

CASE STUDY

Largest Solar Neighborhood in the Southeastern USA Maximum Design Flexibility

OVERVIEW

Installer:

Pontchartrain Mechanical Co.

Systems Designer: Micah Galy**Installation Date:**

December 2011

Location:

The River Garden Apartments
Sustainable Neighborhood
New Orleans, Louisiana, USA

Installed capacity: 420kW**Modules:**

4,395 x MAGE modules (185
MJB, 190 MHUS and 230 PI)

Power Optimizers: 4395 x OP250**Inverters:**

142 x SE5000A-US
20 x SE3800A-US



The River Garden Apartments sustainable neighborhood in New Orleans is not only the largest solar project in Louisiana but also the largest solar neighborhood in the Southeastern USA. 420kW of SolarEdge photovoltaic systems were installed on the roofs of homes in this neighborhood which is built on the ruins of St. Thomas Housing Project. This project provided housing to low-income residents and became one of America's most dangerous developments by the late 1980s. After Hurricane Katrina, the St. Thomas Housing Project received grants from several government agencies in order to revitalize the neighborhood.

Today, stretching 8 city blocks and $\frac{3}{4}$ of a square mile, the River Garden Apartments has transformed into a mixed-income development that offers affordable and sustainable housing.

The extensive PV installation project, installed by Pontchartrain Mechanical Co. was made possible only with the SolarEdge power optimization system. The SolarEdge unique technology was ideally suited to this project as it involved installations of PV systems on multiple roofs, each with a unique configuration and mounting angle. The design flexibility enabled by the SolarEdge system allowed for maximum roof utilization and

a significant increase in power harvesting, even in locations with partial shading or obstructions. The ability to generate maximum power from each and every module, independent of string length, module type or mounting angle was a key factor in the success of the project.

The SolarEdge system enables easy and efficient maintenance of the numerous PV arrays provided by the built-in real-time monitoring of the systems' performance at module level. The system automatically provides web-based alerts on underperforming modules and faults and visually pinpoints affected modules on a virtual site layout map.

Another important feature of the SolarEdge system is its ultimate safety. The SafeDC™ mechanism of the SolarEdge system guarantees maximum safety for residents, installers, maintenance personnel and firefighters at all times. This is especially important in a day after a hurricane where flying debris from high winds can damage solar systems. With other string inverters, damaged arrays could potentially start arc faults and possible home fires. SolarEdge inverters and power optimizers guarantee a safe installation.

Economically, with 10¢ per kWh of electricity, residents of the River Garden Apartments now

enjoy reduced electricity bills and long term stabilized electric costs. The installation of 420kW of residential solar systems were combined into a single project cost, enabling a volume discount which aids in further reducing the cost of electricity. Residents are expected to save about \$50 per month on average in utility costs.

“By using SolarEdge technology, we overcame many challenging issues, specifically installing modules on multiple roofs and different angles, in a safely manner and with reduced maintenance costs.” says Micah Galy of Pontchartrain Mechanical Co. **“I’m very proud to have partnered with SolarEdge in this unique project because not many neighborhoods in the world are completely covered by solar installations. This revitalized community is now able to sustain itself with reliable energy and will be able to stabilize their energy costs for the long term in a clean and sustainable way.”**