



TEXAS CO-OP POWER HOME ENERGY MAKEOVER

Contest Winner: The Feemster Family in Texarkana

Members of Bowie-Cass Electric Cooperative

Tyson and Sherrie Feemster and three of their four sons live in Redwater in their 1,650-square-foot home built in 1972. Their eldest son recently joined the military and moved.

The home includes an addition on the back that the Feemsters knew wasn't properly insulated because it was always a different temperature from the rest of the home.

A home energy assessment provided by Sustainable Services and Aloha Aire indicated that the Feemsters could lower their energy bills and have a more comfortable home through a combination of air sealing, insulation, a more efficient HVAC system and a water heater upgrade.



Comprehensive Energy Analysis

Aloha Aire used diagnostic equipment to conduct an initial home energy assessment and determined that the home's insulation and ducts were leaking air. After the home was selected as a contest winner, Sustainable Services conducted a second, more comprehensive home energy analysis to determine what specific home improvements would be most cost effective from an energy-savings perspective. This testing revealed that the backroom enclosure was so poorly sealed it had more air leakage than the entire rest of the home.

Heating and Cooling System

Industrial Air Systems upgraded the existing seven-year-old, 80 percent efficient furnace and SEER 8 air conditioner with new equipment provided by Lennox Industries—an air conditioner with SEER 15 efficiency and a 97 percent efficient gas furnace. Lennox included a programmable touch-screen thermostat that allows for temperature and dehumidification settings. Industrial Air Systems made significant enhancements to the existing ductwork system, adding three new air supplies in the bedroom, kitchen and laundry room for better airflow. They also sealed and re-insulated the attic ductwork, which was disconnected in one place, causing conditioned air to blow into the attic rather than the living space.

Insulation with Air Sealing

GreenFiber provided cellulose insulation that Sustainable Services installed on top of the home's existing R-10 efficiency-level insulation to bring it to an R-40 efficiency level. Sustainable Services also performed extensive air sealing, using fire-rated foam and foam board to seal all significant wall, ceiling and floor penetrations caused by plumbing, electrical and other holes that allowed air to infiltrate the home's building envelope. They assisted in sealing the ductwork as well. As a result, the home's air leakage was reduced by more than 50 percent, and duct leakage was reduced by more than 75 percent. A majority of the air sealing was achieved in the backroom enclosure.

Window Coverings

Sustainable Services manufactured and installed solar-screen window coverings on all 14 of the home's windows. These durable yet removable screens will prevent more than 80 percent of the sun's radiant heat from entering the home during the summer months. The heat reduction translates into air-conditioning savings. Solar screens can cost just 10 percent of the expense of full window replacement.

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 Sustainable Services. CFLs use 75 percent less energy and radiate less heat than incandescent 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 begin their own home energy makeover.



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Makeover Package Included:

Home Energy Assessments	\$ 250
Heating and Cooling System with Duct Enhancements	\$ 7,500
Solar Screens, Attic Insulation and Air/Duct Sealing	\$ 3,400
Lighting, Faucet and Showerhead Upgrade	\$ 300
Total Value	\$11,450

Makeover Team:

Contest Host: Texas Co-op Power, TexasCoopPower.com

Participating Electric Cooperative: Bowie-Cass Electric Cooperative, www.bcec.com

Comprehensive Home Energy Analysis Provided By: Sustainable Services, www.greenmoneysavers.com, (903) 838-1014, and Aloha Aire, www.alohaair.com, (903) 832-5642

Heating and Cooling System Provided By: Lennox Industries, www.lennox.com, and installed by Industrial Air Systems, (903) 628-5276 or (903) 628-3616

Cellulose Attic Insulation Provided By: GreenFiber, www.greenfiber.com, 1-800-228-0024, and installed with air and duct sealing by Sustainable Services, www.greenmoneysavers.com, (903) 838-1014

Solar Screen Window Coverings Provided and Installed By: Sustainable Services, www.greenmoneysavers.com, (903) 838-1014

Compact Fluorescent Lightbulbs and Low-Flow Faucet Aerators and Showerheads as Well as Home Energy Efficiency Kits Provided By: Niagara Conservation, www.niagaraconservation.com, 1-800-831-8383, and installed by Sustainable Services, www.greenmoneysavers.com, (903) 838-1014

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



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



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.



Aloha Aire is Texarkana's premier heating and air conditioning company—serving residences and businesses in Texarkana with installation, repair and quality service for more than 20 years. The company's reputation is built on years of quality service that has resulted in a long list of satisfied customers. Aloha Aire Heating and Cooling consistently delivers services of ultimate quality, establishing the benchmark by which to measure performance. Visit www.alohaaire.com.

Industrial Air Systems

Industrial Air Systems (IAS) serves Texas, Arkansas and Louisiana as the area's most trusted residential and commercial HVAC service, sales, repair and installation company. IAS provides unmatched service with exceptional products and continues to set the standard for customer satisfaction.



GreenFiber uses recycled materials from local sources, low-energy manufacturing and short-haul transportation to offer an environmentally responsible choice for homeowners. GreenFiber natural fiber insulation consists of 85 percent recycled paper fiber specially treated for flame resistance with borates that are noncorrosive and safe. This cellulose insulation provides outstanding resistance to heat flow, noise suppression and added fire resistance in residential and light commercial construction. Visit www.greenfiber.com.



Sustainable Services is the leader of energy-efficiency services in Texarkana and the surrounding Ark-La-Tex region. They boast the knowledge and expertise to help consumers lower their energy and utility bills while educating the public about green initiatives and energy-saving measures. Sustainable Services offers comprehensive and practical energy-efficiency solutions including professional energy audits and assessments, insulation, weatherization, solar screens, solar/PV panels, lighting and duct sealing.



Niagara Conservation Corporation's mission is to provide customers with the highest quality of water and energy-conservation products and solutions. It couples the delivery of innovative and cutting-edge products with unsurpassed customer service to ensure that consumers receive the greatest level of benefit from the use of Niagara products with the least amount of impact on the environment. Visit www.niagaraconservation.com.



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