



# TEXAS CO-OP POWER HOME ENERGY MAKEOVER

## Contest Winner: Peggy Pillar in Boerne

*Member of Bandera Electric Cooperative*

Peggy Pillar's house has 1,300 square feet of living space and was built in 1993. Pillar has a large family that often visits and sometimes stays overnight. Her guests learned that she sometimes ran out of hot water because her water heater was as old as her home. Further, she knew that her heat pump was also original to the house and learned during a recent service visit that it was need of an upgrade. She recently had the home's exterior painted, and making some indoor improvements was next on her list. She read about last year's Home Energy Makeover contest winners in Texas Co-op Power and decided to enter the contest.



### **Comprehensive Energy Analysis**

WellHome conducted a comprehensive home energy analysis that included a blower door test using diagnostic equipment. They determined that more than 20 percent of the air moving through the old heat pump's duct system was lost due to leaks, holes and poorly connected ducts. This created high energy costs and decreased comfort. WellHome suggested that air sealing, attic insulation and a new heat-pump system would be among the most cost-effective improvements.

### **Heating and Cooling System**

Lennox Industries provided a Model XP14 3-ton-capacity heat pump with SEER 15 efficiency to replace the existing 18-year-old system and included a programmable touch-screen thermostat that allows for temperature and dehumidification settings. WellHome installed the new heat pump and replaced the old thermostat. WellHome carefully sealed the ducts with a mastic sealant and insulated exposed surfaces. The new, higher-rated system and the duct-system sealing enhancements will greatly improve the home's comfort and lower the utility bills.

### **Insulation with Air Sealing**

The insulation in the attic and walls was inadequate in some areas and missing in others. Diagnostic testing showed that there was air flowing through gaps in the insulation and outlets. WellHome increased the attic insulation's rating from an R-24 to an R-49 efficiency level. Also, they identified and sealed all significant wall, ceiling and floor penetrations caused by plumbing and electrical wires that allowed air to infiltrate the home's building envelope.

### **Water Heater**

Bergheim Plumbing provided the labor to upgrade the existing 18-year-old water heater with an 85-gallon Rheem Marathon high-efficiency water heater provided by Texas Electric Cooperatives. It is more energy efficient than other comparable systems and guaranteed for life not to rust or leak.

### **Pool Pump Efficiency**

The home's in-ground pool pump was upgraded by WellHome with a more efficient, programmable Pentair IntelliFlo variable speed pump. The new pump system will dramatically reduce the cost of keeping the pool's water filtered. In addition, the new pump operates much more quietly than the old model in its location just outside Pillar's bedroom window.

### **Lighting and Water Efficiency**

Niagara Conservation donated energy-efficient compact fluorescent lightbulbs (CFLs) as well as water-efficient, low-flow faucet aerators and showerheads that were installed by WellHome. CFLs use 75 percent less energy and radiate less heat than conventional bulbs. The low-flow devices have the added benefit of helping reduce the amount of energy needed to heat water. Niagara Conservation provided do-it-yourself Home Energy Efficiency Kits to each of the contest runners-up to help them begin their own home energy makeover.

### **Quality Assurance and Quality Control**

Building Performance Institute provided a third-party inspection of WellHome's work to ensure that the highest level of industry standards were followed on the project.



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## **Makeover Package Included:**

Heat Pump with Duct Sealing	\$8,700
Insulation with Air Sealing	\$3,100
Pool Pump Upgrade	\$2,000
Water Heater Upgrade	\$1,000
Lighting Package and Showerheads	\$ 300
Total Investment	\$15,100

## **Makeover Team:**

**Contest Host:** Texas Co-op Power, [TexasCoopPower.com](http://TexasCoopPower.com)

**Participating Electric Cooperative:** Bandera Electric Cooperative, [www.banderaelectric.com](http://www.banderaelectric.com), 1-866-226-3372

**Comprehensive Home Energy Analysis Provided By:** WellHome, [www.wellhome.com](http://www.wellhome.com), (512) 928-4404

**Heating and Cooling System Provided By:** Lennox Industries, [www.lennox.com](http://www.lennox.com), and installed by Well-Home, [www.wellhome.com](http://www.wellhome.com), (512) 928-4404

