



**Professional Awning  
Manufacturers Association**

# Residential Awnings & Exterior Roller Shades & Their Impact on Cooling Energy

A NATION-WIDE 50-CITY STUDY

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## **COOLING ENERGY SAVINGS WITH AWNINGS & EXTERIOR ROLLER SHADES**

### **WEST / NO. WEST**

Anchorage AK  
Denver CO  
Honolulu HI  
Medford OR  
Portland OR  
Salt Lake City UT  
Seattle WA  
Boise ID  
Sacramento CA  
San Francisco CA

### **EAST / NO. EAST**

Washington DC  
Boston MA  
Portland ME  
Charlotte NC  
Buffalo NY  
New York, NY  
Philadelphia PA  
Pittsburgh PA  
Norfolk VA

### **CENTRAL / NO. CENTRAL**

Chicago IL  
Indianapolis IN  
Detroit MI  
Minneapolis MN  
Kansas City MO  
St. Louis MO  
Omaha NE  
Cincinnati OH

### **SUNBELT**

Jacksonville FL  
Miami FL  
Tampa FL  
Atlanta GA  
New Orleans LA  
Charleston SC  
Memphis TN  
El Paso TX  
Ft. Worth TX  
Houston TX  
San Antonio TX  
Birmingham AL  
Mobile AL  
Little Rock AR  
Oklahoma City OK  
Phoenix AZ  
Tucson AZ  
Burbank CA  
Fresno CA  
Palm Springs CA  
San Diego CA  
Albuquerque NM  
Las Vegas NV

## COOLING ENERGY SAVINGS WITH AWNINGS



### AVERAGE ENERGY SAVINGS

**Typical Year 42%**

**Hot Year: 27%**

### AVERAGE ENERGY SAVINGS RANGE

**Typical Year: 27 - 61%**

**Hot Year: 15 - 33%**

## EAST & NORTHEAST UNITED STATES – 9 Cities

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## COOLING ENERGY SAVINGS WITH AWNINGS

EAST / NORTH EAST	Cooling Energy Savings (%)		Energy Savings Amount (\$)	
	Avg Year	Hot Year	Avg. Year	Hot Year
Washington, DC	39%	33%	\$100	\$126
Boston, MA	51%	42%	\$ 65	\$ 85
Portland, ME	61%	52%	\$ 35	\$ 59
Charlotte, NC	27%	23%	\$ 83	\$106
Buffalo, NY	57%	43%	\$ 61	\$ 99
Philadelphia, PA	37%	30%	\$ 70	\$ 92
Pittsburgh, PA	55%	41%	\$ 44	\$112
Norfolk, VA	31%	29%	\$ 13	\$ 92

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# COOLING ENERGY SAVINGS WITH EXTERIOR SHADES



## AVERAGE ENERGY SAVINGS

**Typical Year 25%**

**Hot Year: 23%**

## AVERAGE ENERGY SAVINGS RANGE

**Typical Year: 19 - 35%**

**Hot Year: 18 - 33%**

## EAST & NORTHEAST UNITED STATES – 9 Cities

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### **COOLING ENERGY SAVINGS WITH EXTERNAL ROLLER SHADES**

EAST / NORTH EAST	Cooling Energy Savings (%)		Energy Savings Amount (\$)	
	Avg Year	Hot Year	Avg. Year	Hot Year
Washington, DC	25%	22%	\$ 64	\$ 86
Boston, MA	28%	23%	\$ 35	\$ 46
Portland, ME	21%	33%	\$ 12	\$ 37
Charlotte, NC	19%	18%	\$ 59	\$ 81
Buffalo, NY	35%	28%	\$ 37	\$ 64
Philadelphia, PA	25%	21%	\$ 47	\$ 64
Pittsburgh, PA	22%	28%	\$ 17	\$ 51
Norfolk, VA	23%	19%	\$ 52	\$ 61

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## **COOLING ENERGY SAVINGS WITH AWNINGS & EXTERIOR ROLLER SHADES**

This study was commissioned by the Professional Awning Manufacturers Association and conducted by White Box Technologies. The study calculates the impact of awnings and roller shades in 50 cities across the United States and incorporates weather patterns for 10 years for each of the 50 cities to establish a "typical" year. In addition, the study includes data for the hottest year among the ten.

The study considers three (3) variations of window glass, four (4) variations of window orientation and both summer and year-round use of awnings and roller shades. While an earlier 12-city study focused on newer home construction, this study considers an older home which is 10% smaller (1700 sq. ft.) and has less insulation.

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