solar edge

SolarEdge ONE for C&I

The Future of C&I Monitoring,
Control, and Energy Optimization

Product Overview | For North America

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1MW, Asbury, NJ, installed by Solar Landscape

Introduction to SolarEdge ONE for C&I

The Future of Monitoring, Controls, and Energy Optimization

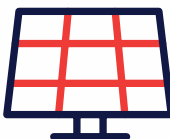**Operate & Maintain**
For EPCs and O&M teams

Optimize & Manage
For Asset Managers

SolarEdge ONE for C&I helps stakeholders manage a site's entire energy portfolio, including:

PV

SolarEdge inverters and Power Optimizers

Environmental Sensors

Integration with weather sensors

Storage *(coming soon)*

Commercial energy storage solutions

Power Export Control *(coming soon)*

Power Export Control/Non-export with UL 3141 compliance

Overview

Why you should care:

SolarEdge ONE is designed to reduce maintenance costs and boost efficiency throughout the project lifetime

What it is:

- A holistic asset management tool providing full plant visibility with robust cybersecurity features to protect your long-term investment
- By integrating with the SolarEdge ONE Manager communication gateway, it enables connection with data logger, energy meter, and weather sensors for enhanced and accurate plant metrics (PR, availability, yield prediction)
- A plant control system supporting applications requiring UL3141 Import/Export limit* compliance

* Coming soon

How it saves you money and boosts efficiency:

- Streamlined site operations, minimizing downtime and site visits through remote device management
- Real-time performance monitoring to quickly identify and address underperforming system components
- Proactive maintenance with live alerts and remote troubleshooting for fast issue resolution
- A single vendor for all software, warranty, servicing, and training needs, simplifying support and reducing complexity

What our customers are saying:

"We've seen a significant boost in our O&M efficiency....the SolarEdge platform's Digital Twin feature, combined with remote troubleshooting and advanced analysis tools, has drastically reduced on-site visits and project downtime.

It's been a game changer for managing our energy assets across Minnesota, making operations smoother and more cost-effective..."

David Carbonneau,
VP Operations & Procurement
iDEAL Energies

Main Benefits - Standard (Built-in) Version

Streamlined installation and operations

- Simplified equipment selection and installation
- One supplier for monitoring and inverters
- Easy integration with SolarEdge inverters and SolarEdge Designer (to support Digital Twin)
- **Comprehensive monitoring:** Streamline operations with an integrated platform for monitoring PV and building loads

Designed to lower maintenance costs

- **Enhanced O&M:** Reduced on-site visits and project downtime with remote inverter operation and configuration
- **Actionable insights:** Real-time inspection of fleet and site performance with easy identification of underperforming system components
- **Digital Twin:** Save time and streamline site management with this powerful site layout tool that offers quick inspection, analysis, and remote device configuration
- **Enhanced plant metrics:** Optimize performance and make informed decisions with help from performance ratios (site and string level), uptime, weather data, yield, and energy comparisons

Built for robust cybersecurity and business continuity

- **Advanced protection:** Safeguard your operations against cyber threats with robust security measures, comprehensive data protection, and secure connections
- **Future-Proofed security:** Stay ahead of emerging threats with advanced cyber capabilities designed to protect now and in the future

Future-Proof Your System with Advanced Monitoring and Controls

Paid Features (Coming Soon)

Installation, cost, and time savings

- **Project savings:** UL 3141 compliance (export limit & non-export) helps preserve NEM status, avoid prevailing wage, and speed up interconnection

Enhanced visibility & optimized fleet performance with advanced monitoring

- **Proactive maintenance:** Use advanced remote operation and digital twin technology to anticipate and resolve issues swiftly
- **Customizable reporting:** Tailor alerts, dashboards, and reports so your data is on-demand

Energy management system – PV, Storage and building loads

- **Increase visibility of energy utilization and trends:** Spot anomalies and discrepancies in the asset portfolio and reduce operational overhead
- **Asset automation:** Monitor building management systems, lighting systems, HVAC, and industrial assets
- **Performance monitoring:** Optimize energy use and cut costs with real-time data analytics to boost asset performance

