



Attachments Energy Rating Council

2017 ACEEE/CEE National Symposium on
Market Transformation

April 4, 2017

What are Window Attachments?

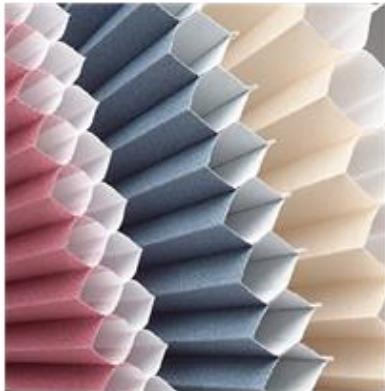
Interior Shutters



Horizontal Blinds



Cellular Shades



Roller Shades



What are Window Attachments?

Exterior Storm Windows



Exterior Roller Shades



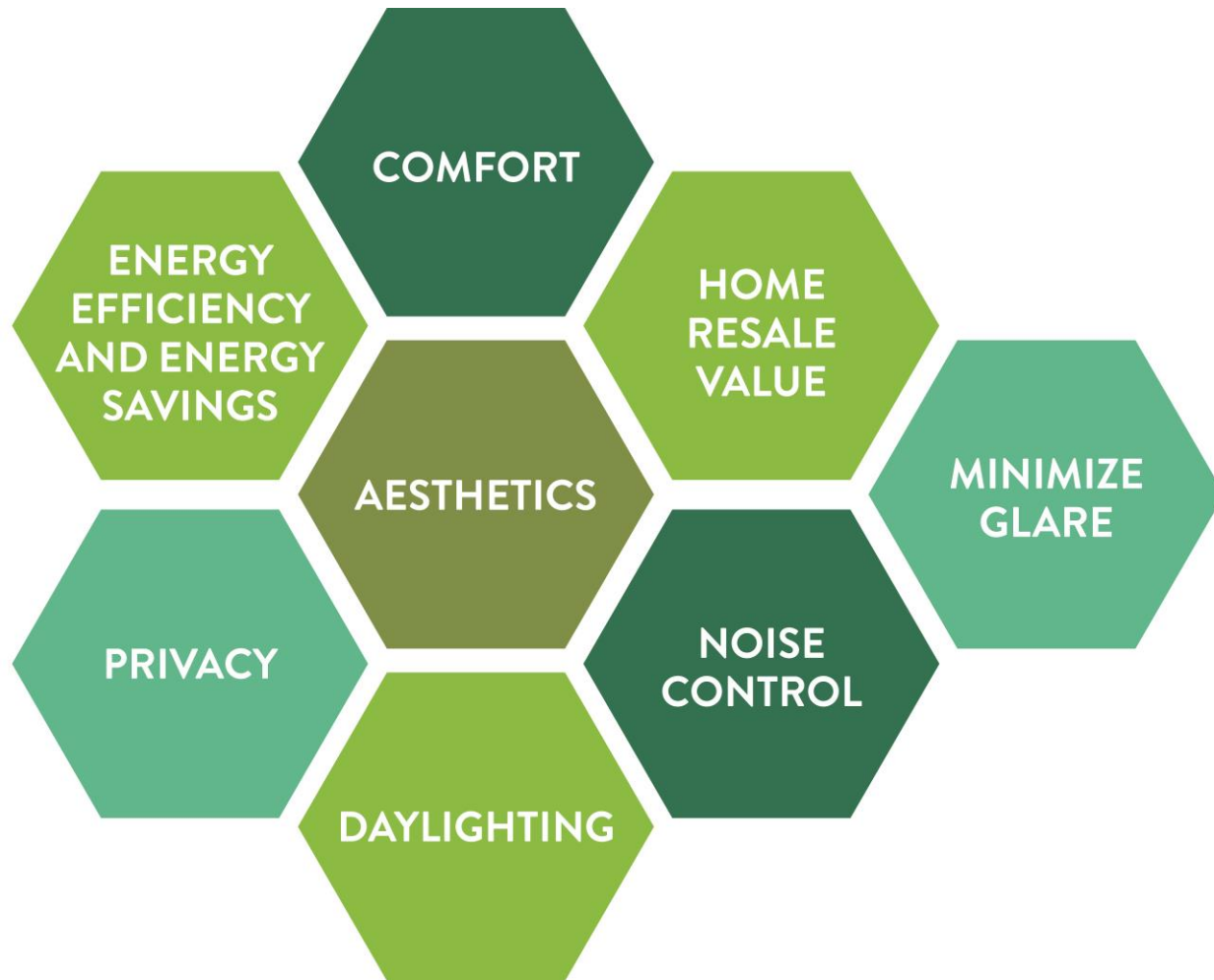
Exterior Roller Shutters



Awnings



Value of Window Attachments



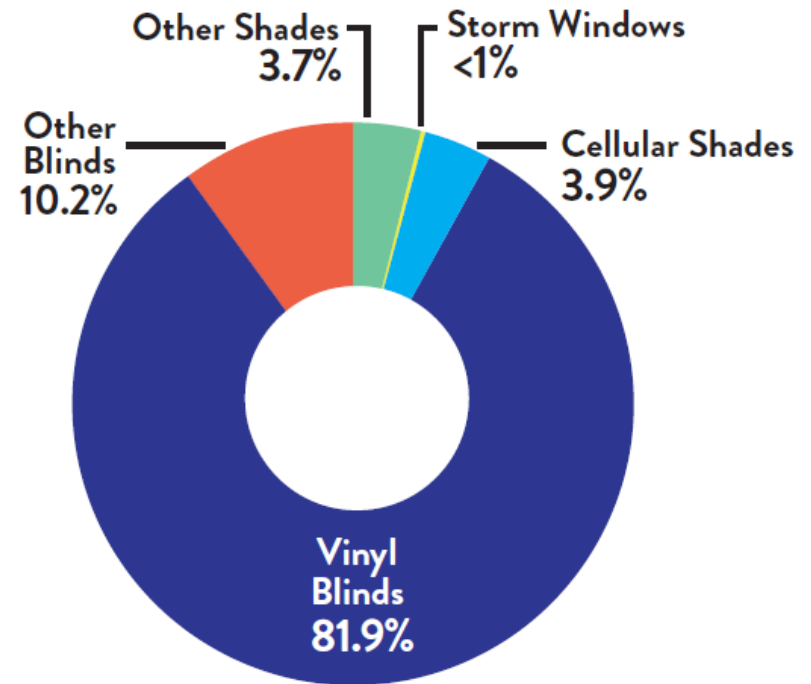
Large Opportunity

- 
- ✓ **FIELD DEMONSTRATED ENERGY SAVINGS:**
