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March 20, 2025

Via Email: pcampbell@aqmd.gov, jvinh@aqmd.gov

Mr. Peter Campbell
Ms. Jennifer Vinh
Planning, Rule Development, and Implementation
South Coast Air Quality Management District
21865 Copley Drive, Diamond Bar, CA 91765

RE: Proposed Amended Rule 1111 Reduction of NOx Emissions From Natural Gas-Fired Furnaces Proposed and Amended Rule 1121 – Reduction of NOx Emissions From Small Natural Gas-Fired Water Heaters

Dear Mr. Campbell and Ms. Vinh,

Rheem Manufacturing Company (Rheem) appreciates the opportunity to submit the following comments in response to the South Coast Air Quality Management District's (SCAQMD) Third Preliminary Draft Proposed Amended Rule 1111 Reduction of NOx Emissions from Natural Gas-Fired Furnaces and Third Preliminary Draft Proposed Amended Rule 1121 – Reduction of NOx Emissions from Small Natural Gas-Fired Water Heaters.

Rheem is an industry leader in total heating, cooling, refrigeration and water heating solutions and one of the few global brands with product offerings covering residential and commercial heating, cooling, conventional and hybrid storage water heaters (HPWH), tankless water heaters, solar water heating systems, pool and spa heaters, commercial boilers, residential hydronic and geothermal systems, commercial refrigeration products, indoor air quality accessories, and replacement parts for all categories. Rheem is headquartered in Atlanta, Georgia, and has U.S. based manufacturing facilities in Alabama, Arkansas, California, Connecticut, and North Carolina. The company also operates distribution facilities throughout the US, Canada, and many other countries around the world. Rheem manufactures commercial boilers and pool heating equipment at the Raypak facility in Oxnard, CA, which are affected by SCAQMD rules.

Rheem appreciates SCAQMD staff's efforts to update the Rules 1111 and 1121 and specifically to include and consider stakeholder input. Rheem supports the intention to provide consumers, plumbers, and contractors with fuel and equipment choice; recognizing complications with emergency replacements, electrical panel upgrades, added air-flow provisions, and higher equipment and installations costs. However, Rheem would like to express and reiterate our concerns regarding the definitions, the compliance date basis, the inappropriately applied mitigation fee, and the burdensome new labeling and reporting requirements. Rheem also



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offers specific improvements and recommendations including a more straightforward mitigation fee approach.

Definitions

Rheem notes that the definition of “NEW BUILDING” in the second preliminary drafts of Rules 1111 and 1121 had “or any subsequent version of the Building Code.” This statement was removed from the NEW BUILDING definition in Rule 1121 but not Rule 1111. Rheem recommends it be added to the definition in Rule 1121.

The newly proposed “ZERO-NOx EMISSION UNIT” definitions include “heating capacity equivalent to [Furnaces or Water Heaters] subjected to this rule.” While Rheem understands the intent of the definitions is to apply to units that are a direct replacement for a natural gas-fired unit, the use of “heating capacity” and “equivalent” are troublesome. Heating capacity is typically just input rate multiplied by steady-state efficiency. For water heaters, a typical gas-fired storage water heater can be replaced with an electric resistance or heat pump storage water heater, which both have significantly less “heating capacity” than a gas-fired storage water heater;¹ or an electric instantaneous water heater, which typically has a much higher “heating capacity” than a gas-fired storage water heater.² Zero-NOx storage water heaters can replace a gas-fired storage water heaters but have a longer recovery times due to the lower heating capacity. Zero-NOx instantaneous water heaters heat water as it flows through the unit, so require a much larger heating capacity as the time to heat is so short. As neither zero-NOx water heater solution has an equivalent heating capacity to the gas-fired storage water heaters covered by Rule 1121, Rheem requests SCAQMD clarify what technologies and ranges within a technology would constitute a “ZERO-NOx EMISSION UNIT.” Rheem notes that if SCAQMD adjusts the mitigation fee approach as described elsewhere in these comments, then the reporting of ZERO-NOx EMISSION UNIT data may not be necessary.

