BOARD OF DIRECTORS
Stationary Source Committee
September 9, 2026

COMMITTEE MEMBERS

KEN CARLSON – CHAIR
DIONNE ADAMS
LYNDA HOPKINS
OTTO LEE
RAY MUELLER
STEVE YOUNG

JOHN GIOIA – VICE CHAIR
DAVID HAUBERT
TYRONE JUE
RICO MEDINA
GABE QUINTO

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

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

Office of Santa Clara County
70 W. Hedding St
10th Floor Conference Room
San Jose, CA 95110

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

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

THE FOLLOWING STREAMING OPTIONS WILL ALSO BE PROVIDED

These streaming options are provided for the public's convenience. In the event that streaming connections malfunction for any reason, the Stationary Source Committee may continue with the meeting without remote webcast and/or Zoom access in accordance with the Air District's Broadcast Technology Disruption Policy.

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/87888568465
or may join Zoom by phone by dialing (669) 900-6833 or (408) 638-0968.
The Webinar ID for this meeting is:
878 8856 8465

PUBLIC COMMENT ON AGENDA ITEMS

The public may comment on each item on the agenda as the item is taken up. Members of the public who wish to speak on a matter on the agenda will have two minutes each to address the Committee on that agenda item, unless a different time limit is established by the Chair. No speaker who has already spoken on an item will be entitled to speak to that item again.

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

STATIONARY SOURCE COMMITTEE
MEETING AGENDA

WEDNESDAY, SEPTEMBER 9, 2026
10:00 AM

Chairperson, Ken Carlson

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

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

2. **Pledge of Allegiance**

3. **Public Comment on Non-Agenda Matters**

   Pursuant to Government Code Section 54954.3, members of the public who wish to speak on matters not on the agenda will be given an opportunity to address the Committee. Members of the public will have two minutes each to address the Committee, unless a different time limit is established by the Chair. If public comment lasts more than 30 minutes, this item may be continued to later in the meeting. Any person who has not had an opportunity to speak on matters not on the agenda may provide their comment at that time.

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

<u>CONSENT CALENDAR (Item 4)</u>

The Consent Calendar consists of routine items that may be approved together as a group by one action of the Committee. Any Committee member or member of the public may request that an item be removed and considered separately.

4. Approval of the Draft Minutes of the Stationary Source Committee Meeting of July 8, 2026

The Committee will consider approving the Draft Minutes of the Stationary Source Committee Meeting of July 8, 2026.

INFORMATIONAL ITEM(S)

5. State and Regional Efforts to Advance the Equitable Transition to Clean Appliances

The Committee will consider and discuss an overview of regional efforts to support an equitable transition to clean electric building appliances, which will highlight programs, partnerships and other initiatives being offered from key entities such as Bay Area Regional Energy Network, Pacific Gas & Electric Company, community choice energy providers, municipal utilities, and local and state government. This item will be presented by Richard Chien, Manager in the Planning and Climate Protection Division. Additionally, two special guest speakers, Jane Elias, Manager of Energy Programs with Metropolitan Transportation Commission/Association of Bay Area Governments and Director of Bay Area Regional Energy Network, and Nik Kaestner, Senior Building Decarbonization Coordinator with the San Francisco Environment Department, will deliver remarks to provide additional context after the presentation.

6. Permitting Research & Development: Unlocking Innovation

The Committee will discuss the landscape of permitting pathways that support research and development projects at stationary sources. The presentation reviews the Air District tools available today, compares objective and time-limited approaches used by peer permitting agencies, and identifies considerations for supporting innovation while maintaining specific, time-limited, and enforceable air-quality protections. This item will be presented by Kelly Crawford, Deputy Executive Officer of Engineering and Compliance.

OTHER BUSINESS

7. Committee Member Comments

Any member of the Committee, 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)

8. Time and Place of Next Meeting

Wednesday, October 14, 2026, at 10:00 a.m. The meeting will be held in-person at the Bay Area Metro Center and at satellite locations as may be specified on the meeting agenda using a remote teleconferencing link. Members of the Stationary Source Committee and the public may attend at any of those in-person locations, and members of the public may also attend virtually via webcast.

9. Adjournment

The Committee meeting shall be adjourned by the Chair.

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

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

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

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

Questions regarding this Policy should be directed to the Air District's Non-Discrimination Coordinator, 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

SEPTEMBER 2026

TYPE OF MEETING	DAY	DATE	TIME	ROOM
Board of Directors Stationary Source Committee	Wednesday	9	10:00 a.m.	1st Floor, Yerba Buena Room
Board of Directors Community Equity, Health, and Justice Committee	Wednesday	9	1:00 p.m.	1st Floor, Yerba Buena Room
Board of Directors Policy, Grants and Technology Committee	Wednesday	16	10:00 a.m.	1st Floor Board Room
Board of Directors Finance and Administration Committee CANCELLED	Wednesday	16	1:00 p.m.	1st Floor Board Room
Community Advisory Council	Thursday	17	6:00 pm.	1st Floor, Yerba Buena Room

OCTOBER 2026

TYPE OF MEETING	DAY	DATE	TIME	ROOM
Advisory Council	Monday	5	9:00 a.m.	1st Floor Board Room
Board of Directors Meeting	Wednesday	7	10:00 a.m.	1st Floor Board Room
Board of Directors Stationary Source Committee	Wednesday	14	10:00 a.m.	1st Floor, Yerba Buena Room
Board of Directors Community Equity, Health, and Justice Committee	Wednesday	14	1:00 p.m.	1st Floor, Yerba Buena Room
Board of Directors Policy, Grants and Technology Committee	Wednesday	21	10:00 a.m.	1st Floor Board Room
Board of Directors Finance and Administration Committee	Wednesday	21	1:00 p.m.	1st Floor Board Room
Community Advisory Council Retreat	Thursday	29	10:00 a.m.	Sheraton Sonoma Wine Country Petaluma Great Blue Heron Room 745 Baywood Dr. Petaluma, CA 94954

BAY AREA AIR DISTRICT
Memorandum

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

From: Philip M. Fine
Executive Officer/APCO

Date: September 9, 2026

Re: Approval of the Draft Minutes of the Stationary Source Committee Meeting of July 8, 2026

RECOMMENDED ACTION

Approve the Draft Minutes of the Stationary Source Committee Meeting of July 8, 2026.

BACKGROUND

None.

DISCUSSION

Attached for your review and approval are the Draft Minutes of the Stationary Source Committee Meeting of July 8, 2026.

BUDGET CONSIDERATION/FINANCIAL IMPACT

None.

Respectfully submitted,

Philip M. Fine
Executive Officer/APCO

Prepared by: Marcy Hiratzka
Reviewed by: Vanessa Johnson

ATTACHMENT(S):

1. Draft Minutes of the Stationary Source Committee Meeting of July 8, 2026

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

Stationary Source Committee Meeting
Wednesday, July 8, 2026

DRAFT MINUTES

This meeting was webcast, and a video recording is available on the website of the Bay Area Air District at
www.baaqmd.gov/bodagendas

CALL TO ORDER

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

   Roll Call:

   Present, In-Person (Bay Area Metro Center, 1st Floor Board Room, 375 Beale Street, San Francisco, CA 94105): Chairperson Ken Carlson; Vice Chairperson John Gioia; and Director Tyrone Jue.

   Present, In-Person Satellite Location: (Office of Contra Costa County Supervisor John Gioia Conference Room 11780 San Pablo Ave., Suite D El Cerrito, CA 94530): Directors Gabe Quinto and Steve Young.

   Present, In-Person Satellite Location: (Santa Rosa Junior College Campus, Doyle Library, Room 148, 1501 Mendocino Ave., Santa Rosa, CA, 95401): Director Lynda Hopkins.

   Present, In-Person Satellite Location: (City of San Bruno, 567 El Camino Real, Room 138, San Bruno, CA 94066): Director Rico E. Medina.

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

   Present, In-Person Satellite Location: (Office of Alameda County Supervisor David Haubert, Scott Haggerty House, 4501 Pleasanton Ave., Pleasanton, CA 94566): Director David Haubert.

   Absent: Directors Otto Lee and Ray Mueller.

2. **PLEDGE OF ALLEGIANCE**

CONSENT CALENDAR

3. APPROVAL OF THE DRAFT MINUTES OF THE STATIONARY SOURCE COMMITTEE MEETING OF JUNE 10, 2026

Public Comments

No requests received.

Committee Comments

None.

Committee Action

Vice Chair Gioia made a motion, seconded by Director Jue, to **approve** the Draft Minutes of the Stationary Source Committee meeting of June 10, 2026; and the motion **carried** by the following vote of the Committee:

AYES:	Adams, Carlson, Gioia, Haubert, Hopkins, Jue, Medina, Quinto, Young.
NOES:	None.
ABSTAIN:	None.
ABSENT:	Lee, Mueller.

