



Case Study: Solar Energy Solutions for Multi-Family Housing

Reduce Your Heating Cost with Solar Energy



Utilizing the sun to heat hot water is not a new technology. It has been done for over 100 years! Today, it is a practical to use solar energy to heat the vast amounts of hot water needed to operate your business. As you know reducing your use of natural gas and/or heating oil lowers your overhead costs and increases your profits. Using solar energy also insulates your building from unexpected energy cost increases, which impact operating cost.

When you invest in a solar energy system you prepay a one-time amount for the energy you will use for a period of 25 years!

Your ROI (Return-On-Investment) may range from 4 – 8 years depending upon the state your building is located in!

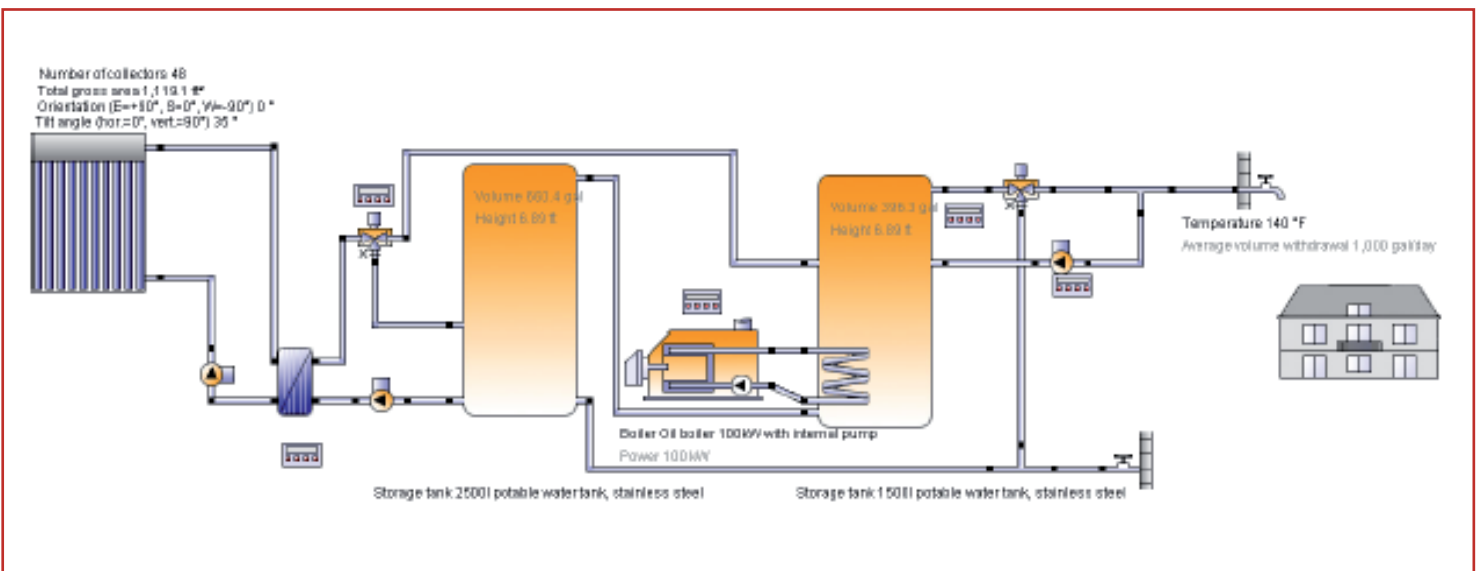
A solar thermal energy system, from KU Solar, is sized based on the amount of hot water used on a daily basis. A properly sized system is mounted on the roof of your building facing South. It is designed to heat water and store it in storage tanks. A backup boiler may or may not need to fire to boost the temperature of the water for use in within the building. This is where you enjoy your energy savings!

To Further Increase Your Savings, A Ku Solar Thermal Energy System Can Be Used For:

- Radiant/space heating
- Solar air cooling

How It Works

System is designed to heat 1,000 gallons of hot water per day to a temperature of 140°F for daily use by 50 occupants





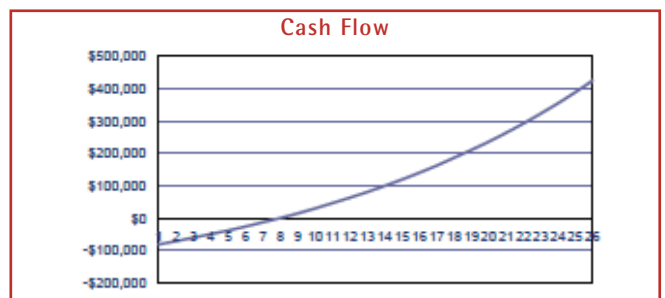
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Annual Projected System Energy Production And Savings

Item	Unit	Annual Value	Annual Value	% Offset
Hot water energy required	kBtu	307,138	\$9,736	
Solar energy to heat hot water	kBtu	261,339	\$8,284	85%
Heating Oil Required	kBtu	45,799	\$1,452	

Example ROI Analysis

Item	Amount
Example System Cost Before Incentives	\$200,000
Less Solar Federal Investment Tax Credit 30%	-\$60,000
Less Tax Accumulated Effect MACRS Depreciation 50% Bonus 2012	-\$59,500
Cost Before Energy Savings	\$80,500



YEAR	SAVINGS	ACCUMULATED SAVINGS	DEPREC.	CASH FLOW
0	0	0	59,500	-80,500
1	9,884	9,884	0	-70,616
2	10,427	20,311	0	-60,189
3	11,001	31,312	0	-49,188
4	11,606	42,917	0	-37,583
5	12,244	55,161	0	-25,339
6	12,918	68,079	0	-12,421
7	13,628	81,707		1,207
8	14,378	96,084		15,584
9	15,168	111,253		30,753
10	16,003	127,255		46,755
11	16,883	144,138		63,638
12	17,811	161,949		81,449
13	18,791	180,740		100,240
14	19,824	200,564		120,064
15	20,915	221,479		140,979
16	22,065	243,544		163,044
17	23,279	266,823		186,323
18	24,559	291,381		210,881
19	25,910	317,291		236,791
20	27,335	344,626		264,126
21	28,838	373,464		292,964
22	30,424	403,888		323,388
23	32,097	435,985		355,485
24	33,863	469,848		389,348
25	35,725	505,574		425,074

Financial Feasibility	
Net Present Value	\$401,435
Annualized IRR	16.82%
ROI – Payback	7 Years
Equivalent Rate \$ Per Gallon of Oil	\$4.69

Note: This financial feasibility is provided as an example of the application of current incentives.

Solar Thermal Incentives

The 30% federal investment tax credit, depreciation and local incentives can reduce your initial system cost by more than 60%!

Interested in learning more about solar energy in your business? Contact us

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