

# The Lamb family of Bluffton

*Buttoning down on Baywood Drive*

- Built in 1986
- 1,250 square foot ranch-style home
- Cement slab with an attic
- 3 bedrooms
- 5 occupants
- Average monthly electric bill: \$350

## Home Fast Facts



## Heating and Air Conditioning

- Bootle Air Systems of Beaufort removed the home's non-functioning and mismatched heat pump and air handler, a 10 SEER system (seasonal energy efficiency rating — think gas mileage for heat pumps!). Bootle installed a new Lennox two-ton XP14 heat pump and a CBX27 air handler which gives the system a certified ARI rating of 15 SEER. They also positioned the new unit 18 inches away from the prior location so that discharged air is not blocked by the eve.
- The old manual thermostat was replaced with a programmable, touch-screen thermostat.

## Ducts

- Some of the existing ductwork was sealed and insulated. Damaged ducts were replaced entirely with new flex duct. The entire system was appropriately sized for the new HVAC unit and suspended with straps to ensure proper air flow.

## How the House Was Helped

### Sealing and Insulation

- JAS Construction's initial comprehensive energy analysis of the home identified several air leaks, including a 16 square-inch space in the attic that was open to the outside. Gene Wilhoit and his crew caulked and sealed the air leaks. They added new sheetrock to close the hole in the attic and address some gaps near the electric meter.
- In the attic, Image Design Solutions of Savannah addressed the home's too-low R-19 level of insulation by blowing in approximately 1,250 square feet of new Owens Corning fiberglass insulation. This step raised the R-value (a measure of protection against temperature variations) to 30, nearly doubling the effectiveness of the attic insulation.

### Other Measures

- A new Rheem Marathon water heater, the most energy efficient electric water heater available, replaced the 10 year-old existing unit.
- Coastal Electric and Palmetto Electric, the cooperative partners on this home, donated energy efficient compact fluorescent light bulbs (CFLs) to replace standard incandescent bulbs in the home. CFLs use 75 percent less energy and radiate less heat than conventional bulbs.

## Actual Investment

- New heat pump system with ductwork, thermostat, and more.....\$6,500
- Sealing, sheet rock installation and comprehensive energy analysis.....\$1,500
- Rheem Marathon water heater and installation.....\$1,200
- Attic insulation to R-38.....\$750

## Costs

**Total estimated value of weatherization efforts in this home.....\$9,950**

Shape Up Your Home for Energy Savings

Presented by The Energy Center of South Carolina



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Presented by The Electric Cooperatives of South Carolina

# Home Energy Efficiency Makeover

## The Lamb family, Bluffton, SC

On their Help My House! contest entry form, David and Tammie Lamb wrote, "We have a lot of heat in our attic and two bedrooms do not get adequate heat or air. Please help us in being more energy efficient and responsible."

### BEFORE



The Lamb's broken HVAC system and substandard ductwork needed replacing. The system's age and the unit's location meant that, even when it was still working, it was costing more to heat and cool the home less.

### AFTER



A new high-efficiency Lennox heat pump and digital programmable thermostat will dramatically improve comfort and energy savings in the Lamb's home.



The nearly 10 year-old unwrapped water heater was housed in an unconditioned storage shed. Its age and location had the unit working harder to keep water hot — wasting energy and money.



A new super-insulated Rheem Marathon water heater - the most energy efficient electric water heater available - replaced the old unit.



Like many homes, insulation in the Lamb's attic had settled over time, leaving an inadequate layer that significantly reduced this important barrier between their inside living area and extreme hot and cold outside temperatures.



New fiberglass insulation blown into the attic nearly doubled the insulation R-values in that unconditioned space. The work helped restore the home's protective envelope against the elements.



## Who Helped

Heating and Cooling System installed by



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