WESTAR
Western States Air Resources Council

October 9, 2024

U.S. Environmental Protection Agency
EPA Docket Center, OAR, Docket EPA-HQ-OAR-2024-0089
Mail Code 28221T, 1200 Pennsylvania Avenue NW
Washington, DC 20460

Re: Docket ID No. EPA-HQ-OAR-2024-0089, Section 610 Review of Standards of Performance for New Residential Wood Heaters, New Residential Hydronic Heaters and Forced-Air Furnaces

Dear Administrator Regan,

The Western States Air Resources Council (WESTAR) hereby submits the following comments on EPA's Section 610 Review of Standards of Performance for New Residential Wood Heaters, New Residential Hydronic Heaters and Forced-Air Furnaces. We encourage EPA to amend the New Source Performance Standards (NSPS) for new residential wood heaters, new residential hydronic heaters, and forced-air furnaces last amended in 2015 as part of their Section 610 review. While EPA is seeking comment on five areas for the review, WESTAR submits comment on the following three: (1) The continued need for the rule; (2) The nature of complaints or comments received concerning the rule; and (3) the degree to which the technology, economic conditions or other factors have changed in the area affected by the rule.

## The continued need for the rule

A revised NSPS for residential wood heaters (RWH) is particularly important for many rural areas where the main source of pollution exposure is from the combustion of wood, which may include residential heating, wildland fire, and prescribed fire. Many people in these rural areas of the West are heavily impacted by pollution produced primarily by residential wood heating in the winter and subsequently impacted by wildfire and prescribed fire smoke in the fall, summer, and winter. While some of these areas are already designated nonattainment for the 2012 $PM_{2.5}$ National Ambient Air Quality Standard (NAAQS), additional areas are likely to be designated nonattainment for the recently revised 2024 annual standard for $PM_{2.5}$. Because wildfire emissions are not controllable, these areas will need EPA's help to attain the standard by reducing emissions from wood heating through better test methods to identify cleaner burning wood heating appliances and expanded targeted airshed grant funding for nonattainment areas.

Areas that are impacted by RWH emissions have limited options for achieving attainment with the NAAQS. The most popular approach has been change-out programs, which incentivize the exchange of older RWH appliances for cleaner new units. However, change-out programs cannot be successful in significantly reducing emissions unless the new appliances are substantially lower-emitting than the ones

they replace. It is essential that EPA operate an effective federal testing and certification program for new RWHs to ensure that change-out programs do not waste scarce resources and provide the anticipated emissions reductions, health benefits, and progress towards attaining the $PM_{2.5}$ NAAQS.

EPA projected that the 2015 NSPS would reduce RWH emissions by 90%. However, lab testing by the Northeast States for Coordinated Air Use Management (NESCAUM) measured emissions rates substantially above the NSPS limits in several stoves that had been certified as compliant.[1] The testing and certification issues have contributed to mixed outcomes from past change-out programs. For example, a study of a change-out program in Oregon found that replacing uncertified stoves with certified non-catalytic stoves did not result in a significant reduction in $PM_{2.5}$ levels in indoor or neighborhood air.[2] It is essential that EPA address the deficiencies in the current program to facilitate attaining the $PM_{2.5}$ NAAQS without the need to eliminate the use of wood-fueled appliances.

Because of the revised 2024 annual $PM_{2.5}$ standard, the timing of a revised NSPS is also important to consider during this review. The new National Ambient Air Quality Standard (NAAQS) for fine particulates was promulgated on February 7, 2024. By that same day in 2026, the area designation process may be complete and areas designated nonattainment for the standard will have 18 months to adopt and submit a plan for attaining the standard. These areas will have until 2032 to attain the standard. Having a revised NSPS for wood heating in place in a timely manner will help these areas reach attainment by that deadline.

## The nature of complaints or comments received concerning the rule

Since the NSPS was finalized in 2015 several reports concluded that the certification process is inadequate. In 2021, NESCAUM released a report on a comprehensive assessment of EPA's Residential Wood Heating certification program, in which the organization found "systemic failure of the entire certification process" and that the "unavoidable conclusion of this report is that EPA's certification program to ensure new wood heaters meet clean air requirements is dysfunctional. It is easily manipulated by manufacturers and testing laboratories. EPA has done little to no oversight and enforcement."[3] In 2023, EPA's Office of Inspector General (OIG) confirmed NESCAUM's conclusions in a report titled: "The EPA's Residential Wood Heater Program Does Not Provide Reasonable Assurance that Heaters Are Properly Tested and Certified Before Reaching Consumers." OIG's summary conclusion is that: "The EPA's ineffective residential wood heater program puts human health and the environment at risk for exposure to dangerous fine-particulate-matter pollution by allowing sales of wood heaters that may not meet emission standards."[4] While new Federal test methods for wood stoves will be helpful, this is not the

[1] NESCAUM, 2022. ASTM 3053 Test Method Study. Available at https://www.nescaum.org/documents/nescaum-3053-based-test-assessments-final-20220310-final.pdf.

