



An Investment with Real Returns

CASE STUDY - Webb Dairy Raft River, Idaho 2011

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



As economic conditions become tougher, it is more important than ever for the agricultural industry to lower their operating costs and show their green commitment.

Farms, especially dairy farms, are heavy users of hot water. 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. The Webb Dairy in Raft River, Idaho, milks 1600 cows three times a day. They run wash cycles three times a day using about 500 gallons of 160 degree water each time.

SunMaxx Solar congratulates Progressive Power Solutions and Timberline Heating and Cooling, for their successful solar thermal installation at Webb Dairy. This project reflects the benefits of incorporating solar thermal into the agricultural industry.

Conservative estimates show that solar thermal will provide sufficient hot water for at least 80 percent of annual requirements.

The Webb Dairy's propane and natural gas bills average \$2000 per month. With their solar thermal system they save an average of \$19,000 annually.

For equipment, the dairy uses two 199,000 BTU water heaters. Because of heavy and constant loads, the water heaters were replaced about every three years. Replacement costs were \$3000 each, plus downtime, labor and incidentals. By preheating the water, solar thermal is extending the useful life of this equipment. Annual savings estimated at \$1,000 each year.

Economic Analysis

Complete System Cost		\$87,000
Federal Tax Credit(30%)	\$24,000	
USDA Grant (25%)	\$21,750	
Total Credits		\$45,750
System Cost After Credit		\$41,250
Annual Energy Savings	\$19,000	
Annual Equipment Savings	\$1,000(est)	
Depreciation(accelerated)	\$5,000(net)	
Total Annual Savings		\$25,000