Bay Area Air District

Board of Directors
MEETING
May 13, 2026

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

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

Office of Santa Clara County
70 W. Hedding St
1st Floor Conference Room
San Jose, CA 95110

Napa County Administration Building
1195 Third Street, Suite 310
County Executive's Office
Napa, CA 94559

San Mateo County
Board of Supervisors' Office
5th Floor
500 County Center
Redwood City, CA 94063

City of San Bruno
567 El Camino Real, Room 138
San Bruno, CA 94066

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

Office of Alameda County Supervisor
David Haubert
Scott Haggerty House
4501 Pleasanton Avenue
Pleasanton, CA 94566

Pittsburg City Hall
65 Civic Ave., Room, 301A
Pittsburg, CA 94565

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

Solano County Administration Building
675 N. Texas St. Room A168
Fairfield, CA 94533

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 Board of Directors 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
https://www.baaqmd.gov/bodagendas

Members of the public may participate remotely via Zoom at
https://bayareametro.zoom.us/j/84445814794
or may join Zoom by phone by dialing (669) 900-6833 or (408) 638-0968.
The Webinar ID for this meeting is:
844 4581 4794

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 Board 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.

Written public comments can be emailed to comments@baaqmd.gov or through the Air District's website via the "Submit a Comment" feature for this meeting. Written public comments emailed by 10:00 a.m. on the business day prior to this meeting will be provided to the Board members in advance of the meeting. Written public comments emailed after that deadline will be provided to the Board members following the meeting's adjournment. Unless directed by the Chair, written public comments will not be read aloud during the meeting.

The Board welcomes comments, including criticism, about the policies, procedures, programs, or services of the Air District, or of the acts or omissions of the Board. Speakers shall not use threatening, profane, or abusive language which disrupts, disturbs, or otherwise impedes the orderly conduct of a Board meeting. The Air District is committed to maintaining a workplace free of unlawful harassment and is mindful that Air District staff regularly attend Board 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.

BOARD OF DIRECTORS
MEETING AGENDA

WEDNESDAY, MAY 13, 2026
10:00 AM

Chairperson, Lynda Hopkins

1. **Call to Order - Roll Call**

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

2. **Pledge of Allegiance**

DISCUSSION ITEM

3. Rule 9-6 Regulatory Overview and Discussion of Flexibility and Affordability Amendments for Zero-NOx Water Heaters (Continued Item 27 from May 6, 2026 Meeting)

   This item was continued from the May 6, 2026, meeting (agenda item 27). The Board of Directors will discuss potential flexibility and affordability amendments to Rule 9-6 for small water heaters and provide direction to staff. The Regulatory Overview for Rule 9-6, released publicly on April 13, was intended to provide additional context on Air District staff's process to date and current recommendations. (Note that public comment has closed for this item. The continuation of this item will be to complete the Board's discussion of the item only.)

OTHER BUSINESS

4. 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 Board of Directors. Members of the public will have two minutes each to address the Board, unless a different time limit is established by the Chair. The Board welcomes comments, including criticism, about the policies, procedures, programs, or services of the Air District, or of the acts or omissions of the Board. Speakers shall not use threatening, profane, or abusive language which disrupts, disturbs, or otherwise impedes the orderly conduct of a Board meeting. The Air District is committed to maintaining a workplace free of unlawful harassment and is mindful that Air District staff regularly attend Board 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.

5. Board Member Comments

Any member of the Board, or its staff, on their own initiative or in response to questions posed by the public, may: ask a question for clarification, make a brief announcement or report on their 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)

6. Report of the Executive Officer/APCO

7. Chairperson's Report

8. Time and Place of Next Meeting

Wednesday, June 3, 2026, at 10:00 a.m. The meeting will be held in-person at the Bay Area Metro Center. Members of the Board of Directors must attend in person at the Bay Area Metro Center; members of the public will be able to attend in person or virtually via webcast.

9. Adjournment

The Board meeting shall be adjourned by the Board Chair.

CONTACT:
MANAGER, EXECUTIVE OPERATIONS **(415) 749-4941**
375 BEALE STREET, SAN FRANCISCO, CA 94105 **FAX: (415) 928-8560**
vjohnson@baaqmd.gov **Air District homepage:**
www.baaqmd.gov

- Any writing relating to an open session item on this Agenda that is distributed to all, or a majority of all, members of the body less than 72 hours before the meeting shall be made available at the Air District's offices at 375 Beale Street, Suite 600, San Francisco, CA 94105, at the time such writing is made available to all, or a majority of all, members of that body.

Accessibility and Non-Discrimination Policy

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

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

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

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Questions regarding this Policy should be directed to the Air District's Non-Discrimination Coordinator, Kimberly Leefatt, Civil Rights Officer at 415-749-4610 or by email at non-discriminationcoordinator@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

MAY 2026

TYPE OF MEETING	DAY	DATE	TIME	ROOM
Board of Directors Stationary Source Committee - CANCELLED	Wednesday	13	10:00 a.m.	1st Floor, Yerba Buena Room
Board of Directors Meeting	Wednesday	13	10:00 a.m.	1st Floor, Yerba Buena Room
Board of Directors Community Equity, Health, and Justice Committee	Wednesday	13	1:00 p.m.	1st Floor, Yerba Buena Room
Board of Directors Policy, Grants and Technology Committee	Wednesday	20	10:00 a.m.	1st Floor Board Room
Board of Directors Finance and Administration Committee -CANCELLED	Wednesday	20	1:00 p.m.	1st Floor Board Room
Community Advisory Council Meeting	Thursday	21	6:00 p.m.	1st Floor Board Room

JUNE 2026

TYPE OF MEETING	DAY	DATE	TIME	ROOM
Board of Directors Meeting	Wednesday	3	10:00 a.m.	1st Floor Board Room
Board of Directors Stationary Source Committee	Wednesday	10	10:00 a.m.	1st Floor, Yerba Buena Room
Board of Directors Community Equity, Health, and Justice Committee	Wednesday	10	1:00 p.m.	1st Floor, Yerba Buena Room
Advisory Council Meeting	Monday	15	9:00 a.m.	1st Floor Board Room
Board of Directors Policy, Grants and Technology Committee	Wednesday	17	10:00 a.m.	1st Floor Board Room
Board of Directors Finance and Administration Committee	Wednesday	17	1:00 p.m.	1st Floor Board Room

HL 5/7/26 – 3:03 p.m. G/Board/Executive Office/Moncal

BAY AREA AIR DISTRICT
Memorandum

To: Chairperson Lynda Hopkins and Members of the Board of Directors

From: Philip M. Fine
Executive Officer/APCO

Date: May 13, 2026

Re: Rule 9-6 Regulatory Overview and Discussion of Flexibility and Affordability Amendments for Zero-NOx Water Heaters (Continued Item 27 from May 6, 2026 Meeting)

RECOMMENDED ACTION

Discuss and provide input on staff recommendations or alternative approaches.

BACKGROUND

In March 2023, the Bay Area Air District Board of Directors adopted amendments to Regulation 9, Rule 6 (Rule 9-6) that established a zero nitrogen oxides (NOx) emissions standard for all sales and installations of covered water heaters beginning with those manufactured after January 1, 2027. These amendments did not include any flexibilities or exemptions for any potential extenuating circumstances. Over the past two years, Air District Staff have collaborated with stakeholders to develop and refine potential amendments to introduce flexibility into the zero NOx standard, with the intention of easing requirements and potential cost impacts and provide options for an easier transition.

The Air District convened an external Implementation Working Group (IWG) comprised of over 40 members representing a variety of stakeholder segments to identify and compile potential solutions for implementation barriers. The IWG's focus areas included technology readiness, costs, permitting, workforce, grid capacity, and equitable access to incentives and financing. Over 20 IWG meetings were held between May 2023 and August 2024 that informed staff's December 2024 Board update and subsequent October 2025 preliminary concepts paper for flexibility and affordability amendments.

DISCUSSION

Flexibility Amendments

While the long-term benefits of Rule 9-6 remain clear, stakeholder engagement has highlighted several practical challenges that can significantly increase costs or limit implementation feasibility for certain properties. Air District Staff are recommending that the Board of Directors provide direction to move forward with a proposal for further amendments to Rule 9-6 that would provide flexibility in the following scenarios:

- Challenging installations due to space constraints, existing electrical system or panel upgrades.
- Low-income qualified property owners
- Water heaters with a capacity of less than 30 gallons
- Hydronic systems (combined water and space heating)
- Businesses with high-heat demand (examples: restaurants, healthcare, dry cleaners, etc.)
- Temporary emergency gas water heaters installed by certified contractors

Air District staff estimate that the average incremental cost to install a heat pump water heater for a "standard" project is approximately $3,500. Of this, the incremental retail cost of a heat pump water heater as compared to a new natural gas fired unit ranges from $600 - $1,600. The remaining difference is due to additional labor costs to install the zero NOx unit.

Air District staff estimate up to 38 percent of new water heater installations would qualify for exemptions as described above. Income-based eligibility exemptions for low-income or housing cost burdened property owners would account for approximately 18 percent, while project or building constraints, such as space or electrical limitations, would account for the other 20 percent. Given the technical nature of the project-specific exemptions, some participation from licensed contractors would be required.

In order to provide sufficient time to make necessary project-specific upgrades while still ensuring that emission reductions are achieved over time, staff recommend that project-specific exemptions be granted on a *one-time basis* per address or location. For water heaters less than 30 gallons and hydronic units, staff recommend amending the compliance date to January 1, 2031 to allow for more time for market development and for the IWG to further evaluate technology readiness and costs at the appropriate time.

Air District staff plans to provide a website for property owners to request and immediately receive exemptions through a process that is as fast and seamless as possible and ensures that rule requirements are met.

The rule will continue to deliver meaningful regional air quality benefits, particularly through reductions in fine particulate matter (PM2.5). However, the introduction of exemptions will result in a more gradual realization of emissions reductions. Over time, as exempted properties transition to compliant technologies, the full benefits of the rule will be achieved.

Common Questions and Concerns

Throughout the stakeholder engagement process, Air District Staff have received some common questions regarding the implementation of Rule 9-6 and potential flexibility amendments including:

- **Scope:** Rules 9-4 and 9-6 apply specifically to furnaces and water heaters. The rules do not impose requirements on other household appliances such as stoves or clothes dryers, as the rules are focused on reducing NOx emissions from major sources.
- **Equity and Affordability**: Equity considerations are central to the proposed amendments. The combination of targeted exemptions and available incentives is intended to reduce financial burdens, particularly for low-income and cost-burdened households. Staff intend to direct all interested parties towards available rebates to support equitable education and access.
- **Electric Grid Readiness**: Air District commissioned research has confirmed that the implementation of Rule 9-6 will not result in significant unplanned burden to the electrical grid. Additionally, the flexibility amendments account for scenarios in which access to additional building-level electrical capacity is limited.
- **Homeowner Costs**: The estimated $3,500 incremental cost of installation is a one-time investment that may be partially offset through rebates. The exemption pathways are designed to avoid requiring replacement in situations that would result in high-cost installations. Additionally, associated health benefits will accrue continuously once the replacement is completed.

Communications and Outreach

A multi-phase communications campaign is underway to support implementation of Rule 9-6. The campaign will focus on increasing understanding of the health impacts of NOx- emitting appliances, the benefits of zero NOx technologies and key steps for replacement.

Outreach will be conducted through multiple channels, including contractors, local governments, media, and community organizations, with messaging tailored to different audiences over time.

Staff Recommendations

Staff are seeking Board consensus on the following recommendations to continue moving forward with the planned amendments:

1. **Low-Income Qualification Criteria:** Staff recommend defining eligible households as those either participating in an existing low-income program (e.g. Medicaid, food stamps, etc., with a household income ≤250% of federal poverty guidelines) or experiencing housing cost burden (i.e. housing costs ≥28% of gross income). This approach aims to capture a broader set of financially vulnerable households.
2. **Requirement for Contractors**: Staff recommend that project-specific exemptions be evaluated and verified by contractors. This ensures an accurate assessment of technical constraints and alignment with evolving technologies.
3. **One-Time Exemption per Address**: Staff recommend that only one exemption is allowed per property, providing approximately 13 years (one equipment lifecycle) for owners to prepare for eventual compliance. This balances near-term feasibility with long-term policy goals and ensures eventual realization of all emissions benefits.
4. **Delayed Implementation Date (October 2027)**: Staff recommend postponing the rule's effective date one year to October 1, 2027 to allow additional time for online system development, market alignment, workforce training, and public outreach. While this delay supports smoother implementation, it also postpones the associated air quality benefits.

Next Steps

Air District staff plan to release detailed proposed rule language, along with updated environmental and socioeconomic analyses, in advance of a targeted vote for adoption of the amendments by the Board of Directors in October 2026. Continued stakeholder engagement and refinement of the proposal will occur throughout this period.

Update

In preparation for the Board of Directors Meeting on May 13, 2026, additional materials to help address questions from the Board of Directors and those raised during public comment is forthcoming.

BUDGET CONSIDERATION/FINANCIAL IMPACT

None.

Respectfully submitted,

Philip M. Fine
Executive Officer/APCO

Prepared by: Jennifer Lam
Reviewed by: Gregory Nudd

ATTACHMENT(S):

1. Rule 9-6 Regulatory Overview May
2. Rule 9-6: Flexibility and Affordability Amendments for Zero NOx Water Heaters Presentation

REGULATORY OVERVIEW: RULE 9-6 FLEXIBILITY AMENDMENTS

APRIL 2026

Bay Area Air District

REGULATORY DEVELOPMENT DIVISION & PLANNING DIVISION

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REVIEWED BY

Gregory Nudd, Deputy Executive Officer – Policy

Philip Fine, PhD, Air Pollution Control Officer

Table of Contents

Executive Summary

In March 2023, the Bay Area Air District Board of Directors adopted amendments to Regulation 9, Rule 6 ("Rule 9-6") that established a zero nitrogen oxides (NOx) standard for all sales and installations of covered water heaters beginning with those manufactured after January 1, 2027. These amendments did not include any flexibilities or exemptions for any potential extenuating circumstances. Over the past two years, Air District Staff have collaborated with stakeholders to develop and refine potential amendments to introduce flexibility into the zero NOx standard, with the intention of easing requirements and potential cost impacts and provide options for an easier transition.

The Air District convened an external Implementation Working Group (IWG) comprised of over 40 members representing a variety of stakeholder segments 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 20 IWG meetings were held between May 2023 and August 2024 that informed staff's December 2024 Board update and subsequent October 2025 preliminary concepts paper for flexibility and affordability amendments.

