



June 2010 solar pool systems have a better return on investment (ROI) than using a heat pump, propane or natural gas in the North East @ 2010 energy prices. Eight 4'X8` glazed solar panels ground mounted close to the pool and connected to the house using insulated L copper tubing for renewable energy tax credits.

Analysis

Solar	Heat Pumps	Natural Gas	Propane
Average system cost after tax credits or out of pocket cost to the consumer or business			
\$12,000.00	\$7,000.00	\$9,000.00	\$9,000.00
Typical operating cost to heat a 16'X32' pool/year @ 2010 energy prices From May 1 to the end of September in New England.			
\$ 30.00	\$ 1,000.00	\$1,000.00	\$1,800.00
Comparison annual energy produced @ 2010 energy prices			
\$2,400.00	\$1,000.00	\$1,000.00	\$1,000.00*
Return on investment @ 2010 fossil fuel prices			
5 years	7 years	9 years	between 15&10
Price increase over 30 years			
NA	100%+	100% +	100%+
System life			
30 + years	less than ten	less than ten	less than ten

Energy data above derived from the below:

Heat pump, propane and natural gas pool heater located close to pool

1. Electricity cost calculated at @ .16KWH

Some other New England States have higher electricity cost.

2. Propane varies in price from a low of \$2.00/gallon to high of \$5.00/gallon @ 2010 energy prices

3. Natural gas data above based at \$15 to \$20 dollars per MBTU 2010 energy prices

4. Heat pump data based on the operation of a heat pump 50% of the time with a COP of less than five. Heat pumps are typically used during cold overnight spring, fall and early summer ambient air conditions that reduces their COP.

5. An average turn key solar pool installation is \$24,000.00 and tax credits cover close to half the cost. System must be connected to the home or building and used for domestic hot water and space heating when applicable. Solar pool heat exchanger is 100,000 Btus/hour. Optimum location of solar panels is close to the pool (ground mounted) however this is not always practical or possible. An additional copper run to the basement adds a considerable amount of money to any system cost.

6. Solar system efficiency varies from a low of 45% in the winter to a high of 75% in the summer.

7. Solar panel oil equivalent data from SRCC testing using partially cloudy day @ 1,000BTU's/day per SF

8. Solar oil equivalent based on a low \$2.75/gallon to a high of \$5.00/gallon.

Calculations done @ \$3.00/gallon