ACTION ITEM

4. POLICY FOR SOCIOECONOMIC IMPACT ANALYSIS OF REGULATORY ACTIONS

Leonid Bak, Economist, gave the staff presentation *Policy for Socioeconomic Impact Analysis of Regulatory Actions,* including: recommended actions; purpose of the policy; what is a socioeconomic analysis; key policy elements; required socioeconomic analysis contents; enhanced socioeconomic analysis; summary of comments received; response to public comments; and recommended action.

Public Comments

Public comments were given by Tim Sbranti, Contra Costa Building & Construction Trades Council; Matt Regan, Public Policy for the Bay Area Council; Fernando Gaytan, Earthjustice; Jan Warren, Interfaith Climate Action Network of Contra Costa County; Meg Stern, East Bay Leadership Council; Tony Sirna, Evergreen Action; and Maureen Brennan, Rodeo resident.

Committee Comments

The Committee and staff discussed how the enhanced analysis framework of Rule 6-5 would be applied to rules with localized health impacts, including quantifying health benefits by race, ethnicity, geography, and other demographic factors alongside economic impacts; how unfunded mandates would be addressed under the proposed socioeconomic analysis framework and the associated cost analysis; consideration of existing regulatory burdens and

baseline costs, and the balance between the depth and timelines of socioeconomic analyses; how the proposed policy would apply to future regulatory actions; how the enhanced analysis framework would expand existing economic analyses, including the addition of demographic impact assessments; the proposed cost and benefit framework, and the importance of considering health, climate and equity benefits alongside employment impacts; economic opportunities for affected communities; evaluation of socioeconomic impacts by business type and size, including impacts on small businesses and the comparison of the proposed policy with the Air District's current socioeconomic analysis practices; employment impacts in the enhanced analysis framework, including evaluation of demographic impacts by race and ethnicity; the request to obtain employment data directly from regulated businesses to support socioeconomic analyses; broader economic impacts of business departures, including job losses, tax base reductions, increased demand for social services, and the need to capture these factors in socioeconomic analyses; the potential economic impacts of proposed regulation, including the importance of evaluating the costs associated with significant regulatory measures; the transparency of regulatory cost estimates; whether the methodologies and calculations supporting projected costs would be made available for peer review and independent evaluation by stakeholders; facilities that are not subject to Rule 6-5; factors that may influence business decisions and whether regulatory requirements may be one of several considerations; whether the Air District conducts retrospective analyses to compare projected regulatory impacts with actual outcomes in order to evaluate the accuracy of assumptions and improve future projections; the importance of expanding public awareness and participation in the Air District's regulatory process; the value of receiving input from a broad range of community members, in addition to organized stakeholders and industry representatives; acknowledgment of staff's work in developing the proposal and collaborating with stakeholders; incorporating enhanced analysis requirements into the regulatory process and whether such analyses could affect rulemaking timelines; whether additional analysis requirements would extend existing timelines; the importance of ensuring that localized community impacts are adequately considered in broader socioeconomic analyses; how the Air District's analysis process would account for specific local impacts and avoid having those impacts minimized or obscured when evaluating broader economic effects; the challenge of distinguishing the impacts of specific regulations from broader economic conditions and state policies; the importance of considering cumulative factors, including marker trends and policy changes, when evaluating the effects of regulations and determining the extent to which impacts can be attributed to individual regulatory actions; the role of broader state, federal and market factors in facility decisions and whether changes in feedstocks are refinery operations may be influenced by factors beyond local regulations; the importance of establishing a comprehensive baseline for analysis, including consideration of existing regulatory requirements and potential compliance costs; how the future of unrealized compliance costs from existing regulations would be accounted for in the baseline assessment; how pending permit applications and ongoing compliance efforts may be considered when evaluating the economic impacts of proposed regulations; factors that may contribute to business relocations and the economic impacts of manufacturing and refinery closures; and whether analyses have been conducted to evaluate the reasons for these relocations; the challenges of attributing business decisions to specific regulatory actions, and the fact that such decisions are often influenced by multiple factors; the importance of evaluating the costs of the Air District's regulations while recognizing the broader economic and policy context and balancing regulatory costs with anticipated public health benefits; the value of the proposed policy and the information it would provide to support informed decision-

making; and appreciation for staff's work and collaboration with community partners throughout the process.

Committee Action

Vice Chair Gioia made a motion, seconded by Director Jue, to recommend the Board of Directors **adopt** a policy on how the Air District will conduct socioeconomic impact analyses for regulatory actions; and the motion **carried** by the following vote of the Committee:

AYES: Adams, Carlson, Gioia, Haubert, Hopkins, Jue, Medina, Quinto, Young.
NOES: None.
ABSTAIN: None.
ABSENT: Lee, Mueller.

INFORMATIONAL ITEM

5. **UPDATE ON RULE DEVELOPMENT TO MODERNIZE THE AIR DISTRICT'S REFINERY FENCELINE AIR MONITORING AND EMISSIONS TRACKING PROGRAMS**

Joe Lapka, Principal Air Quality Specialist, gave the staff presentation *Update on Rule Development to Modernize the Air District's Refinery Fenceline Air Monitoring and Emissions Tracking Programs,* including: outline; abbreviations, Air District Regulation 12, Rule 15; motivation for considering changes to Rule 12-15; potential rulemaking actions to replace Rule 12-15; rule development timeline & opportunities for stakeholder engagement; concept paper for public review and comment; themes in public comments about fenceline air monitoring rule development; key issues raised in public comments about fenceline air monitoring rule development; summary of public comments regarding emissions inventory rule development; summary of public comments regarding potential crude slate reporting rule development; and next steps.

Public Comments

Public comments were given by Colleen Fitzgerrell, Earthjustice; Marilyn Bardet, Benicia Community Air Monitoring Program; Kathy Kerridge, Benicia Community Air Monitoring Program; Erika Siao, Communities for a Better Environment (CBE); Jan Warren, Interfaith Climate Action Network of Contra Costa County; Jubilee Martinez Brumbaugh, CBE; Kaitlin Alcontin, CBE; Maureen Brennan, Rodeo resident; Sukie Kevane, CBE; and Kerry Guerrin, San Pablo Community Emissions Reduction Plan Community Steering Committee.

Committee Comments

The Committee and staff discussed the importance of reporting continued progress on the issue to the Committee; the value of discussing the issue at community meetings, due to strong public interest, particularly among communities near refineries; the installation of new air filtration systems in elementary schools, including those in Richmond and San Pablo; and recognizing the Air District's investment in improving student health protection.

Committee Action

No action taken.

OTHER BUSINESS

6. PUBLIC COMMENT ON NON-AGENDA MATTERS

Public comments were given by Colleen Fitzgerrell, Earthjustice; Imari “Mars” Keith, Sierra Club; Khalil Mitchell, San Francisco resident; Ashia Ajani, Sierra Club; Clara Weinstein, West Oakland Environmental Indicators Project; Kat Selm, Coalition of Environmental Justice and Public Health Organizations; Kaitlin Alcontin, CBE; Marilyn Bardet, Benicia Community Air Monitoring Program; and Kathy Kerridge, Benicia Community Air Monitoring Program.

7. COMMITTEE MEMBER COMMENTS

Vice Chair Gioia asked about the anticipated timeline for presenting the indirect source rule to the full Board.

8. TIME AND PLACE OF NEXT MEETING

Wednesday, September 9, 2026, at 10:00 a.m. The meeting will be held in-person at the Bay Area Metro Center and at satellite locations as may be specified on the meeting agenda using a remote teleconferencing link. Members of the Stationary Source Committee and the public may attend at any of those in-person locations, and members of the public may also attend virtually via webcast.

9. ADJOURNMENT

The meeting was adjourned at 12:22 p.m.

Marcy Hiratzka
Clerk of the Board

and

Aziza De La Torre
Temporary Executive Assistant

BAY AREA AIR DISTRICT
Memorandum

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

From: Philip M. Fine
Executive Officer/APCO

Date: September 9, 2026

Re: State and Regional Efforts to Advance the Equitable Transition to Clean Appliances

RECOMMENDED ACTION

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

BACKGROUND

In March 2023, the Air District Board of Directors adopted amendments to Rule 9-4: Nitrogen Oxides (NOx) from Fan Type Residential Central Furnaces, and Rule 9-6: Nitrogen Oxides Emissions from Natural Gas-Fired Boilers and Water Heaters, that established zero-NOx standards for small, typically residential and commercial, water and space heating systems. Today, these appliances predominantly operate through the combustion of natural gas and as a result, generate a significant portion of emissions from sources in the Bay Area, exceeding NOx emissions generated by passenger vehicles or refineries. At the same time, there are many ongoing and new activities underway across the Bay Area and the state that are part of a larger effort to transition appliances and buildings to clean, zero-emission alternatives that run on available renewable electricity sources. These activities, which have been taking place for years and continue to grow and evolve, are comprised of programs and initiatives that offer a mix of funding and financing support, technical assistance, workforce training, engagement and education, and involve a wide range of entities such as cities and counties, regional and state agencies, community-based organizations, private businesses, utilities and other load-serving entities, among others.