The amendments discussed in this regulatory overview would provide flexibility in the following scenarios:

- Challenging installations due to space constraints, existing electrical system or panel upgrades. (see Appendix A for details)
- Low-income qualified property owners (see Appendix B for details)
- Water heaters with a capacity of less than 35 gallons[1]
- Hydronic water heating systems
- Businesses with high-heat demand (Examples: restaurants, healthcare, dry cleaners, etc.)
- Temporary emergency gas water heater installed by certified contractors

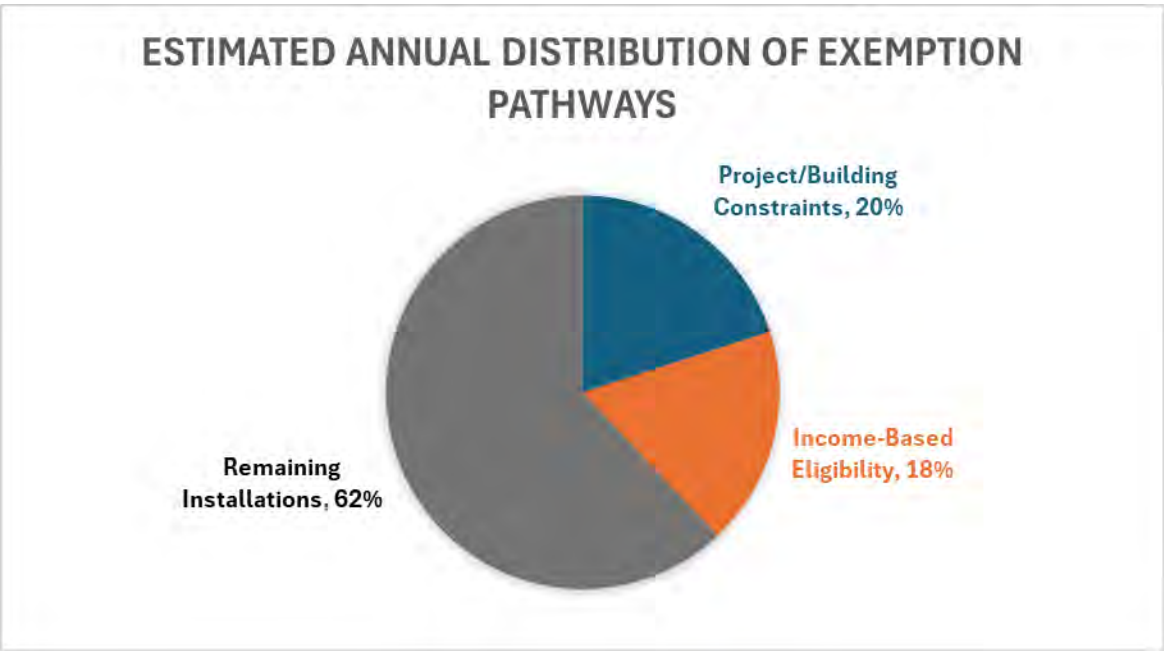
Staff estimate that the average incremental cost to install a heat pump water heater for a "standard" project is approximately $3,500. Of this, the incremental retail cost of a heat pump water heater as compared to a new natural-gas fired unit ranges from $600 - $1,600. The remaining cost difference is due to additional labor to install the unit.

As seen in Figure 1 below, staff estimate up to 38 percent of new water heater installations would qualify for exemptions (Appendix E). Income-based eligibility exemptions for low-

[1] Staff is also considering setting this threshold at 30 gallons, based on feedback from manufacturers. Staff welcomes additional feedback on this issue.

income or housing cost burdened property owners would account for approximately 18 percent. Project or building constraints, such as space or electrical limitations, account for another 20 percent. Given the technical nature of the project specific exemptions, some participation from licensed contractors would be required.

Figure 1. Breakdown of Estimated Distribution of Exemption Pathways



In order to provide sufficient time to make necessary upgrades while still ensuring that emission reductions are achieved over time, staff recommend that project-specific exemptions be granted on a *one-time basis* per address or location. For water heaters less than 35 gallons and hydronic units, staff recommend amending the compliance date to January 1, 2031 to allow for more time for market development and for the IWG to further evaluate technology readiness and costs at the appropriate time.

Staff plans to provide a website for property owners to request and immediately receive exemptions. The goal is to make that process as fast and seamless as possible while ensuring that rule requirements are met.

Introduction: Rules 9-4 & 9-6

The Bay Area Air District has two adopted building appliance rules that address pollution from gas fueled equipment in buildings.[2]

- Regulation 9, Rule 4: Nitrogen Oxides from Fan Type Residential Central Furnaces, which regulates small residential and commercial furnaces that heat indoor air
- Regulation 9, Rule 6: Nitrogen Oxides from Natural Gas-Fired Boilers and Water Heaters regulates natural gas water heaters and small boilers that are used to heat water
- These rules **do not** apply to gas stoves, laundry drying, or any other appliance that may use natural gas.

Rules 9-4 and 9-6 were first ***adopted more than 30 years ago*** to reduce nitrogen oxides (NOx) emissions from these everyday appliances, because NOx contributes to the formation smog and fine particles (i.e. particulate matter, or PM) that result in harmful health effects.

In March 2023, the Board adopted amendments to Rules 9-4 and 9-6 that tighten ***"point-of-purchase"*** emission standards for small furnaces and water heaters, including new zero NOx standards that start to phase in between 2027 and 2031 depending on the size and type of equipment. These updated standards apply to the new replacement appliances that would be installed when an existing appliance reaches the end of its life ("burn out") and needs to be replaced, and to new equipment manufactured after the future compliance dates.

[2] https://www.baaqmd.gov/en/rules-and-compliance/rule-development/building-appliances

Clarifying Common Misconceptions

The overarching goal of this rule amendment effort for Rule 9-6 is to support equity and affordability for residents while continuing to achieve the air quality benefits associated with the replacement of polluting equipment over time.

Staff have received several recurring questions regarding the applicability and implementation of Rule 9-6 during stakeholder engagement. In some cases, the interpretations stem from misunderstandings about when or how the rule applies. **Table 1** below highlights several common misconceptions and provides clarification of the actual requirements of the currently adopted Rules 9-4 and 9-6, prior to any potential changes discussed elsewhere in this document.

Table 1. Simplified Myths Vs. Facts for the Currently Adopted Rule 9-6

Myths	**Facts**
Mandatory replacements of all equipment starting in 2027	**Existing water heaters can remain in operation until they burn out or need replacement**
Point-of-purchase requirement	**The rule is triggered when equipment is replaced (purchased), not when a property is sold**
Applicability based on building type or installation date	**Requirements are based on the appliances btu rating and date of manufacture**
This rule is an electrification or decarbonization mandate	**The rule reduces regional NOx emissions caused by natural gas combustion and the associated $PM_{2.5}$ formation to improve air quality and public health**
This rule applies to stoves, ovens and dryers	**The rule does not apply to stoves, ovens, nor dryers.**

Health Benefits from Implementing Rules 9-4 & 9-6 Amendments

By phasing out polluting gas furnaces and water heaters starting in 2027, Rules 9-4 and 9-6 will help clean up the air we all breathe, prevent dozens of early deaths every year, and save

the region hundreds of millions of dollars in health costs. A summary of the health benefits is shown in the table below.[3]

Table 2. Health Benefits from Rule 9-4 & 9-6

Major health benefits from Rules 9-4 and 9-6	
These appliance rules help improve regional air quality by reducing pollution from furnaces and water heaters.	🏠 ➡️ 🌤️ **Cleaner outdoor air** Less NOx & $PM_{2.5}$ from venting
Lower pollution means lower exposure to fine particles ($PM_{2.5}$)	🗺️ **Cleaner Bay Area Communities** Biggest $PM_{2.5}$ reductions in communities of color & overburdened neighborhoods
Reducing $PM_{2.5}$ and NOx exposure can prevent dozens of early deaths every year in the Bay Area.	❤️‍🩹 🫁 **Up to 85 early deaths avoided** each year from cleaner air
Health improvements from cleaner air avert unnecessary costs from health impacts.	🏥 💵 **Up to $890M** Annual health benefits saved in avoided illnesses, hospital visits, and early deaths[4]
Climate co-benefits resulting from electrification of appliances	Based on current technology, zero NOx appliances are electric, and their use would result in a **reduction of greenhouse gas emissions**

[3] https://www.baaqmd.gov/~/media/dotgov/files/rules/reg-9-rule-4-nitrogen-oxides-from-fan-type-residential-central-furnaces/2021-amendments/documents/20230307_fsr_rules0904and0906-pdf.pdf?rev=100de6caff2342e6b095b59acf2321d0

[4] 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_appe_rg09040906-pdf.pdf?rev=d4b056153496491fad817c6d4a87df78&sc_lang=en

Background

Current Status and Compliance Timeline

For the past 30 years, the Air District has been updating these rules to reflect newer, cleaner technologies and to help meet the region's clean air goals. In March 2023, the Board adopted amendments to Rules 9-4 and 9-6 that tighten ***"point-of-purchase"*** emission standards for small furnaces and water heaters, including new zero NOx standards that start to phase in between 2027 and 2031 depending on the size and type of equipment. These updated standards apply to the new replacement appliances that would be installed when an existing appliance reaches the end of its life ("burn out") and needs to be replaced, and to new equipment manufactured after the future compliance dates. The current compliance schedule for zero NOx equipment is shown below.

Table 3. Current Compliance Schedule for Rules 9-4 and 9-6

January 1, 2027	Water heaters less than 75,001 BTU/hr[5] (typically residential tank water heaters)
January 1, 2029	Residential and commercial furnaces
January 1, 2031	Water heaters between 75,001 and 2 million BTU/hr (typically commercial and multifamily as well as tankless units)

(The above only applies to appliances manufactured after the noted date)

Together, Rules 9-4 and 9-6 are a key part of the Air District's broader strategy to reduce air pollution from stationary sources, including buildings. The staff's technical analysis for these rules clearly show that emissions from gas furnaces and water heaters affect both local and regional air quality, contribute to ozone and secondary particulate matter formation, and exacerbate health and equity concerns in the Bay Area.

The 2023 amendments to Rules 9-4 and 9-6 included a provision to report back to the Board of Directors two years prior to each implementation date on the current state of available technologies, costs and other potential implementation challenges. The Board of Directors directed staff to include a provision in the 2023 amendments to establish an Implementation Working Group, consisting of a wide spectrum of stakeholders, and called for the corresponding report to inform any further changes to the rules.

[5] BTU/hr means British thermal unit per hour

Table 4 below summarizes the Board's actions over time, showing what has happened so far and where the rule currently stands. This timeline provides context for how Rule 9-6 has progressed from adoption to subsequent discussions regarding updates and flexibility.

Table 4. Post-Adoption Timeline of Regulatory Events for Rules 9-4 & 9-6

Date	What happened?	Brief description
March 15, 2023	The Board of Directors adopted amendments to 9-4 & 9-6. The Board also directed staff to come back with a Rule 9-6 implementation report in 2024.	The Board held a public hearing and adopted the proposed amendments to Rules 9-4 and 9-6, and certified the CEQA Environmental Impact Report, formally approving the new zero NOx standards and related requirements.
June 21, 2023	The Board heard details on SIP submittal of Rules 9-4 & 9-6	The Board of Directors held a public hearing and directed staff to submit the current versions of Rules 9-4 and 9-6 to U.S. EPA and the California Air Resources Board for inclusion in the State Implementation Plan (SIP). That process is currently on hold while the Air District develops its attainment plan for the new $PM_{2.5}$ air quality standard.
December 4, 2024	The Board received information on staff's research on Rule 9-6 implementation per the 2023 direction.	Staff presented informational updates on implementation readiness of the zero NOx requirements for residential water heaters under Rule 9-6, summarizing the Implementation Working Group findings and professional research in a Rule 9-6 Implementation Report.[6]

[6] 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

Date	What happened?	Brief description
October 2025	Public Release of Rule 9-6 Concepts Paper (flexibility options)	Staff released the **Rule 9-6 Concepts Paper**, outlining potential flexibility concepts for amending Rule 9-6. The flexibility amendments are a result of findings from the 2024 implementation report that recognized constraints for seamless adoption of Rule 9-6.[7]
December 10, 2025	The Stationary Source Committee received information from staff on potential flexibility amendments based on affordability and availability issues for Rule 9-6.	Staff presented informational updates on flexibility amendments to Rule 9-6 which would address issues that would make the rule more practical to implement. Staff's discussion highlighted the concept paper and the public comments received on the concept paper. ***The Committee directed staff to come back with information on possible exemptions for low-income property owners.***
February 11, 2026	Per direction from the 12/10/2025 Stationary Source Committee meeting, staff presented specifics on options for defining and qualifying low-income affordability	Staff presented to the Stationary Source Committee on: 1. Who qualifies as "low-income" – presenting two options including different income limits as well as considerations for housing cost burden 2. How much does it cost to help low-income households switch to cleaner water heaters ***The Committee directed staff to return in May 2026 with a full set of final options so the full Board can give clear directions on how to proceed with the rule.***

[7] https://www.baaqmd.gov/~/media/dotgov/files/rules/reg-9-rule-4-nitrogen-oxides-from-fan-type-residential-central-furnaces/2021-amendments/documents/rule-09_06-concepts-paper_final-v1-pdf.pdf?rev=9eac6fc7a84e4b259fd2017c838de68c&sc_lang=en

Implementation Working Group

As part of the 2023 zero NOx amendments, the Board required that two years prior to each compliance date, staff must provide updates to the Board regarding implementation challenges, especially focused on concerns raised by stakeholders during rulemaking—such as costs, workforce, market development, and equity issues in terms of incentives and tenant impacts. With this direction, staff coordinated and led a multi-stakeholder Implementation Working Group (IWG) focusing primarily on the Rule 9-6 amendments (IWG Phase 1), holding **21 meetings** from May 2023 through August 2024[8] to provide input on those topics relevant to January 2027 implementation for small water heaters less than 75,000 BTU/hr. Members included industry representatives, union representatives, industry associations, local governments, utilities, community choice aggregators and subject matter expert organizations, among others.

The IWG was comprised of various subcommittees. The Technical Subcommittee compiled and reviewed the most up-to-date technical information relevant to implementing Rule 9-6 to present to the Working Group, such as market availability and projected cost of compliant appliances, and potential financial incentives for consumers. The Technical Subcommittee also provides recommendations for the Working Group and/or Steering Committee to consider.

IWG Phase 1 Findings

Overall, staff found that even in just a short two-year timeframe (2023-2024), several significant challenges brought up during the 2022 rulemaking process had been mitigated or were found not to be major barriers to Rule 9-6 implementation (e.g., water heater impacts to the grid and reliability, market readiness including post-Covid supply chain, workforce availability, and local jurisdictional permit streamlining). However, some challenges remain, and staff's overall recommendation highlighted the need for future flexibility and amending the 100 percent sales requirement. To review all findings, please see the IWG Phase 1 Staff Report *Informational Update Regarding Regulation 9, Rule 6* ,[9] which was presented to the Board of Directors in December 2024.

The following table provides a brief overview of the milestone deliverables prepared for the Building Appliances Implementation Working Group. Each technical report addresses a

[8] https://www.baaqmd.gov/community-health/building-appliances-rule-implementation/building-appliances-implementation-working-group

[9] 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

distinct implementation issue and helped inform the Air District's analysis of Rule 9-6 implementation.

Table 5. Technical Research on Implementation Issues

Technical Report	Brief Description
Installation Costs for Zero NOx Space and Water Heating Appliances	Updates the estimated installation costs of zero NOx heating appliances and how incentives affect household bills and upfront costs.
Workforce Challenges for Zero NOx Requirements	Reviews contractor availability, training needs, and workforce readiness for heat pump adoption.
Challenging Use Cases and Emerging Solutions for Zero NOx Appliances	Identifies difficult retrofit situations and summarizes practical solutions for constrained sites.
Renter Protections Policy Landscape Summary	Reviews renter-protection policies and suggests ways to reduce possible negative impacts on tenants.
Market and Sales Trends for Zero NOx Appliances	Summarizes market conditions, sales trends, and contractor input on the current and future heat pump market.
Permitting Requirements for Zero NOx Appliances	Describes permitting barriers, requirements, and best practices for installing zero NOx appliances.
Grid Reliability and Interconnection Challenges	Examines concerns about electric grid reliability, service upgrades, outages, and appliance-level performance.
Lived Experience Interviews Summary	Summarizes renter interviews on housing insecurity, displacement, energy burden, and other quality-of-life impacts.

