



July 5, 2022

South Coast Air Quality Management District
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Submitted via email to: AQMPteam@aqmd.gov

RE: Comments on Residential and Commercial Combustion Source Measures in Draft 2022 Air Quality Management Plan (AQMP)

On behalf of the undersigned organizations, we appreciate the opportunity to comment on the residential and commercial combustion source measures in the Draft 2022 AQMP.

General Comments

Residential and commercial buildings are a major source of nitrogen oxide (NOx) emissions, and reductions in this sector from deploying zero-NOx-emission building appliances will be critical to attaining the 70 ppb 8-hour ozone National Ambient Air Quality Standard (NAAQS). We agree with the District that the “only way to achieve the required NOx reductions is through extensive use of zero-NOx-emission technologies across all stationary and mobile sources,” but the 2022 AQMP should also explicitly call for zero-NOx-emissions technology solutions for area sources in addition to stationary and mobile.¹

¹ The 2022 AQMP should take the same approach as outlined in the Air District’s 2022 Air Quality Management Plan Policy Brief: Climate Change and Decarbonization, where it states that in order to achieve the 87 percent reduction in NOx emissions below current levels required to meet the 2015 8 hour ozone standard by 2037, “widespread adoption of zero NOx emissions (ZE) technologies across all stationary, area, and mobile source sectors is needed.” See Cheung, Kalam, and Yanrong Zhu, Climate Change and Decarbonization, p.5, (June 2022); available at: <http://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/2022-air-quality-management-plan/combined-climate-change-and-decarbonization.pdf?sfvrsn=14>

We applaud the District’s approach of combining strong regulatory action with incentives. As we noted in a previous letter, incentives without strong regulations, which instead rely on voluntary compliance, have not been effective. While robust incentives are critically important, they must be matched with regulations that move all sources to zero-NOx-emissions to ensure equitable implementation.

With NOx emissions from federally regulated sources outpacing emissions from sources under state and local control, we believe that this should not be a reason for inaction or half measures on local sources, as the District is uniquely positioned given its strong regulatory authority. Given that steep reductions are needed to achieve attainment, due to years of incentive-only approaches and an overreliance on Section 182(e)(5) “black box” measures, the District should change course and lead in regulating sources within its jurisdiction, including appliances. It should focus on deploying zero-NOx-emission-technology through ambitious, feasible, and achievable regulatory action and incentives.

That said, **we strongly support the proposals for zero-NOx-emission appliance rules for residential and commercial appliances**; we outline the below recommendations for their inclusion into the AQMP for their implementation:

1. There must be a stronger commitment to deploy zero-NOx-emission solutions
2. Prioritize environmental justice communities first
3. Accelerate implementation dates starting with new construction
4. Initiate stakeholder working group for existing buildings
5. Zero-NOx solutions foster resiliency, reliability, and societal benefits
6. Eliminate the cost-effectiveness threshold

1. There must be a Stronger Commitment to Deploying Zero-NOx-Emission Solutions

The current proposal to shift to zero-NOx-emissions has tremendous potential, but only if measures set a clear path towards a transition to zero-NOx-emissions appliances through concrete milestones and targeted incentives aimed at helping low-income and environmental justice communities make the transition.

Unfortunately, the 2022 Draft AQMP, while claiming to focus on zero-NOx-emissions technology, still sets emissions reduction targets that continue to perpetuate combustion-based alternatives. The Emissions Reductions description for residential space heaters, for example, states “[t]he target of this regulatory approach is to implement zero-NOx-emissions technologies for 50 percent of the applicable sources and implement low-NOx space heating technologies in

conjunction with a mitigation fee for the rest [sic] 50 percent by 2037.”² Setting this low target for zero-NOx-emission appliance turn over makes little sense, and sets up the District for failure. It is unclear why the District takes this approach, as the District acknowledges the availability of zero-NOx-emission heat pump space heaters, while also acknowledging that certain “alternative” low-NOx technologies, like residential fuel cell water heaters, have yet to be implemented in the United States.³

Moreover, there are at least four rules from the 2016 AQMP that are still in the development phase.⁴ These include Rules 1147, 1147.2, 1153.1 and 1159.1— all of which are now slated for adoption and implementation in 2022.⁵ This backlog of rules creates a ripple effect by crowding the District’s rule forecast and making it difficult for rulemaking on new rules to get underway. Perhaps most concerning is that with scarce staff time and resources, these delayed rules fail to set the District up for success when it comes to meeting our clean air mandates—leaving the District on the hook for steep reductions as it is now. To highlight this, as with previously proposed control measure CMB-02, Table 1-2 in the AQMP shows the District’s commitment for Rule 1111 was emissions reductions in the amount of 1.1 NOx per day by 2023, yet the projected amount to be achieved from the final adopted rule amounts to a meager 0.01 tpd.

