



June 21, 2022

Jennifer Elwell
Bay Area Air Quality Management District
375 Beale Street, Suite 600
San Francisco, CA 94105

Re: Proposed Amendment to Regulation 9, Rule 6

Dear Ms. Elwell:

On behalf of Bradford White Corporation (BWC), we would like to thank you for the opportunity to comment on Bay Area Air Quality Management District's (BAAQMD) Proposed Amendment to Regulation 9, Rule 6.

BWC is an American-owned, full-line manufacturer of residential, commercial, and industrial products for water heating, space heating, combination heating, and water storage. In the Bay Area, a significant number of individuals, families, and job providers rely on our products for their hot water and space heating needs.

While the California Air Resources Board (CARB) has set forth a statewide goal to phase out the sale of NOx producing water heating equipment by 2030, we have concerns that the deadlines set by CARB and subsequent dates established in Regulation 9, Rule 6 are overly optimistic. The magnitude of the transition will place significantly more stress on an already constrained supply chain under the proposed timelines and fails to take into account several external factors that may hinder the ability of the state and the District to transition successfully. Even though California may be on the forefront transitioning to zero-emission water heating, there are other states and countries developing plans to decarbonize and reduce emissions, resulting in a much larger demand for heat pump water heaters (HPWH) than California alone. BAAQMD must consider global demand for HPWH products, not just the District's demand, in their assessment to determine a feasible timeline for transitioning to only allow the sale and distribution of zero-emission water heating technology.

In the proposed rule change, section 9-6-402.4, BAAQMD allows for manufacturers to certify compliance to the District through South Coast Air Quality Management District's (SCAQMD) certification process. This certification process excludes both 9-6-301.5 and 9-6-303.5. With the entire state headed towards zero-emission water heating over the next decade, BWC believes alignment between air districts is critical for helping manufacturers plan transitioning to zero-emission product classes. While the transition dates set forth by CARB and subsequent dates set forth by individual air districts are overly optimistic, we believe that SCAQMD's 2022 Draft Air Quality Management Plan (AQMP) includes logical steps, such as

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allowing Ultra Low NOx technology where significant barriers to installing zero NOx water heaters exist. BWC strongly encourages BAAQMD to align with the strategy that SCAQMD proposed and work with the SCAQMD, CARB and other district's to establish a consistent set of rules for industry to follow. SCAQMD proposed measures R-CBM-01 and C-CMB-01, which are nearly identical in scope to BAAQMD's 9-6-301.5 and 9-6-303.5, contain language that states:

“Allow low NOx technologies as a transitional alternative when installing a zero-emission unit is determined to be infeasible.”

BWC additionally provided suggestions to SCAQMD for defining “infeasibility,” as shown below.

Proposed Definition for Project “Infeasibility”

In the absence of a common definition for “infeasibility” across air districts BWC proposes the following as a starting point for a more comprehensive discussion:

“Where a project applicant can reasonably demonstrate that all parts and equipment required to retrofit an existing, mixed fuel building with a zero-emission water heater equipment is not:

- Commercially available;
- More costly than commercially available gas options (20% or more);
- Able to fit in the footprint of existing equipment
- Able to meet the building/home water heating demand; and
- available from suppliers within the district to replace inoperative equipment on an emergency basis.

In these cases, an exception shall be granted to use readily available gas Ultra Low NOx water heating equipment.”

Emergency Replacements

Approximately 90% of residential water heater replacements are done on an emergency basis where the water heater has failed and cannot be necessarily easily or cost effectively repaired. It is essential that products are available locally, as customers need to be able to have these products installed in a timely manner to satisfy their needs. Local availability is not likely if manufacturers do not have the right product mix, and those products are not stocked by local distributors and retailers, forcing the consumer or business to go without hot water for an extended period of time.

