HOME VENTILATING INSTITUTE

24 April 2023

Senate Committee on Transportation & Energy
Colorado General Assembly
200 E. Colfax Avenue
Denver, Colorado 80203

RE: Comments on HB23-11611, Environmental Standards for Appliances

Dear Committee Members:

The Home Ventilating Institute ("HVI") is an ISO 17065 compliant certification body and a trade association representing over 100 manufacturers located in North America, South America, Asia, and Europe. Our manufacturer members provide the residential and light commercial ventilating products that deliver essential indoor air quality to homes and businesses throughout North America. HVI is pleased to partner with Colorado on the new standards for residential ventilating fans ("RVFs"). HVI's outstanding record in providing certification in this area resulted in Colorado choosing HVI's Publication 916, "HVI Airflow Test Procedure," as the testing standard for RVFs in the proposed Environmental Standards.

HVI offers comment and amendments for clarity and workability of HB23-1161.

As drafted, Colorado's Energy Efficiency Standard for RVFs is unclear.

When it enacted HB19-1231, Colorado became one of the first states to regulate RVFs, requiring all products sold in the state as of January 1, 2021, to "meet the qualification criteria of the Energy Star program . . . version 3.2." CRS §6-7.5-105(3)(j). Energy Star's requirements include not only low energy usage but also criteria not related to energy consumption, such as provision of a warranty, and sound levels. This bill amends Colorado's standards to focus on the energy efficiency of appliances and targets the "Fan Motor Efficacy" of RVFs sold in Colorado.

This move adopts the standard set out in the Model Act for Establishing State Appliance and Equipment Energy and Water Efficiency Standards proposed by the Appliance Standards

Awareness Project (updated November 2022), available online at https://appliance-standards.org/states, and puts Colorado in the company of ten other states which have adopted, or soon will adopt, the Fan Motor Efficacy standards of Energy Star 3.2 for RVFs. As Christine Brinker of the Southwest Energy Efficiency Project testified before the House Energy & Environment Committee, this bill was carefully drafted to "to ensure consistency across states."

The last round of amendments to this bill, however, removed the reference to "version 3.2" and deleted the specifications which define the fan motor efficacy of Energy Star version 3.2.

(j) New residential ventilating fans must meet the FAN MOTOR EFFICACY qualification criteria of the Energy Star program ~~requirements~~ product specification for residential ventilating fans. ~~version 3.2.~~

~~(k) RESIDENTIAL VENTILATING FANS MUST COMPLY WITH THE FOLLOWING REQUIREMENTS:~~

~~(I) INLINE RESIDENTIAL VENTILATING FANS MUST HAVE A FAN MOTOR EFFICACY OF NO LESS THAN 2.8 CUBIC FEET PER MINUTE PER WATT; AND~~

~~(II) RESIDENTIAL VENTILATING FANS OTHER THAN INLINE RESIDENTIAL VENTILATING FANS MUST HAVE A FAN MOTOR EFFICACY OF NO LESS THAN 1.4 CUBIC FEET PER MINUTE PER WATT FOR AIRFLOWS LESS THAN NINETY CUBIC FEET PER MINUTE AND NO LESS THAN 2.8 CUBIC FEET PER MINUTE PER WATT FOR OTHER AIRFLOWS WHEN TESTED IN ACCORDANCE WITH HOME VENTILATION INSTITUTE PUBLICATION 916 "HVI AIRFLOW TEST PROCEDURE"~~

Without this qualifying language, **this bill could refer to any Energy Star standard, including Energy Star 4.1, which is *not* recommended by the Appliance Standards Awareness Project** and would limit consumers only to products with the most current Energy Star label. While these products do provide greater energy efficiency, they also meet criteria in other categories which may not be needed or preferred by every consumer of a residential ventilating fan. The Energy Star 3.2 standard is consistent with other states, establishes a minimum level of energy efficiency, and still empowers the consumer to choose Energy Star 4.1 products for particular applications.

