Green & Healthy Homes Initiative®

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Chair Delgado & Members of the Governing Board
South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, CA 91765

Re: Proposed Amended Rules 1111 and 1121 – Strong Support for this Regulation and its Benefits for Improved Air Quality and Health Outcomes

Dear Chair Delgado and Members of the Governing Board,

On behalf of the Green & Healthy Homes Initiative, the nation's largest healthy housing organization, I write in support of Proposed Amended Rules (PARs) 1111 and 1121 as critical measures to reduce emissions of Nitrogen Oxide (NO_x) and other harmful pollutants in the South Coast Air Basin. PARs 1111 and 1121 will bring about cleaner air and healthier communities in the South Coast Air Quality Management District.

The Green & Healthy Homes Initiative's mission and work is focused on creating healthy, safe, and resilient homes for all Americans, and advancing health equity in vulnerable communities. Founded in 1986 to address the toxic legacy of lead on Baltimore's children, GHHI led the advocacy for legislation, policies, and direct service programs which resulted in a 99% decline in childhood lead poisoning in Maryland. As the organization evolved, we expanded our mission towards advocating for a comprehensive approach to delivering whole house interventions as the most equitable and effective strategy to achieve public health goals related to environmental and behavioral hazards in the home.

Through its direct services, research, and policy work, GHHI is a proven leader in promoting the health, economic and social benefits of upgrading existing housing through comprehensive interventions that deliver healthy, safe and energy efficient housing for low-income residents. By delivering a standard of excellence in its work, GHHI aims to eradicate the negative health impacts of unhealthy housing and unjust policies for children, seniors, and families to ensure better health, economic and social outcomes. GHHI is advocating for AQMD to improve a key social determinant of health – appliance pollution - by advancing PARs 1111 and 1121.

Combustion of fossil fuels in homes and businesses in the region releases over 13,000 tons of nitrogen dioxide and more than 1,200 tons of fine particulate matter each year according to the EPA.[1] These pollutants are harmful to human health.

NO_x emissions are associated with a range of harmful health impacts for those exposed to elevated concentrations, including aggravation of respiratory diseases that can cause acute medical episodes (such as asthma-related hospitalizations and emergency room visits) for short term exposures and increased risk of the development of asthma and susceptibility to respiratory infections for long term exposures.[2] Studies across the country have found disproportionate exposure among communities of color to NO_x emissions as well as other air pollutants.[3,4] Studies show consistent associations between higher pollution levels and detrimental respiratory effects in children from exposure to pollutants, including worse lung function for children with asthma.[5] Exposure to NO_x increases mortality risks from all causes, including respiratory diseases, COPD, and lung cancer.[6]

PARs 1111 and 1121 would result in the reduction and elimination of air pollution from space and water heating appliances that pose risks to both the environment and human health. These rules would also protect the health of the most vulnerable populations at increased risk for the cardiovascular health effects associated with exposure to indoor particulate matter including children with asthma, elderly adults, and adults with asthma, chronic obstructive pulmonary disease (COPD), and heart disease.[7] Avoidance of harmful exposures is a key component of national and international guideline recommendations for management of asthma.[8] Vulnerable

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[1] https://www.epa.gov/air-emissions-inventories/2020-national-emissions-inventory-nei-data

[2] Orellano, P., Reynoso, J., Quaranta, N., Bardach, A., & Ciapponi, A. (2020). Short-term exposure to particulate matter (PM_{10} and $PM_{2.5}$), nitrogen dioxide (NO_2), and ozone (O_3) and all-cause and cause-specific mortality: Systematic review and meta-analysis. *Environment international*, *142*, 105876. https://doi.org/10.1016/j.envint.2020.105876

Huangfu, P., & Atkinson, R. (2020). Long-term exposure to NO_2 and O_3 and all-cause and respiratory mortality: A systematic review and meta-analysis. *Environment international*, *144*, 105998. https://doi.org/10.1016/j.envint.2020.105998

[3] Gallagher, C. L., & Holloway, T. (2022). US decarbonization impacts on air quality and environmental justice. Environmental Research Letters, 17(11), 114018.

