

**ALTERNATE ENERGY - SOLAR ENERGY**  
**SOLAR PORCH**

140,000 BTU PER GALLON OF OIL GROSS  
112,000 BTU PER GALLON OF OIL NET 80% EFFICENCY  
12,544,000,000 TOTAL NET BTU PER YR PROVIDED BY OIL HEAT  
112000 GALLONS YR  
4.00 PER GALLON  
448,000 YR OIL COST

\$  
\$

300 BTU / HR PER SF ADJ FOR SUN ANGLES  
944 SF PORCH GLAZING  
283,200 SUB TOT BTU / HR  
6 AVG HRS IN HEATING SEASON  
1,699,200 SUB TOT BTU / DAY  
137 EFFECTIVE DAYS PER YR IN HEATING SEASONS  
232,578,000 MAX YRLY BTU  
116,289,000 ADJ FOR LOSSES FR PORCH TO OUTDOOR  
58,144,500 ADJ FOR STORAGE LOSSES IN EARTH UNDER HOUSE, HOUSE MASS  
58,144,500 MAX YRLY BTU  
519 EQUIVALENT GALLONS OF OIL SAVED  
Which would essentially mean, no oil heat req, which is way too optomistic  
a lot of heat will be when it's not needed, so I'll toss in another 50% loss factor  
260 EQUIVALENT GALLONS OF OIL SAVED  
4.00 PER GALLON  
1,038 YR OIL COST SAVED  
**1,622 FINAL YR OIL COST**  
3,776 SYSTEM COST - DIY  
3.64 YR PAYBACK  
7.27 YR PAYBACK FOR FULLY GC'D SYSTEM  
Well, this would work

\$  
\$  
\$  
\$