HAWAII STATE ENERGY OFFICE
STATE OF HAWAII

JOSH GREEN, M.D.
GOVERNOR

MARK B. GLICK
CHIEF ENERGY OFFICER

235 South Beretania Street, 5th Floor, Honolulu, Hawaii 96813 Telephone: (808) 587-3807
Mailing Address: P.O. Box 2359, Honolulu, Hawaii 96804 Web: energy.hawaii.gov

Testimony of
MARK B. GLICK, Chief Energy Officer

before the
SENATE COMMITTEE ON ENERGY, ECONOMIC DEVELOPMENT, AND TOURISM

Tuesday February 14, 2023
1:02 PM
State Capitol, Conference Room 229 & Videoconference

Providing COMMENTS on
SB 691

RELATING TO EFFICIENCY STANDARDS.

Chair DeCoite, Vice Chair Wakai, and Members of the Committee, the Hawai‘i State Energy Office (HSEO) respectfully submits comments on the adoption of SB 691 which allows the Chief Energy Officer of HSEO to enforce minimum energy efficiency standards. HSEO’s testimony is guided by its mission to promote energy efficiency, renewable energy, and clean transportation to help achieve a resilient, clean energy, decarbonized economy. Adoption of this bill would accelerate the attainment of Hawai‘i’s decarbonization goals by substantially reducing electricity use, consumers’ electricity bills and the production of CO_2.

HSEO is not an enforcement agency empowered nor has the staffing and resources to enforce appliance efficiency standards. With the passage of this bill, Hawai‘i will join forces with twelve other states with similar provisions. The Appliance Standards Awareness Project fact sheet describes the power of efficiency standards to move Hawai‘i closer to lower utility bills and to a decarbonized economy.

Thank you for the opportunity to testify.

Appliance Efficiency Standards for Hawaii

Hawaii businesses and residents are spending more money than necessary on running appliances in homes and places of work. Setting efficiency standards ensures that the products we purchase use energy and water more efficiently while preserving quality and affordability.

Energy savings | **Utility Bill Savings** | **Water Savings** | **Emissions Reductions**

The basics of efficiency standards

- Set a minimum level of energy and water efficiency for certain household and commercial products
- Create utility bill savings for consumers and businesses
- Reduce carbon emissions and other air pollutants

Standards bring huge benefits to Hawaii

- **Affordability**: Consumers and businesses save money on utility bills, protecting customers from energy waste
- **Jobs**: Local economies get a boost when consumers have more spending money
- **Clean energy**: Public health and air quality improve when emissions and pollutants are cut

States are acting on standards

- In 2019 Hawaii adopted standards for 5 products
- Since then, 12 other states have adopted standards, including for products Hawaii does not yet have standards
- Hawaii should not be left behind

Residents and businesses save money

If new standards are enacted in 2023, Hawaii consumers and businesses would see **$11 million in utility bill savings per year** by 2030. These savings grow to **$24 million annually by 2040.**

Emissions Reductions

By 2040, appliance standards could cumulatively save Hawaii more than **54 gigawatt hours** of electricity. This would keep about **25,000 metric tons of CO_2** out of the atmosphere every year.

The best energy- and water-saving policy you've never heard of.

WATER, ENERGY, AND POLLUTION SAVINGS (HAWAII)

	Potential annual savings in 2030						Potential annual savings in 2040					
	Electricity (GWh)	Natural gas (BBtu)	Water (million gallons)	NO_x (tons)	SO_2 (tons)	CO_2 (thous. MT)	Electricity (GWh)	Natural gas (BBtu)	Water (million gallons)	NO_x (tons)	SO_2 (tons)	CO_2 (thous. MT)
Air purifiers	16.0	--	--	27.6	42.0	8.9	26.1	--	--	31.9	50.4	12.0
Electric vehicle supply equipment	1.5	--	--	2.6	4.0	0.8	10.1	--	--	12.3	19.4	4.6
Portable electric spas	6.9	--	--	12.0	18.2	3.9	11.6	--	--	14.3	22.5	5.4
Residential ventilating fans	1.3	--	--	2.3	3.5	0.7	3.6	--	--	4.4	6.9	1.7
Toilets (water closets)	--	--	83	--	--	--	--	--	219	--	--	--
Urinals	--	--	54	--	--	--	--	--	117	--	--	--
Water coolers	1.6	--	--	2.7	4.2	0.9	2.9	--	--	3.5	5.6	1.4
Total	**27**	**--**	**136**	**47**	**72**	**15**	**54**	**--**	**337**	**66**	**105**	**25**

Assuming a compliance date of 2025 for all the recommended standards. Totals may not sum due to rounding. Urinal savings were estimated using a standard case of 0.125 gallons per flush and weighted for the availability of wall-mounted urinal models found in the Modernized Appliance Efficiency Database System (MAEDbS).

UTILITY BILL SAVINGS AND PAYBACK PERIODS (HAWAII)

	Potential annual utility bill savings (million 2021$)		Payback period (years)
	In 2030	In 2040	
Air purifiers	5.1	8.5	0.5
Electric vehicle supply equipment	0.5	3.3	0.0
Portable electric spas	2.2	3.8	0.6
Residential ventilating fans	0.4	1.2	0.0
Toilets (water closets)	1.4	4.2	0.0
Urinals	0.9	2.2	0.0
Water coolers	0.4	0.8	0.0
Total	**11**	**24**	**--**

Why state standards?

States have historically led the nation in the development of new efficiency standards for residential and commercial products. Over time consensus efficiency standards develop into national standards. By setting state efficiency standards, Hawaii can help accelerate the adoption of energy and water saving products across the country.

Do I have to replace my current products?

No. Efficiency standards merely raise the floor for products available for new purchases and do not require changing out of products currently in use. The recommended standards are also set to ensure consumers and businesses will have numerous choices of qualifying products to purchase.