**Insulation with Air Sealing Provided By:** WellHome, [www.wellhome.com](http://www.wellhome.com), (512) 928-4404

**Water Heater Provided By:** Rheem Marathon, [www.marathonheaters.com](http://www.marathonheaters.com), and Texas Electric Cooperatives, [www.texas-ec.org](http://www.texas-ec.org), and installed by Bergheim Plumbing, (210) 264-1432

**Pool Pump Provided By:** Pentair Water Pool & Spa, [www.pentairpool.com](http://www.pentairpool.com), and installed by WellHome, [www.wellhome.com](http://www.wellhome.com), (512) 928-4404

**Compact Fluorescent Lightbulbs and Low-Flow Showerheads as well as Home Energy Efficiency Kits Provided By:** Niagara Conservation, [www.niagaraconservation.com](http://www.niagaraconservation.com), 1-800-831-8383, and installed by WellHome, [www.wellhome.com](http://www.wellhome.com), (512) 928-4404

**Quality Assurance Inspection Provided By:** Building Performance Institute, [www.bpi.org](http://www.bpi.org), (510) 923-0264

**Contest Administration By:** Electric & Gas Industries Association, [www.egia.org](http://www.egia.org), (970) 209-8347



# TEXAS CO-OP POWER HOME ENERGY MAKEOVER

## Texas Co-op Power would like to thank the participants and sponsors:



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**Lennox HVAC** systems, air conditioners and generators provide a balance of comfort and protection. Lennox products include high-efficiency furnaces and air conditioners that save energy and money, and air filtration systems, humidifiers and dehumidifiers that keep indoor air quality healthy and clean. Lennox offers customizable solutions to match your family's lifestyle and comfort level. Learn more at [www.lennox.com](http://www.lennox.com).



Improve the weather inside.

**WellHome** serves homeowners interested in energy savings and comfort-improvement measures for their home. WellHome conducts a comprehensive, whole-house assessment using state-of-the-art diagnostic equipment. The WellHome team schedules and oversees improvements, including insulation, air and duct sealing, heating and cooling systems and replacement windows. Additionally, WellHome guarantees energy savings for the first year after WellHome improvements are made.



Pool and Spa®

**Pentair Water Pool and Spa** is the world's leading manufacturer of pumps, filters, heaters, controls, cleaners, lighting systems, water features and maintenance equipment for swimming pools and spas. Their Eco Select brand of products identifies their "greenest" and most efficient equipment choices. Visit [www.pentair.com](http://www.pentair.com).



WATER HEATERS

Water heating can account for up to 20 percent of a home's energy usage. However, **Marathon water heaters by Rheem** offer ultra-durable, long-life, high-efficiency electric water heaters that are built to perform and are backed by a lifetime warranty. Learn more by watching the Marathon factory tour on the Marathon website at [www.marathonheaters.com](http://www.marathonheaters.com) or call 1-866-390-4832.



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**Niagara Conservation Corporation's** mission is to provide our customers with the highest quality of water and energy conservation products and solutions. We will couple the delivery of our innovative and cutting-edge products with unsurpassed customer service to ensure that consumers receive the greatest level of benefit from the use of our products with the least amount of impact on our environment. Visit [www.niagaraconservation.com](http://www.niagaraconservation.com).



For All Your Plumbing Service Needs

**Bergheim Plumbing** owner David Engel and the Engel family have been lifelong residents of the Hill Country area, going back several generations. After obtaining his master's license in plumbing, David founded Bergheim Plumbing. He wanted an opportunity to serve the community his way, with family-friendly, personal service. Bergheim Plumbing specializes in residential services with the slogan and belief, "Our family serving your family."



**Building Performance Institute (BPI)** is a recognized global leader, supporting the development of a highly professional building-performance industry through individual and organizational credentialing and a rigorous quality assurance program. BPI works with building-performance industry stakeholders to ensure that the professional bar for excellence in building-performance contracting is established and maintained by creating and regularly updating technical requirements through an open, transparent, consensus-based development process. Visit [www.bpi.org](http://www.bpi.org).



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