



# Is 'passive' design the future of architecture?

Sam Lubell

It's another sunny day on the Internet. Dozens of participants are lined up in their digital boxes attending [Reimagine Buildings '24](#), an online conference held in the spring dedicated, mostly, to Passive House, a quickly-growing approach to building that sharply reduces energy use by going simple: employing techniques like continuous insulation, air-tight sealing, and top quality windows; making better use of both sun and shade, and bringing in fresh air through advanced filtering.

Passive House is also becoming a popular marketing tool — always a sign of a movement's success. As they did with LEED a few years ago, designers and developers are now actively advertising their passive house bona fides. Handel Architects' 691-foot-tall Winthrop Center in Boston, recently certified by the International Passive House Institute, is being touted as the largest passive house office in the world. (A typical class A office building in Boston, says its developer Millennium Partners, uses 150% more energy.)

ARO's Khalil Gibran International Academy and PS 146, a 46,000 square foot facility containing a Spanish-language elementary school and Arabic-language high school on Flatbush Avenue in Downtown Brooklyn is promoting its status as one of the largest passive house education projects in the United States. (It's also the first Passive House certified public school in New York.) When it opens this fall, the project, said ARO principal Stephen Cassell, will use less than a third of the energy of a typical New York public school. The biggest challenge, he said, was "tracking every seal, every joint, every condition" for such a large project.

And Passive House is ripe for innovation. At Reimagine Buildings '24, designers and builders showed off modular, prefab, and all-electric passive projects, passive house retrofits, and new appliances like advanced heat pumps that can make passive house buildings more efficient.

While Passive House has long been promoted in a bottom-up manner — through passionate groups and ambitious developers, designers, and builders — the top down method is gaining steam, as governments start to force the issue. For now the leader on this front is Massachusetts. That state's Department of Energy Resources last year launched a "Specialized Opt-in Code," in which participating municipalities would require multi-family buildings equal to or greater than 12,000 square feet to achieve Passive House certification. (Boston is one of the many cities that have adopted this code.)



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Inside the Winthrop Center.