Savings analysis from the Appliance Standards Awareness Project

BOARD OF WATER SUPPLY

CITY AND COUNTY OF HONOLULU
630 SOUTH BERETANIA STREET
HONOLULU, HI 96843
www.boardofwatersupply.com

February 14, 2023

The Honorable Lynn DeCoite, Chair
The Honorable Glenn Wakai, Vice Chair
and Members
Committee on Energy, Economic Development, and Tourism
State Senate
Hawaii State Capitol, Room 229
415 South Beretania Street
Honolulu, Hawaii 96813

Dear Chair DeCoite, Vice Chair Wakai and Members:

Subject: Senate Bill 691: Relating to Efficiency Standards

The Honolulu Board of Water Supply (BWS) supports Senate Bill (SB) 691, which allows the chief energy officer of the Hawaii State Energy Office to enforce minimum efficiency standards and adopt or amend efficiency standards. The bill sets minimum efficiency standards for air purifiers, electric vehicle supply equipment, portable electric spas, residential ventilating fans, toilets, urinals, and water coolers.

We support efficient standards for appliances that will conserve energy and water resources, especially if there are gaps in Federal standards and to prevent manufacturers from sending noncompliant appliances to Hawaii if they cannot be sold in other states that have adopted standards.

Thank you for your consideration of our testimony on SB 691.

Very truly yours,

ERNEST Y. W. LAU, P.E.
Manager and Chief Engineer

SENATE COMMITTEE ON ENERGY, ECONOMIC DEVELOPMENT, AND TOURISM
February 14, 2023, 1:02 P.M.
Room 229

TESTIMONY IN SUPPORT OF SB 691

Aloha Chair DeCoite, Vice Chair Wakai, and Committee members:

Blue Planet Foundation **supports SB 691**, which expands the list of household products in Hawai‘i that have minimum energy and water efficiency standards. Energy efficiency measures, like setting appliance standards as proposed in Senate Bill 691, are a simple, accessible, and effective tool to reduce the high-cost of electricity for local residents and businesses, while also accelerating our state's transition to 100% clean energy and carbon-negative economy by 2045.

What are appliance efficiency standards?

Appliance and equipment standards specify the minimum energy and/or water efficiency levels of specific products. Many large household appliances—like refrigerators, washers, and dryers—are regulated by national standards. Action at the state level has historically been the catalyst for national policy. Most of the products now covered by national standards were first subject to state standards. For example, California, New York, and Florida refrigerator standards in the 1970s and 1980s were the basis of and a catalyst for the 1987 national refrigerator standards.

By adopting state appliance efficiency standards, states can fill in the gaps on appliances that aren't regulated by the federal government. While doing so, they also decrease energy use, save consumers and businesses money, and reduce greenhouse gas emissions and other pollutants.

In 2019, Hawai‘i adopted appliance efficiency standards for five products sold in the state, including computers and monitors, high color rendering fluorescent lamps, showerheads, faucets, and spray sprinklers (Act 41 of 2019). Since then, 12 other states have also adopted efficiency standards, including for the products in SB 691.

info@blueplanetfoundation.org
126 Queen Street, Suite 204 • Honolulu, Hawai‘i 96813 • 808-954-6161 • blueplanetfoundation.org

Helping Hawai‘i save on utility bills

Hawai‘i residents and businesses pay the highest electricity rates in the nation,[1] which exacerbates our already high cost of living. Appliance efficiency standards are a low-hanging-fruit policy that can provide economic relief to Hawai‘i's small businesses and struggling families.

Estimates show that if Hawai‘i passed this bill with an effective date of 2025, **by 2030, Hawai‘i households and businesses would be saving $11 million annually on their utility bills. By 2040, this number would increase to an annual savings of $24 million.**

Furthermore, the majority of the products in SB 691 have **no incremental cost**, meaning that they don’t cost more than inefficient models and **consumers will start saving right away**. For other appliances, like air purifiers and portable electric spas, utility bill savings pay back the small incremental cost of products meeting the standards within six months. After that, savings accrue to the consumers over the lifetime of the product.

The table below was produced by a non-profit research association, the Appliance Standards Awareness Project, to provide a Hawai‘i-specific breakdown on annual utility bill savings and incremental costs for products considered in this bill:

	Potential annual utility bill savings (million 2021$)		Net present value savings (million 2021$)	Benefit-cost ratio	Payback period (years)
	In 2030	In 2040			
Air purifiers	5.1	8.5	62.8	15.2	0.5
Electric vehicle supply equipment	0.5	3.3	20.1	no cost	0.0
Portable electric spas	2.2	3.8	27.3	11.6	0.6
Residential ventilating fans	0.4	1.2	8.1	no cost	0.0
Toilets (water closets)	1.4	4.2	36.0	no cost	0.0
Urinals	0.9	2.2	16.0	no cost	0.0
Water coolers	0.4	0.8	6.3	no cost	0.0
Total	**11**	**24**	**177**	**26.3**	--

Assuming a compliance date of 2025 for all the recommended standards. Net present value savings take into account both utility bill savings and estimated impacts on product costs for items sold between 2025 and 2040. Totals may not sum due to rounding. The total benefit-cost ratio is calculated as the present value of the total utility bill savings from products sold through 2040 for the package of recommended standards divided by the present value of the total additional costs. Urinal savings were estimated using a standard case of 0.125 gallons per flush and weighted for the availability of wall-mounted urinal models found in the Modernized Appliance Efficiency Database System (MAEDbS).

[1]Compton, Sophia. “Hawaii has the highest electric bills nationwide in 2022, report finds.” *Pacific Business News.* January 6, 2023. (https://www.bizjournals.com/pacific/news/2023/01/06/hawaii-had-highest-electric-bills-nationwide.html)

States are already leading the way on appliance standards

The standards referenced in SB 691 are also easily implementable for the government agency tasked with oversight. This is because: (1) the standards are applicable to readily available products—i.e. products and technologies meeting the standards are readily available today from multiple manufacturers, and (2) other states have already done the lion's share of work to set the appropriate standards and shift manufacturers' behavior and compliance.