Overview of Draft Concepts for Potential Rule Amendments

In October 2025, staff released a Concepts Paper outlining potential future amendments to Rule 9-6 directly addressing the challenges identified in the implementation working group report and described above. Below is a full summary of each concept.

Continued Sales of Smaller Units and Hydronic Systems

1) **35-gallon and less tanked size.** There are currently no 35-gallon or smaller HPWHs available in the US market. 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. Based on feedback from manufacturers, staff is also considering proposing this threshold be set at 30 gallons, rather than 35.
2) **Hydronic Systems.** A hydronic water heater is a system that heats water and circulates it through pipes or through an air handler to provide space heating. 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. Though there are currently a limited number of hydronic heat pump water heaters on the market, the product carries a significant price premium. Hydronic systems are typically installed in multi-unit apartment complexes that require substantial pre-planning and coordination to complete the installations. In order to ensure as minimal renter impacts as possible, and to allow for new technology to develop in this category, staff recommend delaying to a 2031 compliance date. 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.

Certified Exemptions for Purchase and Installation of NOx-emitting Water Heaters

Based on Project Constraint

Certified exemptions based on project constraints would be allowed through application, documentation and attestation with a licensed contractor. Though this requirement may lengthen the process for property owners, especially those who would have utilized an unlicensed handyman or conducted “DIY” self-installation, licensed contractors are more

likely to have the knowledge needed to accurately evaluate multiple technical options for installing a zero NOx water heater and will be more capable of staying up-to-date on technology options as they evolve.

1) **Space Constraints.** Water heater relocation and major construction due to existing space constraints within the home is a major cause of higher installation costs. Flexibility for these scenarios would allow licensed contractors to apply for a space constraint exemption, based upon either lack of access to sufficient space for ventilation, or lack of physical space as listed below.

Ventilation: The location of the existing /old water heater has less than 700 cubic feet of space AND is not adjacent to a space >700 c.f. and therefore cannot be retrofitted with a louvered door, transfer grille or air ducts.
Physical space: The existing/old water heater is in a garage with a ceiling height less than 7.2' tall OR a non-garage space with ceiling height less than 6' tall. [10]

2) **Electrical Constraints.** In homes and buildings with outdated or limited electrical infrastructure, staff have identified several constraints that may justify an exemption, as listed below.

The home/building has knob-and-tube wiring.
The electrical panel is <100 amps (single-family) or <60 amps (multi-family)
New 240v connection requires more than 50 feet of wiring/conduit
The electrical panel does not have enough circuit or breaker space

The objective would be to exempt homes that will likely need to upsize their electric panel and/or install significant new wiring. The exemptions would also preclude the need for costly and time-consuming PG&E service upgrades, since PG&E cannot bring upsized service to an undersized panel (e.g. 200-amp service to a 90-amp panel).

Based on Applicant Type

1) **Low-Income Qualified Property Owners.** Given the incremental cost of HPWHs as well as lack of guaranteed, long-term sufficient funding for incentives serving low-income households, staff recommend an exemption category for low-income qualified property owners.

[10] See "Low Clearance Garages" and "Low Clearance Spaces". https://svcleanenergy.org/wp-content/uploads/electrification_solutions_analysis_svce_webpage_jan2026_noc.pdf

Staff Recommendation: property owners that are either low-income program participants[11] (e.g., food stamps, Family Electric Rate Assistance (FERA) or California Alternative Rates for Energy (CARE) programs) OR housing cost burdened (annual mortgage and property taxes are equal to or greater than 28 percent of gross income). By including housing cost burden, this approach acknowledges the issues of affordability, high housing costs in the region and how that impacts households across different income levels.

There are alternatives to determining low-income status. For example: property owners at or below 80 percent Area Median Income (AMI). Given the complexity of using AMI as it relates to public communication and customer experience (e.g., income thresholds vary by county and change annually; varies based on the number of people in the household; definition of "household" varies amongst public programs), staff recommends the housing cost burden or low-income program approach.

2) **Licensed Contractors: Emergency Replacement Loaners.** Approximately 75 percent of TECH Clean CA HPWH single-family projects statewide took just one day for installation. For Bay Area HPWH single-family projects installed within two days, the number rises to 82 percent. 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,[12] a growing number of emergency replacements can be completed with zero NOx options just as quickly as NOx emitting units.

   However, for some emergency replacement scenarios, including retrofits with longer timelines, a temporary gas-fired NOx-emitting water heater may be needed. To meet this limited demand, licensed contractors would be allowed to apply for and purchase a certain number of NOx-emitting water heaters to utilize as temporary loaners. These loaners would not need to be purchased based on a specific project, but could be pre-purchased by licensed installers in order to have on-hand. This would help avoid the need for exemptions if cost was less of a factor than time delays for the property owner.

3) **Businesses with specialized applications and high hot water demand**. Small business types with operational requirements for high hot water needs and/or

[11] Typically using 250% Federal Poverty Guidelines
[12] https://www.geappliances.com/geospring-water-heater

health and safety codes to provide hot water at specified temperatures 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.

Restaurant, Food Service
Laundry, Dry Cleaner
Healthcare and assisted living

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.

Development of Web Portal for Processing Applications

Staff plan to develop a centralized web portal location on the Air District's home webpage for anyone seeking a certified exemption for any of the exemption options listed above. The portal would be customer friendly and would require documentation and attestation prior to purchase and installation.

When applying for an exemption, staff intend to provide educational resources embedded into the web portal to notify property owners and contractors of incentives that may be available to them based on their location and income level. It is staff's intention to provide residents information to make an informed decision about whether they would like to continue to pursue an exemption to Rule 9-6 or to purchase and install a zero NOx appliance with the help of incentives or other financing.

The certification process as part of the registration portal could be designed to require that contractors must make property owners aware of their zero NOx options, right-sizing (120-volt plug-in HPWHs; circuit-sharing; skinny breakers, etc.), benefits, as well as the incentive programs available to them.

Economic Considerations

Challenging Installations

Variations across the building stock (i.e. existing space configuration, existing electrical system and panel condition, amount of deferred maintenance) will result in some challenging installation cases for zero NOx water heating. TECH Clean CA[13] program data for heat pump water heater (HPWH) installations in the Bay Area showed costs ranging from $2,900 to $38,800, with the high end of costs representing the most challenging installation cases. It should be noted that this data on costs only includes completed jobs and includes data from years before new and improved products were available on the market. These high-cost edge cases are typically driven by either electrical or space constraints. Specifics around drivers for electrical and space constraints, potential heat pump configurations and available data on projects that face these constraints can be found in Appendix A.

Average Upfront and Operational Costs

For the remaining projects that may not be eligible for one of the potential exemptions, or more "standard" projects or "drop-in" replacements, staff estimate average incremental cost to remain at approximately $3,500. Original IWG research was based on a large dataset of over 4,000 incentive program projects with very little difference between mean versus median costs. These amendments would help to eliminate the high-cost projects or other outliers. Therefore, staff expect average costs to be similar to the IWG estimates.

Retail additional (incremental) cost for the equipment only is as follows for most basic models with 50 gallon tanks:

- **120V:** $1,100-$1,600
- **240V:** $600-$1,300[14]

[13] TECH Clean California is a statewide initiative to accelerate the adoption of heat pumps across California homes, overseen by the CA Public Utilities Commission and the CA Energy Commission. https://techcleanca.com/

[14] Baseline assumes midpoint of $900 MSRP for ultra low NOx natural gas tanked water heaters: Low end: $770 (e.g. Rheem Performance 50 gal. Tall 6-Year 34,000 BTU Ultra Low NOx Natural Gas Tank Water Heater; A.O. Smith Signature 100 50-Gallon Tall 6-year Warranty 50000-BTU Natural Gas Water Heater) ; Higher end: $1100 (e.g. Rheem Performance Platinum 50 Gal. Tall 38,000 BTU Ultra Low NOx Natural Gas Water Heater)
Zero NOx water heater costs:120V: $2,000 - $2,500 (e.g., GE GeoSpring 120V, Rheem 120V); 220V: $1,500 - $2,200 (e.g. A.O. Smith Signature 900, Rheem ProTerra, A.O. Smith HPTS-50 Voltex)
Online retailer websites accessed February and March 2026.

Note that most of the upfront costs for HPWH projects consist of labor and installation, along with permitting costs. HPWHs can require extra labor compared to a like-for-like gas water heater due to:

- new electrical wiring
- condensate management or new drain lines
- potential ventilation measures for water heaters in confined spaces (ducts, louvered doors)
- capping the old water heater gas line; and
- further components such as mixing valves, heat exchangers, and vibration-reducing flexible piping.

These are mostly one-time upgrades that will also support future water heater replacements. The number of higher cost installations that need these upgrades will be significantly reduced through the potential exemptions.

Staff expect that over time, larger pools of contractors and greater experience region-wide will lead to lower labor costs.

Operational costs analyses found that with the switch to HPWHs, households will either see utility bill savings or a very small monthly increase. 95 percent of high-usage customers (5,000 kWh or more annual usage before electrifying) see bill savings or no change in bills after switching to a HPWH. For low-use customers, approximately 35 percent of single-family and 60 percent of multi-family (MF) market-rate customers (those not receiving any low-income program discounts) experience a bill increase of around $2 per month on average.

To understand upfront costs, the Air District analyzed incentive program data from multiple agencies (statewide, regional and local) covering over 4,000 projects installed exclusively in the Bay Area between 2021-2023. The average upfront additional incremental cost to install a zero NOx HPWH compared to a NOx-emitting gas water heater is estimated to fall between $1,840, and $3,496,[15] before rebates**Error! Bookmark not defined.**. This number varies based on the program analyzed and the types of projects and baseline appliance (tanked and tankless vs. tanked only) being replaced.

As noted in the IWG report, actual costs may vary depending on site conditions, equipment size, electrical upgrades, installation complexity, and energy prices. Although upfront costs for certain HPWH configurations can be higher than their gas counterparts, these costs can

[15] Installation Costs for Zero NOx Space and Water Heater Appliances https://www.baaqmd.gov/~/media/files/community-health/building-appliance-implementation/task1_electrificationcosts-pdf.pdf?rev=3cb66a09f3094f94b35fa7fc90cfd4ec

often be offset through various available rebates or incentives, while comparable gas options may not. Zero NOx water heaters are expected to have lower operational energy costs for most customers.[16]

Socioeconomic Impact Evaluation

The California Health and Safety Code requires that whenever an air district intends to propose the adoption, amendment, or repeal of a rule or regulation that will significantly affect air quality or emissions limitations, that agency must actively consider the socioeconomic impact of regulations and make a good faith effort to minimize adverse socioeconomic impacts. A "socioeconomic impact" means the following:

a. The type of industries or business, including small business, affected by the rule or regulation.
b. The impact of the rule or regulation on employment and the economy of the region affected by the adoption of the rule or regulation.
c. The range of probable costs, including costs to industry or business, including small business, of the rule or regulation.
d. The availability and cost-effectiveness of alternatives to the rule or regulation being proposed or amended.
e. The emission reduction potential of the rule or regulation.
f. The necessity of adopting, amending, or repealing the rule or regulation to attain state and federal ambient air standards.

For the 2023 Appliance Rule Amendments for Rules 9-4 and 9-6 for Nitrogen Oxide Emissions from Natural Gas-Fired Water Heaters, Boilers and Furnaces, staff additionally analyzed:[17]

a. The direct impacts of increased compliance costs on residential consumers installing and replacing space and water heaters
b. Potential equity impacts at the household level by different income groups, housing tenure, and poverty level.
c. Monetized health impacts and benefits analysis of residents across the region based on race, including a range of valuations, based on modeled particulate matter exposures across the region and an equity assessment by race.
d. Potential shifts in consumer spending and potential job losses (both direct and indirect/induced)
e. Impacts to electrical grid capacity and reliability and related potential costs of related electric utility infrastructure upgrades

[16] *ibid 15*
[17] 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&sc_lang=en

f. Air District costs to implement the proposals

The flexibility amendments being discussed at this time are expected to decrease costs as compared to the analysis conducted for the 2023 amendments and therefore does not necessitate conducting a socio-economic analysis under the California Health and Safety Code. Nevertheless, staff intend to publish an updated analysis outlining expected costs and other relevant items described above for consideration by the Board of Directors and the public.

Available Rebates

A variety of rebates currently exist across federal, state, utility, and local programs, though availability can vary depending on funding cycles and program capacity. The low-income exemptions will help those property owners who are unable to afford the switch to compliant equipment, even with available funding.

Updated information on HPWH rebates available by zip code can also be found at incentives.switchison.org. This information will be also be provided to property owners when they apply for the low-income exemption.

An updated snapshot of currently available rebates is included in **Table 6** below.

Table 6. Available HPWH rebates in the Bay Area as of March 2026[18]

Geographic Scope	Program or Funder Name	Incentive amount per HPWH
Statewide	Multifamily HEEHRA[19]	$1,750
City of Alameda	Alameda Municipal Power (AMP)	$1,500
Palo Alto	City of Palo Alto Utilities	$3,500
PCE customers	Peninsula Clean Energy (PCE)	up to $3,000
PG&E customers	California Energy Smart Homes	$1,000 for Integrated Heat Pump Space and Water Heating
PG&E customers	Golden State Rebates	$400-$700
Pinole	City of Pinole	up to $3,000
Redwood City	Redwood City	Up to $500

[18] https://incentives.switchison.org/residents/incentives?state=CA and filter for equipment "Heat Pump Water Heater"

[19] High-Efficiency Electric Home Rebate Act (HEEHRA), now often called Home Electrification and Appliance Rebates (HEAR)

San Francisco	Clean PowerSF Water Heater Upgrade Program	$1,200 - $1,800 in bill credits ($50/month)
SCP customers	Sonoma Clean Power (SCP)	$700
SJCE customers	San Jose Clean Energy (SJCE)	$2,000 to $3,000
SVCE customers	Silicon Valley Clean Energy (SVCE)	up to $2,000

Note that **Table 6** does not include highly targeted funding programs available to limited households, including PG&E's Energy Savings Assistance (ESA) program;[20] the California Energy Commission's Equitable Building Decarbonization (EBD) Program;[21] and upcoming SB 1221 Neighborhood Decarbonization pilots.[22]

[20] https://www.pge.com/en/save-energy-and-money/energy-saving-programs/energy-savings-assistance-program.html
[21] https://www.energy.ca.gov/programs-and-topics/programs/equitable-building-decarbonization-program
[22] https://www.cpuc.ca.gov/industries-and-topics/natural-gas/sb-1221-implementation

Summary of Potential Impacts and Considerations

Grid and Reliability Impacts

Though often cited by the public as a concern, new electrical loads resulting from Rule 9-6 are highly unlikely to cause power outages. The change in electrical load due to the implementation of these rules will be spread over at least 15 years and is included in the State's ongoing planning for future enhancements of the electric grid. There are current and new (SB 410) requirements for utilities and the California Energy Commission (CEC) regarding grid planning for increasing loads, which will include added load from the building appliance rules.