3%-30%
 - ✓ **LOWER COST MEASURE:**
\$100 median price per window
 - ✓ **YEAR ROUND BENEFITS:**
 - Heating: 20 - 500 therms/year
 - Cooling: 700 - 5,200 kwh/year
 - ✓ **HIGH MARKET POTENTIAL:**
 - 150 million+ attachments shipped annually
 - 4-16 year lifetimes

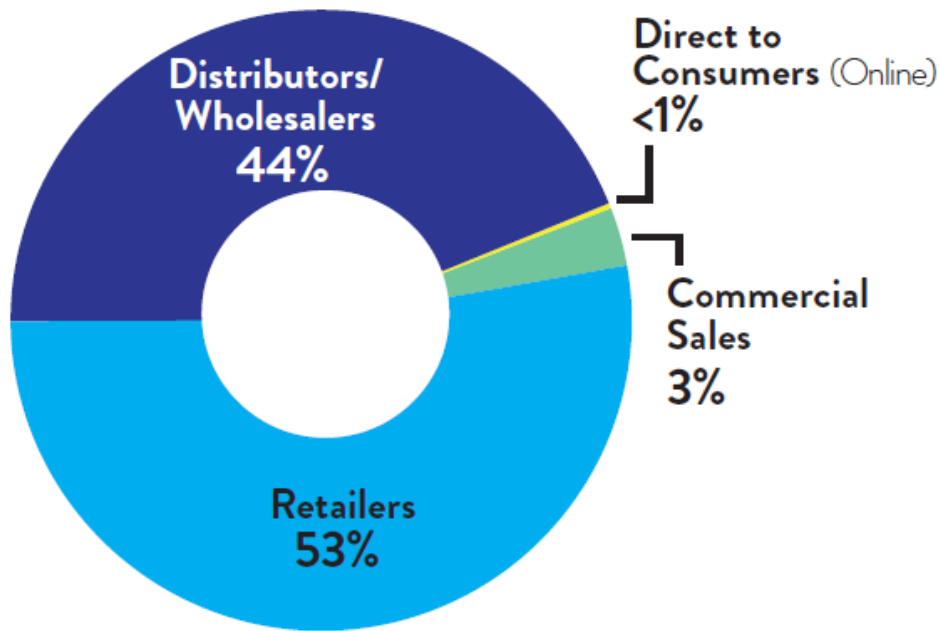
- Window attachments offer a significant opportunity to save energy:
 - Field demonstrated energy savings
 - Heating and cooling savings
 - Wide range of prices, with median prices around \$100
 - Easily accessible to consumers
 - DIY
 - Large market

