



Global Case Study

436kW Solis C&I Grid-tied Projects

S6-GC30K-LV-US



Solis Powers Clean Energy Initiative for Low-Income Seniors

Overview

Exel Solar US, a trusted solar wholesale partner, works to connect businesses with top-tier solar solutions at competitive prices. They streamline the solar supply chain, providing expert services, cost-saving procurement and efficient logistics to help customers grow their business. When they were tapped with sourcing the Corban Commons project, they knew Solis' durability and capabilities could meet the performance expectations of the system.



Background & Goal

Corban Commons is an affordable senior apartment community located on the Northeast side of Columbus. The goal of this solar project was to significantly reduce long-term energy costs for the low-income senior residents, without any upfront cost to the facility, while also contributing to the city's broader clean energy and climate action goals. This project is a cornerstone of the Columbus Region Green Fund's broader efforts to accelerate clean energy adoption, particularly for nonprofits and affordable housing.



Project Overview

The Corban Commons Solar Project is a 436 kW rooftop and ground-mounted solar system installed at the Corban Commons Senior Living Facility. It's designed to generate substantial energy savings, projected to exceed \$2 million over a 35-year lifespan for the facility. This initiative is notable for its "no upfront cost" model for the facility, made possible through innovative financing by the Columbus Region Green Fund. The project powers 90 senior living units, providing direct financial relief to residents through reduced long-term living costs. The installation is maintained under a 20-year Power Purchase Agreement (PPA), after which the non-profit owners will assume ownership and utilize free energy.

The Challenge

Many affordable housing and non-profit organizations face significant barriers to adopting clean energy, primarily due to high upfront costs and difficulty accessing traditional financing. For Corban Commons, the challenge was to secure a renewable energy solution that would provide long-term cost savings for its low-income senior residents without burdening the facility with initial capital expenditures.



The Solution

The solution involved a collaborative effort between public and private sectors, spearheaded by the Columbus Partnership. They created Impact Solar to serve as the project developer while the Columbus Region Green Fund provided financing. Appalachian Renewable Power, recognized as one of the top Ohio solar installers, completed the system installation and integration. Exel Solar, as the procurement partner, provided reliable access to the equipment and materials needed for long-term performance. This model ensures that the senior residents directly benefit from substantial energy cost reductions.

Community Benefits

- **Significant Cost Savings:** Projected \$2 million+ in energy savings over 25 years for Corban Commons, directly benefiting low-income senior residents by reducing their long-term living costs.
- **No Upfront Cost:** The facility incurred no initial expenses, making renewable energy accessible to an affordable housing community.
- **Environmental Impact:** Contributes to reducing pollution and greenhouse gas emissions in the Columbus community by utilizing clean solar energy. This aligns with Columbus' Climate Action Plan to achieve a 45% reduction of greenhouse gas emissions by 2030 and carbon neutrality by 2050.
- **Model for Future Projects:** Serves as one of the first fully operational installations under the Impact Solar Initiative, setting a precedent and paving the way for more than 40MW of additional non-profit and affordable housing developments to come.
- **Community Empowerment:** Puts the power of clean energy, literally, in the hands of community-based organizations.



System Overview

- **Capacity:** 436 kW (rooftop and ground mount system)
- **Panels:** 580W bifacial panels by Philadelphia Solar (bifacial panels capture sunlight from both sides, increasing efficiency)
- **Inverters:** Solis 30kW inverters S6-GC30K-LV-US-RSS (13 units)
- **Ground System:** APA Ready Rack
- **Rapid Shutdown:** Tigo rapid shutdown (a safety feature allowing for quick de-energization of the solar array)
- **Mounting:** Pegasus rail mounting (for secure and efficient panel installation)
- **Coverage:** Powers 90 senior living units.

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