The large majority of power outages are not caused by electrical load or bulk capacity issues but are instead caused by external physical impacts (e.g. downed trees, storms) or public safety power shutoffs (PSPS), which have been significantly reduced since 2019.[23]

For the rare instances of bulk capacity issues (e.g., statewide Flex Alerts), many HPWHs allow users to shift energy usage to off-peak hours (sometimes with the direct support from utilities), essentially using electricity to make and "store" hot water during periods of lower electricity demand and prices. HPWHs are increasingly being used by utilities for demand response to help improve overall grid reliability.

In the event of a power outage, tanked water heaters, including HPWHs, can stay hot for several hours, especially when installed with a cold-water mixing valve. Note that, some new NOx- emitting gas water heaters have dampers and fans (including tankless on-demand, tanked models with power venting) that rely on electricity and cannot operate during power outages.[24]

Potential Renter Impacts

The Air District commissioned research and engaged stakeholders regarding concerns for renter impacts due to Rule 9-6. These analyses confirmed that implementation of the 2023 amended rule language could lead to capital cost pass-throughs, potential rent increases, and temporary evictions for some tenants, though water heaters covered under the 2027

[23] Rincon and E3. *Grid Reliability and Interconnection Challenges.* https://www.baaqmd.gov/~/media/files/community-health/building-appliance-implementation/grid-impacts-final-pdf.pdf?rev=14a3ea4d46704d19a48cf03e3984c90e&sc_lang=en

[24] https://docs.bradfordwhite.com/Spec_Sheets/1118_0815.pdf https://www.hotwater.com/info-center/water-heater-venting.html#:~:text=Power%20Vent,professional%20plumbing%20contractor%20for%20installation

requirements of Rule 9-6 posed a lower risk than other appliances due to lower costs and construction impacts.

Landlords could use a "substantial repair" clause found in the local and state renter protection laws for "no-fault evictions,"[25] creating potential eviction risk for some high-cost water heater installations. In these cases, "substantial repair" refers to significant construction work that requires the renter to vacate while the work occurs, takes more than 30 days, and requires a permit to complete.

Cities with the highest concentration of renters also have the strongest renter protections. San Jose, San Francisco, Oakland and an additional 13 Bay Area jurisdictions have local renter protection laws that go beyond state law. Each major jurisdiction has its own limits on rent increases and capital improvement pass-through costs, as well as eviction protections. In cities without local rent stabilization, renters rely on state protections. AB 1482 provides statewide rent increase limits and just cause eviction protections but does not specifically address capital improvement pass-throughs. The law expires in 2030.

Workforce Development and Availability

Bay Area workforce research shows positive signs for contractor availability and readiness. Compared to national benchmarking, the Bay Area has equivalent levels of relevant contractors compared to the US average. Based on region-wide surveys, the majority of contractors are available to respond to emergency water heater failures within a couple days. A two-thirds majority of surveyed contractors were already aware of the building appliance rules and at least one category of applicable incentives, though slightly less than half of the surveyed contractors participated in incentive programs.

Further education for many installers is needed, however. Large-scale public awareness campaigns and specific outreach to installers are planned for 2026.

Quantitative Estimates on Number of Exemptions

Total estimates for potential certified exemptions are estimated to be up to 38 percent of residential small water heater unit installs. This varies slightly depending upon how the low-income qualified exemption is defined. See **Table 7** below for a more detailed break out.

[25] No-fault evictions allow landlords to remove tenants who have not violated lease terms, but can occur under strict reasons, such as owner move-in, substantial remodeling, or removing units from the market.

Table 7. Residential Certified Exemptions Expected by Category

Annual Residential Small Gas Water Heater Turnover:		120,000
Exemption type	**Percentage**	**Annual Number**
Very Low Income & Housing Cost Burdened	15.8%	19,000
80% AMI and less	17.4% [26]	20,880
Project/ building constraints	20% [27]	24,000

The certified exemption estimates do not include continued sales of 30 gallon and below tanked water heaters, which are estimated at 10 percent per year.

Given that the purchase of Emergency Replacement Loaner water heaters will not displace zero NOx water heaters nor be installed permanently, numbers are not quantified below. However, in the nine-county Bay Area, current numbers of licensed contractors who would be eligible to purchase a limited number of NOx emitting water heaters (larger than 35 gallons tanked and less than 75,000 btu/hour) for emergency replacement loaners is listed below:[28]

- B (General Contractor License) 15,967
- C36 (Plumbing) 1,762
- C20 (HVAC) 868

Lastly, for businesses with specialized applications and high hot water demand, many may already be utilizing water heaters above the 75,000 btu/hour threshold based on high hot water needs. However, estimated numbers of these businesses are listed below.

- Food service/restaurant facilities - approximately 2,427 food service buildings[29]
- Healthcare clinics and assisted living facilities - while not separate categories, BayREN buildings inventory estimates “Medical - Hospital & Clinic” and “Medical – Other” at 3,021 buildings in the Bay Area[30]

[26] These numbers are lower than what was previously presented at the February 2026 Stationary Source Committee. Updated results reflect income profile by each census tract (rather than at the county level) and calculations done separately for each household size category (rather than applying 4-person household income threshold to all owner-occupied households regardless of household size). For data citations for housing burden, federal poverty guidelines and area median income, please see **Appendix B**.

[27] Reasonable estimate based on program data and case studies citing prevalence of space and electrical constraints. See **Appendix C**.

[28] https://www.cslb.ca.gov/onlineservices/dataportal/ accessed October 2025.

[29] https://bayren-existing-buildings.mtcanalytics.org/

[30] Ibid.

- Laundry, dry cleaner and laundromat - estimates in the Bay Area are not available.

Overall, staff expect the annual number of exemptions granted to specialized business applications to be low as compared to other exemption pathways as described above.

Health Equity vs. Economic Equity Considerations

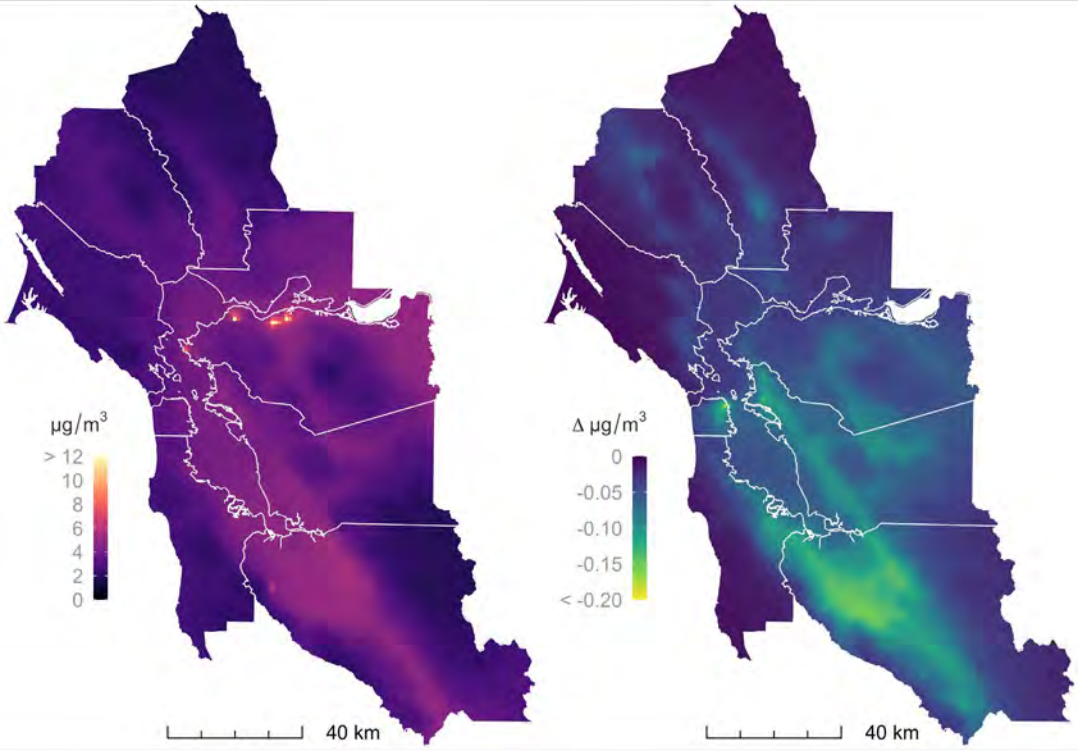
Staff considered both health equity and economic equity implications when evaluating future potential amendments to Rule 9-6. From a health equity perspective, the rule is intended to reduce NOx and $PM_{2.5}$ exposure, particularly in communities that have historically experienced higher pollution burdens. At the same time, staff evaluated potential economic impacts on low-income property owners and renters, including whether compliance costs could create financial hardship or housing instability. To address these considerations, the potential rule amendments incorporate targeted exemptions, phased implementation timelines, and other implementation safeguards intended to mitigate potential cost impacts and help preserve access to housing. **Table 8** below summarizes several of the key policy considerations staff evaluated in balancing these health and economic equity objectives.

Table 8. Equity Considerations

Health Equity
Reduced indoor and outdoor air pollution exposure
Health-protective technology standards
Protections for renters and occupants
Fewer exemptions to maximize health benefits
Prioritize reductions in overburdened communities
Faster reduction of NOx and $PM_{2.5}$ emissions
Economic Equity
Manage cost impacts for residents and businesses
Phased-in compliance timelines
Protections for landlords and property owners
Targeted exemptions to address barriers
Flexibility pathways for cost or technical constraints
Incentives, rebates, and market support programs

For the zero NOx amendments to Rules 9-4 and 9-6 in 2023, staff evaluated ambient air quality and health impacts from covered appliances. Staff estimated NOx and $PM_{2.5}$ emissions from these sources, as well as their contributions to levels of fine particulate matter exposures.[31] Approximately 60 percent of average $PM_{2.5}$ exposure in the Bay Area associated with the target appliances results from secondary formation driven by NOx emissions. In general, because secondary $PM_{2.5}$ formation requires time and atmospheric transport, exposure to secondary $PM_{2.5}$ occurs at a regional scale rather than near the original emission sources. As a result, certain homes or locations that may forgo local emission reductions due to an exemption would still benefit from region-wide improvements in exposure if the flexibility amendments were implemented. **Figure 2**, below, depicts the modeled annual average baseline concentrations and reductions of secondary particulate matter attributed to the elimination of emissions associated with appliances impacted by the 2023 zero NOx amendments to Rules 9-4 and 9-6, which accrue on a regional basis.

Figure 2. Baseline concentrations (left) and reductions (right) for secondary $PM_{2.5}$



[31] 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_appe_rg09040906-pdf.pdf?rev=d4b056153496491fad817c6d4a87df78&sc_lang=en

Staff believe that it is too speculative at this time to make assumptions about the locations at which property owners will choose to utilize a certified exemption for project constraints or low-income qualification as there are many factors that would impact this decision. As summarized above, up to 38 percent of small water heaters could be eligible for an exemption or extension of the compliance timeline. However, due to the regional benefit of reduction of secondary fine particulate matter exposure and the focus of Rule 9-6 on the reduction of nitrogen oxides, a precursor for secondary particulate matter, staff does not believe that the flexibility amendments discussed in this document will result in a significantly different disparity in health benefits in existing overburdened communities. Additionally, the exemption pathways are intentionally designed as one-time exemptions so that any disparity does not exist in perpetuity. Staff intend for outreach related materials and the exemption portal to point all projects, including low-income property owners, to available incentives to mitigate any remaining equity concerns.

With regards to renters, under the Air District's flexibility concepts, exemptions would be provided in scenarios requiring significant construction including space and/or electrical constraints. Landlords would *not* be required to install zero NOx water heaters in scenarios that align with "substantial repair" exemptions, thus greatly decreasing "renoviction" risks.

Since the remaining projects that would be required will be more standard, average-cost projects, the risk of major pass-through costs will also be reduced as a result.

Appendix A

Electrical Constraints

In most homes, some electrical work will be needed to switch to a HPWH from an older gas water heater. This can range from minor work (e.g., simply installing a short length of new electrical conduit or outlet), to major work resulting in significant time and cost (e.g., extensive rewiring, electrical panel upsizing and potential utility service upgrades).

A minimum of 44 percent of single-family homes in the Bay Area is estimated to have electric panels with 200 amps,[32] which is considered to be the modern standard, and could fully electrify without panel upsizing.

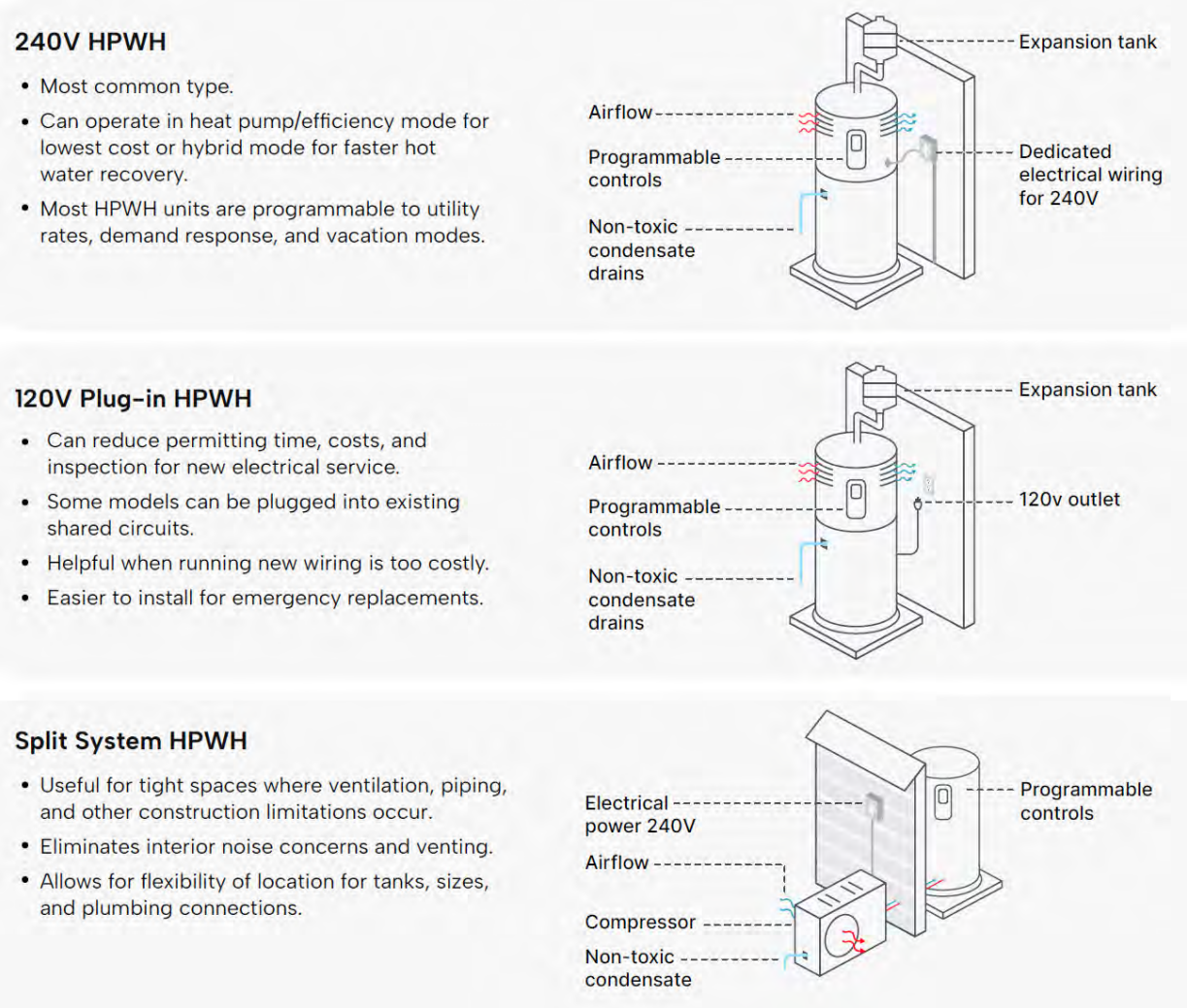
32 percent of single-family and 59 percent of multifamily homes in California have panels of intermediate size (100 amps for single-family, 60 amps for multi-family)[33] and will likely require "right-sizing", "watt diet" or panel optimization strategies (low-voltage appliances; circuit pausing/sharing; smart panels) to avoid panel and service upsizing in these homes. Newer 120-volt plug-in HPWHs (see **Figure 1A**) can also help mitigate the need for extensive electrical upgrades, particularly for smaller households with less hot water demand. For a small portion of homes, extensive electrical work likely cannot be avoided and would be especially costly, encompassing panel upsizing and in some cases, subsequent utility service upsizing. Statewide, 3 percent of single-family homes had panels smaller than 100 amps and 10 percent of multi-family homes had panels smaller than 60 amps (per dwelling unit) which will most likely require upsizing for electrification. In disadvantaged communities (DACs), the number of single-family homes with panels smaller than 100 amps is disproportionately higher at 8 percent.[34]

