ASHRAE Comments Regarding Clearinghouse Rule 23-007
Senate Housing, Rural Affairs, and Forestry Committee
Assembly Housing and Real Estate Committee
Joint Hearing
July 18, 2023

Good morning. Thank you for your service to Wisconsin citizens and for this hearing.

My name is Mick Schwedler. I'm a life-long Wisconsin resident, have a Master's degree in engineering from the University of Wisconsin solar energy lab, am a licensed professional engineer in Wisconsin, and have worked with Trane in La Crosse for over 41 years. My wife and I pay taxes for the services our state offers and vote in every election.

I have the honor today of representing ASHRAE and its four Wisconsin Chapters including over 800 volunteers. ASHRAE is a technical and professional society with a mission to serve humanity by advancing the arts and sciences of heating, ventilation, air conditioning, refrigeration and their allied fields. As a volunteer I also had the privilege to lead ASHRAE's 53,000 members while serving as our global Society President in 2021-22.

With respect to today's hearing, I Chaired the ASHRAE 90.1 committee for its 2010 version. In that capacity we added the National Association of Home Builders (NAHB) as an organizational voting Member, along with more representation for building owners. The NAHB has been involved in the consensus process for about 15 years – including for the 2019 version being considered at this hearing.

ASHRAE, founded in 1894, is a non-profit, non-partisan organization that supports adoption of the most up-to-date energy standards, including this update of Wisconsin's Commercial Building Code from the 2013 edition of ASHRAE Standard 90.1 to the 2019 edition, and the International Energy Conservation Code (IECC) 2021.

Adopting Standard 90.1-2019 statewide will result in energy savings and lower operational costs. Standard 90.1, the *Energy Standard for Buildings Except Low-Rise Residential Buildings*, has been the benchmark for commercial building energy codes in the United States and a key basis for codes and standards around the world for more than 35 years. In hearings in other states, it has been stated that the 90.1 process does not include an economic justification. This is incorrect; for each edition of the standard, the economic justification is considered by the committee. For buildings in Wisconsin, this code update would amount to estimated energy cost savings of $800,900 in the first year, and $343.9 million over 30 years.[1]

[1] Cost-Effectiveness of ANSI/ASHRAE/IES Standard 90.1-2019 for Wisconsin, Pacific Northwest National Laboratory, July 2021: https://www.energycodes.gov/sites/default/files/2021-07/Cost-effectiveness_of_ASHRAE_Standard_90-1-2019-Wisconsin.pdf

The energy efficiency gains in Standard 90.1 have improved in each successive edition, resulting in major improvements over time. Over the period of 2004-2019, which included six editions of Standard 90.1, energy efficiency improved by 36%. Beyond the immediate and substantial cost savings, this increased efficiency creates greater grid resilience to extreme weather events.

This code update would also increase cost-effectiveness in construction, and actually reduce construction costs by an estimated $1 per square foot for mid-rise apartments, with immediate payback on construction costs for builders. This building type would also see total life cycle cost savings of over $3.50 per square foot over 30 years. This is because the latest update reduces the number of light fixtures needed per square foot; LED technology is cheaper, more efficient, and lasts longer; and smaller HVAC equipment is needed due to better building envelopes.

In terms of the impact on small businesses, the same cost-effectiveness study also shows net cost and energy savings for small offices, small hotels, and stand-alone retail buildings that are even greater than the average life cycle cost savings for all building types. The positive economic effects of this code update would include the creation of jobs in construction and related industries, as well as lower utility bills for consumers, tenants, and businesses. Lower utility bills immediately put money back into the pocket of business owners, homeowners, tenants, and landlords that then enters the economy and creates additional jobs.

Finally, this code update will give Wisconsin greater access to federal funding opportunities for additional energy-efficient, resilient and cost-effective code updates, helping to better position the state for future economic growth.

We appreciate the Committee's consideration of ASHRAE's comments. We welcome your questions and would be happy to provide any additional information as needed. Thank you for your consideration of this important matter and for working to ensure the health and well-being of building occupants in the state of Wisconsin.