Case Study

Lake Land College - Phase 9, PV Arrays

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Mattoon, IL 61938

Contact:
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PROJECT COST	$1,123,882
TYPE	Guaranteed Performance Contract
TERM	20 Year Term
ICECF GRANT	$419,956
KWH GENERATION	Over 245,000 kWh Annually

"Without hesitation, I encourage anyone that is considering building renovations or strategic energy initiatives to consider CTS Group. CTS Group was selected based on their unique approach to offerings in solar energy, and creating educational opportunities for our students. Our confidence in CTS Group has grown through each phase of our campus renovations. CTS' daily on-site Project Managers have become like an extension of our own in-house facilities department. CTS has worked hand-in-hand with our Director of Grants Development in securing over $2.1 Millon in grants. They have worked closely with the College to reach our state and federal representatives and promote the campus master plan. CTS is a valuable partner and we commend their great facility solutions and service."

— Ray Rieck
Former VP of Business Services

Background

As a national leader in sustainability, Lake Land College is committed to creating a greener and cleaner education and environment. Beginning in 2008, the College embarked on a multi-phase, long term commitment to energy conservation and generation through renewable energy sources. Lake Land College selected CTS as their long term business partner to help make their vision of sustainability and environmental stewardship a reality.

Solar PV Solution

The College planned to improve their facilities using sustainable, renewable energy-conscious designs, encompassing solar technology. The goal was to reduce energy consumption and to strive toward carbon neutrality while replacing 35-year-old deteriorating infrastructure and facilities across campus. The phase 9 project focused on the design and implementation of solar photovoltaic systems.

Project

The major renovations and maintenance involved in the project included:

/ Engineered, furnished and installed a fully-functional, grid-interactive, solar photovoltaic system for the VoTech Building and Webb Hall

VoTech
/ Replaced roof with white TPO roof system
/ (317) Trina Solar TSM-PA05 Polycrystalline 250W solar modules
/ (5) Fronius IG Plus A 11.4
/ (1) Fronius IG Plus A 10.0
/ (6) Delta Inverters
79.25kW-AET Rayport B Landscape racking
/ (1) AC disconnect

Webb Hall
/ (428) Trina Solar TSM-PA05 Polycrystalline 250W solar modules
/ (10) Fronius IG Plus A 10.0
/ (3) Delta Inverters
/ (3) Schoals DC Disconnect Combiners
/ 107 kW-AET Rayport B Landscaping racking
/ (1) AC Disconnect

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Results

The solar arrays that were installed are producing, on average, 247,590 kWh per year.

Lake Land College reached their goal of becoming one of the first fully-sustainable campuses in the country. There are times throughout the year that the campus solar arrays offset the entire connected building loads through net metering, offered by the local utility.

Through the design-build model of Performance Contracting with CTS, cooperation and joint planning has allowed the College to renovate and refurbish core campus buildings with minimal interruptions to fall and spring semester classes.

The life cycle infrastructure master plan that was developed has been the backbone for the renovations that continue to take place, transforming Lake Land College into a model for other campuses across the country. Together, the College and CTS continue the ongoing partnership of sustainable renovations to the 13 Phase/308 acre campus, turning Lake Land's vision into reality.

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