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Chair Andrew Klein
Washington State Building Code Council
1500 Jefferson St SE
Olympia, WA 98501

RE: Heat Pump and Heat Pump Water Heater Revisions to the Washington State Energy Code

Dear Mr. Klein,

I am writing in strong support of the Washington State Energy Code revisions related to heat pumps and heat pump water heaters.

I am an industry professional with 34 years' experience in accelerating climate positive construction practices. I developed zHome, the first certified Zero Energy community in the United States, located in Issaquah, now celebrating its tenth anniversary. I am the author of [The Power of Zero, Learning from the World's Leading Net Zero Energy Buildings](#), which includes case studies of nineteen projects, all of which are heated with heat pumps and served with heat pump water heaters. Today I run Zero Energy and Zero Carbon programs at McKinstry, working on several dozen buildings which are using the exact technologies being addressed by this code amendment.

My earliest work memory is of a substantial code battle around the requirement for seismic safety elements such as earthquake tie downs. Unfortunately, the building industry, then as now, fought hard against these standards, proclaiming them to cause immitigable financial hardship. Today, these safety measures are expected by all, and are considered part of a modern building. The normalization of these technologies enabled mass scaling and innovation, reducing cost. Our current response to the climate crisis is not all that different – fundamentally, a question of safety and protection against harm.

I would like to offer some perspectives on why I think these amendments should be adopted.

These technologies are ready for prime time because they are already required in the largest building market in the State – Seattle Heat pumps are very well understood by the design and construction trades because they are already here. While it is true that eastern Washington is colder, it doesn't make a material difference in design – projects in both sides of the State will use peaking boilers (including natural gas), which are allowed by this code revision.

Codification will scale heat pumps and thus substantially reduce costs Whenever building technologies transition from the custom to mainstream markets, competition is significantly increased, driving down costs. Within the Seattle market, this has certainly occurred with heat pumps – multiple vendors and manufacturers compete, engineers and contractors learn and sharpen their pencils – and the free

market wins. Heat pumps are a simple technology – chillers running in reverse – so they hardly represent a radical change in systems.

This amendment does not substantially impact trades, including plumbing – good quality work will continue to be needed The result of this amendment will be that boilers and hydronic systems are still the norm – we are simply adding a functionality to chillers, or alternatively adding heat pumps. The need to skilled pipefitting will still be needed.

Aggressive energy codes are of great economic benefit to our State, driving an energy efficiency innovation cluster Ironically, Washington’s legacy of aggressive efficiency, led by the Seattle code, actually results in substantial economic benefit – the opposite of what is claimed by some. McKinstry’s nationally renowned Engineering and Design group does work all over the United States, designing the nation’s best buildings. We, as well as other leading Seattle design firms, are in demand in large part because our core market, Seattle, has the highest energy standards in the country. In turn, we take that know how on the road, returning those dollars to our local economy.

The State Building Code Council’s mandate is to meet the energy reduction target set by the State legislature, not to decide whether the reduction should be made. The SBCC is an implementing, not policy body. Your mandate is to adopt the best way to achieve an improvement in efficiency. To act otherwise is to operate outside of your mandate, and take away from the democratic process. We are very lucky that there is a clear path to making this efficiency improvement. Those opposed to the amendments need to provide clear alternative methods for achieving the reduction. So far, I have seen none.

Given the reality of the climate crisis, decades from now, we will look back at this time and judge our responsibility to the future. Again – the choice is not whether to move forward, but how to move forward. To act otherwise is to act against democracy and legislatively established choices. I urge you to move forward with putting these amendments out for public review.

Sincerely,

A handwritten signature in black ink, appearing to read "Brad Liljequist". The signature is stylized with overlapping loops and a long horizontal stroke at the end.

Brad Liljequist
Seattle, Washington