

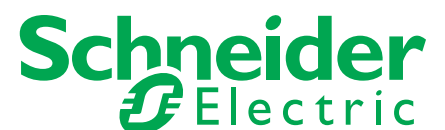
Little Rock State Building

Little Rock, Arkansas



Little Rock State Building Gets Revitalized and Qualifies for LEED® Certification

Make the most of your energySM



In Brief

Goal

Restore the West Capitol Avenue building in Little Rock, Arkansas and leverage energy efficient solutions to achieve LEED Silver certification.

Solution

Schneider Electric and NABCO, a leading electrical and mechanical contractor, partnered to renovate the building with energy efficient solutions that will enable integrated lighting and building control, electric vehicle charging and generation and power monitoring of renewable solar energy to offset the building's energy consumption.

Results

Schneider Electric created a turnkey solution for the City of Little Rock to achieve LEED Silver certification.

Restoring and modernizing a city landmark

Located in the heart of downtown Little Rock, Arkansas, the 900 West Capitol Avenue building is a 132,050 square foot building that was constructed in the 1940's. Previously home to a major retailer's headquarters, the building has been vacant for the past ten years and was in need of repair.

Schneider Electric, a global specialist in energy management, and NABCO, a leading electrical and mechanical contractor, were chosen in late-2008 to bring the building back to its original luster and help it achieve LEED Silver certification.

With its breadth of solutions and expertise in integration, Schneider Electric was able to offer the city of Little Rock a turnkey solution to enable integrated lighting and building control, electric vehicle charging and generation and power monitoring of renewable solar energy to offset the building's energy consumption.

According to Robert Unwer, President, NABCO, "Since we've worked with Schneider Electric on a number of local projects, we decided to have them provide the engineering services and design."

Unwer adds, "We were introduced to Schneider Electric's broad range of products at a recent meeting with company executives. We've historically thought of Schneider Electric as mainly a switch gear company, but it's unbelievable the immense product line they have — from solar and lighting to building controls and management. They also have energy management services to offer a complete package and did an outstanding job integrating all of the products together for this endeavor."

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Solutions

- PowerLogic® SCADA
- Square D PowerLogic submetering products, including PowerLogic Branch Circuit Monitors (BCM), Enercept® meters and Powerlogic PM820 power meters
- Square D Powerlink® G3 intelligent lighting panels
- IPaCS
- Square D C-Bus occupancy sensors, dimmers, relays, area lighting panels and keypads
- Xantrex® GT30 inverters



“We’ve historically thought of Schneider Electric as mainly a switch gear company, but it’s unbelievable the immense product line they have – from solar and lighting to building controls and management.”

*– Robert Unwer,
President, NABCO*

Energy management in action

General construction started in November 2008 with Schneider Electric providing energy consulting and design to help make the building’s energy more reliable, efficient and productive. Initially, Square D by Schneider Electric intelligent submeters, including Branch Circuit Monitors, Enercept meters and PM820 meters were installed to enable the State to monitor the various electrical loads required for LEED certification.

A challenge Schneider Electric faced early on was a request to turn small rooms into electrical closets. To address this need, Schneider Electric and NABCO leveraged Schneider Electric’s Integrated Power and Control Solutions (IPaCS) to customize the layout and transform the small rooms into functional electrical closets. By factory installing and pre-wiring electrical panels, transformers, lighting control and monitoring equipment into a reduced footprint design, the IPaCS solution provided NABCO the opportunity to more efficiently utilize the limited space that was available.

The facility’s lighting controls were modernized to include automated and web-enabled control as well as occupancy-based solutions and dimming capabilities. These new capabilities will help tenants make the most of natural light, increase efficiency and improve the operating environment for state employees and citizens spending time in the building.

Square D Powerlink G3 Intelligent Lighting Panels were also installed to control branch lighting circuits from a standard panelboard. Square D C-Bus occupancy sensors, keypads, and area lighting panels were added to accurately detect occupancy in the building and automatically control lighting. Square D C-Bus dimmers were added as well to compensate for voltage and frequency fluctuations and employ advanced phase-control techniques to reduce flicker and increase lamp life.

Taking steps to further energy efficiency

After a successful general construction, officials indicated their interest to move forward with additional energy efficiency projects for the state building. As a result, Schneider Electric was named “Engineer of Record” and designed and engineered a power system for the structure that included solar power generation and electric car charging stations.

In February 2009, Schneider Electric and NABCO installed a 25 kilowatt photovoltaic solar array over a covered parking structure that would provide energy to the building and a docking station for hybrid electric cars. Using Schneider Electric’s Xantrex GT30 inverters, the raw electrical power from the solar array was converted into high-quality power that works on the electricity grid.

Schneider Electric Case Study > Little Rock State Building



> Solar panels partially installed on-site at state building



“Schneider Electric brought the renewable energy expertise and shared their knowledge with us. They were great to work with.”

*— Robert Unwer,
President, NABCO*

Schneider Electric and NABCO also installed two networked electric vehicle charge stations enabling users to charge vehicles, view energy usage online and generate reports.

Additionally, to increase power system reliability and efficiency, Schneider Electric’s PowerLogic SCADA software was deployed and integrated with the submetering to provide real-time monitoring and fast-acting control of their electrical distribution system.

Unwer adds, “NABCO has worked on a number of green buildings in the past, but this was our first project that involved the installation of renewable energy. Schneider Electric brought the renewable energy expertise and shared their knowledge with us. They were great to work with.”

“With the experience we gained working with Schneider Electric and the addition of PV certified installers to our team, NABCO is aggressively looking for more renewable installation opportunities, and we look forward to partnering with Schneider Electric in the future.”

Once certified this majorly renovated building will be the first LEED Silver certified, state-owned building. The LEED green building rating system, developed and administered by the U.S. Green Building Council, is designed to promote design and construction practices that increase profitability while reducing the negative environmental impacts of buildings and improving occupant health and well-being.

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