



December 19, 2022

Dr. Stephanie Johnson
U.S. Department of Energy
Office of Energy Efficiency and Renewable Energy
Building Technologies Office, EE-5B
1000 Independence Avenue SW
Washington, DC 20585-0121

RE: Notice of proposed rulemaking and request for comment: Energy Conservation Program: Test Procedure for Air Cleaners (RIN) 1904-AF26

Dear Dr. Johnson:

On behalf of the Asthma and Allergy Foundation of America (AAFA), the leading patient organization advocating for people with asthma and allergies and the oldest asthma and allergy patient group in the world, I am writing in response to the Department of Energy's (DOE) Request for Comment on the proposed rulemaking on the Energy Conservation Program: Test Procedure for Air Cleaners.

On July 15, 2022, the DOE determined that air cleaners qualify as a “covered product” under the Energy Policy and Conservation Act (EPCA). Under this proposed rule, the DOE would establish a new test procedure for air cleaners that would include methods to (1) measure the performance of the covered product and (2) use the measured results to calculate an integrated energy factor (“IEF”) to represent the energy efficiency of an air cleaner. Currently, air cleaners are not subject to DOE test procedures or energy conservation standards. AAFA applauds DOE's efforts in this area and is pleased to provide information about our own certification program, the **asthma & allergy friendly**[®] Certification Program,¹ to inform DOE's work.

At AAFA, we have long advocated for improved indoor air quality due to the ongoing impact of indoor air on the health of people living with asthma and allergies. People spend an average of 90% of their time indoors and, according to the Environmental Protection Agency (EPA), indoor air is more polluted than outside air.² Evidence also shows that poor indoor air quality (IAQ) increases risks of severe asthma attacks and allergic reactions.³ To address some of the persistent disparities in asthma's impact on children and adults in the

¹ https://www.asthmaandallergyfriendly.com/USA/products_categories/air-cleaners/

² <https://www.epa.gov/iaq-schools/why-indoor-air-quality-important-schools#:~:text=EPA%20studies%20of%20human%20exposure,times%20%E2%80%94%20higher%20than%20outdoor%20levels.>

³ Tiotiu AI, Novakova P, Nedeva D, Chong-Neto HJ, Novakova S, Steiropoulos P, Kowal K. Impact of Air Pollution on Asthma Outcomes. *Int J Environ Res Public Health*. 2020 Aug 27;17(17):6212. doi: 10.3390/ijerph17176212. PMID: 32867076; PMCID: PMC7503605.



United States,⁴ we must address the factors creating and exacerbating risk, including developing effective test procedures and energy conservation standards for air cleaners.

As DOE establishes the Energy Conservation Program, please consider the following information about the **asthma & allergy friendly**[®] Certification Program,⁵ an initiative created jointly by AAFA and Allergy Standards Limited (ASL)⁶ to help people make better choices when buying products to remove allergens and improve indoor air quality. We believe that our experience certifying air cleaners is relevant and can contribute to DOE's effort in this area.

Each year, Americans spend about \$10 billion on products, including air cleaners that are marketed to people with asthma and allergies. Many products promise to help control allergens. But some products make false or exaggerated claims. This dynamic makes it difficult for consumers to know the best products to buy.

In response, AAFA and Allergy Standards Limited (ASL) joined together to create the **asthma & allergy friendly**[®] Certification Program in 2005. This unique partnership tests and certifies products and services to improve the air quality and health of homes. The program works with retailers and manufacturers to offer healthier products to consumers. The **asthma & allergy friendly**[®] Certification Program helps people make better choices when buying products to remove allergens and improve indoor air quality, including air cleaners. To date, more than 40 companies' products have met our strict scientific standards and received the **asthma & allergy friendly**[®] Certification Mark.

The **asthma & allergy friendly**[®] Certification Program develops its testing protocols based on several general principles, including:

- In establishing experimental set-up for certification standards, the household context is mimicked to the extent possible while still maintaining a consistent, repeatable experimental design.
- Products are challenged with a test dust containing multiple allergens, to reflect the complex nature of dust challenge in real households.
- The impact of a product type on triggers of asthma and allergy and on indoor air quality is the founding guideline in developing a certification standard and related testing procedure.

In the case of portable air cleaners, which the **asthma & allergy friendly**[®] Certification Program certifies under its [certification standard 08-01](#), these principles are applied in the following ways:

⁴ Asthma and Allergy Foundation of America, (2020). [Asthma Disparities in America: A Roadmap to Reducing Burden on Racial and Ethnic Minorities]. Retrieved from aafa.org/asthmadisparities

⁵ https://www.asthmaandallergyfriendly.com/USA/products_categories/air-cleaners/

⁶ <https://www.allergystandards.com/>



- The **asthma & allergy friendly**® Certification testing chamber is based on AHAM AC-1, modified in a way that is more comprehensive than CADR. The dust used is a complex dust containing small dust particles over a range of sizes to align with what is found in homes, rather than being focused on a smaller size range. To address our focus on triggers of asthma and allergies, three allergens - dust mite allergen *Der p1*, cat allergen *Fel d1*, and Timothy Grass pollen *Phl p5*, are included. The purpose of this is to mimic the challenge in a real-life environment, rather than assessing filtration of each pollutant separately, as is done in some standard tests.
- Reduction of particle levels in the air during a test is only one element of measuring particulate reduction. In many cases, removal of particulates from the air is not because of filtration by the air cleaner, but rather from redistribution and settling onto surfaces. From those surfaces, dust and allergens can be easily resuspended into the air through human activity. The **asthma & allergy friendly**® Certification Standard requires that 90% of allergens be removed from the air by the air cleaner, but also that 50% of the allergens removed must be captured on the air cleaner's filter.
- During the test, mechanical resuspension of dust and allergens into the air is carried out to increase the challenge and again increase the real-world relevance of the test.

Thank you for the opportunity to share our experience about our own certification program on air cleaners. We look forward to working with the DOE to improve indoor air quality and to promote strong standards for air cleaners through the Energy Conservation Program.

Please do not hesitate to contact me at kmendez@aafa.org with any questions.

Sincerely,

Kenneth Mendez
President and Chief Executive Officer
Asthma and Allergy Foundation of America