DISCUSSION

On May 13, 2026, the Board of Directors discussed potential flexibility and affordability amendments to Rule 9-6. Several Directors commented and asked about issues related to potential barriers that would add time or cost to small heat pump water heater installations; these included questions about permitting delays, funding availability and related issues.

While the Board of Directors will consider flexibility amendments to Rule 9-6 at their upcoming meeting on November 4, this presentation will provide an update regarding key active efforts that directly support the transition to clean and efficient electric appliances across the Bay Area. This presentation will specifically cover activities of the following entities in detail: the California Heat Pump Partnership, Bay Area Regional Energy Network (BayREN), Pacific Gas & Electric Company (PG&E), load serving entities (Community Choice Aggregation programs and municipal utilities), local governments including the "Sprint to 9-6" collaboration, and the California Energy Commission's Equitable Building Decarbonization program, which recently launched in various locations in the nine-county region.

Following the staff presentation, two special guest speakers, Jane Elias, Manager of Energy Programs with Metropolitan Transportation Commission (MTC)/Association of Bay Area Governments (ABAG) and Director of BayREN, and Nik Kaestner, Senior Building Decarbonization Coordinator with the San Francisco Environment Department, will deliver remarks to provide additional context on their respective work.

BUDGET CONSIDERATION/FINANCIAL IMPACT

None.

Respectfully submitted,

Philip M. Fine
Executive Officer/APCO

Prepared by: Richard Chien
Reviewed by: Wendy Goodfriend

ATTACHMENT(S):

1. September 9, 2026 SSC Appendix August 26, 2026
2. State and Regional Efforts to Advance the Equitable Transition to Clean Appliances Presentation

Stationary Source Committee

September 9, 2026: "Regional Efforts to Advance the Equitable Transition to Clean Appliances"

ATTACHMENT 1: Detailed list of resources, links, and other supporting information

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Bay Area Regional Energy Network heat pump water heater resources available today

- Programs and resources for single family (SF) homeowners
- Programs and resources for multi-family (MF) property owners
- Programs and resources for small and medium-sized businesses
- Link to online on-demand heat pump water heater (HPWH) training for building department staff
- Link to live online HPWH training for building department staff to be offered December 9
- HPWH building code assistance sheet for building department staff
- HPWHs for Accessory Dwelling Units
- HPWH page with resources for building departments
- Bay Area Regional Energy Network (BayREN) Electrical Load Estimator

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PG&E heat pump water heater tools and resources available today

- Energy Action Guide for efficient water heaters, including heat pump options
- Heat pump water heater buyer's guide
- Clean Energy Calculator, which shows estimated appliance and installation costs, potential bill impacts, rate plan options, and possible savings
- Guidance on when an electrical panel upgrade may be needed and how to potentially avoid one
- Questions to ask a home electrification contractor

Load serving entity funding support: CleanPowerSF

HPWH incentives are paid as monthly bill credits, not an upfront rebate.

Appliance / Measure	Amount	Eligible customers	Status

Heat Pump Water Heater	$1,200 total ($50/month × 24 months)	CleanPowerSF (CPSF) customers; gas or electric resistance water heater → HPWH	**Active**
HP HVAC (Ducted, ductless, room, air-to-water)	$1,200 in bill credits ($50/month × 24 months)	CPSF customers	**Active**
Electric Clothes Dryer	$300 in bill credits ($50/month x 6 months)	CPSF customers	**Active**
Electric Cooking	$150 in bill credits ($50/month x 3 months)	CPSF customers	**Active**
CARE/FERA Bonus	$600 in bill credits ($50/month × 12 months)	CPSF customers	**Active**
Gas service removal bonus	$300 in bill credits ($50/month x 6 months)	CPSF customers going all-electric	**Active**
Battery storage	TBD — upfront cost rebate in development	CPSF solar customers	**Coming 2026**

Program conditions: Customers must enroll in a demand response program and be on the E-ELEC or EV2-A rate structure

CONTRACTOR NOTES

Working with SF Environment to develop workforce / incentive hybrid program.

Load serving entity funding support: Marin Clean Energy

CUSTOMER PROGRAMS

Program / Measure	Amount	Eligible customers	Status
HPWH — Heat Pump Rebates (consumer-facing)	$3,175	Marin Clean Energy (MCE) customers	**Active**

HP HVAC — Heat Pump Rebates	$400 per 500 sq ft of home + $2,000 bonus rebate	MCE customers	**Active**
SF Home Savings (income-qualified)	100% of project cost, avg. ~$4,000/home	Single-family low/moderate income	**Active**
Multifamily Program	Up to $7,200/unit (EE + electrification)	MF property owners (LMI + market-rate)	**Active**
Strategic Energy Management	$0.03/kWh + $0.25/therm saved	Multifamily property owners	**Active**

CONTRACTOR & AGGREGATOR RESOURCES

Contractor directory and job seeker support. Flex Market aggregator pathway pays $0.20/kWh and $1.50/therm with kickers for HPWH and HP HVAC (kicker amounts still to be verified); Commercial Energy Management pays $0.20/kWh and $1.50/therm for commercial, industrial and ag customers.

Load serving entity funding support: WestLight (formerly PCE)

CUSTOMER REBATES

Appliance / Measure	Amount	Eligible customers	Status
HPWH — gas water heater → HPWH	$3,500	PCE property owners	**Active**
HPWH — electric resistance → HPWH	$500	PCE property owners	**Active**
HP HVAC — gas heater / furnace → HP HVAC	$1,500	PCE property owners	**Active**
CARE / FERA adder — HPWH or HP HVAC	$1,000	Income-qualified add-on	**Active**
Electric panel upgrade	$1,000	Add-on, all customers	**Active**

Smart load management device	$500	Add-on; must pair with an appliance rebate	**Active**
Full-Service Home Upgrades	Full cost for qualifying low-income households	Income-qualified whole-home upgrades	**Active**
0% interest loan	Up to $10,000	PCE customers, no credit check	**Active**

CITY TOPPER – WESTLIGHT ENERGY & CITY OF MENLO PARK

Benefit	Amount	Who qualifies	Status
Home Upgrade Rebate Match	HPWH $1,500 · HP HVAC $1,500 · Panel $1,000 · IQ adder $1,000	Menlo Park residents in WestLight Energy territory	**Active**
Free Home Upgrade Services	No cost	Income-qualified Menlo Park households	**Active**

CONTRACTOR NOTES

No dedicated contractor incentive program. Self-installed projects eligible for customer rebates. Contractor not required for standard rebates (only for the 0% loan program).

Updated from prior deck: HP HVAC up to $2,500 → $1,500; full-service electrification restated as full cost for qualifying low-income households, not "up to $35,000."

Contractor note unchanged: no dedicated contractor incentive; self-installs qualify for customer rebates and a contractor is required only for the 0% loan.