Software Scope
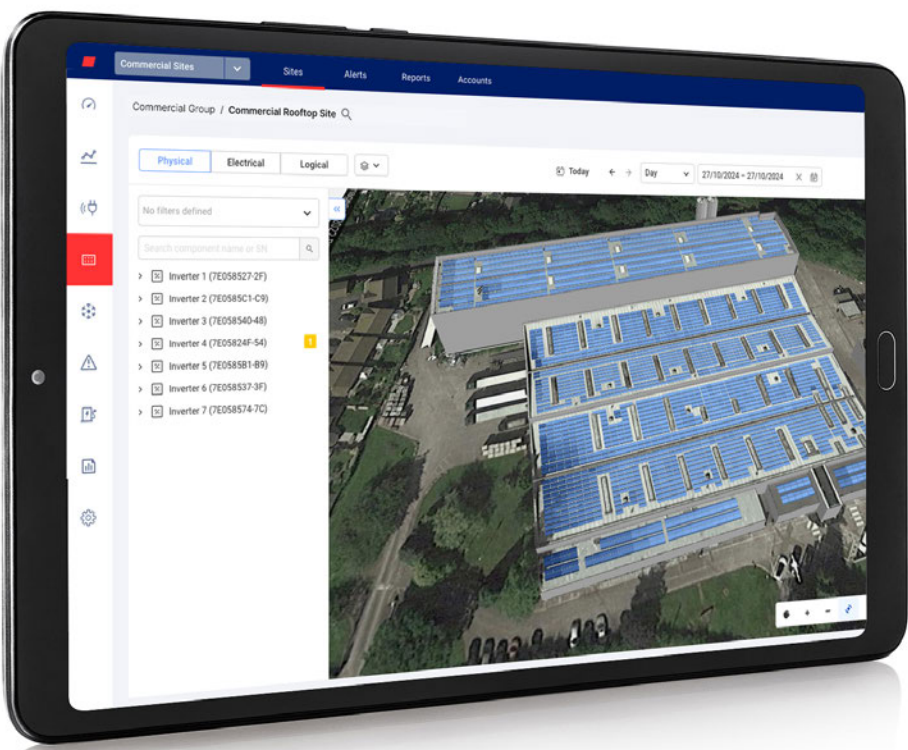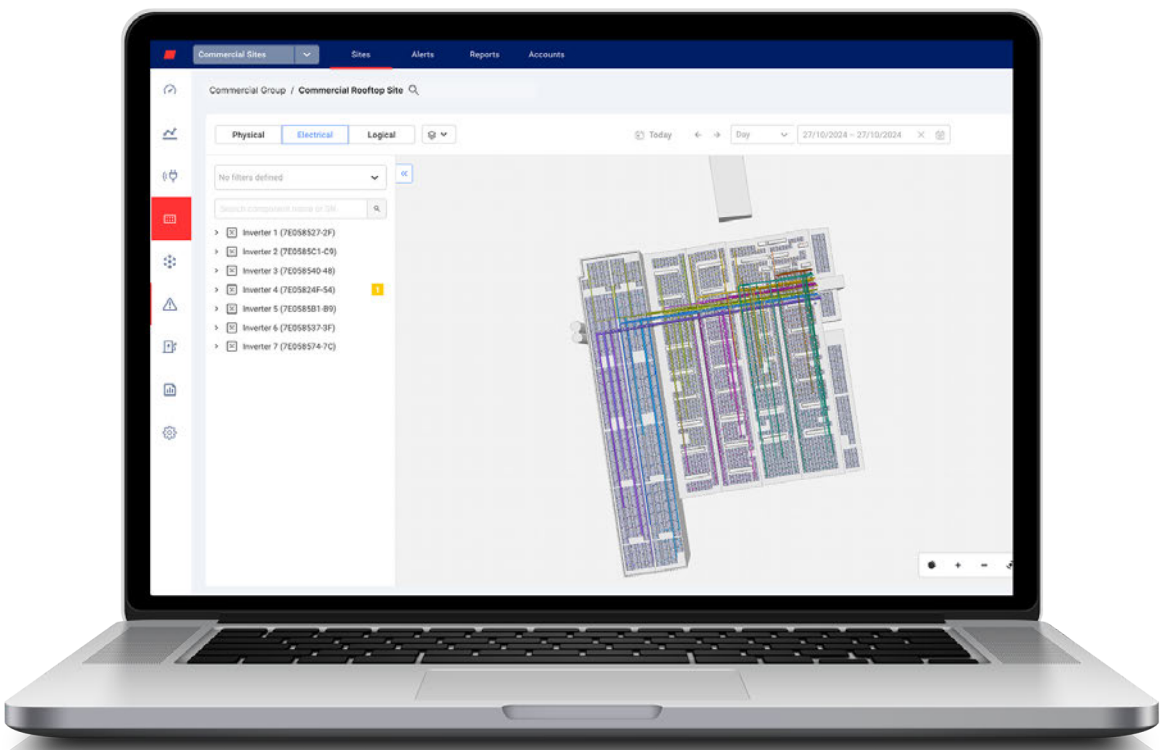
Digital Twin

Physical layout

- A powerful new site layout tool that merges the site's virtual representation (e.g. from SolarEdge Designer) with real-time site data
- Allows users to quickly perform site inspection, analysis, and remote configuration of all devices onsite
- Displays the data using one of two data layers:
  - Energy Layer: Makes it easy to identify underperforming modules over time
  - Thermal Layer: Helps you spot anomalies and module performance issues with live temperature readings from Power Optimizers

Digital Twin

Electrical layout

- Detailed site view showing all electrical AC/DC cable connections per system inverter and string as well as other component connections e.g. batteries
- Provides a visual representation of the site hierarchy
- Supports remote commands such as pairing and restart
- Integrates with the Layout Editor, ensuring the most updated site configurations are reflected
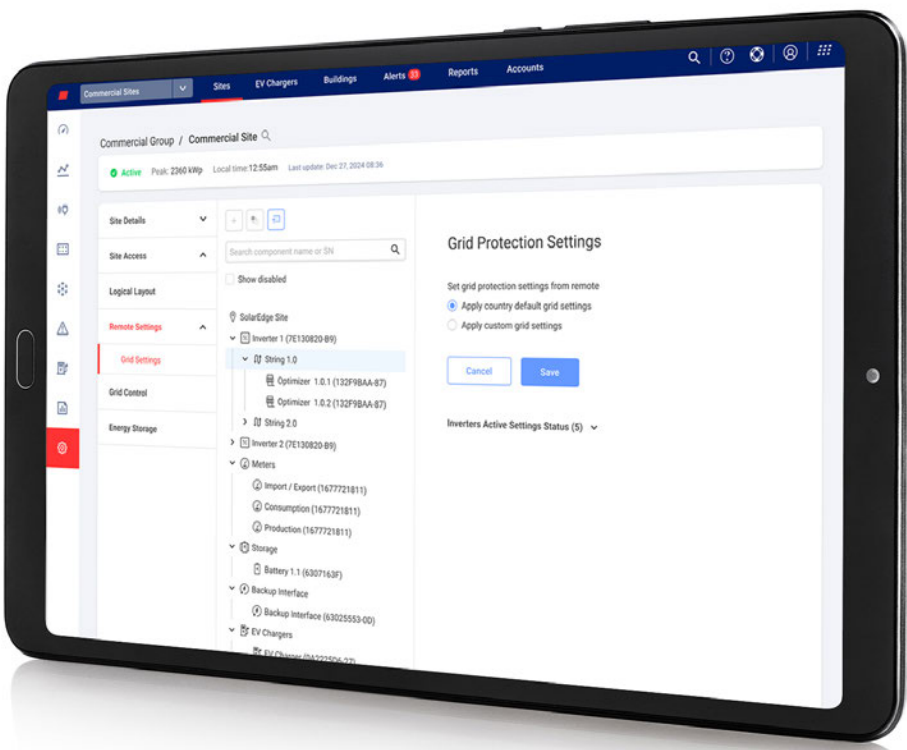
Device Configuration and Operation

