



October 17, 2024

Heather Farr  
Planning and Rules Manger  
South Coast Air Quality Management District  
21865 Copley Drive  
Diamond Bar, CA 91765

Re: Proposed Rule 1121

Dear Ms. Farr:

On behalf of Bradford White Corporation (BWC), we would like to thank you for the opportunity to comment on South Coast Air Quality Management District's (SCAQMD) proposed Rule 1121 and working groups.

We have compiled our comments and questions to the proposed rule 1121 (PAR 1121), supporting documents and analysis.

### **General**

BWC has reviewed PAR 1121 and participated in all the working groups lead by SCAQMD staff. We appreciate staff's consideration of our comments and those of other stakeholders being addressed in the working groups, as well as staff's due diligence conducting site visits. We have compiled comments specific to PAR 1121 language below. In addition to these comments, after completing site visits with staff members and participating in the most recent working group meeting on August 15, 2024, BWC has significant concerns with staff's feasibility assessment of replacing water heaters under PAR 1121 and have provided those comments as well.

### **Rental Equipment**

We have concerns regarding the two exceptions outlined in PAR 1121 Section(f), subsection 1&2. We appreciate the creativity by allowing rental units, however we believe this solution may prove to be incredibly complicated and costly for homeowners and renters. TECH Clean California ran a quick start grant for this same idea and, importantly, covered the cost of the temporary water heater and labor through the program. If the District believes rental equipment will enable an affordable transition, then BWC recommends the District develop, administer and fund a program, as opposed to relying on the market to

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create such an offering. We strongly encourage the District to read the quick start grant report<sup>1</sup> and discuss with project stakeholders.

### **Product Labeling**

Similar to rule 1146.2, the District proposes to require that manufacturers affix labels to equipment to inform purchasers and installers. As stated in our letter dated January 19, 2024 and repeated below, we strongly believe the proposed labeling requirement, as written, is unnecessary to enforce the rule and will add significant burdens to compliance for manufacturers of regulated products:

*“SCAQMD currently maintains a qualified products list<sup>2</sup> for all manufacturer water heating and boiler models certified under Rule 1146.2. To enforce the proposed Zero NOx implementation dates, SCAQMD could simply modify their table to show models that are allowed in new construction and models that are only allowed in existing buildings. Secondly, new construction requires plans to be submitted to building jurisdictions to review, as well as Title 24 energy modeling. SCAQMD can work with building jurisdictions within their territory that review and approve project plans to enforce the use of Zero NOx water heating and boiler equipment. Lastly, new construction projects are permitted and require building inspectors to approve the construction. If a non-compliant product were to be installed, it could ultimately be flagged for removal by the building inspector.”<sup>3</sup>*

Unlike products in scope of Rule 1146.2, the regulated product class of water heaters and boilers under 75,000 Btu/hr input, are rarely if at all used in new construction in California. In 2016, California adopted instantaneous gas water heaters as the standard design for newly constructed homes, and multifamily apartments.<sup>4</sup> We challenge the district’s assumption that a label is necessary to enforce installations in new construction versus existing buildings for this product class, and respectfully request that the district validate this through developer interviews, permit records and the Energy Commission through Title 24 project submissions.

If the District must continue to use labels as an enforcement mechanism, we suggest that the label language in PAR 1121 be the same as the language adopted in Rule 1146.2 “If Installed in South Coast AQMD: For Installation and Use in Existing Buildings Only”. The suggested language in PAR 1121 “If Installed in South Coast AQMD: 1) After January 1, 2026, shall not be sold for installation in new buildings 2) After January 1, 2027, only for installation in mobile homes; and 3) After January 1, 2030, not compliant for use and installation in South Coast AQMD.” is lengthy. Moreover, the proposed language also implies all labeled equipment is suitable for use in mobile homes. Manufacturers produce water heating products that are specifically designed for and certified to be used safely in a mobile home. The proposed language for the label will create confusion among installers and may result in equipment not certified for use in mobile homes being installed in a mobile home. Despite rule 1146.2 being finalized, the same concern exists for the required label on instantaneous water heater products, for use in mobile homes.

### **Product Reporting**

<sup>1</sup> [Barnett Plumbing - Final Report 230810.pdf \(appack-app-tpr-prod-privates3bucket-tvt5lpzx0gqm.s3.amazonaws.com\)](#)

<sup>2</sup> [Rule 1146.2 - Emissions of Oxides of Nitrogen from Large Water Heaters and Small Boilers and Process Heaters \(aqmd.gov\)](#)

<sup>3</sup> [bradford-white-corporation-comment-letter---01-19-2024.pdf \(aqmd.gov\)](#)

<sup>4</sup> [Building Energy Efficiency Standards for Residential and Nonresidential Buildings for the 2016 Building Efficiency Standards | California Energy Commission](#)

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BWC does not agree with the newly proposed annual reporting requirements for manufacturers. As a manufacturer, we have limited influence or knowledge as to where a product will ultimately be installed after it is manufactured. Manufacturers have limited capability to control a product's final installation location.

Regarding Section (g), Subsection (4), Paragraph (E) of PAR 1121, we wish to emphasize that the data that District staff is requiring to be provided is information that product manufacturers keep very closely guarded. To that end it is unclear to BWC as to why District staff believes this information is necessary to fulfill their enforcement obligations related to this rule since the current rule has been effectively enforced without it.

We believe District staff should clarify that manufacturers are permitted to work through representative trade associations to provide this information in an aggregated format. Additionally, we strongly urge District staff to add language to this paragraph of PAR 1121 that clarifies that the District will treat such data as Confidential Business Information (CBI) that will not be shared by the District with any third parties. Apart from clarifying the allowance of this common practice, such language would also provide assurances to manufacturers that they are not being compelled to directly or indirectly disclose CBI, specific to their organization, that other parties would not otherwise have access.