Residential Market

- ~150-225 million interior window coverings shipped in U.S. in 2015



Residential Distribution Networks



- Channels differ greatly manufacturer to manufacturer

Window Attachment Pricing



*Blinds include wood blinds, faux-wood blinds, vertical blinds, and metal blinds

Attachment Energy Savings Studies

		Whole Home Energy Savings Range – Experimental Homes: Matched set of homes, 1,500 ft ² , Pacific Northwest		Product Installed Lifetime Estimates
Product Category	Baseline Window	Percent Savings		Years
		Heating	Cooling	
Cellular Shades (covering all window area)	Double pane clear glass	10.5% ± 3.0% - 16.6% ± 5.3%	10.4% ± 6.5% - 15.9% ± 0.7%	4 – 10
Exterior Storm Windows (covering all window area)	Double plane clear glass, aluminum frame	10.5% ± 1.2%	8.0% ± 0.5%	10 – 20
Interior Storm Windows (covering 74% of window area)	Double pane clear glass, aluminum frame	8.2%± 1.9%	4.2%± 0.7%	

Window Attachment Operation Studies

- DOE conducted a behavioral study that showed that **consumers can save energy** if they move to a more efficient window attachment **without adjusting their daily routine**.
 - Results showed that homes in southern climates had their attachments closed more frequently during summer than northern climates
 - Suggests that consumers may already operate attachments in manner than optimizes efficiency

ATTACHMENTS ENERGY RATING COUNCIL

What is AERC?

AERC is an independent, **public interest** organization whose mission is to **rate, label and certify** the **energy performance of window attachments.**

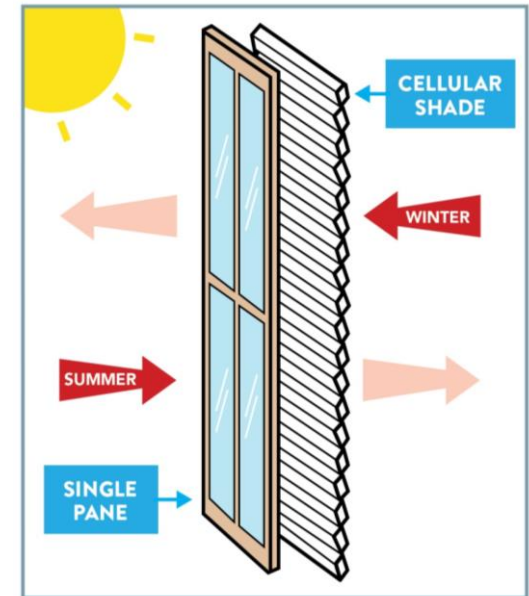
AERC members include:

- Product Manufacturers
- Component Manufacturers
- Public Interest Groups
- National and Commercial Labs
- Utilities



Why is AERC Necessary?

- Window attachments can save energy
- Consumers have no way to compare the energy performance of attachments
- The rating simplifies the customer experience



The AERC rating allows consumers to make more informed decisions.