The proposed standards are largely modeled after standards adopted in other states, meaning that the manufacturers have already adapted to the testing, certification, and labeling requirements for selling energy and water efficient products across the country. As a reference, the following number of states have already adopted efficiency standards for the products included in this bill: standards for EV supply equipment have been adopted in 4 states, air purifiers in 5 states, residential ventilating fans in 9 states, urinals in 12 states, toilets in 13 states, water coolers in 13 states, and standards for portable electric spas have been adopted in 14 states.[2] Consequently, Hawai'i can merely piggyback off of these standards for **easy implementation without a heavy lift for the local government agency tasked with oversight**.

Preventing carbon emissions to help meet our climate goals

Climate change will have devastating, long-term consequences on Hawai'i's environment, economy, and quality of life. For these reasons and others, the State of Hawai'i has committed to a decisive transition away from fossil fuels. The legislature has passed aggressive carbon reduction goals, including a mandate to achieve 100% renewable electricity by 2045 (Act 97 of 2015), and a goal to be carbon-negative by 2045 (Act 15 of 2018), with an interim goal to achieve a 50% reduction from 2005 levels by 2030 (Act 238 of 2022).

Embracing energy efficiency measures is an important part of addressing climate change and reducing carbon emissions. In fact, adopting state appliance efficiency standards is a priority initiative for the U.S. Climate Alliance to accelerate climate action.[3]

Expanding Hawai'i's list of products with appliance standards would significantly aid our collective efforts to achieve a carbon-negative, clean energy future. Cumulatively through 2040, the standards set forth in this bill would **save 552 gigawatt hours of electricity and 3 billion gallons of water, as well as avoid 281,500 metric tons of carbon dioxide, 795 tons of nitrogen oxide, and 1,230 tons of sulfur dioxide pollution.**

[2] "State Standards: State Adoption of Energy Efficiency Standards."*Appliance Standards Awareness Project.* (https://appliance-standards.org/states#states-table)
[3] *See* https://www.usclimatealliance.org/efficiency-challenge.

Conclusion

As Hawai‘i progresses toward achieving its 100% renewable energy and decarbonization goals, energy efficiency remains the quickest, cheapest, and cleanest way to reduce emissions from the electricity sector, while providing financial benefits to Hawai‘i residents and businesses during the transition. Numerous states have adopted standards for all of the products proposed in this bill, and Hawai‘i’s past experience with appliance standards have already proven to be a cost-effective and easily implementable policy. Furthermore, as more states adopt similar legislation and lead the way to an energy efficient economy, the states without appliance standards become a dumping ground for inefficient products that suppliers cannot sell elsewhere. As a result, Blue Planet strongly supports expanding Hawai‘i’s list of appliance efficiency standards by adding the products included in SB 691.

Thank you for the opportunity to provide testimony.

Hawai‘i Appliance Efficiency Standards

HB 194 and SB 691

Basics of appliance efficiency standards

HAWAI‘I BUSINESSES AND RESIDENTS PAY THE HIGHEST ELECTRICITY RATES IN THE NATION. EFFICIENCY STANDARDS ENSURE THAT THE PRODUCTS WE PURCHASE USE LESS ENERGY AND WATER WHILE ENSURING QUALITY, AFFORDABILITY, AND PROGRESS TOWARD OUR CLEAN ENERGY AND CLIMATE GOALS.

- Set a minimum level of energy and water efficiency for certain household and commercial appliances.
- Provide substantial savings for consumers and businesses.
- Encourage innovative water- and energy-saving technologies.
- Reduce carbon emissions and other air pollutants.
- Protect consumers against manufacturers who would otherwise sell the less efficient appliances that they can’t sell in markets without such protections.

“Adopting efficiency standards is a low-cost way for Hawaii to cut energy waste, reduce electricity bills, and reduce greenhouse gases – helping the state meet its clean energy, energy efficiency, and affordability goals.”

— Appliance Standards Awareness Project

$232.2 MILLION

NET UTILITY BILL SAVINGS HAWAI‘I CONSUMERS AND BUSINESSES COULD SEE OVER 15 YEARS IF THE PROPOSED STANDARDS ARE ADOPTED.

AFFORDABILITY

Consumers and businesses save money on utility bills

JOBS

Local economies get a boost when consumers have more spending money.

CLEAN ENERGY

Reducing air pollutants and greenhouse gas emissions improve public health and accelerate progress toward meetings our clean energy and climate mitigation targets.

Cost-effective and ready to implement

The standards proposed in HB 194 and SB 691 are:

- COST EFFECTIVE: Majority of the products in the bill have no incremental cost, meaning that they don't cost more than inefficient models and consumers will start saving right away. For others, utility bill savings pay back the small incremental cost of products meeting the standards within six months. After that, savings accrue to the consumers over the lifetime of the product.
- APPLICABLE TO READILY AVAILABLE PRODUCTS: Products and technologies meeting the standards are readily available today from multiple manufacturers.
- IMPLEMENTABLE AT LOW COST: Each standard is ready to implement because other states are already using or proposing identical standards.