Load serving entity funding support: San Jose Clean Energy

CUSTOMER REBATES

Appliance / Measure	Amount (market / EJC)	Eligible customers	Status
HPWH (gas water heater → HPWH)	$2,500 / $3,500	San Jose Clean Energy (SJCE) single-family and multifamily	**Active**

HP HVAC (gas furnace → HP HVAC)	$1,500 / $2,500	SJCE single-family and multifamily	**Active**
Electric panel upgrade	$1,000 / $2,000	Add-on; must pair with a core rebate	**Active**
EV / dryer / cooking circuit prewire	$500 / $750 each	Add-on; must pair with a core rebate	**Active**
Circuit pauser / splitter	$250	Add-on; must pair with a core rebate	**Active**
Attic insulation	$0.75/sq ft (max $700 / $1,000)	Must pair with HP HVAC	**Active**
Battery storage	$125/kWh (max 26 kWh) / $400/kWh EJC	Must pair with solar	**Closed to new applications**
EcoHome Payment Plan	0% financing up to $5,000	HPWH or HP HVAC, all customers	**Active**

CONTRACTOR INCENTIVES

Benefit	Amount	Who qualifies	Status
New Contractor HPWH Bonus	$1,000/install, up to $6,000/yr	New contractors to SJCE programs	**Active**
EcoHome Network Listing	Contractor directory	Contractors who install 3+ EcoHome Rebate projects	**Active**

Load serving entity funding support: Silicon Valley Clean Energy

CITY TOPPERS

Program	Measure	Amount	Notes	Status
Silicon Valley Clean Energy (SVCE) + City of Milpitas	HPWH (market rate)	$3,350	Gas water heater → HPWH	**Active**

SVCE + City of Milpitas	HP HVAC (market rate)	$4,500	Gas furnace → HP HVAC	**Active**
SVCE + City of Los Altos	HPWH (market rate)	$3,500	Gas water heater → HPWH	**Active**
SVCE + City of Los Altos	HP HVAC (market rate)	$3,000	Gas furnace → HP HVAC	**Active**
SVCE + City of Sunnyvale	HP HVAC (market / IQ)	$3,000 / $3,500	Gas furnace → HP HVAC	**Active**
SVCE + City of Mountain View	HPWH (market / IQ)	$4,000 / $5,000	Year of the Water Heater	**Active**

Milpitas, Los Altos, Sunnyvale and Mountain View fund toppers through SVCE — a customer in those cities receives the combined amount, not two separate rebates

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Load serving entity funding support: Sonoma Clean Power

CUSTOMER REBATES

Appliance / Measure	Amount	Eligible customers	Status
HPWH	$2,500 · 50% of remaining project cost up to $10,000 (IQ)	Sonoma Clean Power (SCP) residential customers	**Active**
HP HVAC	$1,000 · 50% of remaining project cost up to $10,000 (IQ)	SCP residential customers	**Active**
Air-to-water hydronic heat pump	$3,500	SCP residential customers	**Active**
Induction range	$500 + free induction cookware set	SCP residential customers	**Active**
MF panel upgrade	$500–$750 per in-unit panel; $5,000 central panels	Multifamily owners (5+ units)	**Active**

CONTRACTOR RESOURCES

No dedicated contractor cash incentive program. SCP runs a customer rebate program that customers apply for directly.

Load serving entity funding support: Silicon Valley Power

RESIDENTIAL REBATES

Appliance / Measure	Amount	Eligible customers	Status
HPWH — gas-to-electric	$5,500	Silicon Valley Power (SVP) residential customers (market rate)	**Active**
HPWH — gas-to-electric, income-qualified	$6,500	FRAP / LIHEAP customers	**Active**
HPWH — electric-to-electric	$500	SVP residential customers (market rate)	**Active**
HP HVAC — gas replacement	Up to $10,000	SVP residential customers (market rate)	**Active**
HP HVAC — gas replacement, income-qualified	Up to $11,000	FRAP / LIHEAP customers	**Active**
HP HVAC — electric resistance replacement	$1,000	SVP residential customers (market rate)	**Active**

Load serving entity funding support: City of Palo Alto Utilities

CUSTOMER REBATES

Appliance / Measure	Amount	Notes	Status
HPWH — gas water heater → HPWH	$3,500	Rebate Hub, market rate	**Active**
HPWH — electric resistance → HPWH	$500	Rebate Hub, market rate	**Active**

HP HVAC — gas / fossil heater → HP HVAC	$2,500 · $5,000 income-eligible	Rebate Hub	**Active**
Electric panel upgrade	$1,000 · $2,000 income-eligible	Rebate Hub add-on	**Active**
Gas meter removal	$2,500	Rebate Hub	**Active**
Whole-home electrification — Electrify My Home	No cost (income-eligible) · cost-share (market rate)	HPWH, HP HVAC and whole-home gas-to-electric retrofit	**Active**
Limited-time HPWH discount	$500	All customers (Electrify My Home)	**Active**

Load serving entity funding support: other city programs

City / utility	Heat pump amounts	Notes	Status
Alameda Municipal Power	HPWH $1,500 · HP HVAC $1,500 · Panel upgrade $1,500	Municipal utility, market rate	**Active**
City of Albany	HPWH $500 / $1,500 moderate / $3,000 low income · HP HVAC ducted $3,000–$6,000 · ductless $1,000–$6,000 · panel $500–$2,000	Income-tiered; ductless scales with number of units; panel requires a qualifying HP project	**Active (7/23/26)**
City of Piedmont	Ductless mini-split $750 · ducted central ASHP $1,500 · low income doubles the standard rebate	Electrification Rebate Program, SF and MF	**Active**
City of Hayward	HPWH $800 · full cost for low income	Water Heater Replacement Program; older water heaters preferred	**Active**

City of Pinole	HPWH up to $3,000 · HP HVAC $3,000 (PEER program)	Local rebate, all customers	**Active**
Redwood City	HP HVAC $500 · HPWH $500 · $500 income-qualified permitting adder	Environmental Initiatives Rebates; CARE/FERA/WSRAP adder	**Active**

Load serving entity permitting activities: overview

LIVE TODAY	ACTIVELY BUILDING	PERMIT SUPPORT VIA REBATES
Palo Alto Instant permits for HPWH. $329 fee, rebated back to the customer. Alternative load calc uses actual AMI energy data. Encourages avoiding unnecessary panel upgrades. **San José** Same-day online permits for heat pump installations. SJCE rebates require a final permit, and staff assist when inspection scheduling stalls. **Santa Clara / SVP** Permit Center “Simple Permits.” $525.10 fee. Smart panel rebate up to $4,000 ($6,000 income-qualified) specifically to avoid a service upgrade.	**Ava Community Energy** Unify requirements, leverage existing AHJ permit software, connect an HPWH spec database for instant approval. **MCE** Studied permitting & inspection practices across all 38 municipalities served. Published “Permitting Barriers in Residential Electrification” (Cadmus, April 2026). **SVCE** “Permit Modernization Program”: training, load estimation tools, educating officials on optimizing electrical service. All 13 jurisdictions participating at some level.	**Sonoma Clean Power** Rebate program requires contractors to obtain permits from local AHJs. SCP staff help customers track permit status and open lines to building departments. 14 permitting authorities in territory, most having issued permits for SCP-rebated projects.

	WestLight Energy “Conquering the Permitting Process” guide; active jurisdiction engagement with SVCE.	

Load serving entity permitting activities: local examples

PALO ALTO	SAN JOSE	SANTA CLARA / SILICON VALLEY
Permitting Instant permits for HPWH **Fee** $329 — rebated back to the customer, so effectively $0 **Load calc** Alternative load calc using actual AMI energy data **Inspection** In-person final, scheduled online; contractor need not attend **Panels** Actively encourages avoiding unnecessary panel upgrades	**Permitting** Same-day, online permits for heat pump installations **Program link** SJCE rebates and zero-interest financing require a final permit **Support** SJCE works with the permitting department when inspection scheduling stalls	**Permitting** Permit Center “Simple Permits” **Fee** $525.10 for an HVAC or HPWH permit **Inspection** Final inspection only for the HVAC rebate program; others need permit-issued status **Panels** Up to $1,500 for 100→200 amp upgrade; smart panel rebate up to $4,000 ($6,000 income-qualified) to avoid a service upgrade

Load serving entity permitting activities: Community Choice Aggregation led

Ava Community Energy	Offering technical support to interested member jurisdictions ahead of Rule 9-6. Objectives: unify permitting requirements across jurisdictions; leverage existing AHJ permit management software to standardize application information; connect an HPWH spec database (volume, capacity) for quick or instant approval; and standardize the flow from application into a comprehensive inspection document.	Holds Ava SME Research and Standard Form Requirements developed by the Solar APP Foundation — available from Ava staff on request.
MCE	Works with all 38 municipalities it serves to improve permit access for contractors and customers. Studied municipal permitting and inspection practices across every one of those 38 communities, identifying inefficiencies and streamlining opportunities while maintaining safety and code compliance.	Permitting Barriers in Residential Electrification (April 2026) — Cadmus Group
SVCE	Permit Modernization Program provides resources and guidance to member agencies: training, analysis of load estimation tools, and educating permitting officials on optimizing electrical service to avoid service upgrades.	All 13 local jurisdictions in SVCE territory participating at some level. Service Optimization Guide for Building Officials.
WestLight Energy	"Conquering the Permitting Process" customer guide listing which San Mateo County jurisdictions offer streamlined permitting. Active engagement with member jurisdictions and coordination with SVCE.	San Mateo County Office of Sustainability HPWH permit streamlining report (2021).

CEC Equitable Building Decarbonization (EBD) Program

EBD-Northern California Website: https://aea.us.org/ebd-northern/

- Budget: $133,000,000
- See list of "Initial Community Focus Areas" below (Question 4)

Frequently Asked Questions

Q1: Why is the Equitable Building Decarbonization Program important?

