that provides coverage across the Bay Area's nine counties will be necessary for residents to participate reliably and at scale. Given its regional role, the Air District should consider supporting the creation of such loaner programs, either directly or through other entities like CCAs, equipment distributors, etc.

## 2. Space-constrained installs

Rule-compliant HPWHs sometimes require more physical space to install than the comparable equipment that they are replacing. In addition, HPWHs have requirements for a minimum amount of air volume or ventilation in the space they occupy in order to function effectively.

In some cases, it can be very difficult or costly to modify the existing installation space to accommodate a HPWH or to relocate the water heater to an appropriate space. The Air District's December 2024 interim readiness report highlights space-constrained installations as a category of "edge-case" installations with costs and project timelines that are well above average.<sup>12</sup> In such cases, Rule 9-6 can (1) direct building owners to loaner programs to allow sufficient time for the modifications needed for a compliant installation to progress more feasibly and cost-effectively—or (2) grant building owners an exception for the installation of NOx-emitting equipment for its full lifetime if an installer certifies that a compliant installation is infeasible.

## 3. Electrical infrastructure-constrained installs

In some cases, constraints on electrical service, panel size, or building wiring may prevent the installation of a suitable non-emitting water heater; these conditions are also cited as a reason for "edge-case" installations in the Air District's interim report.<sup>13</sup> These cases should be relatively rare, given the increasing availability of 120-volt HPWHs and the minimal load that water heaters place on an electrical system.

Some amount of new or upgraded wiring would be expected when installing new electric equipment, but it makes sense to provide flexibility when electrical upgrades would be prohibitively expensive or onerous. In such cases, Rule 9-6 can (1) direct building owners to loaner programs to allow sufficient time for the modifications needed for a compliant installation to progress more feasibly and cost-effectively—or (2) grant building owners an exception for the installation of NOx-emitting equipment for its full lifetime if an installer certifies that a compliant installation is infeasible.

Installers would benefit from coordinated education from the Air District and/or other regional or state experts about Power Efficient Design strategies and concerted encouragement to utilize these approaches whenever possible to minimize expenses for building owners and the need for major upgrades.<sup>14,15</sup>

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<sup>12</sup> BAAQMD, [Informational Update Regarding Regulation 9, Rule 6: Nitrogen Oxides Emissions from Natural Gas-Fired Water Heaters less than 75,000 BTU/hr](#), December 2024.

<sup>13</sup> Ibid.

<sup>14</sup> Consortium for Power Efficiency/Dunsky, [Overview of Power Efficient Design Strategies](#), December 2024.

<sup>15</sup> SPUR, [Solving the Panel Puzzle: Avoiding and streamlining electric panel and service upsizing to accelerate building decarbonization](#), May 2024.



#### 4. Income-based flexibility

Currently, the upfront cost for installing efficient, non-emitting equipment often exceeds the cost of like-for-like replacement with polluting equipment, which can present a serious hardship for low-income households. Although there is currently insufficient funding for every qualified household to receive support, a number of programs already exist to help low- and middle-income customers purchase HPWHs. To drive equitable implementation of Rule 9-6, the Air District will need to work with state programs, utilities, and other entities to help provide expanded support for low-income households to afford any additional costs of upgrading to clean equipment.

Ideally, low-income households would be upgraded to zero-emission equipment at rates as fast or faster than the community average so that they and their neighbors could share in the many benefits of such a transition. Funding to support that transition remains limited, however, and it is harmful to require low-income households to pay for upgrades they cannot afford. Thus, additional flexibility in this area seems necessary.

In concert with new financial support from the Air District and other parties, Rule 9-6 can grant homeowners with income below 80% of the Area Median Income an exception for the installation of NOx-emitting equipment for its full lifetime, based on self-attestation of income. Prior to and during the process of self-attestation, residents who qualify for this exception should be directed as often as possible toward resources that can help them transition to zero-pollution equipment at lower cost. For rental units, exceptions should be limited to cases where the costs of upgrades would be passed through to low-income households, causing an untenable burden for them.

#### **Granting Exceptions**

Any system for exceptions must be designed to be practical for building owners and installers as well as equipment distributors and retailers. Such a system must also be designed for practical implementation by the Air District itself.

A system that allows for building owners and equipment installers to attest to the need for an exception via an online web-based form meets these needs. After completing the application, exceptions would be automatically approved, with certification thereof made available to the installer and/or directly to parties that have been authorized by the Air District to sell non-compliant equipment with a certificate of exception.