15-Year Cumulative Savings for Hawai'i Consumers

$232 million utility bill savings	552 GWh electricity
281,000 metric tons CO_2	3 billion gallons water

Hawai'i Potential Annual Savings Through 2040

	Utility Bill savings (million 2021$)	Electricity (gigawatt hours)	Water (million gallons)	CO_2 emissions (thousand metric tons)	NOx emissions (tons)	SO_2 emissions (tons)
Air Purifiers	8.5	26.1	--	12	436.1	674.2
Electric Vehicle Supply Equipment	3.3	10.1	--	4.6	77.9	121.1
Portable electric spas	3.8	11.6	--	5.4	192.1	297.2
Residential ventilating fans	1.2	3.6	--	1.7	43.2	66.9
Toilets	4.2	--	219	--	--	--
Urinals	2.2	--	117	--	--	--
Water Coolers	0.8	2.9	--	1.4	45.8	70.9
Total	24	54	336	25	795	1,230

Assuming a compliance date of 2025 for all the recommended standards. Totals may not sum due to rounding. Urinal savings were estimated using a standard case of 0.125 gallons per flush and weighted for the availability of wall-mounted urinal models found in the Modernized Appliance Efficiency Database System.

blue planet

CONTACT: info@blueplanetfoundation.org; (808) 954-6161

Savings calculations provided by *Appliance Standards Awareness Project (ASAP)*, appliance-standards.org

Hawai'i Energy

45 North King Street, Suite 500 • Honolulu, Hawai'i 96817 • HawaiiEnergy.com • P: (808) 839-8880 • F: (808) 441-6068

Before the Senate Committee on Energy, Economic Development, and Tourism
Tuesday, February 14, 2023 at 1:02 p.m.

Testimony in Support of SB691: Relating to Efficiency Standards

Chair DeCoite, Vice Chair Wakai, and Members of the Committee:

Thank you for the opportunity to testify in support and provide comments on Senate Bill 691.

Hawai'i Energy works to empower island families and businesses on behalf of the Hawai'i Public Utilities Commission (PUC) to make smart energy choices to reduce energy consumption, save money, and pursue a 100% clean energy future. Energy efficiency – the energy we do not use – is the cheapest option to help us achieve our 100% clean energy goal by eliminating waste and being more efficient.

Hawai'i Energy applauds the legislature's efforts to support the continued impact of energy efficiency on Hawai'i's residents and businesses as an integral component of the State's Clean Energy Initiative, which calls for Hawai'i to achieve 100% clean energy by 2045.

In 2019, the State Legislature passed Hawai'i's first minimum appliance standards, a law that went into effect in 2021. Although progress has been made, it is crucial that we do not rest on our laurels. We need to continue to push for more – more minimum standards, more savings, and more customer protection for different appliances.

Appliance standards empower Hawai'i consumers to make the best energy, water and financial choice over the lifetime of the equipment and protect our consumers from "dumping" by manufacturers who cannot sell less efficient products in markets where standards do exist. This bill adds several appliances to the state's minimum appliance standards, including air purifiers, residential ventilating fans, toilets, urinals, and water coolers.

In addition, adopting the appliance energy standards modeled after and already implemented in California will allow Hawai'i to benefit from the market power that California exerts on manufacturers and the appliances they produce and ensure consistency for manufacturers.

Hawai'i Energy supports minimum appliance standards as a cost effective way to help reach our state's clean energy and carbon neutrality goals.

Thank you for the opportunity to testify in support of Senate Bill 691.

Sincerely,
Caroline Carl
Executive Director
Hawai'i Energy

13 February 2023

Energy, Economic Development, and Tourism Committee
Conference Room 229
State Capitol
415 South Beretania Street
Honolulu, Hawaii 96813

RE: Comments on SB691, Relating to Efficiency Standards

Dear Committee Members:

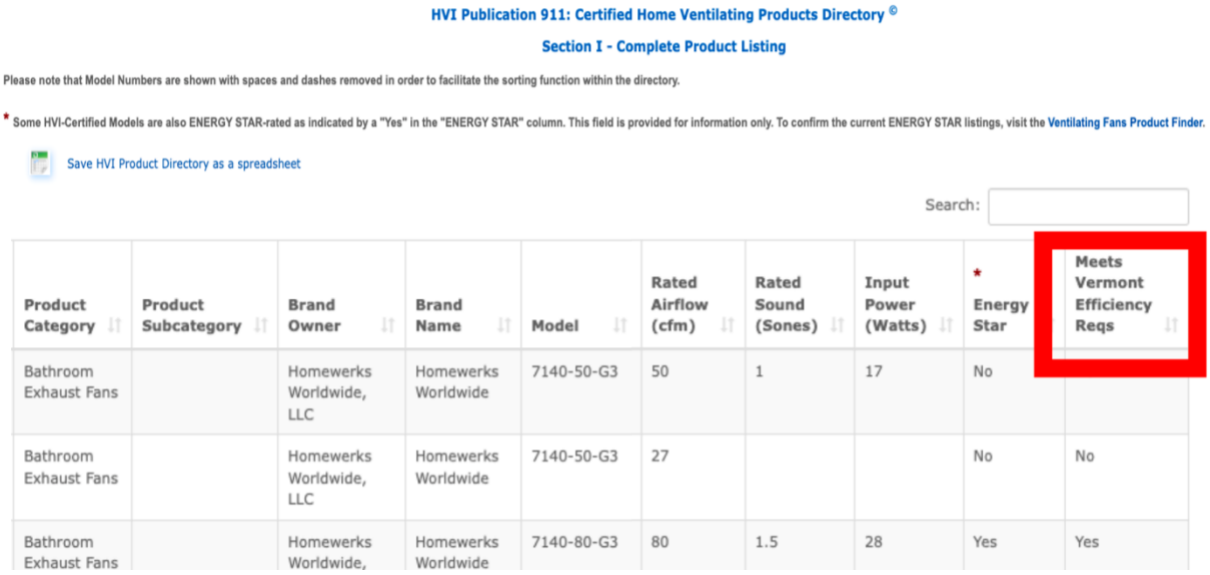
The Home Ventilating Institute ("HVI") is an ISO 17065 compliant certification body and a trade association representing over 100 manufacturers located in North America, South America, Asia, and Europe. Our manufacturer members provide the residential and light commercial ventilating products that deliver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

HVI offers comment on the certification process and labeling requirements in SB691, and urges the Senate Committee to adopt the amendments passed by the House Energy and Environmental Protection Committee to companion bill HB194.