Regarding scope of covered furnaces, Rheem supports SCAQMD retaining the less than 175,000 British thermal units (Btu)/ hour scope for furnaces and not increasing to include larger commercial furnaces at this time.

Requirements

Rheem supports aligning the existing building water heater compliance date with the gas-fired instantaneous compliance date from Rule 1146.2 of January 1, 2029.

¹ Rheem estimates that the range of heating capacities for gas-fired storage water heaters to be between 20-60 kBtu/h (32 kBtu/h average), electric resistance storage water heaters to be between 10-40 kBtu/h (16 kBtu/h average), 120V heat pump water heaters to be between 5-17 kBtu/h (9 kBtu/h average), and 240V heat pump water heaters to be between 10-38 kBtu/h (21 kBtu/h average). Heating capacity for heat pump water heaters includes heating from the heat pump and electric resistance elements.

² Rheem estimates that the range of heating capacities for electric instantaneous water heaters that can replace a gas-fired storage water heater (*i.e.*, residential-duty commercial electric instantaneous water heaters) to be between 36-120 kBtu/h (72 kBtu/h average).



Rheem recommends that the new building compliance date be based on the permit application date rather than the construction or alteration completion date. Buildings permitted now may not complete construction by January 1, 2027. Rheem expects construction to be slowed somewhat due to the number of homes that will need to be rebuilt following the recent wildfire damage. Rheem recommends amending exemption (h)(2)(C) from Rule 1111 and exemption (h)(C) from Rule 1121 from “Date of Adoption” to “January 1, 2027.”

Alternative Compliance Options

Rheem appreciates SCAQMD providing a compliance pathway that allows for consumer choice. However, Rheem has strong concerns regarding mitigation fee application, structure, and potential effectiveness.

As proposed, the mitigation fee is misapplied. Any fee imposed on the manufacturer, rather than the installer, has a diluted (if any) effect on the adoption of zero-NOx technology. Manufacturers make a variety of models available to the market and fulfill the demand as it is called for by the channel, which is comprised of distributors, wholesalers, dealers, contractors, and installers. A fee imposed per unit sold by the manufacturer does little to alter market demand and has little bearing on the volume of equipment manufacturers supply to fulfill the channel requests. Rheem requests SCAQMD reconsider applying the mitigation fee at the point of sale. This would ensure that furnaces and water heaters sold within the air district are accounted for and that the fee can be directly associated with the choice of product. Further, Rheem recommends working with the local gas utilities to cover the cost of the mitigation fees.

The escalation structure of the mitigation fee is also highly problematic. A critical aspect of any fee or incentive—at all parts of the market channel—is certainty and predictability. Any variable that stands to affect the market value of new equipment must be known in advance. As proposed, the mitigation fee is applied to the manufacturer at the end of year and possesses an uncertainty of between \$50 and \$500 per unit. Yet the manufacturer must predict this when offering at the first step in the distribution channel, in a way that accurately factors any applicable fees, including any other fees that may be assessed from Rule 306. Further, it should be understood that these fees are passed through the distribution channels and get compounded with each step ultimately impacting the consumer cost. Rheem does not support the proposed mitigation fee escalation if the sales targets are not met. Manufacturers cannot fully predict or force demand, so all mitigation fees are expected to be passed through to the consumer. A more straightforward approach would be to keep the mitigation fee constant for a given period and adjust it every few years to align with the gas-fired phasedown that is desired by SCAQMD. Rheem understands that the SCAQMD already has an accurate estimate of the number of water heaters and furnaces installed in their jurisdiction. SCAQMD can estimate the number of replacements each year as this shouldn’t change dramatically year over year. Based on mitigation fees collected, program effectiveness can be gauged, and mitigation fee changes can be assessed. Moving to a single fee removes the need for a manufacturer to submit

confidential business information, which may inappropriately be used outside of determining compliance with Rules 1111 and 1121. When based on manufacturer reported sales, any public statement on the effectiveness of Rules 1111 and 1121, including the number of units installed or mitigation fees collected, will be problematic and result in public disclosure of confidential business information.