The attestation and waiver model could work as follows:

1. The installer assesses the feasibility of installing compliant equipment with the building owner and determines an exception is warranted.
2. The installer navigates to the Air District attestation and waiver website and:
  - a. Completes a cascading series of dropdown menus that guide compliance and collect data to inform future complementary policy efforts, enforcement strategies, funding streams, etc.;
  - b. Signs the web form under penalty of perjury; and
  - c. Is automatically granted a waiver tied to the specific installation under question.

3. The installer then uses the waiver to purchase the NOx-emitting equipment from a distributor or retailer, with the seller tying the serial number of the polluting equipment to the waiver at the time of purchase. Prioritizing zero-NOx water heaters on showroom shelves will help accelerate market development and support industry alignment with emerging standards. .
4. The Air District maintains access to the waiver and all data collected therein and also maintains the right to audit waiver grantees and verify elements of their attestation form.

The Air District attestation webform should include the following:

*Initial form information:* Users of the attestation system should be informed that they are required to answer truthfully under penalty of law. Users should be encouraged through the interface to install compliant equipment whenever possible and directed toward supportive resources and information for doing so. And users should be informed of the negative health consequences resulting from the operation of gas-fired water heaters, including the estimated health impacts over the lifetime of the unit.

*Basic user information:* Users will fill out basic information, including the location of the install and the installer assessing the need for an exception.

*Pre-requisites for requesting an exception:* Users must attest that they are requesting an exception for an existing building, for a replacement of gas equipment, and that the feasibility of installing compliant zero-pollution equipment was assessed.

*Exception attestation inputs:* The form will include cascading dropdown menus that will identify which, if any, exceptions for which the project qualifies. These menus will include expanding sections for space-constrained installs, electrical infrastructure-constrained installs, and income-based flexibility, as described above. Each section will provide checklists for the user to identify specific constraint details, and users will be prompted to verify whether they have pursued common solutions (e.g., low-cost ventilation measures, Power Efficient Design strategies, exploration of rebates and supportive programs, etc.).

*Final signature and waiver:* If the answers in the attestation inputs section qualify the user for a waiver, the user will be directed to the final page, where they will sign and submit the attestation under penalty of perjury and be granted a waiver automatically.

### **Conclusion**

The above principles and flexibility measures will strengthen the transition to zero-emission water heating by offering off-ramps for building owners who would otherwise face undue hardship and infeasible installation scenarios. The equipment and project-based exceptions proposed offer robust flexibility while maintaining Rule 9-6's trajectory toward market transformation, an equitable transition, and large-scale reductions in harmful NOx emissions. The proposed project-based exceptions pathway also offers the benefit of a strong data collection platform that will allow the Air



District, program implementers, and third parties to respond to salient conditions that are driving exceptions.

We thank the Air District staff for their consideration of these recommendations for flexibility amendments to Rule 9-6 and for their leadership in reducing health-harming, smog-forming NOx emissions from gas water heaters and furnaces.

Respectfully,

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SPUR

Tony Sirna  
Senior Policy Lead - Buildings  
Evergreen Action

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Sara Greenwald  
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Ashley McClure  
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Climate Health Now

Avni Jamdar  
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Fernando Gaytan  
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## Appendix B: Myths vs. Facts Sheet



# Myths vs. Facts: Understanding the Bay Area's Building Appliance Rules

### MYTH #1

The rules ban all gas appliances, including stoves.

**FACT:** The Bay Area Air District's appliance rules require new water heaters and furnaces to meet air pollution standards. The rules apply only to the sale and installation of new water heaters and furnaces that would take place after the specified compliance dates. Stoves, ovens, dryers, and other cooking appliances are not affected because they account for less than 10% of outdoor air pollution from appliances. The Air District has no plan to regulate these devices.

### MYTH #2

Homeowners must replace their gas appliances before 2027 or risk going without hot water or heat for months or more.

**FACT:** The rules apply **only when** a water heater or furnace is **replaced proactively** or **fails and requires replacement after** the following specified compliance dates, which start at the beginning of each year:

**2027:** Residential water heaters

**2029:** Furnaces

**2031:** Large commercial and multifamily water heaters

In general, there is no requirement to proactively replace working appliances before they break down and need replacement.

### MYTH #3

Homeowners must replace their existing gas appliances immediately.