If reporting is to be required, we ask that the District use the manufacture date of equipment, consistent with how other regulatory bodies implement such requirements, including the Bay Area Air Quality Management District<sup>5</sup>, and not the date of sale or installation.

### **Feasibility Analysis**

On August 15, 2024, staff presented their findings from conducting site visits and analyzing different installation scenarios. The presentation focused on 120-volt Heat Pump Water Heaters and suggested that these products were a feasible alternative to natural gas in every scenario evaluated. We disagree with staff's conclusion that a 120-volt product is comparable in hot water utility to a commonly seen ultra-low NOx 40-gallon atmospheric vent storage water heater. We have provided a product comparison showing that end users access to hot water would be reduced by over 50%.

	URG140T6N <sup>6</sup>	RE2H50S10-CON <sup>7</sup>	PROPH65 T0 RH120-M <sup>8</sup>	HPTV-66 <sup>9</sup>
Fuel	Natural Gas	Heat Pump Electric 240v	Heat Pump Electric 120v	Heat Pump Electric 120v
Rated Storage Volume (US Gal)	38	45	59	68
First Hour Rating	64	65	63	76
Usage Pattern	Medium	Medium	Medium	High
Recovery @ 90°F Rise (US Gal)	37	24	Not Listed	Not Listed

<sup>5</sup> [20230315\\_rg0906-pdf.pdf \(baaqmd.gov\)](https://www.baaqmd.gov/20230315_rg0906-pdf.pdf)

<sup>6</sup> [residential\\_gas\\_ultra\\_low\\_nox\\_atmospheric\\_vent\\_naeca\\_compliant\\_specsheet\\_1113.pdf](https://www.naeca.com/residential_gas_ultra_low_nox_atmospheric_vent_naeca_compliant_specsheet_1113.pdf)

<sup>7</sup> [residential\\_heat\\_pump\\_aerotherm\\_re\\_series\\_con\\_specsheet\\_1901.pdf](https://www.reh.com/residential_heat_pump_aerotherm_re_series_con_specsheet_1901.pdf)

<sup>8</sup> [RH-PIHP-SC-REV5\\_Plus-without-Leakguard-0627B.pdf \(rheem.com\)](https://www.rheem.com/RH-PIHP-SC-REV5_Plus-without-Leakguard-0627B.pdf)

<sup>9</sup> [ARXSS00123.pdf \(hotwater.com\)](https://www.hotwater.com/ARXSS00123.pdf)

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	URG140T6N <sup>6</sup>	RE2H50S10-CON <sup>7</sup>	PROPH65 T0 RH120-M <sup>8</sup>	HPTV-66 <sup>9</sup>
Recovery @ 60°F Rise (US Gal)	Not Listed	Not Listed	12	Not Listed

While it is seemingly feasible to select a HPWH product, either 240-volt or 120-volt, based on a comparable first hour rating, this selection overlooks an important factor, which is the ability for the heater to recover hot water. The table shows a comparison of four products, a 40-gallon ultra-low NOx natural gas atmospheric vent heater, a 50 gallon 240-volt HPWH, a 65 gallon 120-volt HPWH and a 66 gallon 120-volt HPWH.

- A 240-volt HPWH has a gallon per hour (GPH) recovery that is 35% lower than the baseline natural gas unit.
- A 120-volt HPWH has a has a GPH recovery that is 68% lower than the baseline natural gas unit.

Recovery is important as it determines how long an end user might have to wait for hot water if their tank has been depleted. A 40-gallon ultra-low NOx natural gas atmospheric vent heater can recover almost an entire tank of hot water in an hour. A 240-volt HPWH, assuming ideal conditions and use of a common 4,000 watt heating element working in concert with a compressor, would take nearly two hours or twice as long. A 120-volt HPWH, assuming ideal conditions and no heating element, would take nearly five hours: five times as long to recover. While a 120-volt HPWH may serve a purpose for niche applications where hot water demand is low, it cannot be considered a feasible solution in all cases as emphasized by the District in their analysis as it is far more likely leave many homeowners and renters in the District without adequate hot water for a substantial part of the day.

As the District prepares to adopt PAR 1121, it is essential that the District also prepare to inform the public of the benefits and drawbacks of transitioning to zero NOx water heating products. Consumers must be made aware of all potential installation challenges that will allow them to make an informed decision on the products they choose to have installed in their home, often at a substantial cost. As a manufacturer of these products, BWC recognizes there is no "one-size-fits all" solution to the obstacles that homeowners and renters may encounter. For that reason, we offer many unique products that are designed to meet homeowners and renter needs in a variety of installations. We additionally provide tools for installers, such as RightSpec®10 to ensure the homeowner's and renters hot water utility can be met.

In closing, we appreciate the opportunity to provide public comment on PAR 1121 and encourage the District to take our suggestions and feedback into consideration as they finalize PAR 1121. We welcome continued dialogue on these matters and would be pleased to have further, direct, conversations with District staff.

Please let me know if you have any questions or would like to schedule a meeting to discuss our comments further.

Respectfully Submitted,

Bradford White Corporation

<sup>10</sup> [RightSpec® Sizing Software | Bradford White Water Heaters. Built to be the best. \(bradfordwhiterightspec.com\)](https://www.bradfordwhiterightspec.com)

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Tom Gervais  
Senior Director, Regulatory Affairs

Cc: R.B. Carnevale; E. Truskoski; R. Simons; B. Hill; L. Prader; C. VanderRoest; M. Corbett; B. Wolfer

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