

Making heat recovery ventilators sexy

Sure, we'd all love a new kitchen instead of a pricey, invisible insulation job. But only one of them can save the planet.

By **Yvonne Abraham** Globe Columnist, Updated December 7, 2022, 5:59 p.m.



A home heat pump. VERENA MATTHEW/ADOBE STOCK

SALEM — It's called "building decarbonization" — the work of making structures of all sizes nearly carbon free. And I'll concede that the topic, while vital to our survival on this roasting planet, isn't the sexiest.

But spend an hour with Julie Klump, and you, too, might be surprised to find yourself getting excited about polyisocyanurate board insulation and heat recovery ventilators.

On Tuesday, I met Klump at the Salem Heights Apartments, a complex of 281 affordable and low-income units owned by [the Preservation of Affordable Housing](#), where Klump is VP of design and building performance. Hard-hatted workers swarmed the site, some affixing super efficient insulation panels around new triple-glazed windows on the building's upper floors.

The new cream, ochre, and gray aluminum exterior is a vast improvement over the ugly — and unstable — drab brick facade that has enclosed this blocky building since the 1970s. But what's happening here goes way beyond cosmetics. [This phenomenally expensive renovation project](#) is zipping Salem Heights up tight, putting a sweater on the behemoth so that every apartment can now be heated and cooled with efficient electric heat pumps, which will eventually run entirely on renewable energy.

When it's done, energy bills at Salem Heights will drop about 67 percent, Klump says. The building will be so resilient that it will stay warm, or cool, even if the power goes out for a week. The old gas heat will remain in place just in case, but if all goes well, that dirtier system will never be used again.

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Transformation like this doesn't come cheap: Klump estimates it will cost \$70,000 per apartment.

“The payback is healthier and more comfortable residents,” she said.

She knows that some of those residents — like the rest of us with limited resources — might be more excited about new kitchens and bathrooms than these improvements, which are largely invisible. But what's happening at Salem Heights is about more than the people who live here: It gets us all closer to a future without fossil fuels, and the harm they create.

If we're going to meet [the ambitious climate goals we've set ourselves in this state](#), we have to deal with the 2 million [existing buildings](#) that are currently responsible for almost [one third of the state's carbon emissions](#) — polluters second only to transportation. That means we have to retrofit and electrify many, many buildings like Salem Heights.

And we have to do it fast. The best bang for our bucks will come from larger scale projects — low-income housing, municipal and state buildings, schools.

Schools alone account for 180 million square feet of the state's building space, according to Sara Ross, cofounder of [UndauntedK12](#), a national nonprofit focused on helping public schools get to zero emissions. But “we don't have a plan right now to get our schools in line with our state goals,” she said, even though schools are central to communities, especially disadvantaged ones, especially during power outages and other crises. If they're more resilient, their communities are, too.

Ross is part of a huge new coalition of environmental, housing, and community advocates pushing Beacon Hill to create a Zero Carbon Renovation Fund to fund retrofits across the Commonwealth, especially in communities that otherwise would be left behind when it comes to electrifying. They propose that the state set aside an initial \$300 million to fund the effort.

Obviously, \$300 million doesn't come close to covering the need here. But in addition to putting a sizable dent in our emissions, the projects it funds would also juice up the retrofitting and heat pump market. They would also build expertise when it comes to kicking fossil fuel, training the army of electricians and other workers on whom our carbon-free future depends.

People [have been pushing for it for over a year](#), but this is the perfect moment to make a Zero Carbon Renovation Fund a reality. The state has piles of extra federal revenue from the American Rescue Plan and the Inflation Reduction Act, and surplus state tax money. Incoming governor Maura Healey wants to be aggressive on climate, and must meet the ambitious goals set by the Baker administration and lawmakers. And we're all about to get our behinds kicked by [spiking heating costs](#).

Decarbonization has never been so sexy.

Globe columnist Yvonne Abraham can be reached at yvonne.abraham@globe.com. Follow her on Twitter [@GlobeAbraham](https://twitter.com/GlobeAbraham).

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