[32] NREL model, as described in Table 19. https://www.baaqmd.gov/~/media/files/community-health/building-appliance-implementation/task1_electrificationcosts-pdf.pdf?rev=3cb66a09f3094f94b35fa7fc90cfd4ec&sc_lang=en

[33] Fournier, Eric et al. *Quantifying the electric service panel capacities of California's residential buildings*. 2024. https://www.sciencedirect.com/science/article/pii/S0301421524002581

[34] Ibid.

Figure 1A. Heat Pump Water Heater (HPWH) configurations and wiring, siting and installation needs



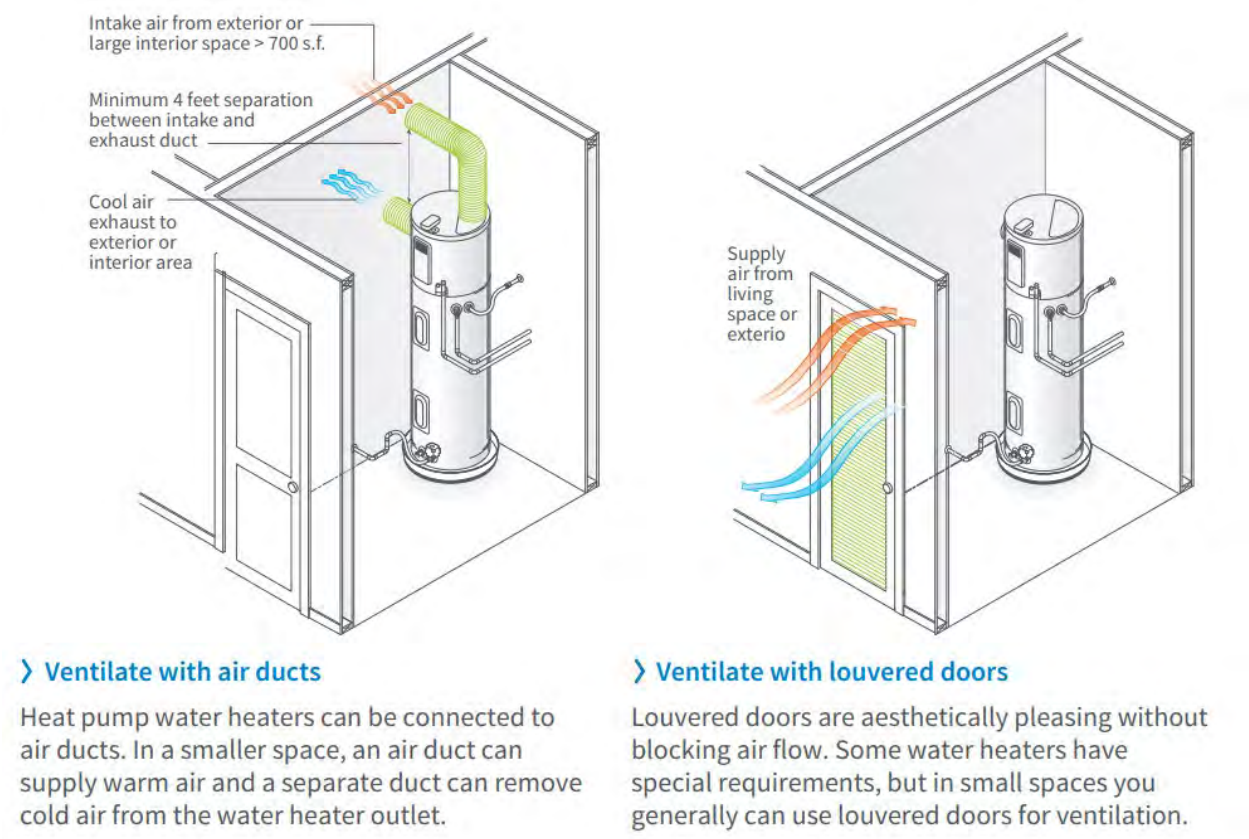
Space Constraints

HPWHs need adequate ventilation space as well as physical space (because of the integrated compressor unit, they are typically a bit taller than NOx-emitting units). Modifications to address space constraints range in costs.

Ventilation measures (air openings such as louvered doors, see **Figure 2A**) were mostly relatively low cost (average=$208 and max=$1,701) according to Palo Alto HPWH program

data.[35] Lower costs for these measures are also dependent upon having adequate ventilation space in the adjoining room or access to an outdoor wall.

Figure 2A. Ways to circulate more air[36]



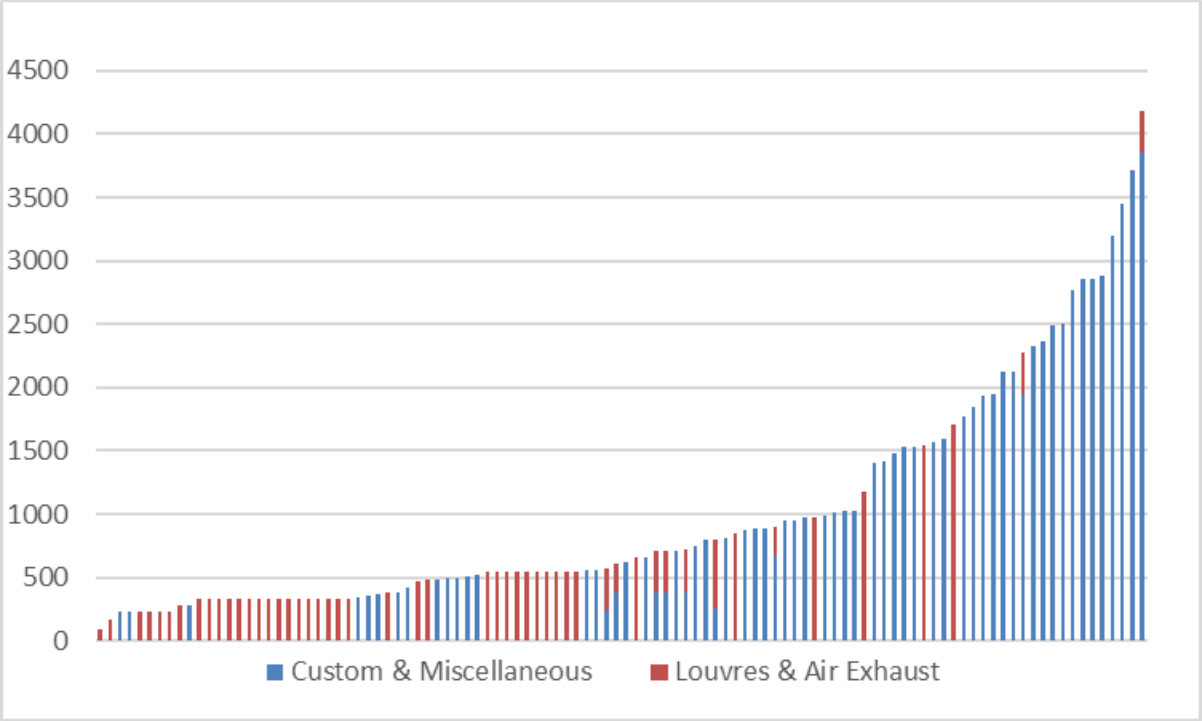
HPWHs, due to their slower recharge times, are typically upsized approximately 10-15 gallons compared to a gas water heater; these larger tanks, in addition to the integrated compressor, can lead to lack of physical space for the new HPWH if the existing location is a utility closet, a basement space with low ceilings, etc. Space reconfiguration or relocating the water heater can cause significant costs (average= $1,287 and max= $4,540), according to Palo Alto HPWH program data, as seen below in **Figure 3A.** Program data as illustrated in the **Figure 3A** bar chart shows that for individual projects, ventilation measures (red bars) were generally less expensive to add (<$1,000) compared to space reconfiguration and carpentry measures (blue bars). Bars showing both red and blue

[35] Data provided by Palo Alto Utilities staff, September 2024. Note that the Palo Alto program is one of the few programs documenting detailed measures such as ventilation or carpentry measures, with hundreds of projects.

[36] https://library.peninsulacleanenergy.com/m/c76176ab7d47195/original/Heat-Pump-Water-Heater-Space-and-Air-Guidance.pdf

represent projects and costs that deployed both ventilation measures and space reconfiguration or carpentry measures.

Figure 3A. Palo Alto HPWH Program: Additional Space Constraint Costs ($) for Space Reconfiguration, Carpentry, and Ventilation Measures[37]



HPWH solutions for small spaces are emerging. Split-system HPWHs offer an unattached, outside condenser/heat pump (see **Figure 1A**) but there are fewer and less common market options.

[37] Data provided by Palo Alto Utilities staff, September 2024. Note that the Palo Alto program is one of the few programs documenting detailed measures with hundreds of projects.

Appendix B

References for Income Qualified Calculations

For 2025 values of 250 percent Federal Poverty Guidelines for each household size:
https://aspe.hhs.gov/sites/default/files/documents/dd73d4f00d8a819d10b2fdb70d254f7b/detailed-guidelines-2025.pdf

For 2023 5-year American Community Service Tables:

B25009 - tenure by household size for owner and renter occupied homes - use owner occupied:
https://data.census.gov/table/ACSDT5Y2023.B25009?g=050XX00US06001$1400000,06013$1400000,06041$1400000,06055$1400000,06075$1400000,06081$1400000,06085$1400000,06095$1400000,06097$1400000

B25118 - number of households in different income bins for owner- and renter-occupied homes - used owner-occupied housing units: Tenure by Household Income in the Past 12 Months (in 2023 Inflation-Adjusted Dollars):
https://data.census.gov/table/ACSDT5Y2023.B25118?q=California+Income+and+Poverty&t=Owner/Renter+(Householder)+Characteristics&g=050XX00US06001,06013,06041,06055,06075,06081,06085,06095,06097&y=2023

For Area Median Income (AMI) for each county and household size:
https://www.hcd.ca.gov/sites/default/files/docs/grants-and-funding/income-limits-2023.pdf

Appendix C

Sources for Project Constraint Estimates

Program/ Source	Geographic Scope	Constraint	Prevalence
Palo Alto	Palo Alto	Space, electrical, drainage measures >$1500 per project	15%
TECH / NBI 120V HPWH study	Statewide	Space constraint. (Note: program did not use any space ventilation measures e.g. louvered doors)	28%
UCLA *Quantifying the electric service panel capacities of California's residential buildings.*	Statewide	Electrical	3% SF, 10% MF
BayREN Home Energy Score Audits (included water heater location information)	Santa Clara Co.	Space: interior utility closets (some basements may also be constrained)	4% interior closet, 20% Basement

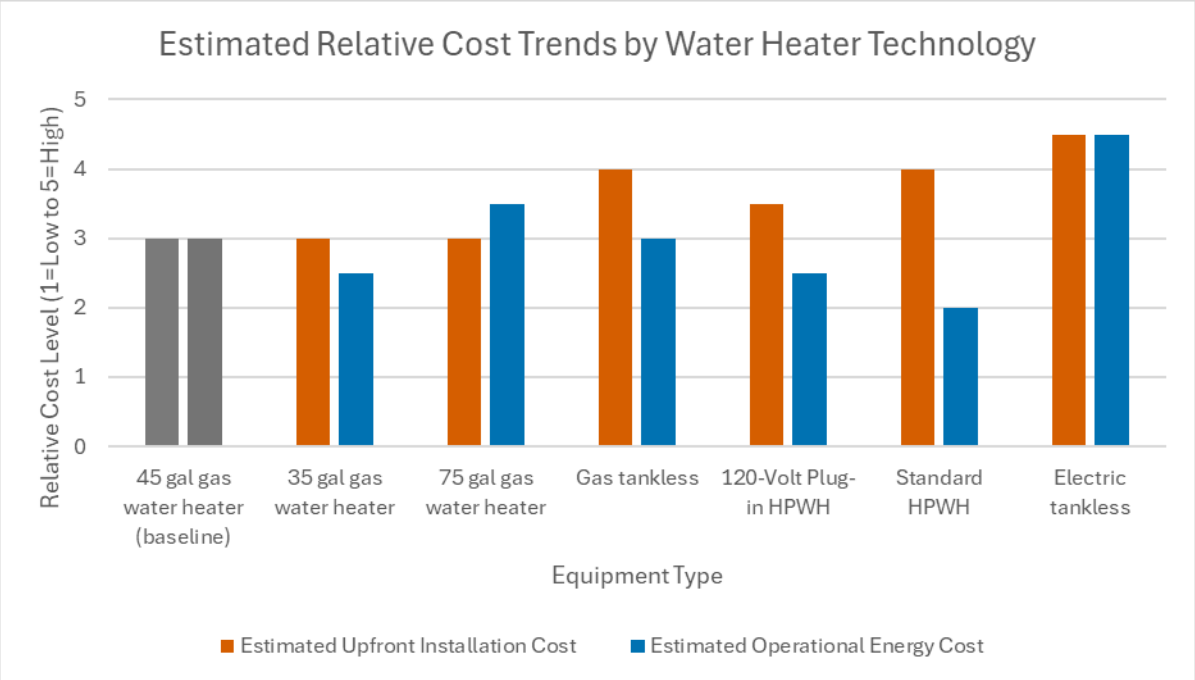
Appendix D

Average Estimated Upfront and Incremental Costs

The costs presented below are general estimations and are not meant to represent exact costs for any specific project or installation. Actual costs will vary based on site conditions, equipment size, and installation requirements.