Use of HVI's Certified Product Directory to Meet Certification and Labeling Requirements

Under Hawaii's current law, any product listed in California's Modernized Appliance Efficiency Database System (CA MAEDbS) is "deemed to be in compliance" with provisions requiring manufacturers to "certify and label products," HRS § 196-88. However, the CA MAEDbS lists not only RVFs that comply with Hawaii's law but also products that do not comply. To support compliance with Hawaii law, identifying a clearer method of determining compliant products is advisable.

In addition to recognizing CA MAEDbS, Hawaii law also allows that the "certification and labeling programs of other states and federal agencies" may establish compliance with the certification and labeling requirements for regulated products in Hawaii. HRS § 196-88. As an ISO accredited certification body of RVFs, HVI is uniquely positioned to communicate compliance with Hawaii's new RVF standards. Given that HVI's testing procedure is an element of compliance, and that HVI maintains a "certification and labeling program" referenced by another state (namely, Vermont), HVI requests that HVI's Certified Products Directory (https://www.hvi.org/hvi-certified-products-directory/) be explicitly recognized as a certification program by the State of Hawaii under HRS § 196-88. If Hawaii accepts HVI's Certified Products Directory as a certification program under HRS § 196-88, HVI will add a field to its Directory for directly determining Hawaii compliance. See the screenshot below from Section I of HVI's Directory for an example of how HVI communicates compliance with a state's (i.e., Vermont's) RVF performance requirements.



HVI Publication 911: Certified Home Ventilating Products Directory ©

Section I - Complete Product Listing

Please note that Model Numbers are shown with spaces and dashes removed in order to facilitate the sorting function within the directory.

* Some HVI-Certified Models are also ENERGY STAR-rated as indicated by a "Yes" in the "ENERGY STAR" column. This field is provided for information only. To confirm the current ENERGY STAR listings, visit the Ventilating Fans Product Finder.

Save HVI Product Directory as a spreadsheet

Search:

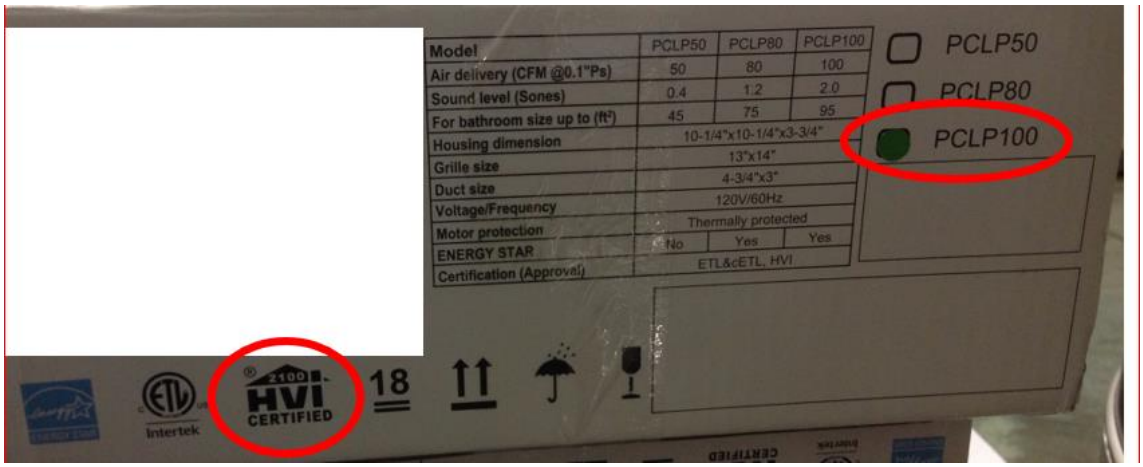
Product Category	Product Subcategory	Brand Owner	Brand Name	Model	Rated Airflow (cfm)	Rated Sound (Sones)	Input Power (Watts)	* Energy Star	Meets Vermont Efficiency Reqs
Bathroom Exhaust Fans		Homewerks Worldwide, LLC	Homewerks Worldwide	7140-50-G3	50	1	17	No	
Bathroom Exhaust Fans		Homewerks Worldwide, LLC	Homewerks Worldwide	7140-50-G3	27			No	No
Bathroom Exhaust Fans		Homewerks Worldwide,	Homewerks Worldwide	7140-80-G3	80	1.5	28	Yes	Yes

About the HVI Certified Products Directory

HVI accepts for listing in its Certified Products Directory only those RVFs which have been tested using the HVI Airflow Test Procedure in laboratories approved by HVI in accordance with ISO 17065. HVI also verifies the test results of listed products using a third-party lab accredited in accordance with ISO 17025. HVI selects 10% of each of its members' products in each category for annual verification. As an accredited certification body, HVI is accountable to the American National Standards Institute.

Each HVI certified product is already labeled as such, and a regulator, retailer, installer, or consumer will be able to easily confirm, by looking up the model number on the product

packaging (see image below for an example) within the HVI Certified Products Directory, whether the product complies with Hawaii's RVF standards.



HVI is eager to support Hawaii's Efficiency Standards through clearly communicating to the Hawaii State Energy Office and the general public whether a listed RVF is certified as complying with Hawaii's requirements. 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 Matt Matheny, HVI Engineering Director, at iaq@hvi.org.

Respectfully submitted,

Jacki Donner, HVI CEO

February 13, 2023

Chairwoman DeCoite
Vice-Chair Wakai

RE: SB 691 – Relating to efficiency standards ("Appliance efficiency standards")

Dear Members of the Senate Committee on Energy, Economic Development, and Tourism:

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.

Our organization, along with ACEEE, conducted the research and analysis upon which SB 691 is based. In 2017, we 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 been updated annually.[1] We would be happy to provide additional information about this analysis as well as the products and standards covered by the bill.

