

## CASE STUDY

# Circuit Energy Solutions uses Tigo Green Glove program for 98kW rooftop install



## Background

Secure Store is one of Florida's fastest-growing retail climate-controlled storage companies with multiple large locations throughout the state. Secure Store leadership has strategically embraced commercial solar rooftop installations for several compelling reasons, including:

- Sustainability Commitment
- Forward Thinking Leadership
- Cost Savings
- Improved Customer Experience
- Enhanced Brand Image

Secure Store chose Circuit Energy Solutions to design and install a rooftop solar installation at its Orange City, Florida location.

Circuit Energy Solutions is a full service commercial and residential electrical contractor located in Tampa Bay Florida. With over 38 years of experience, the company has expertise in commercial, residential and design/build services.

## Challenges

The Secure Store facility is Temperature-Controlled Self Storage facility with large garages. To keep utility bills at a minimum while maintaining a commitment to the environment, the customer wanted a solar installation that would maximize savings and return on their investment.

Circuit Energy Solutions designed a 98 kW rooftop solar array for the facility, consisting of 217 solar modules. Because it's a rooftop solar installation, it must meet rapid shutdown safety codes to comply with the US National Electrical Code (NEC). NEC code 2017+ requires a module-level shutdown function upon initiation by a switch or power outage. This capability, known as rapid shutdown, is a requirement for the safety of firefighters and first responders.

## Solution

Circuit Energy Solutions turned to Tigo Energy, the industry leader in rapid shutdown technology to meet rapid shutdown codes. They installed Tigo TS4-A-F dedicated rapid shutdown devices on each module and RSS Transmitters with Pure Signal technology with the inverters. The RSS Transmitters maintain a unified keep-alive signal with the rapid shutdown devices while minimizing signal interference and crosstalk.

### INSTALLER



Circuit Energy Solutions

### INSTALLATION TYPE

Commercial

### LOCATION

Florida, USA



### FEATURES

Rapid Shutdown



### TIGO EQUIPMENT

Tigo TS4-A-F

RSS Transmitter with Pure Signal technology

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Circuit Energy Solutions wanted to ensure their design and implementation of Tigo rapid shutdown equipment were done correctly, so they enrolled in the Tigo Energy Green Glove program. The Green Glove program delivers a premium support experience that enriches the C&I installer journey from design to commissioning.

"Optimizing the installation process is critically important to us because we operate in more than 15 U.S. states, and we got involved with the Green Glove program to help our installers deal with the wide variety of construction methods and designs they face," said Brittany Johnson, Project Coordinator at Circuit Energy Solutions.

As part of the Green Glove service, a Tigo Sales Engineer reviewed the drawings that Circuit Energy Solutions sent to make sure the rapid shutdown system was designed correctly. On the installation day, the engineer was connected to the lead installer/electrician, and over the phone he confirmed things such as power to the Tigo equipment and proper voltage readings.

## Results

Since the site was successfully installed and commissioned in early 2024, it has been performing as expected and meets the required safety codes.

"When we heard about the release of Green Glove, we decided to give it a try because such close-knit relationships with solar technology providers are genuinely rare. This was a great decision because the design review was user-friendly, and having on-call support during installation was a game-changer. Our team gives it a perfect ten across the board," added Brittany.

Circuit Energy Solutions is currently using the Tigo Green Glove service for additional sites to ensure rapid shutdown design requirements are met and best practices are used.

## Equipment summary

- System size: 97.65kW (DC) at STC
- Tigo equipment: TS4-A-F and RSS Transmitters with Pure Signal technology
- Modules: Canadian Solar CS3W-450MB-AG
- Inverters: Solectria PVI 25TL-208

For more information on **Circuit Energy Solutions**, visit [www.circuitenergysolution.com](http://www.circuitenergysolution.com)

For more information on **Secure Store**, visit: [www.securestorefl.com/](http://www.securestorefl.com/)



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Brittany Johnson, Project Coordinator at Circuit Energy Solutions.



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