AERC Program Background

- Cooperative Agreement between DOE and Window Coverings Manufacturers Organization (WCMA)
- Financial self-sufficiency at the end of four year funding period
- Public interest mission and majority public interest representation on Board of Directors

AERC Program Goals

- Deliver a consistent set of energy performance-based rating and certification standards
 - Residential and commercial fenestration attachments
- Create consumer website and database to share certified product performance

Phased Ratings Development



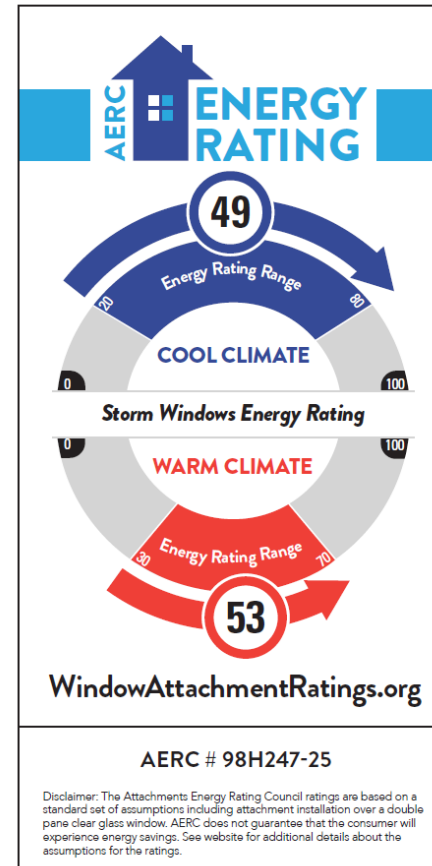
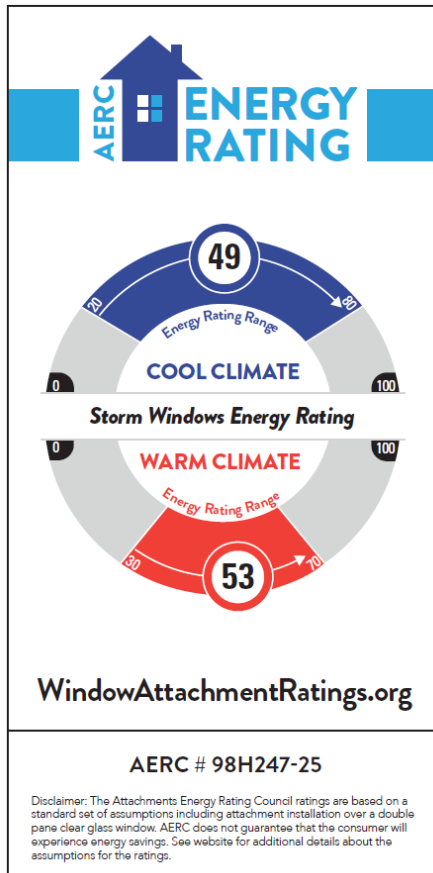
AERC 2017 Goals

- **Energy Performance Residential Ratings** for cellular shades, storm windows, blinds, roller shades, pleated shades, and solar screens
- **Product Label** for the residential market
- **Website** that will allow consumers to access certified product performance information
- Ongoing public **outreach and education**

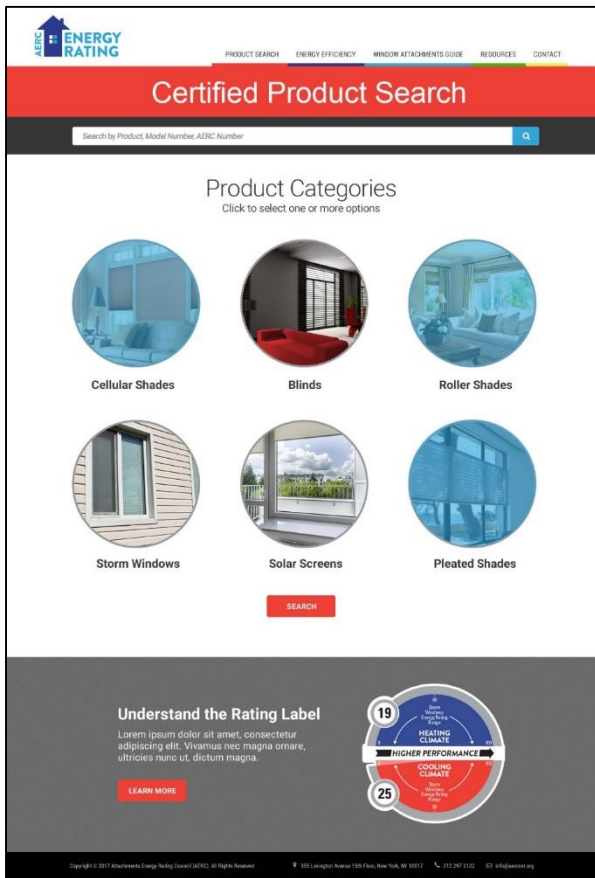
AERC Technical Ratings

- U-Factor
- Solar Heat Gain Coefficient
- Visual Transmittance
- Air Leakage (as applicable)
- Annual Energy Performance