- Reduce time on site by viewing and configuring devices remotely
- From the comfort of your office, easily update device parameters such as inverter power control or grid settings or set import/export limits.
- Includes an audit trail to track each device configuration that was made
- A robust set of cybersecurity measures protects the system from unauthorized remote access

Software Scope
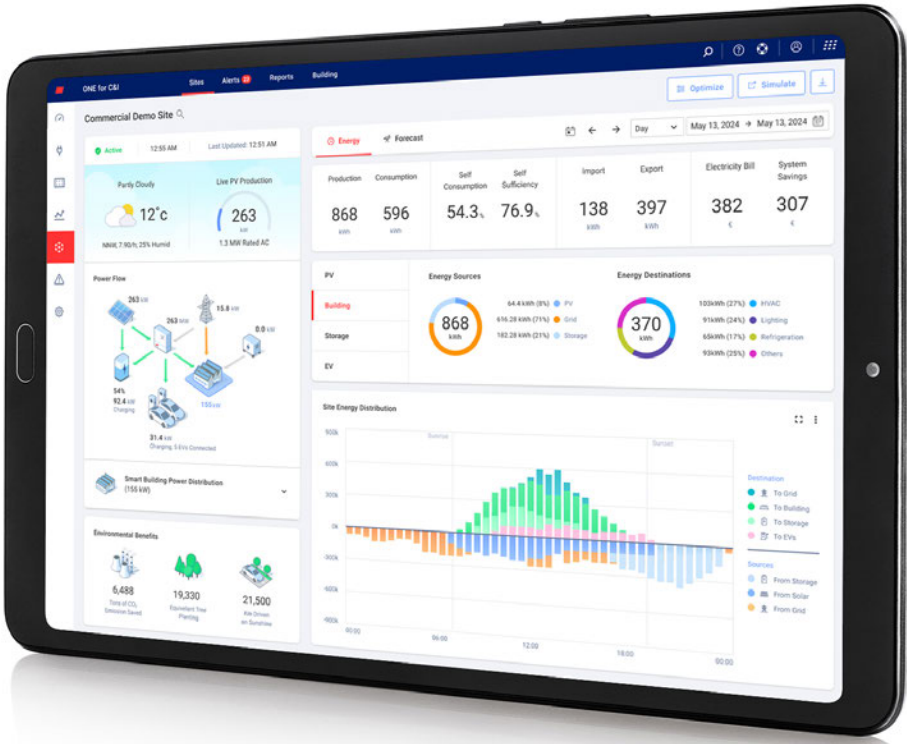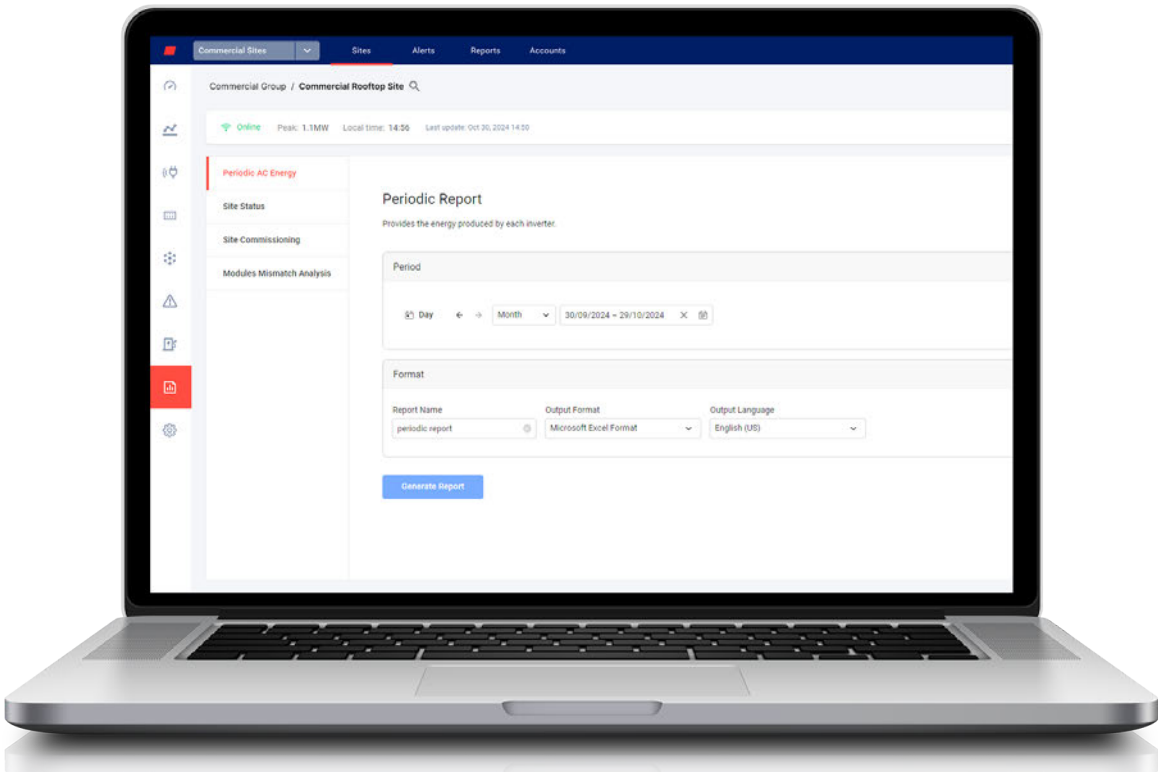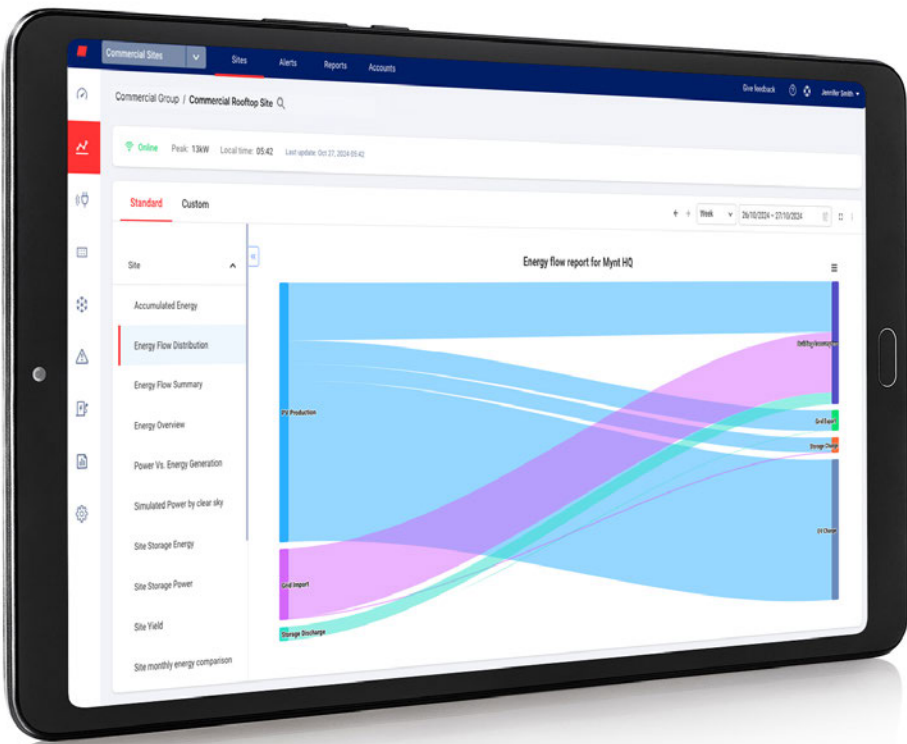
Site Analysis Tools