HVI strongly urges Colorado to clarify its standard by not deleting the phrase "version 3.2" from CRS §6-7.5-105(3)(j).

Without this important amendment, HB23-1611 would create substantial negative consequences for retailers, distributors, and manufacturers.

To provide retailers and manufacturers time to comply with a new standard, current Colorado law allows retailers to continue to sell "products held in inventory on or before the effective date of the applicable standard." CRS §6-7.5-104(2)(c)(I). However, because RVFs are already regulated in Colorado, the effective date of RVF standards is January 1, 2021.

6-7.5-105. Standards - effective dates - repeal.

*****

(3) On ~~or~~ AND after January 1, 2021, A PERSON SHALL NOT SELL, LEASE, OR RENT ANY OF the following new products ~~shall not be sold, leased, or rented~~ in Colorado unless the efficiency of the new product meets or exceeds the following efficiency standards, as applicable:

*****

(j) New residential ventilating fans must meet the FAN MOTOR EFFICACY qualification criteria of the Energy Star program ~~requirements~~ product specification for residential ventilating fans. ~~version 3.2.~~

Thus, the cut-off date for sellable inventory which does not meet the state standard is January 1, 2021. If Colorado's goal is to amend the RVF standard from the full specifications of Energy Star 3.2 to the Fan Motor Efficacy of Energy Star 3.2, there is no problem with this language. If, however, the non-specific reference to Energy Star is interpreted to mean Energy Star 4.1, retailers and distributors will be left with large amounts of unsellable stock when this bill takes effect ninety days after the "final adjournment of the general assembly." (HB23-1161, Section 15). If every RVF sold in Colorado must meet Energy Star 4.1 fan motor efficacy by that date, manufacturers will not be able to meet consumer demand.

HVI is eager to support Colorado's efforts to join other states in establishing Energy Star 3.2 Fan Motor Efficacy as the standard for products sold in the state. We ask that this Committee amend the bill to maintain the reference to "version 3.2" in CRS § 6-7.5-105(3)(j).

We hope that the Committee will consider our recommendation, and we would be glad to discuss these matters further should you have any questions. Please feel free to reach out to Josh Lynch, HVI Engineering Director, at compliance@hvi.org.

Respectfully submitted,

Jacki Donner, HVI CEO

April 24, 2023

Chairwoman Winter
Vice-Chair Priola

RE: HB 23-1161 – Environmental standards for appliances

Dear Members of the Senate Transportation and Energy Committee:

Please accept this testimony on behalf of the Appliance Standards Awareness Project (ASAP). We are a project of the American Council for an Energy Efficient Economy (ACEEE) dedicated to advancing cost-effective appliance and lighting standards at both the national and state level.

HB 23-1161 seeks in part to transition Colorado away from mercury-containing fluorescent light bulbs. In 2022, ASAP and ACEEE published a joint report - *Farewell to Fluorescents: How a Phaseout Can Cut Mercury Pollution, Protect the Climate, and Save Money* – detailing research findings that Light Emitting Diodes (LEDs) are ready to widely replace common fluorescent light bulbs.[1] We also published analysis showing savings states could see from transitioning common fluorescent light bulbs to LEDs, including for Colorado.[2] These savings are described further below. We would be happy to provide additional information about this analysis or answer any questions.

Additionally, HB 23-1161 would continue Colorado's leadership on appliance efficiency standards, adopting new and updated energy and water efficiency standards for certain products. In 2017, ASAP and ACEEE published a joint report, *States Go First: How States Can Save Consumers Money, Reduce Energy and Water Waste, and Protect the Environment with New Appliance Standards,* and created savings analyses for each state which have also been updated annually.[3] We would be happy to provide additional information about this analysis as well.

HB 23-1161 WOULD SAVE RESIDENTS AND BUSINESSES MONEY

The bill would transition off the sales of common fluorescent light bulbs, allowing LEDs to take their place. Because LEDs are twice as energy efficient as fluorescents, they generate significant electricity bill savings. ASAP estimates by 2030 Colorado would see $46 million in annual, statewide electricity bill savings due to transitioning from fluorescents to LEDs.[4] By 2050 this would result in cumulative savings of $572 million statewide on electricity bills.