AERC Draft Residential Product Label



AERC Consumer-Facing Website



ENERGY RATING

PRODUCT SEARCH ENERGY EFFICIENCY WINDOW ATTACHMENTS GUIDE RESOURCES CONTACT

Certified Product Search

Search by Product, Model Number, AERC Number

Product Categories

Click to select one or more options

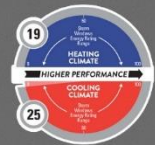
- Cellular Shades
- Blinds
- Roller Shades
- Storm Windows
- Solar Screens
- Pleated Shades

SEARCH

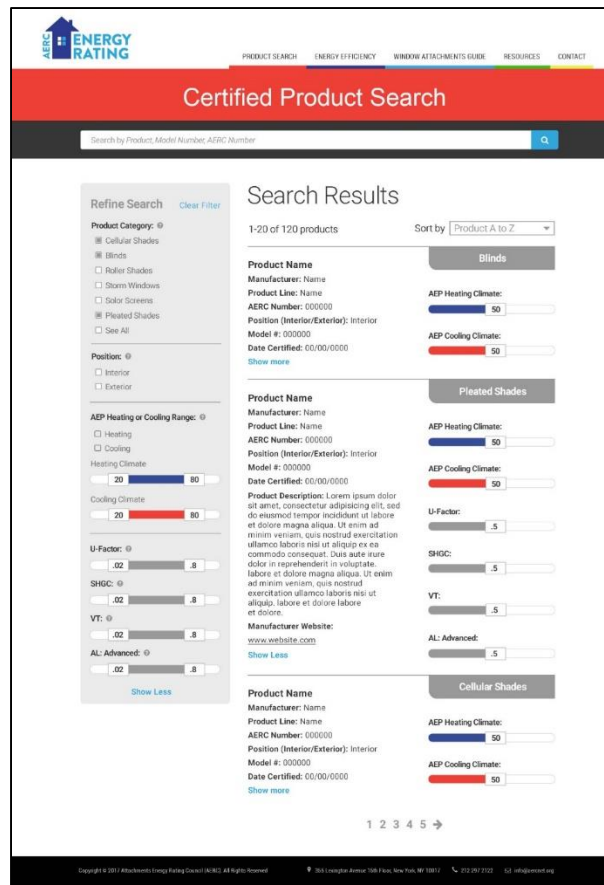
Understand the Rating Label

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LEARN MORE



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ENERGY RATING

PRODUCT SEARCH ENERGY EFFICIENCY WINDOW ATTACHMENTS GUIDE RESOURCES CONTACT

Certified Product Search

Search by Product, Model Number, AERC Number

Search Results

1-20 of 120 products Sort by Product A to Z

Blinds

Product Name
Manufacturer: Name
Product Line: Name
AERC Number: 000000
Position (Interior/Exterior): Interior
Model #: 000000
Date Certified: 00/00/0000
[Show more](#)

AEP Heating Climate: 50
AEP Cooling Climate: 50

Pleated Shades

Product Name
Manufacturer: Name
Product Line: Name
AERC Number: 000000
Position (Interior/Exterior): Interior
Model #: 000000
Date Certified: 00/00/0000
Product Description: Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate, labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip, labore et dolore labore et dolore.

AEP Heating Climate: 50
AEP Cooling Climate: 50

U-Factor: .5
SHGC: .5
VT: .5
AL: Advanced: 5

Cellular Shades

Product Name
Manufacturer: Name
Product Line: Name
AERC Number: 000000
Position (Interior/Exterior): Interior
Model #: 000000
Date Certified: 00/00/0000
[Show more](#)

AEP Heating Climate: 50
AEP Cooling Climate: 50

1 2 3 4 5 →

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GET INVOLVED WITH AERC

Become a Member

- AERC values a diverse membership that balances industry and public interest
- Organizations or individuals with experience in the window attachments industry and/or energy efficiency are encouraged to join AERC and contribute to its success
- Influence key decisions, bring your expertise, and network in the window attachments industry

Collaborate with AERC

- AERC is looking to partner with organizations to conduct field studies and outreach to the public
- Call to Action:
 - Co-sponsor a demonstration project
 - Develop pilot program incentivizing sales of efficient attachments
 - Launch public education campaign on the benefits of window attachment upgrades

Learn More

Window Attachments: Call to Action



80% of U.S. homes have non-low-e single or double pane windows

30% of a typical home's heating and cooling energy

Window attachments can upgrade the performance of existing windows and save up to **13%** of a household's annual energy use.