- **Pre-configured charts:** Quickly analyze site and device performance such as production vs. irradiance to identify issues and ensure optimal efficiency
- **Energy simulations:** Predict PV system output to set realistic expectations and improve planning
- **Advanced customization:** Tailor charts to your O&M needs for more relevant insights and better decision-making

Reports

- Generate detailed reports to analyze and compare site performance according to the individual Site level or Account level
- Multiple report types are available e.g. to help detect under-performing modules, verify site communications and commissioning, or review system production over time
- Report generation runs in the background, so you can continue to work in SolarEdge ONE uninterrupted
- Supports export to PDF, Excel, and HTML

Energy Board

- **Comprehensive insights:** Visualize real-time power flow and aggregated energy consumption to manage site performance
- **Energy breakdown:** Analyze how energy is sourced (e.g., PV vs. grid) and distributed to destinations like batteries, buildings, and the grid over defined periods
- **Key metrics:** Monitor production, consumption, and system savings with detailed daily, weekly, monthly, or annual data

Software Scope
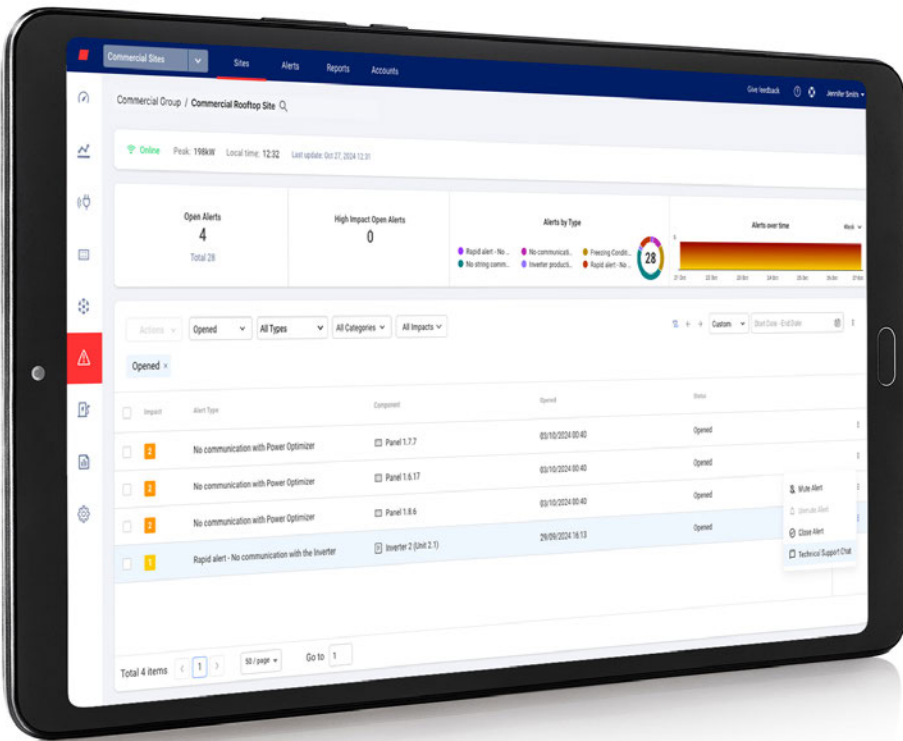
Alerts Tool

- Provides a pinpointed overview of any potential issues that may require attention, across all sites in your SolarEdge portfolio
- Alerts are automatically prioritized based on their impact e.g. on energy production or site safety, and are color-coded to make it easy to identify critical issues
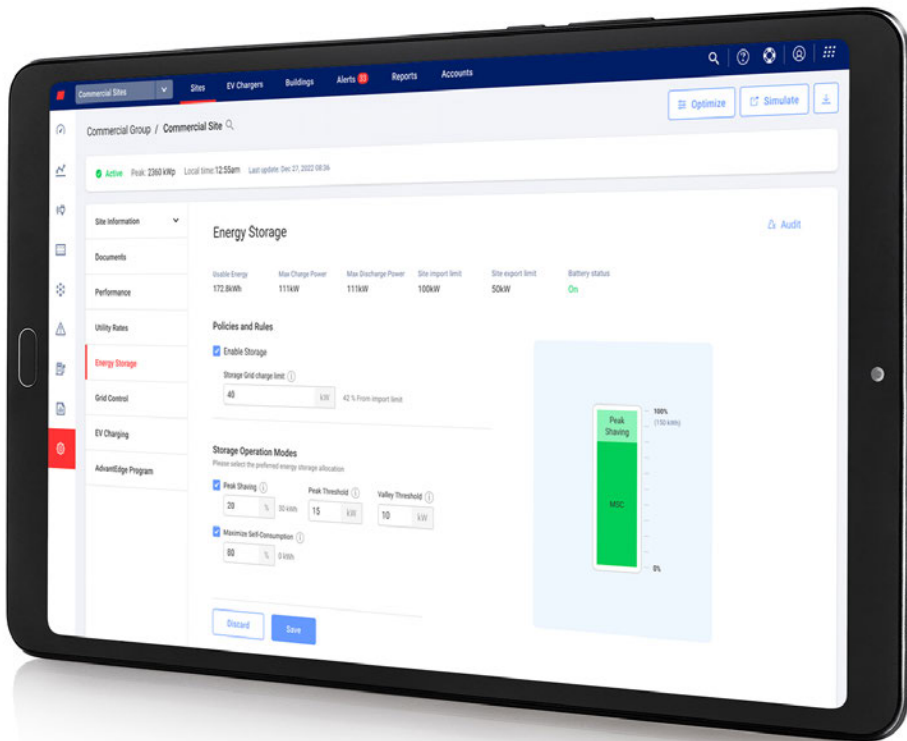
Coming Soon: Battery Monitoring and Management