The State of California is committed to a just and equitable transition to carbon neutrality by 2045. Buildings account for about 25% of California's greenhouse gas emissions, so decarbonizing buildings – by replacing gas appliances with efficient electric appliances – is a key part of California's climate strategy. The Equitable Building Decarbonization Program (which includes the Statewide Direct Install, Tribal Direct Install, and Statewide Incentive Programs) prioritizes low-income, disadvantaged, and tribal communities, to ensure that these communities aren't left behind in the transition to carbon neutrality. In addition to reducing greenhouse gas emissions and advancing energy equity, the Equitable Building Decarbonization Program benefits low-income households and communities by improving resiliency to extreme heat and poor air quality, while promoting energy affordability, grid reliability, and local workforce opportunities.

Q2: What is a direct install program?

A direct install program is a type of program that provides and installs energy-efficient appliances, energy efficiency measures, and related upgrades directly to consumers at minimal or no cost. Direct install programs are different from loan programs because participants are not responsible for paying anything back. They are also different from rebate programs, which often require participants to pay for upgrades upfront and get reimbursed later.

Q3: How does the Equitable Building Decarbonization Statewide Direct Install Program work?

First, community-based organizations conduct outreach to potential participants in the initial community focus areas. Outreach focuses on homes most likely to benefit from the program, including those most likely to save money on their electric bills as a result of decarbonization retrofits. The program is open to single-family homes, multifamily buildings, and manufactured and mobile homes. Homeowners/occupants who are interested are first screened for eligibility. If the property is eligible, a home assessment is conducted to evaluate the existing condition of the home and to identify appropriate retrofit measures from among the program's eligible measures (see Q5). After the home assessment, if the homeowner/property owner wishes to proceed with the retrofit, the regional administrator schedules contractors to complete the work. All work is done at no cost to the homeowner.

Q4: Which homes are eligible for the Statewide Direct Install Program?

To be eligible, a building must meet all of the following criteria.

- Be a single-family home, multifamily building, or manufactured/mobile home.

- Be located in an initial community focus area (ICFA, see below), or in a community selected through the forthcoming community application process (see below).
- Be built before January 1, 2020.
- Use natural gas, propane, or another fossil fuel as the primary fuel for space heating or water heating.
- Bay Area ICFAs
    - Eastern Contra Costa
    - Western Contra Costa
    - East & West Oakland
    - East Palo Alto
    - East San Francisco
    - Morgan Hill & Gilroy

In addition, the building occupants must meet the following income criteria.

- For single family and manufactured/mobile homes, the home must be occupied by a low-income household.
- For multifamily properties, at least two-thirds of units must be occupied by low-income households.

Low-income households are defined as households earning up to 80% of the area median income. Low-income thresholds by county and household size are available from the Department of Housing and Community Development.

Each regional administrator is developing an application process for communities that would like to participate in subsequent phases. Like the initial community focus areas, additional communities will be required to be under-resourced (disadvantaged or low-income communities). The community application process is expected to be available in late 2026.

Q5: What do the direct install home retrofits include?

At this time all homes served are provided retrofits at no cost. All homes served receive a heat pump for space heating and cooling, or a heat pump water heater, or both. Homes may also receive other upgrades including:

- Induction stove
- Electric clothes dryer
- Duct sealing
- Smart thermostat
- Ceiling fan or whole house fan
- Insulation
- Air sealing

- Solar window film
- Low-flow showerheads and faucets
- LED lighting
- Air filtration
- Electric wiring and panel upsizing
- Remediation and safety improvements

In addition, at the conclusion of the retrofit, at least two of the following four end uses must be electric: space heating, water heating, cooking, and clothes drying. The full list of eligible measures is available in the program guidelines.

State and local financing programs for clean appliances

GoGreen Financing: https://www.gogreenfinancing.com/energy-efficiency-home-loans-california/finance-options/

- Part of the California Hub for Energy Efficiency Financing (CHEEF), a state-administered program working towards a cleaner and more energy-efficient California.
- Supporters and partners: investor-owned utility ratepayer funding allocations, loans by local finance providers like credit unions, and services and installations performed by local contractors.
- Loan loss reserves that underly the program allow lenders to offer competitive rates and accessibility to a wider range of borrowers.
- Has also received funding from the California Energy Commission's Equitable Building Decarbonization Incentive Program and California Climate Investments.
- GoGreen loans can be used for a range of clean energy projects, including heat pump water heaters, heat pump HVAC, EV chargers, solar photovoltaic systems, and energy efficiency improvements.
- Zero percent interest loans are available to install heat pump space and water heating for low-income households in designated disadvantaged communities. See https://www.gogreenfinancing.com/heat-pump-promotion/ for details.

Community Choice Aggregation financing programs

- Silicon Valley Clean Energy zero precent loans: https://www.svcleanenergy.org/financing/#1755546761887-28f1fed0-9c0f
    - Launched June 2025
    - 0% interest loans to help cover the cost of heat pumps for water heating, space heating, and AC
    - Payments conveniently included on your monthly energy bills
    - Terms

        - Maximum loan size: Capped so payments do not exceed predicated annual energy bill savings.
        - APR: 0%
        - Fees: none
        - Credit requirements: none
        - Repayment term: 10 Years
        - Restrictions: You must meet all of the eligibility requirements.
        - Stackable with rebates

- WestLight Energy zero precent loans: https://www.westlightenergy.org/residential/financing/
    - Launched October 2022
    - 0% interest loans to cover the cost of heat pumps for water heating, space heating, and electrical panel upgrades
    - Payments conveniently included on your monthly energy bills
    - Terms
        - Maximum loan size: $10,000
        - APR: 0%
        - Fees: none
        - Credit requirements: none
        - Repayment terms: 2-5 years
        - Restrictions: You must meet all the eligibility requirements
        - Stackable with rebates

Sprint to 9-6 participants list

Jurisdictions	Non-profit organizations	Utilities	Technical	Agencies
Alameda	Act Now BA	MCE	SPUR	Air District
Alameda (C)	ECC	SVCE	Rewiring America	BayREN
Albany	PODER	Alameda Municipal Power	POWER	CARB
Berkeley	NRDC	SFPUC	AEA	Sonoma County RCPA
Contra Costa (C)	GHHI	PG&E	RMI	Stopwaste
Cupertino	Sierra Club	Ava	USGBC-CA	

Hayward	Earth Justice	PCE	BDC	
Marin (C)	Evergreen Action	SJCE	Energy Solutions (TECH)	
Mountain View	SFPSR		Vaya	
Napa (C)	Acterra		SunWork	
Oakland			Revalue.io	
Palo Alto			Clear Result	
Piedmont			Efficiency First	
San Francisco			CTWI	
San Mateo (C)			Build It Green	
Solano (C)				
Sonoma (C)				
San Rafael				
Santa Clara (C)				
Sunnyvale				
Walnut Creek				

Note: Jurisdictions identified with “(C)” are counties.

Bay Area Air District

State and Regional Efforts to Advance the Equitable Transition to Clean Appliances

Stationary Source Committee

September 9, 2026

Richard Chien
Manager
Planning and Climate Protection

Abbreviations

BayREN: Bay Area Regional Energy Network

BAMBE: Bay Area Multifamily Building Enhancements (BayREN program)

CCA: Community Choice Aggregation (also referred to as Community Choice Energy)

EASE Home: Efficiency and Sustainable Energy Home Program (BayREN program)

EBD: Equitable Building Decarbonization program

HPWH: heat pump water heater

HVAC: heating, ventilation and air conditioning

LSE: load serving entity

MTC/ABAG: Metropolitan Transportation Commission/Association of Bay Area Governments

PG&E: Pacific Gas and Electric

Presentation Outline

1. Major players in the clean appliance transition
2. Spotlights on key regional activities
3. Special guest speakers
   - Jane Elias, Manager, Energy Programs, MTC/ABAG, Director, BayREN
   - Nik Kaestner, Senior Building Decarbonization Coordinator, San Francisco Environment Department
4. Questions and discussion