SB 691 WOULD SAVE MONEY, ENERGY, AND AVOID GREENHOUSE GASES
The bill would set minimum energy or water efficiency standards for seven products. If adopted, our analysis shows these standards would save Hawaii residents and businesses $24 million annually on utility bills by 2040.[2] Additionally, by 2040 Hawaii could cumulatively save 552 gigawatt hours of electricity while avoiding 281,000 metric tons of CO_2 emissions.

THE PROPOSED STANDARDS ARE COST EFFECTIVE, PRODUCTS READILY AVAILABLE
Five of the products in the bill have zero payback period, meaning the more efficient products are available at the same price and savings begin right away. The remaining two products, portable electric spas (aka hot tubs) and air purifiers, have payback periods of six months or less. Additionally, products meeting the standards are readily available today from multiple manufacturers.

SB 691 WOULD CONTINUE HAWAII'S LEADERSHIP ON APPLIANCE STANDARDS
In 2019, Hawaii passed efficiency standards for five products, becoming one of the first states in the nation to do so and putting the state on the path toward saving millions of dollars from decreased utility bills. Since then, 12 other states have also adopted appliance standards, creating a "strength in numbers" effect that is helping states with the implementation of standards.[3]

[1] For the 2017 ASAP/ACEEE report and subsequent updates, see: https://appliance-standards.org/document/report-overview-states-go-first
[2] See 2023 Hawaii Appliance Standards Savings Analysis at the end of these comments.
[3] Washington, Oregon, California, Nevada, Colorado, New York, New Jersey, Maryland, Rhode Island, Massachusetts, Maine, and Vermont.

STANDARDS ARE A COST-EFFECTIVE WAY TO ACHIEVE STATE GOALS
Adopting efficiency standards is a low-cost way for Hawaii to cut energy waste, reduce electricity bills, and reduce greenhouse gases – helping the state meet its clean energy, energy efficiency, and affordability goals.

We would be happy to provide further information, answer questions about appliance standards, or provide technical assistance should such a need arise.

Sincerely,

Brian Fadie, State Policy Manager
Appliance Standards Awareness Project

ASAP | APPLIANCE STANDARDS AWARENESS PROJECT

Appliance Standards Awareness Project

2023 State Appliance Standards Recommendations

Savings estimates for: Hawaii

	Potential annual savings in 2030						Potential annual savings in 2040					
	Electricity (GWh)	Natural gas (BBtu)	Water (million gallons)	NO_x (tons)	SO_2 (tons)	CO_2 (thous. MT)	Electricity (GWh)	Natural gas (BBtu)	Water (million gallons)	NO_x (tons)	SO_2 (tons)	CO_2 (thous. MT)
Air purifiers	16.0	--	--	27.6	42.0	8.9	26.1	--	--	31.9	50.4	12.0
Electric vehicle supply equipment	1.5	--	--	2.6	4.0	0.8	10.1	--	--	12.3	19.4	4.6
Portable electric spas	6.9	--	--	12.0	18.2	3.9	11.6	--	--	14.3	22.5	5.4
Residential ventilating fans	1.3	--	--	2.3	3.5	0.7	3.6	--	--	4.4	6.9	1.7
Toilets (water closets)	--	--	83	--	--	--	--	--	219	--	--	--
Urinals	--	--	54	--	--	--	--	--	117	--	--	--
Water coolers	1.6	--	--	2.7	4.2	0.9	2.9	--	--	3.5	5.6	1.4
Total	**27**	**--**	**136**	**47**	**72**	**15**	**54**	**--**	**337**	**66**	**105**	**25**

Assuming a compliance date of 2025 for all the recommended standards. Totals may not sum due to rounding. Urinal savings were estimated using a standard case of 0.125 gallons per flush and weighted for the availability of wall-mounted urinal models found in the Modernized Appliance Efficiency Database System (MAEDbS).

Savings estimates for: Hawaii

	Potential annual utility bill savings (million 2021$)		Net present value savings (million 2021$)	Benefit-cost ratio	Payback period (years)
	In 2030	In 2040			
Air purifiers	5.1	8.5	62.8	15.2	0.5
Electric vehicle supply equipment	0.5	3.3	20.1	no cost	0.0
Portable electric spas	2.2	3.8	27.3	11.6	0.6
Residential ventilating fans	0.4	1.2	8.1	no cost	0.0
Toilets (water closets)	1.4	4.2	36.0	no cost	0.0
Urinals	0.9	2.2	16.0	no cost	0.0
Water coolers	0.4	0.8	6.3	no cost	0.0
Total	**11**	**24**	**177**	**26.3**	**--**

Assuming a compliance date of 2025 for all the recommended standards. Net present value savings take into account both utility bill savings and estimated impacts on product costs for items sold between 2025 and 2040. Totals may not sum due to rounding. The total benefit-cost ratio is calculated as the present value of the total utility bill savings from products sold through 2040 for the package of recommended standards divided by the present value of the total additional costs. Urinal savings were estimated using a standard case of 0.125 gallons per flush and weighted for the availability of wall-mounted urinal models found in the Modernized Appliance Efficiency Database System (MAEDbS).

Cumulative savings estimates for: Hawaii

	Potential cumulative savings through 2040					
	Electricity (GWh)	Natural gas (TBtu)	Water (billion gallons)	NO_x (tons)	SO_2 (tons)	CO_2 (thous. MT)
Air purifiers	300	--	--	436.1	674.2	153.3
Electric vehicle supply equipment	57	--	--	77.9	121.1	28.1
Portable electric spas	132	--	--	192.1	297.2	67.5
Residential ventilating fans	30	--	--	43.2	66.9	15.3
Toilets (water closets)	--	--	1.9	--	--	--
Urinals	--	--	1.2	--	--	--
Water coolers	32	--	--	45.8	70.9	17.3
Total	**552**	**--**	**3**	**795**	**1,230**	**281**

Assuming a compliance date of 2025 for all the recommended standards. Totals may not sum due to rounding. Urinal savings were estimated using a standard case of 0.125 gallons per flush and weighted for the availability of wall-mounted urinal models found in the Modernized Appliance Efficiency Database System (MAEDbS).

