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# PowerSecure Solar

## Statement of Qualifications

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# This is PowerSecure Solar.

## PROFILE

**PowerSecure Solar** is a North Carolina-based sustainable energy company offering solar energy products and services for large industrial, commercial, and utility-scale installations across the country.

PowerSecure Solar is a division of PowerSecure, Inc., a company whose portfolio of solutions include utility and energy technologies in the areas of **distributed generation, energy efficiency, and utility infrastructure**. The company is a pioneer in **Interactive Distributed Generation®**, with over 1,400MWs of capacity deployed across the U.S. – monitored and operated via PowerSecure’s state-of-the art **PowerControl®** smart grid 24/7 Service Center.

PowerSecure’s unprecedented experience in interconnecting over 1400MWs of generation capacity behind over 250 utility grids across 25 states makes us very unique in the solar industry. In addition, our **NexGear® Advanced Paralleling Switchgear** group is one of the leading manufacturers of paralleling switchgear in the US and provides PowerSecure with a distinct competitive advantage in the market.

PowerSecure Solar was formed in 2012 with the acquisition of Southern Energy Management’s commercial solar PV group. PowerSecure Solar’s team is comprised of the same talented, dedicated experts who were integral to delivering industry-leading solar solutions as part of SEM. As part of PowerSecure Solar, this team is expanding the potential of solar by combining it with PowerSecure’s diverse portfolio of smart grid solutions for our customers.

Please [read our press release](#), and visit [www.powersecure.com](http://www.powersecure.com) or [www.southern-energy.com](http://www.southern-energy.com) for more information.

## SERVICE AREA

United States with concentration in the Northeast, Mid-Atlantic and Southeast

## OFFICES

Wake Forest, NC; Morrisville, NC; Atlanta, GA; Wilmington, NC; Greenville, SC

## SOLAR OFFERINGS

- Photovoltaic system design, engineering
- Full Engineering, Procurement and Construction (EPC)
- Project development
- Owner's representative
- Operations and Maintenance

PowerSecure Solar delivers both design/engineering and turnkey construction services with 100% in-house resources.. Each client receives a custom solution – the right technology and configuration to fit their needs. PowerSecure Solar is flexible, capable of serving in a variety of roles, ranging from installation only to full EPC.

## SAFETY

PowerSecure Solar prioritizes safety, meeting or exceeding all OSHA standards. PowerSecure Solar has staff dedicated to advancing best practices, and training team members. The program includes ongoing roof safety, fall protection and electrical safety training. PowerSecure Solar has qualified and performed under many federal, corporate and utility safety programs.

Through its O&M group, PowerSecure Solar wrote and released a white paper addressing some fundamental flaws in system designs that are used industry wide. It also offered effective solutions to those design issues to reduce fire hazards and improve solar rooftop safety.

## THE POWERSECURE SOLAR DIFFERENCE

### DEDICATION

PowerSecure Solar team members are deeply committed to what they do and its impact.

### EXPERTISE

Beyond installation, PowerSecure Solar also designs, engineers, consults, educates, and trains. The PowerSecure Solar team includes 4 NABCEP PV Certified Technicians and 1 NABCEP PV Technical Sales account manager.

### EXPERIENCE

Many types of solar PV technologies, installation types, low/medium voltage, and interconnection situations.

### SCALE

Purchasing power and efficiency, while remaining attentive to smaller jobs.

## DOCUMENTS AVAILABLE

- Professional certifications and licenses
- Audited financial statements
- Insurance certificate
- Client letters of recommendation

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# Solar

## Statement of Qualifications – Project Experience

### Solar Photovoltaic

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# Solar Project Experience

PowerSecure Solar has more than a decade of experience in design and installation of commercial solar PV systems. PowerSecure Solar is the largest commercial solar integrator in the Southeast, and a pioneer with several industry firsts. Clients include utilities, corporations, Federal/military, municipalities, and solar project developers in the Southeast, Mid-Atlantic, Northeast and beyond. Some recent projects are highlighted below.