Major Players in the Clean Appliance Transition

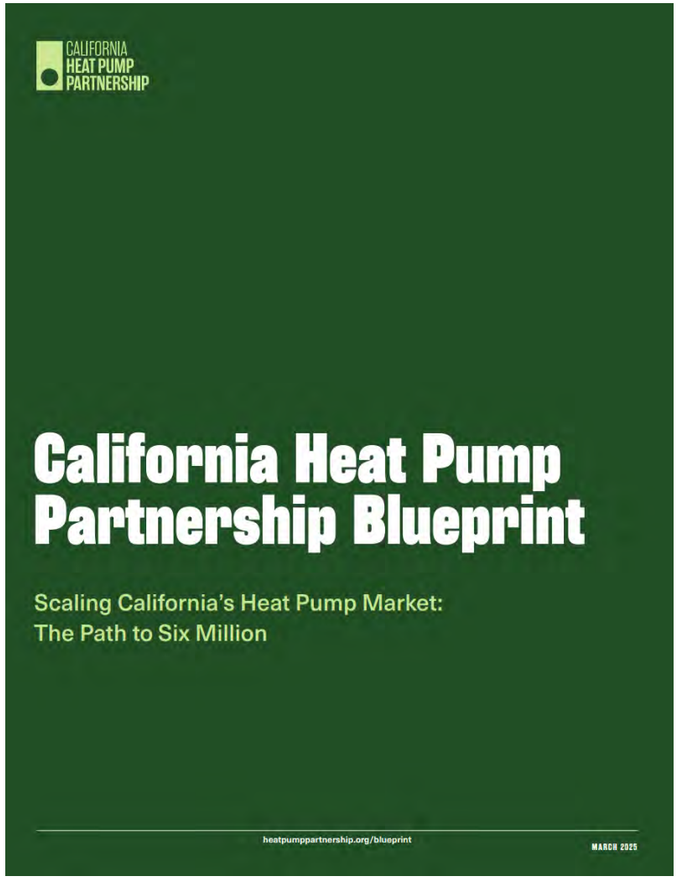
- California Heat Pump Partnership
- BayREN
- PG&E
- Load Serving Entities (Community Choice Aggregation programs, municipal utilities)
- Cities and counties
- State and local funding programs (rebates and financing)
- Building Decarbonization Coalition
- Community-based organizations
- Many, many others!

Spotlight on CA Heat Pump Partnership

What it is: public-private partnership with state policy leaders, heat pump manufacturers, retailers, distributors, utilities, and other key stakeholders to rapidly scale California's heat pump market to help achieve the state's goal of installing six million heat pumps in California's buildings by 2030

Activity highlights

- Marketing campaigns to raise public awareness on the benefits of heat pumps and increase familiarity with the technology
  - "Heat Pump Week": April 11-19, 2026
- Educating and activating installers and contractors statewide
  - Listening sessions, roundtables, advertise training
  - Provide members with policy updates and engagement



Source: https://heatpumppartnership.org/wp-content/uploads/2025/03/CAHPP_Blueprint_2025.pdf

Spotlight on BayREN: Overview

- A coalition of the Bay Area counties and the Association of Bay Area Governments (ABAG) working to create an energy efficient, healthy and resilient built environment
- Funded by public goods charge (utility ratepayer revenues)

BayREN: Overview (cont.)

Operates nine programs serving:

- Residential homeowners, property owners, and renters with personalized recommendations for energy upgrades, funding, and technical assistance
- Small and medium-sized businesses with free or low-cost help to lower operating costs and emissions and improve comfort
- Local government officials and staff with training, resources, policy guidance, and building upgrade assistance to meet climate goals and reduce facility costs

BayREN: HPWH for Hard-to-Reach Households

Single family program (EASE Home) directly installs improvements (including HPWH) for qualified low- and moderate-income households

- “Early replacement” focus (water heaters >10 years old)
- Pair with energy efficiency and post-install assistance to minimize energy costs
- Can address barriers under proposed Rule 9-6 exemptions
- Targets 100-200 HPWH upgrades annually at a minimum of 50% cost coverage

Multifamily program (BAMBE) supports HPWH installations for fuel substitution

- Provided over $12 million in incentives for over 1,300 HPWH installations from 2024 to the present
- Now targeting buildings with <50 units

BayREN: Contractor Readiness

- Working through member agency City and County of San Francisco and with other local governments via “Sprint to 9-6”
- Funding HPWH Contractor Trainings across the Bay Area
- Improvements being develop for future trainings to increase outreach and education, enhance in-language options, and incorporate hands-on learning
- Operating a paid “Contractor HPWH Mentorship Program” with Emerald Cities Collaborative

BayREN: Building Department Support

Training and resources to local building departments

- Forty HPWH trainings for building department staff since 2018 (>800 attendees)
- Training offered live, webcast twice per year, and available online on-demand
- Resources available include electrical load estimator, building code assistance sheet, guidance on HPWHs for accessory dwelling units, etc. (more resources to be added in Fall 2026)

BayREN: Building Department Support (cont.)

Permitting simplification efforts

- San Mateo County pilot project reviewed HPWH permitting processes in twenty-one jurisdictions and developed recommended improvements
- Eight jurisdictions are currently implementing and testing some recommendations
- Coordinating with counties and CCAs to scale-up permitting improvements across Bay Area

Spotlight on PG&E

Working to accelerate heat pump adoption and enable efficient electrification at scale through three strategic priorities: improving economics, simplifying the customer experience, and supporting equity customers

Improving economics

- ~$50M in residential incentives forecasted through 2031
- Supporting residential financing through GoGreen Financing Program
- Promoting new cost-reducing technologies (e.g. PanelBoost smart panel pilot)
- Exploring rate design solutions
- Pursuing cost-effective zonal electrification

PG&E (cont.)

Streamlining the customer experience

- Evaluating options to make installation faster and easier, e.g. pilot deploying 120-volt HPWH to help customers electrify in 48 hours or less
- Streamlining service planning and interconnection (reduced application intake time by 40%, reached 96% compliance with new energization timelines)
- Providing guidance, online planning tools, and advisory services
- Providing training sessions and other support for contractors and installers

Supporting equity customers

- Incentives for income-qualified customers and underserved communities
- Running equity-focused zonal (neighborhood) programs

Spotlight on Load Serving Entities

westlight energy

SAN JOSE CLEAN ENERGY
A Program of the City of San José

Sonoma Clean Power

SILICON VALLEY CLEAN ENERGY

CITY OF PALO ALTO UTILITIES

Ava Community Energy

PENINSULA CLEAN ENERGY

SILICON VALLEY POWER
CITY OF SANTA CLARA

ALAMEDA MUNICIPAL POWER
POWERED BY 100% CLEAN ENERGY

MCE Empowering Our Clean Energy Future
CONTRA COSTA | MARIN | NAPA | SOLANO

CleanPowerSF

Load Serving Entities: Funding Support

Load Serving Entity[1]	HPWH Rebate
CleanPowerSF	$1,200
Marin Clean Energy	$3,175
WestLight Energy	$3,500
San José Clean Energy	$2,500
Silicon Valley Clean Energy (SVCE)[2]	$2,500
Sonoma Clean Power	$2,500
Silicon Valley Power	$5,500
Alameda Municipal Power	$1,500
City of Palo Alto Utilities	$3,500

Table of current HPWH rebates offered by LSE's (as of 8/6/26)

Notes

1. Cities currently offering local rebates that can be "stacked" on top of LSE funds:

- Albany ($500)
- Redwood City ($500)
- Hayward ($800)
- Pinole (up to $3,000)

2. SVCE has additional "city toppers" for these cities: Milpitas, Los Altos, Sunnyvale, Mountain View

Load Serving Entities: Permitting Support

- On-the-ground engagement with local building departments
- Investing resources to expand simplification and standardization
- Aligns with funding support programs

Palo Alto
Instant $329 permit for HPWH, fee rebated back to the customer. Alternative load calculation uses actual metering energy data, encourages avoiding panel upgrades.

San José
Same-day online permits for HPWHs. San Jose Clean Energy rebates require a final permit, and staff will assist when inspection scheduling causes delays

Santa Clara and Silicon Valley Power
HPWH "Simple Permits" with $525 fee. $4,000 smart panel rebate ($6,000 for income-qualified) to avoid electrical service upgrades.

San Francisco
Single plumbing permit now allowed for most HPWHs (i.e. plumber can do minor electrical). Same day over-the-counter and instant online permitting.