**FACT:** **There is no mandate to remove or replace functioning appliances before they fail.** The rules apply only to appliances **newly purchased** or installed after the specified compliance dates.



### MYTH #4

These rules were rushed through without public input.

**FACT:** The 2020-2023 rulemaking process were partial amendments to existing rules and included extensive public engagement, with over **ten public meetings** and 565 public comments on the final rule package. Additional stakeholder engagement and over 20 meetings were held through the [2023-2024 Implementation Working Group process](#), leading to board updates and likely future amendments of Rule 9-6 for small water heaters to provide more flexibility.

### MYTH #5

The Air District has not done any outreach to inform the public about these rules.

**FACT:** The Air District has begun the first phase of outreach focusing on contractor engagement and education. The Board of Directors approved funding for a substantial public outreach and awareness campaign which will begin closer to the compliance dates to ensure information is timely and actionable for Bay Area residents.

### MYTH #6

People could go for months without hot water.

**FACT:** Most property owners will be able to install a heat pump water heater quickly working with contractors that are readily available today. The Air District's research shows there is sufficient workforce capacity to meet this demand. For a smaller number of situations where significant electrical changes are needed, the Air District is currently developing amendments to the water heater rule (Rule 9-6) to allow flexibility to ensure residents are not left without hot water during the transition.

### MYTH #7

It will be very expensive to redo a property's electrical system to comply with this rule.

**FACT:** In most cases, heat pump water heaters can replace gas water heaters with only light electrical work, and many newer models can simply plug into a standard 120-volt outlet. With new technology solutions, many 240-volt models work on current electrical service and panel—no upgrade needed.

*Last Revised: 9/22/25*



In limited cases, electrical upgrades may be costly or time-consuming. To address this, the Air District is currently developing amendments to the water heater rule (Rule 9-6) to allow flexibility to ensure residents are not left without hot water during the transition.

#### MYTH #8

The rules will have minimal impact on air quality.

**FACT:** Gas appliances emit significant amounts of nitrogen oxides (NO<sub>x</sub>), which contribute to smog and respiratory illnesses. The new standards are projected to prevent approximately 85 premature deaths and 15,000 asthma attacks annually in the Bay Area, avoiding up to \$890 million per year in health-related costs.

#### MYTH #9

Electric appliances are unaffordable and impractical.

**FACT:** While some electric appliances do cost more upfront, many utility, state and local programs offer significant financial support.

- Visit the [SwitchIsOn.org](https://SwitchIsOn.org) to learn more about incentives and financing in your city.
- Modern electric appliances, such as heat pump water heaters, are efficient, reliable, and can lower energy costs with the right electric rate. Heat pumps also have the advantage that they can provide air conditioning on hot days.



#### MYTH #10

There is a set maximum cost that homeowners will have to pay to comply with these rules.

**FACT:** There is no set cost for homeowners to comply with these rules and actual installation costs will vary. A 2024 staff report to the Air District Board of Directors – based on thousands of Bay Area installations – found average additional costs are less than \$2,000 for zero NO<sub>x</sub> water heaters, though some may be higher. Staff is currently developing amendments to the water heater rule (Rule 9-6) to allow flexibility for higher cost installations. A cost and technology assessment for furnaces (Rule 9-4) will be completed before the 2029 compliance date.

#### MYTH #11

The rules disproportionately affect low-income and disadvantaged communities.

**FACT:** The resulting air quality improvement benefits from the rules were found to be particularly strong in communities of color in the Bay Area that already suffer disproportionate pollution burdens. Additionally, the Air District is currently developing amendments to the water heater rule (9-6) that may include provisions for low-income households.

#### MYTH #12

The Bay Area is the only region with such rules.

**FACT:** The Bay Area is among the first to adopt these standards, but similar policies are being considered across California. The California Air Resources Board is developing similar rulemaking that, if passed, would cover the entire state.

**For more information on the Bay Area's building appliance rules, visit:**  
[baaqmd.gov/building-appliances](https://baaqmd.gov/building-appliances)

You can also sign up for email information regarding these rules at the bottom of the page.

