

# When it came to Solar, Impact Photo Graphics chose Premier Power



## Background

When it comes to enjoying our natural world, for the leading producer of photographic interpretive products, Impact Photographics, the phrase, “Take only pictures, leave only footprints” just begins to tell its story. The company specializes in bringing the beauty of nature – particularly from tourist destination spots such as state and national parks, historical sites, zoos, aquariums, museums and monuments, among others – to the world through photography and environmentally friendly products.

The company has a vested interest in an environment that is protected and maintained. For Impact Photographics, clean and clear applies to its products, to the work of the world-renowned photographers who submit their pictures and to the beauty of the surroundings and settings they capture. However, the company knows that every kilowatt-hour it draws from the grid to run its operations also represents, unfortunately, an associated amount of greenhouse gases released into the atmosphere.

## Environmental Impact

To help mitigate its environmental impact, the company implemented an extensive recycling program and is switching to digital processes for its photographic activities. So in May 2006 when owner J.B. Wagner suggested Impact Photographics switch to clean, renewable solar energy, the response was a resounding, “Yes!”

## Project Overview

Location . . . . . El Dorado Hills, CA  
 System Completion . . . . . May 2006  
 System Type . . . . . Self ballasted Roof Mount  
 Total System Size . . . . . 130kW-DC

## System Configuration

PV modules used . . . . . 788 GE 165 watt modules  
 Inverters . . . . . 1 Sunny Central 125 inverter  
 Modules tilt . . . . . 20°

## Performance\*

Estimated annual production . . . . . 181,220 kWh  
 Total kWh Usage reduced . . . . . 98% of 2007 usage

## Environmental benefits, annually†

Greenhouse gases reduction (CO<sub>2</sub>) . . . . . 345,428 lbs  
 Gasoline not consumed . . . . . 17,785 gallons  
 Barrels of oil not consumed . . . . . 364 barrels  
 Cars not driven . . . . . 28.7

Sources:

\* PV Watts Solar Energy Calculator ( <http://www.pvwatts.org> )

† U.S. Environmental Protection Agency  
 ( <http://www.epa.gov/cleanenergy/energy-resources/calculator.html> )

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**The Challenge**

Sitting in the California Sierra Foothills, the commercial building in which Impact Photographic operates, is subject to wide temperature swings over the year. Additionally, the occasional winter storm can produce high-winds. Concerned about damaging the integrity of the building’s flat roof, as well as the potential for leaks, Premier Power was called to help, namely to assess the roof’s ability to support a photovoltaic array.

**The Solution**

With more than 20 years of design and construction experience, Premier Power designed and engineered a non-penetrating ballasted flat-roof mounting system that would maintain the roof-top’s integrity, hold the solar panels securely and meet J.B.’s goal of having a 100 percent solar powered building. Each freestanding mount is specially designed for commercial and public building flat roofs. The mounting system, with its 20-degree panel-tilt design, sits directly on the roof surface. In addition, tilting each panel up to 20 degrees increases productivity by 11 percent over a panel set flat to the roof.<sup>1</sup>

As an all-electric building with high energy usage, J.B. Wagner, said it was a “NO BRAINER!” when it came to considering solar.

Sources: <sup>1</sup>PW Watts Solar Energy Calculator (<http://www.pwwatts.org>)



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