Additionally, the majority of fluorescent light bulb sales today are for commercial buildings. ASAP estimates for the most common fluorescent light bulb, the 4-foot T8, the commercial sector would recover the incremental increase in purchase price for an LED in less than one month. Each 4-foot T8 LED would then go on to save $21 per bulb over its lifetime, resulting in significant economic savings for any building.

[1] For the 2022 ASAP/ACEEE clean lighting report and state savings analysis visit https://appliance-standards.org/clean-lighting
[2] See https://appliance-standards.org/sites/default/files/Colorado.pdf
[3] For the 2017 ASAP/ACEEE appliance standards report and subsequent updates, see: https://appliance-standards.org/document/report-overview-states-go-first

ASAP | APPLIANCE STANDARDS AWARENESS PROJECT

HB 23-1161 WOULD REMOVE A SOURCE OF TOXIC MERCURY POLLUTION

All fluorescent light bulbs contain mercury, a potent neurotoxin that threatens human health and the environment. When fluorescent bulbs are accidentally broken—whether in homes, businesses, or the waste management system—they present a health hazard to those nearby. LEDs do not contain mercury, therefore transitioning away from fluorescents would avoid a source of mercury pollution coming into Colorado. ASAP estimates by 2050 Colorado would cumulatively avoid 167 pounds of mercury waste from transitioning off of fluorescent light bulbs, enough to contaminate 8.3 billion gallons of water.

Furthermore, LED's increased energy efficiency means the state would see reduced energy consumption and thereby also avoid greenhouse gas emissions. ASAP estimates in 2030 Colorado would see annual savings of 559 gigawatt hours of electricity from transitioning off of fluorescent light bulbs. From this, by 2050 Colorado could cumulatively avoid the release of 2.1 million metric tons of carbon dioxide per year, the equivalent of 452,000 gasoline-powered passenger vehicles driven for one year.

LEDs ARE READY TO REPLACE COMMON FLUORESCENT LIGHT BULBS

LEDs have advanced tremendously over the last 10 years. Our lighting market research found that today LEDs are widely available and cost effective as replacements for general-purpose, white light fluorescent light bulbs across the different sizes and shapes.[5] General-purpose, white light bulbs (see Figure 1) are most commonly found in office building settings or in certain residential situations like a kitchen or basement. Compared to fluorescents, LEDs were found to produce the same or better light quality, last 2-3 times longer, have positive economic outcomes for consumers, and not contain mercury. HB 23-1161 only proposes to transition out these general-purpose, white light fluorescents and would not cover specialty fluorescents, such as ultraviolet (UV) fluorescents used for suntanning booths or other specialty purposes.

Figure 1. General-purpose, white light fluorescent light bulbs.

HB 23-1161 WOULD CONTINUE COLORADO'S LEADERSHIP ON ENVIRONMENTAL STANDARDS

In 2019, Colorado passed efficiency standards for 15 products, becoming one of the first states in the nation to do so and putting the state on the path toward saving hundreds of millions of dollars from decreased utility bills. The environmental standards proposed in this bill would only add to these savings. Additionally, since 2019, 12 other states have also adopted appliance standards, creating a "strength in numbers" effect that is helping states with the policy's implementation.[6]

We would be happy to provide further information, answer questions, or provide technical assistance.

Thank you,

Brian Fadie, State Policy Manager
Appliance Standards Awareness Project

[5] See "Farewell to Fluorescent Lighting: How a Phaseout Can Cut Mercury Pollution, Protect the Climate, and Save Money." 2022. Found at https://www.aceee.org/research-report/b2202

[6] Washington, Oregon, California, Nevada, Hawaii, New York, New Jersey, Maryland, Rhode Island, Massachusetts, Maine, and Vermont.