

POWER PROFILE

Louisiana Cat

POWER NEED

As it looks to grow its customer base inside the United States and beyond, Louisiana Cat strives to be experts in all the products it sells. For Mike Jennings, general manager for Louisiana Cat's energy and transportation division, that meant installing and operating a hybrid energy solution that generates solar power for the dealership.

"We really wanted to understand all of what was involved before talking to our customers about it," Jennings said. "So that's what this has done for us – it has helped us better understand the engineering and application aspects of a project like this – things that you need to be very cognizant of to ensure long-term success."

Taking advantage of Caterpillar's recent expansion into the hybrid energy solutions market, Jennings and the team at Louisiana Cat sought a system that could not only be demonstrated to potential customers, but also deliver power for its New Iberia facility in an area where frequent hurricanes roll in from the Gulf of Mexico.

SOLUTION

The solar installation includes 1,550 Cat® PVT115 photovoltaic (PV) panels mounted on the roof of the high service bay area of the facility, where they feed five 30 kW SMA string inverters. To help protect the panels during hurricanes and other high-wind events, local installation partners EP Breaux and South Coast Solar added panel clamps able to withstand winds up to 140 mph.

The team installed a Cat gas generator set and a Cat Service Entrance Rated automatic transfer switch (ATS) for standby power. The system is connected to the local grid, enabling Louisiana Cat to sell power back to the local utility when the power generated by the PV panels exceeds the electrical load.

RESULTS

The PV array at the New Iberia facility can produce a maximum output of 150 kW on a cloudless, sunny day. In the first two and a half months after installation, Louisiana Cat saved \$7,254 in utility costs and produced just over 75 megawatt hours of energy. According to Jennings, that translates into a net carbon reduction of 57 tons since the PV array was installed. "You can see the benefit from green technology almost immediately," said Jennings.

As the project evolves, the next step will be to add energy storage along with a Cat Microgrid Master Controller (MMC). The Cat MMC is designed to help large industrial or campus installations integrate a variety of traditional and renewable energy sources by providing overall monitoring and control of the different assets.

"Control and monitoring is really the secret sauce for a dependable and energy-efficient microgrid," Jennings noted. "Caterpillar has done a fantastic job of coming together with a control strategy to manage all of the different energy assets."

As the facility continues to operate its PV array, Jennings hopes to show potential customers firsthand the improved energy efficiency and power output a hybrid energy solution can offer, especially for customers with limited access to a strong utility grid or power network.

Our goal was to have a fully functional microgrid here at our New Iberia facility so it can serve as a working model for our potential customers and future clients," Jennings said. "We are more or less walking the talk by installing and operating our own microgrid."

[For more information, please visit cat.com/powergeneration.](http://cat.com/powergeneration)



Louisiana Cat's New Iberia facility is the dealer's energy and transportation headquarters.

CUSTOMER

[Louisiana Cat](#)

LOCATION

New Iberia, Louisiana, USA

CUSTOMER BUSINESS ISSUE

Reduced utility costs and increased use of renewable sources of energy

SOLUTION

- [1,550 Cat® PVT115 photovoltaic solar panels](#)
- [Cat® 400-kW gas generator set](#)
- [Cat® Service Entrance Rated automatic transfer switch](#)

CAT DEALER

[Louisiana Cat](#)



Louisiana Cat installed 1,550 Cat® PVT115 photovoltaic solar panels atop its service building.