

Energy and Heating Cost Comparison Chart (Winter 2015-16; Western North Carolina)

	Propane		Natural Gas		Heat Pump (Air-Source)		Heat Pump (Geothermal)		Electric Resistance		Heating Oil	
Appliance Efficiency	0.8	Avg. Efficiency	0.8	Avg. Efficiency	6.50	HSPF****	3.0	COP	0.95	Avg. Efficiency	0.8	Avg. Efficiency
Fuel/Energy Price	2.66	\$/gal.*	0.89	\$/therm**	0.089	\$/kwh***	0.089	\$/kwh***	0.089	\$/kwh***	2.36	\$/gal.*-*
Heat Value	91,333	BTU/gal	100,000	BTU/therm					3,413	BTU/kwh	138,690	BTU/gal
Energy Input/Appliance Output	1.369	gal/therm	1.25	therm/therm	15.38	kwh/therm	9.77	kwh/therm	29.30	kwh/therm	0.9013	gal/therm
Operating Cost/Therm of Heat Produced	3.64	\$/therm	1.11	\$/therm	1.37	\$/therm	0.87	\$/therm	2.74	\$/therm	2.13	\$/therm
Winter Heating Cost*-*	\$ 3,641		\$ 1,113		\$ 1,369		\$ 869		\$ 2,745		\$ 2,127	

* U.S. Energy Inform. Administration, average Lower Atlantic Region (NC) residential propane spot price, 10/26/2015 (note: local pricing trends closely to LAR spot pricing)

** Source: Piedmont Natural Gas, Effective 6/1/2015, NC residential rate Nov-March

*** Source: Duke Energy, effective 9/25/2015, all-electric RE schedule residential rate for NC Nov.-June (avg. for over and under 350 kWh rates)

****Typical 7.7 HSPF air-source heat pump (per DOE a 7.7 HSPF correlates to 6.5 actual in Asheville)

- U.S. Energy Information Administration, average Lower Atlantic Region (NC) residential heating oil spot price, 10/26/2015

- based on 1,000 therms of total seasonal heat assumed for an average, larger (~3,000 sq. ft.) home in Asheville

Notes: 1 therm = 100,000 Btu



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