[4] Tessum, C. W., Paolella, D. A., Chambliss, S. E., Apte, J. S., Hill, J. D., & Marshall, J. D. (2021). PM2.5 polluters disproportionately and systemically affect people of color in the United States. Science advances, 7(18), eabf4491. https://doi.org/10.1126/sciadv.abf4491

[5] Belova, A., Dagli, R., Economu, N., Hartley, S., Holder, C., & Hubbard, H. (2022). Literature review on the impacts of residential combustion final report. https://www.lung.org/getmedia/2786f983-d971-43ad-962b-8370c950cbd6/ICF_Impacts-of-Residential-Combustion_FINAL_071022.pdf

[6] Kasdagli, M. I., Orellano, P., Pérez Velasco, R., & Samoli, E. (2024). Long-Term Exposure to Nitrogen Dioxide and Ozone and Mortality: Update of the WHO Air Quality Guidelines Systematic Review and Meta-Analysis. International journal of public health, 69, 1607676. https://doi.org/10.3389/ijph.2024.1607676

[7] Global Initiative for Asthma. GINA Workshop Report: Global Strategy for Asthma Management and Prevention.; 2006.

[8] National Heart, Lung, and Blood Institute, National Asthma Education and Prevention Program. Expert Panel Report 3: Guidelines for the Diagnosis and Management of Asthma.: National Institutes of Health, US Department of Health and Human Services; Full Report 2007. NIH Publication No. 07–4051.

populations across Los Angeles, Orange, Riverside, and San Bernardino Counties include more than 3.7 million children, 2.7 million adults over 65, and 181,000 pregnant women. In addition, there are over 237,000 cases of pediatric asthma, 1.2 million cases of adult asthma, 573,000 cases of COPD, and 975,000 cases of cardiovascular disease. All of these vulnerable populations are particularly susceptible to the health impacts of air pollution.

The staff socioeconomic assessment estimates over $25 billion in health benefits from these rules in the period 2027-2053. The impact of the rules on the health of South Coast residents cannot be understated: 2,490 deaths prevented, 10,200 cases of newly onset asthma prevented, 170,000 school loss days avoided, 100,000 work loss days avoided, and many other benefits. These benefits highlight the ongoing health hazards posed by combustion appliances, as well as the significant opportunity in improving air quality to promote South Coast communities' health and wellbeing.

While combustion appliances pose health and environmental risks, zero emissions appliances for space and water heating are a safe and proven technology for households. Specifically, heat pumps are a zero-emission space heating technology that is 2.2 to 4.5x more efficient than ENERGY STAR gas furnaces on an annual basis. Heat pumps have no onsite emissions, and replacing gas furnaces with heat pumps in California would reduce building space heating emissions in the first year by 72%.[9] The viability of heat pumps as a healthy and efficient technology for space heating makes addressing appliance pollution an attractive target for primary disease prevention. The staff socioeconomic report indicates that these rules will provide net savings on household utility bills and also be a net job creator for the region.

In conclusion, by passing PARs 1111 and 1121, AQMD will take a decisive step toward cleaner air and healthier communities in the South Coast Air Basin.

This ruling not only tackles the immediate public health crisis caused by polluted air and fossil fuel emissions but also invests in long-term solutions that reduce greenhouse gas emissions and improve air quality for young children and families. We urge the Board to support this critical ruling and take a decisive step toward creating a healthier, more equitable California for all.

Sincerely,

DocuSigned by:
Ruth Ann Norton
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Ruth Ann Norton

President and CEO

Global Initiative for Asthma. GINA Workshop Report: Global Strategy for Asthma Management and Prevention.; 2006.

[9] https://rmi.org/now-is-the-time-to-go-all-in-on-heat-pumps

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