Sections (f)(3)(A) of Rule 1111 and (f)(2)(A) of Rule 1121 address when the “percentage of [Furnaces or Water Heaters] sold is ***greater than*** the [...] Sales Target” and sections (f)(3)(B) and (f)(2)(A) address when the “percentage of Zero-NOx Emission Units sold is ***greater than*** the [...] Sales Target.” Rheem requests clarification on what happens with the sales target exactly meets the sales target.

Rheem requests that a sample filled out form 400A be provided as the form appears to not have been developed for purposes related to this application. Rheem also requests a sample fee calculation be provided. Rule 306 has several different fees, including, but not limited to, filing, plan evaluation, and inspection. Given the many units installed within the SCAQMD jurisdiction each year, Rheem expects inspection fees, if assessed, to quickly become greater than the mitigation fee.

Section (f)(2)(E) of Rule 1111 and section (f)(1)(E) of Rule 1121 require a report and mitigation fee pursuant to (g)(2) or (f)(1), respectively, to be paid every year, yet sections (g)(2)(A) and (f)(1)(A) require filing an alternate compliance plan by November 1, 2026. Rheem understands these requirements to mean that a new compliance plan should be submitted each year. If so, Rheem recommends “November 1, 2026” be amended to “no later than November 1 the year prior to the calendar year utilizing this alternative compliance option.” Alternatively, if the intent is to require a manufacturer to lock in the compliance option pathway in 2026, then Rheem does not support the requirement. This would essentially require payment of Rule 306 fees in perpetuity even after a manufacturer stops producing NOx emitting units. Rheem notes that section (f)(1)(B) of Rule 1111 appears to allow selection of the compliance option each year for mobile home furnaces.

Section (g)(2)(B) of Rule 1111 and section (f)(1)(B) of Rule 1121 state that “The manufacturer sells, ***or enables*** distributors, retailers, Resellers, or Installers to sell, Zero-NOx Emission Units into or within the South Coast AQMD.” Rheem understands this to mean that only manufacturers with electric and gas products can use the alternate compliance option. Rheem does not understand the requirement to mean that a manufacturer must compel the distribution channel to comply. Manufacturers have no ability to force customers to buy a specific product, which has traditionally been the role of government.

Rheem notes that the SCAQMD jurisdiction is not an isolated market and encourages SCAQMD to establish its prohibitions and fees in a way that discourages noncompliance by way of obtaining equipment outside of the district.



Labeling, Recordkeeping, and Reporting

Rheem recommends that the “and” in section (g)(1)(B)(ii) of Rules 1111 and 1121 be amended to “or.” The intent of this section appears to be to provide information to the consumer, not to overexpose them to regulatory language.

Section (g)(1)(C)(ii) of Rules 1111 and 1121 sets a single date for setting mobile home unit label language. After the Table 2 compliance dates, gas-fired mobile home units can only be installed in existing homes. This makes half of the label unnecessary. Rheem recommends removing section (g)(1)(C)(ii) from Rules 1111 and 1121. Similarly, section (g)(4)(B)(ii) of Rule 1111 and section (g)(3)(B)(ii) of Rule 1121 require alternate language be submitted prior to October 1, 2025. Rheem recommends these sections also be removed. Further, there are other jurisdictions establishing zero NOx and zero GHG regulations and are requiring labelling. If we can't update the labeling as needed new regulations go into effect, then compliance with these labeling provisions will be unnecessarily burdensome.

Thank you for the opportunity to provide these comments. If there are any questions, please contact me directly.

Sincerely,

James Phillips
Senior Regulatory Affairs Manager
Rheem Manufacturing Company

cc: Allison Skidd, Joe Boros, Karen Meyers, Matt Lattanzi