Unit Type	Upfront Installation Cost	Long-Term Energy Cost
35-gal gas water heat	Moderate	Moderate-low
75-gal gas water heater	Moderate	Moderate-high
Gas tankless	Moderate-high	Moderate
120-volt Plug-in HPWH	Moderate-high	Moderate-low
Standard HPWH	Moderate-high	Low-moderate
Electric tankless	High	High

Figure 4A Illustrative Relative Costs Trends by Water Heater Technology[38]



[38] *Adapted from ibid* 15; *values are illustrative and reflect staff interpretation of available data*

Bay Area Air District

Rule 9-6: Flexibility and Affordability Amendments for Zero NOx Water Heaters

Board of Directors Meeting

May 13, 2026

Jennifer Lam
Manager
Regulatory Development Division

Presentation Outline

I. Rule 9-6 Background and Overview
II. Need for Flexibilities
III. Summary of Potential 9-6 Amendments
IV. Common Questions and Concerns
V. Next Steps and Discussion

Recommended Action

Discuss and provide input on staff recommendations or alternative approaches.

Abbreviations

AMI: Area median income

BTU/hr: British thermal units per hour; measure of heat energy

CARE: California Alternate Rates for Energy

CEC: California Energy Commission

CEQA: California Environmental Quality Act

CPUC: California Public Utilities Commission

FERA: Family Electric Rate Assistance Program

HPWH: Heat pump water heater

M: Million

NOx: Nitrogen Oxides

PG&E: Pacific Gas and Electric

PM: Particulate matter

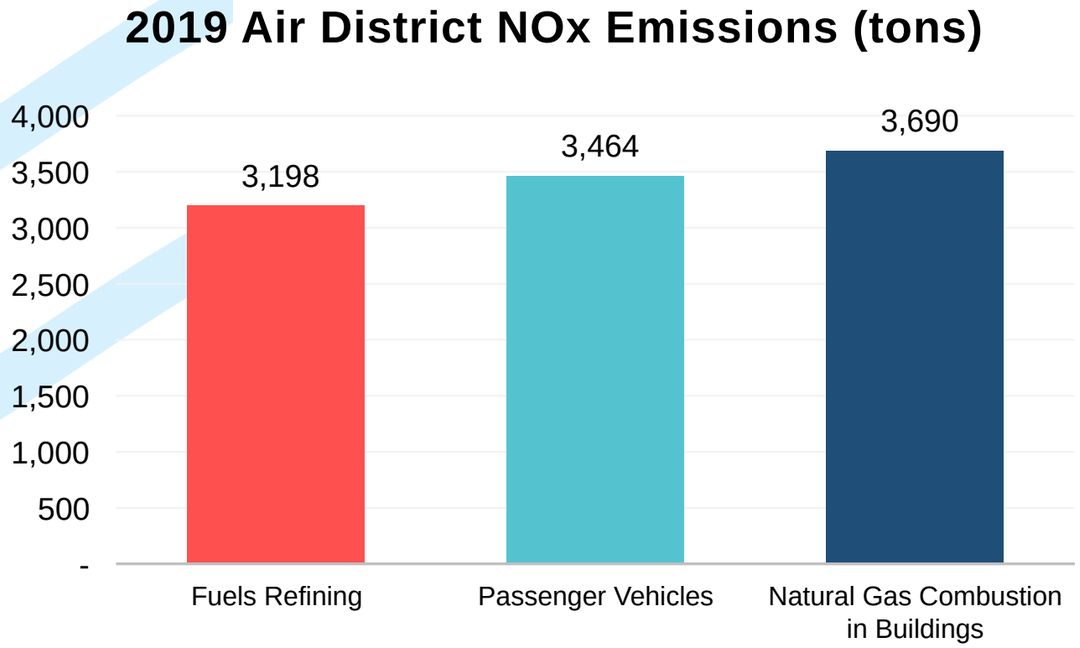
$PM_{2.5}$: Fine particulate matter

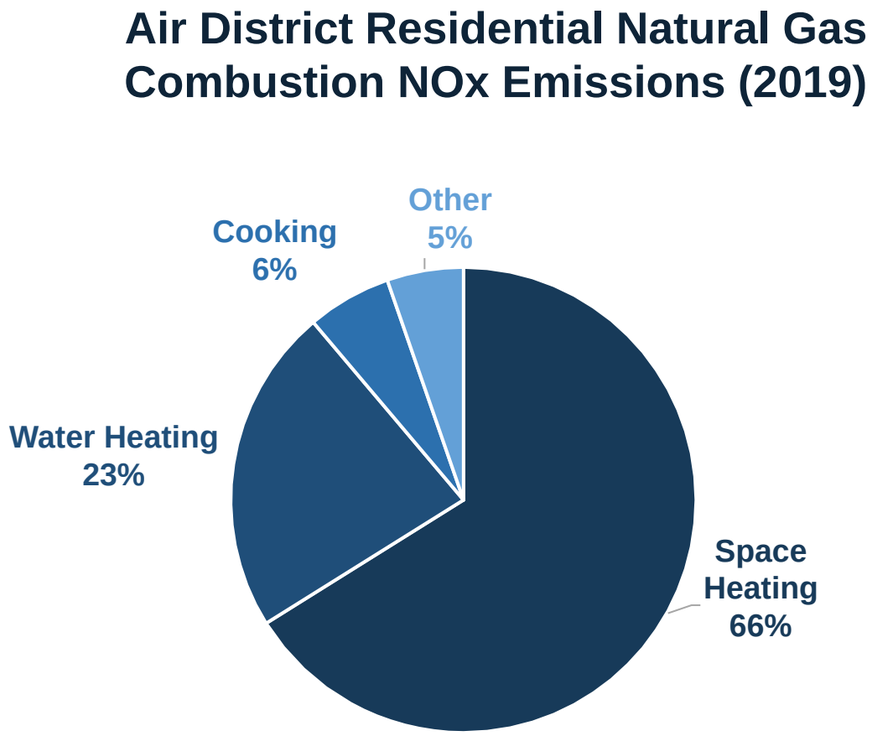
WIC: Women, Infants and Children (supplemental nutrition program)

Bay Area Air District

Part I. **Why did Air District Board of Directors adopt zero NOx standards for furnaces and water heaters?**

NOx Emissions from Buildings





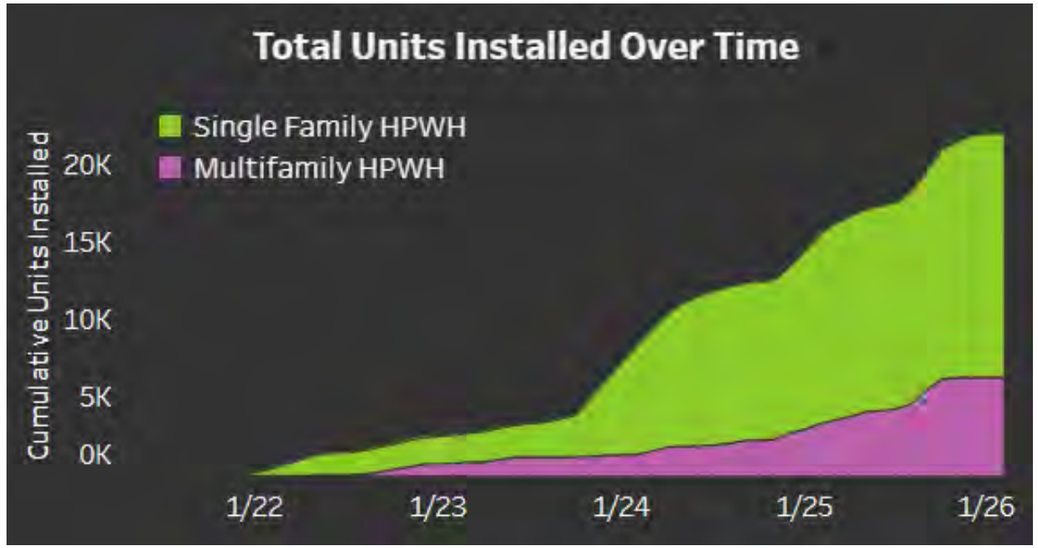
Major Health Benefits from Rules 9-4 and 9-6

These appliance rules help improve regional air quality by reducing pollution from furnaces and water heaters.	**Cleaner outdoor air** Less NOx and $PM_{2.5}$ from venting 
Lower pollution means lower exposure to fine particles ($PM_{2.5}$).	**Cleaner Bay Area communities** Biggest $PM_{2.5}$ reductions in communities of color and overburdened neighborhoods 
Reducing $PM_{2.5}$ and NOx exposure can prevent dozens of early deaths every year in the Bay Area.	**Up to 85 early deaths avoided** each year from cleaner air 
Health improvements from cleaner air avert unnecessary costs from health impacts.	**Up to $890M** Annual health benefits saved in avoided illnesses, hospital visits, and early deaths 

Zero NOx Water Heater Technology is Widely Available

- Diverse technology options available for installation

- 20,000+ units installed in the Bay Area and growing



Source: TECH Public Reporting Heat Pump Data Visuals

Zero NOx Standards – 2023 Amendments

- NOx standards within Rule 9-4 (furnaces) and Rule 9-6 (water heaters) have been in place for almost four decades
- Standards have **gradual phase-in:** all new sales or installations of units manufactured after compliance dates

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

- Staff update to the Board due two years prior to each compliance date

Implementation Working Group Phase 1 Small Water Heaters

Technical Readiness

Equitable Transition

40+ members

- Environmental Justice and Community-Based Organizations
- Subject Matter Experts on Energy, Buildings, and Technology
- Regional/Local Government and State Agencies
- Labor and Trade Organizations
- Utilities and Community Choice Aggregators

Meetings

- 6 Public Plenary
- 5 Steering Committee
- 5 Technical Subcommittee
- 5 Equity Subcommittee

Board and Committee Timeline

Date	Venue	Summary
March 15, 2023	Board of Directors	Adoption of zero NOx amendments to Rules 9-4 & 9-6 Board directed staff to come back with a Rule 9-6 implementation report in 2024
December 4, 2024	Board of Directors	Informational report on staff's research and a summary of IWG findings for Rule 9-6 implementation
October 24, 2025	Public Comment Period	Public Release of Rule 9-6 Concepts Paper (flexibility options) informed by Phase I of the IWG
December 10, 2025	Stationary Source Committee	Presentation on potential flexibility amendments based on affordability and availability issues for Rule 9-6 Committee directed staff to come back with information on possible exemptions for low-income property owners
February 11, 2026	Stationary Source Committee	Presentation on the definition of "low-income" including considerations for housing cost burden and how much it costs to help low-income households switch to zero NOx water heaters Committee directed staff to return in May 2026 with a full set of proposed changes so the full Board can give clear directions on how to proceed with the rule

Release of the Regulatory Overview

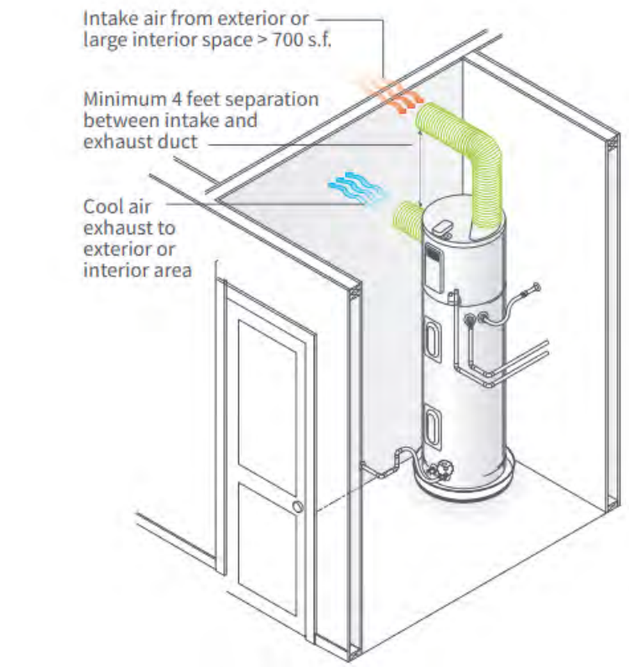
- Highlights steps taken since the adoption of the 2023 amendments to Rule 9-6
- Additional background information and details on flexibility and affordability amendments
- Released April 13, 2026

Bay Area Air District

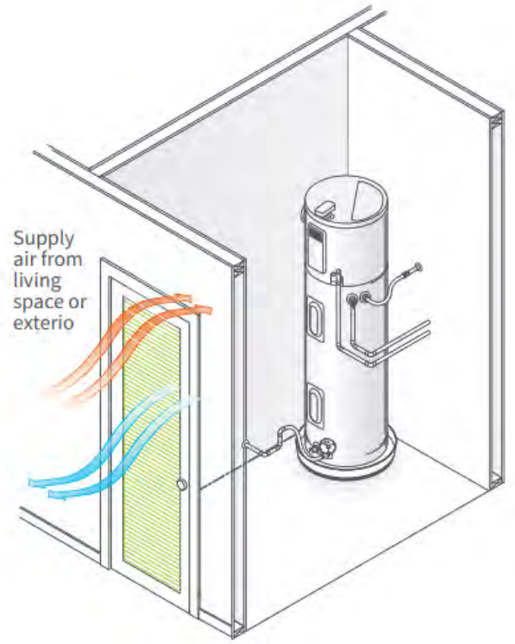
Part II. **Why do Rule 9-6 zero NOx standards for water heaters need flexibilities?**

Space Constraints

- HPWHs take up more space
  - *confined spaces (e.g. closets) may not physically fit the larger HPWH*
- HPWHs need sufficient air to pull heat from; most manufacturers recommend at least 700 ft³ of space
  - *some installs can use venting measures to allow installs in smaller spaces*
- Smaller HPWH technology still under development



› Ventilate with air ducts



› Ventilate with louvered doors

Source: www.peninsulacleanenergy.com

Electrical Constraints

- In some cases, complex electrical work and panel and utility service upsizing can result in higher installation costs and long timelines
  - 120-volt plug-in HPWHs can help for some homes

- “Watt diet” or panel optimization strategies could be deployed in 32% of single-family homes and 59% of multi-family homes in California to avoid panel and service upsizing

Source: Granger.com

Costs Associated with Implementation

Zero NOx Average Additional (Incremental) Costs:

- Approximately $3,500 *($600-$1,600 additional retail cost for equipment, plus installation)*
- Rebates where available will offset some incremental costs
- Operational cost savings may offset some upfront incremental costs over time
- Median incremental costs are similar to the average

