



Joint Testimony of the Heating & Air Conditioning Contractors of Maryland (HACC) and the Association of Air Conditioning Professionals (AACP)

**Before the Maryland Senate Budget & Taxation Committee
January 26th Hearing: SB329 “Income Tax – Credit for the Purchase and Installation of Indoor Air Quality Equipment”**

Position: Favorable with Amendment

Chair Guzzone, Vice Chair Rosapepe, and honorable members of the Senate Budget & Taxation Committee, thank you for the opportunity to provide testimony in support of SB329 “Income Tax – Credit for the Purchase and Installation of Indoor Air Quality Equipment.” The Heating & Air Conditioning Contractors of Maryland (HACC) and the Association of Air Conditioning Professionals (AACP) strongly support this bill, and our organizations respectfully ask for a favorable report from the Committee to help mitigate the transmission of COVID indoors and support healthy indoor air quality for families and small businesses, by incentivizing the implementation of proven technologies. HACC and AACP also strongly support the proposed amendment to require that 30% of the allocated residential tax credits go to low-income households (defined as 200% of the Federal Poverty Level) and allowing renters in small multifamily properties to also benefit. We believe including these provisions will help ensure that this legislation benefits Marylanders equitably.

The Heating & Air Conditioning Contractors of Maryland (HACC) and the Association of Air Conditioning Professionals (AACP) are the two trade associations for independent heating, ventilation, air conditioning and refrigeration (HVACR) professionals in Maryland. Together, HACC and AACP represent **217 companies** across the state of Maryland—companies that represent small businesses and local jobs, as well as a critical skilled workforce providing essential services to homes, businesses, and other facilities. Our member companies are leaders in the HVAC industry and in the installation of indoor air quality equipment. We are pleased to represent them before the Committee in urging your support for this bill.

Support Public Health & Local Jobs

This bill would support public health and local jobs—an important win-win solution in the face of the monumental crises Maryland is experiencing right now. Supporting healthy indoor air quality (IAQ) and strategies to reduce viral transmission indoors are key to the state’s public health efforts now and into the future. Installation of IAQ technologies by trained HVAC contractors can help prevent the spread of viruses in the workplace and at home, through

enhanced ventilation and filtration, and technologies that can deactivate viral cells, including bipolar ionizers and ultraviolet light.

Improving IAQ also has long-term health benefits beyond the pandemic. Research has shown that specifically improving ventilation and air filtration can reduce asthma and other respiratory problems, reduce exposure to toxins like radon and formaldehyde, and result in better overall physical and mental wellbeing.¹ All Marylanders deserve a safe and healthy indoor environment, and this tax credit would help make that possible for more families and small businesses.

In addition, this tax credit would directly support local jobs. The bill stipulates that in order to be eligible for the tax credit, IAQ equipment must be installed by a Maryland-licensed HVAC contractor. Given the complexity of HVAC systems, many requirements need to be considered—including ventilation rate, compatible filtration, relative humidity, and air flow distribution—to ensure a positive impact on indoor air. Therefore, it is critical that these upgrades be done by licensed contractors who have the necessary training to not only pick the appropriate solution or set of solutions for a given home or building, but also install the technologies properly.

This bill would create new local jobs to do the work of installing critical IAQ equipment and support small contracting businesses like HACC and AACP member companies that are part of our local communities. It would mean helping to stimulate our local economy, while simultaneously helping more Marylanders breathe healthy indoor air and stay safe.

Research Shows IAQ Technologies/Solutions Can Mitigate Viral Transmission

ASHRAE, which develops technical standards on IAQ as well as other issues related to HVAC systems, recently published a Position Document on Infectious Aerosols which concludes “the use of **HVAC strategies supported by the evidence-based literature** should be considered.”² The document strongly recommends the following strategies based on good evidence supporting their efficacy:

- Enhanced filtration (higher minimum efficiency reporting value [MERV] filters over code minimums in occupant-dense and/or higher-risk spaces)
- Upper-room UVGI (with possible in-room fans) as a supplement to supply airflow (Evidence Level A)
- Local exhaust ventilation for source control

Studies of viral outbreaks have highlighted the impacts of ventilation and filtration, as well as other mitigation strategies, on transmission:

¹ <https://e4thefuture.org/wp-content/uploads/2016/11/Occupant-Health-Benefits-Residential-EE.pdf>

² https://www.ashrae.org/file%20library/about/position%20documents/pd_infectiousaerosols_2020.pdf

- A study of the choir rehearsal COVID-19 super spreader event in Washington state showed that **the outbreak was likely exacerbated by poor ventilation**. The study concludes that widespread application of effective indoor environmental controls—including **enhanced ventilation, mechanical filtration, and germicidal ultraviolet disinfection—could help limit the extent of super spreading events.**³
- In a 2019 study of an outbreak of tuberculosis at Taipei University in Taiwan, rooms were under-ventilated with a rate of 3.6 cubic feet per minute/per person and carbon dioxide levels were found to be in a range of 1,200 parts per million to 3,000 PPM. The university increased the ventilation rate to 51 CFM/per person, resulting in carbon dioxide levels dropping to 600 PPM, and the outbreak ended. **The results showed that maintaining adequate indoor ventilation could be a highly effective strategy for controlling TB outbreaks.**⁴ (Note, tuberculosis, like COVID-19, is an airborne disease.)

Leading Examples from other States

Other states are advancing policies and programs to support COVID-responsive IAQ improvements in buildings. In California, for example, the State Assembly passed legislation to create a School Reopening Ventilation and Energy Efficiency Program, providing grants to support the testing, upgrade, repair, and/or replacement of HVAC systems to meet safe ventilation and filtration requirements.⁵ In New York, the New York State Energy Research and Development Authority (NYSERDA) has entered into a strategic partnership with the American Society of Heating, Refrigerating and Air Conditioning Engineers (ASHRAE) to advance the combined goals of improved indoor air quality and environmental sustainability and support COVID-mitigating air quality improvements in buildings.⁶ And finally, the Tennessee Valley Authority, which provides power to Southeastern states, is offering a new rebate for implementing ultraviolet germicidal irradiation in commercial buildings, to help minimize the spread of airborne pathogens.⁷

Conclusion

For all of these reasons, HACC and AACP ask for a FAVORABLE REPORT on SB329, to help connect people and businesses in Maryland with systems that improve indoor air quality, while also supporting local jobs to do this important work. If enacted, this legislation will help protect Maryland families and help small businesses reopen safely, and drive lasting improvements toward healthier indoor environments; and Senator Benson’s proposed amendment would help to ensure the tax credit is benefiting families who need it most.

³ <https://www.medrxiv.org/content/10.1101/2020.06.15.20132027v2.full.pdf>

⁴ <https://onlinelibrary.wiley.com/doi/full/10.1111/ina.12639>

⁵ https://leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill_id=201920200AB841

⁶ <https://www.nyserda.ny.gov/About/Newsroom/2020-Announcements/2020-07-08-NYSERDA-Announces-First-of-Its-Kind-Partnership-with-ASHRAE>

⁷ <https://energyright.com/business-industry/incentives/ultraviolet-germicidal-irradiation/>

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