To avoid the failures of the past, the District needs to set a clear course towards zero-NOx-emission solutions. Allowing a loose structure to dole out exceptions will ensure that past failures are repeated. **For this reason, we strongly urge the District to consider revising the language of the proposals related to residential and commercial water heating, furnaces, and other cooking appliances to ensure that regulatory “off-ramps” do not undermine the rule. The target of the regulatory approach should be 100% zero-NOx-emission technology implementation—anything less than that runs the risk of perpetuating the status quo.** While the Draft 2022 AQMP suggests that the details of the rule will be worked out in the rulemaking process, for a zero-emission goal to work, the District must set out the clear expectation that alternatives to zero-NOx emissions will not occupy half the implementation strategy or worse, become the standard.

Additionally, **we call on the District to expedite its rulemaking schedule by prioritizing rules over discretionary programs.** A plan is only as good as the outcomes it is able to achieve. In order to properly set goals and measure success, rules must be set into place and become operational. The District has an opportunity to make good on its promise to do everything within

² Draft 2022 AQMP Appendix IV-A, South Coast AQMD’s Stationary and Mobile Source Control Measures, p.IV-A-23, (May 2022); available at <http://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/2022-air-quality-management-plan/appiv-a.pdf?sfvrsn=18>

³ *Id.*, at IV-A-11.

⁴ *Id.* at 1-15

⁵ *Id.*

its control to achieve as many emissions reductions across multiple sectors as possible. We therefore ask the District to make good on its commitments to emissions reduction in control measures for the 2022 AQMP by more aggressively committing to zero-NO_x-emission goals and expediting the timeline for implementation.

2. Prioritize Environmental Justice Communities

In alignment with District goals on equity, **we must prioritize low-income and environmental justice communities through targeted incentive programs and other investments for the early adoption of zero-NO_x-emission technologies.** Targeting incentives in this way will ensure that communities most in need of the affordability, quality of life, and public health benefits of zero-NO_x-emissions appliances have access to them.

However, incentives or mitigation fees should not replace strong regulations. Strong regulations and incentives must work in tandem to both force the market to shift while ensuring the market transition is equitable.

We applaud the District's changing eligibility requirements for its CLEANair Furnace Rebate Program to exclude combustion technologies, only funding heat pumps instead. **We recommend the District increase the amount of funding for this program,** but would oppose efforts to secure funding for this program by weakening regulations through weak targets and mitigation fees as suggested by the District in its Policy Brief.

We also recommend an increase in the share dedicated to environmental justice and low-income households from 25% to 70%. The program should additionally cover the costs for panel, wiring, and necessary electrical upgrades for low-income and environmental justice households.

3. Accelerate Implementation Dates Starting with New Construction

We appreciate and strongly support staff's proposal on moving forward with a zero-NO_x-emission rule for residential and commercial space and water heaters. Given the District's extreme nonattainment status and the risk of sanctions under the Clean Air Act, there is a compelling need to accelerate the timeline on the implementation dates for the space and water heating standards to show that the District is serious about achieving compliance. Additionally, we would recommend bifurcating new construction versus existing construction in rulemaking, with a separate, more expedited effort for new construction. We also believe that the District should address other NO_x-emitting appliances, such as gas stoves, especially for new construction.

Our recommendations are as follows:

- **New construction: residential/commercial building appliances** should be zero-NOx-emission starting in 2024 to align with already existing all-electric new construction mandates across California and building code updates, and regulations should cover space heating, water heating, cooking appliances, and all other fossil fuel appliances. Failing to address cooking and other appliances for new construction risks continued expansion of the gas system, and exacerbating energy unaffordability while harming public health by allowing buildings to continue emitting, making it harder to achieve clean air mandates.
- **Existing construction: residential water heaters and space heaters** should be zero-NOx-emission no later than 2027. This would align in part with regulations proposed by the Bay Area Air Quality Management District and should help provide needed scale to expand the market for clean technologies.
- **Existing construction: commercial water heaters and space heaters** should be zero-NOx-emission no later than 2030, to align with proposals by the California Air Resources Board under its State Implementation Plan (SIP).

