

THE NEED

Windows are essential elements of most building envelopes. They connect occupants with the outdoors, providing view, daylight, air, warmth from sunlight in winter and serve as a distinguishing design feature of many buildings. But traditional windows are poor energy performers - although they constitute only 10% of the surface area of a typical home they usually account for 30-40% of the heat loss in winter and often add to cooling peaks and discomfort in summer. As the US pivots toward a new generation of net zero energy buildings, addresses carbon emissions and confronts the challenges of shifting peak heating loads from gas to electricity as part of an effort to decarbonize the grid, there is a growing need for improved window products to support these efforts.



THE GOOD NEWS is that there are product options on the market now and even better emerging technologies that can help address these needs. However, the market is fragmented, and the supply chain needed to meet this demand for more high-performance products is not yet in place. We need to organize and mobilize disparate efforts to rapidly expand demand for advanced windows and window attachments and then ensure that the market can meet that demand with cost effective products. Industrial innovation and market forces can be powerful forces for change, if they can be organized and coordinated in a manner that transforms existing dysfunctional markets. Progress has been slow because there is a mismatch between the industry suppliers of window solutions and the markets that demand them.



A NEW PUBLIC / PRIVATE PARTNERSHIP IS THE SOLUTION

The Partnership for Advanced Window Solutions (PAWS) is a collaborative that promotes cost-effective, high performance window solutions for the nation's new and existing building stock. Together its members will employ a variety of proven strategies to transform window markets, including:

1. Field demonstrations to verify performance claims
2. Technical support for glass and window manufacturers and RD&D as needed to overcome any technical issues
3. Support for manufacturers to upgrade production lines to the latest high-performance window technologies
4. Development of rebate and incentive programs aligned with utility demand side management programs
5. Information campaigns to inform and advise purchases of efficient window solutions
6. Collaboration with state, local and national government to support implementation of decarbonization policies
7. Engagement with building code bodies to recognize and promote programs that encourage adoption of high performance window solutions nationwide
8. Creation or leveraging of model financial programs to encourage investment in better windows in new and existing buildings
9. Support for significant changes to ENERGY STAR window criteria to achieve aggressive PAWS performance goals
10. Document non-energy benefits such as enhanced thermal comfort and resilience
11. Provide an ongoing unbiased, technology-neutral assessment of emerging window design solutions and needs.



INITIAL FOCUS

Initial efforts will focus on regional programs to promote highly insulating windows (~R5) for residential markets, both new and retrofit. These products have application across most of the U.S. and are available today but underutilized or emerging and can be scaled rapidly. Replacing today's code compliant, double pane low-e window in a new home with these R5 solutions can save between 7% and 16% of a home's energy use, depending on climate. In an older home, retrofitting its single glazed windows with R5 windows can provide much larger energy savings and if scaled across the country could create many new jobs in the building sector. Over half the homes in the US have inefficient windows (~R1 single or ~R2 double pane clear).



The outcome of the PAWS collaborative programs will:

1. Provide energy and cost savings for homeowners both in new and existing single family and multifamily homes while enhancing occupant comfort
2. Contribute to emerging carbon savings goals and ease the transition to a decarbonized electric grid
3. Create new American jobs in window manufacturing plants and for the construction crews that install them



HOW TO PARTICIPATE

Join us in developing and implementing these critically needed local, regional and national efforts to accelerate adoption of advanced windows and energy-efficient window attachments. If you are an energy efficiency advocate, government agency, utility, or window rating organization looking to expand your energy efficiency efforts, or a window or building industry organization supporting our goals, please contact us. Let us know how you can engage to support PAWS activities and what kind of market and technical assistance you think will be most valuable to your organization.



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Additional Information

Check our website to learn more about PAWS and new window technology options [here](#).