

## Practical Solar Solutions for your Car Care Business

*By Matthew Brown*

Published in Car Care Business Magazine

Going green has a number of significant benefits for your business. These benefits are both environmental and economic, and will help you to build a stronger, more profitable business and brand. While there are a number of different ways for you to take your car care business in a new green direction, solar energy offers the most cost-effective, affordable and efficient energy solutions.

### Commercial Solar Solutions

There are three specific solar energy technologies that can be extremely beneficial to your car care business. These technologies are PV (solar electric) systems, solar thermal (solar hot water and heating) systems and commercial solar lighting systems. Each of these technologies offers significant economic and environmental benefits, some of which are easy to see, and others that are less expected.

#### Solar Electric Systems

PV, photovoltaic solar electric systems are a great way to reduce your electric costs. These systems typically have a high initial investment, but offer some of the highest economic benefits and are among the most cost-effective of any renewable energy system.

A PV system can easily be sized to operate all, or a portion, of your electrical load. This includes lighting, pumps, heaters, vacuums, change machines, and more. With the increasing prices of electricity across United States it is becoming more and more of a concern for businesses looking to cut their operating costs and increase their profitability. A solar electric system can easily cut these costs by up to 100%.

There are three main types of solar electric systems to choose from; off-grid PV systems, grid-tie PV systems and grid-tie PV systems with a battery backup. Each of three systems offers significant advantages, including cutting your operating costs and reducing your carbon footprint (one of the best ways to help fight global warming). Each system also has advantages and disadvantages when compared to the other system types.

An off-grid PV system is not connected to the utility grid at all, meaning that you have no monthly, or annual, electric bill. A grid-tie PV system is connected to the electric utility, allowing it to use the electric grid as a backup system when the PV system is not generating enough power (cloudy weather and at night). A grid-tie PV system with a battery backup is also connected to the electric grid. However, because of the battery backup, it is able to store excess energy for later use. This means that there will be less use of the electric grid, which lowers your electric bill even further.

An added advantage of both types of grid-tie PV systems is that the connection to the electric grid works both ways. When your PV system is not generating enough electricity, it will automatically pull what is needed from the grid. But, if your system is generating surplus electricity, the excess power can be fed back onto the grid. The utility company is required to pay you retail rate for any electricity you contribute to the grid (in states with net metering laws). Additionally, many state and local incentives for PV systems require that the system be grid-tied in order to qualify.

#### Commercial Solar Lighting Systems

Lighting is another major use of electricity, and contributor to your high operating costs. Solar energy offers a number of affordable ways to lower your electric costs through the use of low-cost lighting systems. Commercial solar lighting systems come in a number of varieties, including solar sign lighting, solar parking lot/street lighting, solar security lighting and low-power interior LED lighting.

All of these different lighting options are powered by a simple PV panel and battery pack. The solar panel charges the battery during the day and when the sun goes down the lights automatically turn on. Some lights provide lighting all night (dusk to dawn) automatically and others have the option of setting custom running times based on the length of time they will be needed each night.

Switching some, or all, of your lighting to commercial solar lighting can cut hundreds, or thousands, of dollars a year off of your electric bills. Commercial solar lighting systems are often sold as complete, pre-packaged units that often include the light fixture, batteries, controller and solar panels. This allows for hassle-free installation, operation and maintenance.

### **Solar Thermal (hot water and heating)**

Hot water and heating are typically one of the biggest portions of a business's operating costs. It is a reality today that the costs of traditional heating fuels (propane, natural gas, oil and electricity) are on the rise, with prices higher than ever before. Additionally, burning these fossil fuels is one of the leading contributors to GHG (greenhouse gas) emissions and global warming.

A thermal system can dramatically reduce your heating costs (by 50% or more every year), reducing your heating costs by hundreds, even thousands, of dollars a year.

Best of all, today's solar hot water and heating systems are extremely versatile, and can be used for any number of applications at your car care business. If you offer hot water washes to your customers, a solar hot water system can be used to preheat that water. If you use in-bay heating systems or ice/snow melting systems for the bays, parking lots or sidewalks, the system can be used for that as well. If you have a convenience store/gas station attached to your car wash, the internal heating system can be supplemented with a solar thermal system.

