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# Operating Cost Summary

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## Location & Building Load Assumptions

Selected Location		Peak Loads		Analysis Period --- Annual	
State	Maryland	Heating Load	45 MBH	Design Htg Temp	15° F
City	Baltimore	Cooling Load	50 MBH	Design Clg Temp	95° F

## Energy Cost Assumptions

Standard Elec Rate	0.206	\$/kWh	Gas Rate	1.50	\$/ccf
GSHP Elec Rate	0.206	\$/kWh	Propane Rate	3.50	\$/gal
ASHP Elec Rate	0.206	\$/kWh	Fuel Oil Rate	3.50	\$/gal

## System Performance Assumptions

----Comparisons Made Against GSHP System with a Seasonal COP = 3.95 and a Seasonal EER = 20.78----

Alternative System Type	Heating Efficiency		Cooling Efficiency	
Resistance Heat & Central A/C	COP	1.00	SEER	13.00
ASHP	SHPF	6.00	SEER	13.00
Natural Gas Furnace & Central A/C	Rated Efficiency	88%	SEER	13.00
Propane Furnace & Central A/C	Rated Efficiency	90%	SEER	13.00
Fuel Oil Furnace & Central A/C	Rated Efficiency	80%	SEER	13.00

## Operating Costs

System Type	Heating \$	Cooling \$	Total \$	Incremental \$ (vs GSHP)
GSHP	\$1,446.93	\$457.95	\$1,904.88	N/A
Res. Heat+A/C	\$5,716.97	\$731.96	\$6,448.93	+ \$4544.06
ASHP	\$3,252.00	\$731.96	\$3,983.96	+ \$2079.09
Natural Gas+A/C	\$1,921.83	\$731.96	\$2,653.79	+ \$748.91
Propane+A/C	\$4,615.93	\$731.96	\$5,347.90	+ \$3443.02
Fuel Oil+A/C	\$3,364.29	\$731.96	\$4,096.26	+ \$2191.38

## Operating Cost Comparisons

### Operating Cost Comparison