## UTILITY SCALE SOLAR



### **Marlboro Mushrooms, West Grove, PA**

*1.13 MW, single axis tracker ground mount, SunPower T-O trackers*

Located at the nation's oldest family-owned mushroom farm, owners estimate this system will account for 100% of the farm's electricity usage. The entire project includes 4,953 SunPower modules and utilizes the SunPower T0 tracking system.



### **SAS Institute, Cary, NC**

*1 MW, crystalline PV, single-axis tracker*

The SAS solar farm includes over 5,000 modules on land adjacent to the SAS corporate campus. This system is interconnected to the Progress Energy grid. SAS sells both the power and Solar Renewable Energy Credits (RECs) to the utility.



### **QVC/Liberty Media, Rocky Mount, NC**

*1 MW, crystalline PV, single axis tracker*

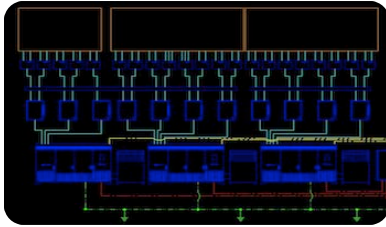
Installed at QVC's regional distribution facility, located adjacent to the facilities warehouses. Interconnected into the local Electric Cooperative distribution grid.



### **Duke Energy/Electricities, Shelby, NC**

*1 MW, crystalline PV, single axis tracker*

This system was completed in less than 3 months, on budget. 10 acres of land leased from town, adjacent to airport.



### **Greenco, Murphreesboro, NC**

*6.4 MW, single axis tracker ground mount*

PowerSecure Solar's design team engineered and stamped the electrical design for this large single-axis T0 Tracker System. A medium voltage interconnection of 34.5 kV was provided for the GreenCo SunPower site.



The 5 preceding installations were completed in partnership with SunPower Corporation, Systems Division. SunPower is the second largest solar company in the US and a major developer of utility scale projects. PowerSecure Solar has completed engineering and/or installation services for more than 11 MW of SunPower PV systems. SunPower continues to select PowerSecure Solar for both engineering capabilities and project installation experience.



### **Progress Solar – One, Bunn, NC**

*4.52 MW, Polycrystalline PV, fixed-tilt Ground Mount*

PowerSecure Solar designed and constructed this array of 18,816 REC Modules on Schletter FS Fixed-Tilt Racking. This 25-acre project utilized land adjoining a correction facility which was not otherwise a candidate for development. The system is interconnected Progress Energy's Grid.



### **MTC Logistics, Baltimore, MD**

*740 kW, crystalline PV, ballasted roof mount*

The MTC Logistics array is on top of a large cold storage facility, and integrated into the building's energy management and procurement system.



### **Utility's Commercial Rooftop PV Program, NC**

*2.2MW, 532kW, 528kW, ballasted rooftop PV*

PowerSecure Solar is a preferred vendor for an investor owned utility's Commercial Solar Rooftop program. These installations utilize SunLink racking, Yingli modules and SatCon inverters. Modules for the 2.2MW project were staged and racked in a very fast six weeks.



### **Utility R&D PV Test Site, NC**

*1.3 MW, ground mount, various technologies*

Located on a fly ash disposal site, this is the largest PV R&D project in the southeast. PowerSecure Solar has designed and installed several different technologies: CiGS thin film, amorphous thin film, high-efficiency mono-crystalline, polycrystalline, printed thin film. Ballasted tracking and non-tracking systems are set up for comparison. These systems enable the utility to test various approaches to solar systems, including residential scenarios. PowerSecure Solar is continuing to work with the utility to add new innovative solar technologies to the project.



### **Sandy Cross Solar Farm, Elm City, NC**

*1.5 MW, ground-mount*

PowerSecure Solar designed and engineered this array for O2 Energies. The 1.5 megawatt system sits on the grounds of a family-owned soybean farm and features 6,000 REC solar modules. Racking system provided by North Carolina-based Daetwyler Clean Energy.

