

# PRESERVATION

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## The Cost of Going Green

**You know that going green is good for the environment. But how much will it cost—and how long will it take to recover the dollars you invest?**

By Lindsey M. Roberts | From *Preservation* | March/April 2010



This *Preservation* guide lists average costs for energy-saving features easily integrated into old or new homes of about 2,500 square feet. (Prices will vary depending upon location of home.) Some solutions shown qualify for tax credits, particularly if installed before December 31. (Check [PreservationNation.org/incentives](http://www.PreservationNation.org/incentives) for eligibility information.) To determine what you need to do now—and exactly how much you're likely to save—start with an energy audit. It's a green investment you can afford to make.



### Energy Audit

Cost: \$0-\$500

Annual Savings: \$440-\$1,100

Payback: 1 year or less

Projected savings generated by audit-recommended improvements to average single-family home up to 3,000 square feet, with annual energy bills of approximately \$2,200. Many localities offer free audits to identify energy-saving repairs.



### Duct Sealing

Cost: \$1,350

Annual Savings: \$250

Payback: 5.4 years

Based on professionally inspected, repaired, and insulated ductwork. Most heating and cooling equipment contractors repair ductwork. The National Trust for Historic Preservation recommends insulating ducts wherever possible.



### **Insulation**

Cost: \$2,000-\$5,000

Annual Savings: \$350

Payback: 5.7-14.2 years

Based on installation by professional contractor. Estimates vary widely depending upon locality and type of insulation. Avoid materials that can damage historic fabric, such as plaster walls.



### **Storm Windows**

Cost: \$2,500-\$4,750

Annual Savings: Up to \$690

Payback: 4-7 years

Calculated for average home with 25 windows at cost of \$100-\$200 per window. Make sure windows are as tight as possible and evaluate whether exterior or interior storms make sense. The National Trust for Historic Preservation strongly recommends restoring old windows instead of replacing them.



### **Tankless Water Heater**

Cost: \$1,489

Annual Savings: \$175

Payback: 8.5 years

Calculated for a family of four using a Bosch AquaStar 7.2-gpm tankless heater, which can supply two or three major applications (shower, dishwasher, kitchen sink) at the same time. To improve standard water heaters and reduce heat loss, add insulation.



### **Compact Fluorescent Light Bulbs**

Cost: \$136

Annual Savings: \$200

Payback: 8 months

Based on 40 bulbs illuminated for three hours each day, the average U.S. residential number and usage. CFL lifetime calculated at 6,000 hours.



### **Water-Saving Toilet**

Cost: \$299

Annual Savings: \$90

Payback: 3.3 years

Based on a Kohler WaterSense toilet and water usage for a family of four. Some local utilities offer cash incentives to customers who replace older toilets.



### **Ceiling Fan**

Cost: \$80

Annual Savings: \$10

Payback: 8 years

Based on estimated savings if 52-inch Harbor Breeze Calera fan with one light is used only when room is occupied. Ceiling fans lower perceived temperature in summer, lessening reliance on air conditioning and saving energy. In winter, fans draw warm air down from the ceiling, saving on heating costs.



### **Energy-Saving Refrigerator**

Cost: \$729

Annual Savings: \$90

Payback: 8.1 years

Based on a GE Energy Star 18.2-cubic-foot refrigerator-freezer, replacing a 1990 refrigerator-freezer.



### **Caulk**

Cost: \$5-\$250

Annual savings: Up to \$250

Payback: 1 year or less

Based on projected savings generated by caulking cracks, gaps, and joints.

[Illustration by Matt Thomas](#)

SOURCES: National Trust for Historic Preservation; TerraLogos Energy Group, a Baltimore-based company recognized by Energy Star (a program jointly administered by the U.S. Environmental Protection Agency and the U.S. Department of Energy) as a 2008 energy home performance contractor of the year; WaterSense, a program of the Environmental Protection Agency; Energy Star