### **Key Benefits of Commercial Solar Solutions**

There are several ways that a solar energy system (or combination of solar energy systems) will benefit your business. Some of these benefits are directly financial, and others are not, but still provide significant financial benefits in the long run.

#### **Lower Operating Costs**

Today's energy bills are higher than ever - not just for homeowners, but for business owners as well. The prices of electricity, oil, natural gas and propane are at all-time highs. These increased operating costs are lowering corporate. Additionally, today's tough economy is making it harder and harder for American consumers to spend money, and difficult for businesses to operate profitably.

By using solar energy systems to reduce your heating and electricity costs your business will have hundreds, even thousands, of additional dollars to contribute toward the bottom line every year. These savings can then be used for expansion and growth, facility upgrades, increased advertising or for providing new services for your customers.

#### **Increased Media Attention**

The media loves stories about companies going green and doing the right thing for the environment. This increased media attention is free marketing for your business. With all of your other operating costs, and a tightening economy, marketing is a tough cost to bear, and any free marketing, like positive media attention, will only help to increase your business.

#### **Increased Customer Base and Loyalty**

Were you aware that the number of Americans who consider themselves green consumers is growing every year? Did you know that those customers who consider themselves green are willing to pay higher prices to get products or services from green companies that share their values?

Being the green carwash in town will naturally attract the business of the local residents that consider themselves green consumers, or who are looking to do business with companies that share their goals of a greener, cleaner Earth. As a side result, your current customers will see your forward-thinking business model and be more apt to become life-long repeat customers. Could you use a larger, more loyal customer base?

### **Commercial Solar Energy Incentives**

Because of the growing popularity of solar energy systems for both residential and commercial applications, local, state and federal governments are offering a number of incentives designed to offset a significant portion of the costs of purchasing and installing a commercial solar energy system.

There are key incentives that deal with solar electric systems, solar lighting systems and solar thermal systems and there are a variety of incentives available. A combination of these incentives can offset 50%, or more, of the total cost of your solar energy system.

#### **Federal Solar Incentive**

The US Federal Government has one main incentive for solar energy systems. This incentive is a 30% income tax credit. Thirty percent of the total cost of your solar electric or solar thermal system can be written off on your corporate taxes.

For commercial solar systems, both PV and solar thermal, there is no cap on the amount of your tax credit – you get the full 30%, no matter how much.

#### **State & Local Incentives**

State and local solar incentives vary from state to state. There are a number of typical incentives, and most states and municipalities offer one, or a combination, of these incentives:

- State Income Tax Credits
- Sales Tax Exemptions
- Property Tax Increase Exemptions
- Cash Rebates
- Production Credits
- Net Metering (credits from your electric utility for contributing excess electricity to the grid through a grid-tie system)
- Low or No-Interest Loans
- Grants

By combining these federal, state and local incentives with the lower energy bills and additional financial benefits of a commercial solar solution, you can dramatically reduce the initial cost of your solar energy system, shorten the payback period and increase your overall return on investment.

### **Getting Started with Commercial Solar Solutions**

After you read this article, and maybe do some additional research on solar energy systems for your car care business and feel that one of these systems is the right solution to cut you operating costs, increase your business and improve your profitability, you can follow the steps below to guide you through your purchase.

#### **Choose your Commercial Solar Solution**

Whatever your needs, the right solar energy system can have an extremely beneficial impact on your profits. You may feel that one of these systems will have more direct benefits to your business, or that you would be best served with a combination of systems. A careful examination of your energy bills, your budget and the available solar options will help make this decision simple.

#### **Size your Commercial Solar System**

After you have decided which solar solution(s) you would like to invest in, it is important that they be sized to meet your needs, and your budget. Undersized and oversized systems waste money. A professional will help you determine which size solar energy system is right for you, ensuring that it is as efficient and cost-effective as possible.

### **Choose your Solar Dealer and Installer**

The last step in getting started with a solar energy system is to find a good supplier and installer for your new system. You should look for a company that provides the best products at the best prices, but that also provides world-class service and support (just like you do). The right solar energy dealer and installer will make the purchase of your solar energy system easier, more affordable and hassle-free.

If you are looking for an all-in-one way to save money, increase your profits, generate more business and differentiate yourself from your competitors, a commercial solar energy system is the right choice. Today, going green is about saving money as much as it is about saving the environment - a solar energy system can help you do both.