## **COMMERCIAL SOLAR PV**



### **Wake Tech Public Safety Education Campus, Raleigh, NC**

*389 KW, rooftop PV*

PowerSecure Solar teamed with Enlight Solar to install 1,368 Yingli YL 285 Modules on Daetwyler Eco Top racking. The Daetwyler racking system allows the array to follow the roof's contours, important for existing buildings. The project included Draker monitoring and Advanced Energy PV Powered Inverters.



### **Ideal Fastener, Oxford, NC**

*Phase 1 – 198.2 kW, Phase 2 – 216.9 KW, rooftop PV*

Ideal Fastener selected PSS again in 2012 to complete the Phase 2 array at their Oxford, NC Headquarters. Ideal Fastener's Oxford location now has a total of 1,574 PV modules, and produces over 500 MWh's of renewable energy annually.





### **Eastern Mennonite University, Harrisonburg, VA**

*104 kW, rooftop*

PowerSecure Solar installed this system on the roof of EMU's Sadie Hartzler library for Secure Futures, LLC. The installation utilized SunPower's T-10 racking with SPR 318 watt high efficiency modules. At the time, this was the largest solar PV installation in Virginia and the first commercial PPA project in the state.



### **Washington & Lee University, Lexington, VA**

*330.2 kW, rooftop*

Installed on the roof of W&L's School of Law library. This was PowerSecure Solar's second project with Secure Futures, LLC, who owns the system and leases it to the school. The system uses SunPower T5 320-watt modules and is currently the largest PV installation in Virginia.



### **Becton Dickinson, Four Oaks, NC**

*997.92 kW, rooftop*

PowerSecure Solar provided Engineering, Procurement and Construction for this nearly-1MW system. Installed on the roof of Becton Dickinson's massive storage facility in eastern North Carolina, it uses more than 4,000 LG modules.



### **Westgate Chrysler Jeep, Raleigh, NC**

*98.7 kW, rooftop*

PowerSecure Solar installed this system on the roof of the dealership's service bay. It includes 420 LG modules, which will generate more than 129-megawatt hours of clean energy a year. Westgate is the first car dealership to take advantage of Progress Energy's SunSense Commercial Solar PV Program.



### **Piedmont Biofuels, Pittsboro, NC**

*92.16 kW, ground mount*

Innovative "solar double cropping" design allows Piedmont Biofarm to continue using the land for agriculture underneath, while harvesting energy from the solar array, which is raised ten feet above the ground. The system utilizes 288 SunPower 320-watt modules. PowerSecure Solar designed and installed the system for Miraverse Power & Light and Piedmont Biofuels.



## FEDERAL, MILITARY PV



### **NAVFAC Southeast, Multiple Locations, FL**

*1.8 MW, rooftop PV*

PowerSecure Solar executed this work over a 9 month period with multiple simultaneous mobilizations across northern Florida. The entire scope of work encompassed eight installations on six different Department of Navy sites, totaling 1.8 MW of roof-mounted PV on flat and pitched roofs. Shaw Environmental and AECOM were the prime contractors for this ARRA-funded project, and PowerSecure Solar's work was performed for Advanced Roofing out of Florida.



### **PowerGuard, Wallace Creek, Camp Lejeune, NC**

*1.1 MW, Hybrid Attached/Ballasted rooftop PV*

Sunpower selected PSS to install this PowerGuard Array at the second phase of the Regimental Complex at Wallace Creek. Installed on the top floor of a parking deck, the PV portion of the system was completed in 60 days. PSS completed the AC switchgear installation and connection for the entire structure. The DC portion of the system covers the entire roof surface with an innovative self-ballasted interlocking PV module made exclusively by Sunpower.



### **Child Development Center, Parris Island, SC**

*260 kW, rooftop and canopy PV*

PowerSecure Solar installed five arrays on the Marine Corp's famous island recruit depot. The project includes a mechanically attached roof-mounted array on the building and a parking canopy in the adjacent parking lot. The energy produced by the array helped the building to receive additional points under the LEED rating system.