Incremental Costs
~$3,500

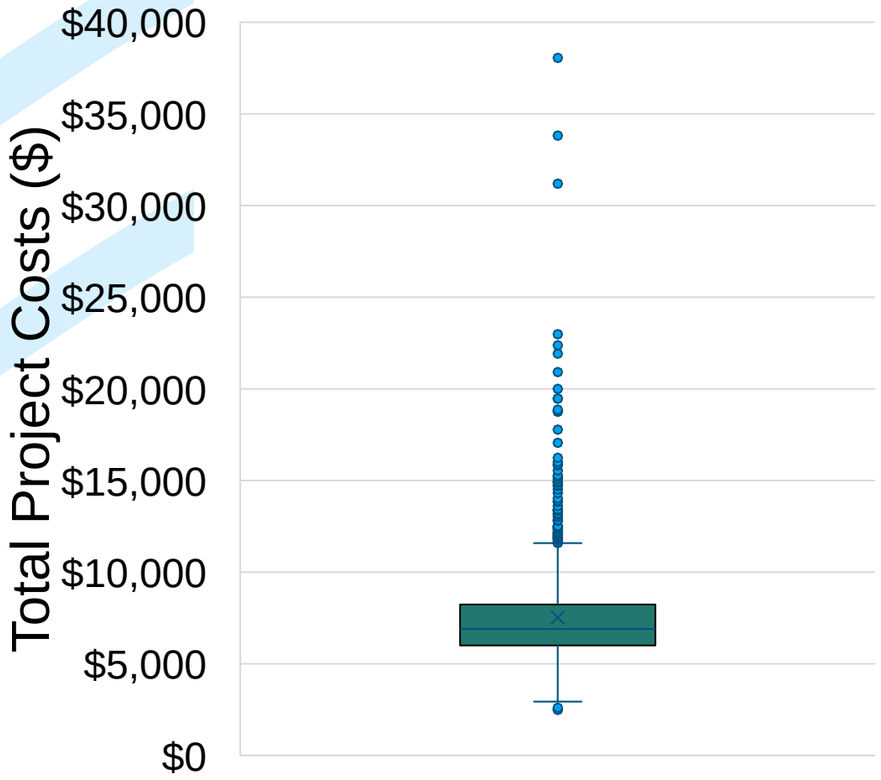
=

Zero NOx equipment and install costs
~$7,000

−

NOx Emitting equipment and install costs
~$3,500

Cost Distribution of Replacement Projects

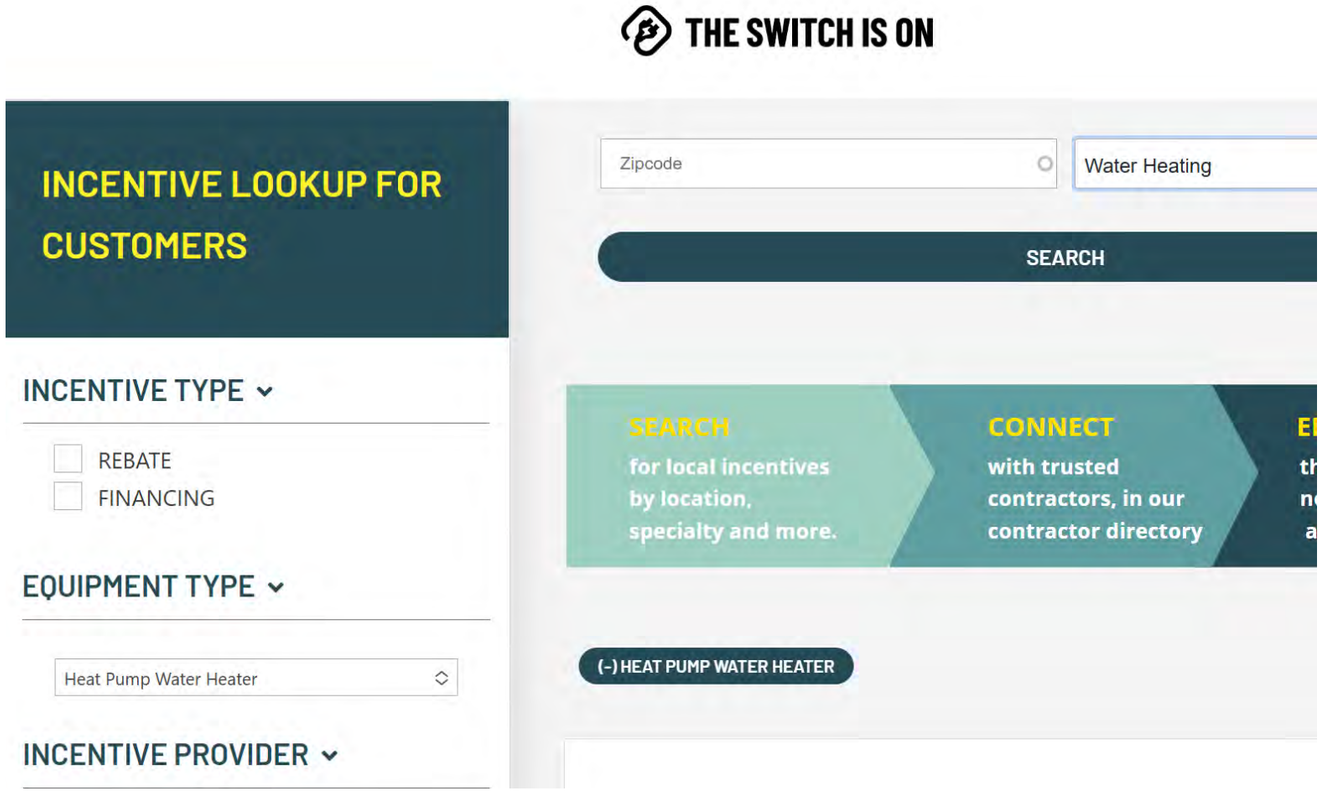


Source: Appendix A of Staff Report: Informational Update on Rule 9-6 & TECH Clean CA December 2023

- Majority of ~4,000 Bay Area HPWH projects evaluated were close to the median and average of ~$7,000 for total equipment and install costs
- Program data showed some outliers and high-cost projects due to:
  - Electrical upgrades
  - Water heater relocation

Incentive Availability

- Federal, State and local incentives are currently available
- Not enough current funding to cover incremental costs for all Bay Area low-income homes beyond the next few years



Source: www.switchison.org

Bay Area Air District

Part III. **What are the proposed flexibility exemptions?**

Objectives of Exemptions

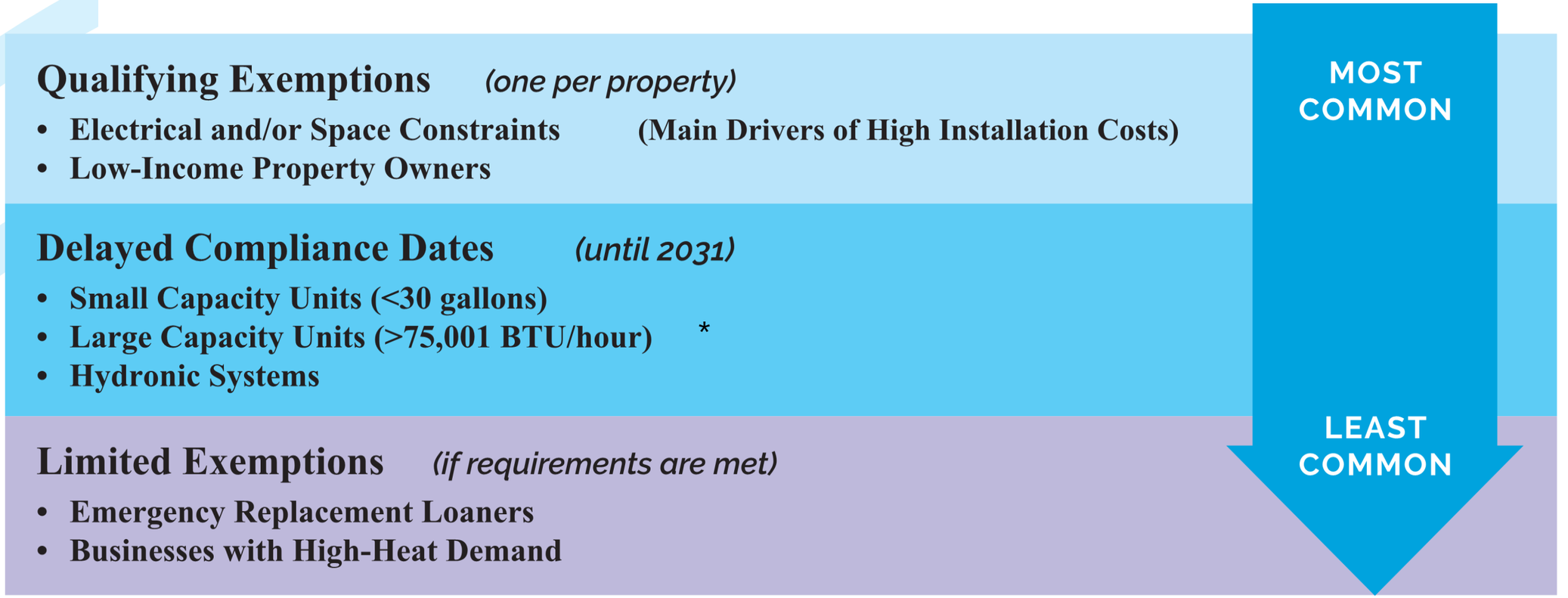
1. Address **affordability** and the **drivers** of high cost

2. **Simple** and **automated** process

3. Continued sales for equipment lacking zero NOx options

Source: istockphoto.com

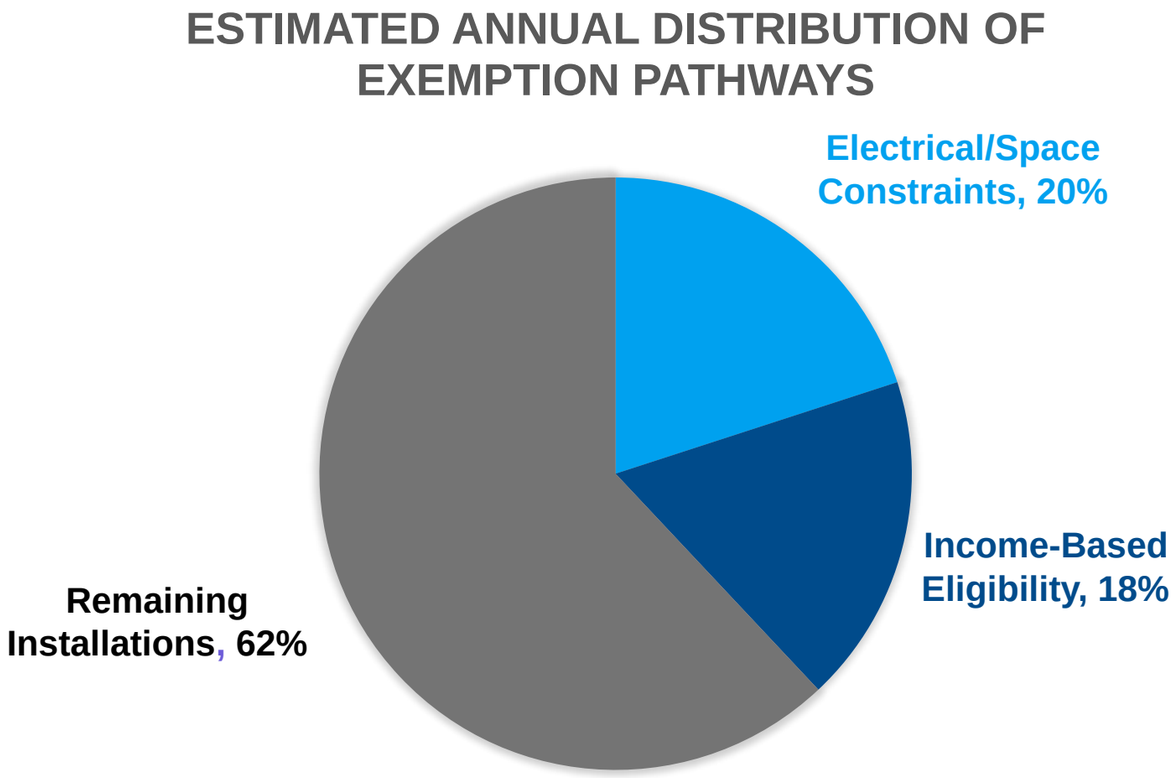
Categories for Rule 9-6 Compliance



*Note: Large capacity unit compliance date is existing requirement, not planned change

Total Estimated Exemptions

- Staff estimate up to 38% of water heater installations would qualify for exemptions



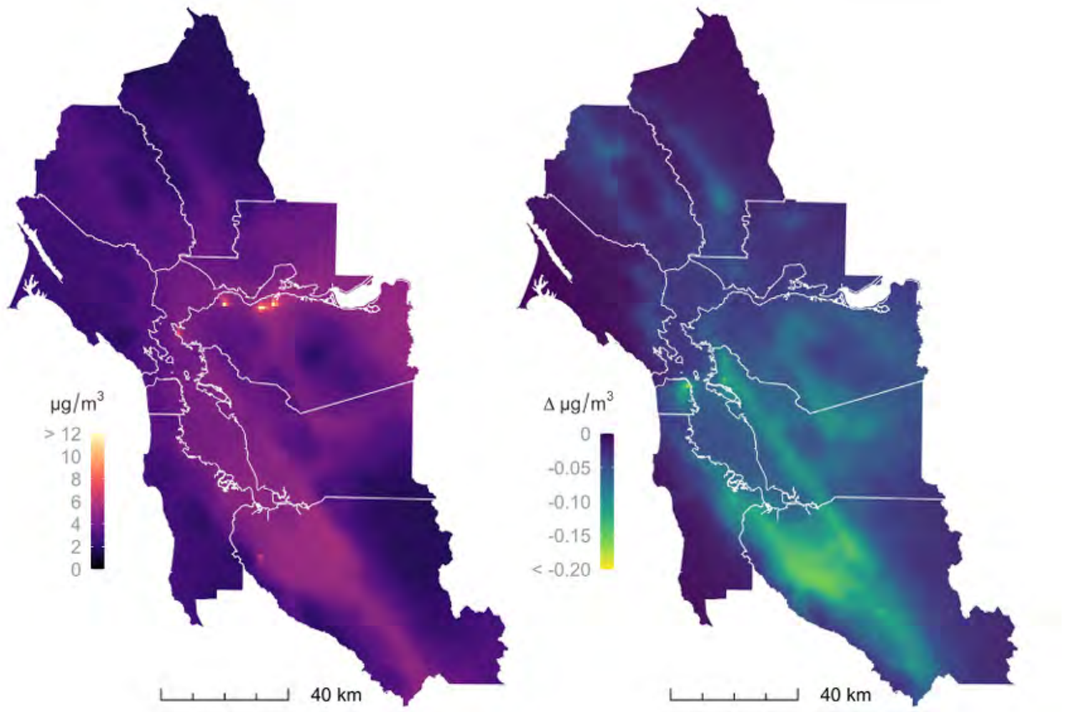
Project Cost Impacts

- Remaining projects will be “standard” installs
  - Incremental costs expected to remain ~$3,500
- Majority of project costs due to extra labor required (new electrical and drain lines; cap gas line; etc.)

Source: www.istockphoto.com

Public Health Impacts

- Exemption locations are uncertain at this time
- Maintains regional benefit due to the reduction on $PM_{2.5}$
- Emissions reductions will take longer to achieve due to exemptions



Baseline concentrations (left) and reductions (right) for secondary PM2.5 (Source: 2023 Rule 9-6 Staff Report)

Low-Income Qualified Property Owner

Defined as:

- Property owners that are either low-income program participants (250% Federal Poverty Guidelines) OR
- Housing cost burdened (annual mortgage and property taxes ≥28% of gross income).

