

## Passive House and Other Deep Energy Retrofits

**Considering the Passive House standard or similar deep energy retrofit for renovating your locally-designated historic property? *Go for it.***

In 2009, LPC received its first application for a historic building renovation seeking to use the Passive House building standard for high performance in energy efficiency, very low heating and cooling loads, superior indoor air quality and comfort, and improved building resiliency. Since then more applications have followed, and although LPC does not substantively review much of the work that goes into these projects because it takes place inside the building, staff has become familiar with certain exterior components requiring specialized detailing, such as triple-glazed windows.

**Can new windows satisfying strict Passive House requirements be made to look like historic windows? And has LPC reviewed and approved windows of this type? *Yes and yes.***

For Passive House-type projects requiring extremely energy efficient windows with triple-glazing, very high insulation values and no air leakage, for which typical modern double-hung windows and retrofitted older windows cannot comply, the Commission has approved simulated double-hung windows (i.e. casement lower sash set back from and below a fixed upper sash) more than twenty times for several distinct building types located in many different historic districts. While these particular window approvals are currently made via the Public Hearing process, because the operation and details typically vary from that of historic windows, LPC is considering a revision to the Rules to allow staff level approval for buildings in historic districts. If this Rule revision is approved, it will provide an opportunity for many projects of this type to be reviewed more quickly by LPC staff, assuming other aspects of the proposal (i.e. new additions) also qualify for staff level review.

**Does LPC review the rest of the work, besides windows, that goes into Passive House-type projects? *Yes. All exterior work except for general maintenance, and most interior work (including work filed with the NYC Department of Buildings), does require a LPC permit.***

There are currently no special provisions or exceptions for reviewing these projects, so existing Rules and policies apply. Encouragingly, almost all interior work and most exterior work (i.e. installing mechanical equipment and renewable energy equipment at rooftops), is reviewed and approved at staff level. Other exterior work, such as adding exterior insulation to historic facades, has not been supported by the Commission to date. Though not reviewed substantively by staff, some interior work (i.e. intensive insulating and air sealing) should be carefully designed by a professional with expertise in working with older buildings specific to our local climate, to minimize or eliminate risk of damaging the historic building envelope. If you are considering a historic building renovation using the Passive House standard or something similar to it, please discuss this with Preservation Department staff early in the application process.