

POO, Box 361, Rutledge, GA 30663 800-995-9466 www.eairtightinsulation.com

# \_\_\_\_\_ Same House Case

# Study \_\_\_\_\_

It has been estimated that 40% of a home's heating and cooling loss results from leaks in the building envelope. When deciding what type of insulation to use in your new home, you must consider much more than R-value alone.

AirTight SprayFoam offers the builder/homeowner tremendous versatility. SprayFoam adheres to virtually any clean, dry substrate to provide thennal insulation and sound deadening. It fills cracks and voids to control air and moisture flow, even as it conforms to virtually any architectural shape or surface configuration that might be used in residential, commercial or industrial applications. Fiberglass only filters air through the building envelope.

To prove this point, AirTight Insulation has been conducting a case study on two identical houses. The houses chosen were: (1) Approximately 1800 Square feet of conditioned space, (2) Less than 2 miles apart, with (3) Similar occupancy.

House No. l, located at 1141 Rawlings Drive, was insulated to Energy Star standards using R-13 Fiberglass Batts in the sidewalls, R-19 Fiberglass Batts in the sloped ceilings and R-38 Blown Fiberglass in the attic area.

House No. 2, located at 5()3 Indian Creek Trail, was insulated with AirTight SprayFoam. The foam was applied at a 2 inch average (R-14) over the entire building envelope. (All sidewalls and the complete roof assembly. Both houses are on concrete slabs).

Each house was occupied for 12 full months and the results were as follows:





\$300.00 \$250.00 \$200.00 \$150.00 House No. 1- 1141 **Rawlings** Drive \$100.00 pht Sprave \$50.00 Mar - 04 May - 04 Iul - 04 Jan - 04 Oct - 03 Feb - 04 Jul - 03 Aug - 03 Nov - 03 Dec - 03 Sep - 03 Apr - 04 lun - 04 \$0.00

House No. 2 - 503 Indian Creek Trail

Average MONTHLY Cost Savings w/AirTight SprayFoam: \$54.12 Cost of Fiberglass Insulation for House No. 1 \$2,350.00 Average YEARLY Cost Savings w/AirTight SprayFoam.• \$649.44 Cost of SprayFoam Insulation for House No. 2 \$5,200.00

DIFFERENCE: \$2,850.00



As you can see from the graph, the house with AirTight SprayFoam performed almost 40% more efficiently than the house with Fiberglass Insulation. How can this be, considering House No. I had almost twice the R-value on the building envelope? The answer is simple. The house with the spray-foamed envelope was able to eliminate air infiltration, as well as stop the heat transfer at the point of entry.

In summary, we have learned that it is more important to have an air-impermeable insulation on the building envelope, than to have airpermeable products with higher R-values. Applying AirTight SprayFoam to the underside of the roof decking (what we call the hot roof system) significantly adds to the efficiency of the home. Insulation is one of the few items that we can upgrade during the building process that can pay for itself in a short amount of time.

To find out more about the advantages of AirTight SprayFoam, visit our web site at www.airtightinsulation.com, or call us toll free at 800-995-9466.

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SprayFoa www.airtightinsulation.com

### Monthly Utility Bills - Georgia Power

Customer Name:	House No. 1 1141 Rawlin s Drive		Customer Name:	House No. 2 503 Indian Creek Trail	
Address:			Address:		
DATE	COST	KWH USAGE	DATE	COST	KWH USAGE
July 2003	\$ 204.24	2229	July 2003		
August 2003	192.25		August 2003		1089
September 2003			September 2003	87.88	1046
October 2003			October 2003		681
November 2003			November 2003	54.57	738
December 2003	168.45	2722	December 2003	139.22	2212
January 2004		2495	January 2004		
February 2004	148.56	2375	February 2004		
March 2004			March 2004	60.89	847
April 2004	76.82		April 2004		706
May 2004		1646	May 2004	69.87	1002

### PAYBACK IN YEARS FOR HOUSE NO. 2 4.39 YEARS

June 20	04	152.09	1846	June 2004	104.28	
July 200	04	247.31	2584	July 2004		
	AVG:	143.76	1900.69	AVG:	89.64	1215.42
	. cost u KWH		0.0756	. cost U k	KWH	0.0737

Average MONTHLY Cost Savings w/AirTight SprayFoam.• \$54.12 Average YEARLY Cost Savings w/AirTight SprayFoam.• \$649, 44

Cost of Fiberglass Insulation for House No. 1 \$2,350.00 Cost of SprayFoam Insulation for House No. 2 \$5,200.00 DIFFERENCE: \$2,850.00