

# SunMaxx™

## Commercial Solar Solutions: Dairies & Agriculture



- Lower operating costs and increased profitability
- Take advantage of USDA guaranteed funding options
- Increase local jobs and build the economy
- Become a green leader in your community
- Reduce your dependence on fossil fuels & carbon footprint

As economic conditions become tighter, it is more important than ever for the agricultural industry to take advantage of every opportunity to lower their operating costs and show their green commitment. A SunMaxx solar thermal system is the perfect investment to do both.

Farms, especially dairy farms, are heavy users of hot water. Most of the hot water is used for washing animals and sterilizing milking equipment. In fact, according to the USDA, 40% of the energy used on a dairy farm is for water heating, making it the largest portion of energy consumption. A SunMaxx system is the most efficient way for a farm to provide its hot water; lowering its operating costs and showing its green commitment.

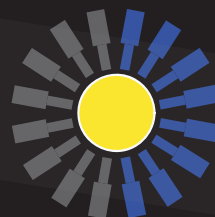
Other uses for solar hot water in the agricultural industry include radiant floor heating, space heating, domestic water heating, greenhouse heating, and heating for the pasteurization process.

A SunMaxx solar thermal system can help reduce these costs, cutting a farm's water heating bill by 50%, or more. This money can then be used for other important needs, such as equipment upgrades, expansion, growth and much more.

To help agricultural producers pay for a SunMaxx solar hot water heating system, the USDA offers the Rural Energy for America Program (REAP) which is designed to help small businesses in rural areas (farmers).

This new USDA plan offers a number of assistance options including guaranteed loans and grants to assist farmers become more energy efficient, including the purchase and installation of SunMaxx solar hot water and heating systems.

In addition to USDA programs, federal, state and local governments have initiated incentives on solar thermal installations. These include income tax credits, sales tax exemptions, property tax increase exemptions and cash rebates. Combined, they often pay for 50% or more of the system's initial cost.



**Silicon Solar Inc**  
Innovative Solar Solutions™

# Solar Thermal for Dairies & Agriculture

## Solar Thermal System Estimate

Farm Type	Dairy
Farm Location	Illinois
Head of Cattle	200
Hot Water use/day	500G
Hot Water Temperature	130 °F
Solar Collectors	SunMaxx-30 (EVT)
Number of Collectors	20
BTU/year	81.0 Million
Solar Fraction	66%
Heating Fuel	Propane
Heating Fuel Cost	\$ 2.34/G
Heat Fuel Use (Before)	1,434G
Heat Fuel Cost (Before)	\$ 3,357.00
Heat Fuel Use (After)	490G
Heat Fuel Cost (After)	\$ 1,148.00
Gross System Cost	\$ 33,000.00
Federal Tax Credit (30%)	\$ 9,900.00
State Incentive	\$ 9,900.00
Net System Cost	\$ 13,200.00

## Solar Thermal Incentives

To help businesses pay the initial costs of a SunMaxx solar hot water or heating system, federal, state and local governments have begun offering a number of incentives.

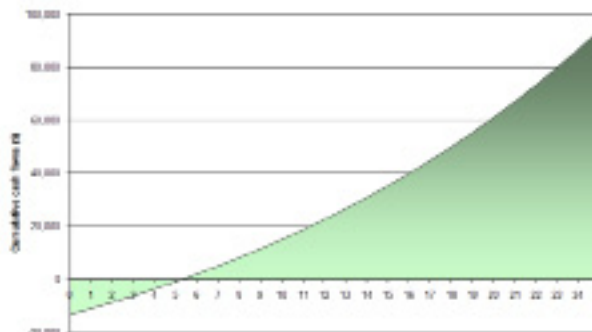
The key incentive is a 30% uncapped federal tax credit. Most state and local governments offer a combination of state tax credits, cash rebates, sales tax exemptions and property tax increase exemptions.

Combined together, these incentives can cover 50%, or more, of the total cost of your SunMaxx solar thermal system.

## Yearly cash flows

Year	Pre-tax	After-tax	Cumulative
#	\$	\$	\$
0	-13,200	-13,200	-13,200
1	2,252	2,252	-10,948
2	2,364	2,364	-8,584
3	2,482	2,482	-6,102
4	2,606	2,606	-3,495
5	2,737	2,737	-759
6	<b>2,874</b>	<b>2,874</b>	<b>2,115</b>
7	3,017	3,017	5,132
8	3,168	3,168	8,300
9	3,327	3,327	11,627
10	3,493	3,493	15,120
11	3,668	3,668	18,788
12	3,851	3,851	22,638
13	4,043	4,043	26,682
14	4,246	4,246	30,928
15	4,458	4,458	35,386

**Payback Period: 5-6 Years**



## New Green Economy

Studies indicate that the number of American consumers who consider themselves green shoppers is growing at exponential rates. Additionally, these studies show that consumers are willing pay up to 15% more for green products and services, or products and services offered by a company with a green image.

The growth of America's green industry is seen as a great step forward for our country; leading to jobs that cannot be outsourced, decreased carbon emissions, and a reduced dependence of foreign oil. Your farm has the chance to be a leader in this movement, by adopting solar thermal technology.

