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New green job training prepares future Philly workers for climate transition

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Electrifying old Philadelphia homes in order to address climate change will require skilled labor. A new training lab in North Philly aims to prepare local workers, by teaching them to install, maintain, and fix heat pumps.

Heat pumps do the work of both a heater and air conditioner. They're [considered a climate solution](#) because they're efficient and run on electricity — which can be made from renewable energy — rather than natural gas.

“We’re moving away from fossil fuels,” said Jackie R. Robinson, lead instructor at the Energy Coordinating Agency, which unveiled the new training lab Friday. “Everything here runs off electric.”

The biggest source of planet-warming carbon emissions in Philadelphia’s residential buildings is natural gas, used for heating and cooking, rather than electricity, according to the city’s [latest greenhouse gas emissions inventory](#). Emissions from natural gas across all buildings and industry in Philadelphia grew 4% between 2006 and 2019.

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The Energy Coordinating Agency’s new heat pump lab features a heat pump dryer, heat pump hot water heater, and several types of heat pump home heating and cooling systems, including ductless mini splits.

“What we want to do is get them all together so we can get our students familiar with all the different types of equipment, so they can go out and be the best technicians possible,” Robinson said.

The training lab will be integrated into the Energy Coordinating Agency's existing HVAC training program, which currently serves a few dozen trainees, including high school students at ASPIRA charter school, said Christopher Petersen, director of business development at the Energy Coordinating Agency. The program aims to not only train workers to electrify Philly homes, but help Philadelphians access jobs that pay well.

The [mean hourly wage](#) for heating, air conditioning, and refrigeration mechanics and installers in Pennsylvania was over \$26 as of last spring, according to the U.S. Bureau of Labor Statistics.

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If installed in homes across the city, heat pumps could help lower Philadelphians' energy bills and keep families cool during increasingly hot summers, said Nidhi Krishen, deputy director for climate solutions in the city's Office of Sustainability.

"We need to be supporting access to efficient mechanisms of cooling, to ... not exacerbate energy burdens in the city, which are incredibly high," Krishen said.

The Philadelphia Energy Authority has already installed electric appliances — including electric stoves, hot water heaters, and heat pump HVAC systems — in around 40 homes through its [Built to Last program](#), said Alon Abramson, director of the Authority's residential programs. The Authority plans to scale up the program, using funding through the [Whole-Home Repairs program](#), to repair, weatherize, and/or install new appliances in 150 homes next fiscal year.

Philadelphia Energy Authority worked with [RMI](#), a nonprofit working to decarbonize energy systems, to model how utility costs would change in a typical Philadelphia row home if the HVAC system and hot water heater were replaced with heat pumps under different scenarios.

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“We really found that there’s no situation where putting a heat pump in isn’t more cost effective — especially when you pair that with weatherization, which we always do in our homes,” Abramson said. “It’s kind of a no brainer.”

David Lamb, product manager for ductless systems at HVAC distributor Peirce Phelps, has noticed an increase in demand for heat pumps in the last few years in Philly, particularly in new construction of multifamily buildings.

“Any organization that is starting to train people up in the trades and in heat pumps in particular, because that segment is growing so quickly, it’s going to find ready homes for those people,” Lamb said.

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