- **Real-Time monitoring:** View key data for battery devices such as battery inverters and cabinets to track their health and performance
- Check inverter power, voltage, phase power, connection status, and module/cell health
- **Remote configuration:** Adjust settings like grid charge limits, Peak Shaving, and Maximum Self-Consumption modes for optimized storage management smart algorithms to optimize energy allocation
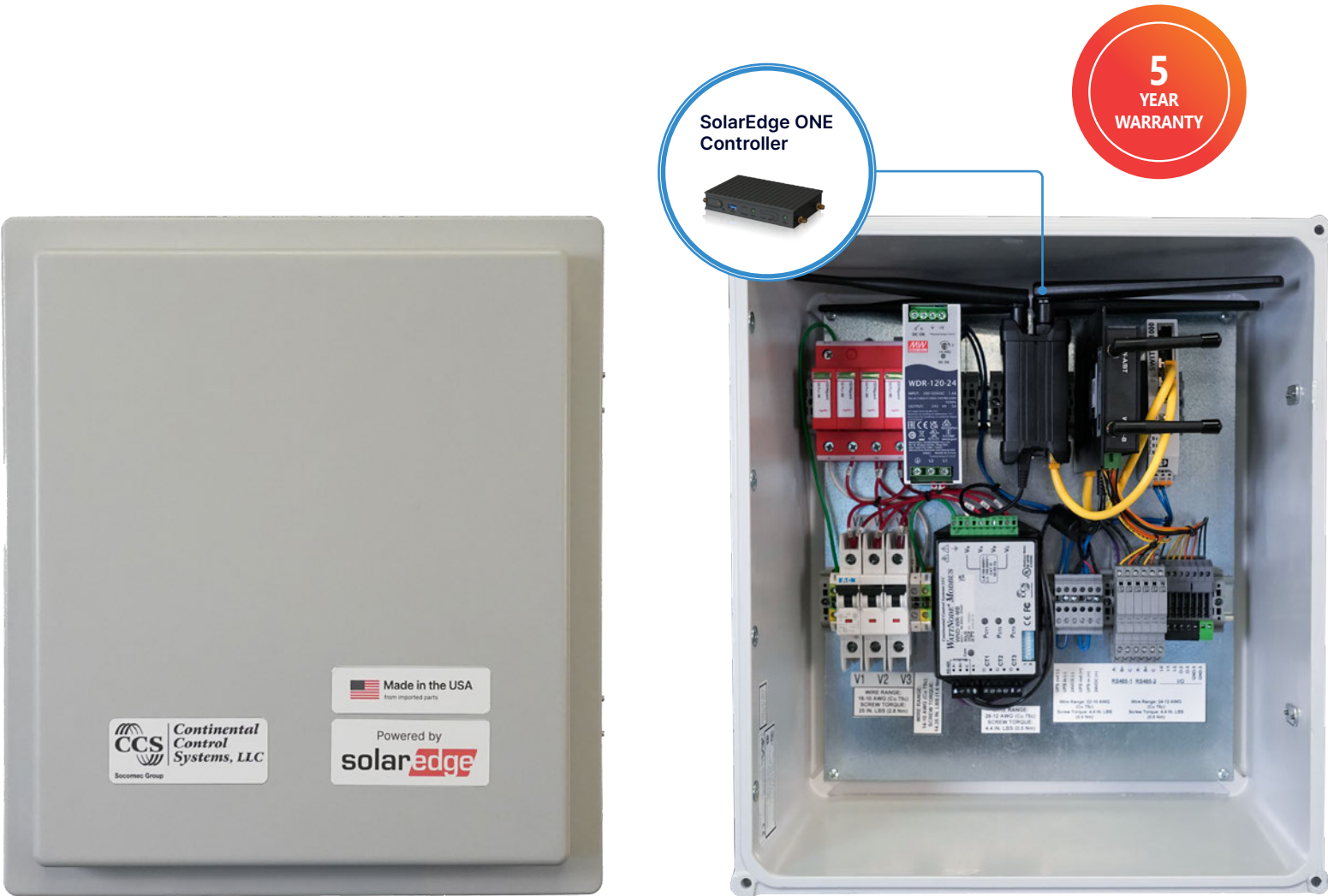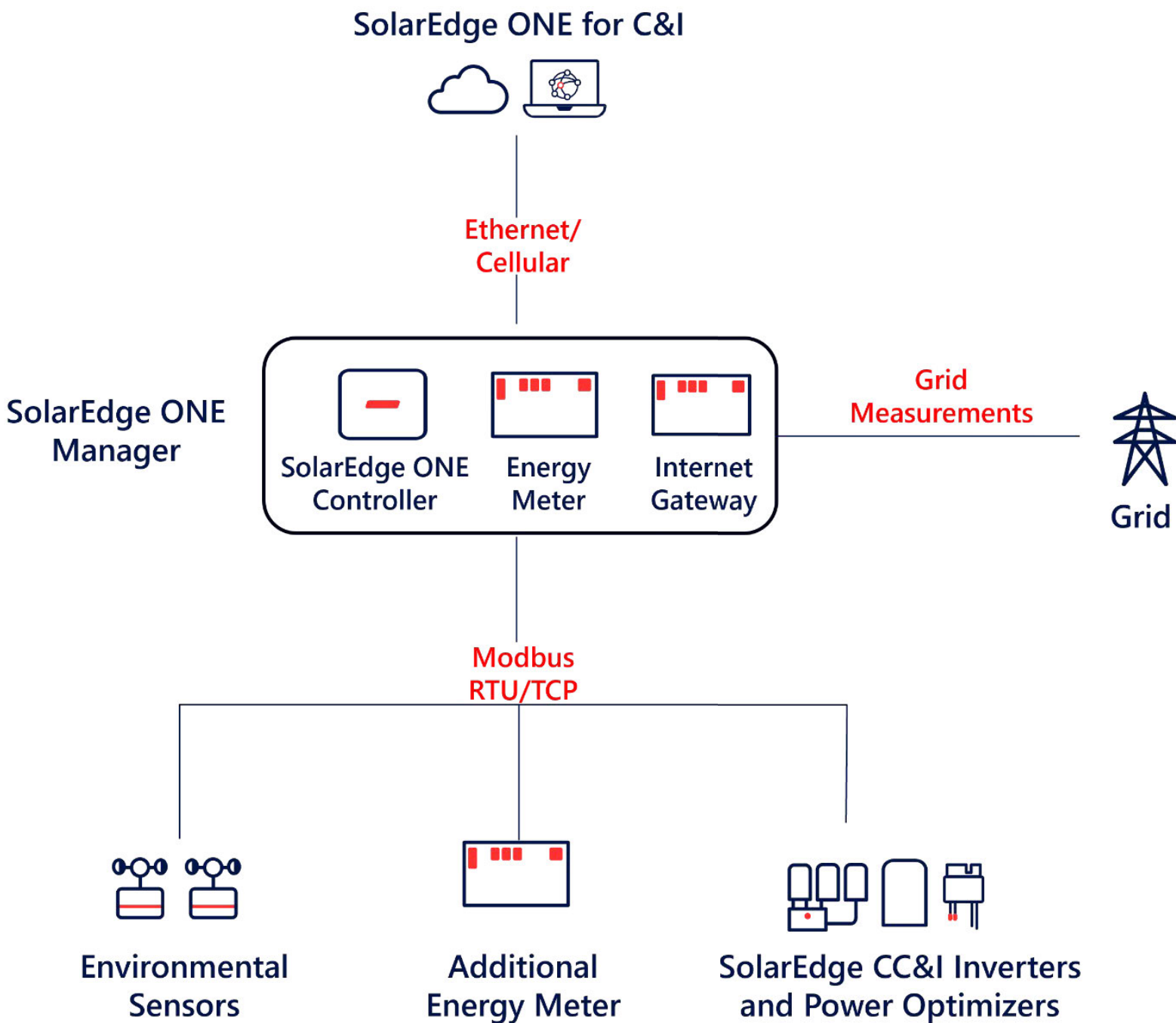
SolarEdge ONE Manager

The SolarEdge ONE Manager is an all-in-one solution serving as the communication gateway for seamless integration of weather sensors, energy meters and SolarEdge inverters.