Per-unit savings estimates for: Hawaii

	Average lifetime (years)	Per-unit incremental cost (2021$)	Per-unit annual savings		Per-unit annual utility bill savings in 2025 (2021$/yr)
			Electricity (kWh/yr)	Water (gallons/yr)	
Air purifiers	9	36	117	--	37.14
Electric vehicle supply equipment	16	0	30	--	9.52
Portable electric spas					
standard/exercise/combination	10	121	464	--	99.53
inflatable	3	108	1,311	--	281.37
Residential ventilating fans	15	0	14	--	4.57
Toilets (water closets)					
residential	25	0	--	861	15.00
commercial	12	0	--	488	7.53
Urinals	12	0	--	4,095	63.17
Water coolers	10	0	92	--	25.96

Urinal savings were estimated using a standard case of 0.125 gallons per flush and weighted for the availability of wall-mounted urinal models found in the Modernized Appliance Efficiency Database System (MAEDbS).

SB-691
Submitted on: 2/12/2023 7:40:41 PM
Testimony for EET on 2/14/2023 1:02:00 PM

Submitted By	Organization	Testifier Position	Testify
Ted Bohlen	Testifying for Climate Protectors Hawaii	Support	Written Testimony Only

Comments:

The Climate Protectors Hawaii are in STRONG SUPPORT of SB691!

Appliance efficiency standards are one of the best ways to save consumers substantial money over the life of the appliance. It also saves electricity, reducing the greenhouse gas emissions and other pollution.

Please pass this bill!

Mahalo!

Climate Protectors Hawaii)by Ted Bohlen)

Email: communications@ulupono.com

SENATE COMMITTEE ON ENERGY, ECONOMIC DEVELOPMENT, & TOURISM
Tuesday, February 14, 2023 — 1:02 p.m.

Ulupono Initiative supports SB 691, Relating to Efficiency Standards.

Dear Chair DeCoite and Members of the Committee:

My name is Micah Munekata, and I am the Director of Government Affairs at Ulupono Initiative. We are a Hawai'i-focused impact investment firm that strives to improve the quality of life throughout the islands by helping our communities become more resilient and self-sufficient through locally produced food, renewable energy and clean transportation choices, and better management of freshwater resources.

Ulupono supports SB 691, which allows the chief energy officer of the Hawai'i State Energy Office to enforce minimum efficiency standards and adopt or amend efficiency standards; and, sets minimum efficiency standards for air purifiers, electric vehicle supply equipment, portable electric spas, residential ventilating fans, toilets, urinals, and water coolers, effective 1/1/2025.

Ulupono is supportive of energy and water efficiency measures to lower consumption across the state. This bill seeks to add certain products to the current Hawai'i efficiency standards list adopted in 2019. With the additional seven items listed in this bill, Hawai'i consumers will realize an estimated savings of $11 million by 2030 and $24 million by 2040. Additionally, by 2040, adopting these standards will save 552 GWh of electricity and 3 billion gallons of water.[1] It is also worth noting that the State and electric utilities are depending on consumers to do their part in energy efficiency and conservation in order to achieve Hawai'i's 100% Renewable Portfolio Standard by 2045. Adding renewables and reducing demand are both vital in achieving our clean energy future.

Hawai'i leaders must consider our energy and water future to support affordable and resilient options for our local communities in the long run.

Thank you for the opportunity to testify.

Respectfully,

Micah Munekata
Director of Government Affairs

[1] https://appliance-standards.org/

ASSOCIATION OF HOME APPLIANCE MANUFACTURERS

1111 19th Street NW ➢ Suite 402 ➢ Washington, DC 20036
t 202.872.5955 f 202.872.9354 www.aham.org

TESTIMONY

Jacob Cassady
Director, Government Relations

On Behalf of
Association of Home Appliance Manufacturers

Before the Hawai'i Senate
Committee on Energy, Economic Development and Tourism

HEARING

SB 691
Environmental Standards for Appliances

February 14, 2023

Chair DeCoite, Vice Chair Wakai, and members of the Committee, the **Association of Home Appliance Manufacturers (AHAM) strongly urges the committee to <u>oppose SB 691.</u>** Although AHAM understands the bill's intent to save energy, an objective we not only support, but have been key in advancing under the Federal Appliance Standards Program, the legislation has a number of problems relating to home appliances that need to be addressed, specifically with respect to consumer room air cleaners.

AHAM represents manufacturers of major, portable and floor care home appliances, and suppliers to the industry. AHAM represents more than 150 member companies that manufacture 90% of the major, portable and floor care appliances shipped for sale in the U.S. Home appliances are the heart of the home, and AHAM members provide safe, innovative, sustainable and efficient products that enhance consumers' lives. The home appliance industry is a significant segment of the economy, measured by the contributions of home appliance manufacturers, wholesalers, and retailers to the U.S. economy. In all, the industry drives nearly $200 billion in economic output throughout the U.S. and manufactures products with a factory shipment value of more than $50 billion.

In Hawai'i, the home appliance industry is a significant and critical segment of the economy. The total economic impact of the home appliance industry to Hawai'i is $295.2 million, more than 2,200 direct and indirect jobs, $68.8 million in state tax revenue and more than $100.4 million in wages. The home appliance industry, through its products and innovation, is essential to consumer lifestyle, health, safety and convenience. Home appliances also are a success story in terms of energy efficiency and environmental protection. The purchase of new appliances often represents the most effective choice a consumer can make to reduce home energy use and costs.

