Heating Cost Comparison Chart (Winter 2012-13; Western North Carolina)

	Propane		Natural Gas		Heat Pump (Air-Source)		Heat Pump (Geothermal)		Electric Resistance		Heating Oil	
Efficiency	0.78	Avg. Efficiency	0.78	Avg. Efficiency	6.50	HSPF****	3.3	COP	0.95	Avg. Efficiency	0.78	Avg. Efficiency
Fuel Cost	**2.66**	$/gal.*	**1.02**	$/therm**	**0.0854**	$/kwh***	**0.0854**	$/kwh***	**0.0854**	$/kwh***	**3.79**	$/gal.*-*
Heat Value	91,500	BTU/gal	100,000	BTU/therm					3,413	BTU/kwh	138,000	BTU/gal
Therm Capacity	1.093	gal/therm	1	therm/therm	15.38	kwh/therm	8.88	kwh/therm	29.30	kwh/therm	0.7246	gal/therm
Cost/Therm	**3.73**	**$/therm**	**1.31**	**$/therm**	**1.31**	**$/therm**	**0.76**	**$/therm**	**2.63**	**$/therm**	**3.52**	**$/therm**
Winter Heating Cost*-**	$ 3,727		$ 1,308		$ 1,314		$ 758		$ 2,634		$ 3,521	

* U.S. Energy Administration, average Lower Atlantic Region (NC) residential propane spot price, 11/12/2012 (note: local pricing trends closely to LAR spot pricing)

** Source: Piedmont Natural Gas, Effective 11/1/2012, NC residential rate

*** Source: Duke Energy, effective 9/1/2012, 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 Administration, average Lower Atlantic Region (NC) residential heating oil spot price, 11/16/2012

*-** 1,000 therms of total seasonal heat which would be required for average construction 3,000 sq. ft. home in Asheville

Notes: 1 therm = 100,000 Btu

W. G. BARTLETT ENGINEERING SERVICES
144 PARIS GLEN WAY • GREENVILLE, S.C. 29609
VOICE: 864.354.3976
FAX: 864.292.2187
www.wgbengineering.com