It's an essential solution that enables improved plant performance monitoring and controls for owners and asset managers.

The benefits of including SolarEdge ONE Manager:

- ONE Monitoring platform for Plant and Fleet performance – Inverters, optimizers, energy meters, weather sensors in one location
- Improved telemetries for performance ratio, availability by using local sensors
- Ability for inclusion of additional sensors and meters (consumption, etc.)
- Optional cellular connection to the plant
- Better protection against unauthorized access with a cyber-secured gateway for external communication

SolarEdge ONE Manager

Solution for Monitoring Plant and Fleet Performance

SolarEdge ONE Manager
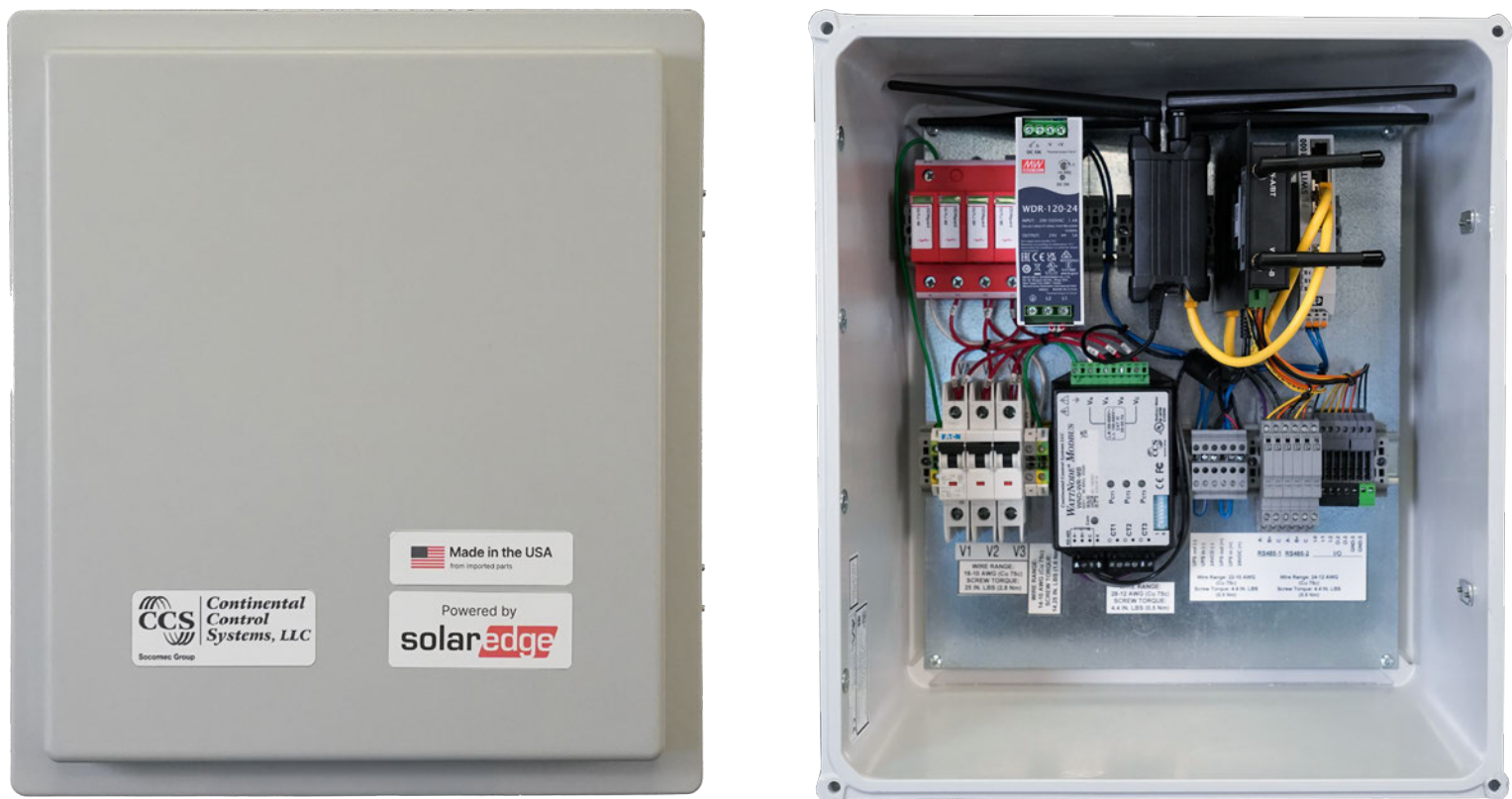
SolarEdge ONE Manager: All-in-one Solution with pre-wired and ready to be installed, including:

, SolarEdge Controller
, Revenue-Grade Energy Meter (RGM)
, Cellular Modem and Cell Plans
, Power Supplies
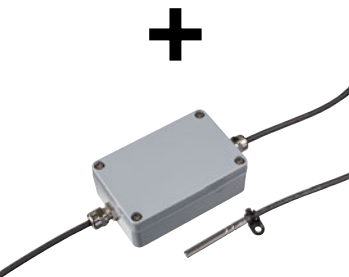, Terminal Blocks for Customer Connection