### **James A. Haley Medical Center (Veterans Administration), Tampa, FL**

*3 MW, canopy PV*

This project is the sixth for which PowerSecure Solar was selected by SunPower Systems. Total scope of work is 3 MW. The arrays are all mounted to parking lot canopy structures, and the project required the staging of work to allow for maximum use of the lots during construction. Existing lighting was demolished and replaced and security cameras were moved to provide identical functionality for the lots. Site security in this downtown location was also critical.



### **US Department of Energy, Germantown, MD**

*368 kW ground-mount, rooftop and canopy PV; EV charging stations*

This 368 kW installation at DOE's Headquarters consists of a fixed-tilt ground-mount PV array, an additional array mounted on a parking lot canopy, a small roof array on an adjacent childcare center, as well as several electric vehicle (EV) charging stations. This is PowerSecure Solar's third project in the DC/Beltway region, which requires review and approval by the National Capital Projects Commission (NCPC).



### **Naval Air Station Jacksonville, Jacksonville, FL**

*204 kW canopy PV & 286 kW rooftop PV*

PowerSecure Solar installed a canopy mounted PV system for Sauer, Inc., outside the Child Development Center. The arrays provide weather protection for cars in the parking lot while producing electricity for the day care center. PowerSecure Solar also installed a roof mounted array for Advanced Roofing, Inc.

## **STATE AND LOCAL GOVERNMENT**



### **Neuse River Wastewater Treatment Plant, Raleigh, NC**

*1.305 MW ground mount*

The Neuse River Solar Farm is being built on approximately 10 acres of field adjacent to the City of Raleigh Waste Water facility. This installation is a ballasted, fixed tilt array. This is the largest, and one of the most innovative, municipal solar projects in North Carolina. PowerSecure Solar worked closely with the City of Raleigh and NxGen Power to help develop, plan and execute this project.



### **City of Danville, Danville, VA**

*36 kW, rooftop*

PowerSecure Solar installed this Sharp system on the roof of the Danville Community Market as part of an American Reinvestment and Recovery Act energy project. PowerSecure Solar was selected by the City of Danville as a sole-source partner for both energy efficiency and solar projects.



### **North Carolina Zoo, Asheboro, NC**

*105 kW, picnic shade canopy*

PowerSecure Solar installed this PV array for Carolina Solar Energy (CSE), the first solar developer in the state, for CSE's Zoo project. This array was installed on a parking lot structure over a parking area at the NC Zoo.



### **NC State / EPA Brownfield Site, Raleigh, NC**

*76 kW, ground mount*

PowerSecure Solar, working with CSE's contractor team, completed the installation of this project on an EPA remediated super-fund site on the NC State University campus beside the RBC Center arena. The modules were mounted on a ballasted racking system developed by SunEdison

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# Solar

## Statement of Qualifications – Operations & Maintenance

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# O&M Experience

PowerSecure Solar has the experience and expertise to ensure that commercial solar PV arrays continue to produce power at the optimal level throughout the life of the system. PowerSecure Solar is the largest commercial solar integrator in the Southeast, and a pioneer with several industry firsts.

The PowerSecure Solar Operations and Maintenance team has the know-how to spot potential issues before they become problems; we have embraced the idea of using tools like Bender Devices and IV Curve Tracers to maximize output, durability and safety. We will gladly serve as owner's representative, and can also provide diagnostic/repair work as needed. Some current O&M projects are highlighted below.