TYPES OF ATTACHMENTS

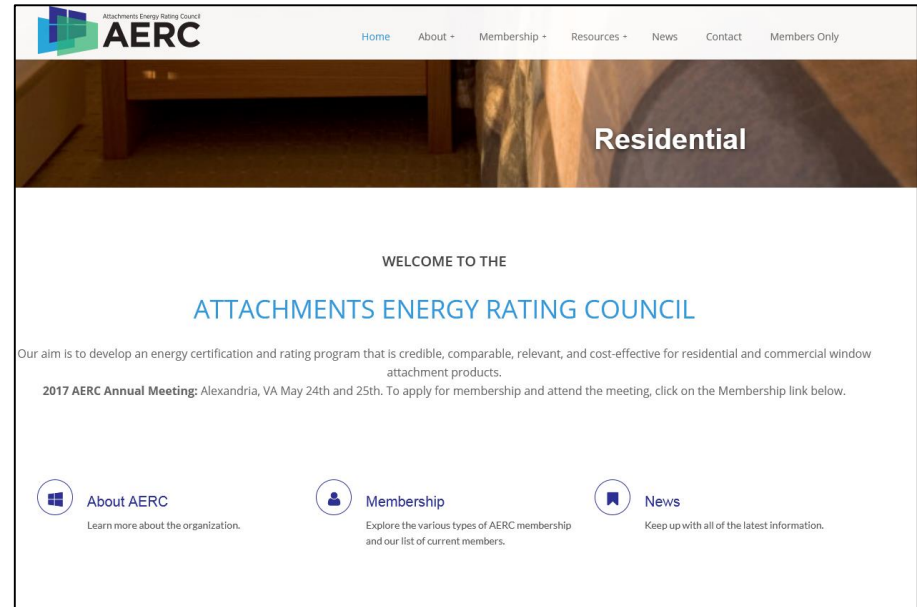
BLINDS: SAVINGS \$220 - \$360	CELLULAR SHADES: SAVINGS \$280 - \$770
ROLLER SHADES: SAVINGS \$9 - \$180	STORM WINDOWS: SAVINGS \$370 - \$910

- ✓ **FIELD DEMONSTRATED ENERGY SAVINGS:** 3%-30%
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Call to Action

- Get involved with AERC
- Run a pilot program
- Learn more at aercnet.org

Website: Aercnet.org/resources/reports Email: info@aerc.org



Attachments Energy Rating Council
AERC

Home About + Membership + Resources + News Contact Members Only

Residential

WELCOME TO THE
ATTACHMENTS ENERGY RATING COUNCIL

Our aim is to develop an energy certification and rating program that is credible, comparable, relevant, and cost-effective for residential and commercial window attachment products.

2017 AERC Annual Meeting: Alexandria, VA May 24th and 25th. To apply for membership and attend the meeting, click on the Membership link below.

- About AERC**
Learn more about the organization.
- Membership**
Explore the various types of AERC membership and our list of current members.
- News**
Keep up with all of the latest information.

AERC Organizational Website

AERC Utility Briefing Document

Contact Information

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- Phone: 301-628-2017

Annual National Aggregate Savings Potential Across Product Types

10% Adoption

Heating (Billion Therms)

0.2 – 0.4

Cooling (TWh)

1.4 – 3.1

20% Adoption

Heating (Billion Therms)

0.4 – 0.8

Cooling (TWh)

2.8 – 6.2

For gas heating and electric A/C homes ~25% of homes in the US

Estimates based off of modeled data from the following report: Curcija, D., M. Yazdanian, C. Kohler, R. Hart, R. Mitchell, and S. Vidanovic. 2013. *Energy Savings from Window Attachments*. Prepared for U.S. Department of Energy. Berkeley, Calif.: Lawrence Berkeley National Laboratory.