*Last Revised: 9/22/25*



# Rule 9-6: Consideration of Concepts for Affordability and Availability Amendments

Stationary Source Committee

December 10, 2025

Jennifer Lam

Assistant Manager

Rules and Strategic Policy Division



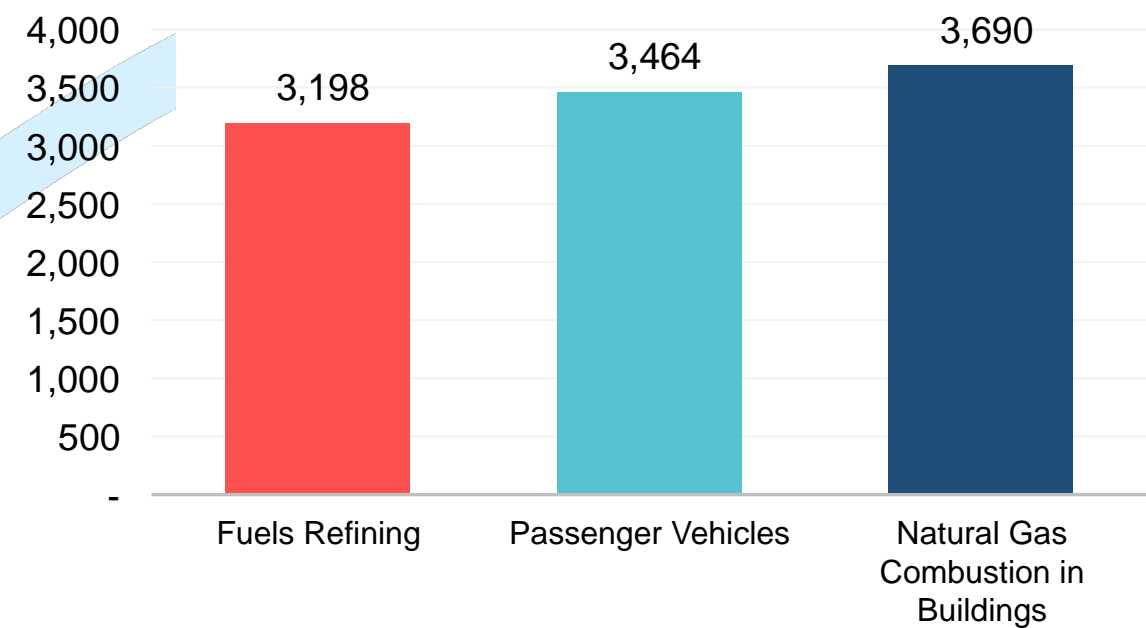
# Presentation Outline

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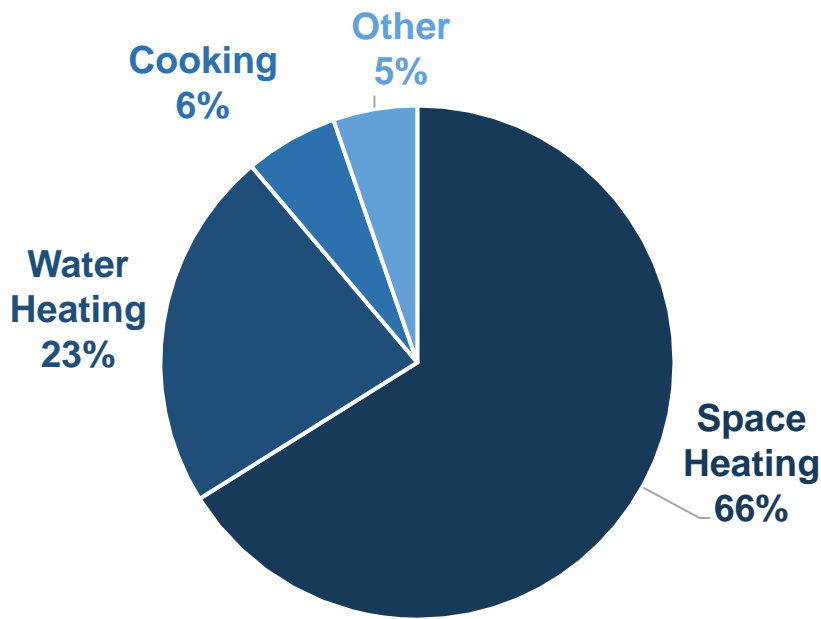
- General Background
- Overview of Potential Flexibility Concepts
- Detailed Review of the Concepts
- Brief Discussion of the Public Comments Received
- Possible Timeline for Future Actions

