

Energy Savings Due to Infiltration Sealing

Local Yearly Degree Days (Table 13)	Temperature Difference, ΔT	Infiltration Constant, C (Table 14)
<u>1799</u>	$\div 365 =$ <u>4.93</u>	\rightarrow <u>0.1</u>
Infiltration Constant, C (From Above)	Building Volume	Heat Savings
<u>0.1</u>	$\times 16,800 \text{ ft}^3$	$\times 24 \times 365 =$ <u>1.47×10^7</u> Btu/yr

Energy Savings Due To Wall/Window/Door Modifications

Modified Wall Element	Original U-Factor (From Tables)	Modified U-Factor (From Tables)	U-Factor Change	Wall or Element Area, ft^2	Local Annual Degree-Days (From Table 13)	Heat Savings Btu/yr
1. <u>Window</u>	<u>1.13</u>	<u>0.58</u>	<u>= 0.55</u>	\times <u>40</u>	\times <u>1799</u>	$\times 24 =$ <u>9.5×10^5</u>
2. _____	_____	_____	<u>=</u> _____	\times _____	\times _____	$\times 24 =$ _____
3. _____	_____	_____	<u>=</u> _____	\times _____	\times _____	$\times 24 =$ _____
4. _____	_____	_____	<u>=</u> _____	\times _____	\times _____	$\times 24 =$ _____
5. _____	_____	_____	<u>=</u> _____	\times _____	\times _____	$\times 24 =$ _____
_____ Btu/yr $\times .252 =$ _____ kg-cal/yr						Total = <u>9.5×10^5</u>

Fuel Savings Due to Noise Reduction Modifications

Fuel (circle one): Coal (lb), Oil (gal), Gas (ft³)

Heat Energy Savings	Heating Value Efficiency Product (From Table 19)	Fuel Saved
$\frac{1.47 \times 10^7 + 9.5 \times 10^5 \text{ Btu}}{\text{yr}}$	\div <u>820</u> $\frac{\text{Btu}}{\text{gal}}$	$=$ <u>1.91×10^4</u> $\frac{\text{lb}}{\text{gal}}$ per year
	_____ lb $\times .454 =$ _____ kg	
	_____ gal $\times 3.79 =$ _____ liters	
	_____ ft ³ $\times .0283 =$ _____ m ³	

Added Ventilation Energy

Building Volume	Energy Required
<u>16,800</u> ft ³ $\div 233 =$	<u>72</u> kWh per year
_____ kWh $\times 860.5 =$ _____ kg-cal	