## **Childress Klein II, Charlotte, NC**

*2.17 MW, roof mount system owned by Duke Energy*

- 9,450 Yingli modules
- Satcon Powergate inverters
- Sunlink racking



## **City of Charlotte, Charlotte, NC**

*112.7 kW, roof mount system owned by Duke Energy*

- 490 Yingli modules
- Satcon inverters
- Daetwyler racking



## **Merchants Terminal, Baltimore, MD**

*736.96 kW, roof mount system owned by MTC Logistics*

- 3,136 REC modules
- Satcon inverters
- Sunlink racking
- Full O&M





### **Carrier Center, Charlotte, NC**

*528.08 kW, roof mount system owned by Duke Energy*

- 2,296 Yingli modules
- Satcon inverters
- Sunlink racking
- Workmanship & Production Guarantee



### **Eastern Mennonite University, Harrisonburg, VA**

*104.3 kW, roof mount system owned by Secure Futures, LLC*

- 328 SunPower modules
- Satcon Powergate inverters
- SunPower T-10 racking
- Full O&M with Production Guarantee



### **Washington & Lee University, Lexington, VA**

*330.2 kW, roof mount system owned by Secure Futures, LLC*

- 1,116 SunPower modules
- Satcon inverters
- SunPower T-5 racking
- Full O&M with Production Guarantee



### **EPA Learning Center, Durham, NC**

*109.48 kW, roof mount system owned by Duke Energy*

- 476 Yingli modules
- Satcon inverters
- S-5! racking
- Workmanship & Production Guarantee



### **Lincoln Charter School, Denver, NC**

*161 kW, roof mount system owned by Duke Energy*

- 700 Yingli modules
- Satcon Powergate inverters
- Sunlink racking
- Workmanship & Production Guarantee





#### **Gaston County Schools, Lowell, NC**

*70.84 kW, roof mount system owned by Duke Energy*

- 308 Yingli modules
- Satcon Powergate inverters
- Daetwyler racking
- Workmanship & Production Guarantee



#### **Childress Klein I, Charlotte, NC**

*532.22 kW, roof mount system owned by Duke Energy*

- 2,314 Yingli modules
- Powergate 500 inverters
- Sunlink racking
- Workmanship & Production Guarantee



#### **Siemens, Charlotte, NC**

*51.5 kW, roof mount system owned by Duke Energy*

- 236 Yingli modules
- SMA inverters
- Sunlink racking
- Workmanship & Production Guarantee



#### **Neuse River Solar Farm, Raleigh, NC**

*1.3 MW, ground mount system owned by NxGen Power*

- 4,664 Trina modules
- Satcon inverters
- (P2) Perpetual Power racking
- Full O&M with Production Guarantee



#### **Marshall Steam Station, Terrell, NC**

*1 MW, ground mount system owned by Duke Energy*

- 5,018 modules made by 9 different manufacturers
- 7 different inverter manufacturers
- Tracking and fixed racking technologies
- Largest PV R&D project in the Southeast
- Workmanship & Production Guarantee



### **Highwoods Properties, Greensboro, NC**

*1.5 MW, roof mount system owned by Duke Energy*

- 6,500 Yingli modules
- SMA inverters
- Daetwyler racking
- Full O&M



### **Food Lion, Salisbury, NC**

*1.09 MW, roof mount system owned by Duke Energy*

- 4,732 Yingli modules
- Satcon Powergate inverters
- Full O&M



### **National Gypsum, Mount Holly, NC**

*1.21 MW, roof mount system owned by Duke Energy*

- 5,252 Yingli modules
- Satcon Powergate inverters
- Full O&M



### **McAlpine, Charlotte, NC**

*50 kW, ground mount system owned by Duke Energy*

- 213 SunPower modules
- Satcon Powergate inverters
- Full O&M

# References

*Contact Information Available Upon Request*

## PHOTOVOLTAIC PROJECTS

### **Duke Energy Carolinas**

Charlotte, NC

### **SunPower Corporation**

San José, California

### **NxGen Power, LLC**

Raleigh, NC

### **Sauer, Inc.**

Jacksonville, FL

### **Turtle Associates, LLC**

Cherry Hill, NJ

### **Energy Systems Group**

Charlotte, NC

### **Danville Utilities**

Danville, VA

### **SAS Institute**

Cary, NC

### **O2 Energies**

Cornelius, NC