

Facility Manager Project Profile

Wayne Brayton

Here comes the Sun

SONIC's company-owned drive-ins achieve cost savings and reduced maintenance with solar panels

How long have you been in the restaurant industry? I have worked in the restaurant industry for 30 years.

What is your official title, how long have you been at SONIC and how many company-owned locations are you responsible for? I am the vice president of facilities for the Oklahoma City-based national headquarters of SONIC, America's Drive-In and have been with the company for 17 years. For the past three years, I have handled the energy savings initiatives for company-owned drive-ins.

How did you find out about potentially utilizing solar panels on drive-in canopies for energy savings? SONIC franchisees located in Colorado, Oregon and Tennessee have tested solar panels and experienced energy savings in addition to receiving rebates. They expect to experience a return on their investment within five years.

Where is the first company-owned drive-in with solar panels, and when was installation completed? The first company-owned drive-in to install solar panels is located in San Antonio, Texas, and the project was completed in January 2016.

Why was this particular drive-in chosen? The SONIC Drive-In in San Antonio was chosen for a solar panel installation due to its location, visibility, sales and access.

How did you choose your panel supplier/installer? CPS Energy is a natural gas and electric service provider located in San Antonio. We reviewed their approved vendor list to find a supplier and installer.

How many panels were installed in the San Antonio drive-in? There is a total of 90 solar panels and a 27-kilowatt system.

Briefly explain the system set up, installation and tie-in with the existing electrical system. The system includes three inverters, installed framing on top of the drive-in stall canopies and a sub electric meter.

How much did the panels reduce electrical usage and costs? The monthly savings varies, with an average 15-20 percent electrical usage savings per month and an average cost savings of \$400 per month.

What is the rated electrical efficiency of the panels in San Antonio? The solar panels installed in the San Antonio drive-in have demonstrated 13 percent electrical efficiency.

Were there any local utility rebates and federal tax credits? CPS Energy offered a 50-percent rebate for the solar panel installation, and there was also a 30-percent federal tax credit.

What are the warranty terms for the panels and inverters? The solar panels have a 25-year warranty, and the inverters have a 10-year warranty.

What is the estimated ROI for this system considering the rebate and tax credits? The payback is estimated at less than five years.

Is there any maintenance required for the panels? How do they hold up in hail storms? There is very little maintenance required for the solar panels, and they have been shown to be hail-resistant.

Since the San Antonio installation, you have recently installed panels at a location in Colorado Springs, Colo. Why was this drive-in chosen? Was the same type of system used? We wanted to test solar panels in another market. The drive-in located in Colorado Springs happened to have a substantial hail damage claim pending on the canopy. The San Antonio installation was a retrofit on top of the canopy, whereas the Colorado Springs installation involved using the solar panels as the canopy.

By using solar panels that also double as the canopy, are there potential construction savings associated with this design? We can possibly reduce the structural design, reduce canopy steel packaging costs and take a 30-percent tax credit on the entire canopy structure.

What is the electrical efficiency gained using these newer panels that double as a canopy? Lumos panels are 17 percent efficient. Were rebates and tax credits available for the Colorado Springs installation? Yes, there was a \$10,000 rebate and a 30-percent federal tax credit for the Colorado Springs location.

Without the need for deck pans on your canopies, will the panels hold up in storms? Is there any maintenance for cleaning (e.g., bird droppings) required? These Lumos panels are also hail-resistant and require no maintenance.

Are there any electrical storage devices on either of the drive-ins? Not currently, but we are considering a battery pack test in the future.

What are your thoughts on moving forward with using solar panels on SONIC's canopies, and do you see the overall electrical efficiency rising substantially in the future? As the costs of solar power decrease, and solar panel efficiency increases, using solar panels will make more economic sense moving forward.

In hindsight, what was the main takeaway from these projects? SONIC is well-positioned, with an advantageous footprint, to utilize solar energy. This cost-saving initiative has been well received by our operations team, franchisees and customers.

Wayne Brayton is Vice President of Facilities with SONIC. He has worked in restaurant construction and facilities since 1988 and started with SONIC in 2001. For the past three years, Brayton has handled the brand's energy-savings initiatives. He has been a member of RFMA since 2007.