[2] Survilo, M. F. Indoor Air Quality Impacts of a Woodstove Exchange Program in Washington County, Oregon. Master of Science Thesis, Portland State University, Portland, Oregon, 2020. https://pdxscholar.library.pdx.edu/open_access_etds/5583/

[3] Assessment of EPA's Residential Wood Heater Certification Program Test Report Review: Stoves & Central Heaters. NESCAUM. March 2021. Accessed Sept. 13, 2024, at: https://www.nescaum.org/documents/nescaum-review-of-epa-rwh-nsps-certification-program-rev-3-30-21.pdf.

[4] The EPA's Residential Wood Heater Program Does Not Provide Reasonable Assurance that Heaters Are Properly Tested and Certified Before Reaching Consumers. February 2023. Accessed Sept. 13, 2024, at: https://www.epa.gov/system/files/documents/2023-02/_epaoig_20230228-23-E-0012_2.pdf.

only issue to be addressed with a review and revision of the NSPS. This will be a grave problem for new nonattainment areas where the majority of $PM_{2.5}$ emissions are from residential wood heating. Addressing these issues comprehensively and expediently is imperative because woodstove changeouts will likely need to be part of their compliance plans.

Since the release of the 2021 NESCAUM and the 2023 EPA OIG reports, EPA has worked to improve the RWH NSPS program. However, there is more to be done to ensure emission reductions from this sector. WESTAR agrees with OIG's findings that the only solution to the current RWH NSPS issues is for EPA to promulgate revised regulations that eliminate unenforceable and unclear provisions. One of the most notable deficiencies is that EPA does not have the capacity to oversee certified labs; this has left manufacturers paying the financial cost for lab mistakes.

Additionally, EPA must eliminate the third-party system created by the 2015 RWH NSPS, which delegates almost all rule oversight to third-party certifiers. The third-party system is flawed beyond repair. Third-party certifiers review test reports, issue conformity certificates, conduct inspections at manufacturing facilities, and inspect EPA-approved labs. The 2021 NESCAUM report revealed that the third-party system has resulted in a complete lack of efficacy and the elimination of oversight and transparency in the RWH NSPS program.

## The degree to which the technology, economic conditions or other factors have changed in the area affected by the rule

The technical and economic landscape for this sector has changed since the RWH NSPS was last updated in 2015. Most importantly, assessments have demonstrated that the test methods used to show compliance with the NSPS emissions limits are inadequate. The consensus-based test methods in the updated NSPS reduced method precision and introduced opportunities for reducing measured emissions rates by altering test procedures rather than by improving appliance performance. The RWH market in the United States has experienced only minor technical improvements in that period, such as the adoption of a hybrid emission approach that employs control technologies that have been in place for more than 30 years. However, the European market has created new technical approaches to improve stove performance and reduce emissions. Recently, European manufacturers introduced a new fleet of "smart" stoves that use automatic controls, rather than relying on homeowners, to ensure proper operating conditions.[5] These technical advances warrant a new analysis of the Best System of Emission (BSER) analysis by EPA.

Since the promulgation of the 2015 NSPS, the economic landscape has changed for RWH appliances. The federal government has instituted subsidies that provide up to a 30% tax credit for the purchase and installation of residential wood heaters meeting an efficiency standard. EPA's OIG report found that, over

[5] IEA Bioenergy, 2022. Design of Low Emission Wood Stoves. Available at https://www.ieabioenergy.com/wp-content/uploads/2022/11/IEA-Bioenergy-Task-32_Report-D1-2_Low-emission-wood-stove-design_final.pdf
IEA Bioenergy, 2024. Low emissions biomass combustion in automated boilers for heat and power. Available at https://www.ieabioenergy.com/wp-content/uploads/2024/09/Nussbaumer_IEA-Bioenergy-Task32-Emissions-Report_2024_08_20.pdf
Phamnews, 2017. Advances in Wood Burner Technology. Available at https://www.phamnews.co.uk/advances-in-wood-burner-technology/
TFZ, 2020. Wood Stove 2020 – Development of next generation and clean wood stoves. Available at https://www.tfz.bayern.de/en/162907/index.php and https://eranetbioenergy.net/wp-content/uploads/2024/04/EB_call07_Woodstoves2020_factsheet.pdf

a six-year period, EPA provided $82 million dollars to subsidize payments to industry and retailers to replace old appliances with new ones. Wood heater change-outs are also eligible for funding under the Inflation Reduction Act. In addition to the federal subsidies, some state and local areas provide incentives for the purchase and/or changeout of appliances.

Since the promulgation of the 2015 RWH NSPS, millions of taxpayers and enforcement settlement dollars have supported the purchase of new wood-burning appliances, creating a significant economic benefit for manufacturers. If there is no guarantee that the new stoves are any cleaner than the old appliances, that money has been wasted. A revised RWH NSPS would ensure that the best technology for reducing emissions is adopted by manufacturers and future money spent on change-out programs would be effective.

For these reasons, WESTAR recommends that EPA review and revise the NSPS for residential wood heaters, new residential hydronic heaters and forced-air furnaces as quickly as possible to minimize emissions from these appliances. The revisions should take into account the deficiencies outlined in the OIG report to increase the accuracy, transparency, and enforceability of the testing and certification program. The review and finalization should be done quickly to make the rule effective for areas that will be designated nonattainment for the 2024 Annual $PM_{2.5}$ NAAQS that are impacted primarily by emissions from wood heating.

Sincerely,

Kathy Taylor, President