# Building Nitrogen Oxides (NOx) Emissions Overview

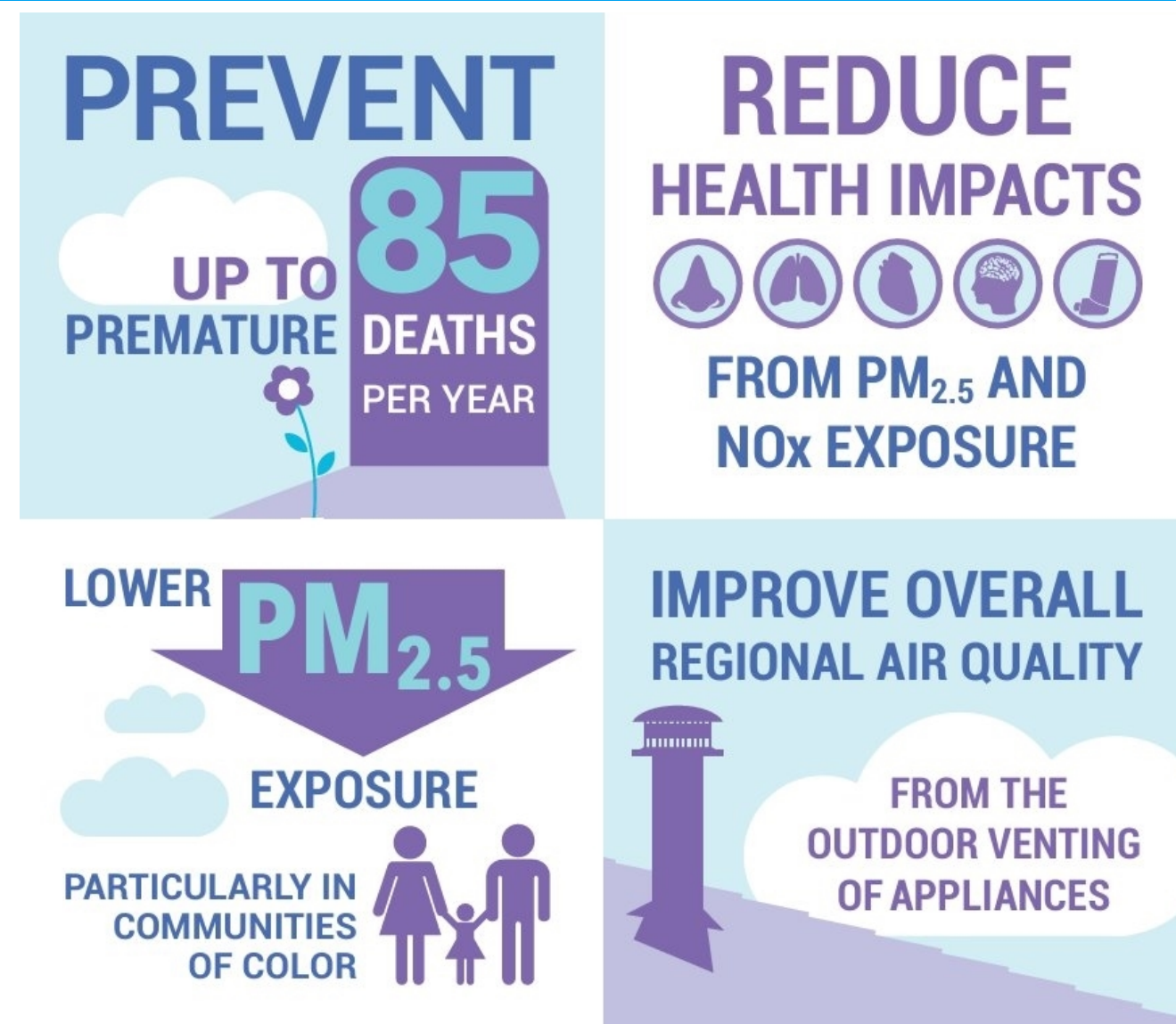
2019 Air District NOx Emissions (tons)



Air District Residential Natural Gas Combustion NOx Emissions (2019)



# Health Benefits Overview



# Upcoming Implementation Timelines

- Regulation 9, Rule 4: Nitrogen Oxides from Fan Type Residential Central Furnaces
- Regulation 9, Rule 6: Nitrogen Oxides from Natural Gas-Fired Boilers and Water Heaters
- Zero NOx amendments adopted on March 15, 2023, with future implementation dates