Four examples of local permit streamlining achievements

Senate Bill 222 – The Heat Pump Access Act

- Sponsored by Senator Wiener (2026)
- Key provisions
  - Require asynchronous inspections for installations (contractor and inspector do not need to be present together)
  - Require jurisdictions to offer only one permit unless they meet certain conditions
  - Require jurisdiction to offer electronic signatures and submittals for permit applications
  - Require online “instant” permits for simple “swap-outs” (no panel upgrade or structural work needed) by January 2028
  - Limits local rules that create barriers for heat pumps
  - “Soft” fee caps of $150 (HPWH) and $200 (HVAC); flat fees for same equipment type

Spotlight on Sprint to 9-6

San Francisco Environment Department is leading regional coordination with cities, counties, agencies, utilities, technical experts, and nonprofit organizations to lay the foundation for a successful launch of Rule 9-6

Focus areas

- Reduce installation costs: equipment, labor, permitting and inspection
- Overcome common technical barriers: electrical and space constraints
- Support for homeowners: funding, technical assistance, communications and outreach
- Highlight and scale-up local best practices

Sprint to 9-6: Communications and Outreach

Example activities

- Launching regional electrification campaign
- Developing generic, unbranded fact sheets and FAQs
- Sharing presentation templates between jurisdictions
- Coordinating press events and advocacy
- Developing regional newsletter and events calendar
- Expanding homeowner and property manager outreach

Spotlight on Equitable Building Decarbonization

- Program overseen by the California Energy Commission
- EBD in the Bay Area administered by Association for Energy Affordability (AEA)
- “Initial Community Focus Areas” (ICFAs)
- Comprehensive projects, single-family and multifamily properties
- Community based organization partners for outreach and recruitment
- Eligibility look-up tool under development

Map of Bay Area ICFA’s

Air District Outreach and Education

Outreach Events

- Bay Area Air District
- Online or webinar

- Building Decarbonization Coalition
- Online or webinar

Special Guest Speakers

Jane Elias

Manager, Energy Programs, MTC/ABAG

Director, BayREN

Nik Kaestner

Senior Building Decarbonization Coordinator

San Francisco Environment Department

Questions & Discussion

For more information:

Richard Chien | Manager | Bay Area Air District | rchien@baaqmd.gov

BAY AREA AIR DISTRICT
Memorandum

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

From: Philip M. Fine
Executive Officer/APCO

Date: September 9, 2026

Re: Permitting Research & Development: Unlocking Innovation

RECOMMENDED ACTION

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

BACKGROUND

The Bay Area is home to many of the world's leading technology companies, research institutions, universities, national laboratories, manufacturers, and emerging businesses. The region has long served as a center for innovation, including the development and demonstration of technologies intended to address climate change, improve industrial processes, reduce emissions, and advance environmental performance.

Research and development (R&D) activities at stationary sources can take many forms. They can include laboratory experimentation, pilot-scale equipment, demonstration projects, development of new products or processes, and testing of new pollution-control or emission-reduction technologies. These activities can present permitting circumstances that differ from conventional commercial operations. An R&D project may be temporary, its operating characteristics may still be under development, or the information ordinarily used to characterize emissions may itself be one of the outcomes the project is intended to establish.

At the same time, designation of a project as “research and development” does not change the Air District's responsibility to protect public health and ensure compliance with applicable air quality requirements. The permitting question is therefore not simply whether a project is innovative, but how its scale, emissions and risk, and duration fit within existing regulatory requirements and available permitting pathways.

The Air District already has permitting tools that can accommodate qualifying R&D activities, including exemptions for certain laboratory and bench-scale activities and temporary permits for testing equipment and processes. Other air permitting agencies have developed additional approaches for research operations, including dedicated

research permits and general permits with predetermined eligibility criteria and operating conditions.

This informational item provides an overview of these approaches and places them in the context of the types of R&D projects and applications encountered by the Air District.

DISCUSSION

Stages of Research and Development

R&D encompasses a continuum of activities, from bench-scale experimentation through pilot and demonstration projects and, ultimately, commercial operation. For permitting purposes, the term “R&D” alone does not determine the appropriate regulatory pathway. Three characteristics are particularly relevant: scale, emissions and risk, and duration.

Scale describes the progression from bench-scale experimentation to pilot, demonstration, and commercial operation. Bench-scale activities generally involve small quantities and equipment intended to test a concept or answer a specific research question. Pilot-scale activities apply that concept at a larger scale to understand how a process or technology performs under more representative conditions. Demonstration projects move closer to real-world operating conditions and may involve equipment and throughput approaching commercial applications. At commercial scale, the activity has generally moved beyond experimentation to routine or sustained operation.

Emissions and risk may change as an activity moves through these stages and are not necessarily proportional to scale. In some cases, emissions are well understood and readily quantified. In others, the experiment may itself be intended to determine emissions, control efficiency, or operating characteristics. Established emissions factors or monitoring methods may not exist. Similarly, a technology intended to reduce one pollutant may have the potential to increase another pollutant or create other emissions that require evaluation.

Duration is another distinguishing characteristic. R&D activities may be intentionally short-lived, may need to be deployed within a limited research or funding window, or may involve temporary testing of a technology intended to achieve emissions reductions. In these circumstances, the anticipated duration of the project may be substantially shorter than that of a conventional permitted source.

Current Pathways

The Air District's existing permitting framework contains pathways applicable to qualifying research and development activities. *These provisions establish an existing pathway for qualifying laboratory and bench-scale R&D activities.*

Permit Exemptions

Regulation 2, Rule 1 provides exemptions applicable to certain laboratory and bench-scale activities. Rule 2-1-113.2.12 addresses qualifying laboratories of less than 25,000

square feet or with fewer than 50 total fume hoods. Rule 2-1-126.2 provides an exemption for qualifying bench-scale laboratory equipment used exclusively for chemical or physical analyses or experimentation, quality assurance and quality control, research and development, or similar bench-scale activities. Pilot plants are expressly excluded from the bench-scale exemption.

Temporary Operations
Regulation 2-1-302.3 provides a temporary Permit to Operate for testing equipment or processes, including new formulations. A permit issued under this provision expires after three months and is non-renewable. The operation remains subject to applicable prohibitory rules, and offsets are required for increased emissions where applicable. The rule also recognizes the temporary nature of the activity by evaluating Best Available Control Technology (BACT) cost effectiveness based on the short duration of the operation. These provisions provide existing mechanisms that can accommodate activities ranging from qualifying laboratory experimentation to short-term testing of equipment, processes, and formulations. R&D activities that do not qualify for these pathways proceed through the Air District's otherwise applicable permitting requirements.

Further, Air District experience indicates that R&D applications can vary significantly in how well they are positioned for efficient permitting. The differences are often less about whether a project is described as R&D and more about how early the applicant engages with the Air District, how clearly the project is bounded, and whether key permitting issues have been anticipated.

What the Air District typically receives…	**What would help streamline processing…**
No outreach to Air District, no pre-application plan	Pre-Application meeting to identify potential issues and data requirements
Rush application; no time for possible bottlenecks, e.g., unknown emission factors or risk screening assumptions	Application submitted early in project development, time to address permitting issues and data gaps
Pilot-scale or larger projects that aren’t eligible for exemption or temporary permit to operate.	Bench scale project
Projects that aren’t R&D, i.e., applicant seeks permanent authority to construct and/or permit to operate.	Temporary project (i.e., < 3 months) to test equipment, processes, or new formulation
Project is in over-burdened community or near a school that requires public notice	Site selection to minimize risks to the public
Abatement and/or offsets not anticipated	Abatement and/or offsets identified early in project planning

Measurement, monitoring, or source test methods not well established or anticipated	Accurate recordkeeping, continuous monitoring, with plans for source testing, where needed

These observations reflect considerations that apply to permitting more broadly. Applicant readiness, early engagement, and a sufficiently defined project allow applicability and eligibility questions to be addressed earlier and provide greater predictability for both applicants and Air District staff.

Peer Agency Approaches

Air permitting agencies use different combinations of exemptions, dedicated research permits, temporary permits, fixed thresholds, and standardized conditions to address R&D activities. South Coast Air Quality Management District and the New Jersey Department of Environmental Protection illustrate two different approaches.

South Coast Air Quality Management District

South Coast uses multiple pathways for research activities. Rule 219 exempts qualifying laboratory testing and quality-control testing equipment, non-production bench-scale research equipment, and associated control equipment. For research activities that do not qualify for an exemption, Rule 441 provides a dedicated pathway for research operations undertaken to investigate, experiment, or conduct research that advances knowledge or state-of-the-art technologies. Qualifying research operations are time-limited and remain subject to applicable air quality requirements, including New Source Review.

South Coast therefore illustrates a tiered approach in which qualifying non-production bench-scale activities may be exempt, while larger research operations can proceed through a dedicated, time-limited regulatory pathway.

New Jersey Department of Environmental Protection

In contrast, New Jersey uses a general permit for qualifying R&D operations at minor facilities. A general permit is a permit developed by the agency in advance for a defined category of activities. The agency establishes eligibility criteria and standard permit conditions before an individual applicant seeks coverage. An applicant demonstrates that its project meets those criteria and, if eligible, operates subject to the predetermined conditions.

A general permit is not an exemption. The activity remains permitted and subject to enforceable requirements; the mechanism differs from an individual permit because the basic regulatory conditions have been established in advance for qualifying projects. General permitting of this type has not traditionally been used by California air districts as an R&D permitting model and provides a different permitting architecture for comparison.

