



# Financing Your Solar Thermal System

## Rebates, Incentives and Financing Options to Encourage Solar Thermal Adoption

Solar Thermal is an easy and effective way for your business to go green. In addition to the environmental benefits, installing a Solar Thermal system can also be a low-cost, high-return investment. Solar Thermal systems can greatly reduce energy costs for businesses and property owners. There are many rebates and financing options available to encourage investment in Solar Thermal. SunWater Solar can provide details on how to finance a system, including more information on the following programs and incentives:

### CSI Thermal Rebate (California)

The California Solar Initiative (CSI) Thermal Rebate Program sets aside \$350 million in direct financial incentives for California businesses and residences to install Solar Thermal systems. One goal of the CSI Program is to displace 585 million therms of natural gas. The program will run through 2017, or until the program funds are exhausted, whichever occurs first.

The CSI Thermal Program also encourages Solar Thermal manufacturers and installers to commit to high-performance, low-cost designs. Incentives will decrease over time to reflect performance gains and expected cost reductions.

### Federal ITC Tax Credit

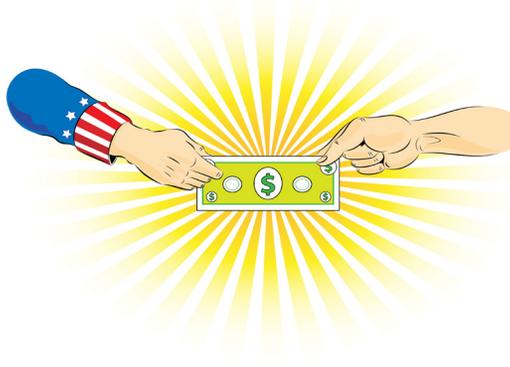
The federal Investment Tax Credit (ITC), which will remain in effect through 2016, offers a 30% federal tax credit for most Solar Thermal installations, with no maximum credit. In addition, the American Recovery and Reinvestment Act of 2009 allows taxpayers eligible for the ITC to receive a grant from the U.S. Treasury Department instead of taking the ITC for new installations.

Note that pool and hot tub systems are excluded from the ITC, and the system components must be certified by the Solar Rating and Certification Corporation (SRCC).

### Accelerated Depreciation

Accelerated depreciation, which can be used alongside the federal ITC tax credit, allows Solar Thermal system owners to re-coup a significant percentage of their investment in a system.

Qualifying businesses are eligible for 5-year accelerated capital depreciation on installed Solar Thermal systems under the federal Modified Accelerated Cost-Recovery System (MACRS). The 5-year schedule for most types of Solar Thermal has been in place since 1986.





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### State & Local Rebates

Fifteen U.S. states currently offer solar water heating incentives that cover anywhere from 15% to 85% of the system cost. States that already offer rebates include California, Hawaii and Arizona. Additional states are currently considering similar programs.

Many local governments offer additional rebates to residents who install Solar Thermal systems. In California, for example, cities such as Sacramento and Palo Alto offer their own solar water heating rebates, which are possible because these cities own the utility companies that provide power to customers.



### Funding

With appropriate financing, a Solar Thermal installation can be cash positive from the beginning. Some lenders offer solar loans with no money down and interest rates as low as 6%.

Large projects may also qualify for a Power Purchase Agreement (PPA). In this arrangement, a third-party financier provides the upfront capital for a business to buy a Solar Thermal system. The financier owns the system and sells the power it generates to the business owner at a rate lower than that charged by the local utility. Typically, after a number of years, the business owner can purchase the system from the third-party financier.



### PACE Programs

Property Assessed Clean Energy (PACE) programs allow local municipalities to finance solar hot water systems through the property taxes paid by businesses and homeowners.

In a typical PACE program, the local municipality finances the equipment and installation costs of the Solar Thermal system and the property owner pays for the system over a set period of time (i.e., 20 years) at a fixed interest rate through property taxes. In California, the city of Berkeley led the way with a PACE program called Berkeley FIRST. The City and County of San Francisco have instituted a PACE program called GreenFinanceSF.



### About SunWater Solar

SunWater Solar designs, installs and services Solar Thermal systems that lower utility bills, reduce greenhouse gas emissions and help clients meet sustainability requirements. From system design to project management, SunWater Solar has implemented Solar Thermal technology for a variety of applications, including domestic hot water heating, process heating and pool heating. Founded in 2006 and based in Richmond, California, SunWater Solar serves a wide variety of customers and focuses exclusively on Solar Thermal technology.



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## Estimated Cost and Return on Investment for a Commercial Solar Thermal System

SunWater Solar always provides a detailed financial breakdown of system cost and ROI to business owners and other dollar-conscious clients considering the purchase of a Solar Thermal system. Below is a hypothetical example of cost and long-term ROI for a commercial system. Because factors such as natural gas prices and rebate amounts can fluctuate, this example should be considered an estimate only, rather than a fixed projection of actual cost and ROI.

### Project Information

Customer Name	Stellar Apartments
# of Apartments	70
Total # of Tenants	100
Hot Water Use per Month	60,000 gallons
Solar Thermal Collector Area	1,160 sq. feet

### Assumptions: Natural Gas Usage

Current Fuel Type	Natural Gas (Therms)
Fuel Price	\$1.20 per Therm
Annual Fuel Price Increase (Yrs. 1-25)	10%

### The Bottom Line

It will take six years for the energy costs offset by this Solar Thermal system to equal the \$32,683 cost of installing the system. After that, the system will continue to provide savings by offsetting the natural gas used to heat water, providing an excellent return on investment.



### System Cost & Savings

Original Total Cost of System	\$139,200
CSI-Thermal Rebate	\$58,000
Investment Tax Credit (ITC) - 30%	\$24,360
Accelerated Depreciation (5 Years)	\$24,157
Final Cost of System to Customer	\$32,683
Natural Gas Saved	3,840 Therms
Annual Savings (Year 1)	\$4,608
Positive Cash Flow (25 Years)	\$420,500
Internal Rate of Return (25 Years)	19%
Simple Payback	6 Years

### 25-Year Estimated Cash Flow