1/1/2027	Rule 9-6: Water heaters less than 75,000 BTU/hr*
1/1/2029	Rule 9-4: All applicable natural gas-fired furnaces (e.g., residential and commercial; including direct-vent units)
1/1/2031	Rule 9-6: Water heaters 75,000 to 2 million BTU/hr

*\*BTU/hr = British thermal units per hour*

# Overview of the Concept Paper

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## Potential concepts on flexibilities for Rule 9-6 (Small Water Heaters)

1. Equipment type sales exemption
2. Limited certified exemptions

- Published in October for 30-day comment period
- Comment period closed on November 24<sup>th</sup>
- Approximately 375 comments sent in response to concept paper

*[Link](#) to concept paper*

# Flexibility Concepts: Smallest Units

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## **Small Capacity Units**

- Continued sales of 35 gallons and less tank size water heaters

## **Challenge Addressed:**

- Market gap for small sized water heaters

## **Benefits:**

- Equity benefit for homes with small capacity water heaters and limited space

# Flexibility Concepts: Project Constraints

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## **Certified Exemptions**

- Issue self-certified exemption based on information about project constraints that would increase costs and/or timeline

## **Challenges Addressed:**

- High-heat demands, home configurations (hydronic), electrical constraints, space constraints

## **Benefits:**

- Address concerns for high-cost installations

# Flexibility Concepts: Emergencies

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## **Emergency Replacement Stock**

- Licensed contractors issued exemptions to purchase (potentially limited amount of) equipment into inventory to temporarily install

## **Challenges Addressed:**

- Short term needs and emergencies

## **Benefits:**

- Address concerns for emergencies and scenarios with additional planning needed



# Flexibility Concepts: Income Qualification

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## **Income-Qualified Property Owners**

- Applicant issued exemption for purchase of non-compliant water heater based on enrollment in existing program

## **Challenges Addressed:**

- High-cost installations, Cost concerns for low-income homeowners

## **Benefits:**

- Ease burden on low-income property owners

# Potential Impacts from the Concepts

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## **Health and Air Quality Impacts**

- Delayed emissions reductions and delayed public health and equity benefits compared to 2023 estimates

## **Socioeconomic Impacts**

- Reduced costs of implementation for the public

## **Air District Impacts**

- Resources would be required to administer program
- Compliance and Enforcement resources needed to audit exemptions

# Public Comment Summary

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## **Apartments/Condominiums**

- Request for a solution for homes configured with hydronic water heaters

## **Cost Concerns**

- Comments on potential higher upfront costs in certain projects and ongoing electric bills
- Some commenters requested repeal or delay of zero NOx requirements

## **Support for rule and proposed amendments**

# Next Steps

# Considerations for Discussion

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## **Self-Certification of Exemptions**

- Property owner vs. licensed contractor?
- Burden of proof for qualifying exemptions?
- Complexity of exemption application?
  - Simpler exemption applications are faster for the end user
  - More detailed exemption applications can provide more information for improving the program

# Considerations for Discussion

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## Limitations on Exemptions

- One-time or re-apply for every installation?
- Phase out of certain exemptions over time?
- Trade offs:
  - A one-time exemption gives the property owner about 15 years to address implementation challenges and ensures emissions reductions occur.
  - Some properties may be so difficult to retrofit, the cost may not be worth the benefit.
  - Technology improvements will reduce costs in the future.

# Considerations for Discussion

## Income Thresholds/Cost Exemption

- What level of income qualifies for an exemption?
  - 200% of federal poverty level
  - 80% of area median income
- How is income level demonstrated?
  - Membership in assistance programs
  - Separate self-attestation

Bureau of Indian Affairs General Assistance
CalFresh/SNAP (Food Stamps)
CalWorks/Tribal Temporary Assistance for Needy Families
California Alternate Rates for Energy (CARE)
Family Electric Rate Assistance Program (FERA)
Free or Reduced National School Lunch Program (NSLP)
Head Start Income Eligible (Tribal Only)
Women, Infants and Children (WIC)
Supplemental Security Income (SSI)
Low Income Home Energy Assistance Program (LIHEAP)

# Additional Steps

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Consider Board feedback and direction on staff's potential flexibility concepts



Conduct Public Workshop(s) to discuss potential amendments with stakeholders to better inform staff on strategy development



Report back to the Board with updates and recommendations



# Questions & Discussion

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## **For more information:**

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