4. Initiate Stakeholder Working Group for Existing Buildings

While regulations on new construction are low-hanging fruit to avoid increasing emissions, regulating existing buildings will require more intentional and cross-cutting planning to address installation barriers and prioritizing equity.

As we mentioned in our previous letter, with the long-term phase in date of zero-NOx-emission standards for appliances, the **District should convene a stakeholder working group process to engage community, environmental, environmental justice, tenants rights, labor, manufacturing, and utility groups, and other local and state entities to develop and implement plans and policies to equitably advance zero-NOx-emission technologies across the District.** Considerations should include, but not be limited to, assessing installation, affordability, grid reliability, and accessibility barriers, anti-displacement and affordability protections, quality installations, and opportunities for local high-road jobs. Engaging with stakeholders to develop equity-centered strategies and programs will help ensure that low-income communities are prioritized in the clean energy transition and can benefit directly from any public investments.

This coordination should also include municipalities, such as Los Angeles and Riverside, to ensure the regional effort is informed by local action and leadership.

5. Zero-NOx Solutions Foster Resiliency, Reliability, and Societal Benefits

With extreme weather events more frequent due to the intensifying effects of climate change, there is a greater need to enhance climate resilience and maintain grid reliability. This is especially critical for low-income and environmental justice communities who are disproportionately impacted by extreme weather living in hotter neighborhoods, with inefficient or no air conditioning and scarce access to solar, electricity storage, and other distributed clean technologies that enhance resiliency.

The District can help keep communities safe from extreme heat and reduce energy burden by leveraging building decarbonization strategies. For example, in assessing the need like in Los Angeles County, it is estimated that 3 million people across 1 million households do not have air conditioning. In Riverside County, where the energy burden for low-income and environmental justice is twice the median average in the region, they cannot afford to run cooling systems because of high utility bills, which are exacerbated by inefficient cooling systems.

With building decarbonization, we have a unique opportunity to provide solutions that can safeguard reliability, enhance resiliency, and reduce climate emissions. **Building decarbonization through heat pumps is the starting point for creating healthy and resilient homes for vulnerable households that are on the frontlines of climate change and need these benefits the most.** Heat pump investments ought to be leveraged as a vehicle to align additional financial resources to make other investments, such as solar, storage, and insulation.

6. Eliminate the Cost-Effectiveness Threshold

We agree with the District that the Clean Air Act “does not contemplate cost as a consideration in meeting NAAQS and Supreme Court case law expressly prohibits the U.S. EPA from considering costs in establishing NAAQS.” While we read the proposed cost-effectiveness thresholds as applying only to stationary and mobile sources, and not area sources, we don’t agree that the cost-effectiveness threshold is required by statute. Health and Safety Code § 40922 does require the District to assess and rank the cost-effectiveness of each measure, but having an arbitrary threshold inappropriately elevates one element—related only to costs—among the many required by statute. This would only serve to dilute the importance of public health, social, and climate benefits associated with critical strategies and skew decision-making towards economic considerations.

Moreover, given that most cost-effective measures have already been implemented, having an arbitrary threshold puts the District in an unreasonable position of rejecting measures and undermining future rulemakings critical to achieving attainment. **Therefore, we urge the District to eliminate the cost-effectiveness threshold.** Based on statute, meeting the

cost-effectiveness threshold should not be a requirement, but rather a factor that needs to be balanced among others.

The District aptly notes that “while the transition to cleaner technologies will be expensive, the public health benefits associated with meeting the standard will be substantial. There will also be significant co-benefits ... resulting in significant climate change benefits”. Given the substantial reductions still needed in the region, the District should explore all opportunities to achieve additional reductions from all sectors, while providing robust analysis of public health and climate benefits alongside the socioeconomic considerations.

Conclusion

In summary, we strongly support zero-NOx emission appliance standards for residential and commercial end uses, accompanied by increased and targeted incentives for environmental justice communities. We would oppose efforts to weaken regulations and rely on mitigation fees for increasing funding, however. We encourage the District to accelerate the standards’ implementation dates, especially for new construction, and to initiate a stakeholder working group to ensure equitable and affordable rule implementation. The public health benefits of zero-emission appliance control measures, including resiliency and reliability benefits, should be weighed. The arbitrary cost-effectiveness threshold, on the other hand, is not supported by statute and should be eliminated.

Thank you again for the opportunity to comment. We look forward to continuing to collaborate with you on this critical plan.

Sincerely,

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