On January 18, 2023, the Department of Energy (DOE) sent the final standards rule for consumer room air cleaners[1] to the White House Office of Information and Regulatory Affairs (OIRA).[2] The final standards rule is the result of a 2022 determination by DOE that air cleaners qualify as a covered product under Part A of Title III of the Energy Policy and Conservation Act (EPCA), effective September 13, 2022. After OMB approval, DOE can publish final rule and air cleaners would be pre-empted from state laws and regulations regarding minimum energy conservation standards. **<u>This federal regulatory action makes the inclusion of consumer room air cleaners in the legislation unnecessary.</u>**

Energy efficiency advocates and AHAM have worked for the past year towards an agreement on a national minimum energy standard for room air cleaners. That negotiated agreement, which we expect to be implemented by DOE's upcoming direct final rule, is a win-win for a national marketplace and energy savings, including for consumers in Hawai'i. AHAM and the efficiency and consumer advocates that jointly submitted agreed upon standards and accompanying test procedures to DOE are unified in support of implementing this agreement on a national

[1] [1] In the "Energy Conservation Program: Final Determination of Air Cleaners as a Covered Consumer Product" the US Department of Energy uses the term "consumer room air cleaner," which is also known as an "air purifier." https://www.federalregister.gov/documents/2022/07/15/2022-13655/energy-conservation-program-final-determination-of-air-cleaners-as-a-covered-consumer-product

[2] OIRA regulatory announcement: https://www.reginfo.gov/public/do/eoDetails?rrid=293065

minimum energy standard either through a DOE regulatory process or legislatively through Congress. Also, as part of this agreement, we are supporting a new national EnergyGuide label for air cleaners.

Importantly, absent federal rulemaking and the bill is enacted, Hawai'i consumers will be faced with fewer options at higher cost, potentially putting them out of reach for lower-income residents. Air cleaners are a critical tool in the fight against COVID-19, asthma, allergies, and other health risks. Now, especially for people with health concerns, is the wrong time to limit the availability of the lower cost products by setting unnecessarily strict requirements with a product people depend on for their health at home. This is especially true given the unprecedented demand for these products coupled with severe supply chain challenges all industries are facing and which are significantly impacting air cleaner manufacturers' ability to provide an adequate supply of these products which are critical to consumers' health.

The legislation also completely undercuts the very purpose of the ENERGY STAR program, which has successfully created a label designating the more efficient products in the marketplace. ENERGY STAR standards are not intended to serve as a minimum, but are a goal for companies to strive towards by maximizing a product's efficiency. The ENERGY STAR label designation informs the consumer about the more efficient products that are available. Current ENERGY STAR criteria are not intended to be and never should be used as a mandatory minimum.

The legislation's January 1, 2025 requirement for residential room air cleaners to be in compliance is insufficient. Under Federal law, manufacturers have five years to comply with energy conservation standards for new products and three years to comply with amended energy conservation standards, both of which allow for redesign, retooling of factories, pilot product testing, safety testing, and many other requirements to ensure the product is ready for the market. This bill should not continue to include energy conservation standards for room air cleaners, but if it does, it should provide a minimum of five years for compliance.

<u>Clean Air Delivery Rate (CADR)</u>
CADR indicates the volume of filtered air delivered by an air cleaner. The higher the tobacco smoke, pollen and dust numbers, the faster the unit cleans the air in the room. The AHAM label (below) is found on the packaging of more than 15 million air cleaners shipped per year and lists the three CADR particulate reduction numbers ─ one for tobacco smoke, one for pollen and one for dust. But even more importantly, this label indicates the suggested room size, as tested, that is appropriate for the consumer, avoiding the tendency to just buy bigger and bigger units. This rating system, which indicates performance at the most efficient room size, greatly advantages the people with limited financial resources.

AHAM's Verifide program provides a uniform and practical verification of energy, volume and certain performance criteria for each product, with an independent laboratory performing the verification testing. AHAM is recognized by the EPA as a Certification Body and is approved to administer verification testing for purposes of the ENERGY STAR program. Manufacturers that participate in the programs are identified by the AHAM Verifide Mark (see below) that appears on the product packaging or rating label.

For purchasing the right air cleaner, a person can easily find the AHAM suggested room size noted prominently on the label. This suggested sizing should match the size of the room the consumer is trying to clean. Air cleaners today exist across the full range of CADR. If the CADR rating, which is directly linked to performance and room size, is limited based on wattage as a result of this bill, it will likely cause customers to buy multiple or bigger air cleaners to obtain the performance they were trying to achieve. The reason for this is because any air cleaner first and foremost has to move air across a filter to clean it. The denser the filters, the more watts are needed to move the air through the filtration system. In order to reduce the wattage of the fan/motor system, the filters could be made either less dense or move less air. For example, an optimal air cleaner for a small bedroom for a child that is 10 x 10 feet, or 100 square feet; is a unit with a smoke CADR of 65. In order to be ENERGY STAR in that small size, the product's wattage would be limited to half the smoke CADR. If the smoke CADR were 65, then the product would be limited to 32 watts. On 120 volts power, that means it would have to operate at less than 1/4 of an amp. That is not many amps to move air through a filter.

The electricity cost for the needed wattage is very low when compared to the important health benefits. For example, if one unit used 100 watts and another used 40 watts, and even assuming

it runs 12 hours a day, 365 days a year, the energy difference is only 263 kWh/year or $2.77/month.

Conclusion

AHAM appreciates the opportunity to provide comments on SB 691 and strongly urges the Energy, Economic Development and Tourism Committee to oppose the bill. The goal of saving energy is important but should not be considered irrespective of other consequences, such as impacts to healthy indoor air quality and the products' availability to lower income and disadvantaged populations. AHAM strongly urges you to reconsider this bill for the reasons set forth in this testimony. For future reference, my contact information is 202.872.5955 x327 or via electronic mail at jcassady@aham.org.