Having the right products available for the right application is only one piece of the puzzle. Barriers such as electrical infrastructure and space constraints can add to the complexity and cost of replacement and may place a significant and unfair burden on the customer. In particular, low- to medium-income homeowners and small business owners, who are simply trying to restore hot water service will be adversely affected. If BAAQMD chooses to adopt the proposed timelines, then BAAQMD must also ensure there is a robust program and funding in place to help property owners prepare for the transition well in advance of needing a new water heater.

While the state is off to a good start increasing adoption of residential HPWH technology, the commercial sector has not been addressed with the same level of attention, increasing the barriers to transition in this sector. The recently adopted 2022 Title 24, California Energy Code does not address HPWHs in existing commercial and nonresidential buildings, largely because there are very few commercially available products on the market today.

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A shift to require that existing commercial and nonresidential buildings be retrofitted to use all electric water heating technology will require significant time, money, and collaboration by manufacturers and plumbing trade associations to train the workforce to ensure quality installations. This is an effort that will take many years to come to fruition, as new technology becomes commercially available, likely extending well beyond 2031. Like residential products, commercial HPWH technology will face similar challenges around product footprint, adequate free air space and electrical capacity. In cases where the challenges exist, requiring the water heater to be relocated, or in cases where an emergency replacement is not achievable, the District should have provisions in place to allow an Ultra-Low NOx alternative. While solutions to these challenges may emerge, the market for commercial HPWH equipment is even smaller than residential products and will take significant effort to develop practical solutions.

While it is reasonable to expect a building owner to plan around current laws and regulations surrounding NOx emission standards and commercially available compliant equipment, the cost to change from natural gas water heating to a heat pump water heater will be significant. This is especially the case for low- and medium-income households and small business owners even when they are able to plan the replacement of their equipment. BWC agrees with BAAQMD that incentives and financing programs will be needed to help offset these costs and encourage more early adoption of technology throughout the District. Furthermore, BWC is committed to working with the District to help inform development of programs to incentivize the transition to zero-emission water heating technology.

[Ultra] Low NOx Water Heaters as a Transitional Technology

As mentioned previously, SCAQMD has included language in their 2022 Draft AQMP allowing for Ultra Low NOx transitional technology when installing a zero-emission water heater is determined to be infeasible. BWC supports this strategy if it does not require additional NOx levels below the current rule standards. If the state of California and the District are only allowing zero-emission water heating to be sold and installed, then research and development in achieving further NOx reductions in gas fired water heating equipment is likely not worth the investment as an interim measure. If the District will allow equipment meeting the current NOx standards to be used in cases where zero-emission water heating technology is deemed infeasible, BWC and other manufacturers can focus on development of zero-emission water heating technology where the greatest need exists.

Allowing Sales of Ultra Low NOx Water Heaters

Since BAAQMD's proposed Regulation 9, Rule 6 regulates the distribution and sales of product in the District territory, aligning with SCAQMD and allowing a transitional Ultra Low NOx water heater needs to be carefully thought out. If Ultra Low NOx water heating equipment will be allowed for cases where zero-emission water heating technology is determined to be infeasible, then there will need to be available inventory of Ultra Low NOx water heaters at distributors. We support this strategy; though, if BAAQMD chooses to adopt this strategy, we have the following questions regarding enforcement:

- How will the District determine what sales are properly following the infeasibility criteria?
- Which agency(ies) will be responsible for enforcement of the rule?
- Will the District provide clear rules, so contractors are able to confidently and expeditiously make an easy decision in the field and not risk being fined?

In closing, we would like to invite BAAQMD staff to meet with BWC to discuss how we can best accomplish transitioning to zero-emission water heating equipment across all sectors. We understand the state and District's goals to reduce emissions and want to play a part in ensuring it is successful in doing so.

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BWC thanks the Bay Area Air Quality Management District for the opportunity to provide feedback on the proposed Regulation 9, Rule 6. 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

Eric Truskoski
Senior Director of Government and Regulatory Affairs

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

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