R&D Permitting Landscape

The R&D permitting landscape does not reflect a single national model. Instead, agencies use multiple pathways depending on the characteristics of the activity. Common approaches include exemptions, temporary or dedicated research permits, operational caps or fixed thresholds, and pre-approved permit conditions, including general permits.

Across these approaches, scale, duration, and uncertainty are recurring considerations. These characteristics help distinguish laboratory and bench-scale research from pilot, demonstration, and commercial operations and help determine which regulatory pathway is applicable. The approaches also reflect several themes familiar from the Air District's broader permit-efficiency work: applicant readiness is critical, early staff determinations provide greater certainty, and objective eligibility criteria support consistent decisions.

Regulatory flexibility does not eliminate the need for a complete and technically supportable project description. Applicants must be prepared to describe the project's purpose, scale, duration, materials, equipment, anticipated emissions, monitoring approach, and areas of uncertainty sufficiently for staff to determine the appropriate pathway.

Fixed thresholds, operational caps, and clearly defined eligibility requirements can provide an objective basis for determining the appropriate permitting pathway rather than relying primarily on subjective determinations at intake.

Overall, the landscape indicates that the Air District's existing framework can accommodate true R&D activities through its current exemption, temporary-operation, and standard permitting provisions. Peer-agency approaches demonstrate different ways of structuring similar regulatory decisions. Across the models reviewed, the recurring elements are multiple pathways appropriate to different types of projects, objective eligibility criteria, early regulatory determinations, and applicants prepared to provide the information necessary to support those determinations.

BUDGET CONSIDERATION/FINANCIAL IMPACT

None.

Respectfully submitted,

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Reviewed by: Dr. Philip M. Fine

ATTACHMENT(S):

1. Permitting Research & Development Presentation

Bay Area Air District

Permitting Research and Development: Unlocking Innovation

Stationary Source Committee

September 9, 2026

Kelly Crawford
Deputy Executive Officer of Engineering & Compliance Engineering

Abbreviations

BACT: Best Available Control Technology

R&D: Research and Development

AQMD: Air Quality Management District

QA/QC: Quality Assurance/Quality Control

AC: Authority to Construct

PTO: Permit to Operate

Presentation Outline

- What is Research and Development?
- Current Pathways
  - Air District
  - Peer Agencies
- Considerations for R&D projects

Strategic Plan Alignment

4.01 Timely Permits

4.02 Transparent Permit Process

4.03 Consistent Permits

4.10 Ensure Success

Be Effective, Accountable, & Customer-Oriented

Stages of Research and Development
Regulatory Implications

Bench scale → **Pilot** → **Demonstration** → **Commercialization**

Analysis and experimentation

At lab or “bench” scale,
i.e., small and controlled

Scale-up and learning

Validates lab data
to mimic real world operations

Final Proof-of-Concept

Performance in a
realistic setting

Full-scale production

Standard operating model

Specific **Time-limited** **Enforceable**

Current Pathways – Bay Area

Exempt from Permits

- Labs <25,000 SF or < 50 total fume hoods

  Rule 2-1-113.2.12

- Bench scale lab equipment used exclusively for:
  - Chemical or physical analyses or experimentation
  - Quality assurance and quality control
  - Research and development
  - Or similar bench scale equipment, excluding pilot plants

  Rule 2-1-126.2

Permit to Operate, Temporary Operations

- To test equipment or processes, including new formulations, if:
  - Permit expires in three (3) months and is non-renewable
  - Subject to prohibitory rules
  - Offsets required for increased emissions
  - BACT cost effectiveness analysis is based on short duration of the operation

  Rule 2-1-302.3

Typical R&D Project vs. Ideal R&D Project

What the Air District typically receives…		What would help streamline processing…
No outreach to Air District, no pre-application plan	➡	Pre-Application meeting to identify potential issues and data requirements
Rush application; no time for possible bottlenecks, e.g., unknown emission factors or risk screening assumptions	➡	Application submitted early in project development, time to address permitting issues and data gaps
Pilot-scale or larger projects that aren't eligible for exemption or temporary-PTO	➡	Bench scale project
Projects that aren't R&D, i.e., applicant seeks permanent AC / PTO	➡	Temporary project (i.e., < 3 months) to test equipment, processes, or new formulation
Project is in over-burdened community or near a school that requires public notice	➡	Site selection to minimize risks to the public
Abatement and/or offsets not anticipated	➡	Abatement and/or offsets identified early in project planning
Measurement, monitoring, or source test methods not well established or anticipated	➡	Accurate recordkeeping, continuous monitoring, with plans for source testing, where needed

Peer Agency Models: South Coast AQMD

Exempt

- Non-production, bench scale research equipment and associated control equipment
- Laboratory testing and quality control testing equipment

Research Operations – Rule 441

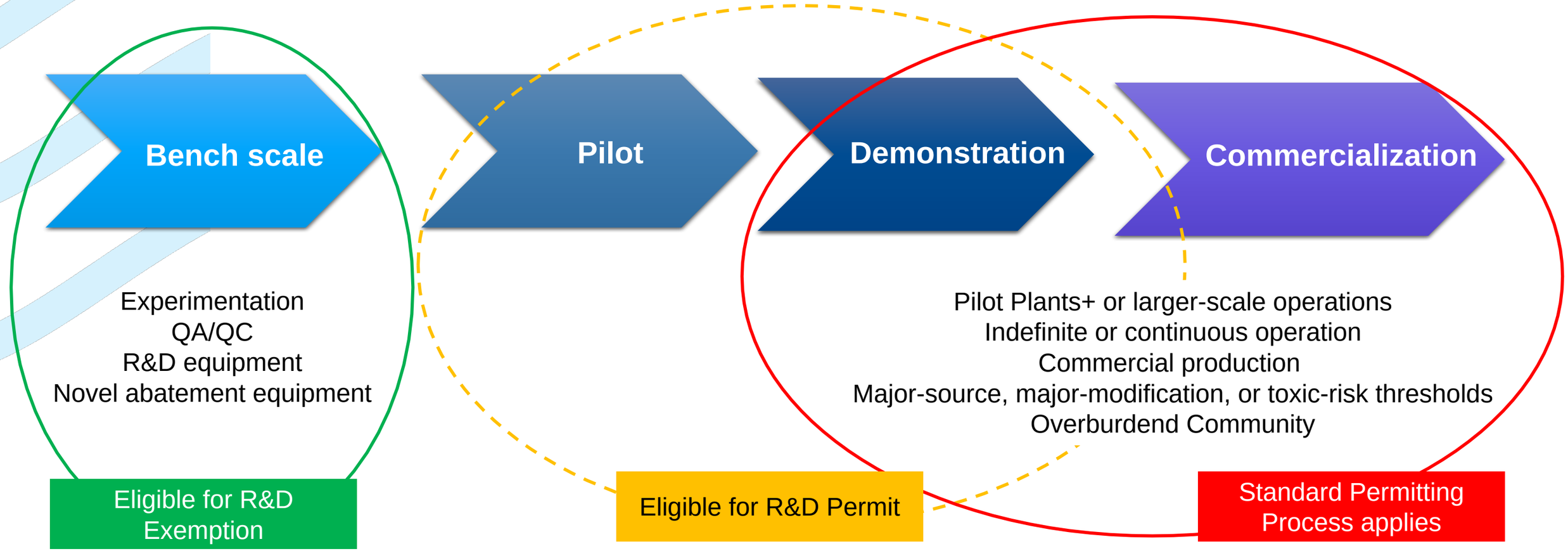
- Investigate, experiment or research that advances state of knowledge or state-of-the-art technologies
- 2-year maximum
- Subject to New Source Review

Peer Agency Models: New Jersey Department of Environmental Protection

New Jersey General Permit – 020A

- R&D Facility: new processes and products – no commercial sales
- +50 lbs/hr raw material
- 5 years
- Exclusions: formulas/products for multiple clients, combustion, exceeding 90 product/days per year

R&D Permitting Landscape



R&D Permitting Landscape (cont.)

- Multiple Pathways
  - Exemption
  - Temporary Permit
  - Operational Cap / Fixed Thresholds
  - Pre-approved Conditions
- Top Eligibility Concerns
  - Scale
  - Duration
  - Uncertainty
- Success Drivers
  - Eligibility is determined by staff
  - Objective testing > Subjective Decisions at intake
  - Applicant readiness is critical

Peer models narrow eligibility and enforce operating bounds

Considerations

- Develop internal policies, checklists and public guidance using existing authority
- Staff training and development
- Is three months realistic for R&D? What evidence should staff gather?
- Better outreach to projects through coordination with state demonstration and funding programs

Questions & Discussion

For more information:

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