Weather Sensors

Plane of Array Irradiance Sensor, Back of the Module Temperature Sensor, Ambient Temperature Sensor

Plane of Array Irradiance Sensor, Wind Sensor, Back of the Module Temperature Sensor, Ambient Temperature Sensor

+

Digital Ambient Temperature Sensor

Current Transformers for Grid Measurements

50A-5000A

Service & Support Tools
We're here to ensure your O&M goes smoothly

Automated Self-Service Tools

Support Chat

- Contact your local support engineer in your time zone and native language
- Receive recommendations for troubleshooting specific system or device alerts
- Easily issue RMAs based on the device alert and information (part/device SN)

Resource Center

- Easily access all relevant application notes
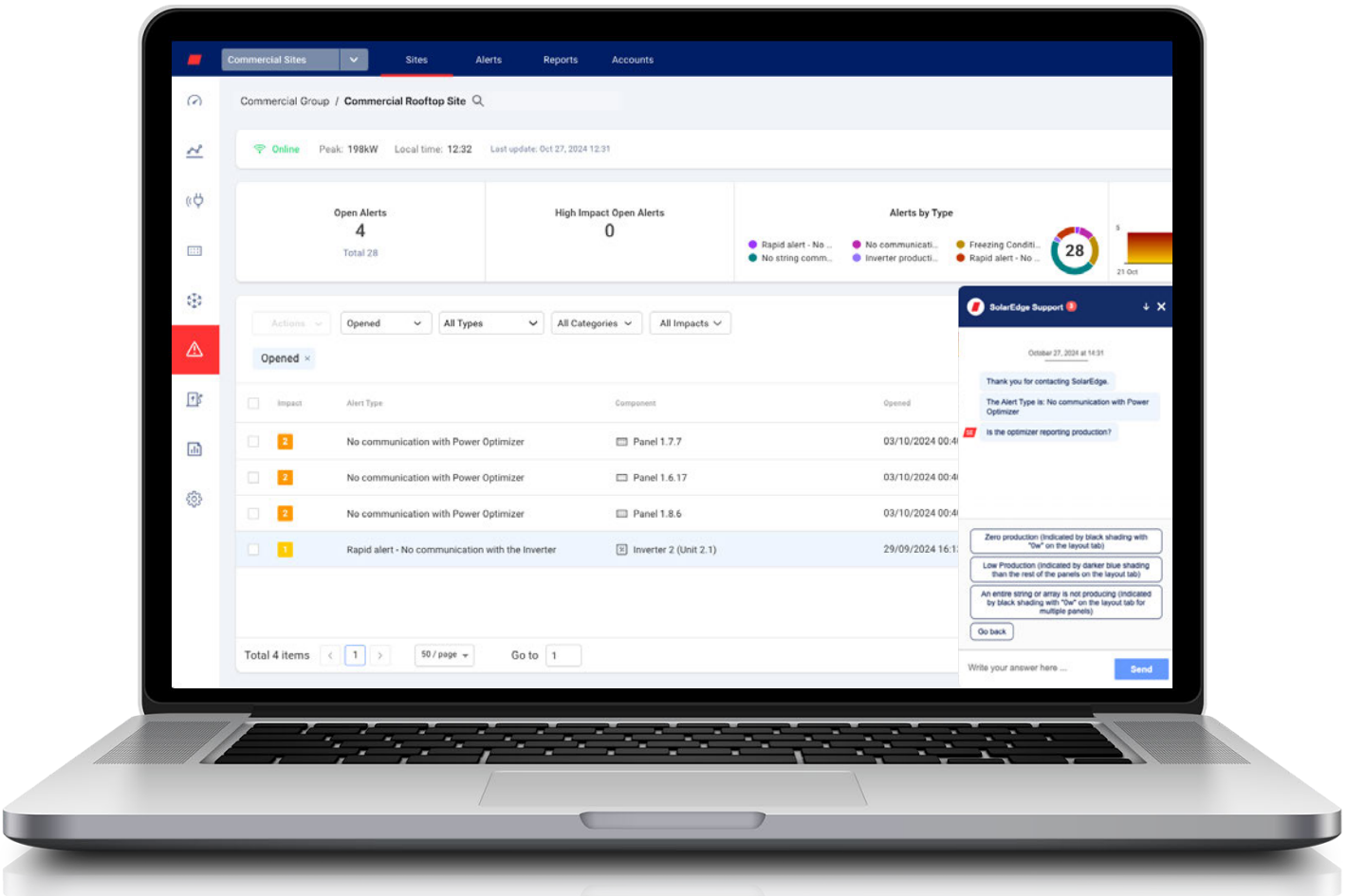- 'How to' guides and tutorials

Direct Communication Support

Call Us

- Place a service call (toll-free number)
- Call our dedicated, trained experts

Contact Us

- Send new feature requests
- Share your feedback
- Email us on any other topic

About SolarEdge

SolarEdge Technologies is a global leader in renewable energy technology that applies world-class engineering and innovation to provide solar PV solutions for the residential, commercial and utility segments. SolarEdge brings an optimized approach to generating, storing, managing and consuming energy. The company develops and produces PV inverters and Power Optimizers, energy management and optimization solutions, energy storage and grid services. SolarEdge's DC-optimized technology is installed in millions of homes in over 140 countries, and more than 50% of Fortune 100 companies have SolarEdge technology on their rooftops. SolarEdge is accelerating the transition towards distributed, sustainable energy networks which will optimize energy everywhere.

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400 kWp carport, 768 kWp rooftop, Waterloo, Canada
Installed by VCT Group