



SHOWCASE PROJECT: FORT ATKINSON SCHOOL DISTRICT: ROCKWELL ELEMENTARY SCHOOL

SOLUTION OVERVIEW

Rockwell Elementary School, housing children in Kindergarten through Grade 5, is the site of an energy efficiency upgrade and photovoltaic system installation projected to generate approximately 26,208 kWh of electricity annually. The 15 month project, which began in June 2012, will offset approximately 9% of the building's annual electric consumption.

The school is a one story building with a basement partially below grade. Constructed in several additions between 1955 and 1976, all exterior walls and some interior walls are masonry. The remaining interior walls are movable panels (never relocated) or steel studs with gypsum board facing. The roofs are flat and constructed of steel bar joist while the roof insulation is entirely above deck.

SECTOR TYPE

Education

LOCATION

Fort Atkinson, Wisconsin

PROJECT SIZE

40,200 square feet

FINANCIAL OVERVIEW

Project Cost \$140,200

SOLUTIONS

Improvements to this facility include a building envelope testing resulting in the air sealing of soffits and door weather stripping, LED lighting retrofits to the renovated art room and a hot water heater upgrade to an on-demand tank-less heater.

In addition to the energy efficiency improvements, the District is also installing a 20.16 kW roof mounted solar electric system which will consist of four rows of panels (80 panels each 250 W) which are tilted above the roof plane using fixed mounts (manually adjusted two times a year by District staff) for optimum angle for year round power output. The system is grid-tied and electrical offset comes in the form of net metering with the utility company.

OTHER BENEFITS

The District is also participating in Energy Stewards® to encourage participants strengthen existing energy management programs. The cloud-based platform will enable school leaders to efficiently spread energy improvement actions and view the results. Teachers, staff and students at each school can see their building's energy consumption in real time.

Rockwell Elementary earned the ENERGY STAR® in 2010, 2011 and 2012. The School has a current score of 86 and the District expects an increase as a result of the PV installation. In addition, the project will serve as an educational tool for the students of Rockwell, who will be afforded the opportunity to witness energy efficiency in action at their own school.

Annual Energy Use

(Source EUI)

Baseline(2012)
81 kBtu/sq. ft.

Expected(2014)
67 kBtu/sq. ft.

Actual()
Coming soon

Energy Savings

17%

Annual Energy Cost

Baseline(2012)
\$37,000

Expected(2014)
\$30,000

Actual()
Coming soon

Cost Savings

\$7,000



Rockwell Elementary School



Students with solar panels



Solar panels