Pros:

- Streamlines determination and customer experience (no annual county- or household-specific income thresholds)
- Provides relief for potential affordability issue
- Aligns with programs e.g. FERA, CARE, WIC

Cons:

- Other designations e.g. 80% AMI more typically used by some HPWH incentive programs

Project Specific Exemptions Require Contractor

Pros: Contractors will:

- Have knowledge needed to accurately evaluate technical options
- Be more capable of staying up-to-date on growing technology landscape

Cons:

- May increase time and costs for property owners who may normally self-install

Source: *istockphoto.com*

One-time Exemption Per Project Address

Pro:

- Provides building owner ~13 years to prepare for zero NOx installation for next water heater, starting from 2027

Con:

- May still have high costs upon future installation

Source: istockphoto.com

Processing Fee for Exemptions

- No processing fee for low-income exemptions, only for project-specific exemptions
- Consideration of increased fee to fund low-income rebates

Cost recovery:

Annual Implementation Expenses
~$3 million

÷

Expected Annual Project Specific Exemptions
~24,000

=

Processing Fee
$125

Delay to October 1, 2027 Effective Date

Pros: Provides time for:

- Development and testing of exemption system
- Better alignment with retailers, manufacturers, distributors & contractors
- Increased training of staff & participating stakeholders
- More property owner outreach

Cons:

- Emissions benefits deferred 9 months

Bay Area Air District

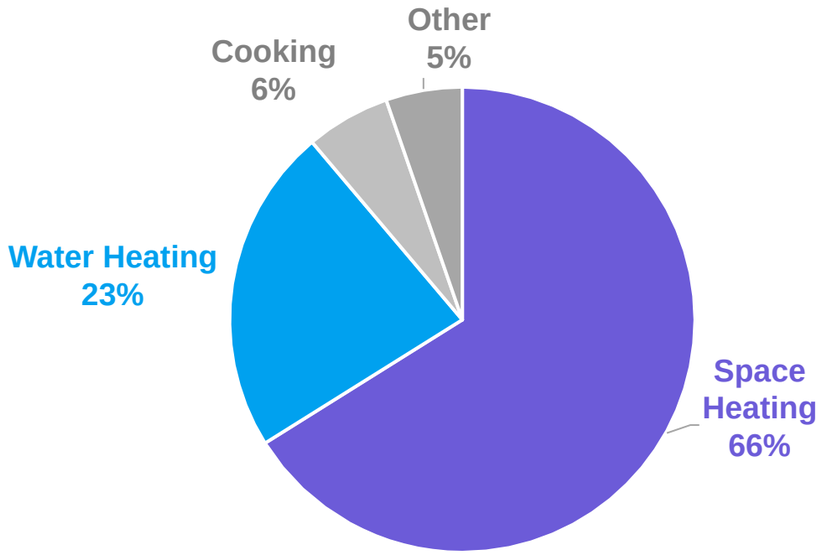
Part IV. **Common Questions and Concerns**

Stoves or Whole Home Electrification?

Rules 9-4 and 9-6:

- DO NOT require immediate replacement of working appliances
- DO NOT affect stoves, clothes dryers, fireplaces, or any other gas appliance
- DO NOT require whole home electrification or discontinuing gas service
- DO focus on reducing NOx emissions that impact regional air quality

Air District Residential Natural Gas Combustion NOx Emissions (2019)



Socioeconomic Impacts?

- The Air District completed an extensive review of the socioeconomic, environmental, and electric grid impacts of the rules in 2022, including:

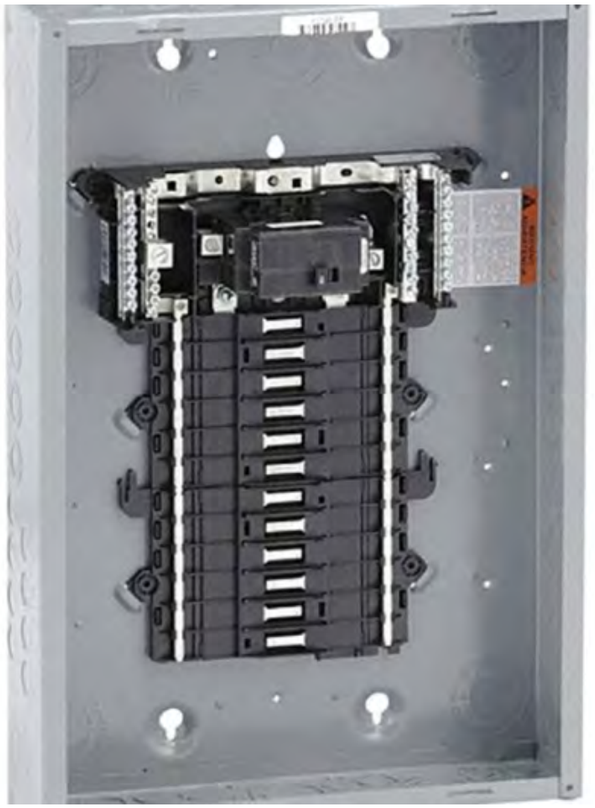
Direct impacts of increased compliance costs	Potential equity impacts at the household level	Potential shifts in consumer spending and job losses	Impacts to electric grid capacity, reliability and related costs	Air District costs to implement the proposals

- Stakeholders consider this analysis to be a good model for enhanced regulatory analyses going forward
- We will update this analysis with new information for the affordability amendments

High Expense to Property Owners?

- Exemptions for space and electrical constraints are designed to avoid situations that would result in high-cost installations
  - The incremental cost is a one-time cost of $3,500
  - Existing incentives and rebates will bring that cost down, especially for low-income property owners
- The low-income exemption is designed to help property owners who cannot afford these costs, even with available incentives
- Remaining non-exempted installations will be low or moderate cost and for those who can better afford it
- The health benefits from these one-time upgrades last forever

Panel and Service Upsizing?

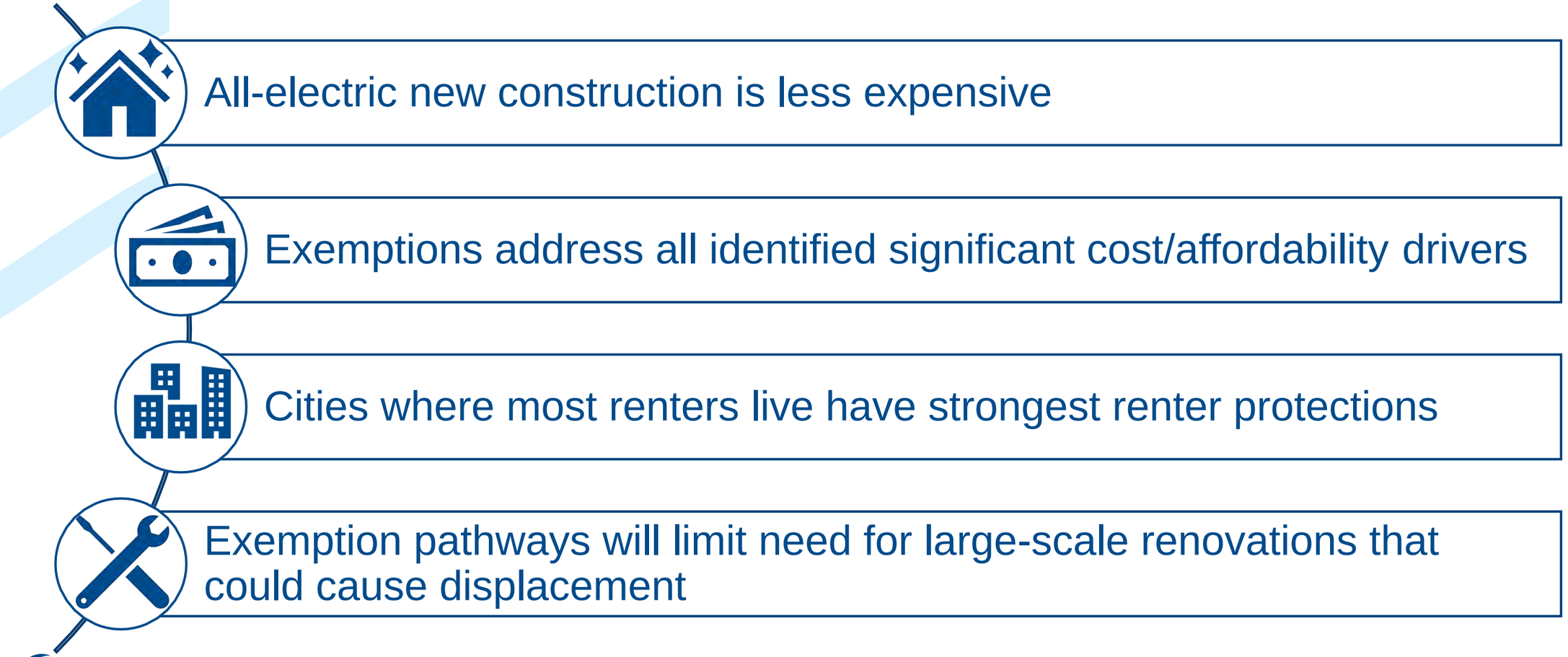


Source: Granger.com

Requirements for Contractor Certified Exemption for Electrical Constraints:

- The home/building has knob-and-tube wiring.
- The electrical panel is <100 amps (single-family) or <60 amps (multi-family)
- The electrical panel does not have enough circuit or breaker space
- New 240v connection requires more than 50 feet of wiring/conduit
- Utility service upsizing is needed

Housing Costs and Displacement Impacts?



Equity Concerns with Low-Income Exemption?

Property Owners

- The exemption only applies to property owners; there will still be substantial conversion to clean equipment in overburdened communities

Regional Benefit

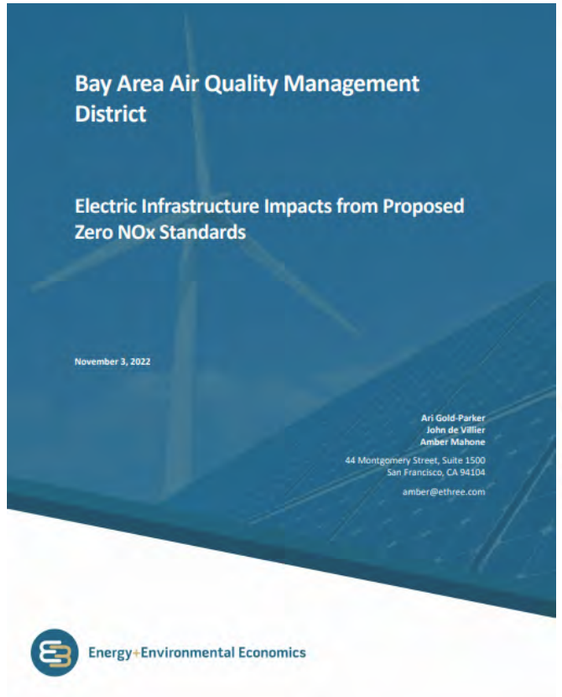
- A large part of the health benefit from the rule is from NOx that converts to PM over time; these health benefits accrue regionally

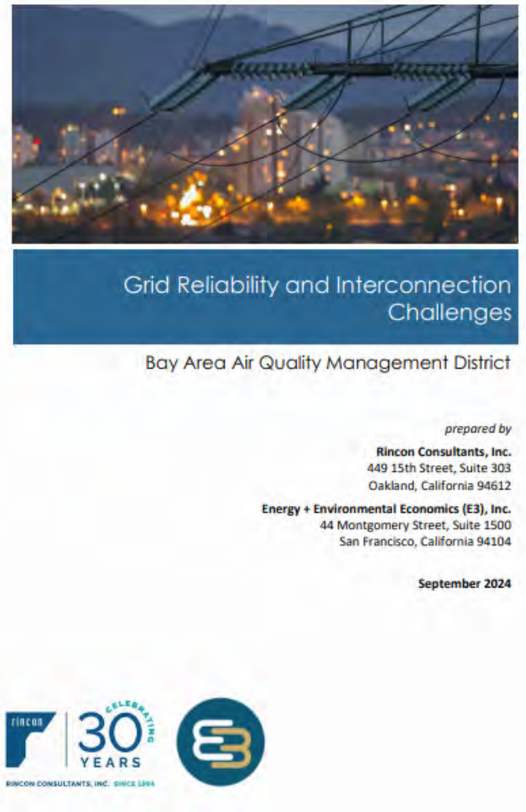
Rebate Availability

- Low-income households have greater access to rebates, and so many may not need to use the exemption. The exemption website will connect them with personalized information about available funding. We will continue to advocate for more rebate funding, especially for low-income property owners

Electric Grid Readiness and Reliability?

- CEC, CPUC and PG&E have accounted for added electric loads in their planning processes
- Appliance replacements will phase in over time
- HPWHs can store hot water and energy for several hours
- Like HPWHs, many new gas water heaters require electricity to operate
- Most outages are short-term and caused by weather disturbances





Major Health Benefits from Rules 9-4 and 9-6

These appliance rules help improve regional air quality by reducing pollution from furnaces and water heaters.

Cleaner outdoor air

Less NOx and $PM_{2.5}$ from venting

Lower pollution means lower exposure to fine particles ($PM_{2.5}$).

Cleaner Bay Area communities

Biggest $PM_{2.5}$ reductions in communities of color and overburdened neighborhoods

Reducing $PM_{2.5}$ and NOx exposure can prevent dozens of early deaths every year in the Bay Area.

Up to 85 early deaths avoided

each year from cleaner air

Health improvements from cleaner air avert unnecessary costs from health impacts.

Up to $890M

Annual health benefits saved in avoided illnesses, hospital visits, and early deaths

Bay Area Air District

Part V. **Next Steps and Discussion**

Public Awareness Campaign Overview

- Campaign to increase awareness of the health impacts of NOx-emitting appliances, benefits of zero NOx alternatives, and key steps for replacement
- Multi-channel outreach: contractors, municipalities, media, property owners, small businesses, social media, and local advertising
- Baseline and tracking surveys to measure awareness of zero NOx appliances and Building Appliance Rules

Public Awareness Campaign Timeline

Multi-phase communications plan to educate and engage all audiences

Phase I – Now through fall

- Develop clear, audience-specific messaging focused on benefits of switching to zero NOx appliances
- Conduct baseline awareness survey (April–June)
- Launch media, contractor, and social outreach

Phase II – Fall through early 2027 (post-Board action)

- Launch local advertising campaign
- Expand outreach, including door-to-door, with clear timelines and calls to action

Phase III – 2027 and beyond

- Continuation of advertising, public relations, stakeholder, and social media outreach

Immediate Next Steps

Board Meeting for Vote October 2026 *(targeted)*

In advance, Staff will release:

- Proposed Rule Language
- Staff Report
- Updated CEQA Analysis
- Updated Socioeconomic Impacts Report

} **As compared to 2023 amendments**

Summary of Key Recommendations

Discuss and provide input on staff recommendations:

- Low-income exemption based on participation in income-qualified program or housing cost burden
- Project-specific exemptions requiring contractor participation
- One project-specific exemption per address
- Assess a moderate processing fee for project-specific exemptions to recover costs of the program
- Provide for a 9-month delay to develop exemption process and conduct outreach

Conclusion

For more information:

https://www.baaqmd.gov/building-appliances