



Cuyahoga Metropolitan Housing Authority:

Energy Efficiency and Sustainability Comes Home Through
Guaranteed Performance Contracting

Building Technologies

SIEMENS



“We have been challenged over the years to try and upgrade, improve and maintain more than 50-year old equipment that was no longer state of the art or applicable to modern-day energy efficient standards,” said George A. Phillips, CMHA Executive Director

Located in Cleveland, Ohio, the Cuyahoga Metropolitan Housing Authority (CMHA) was established in 1933 as the first housing authority in the state of Ohio.

Throughout the years, CHMA has grown to become the seventh largest housing authority in the United States, consisting of 47 public housing developments.

Now serving nearly 14,000 households, the CHMA’s mix of housing has grown to include high-, mid- and low-rise buildings, town houses, duplexes and single family homes. CMHA’s mission has always remained the same—to be a leader in providing residents with safe, quality, affordable housing to individuals and families alike.

Client Objectives

As energy costs and demand began to consume more of CMHA’s operating budget, the Authority’s leadership team wanted to establish a comprehensive program that would reduce energy use throughout their buildings and incorporate long-term sustainability practices into the daily routines of their residents.

When it came to auditing and optimizing their buildings’ energy use, the Authority asked Siemens Building Technologies to create a plan for the installation and use of efficient, environmentally-friendly upgrades to their facilities.

Project Financing

With limited capital funds available, the CMHA turned to the U.S. Department of Housing and Urban Development’s (HUD) energy reduction incentive funding program, Energy Performance Contracting (EPC). EPC allows third party financing to provide initial funding for energy-related improvements. The guaranteed annual savings generated by the improvements are dedicated to repayment of the initial financing.

CMHA chose Siemens—through the HUD approved procurement process—as the most qualified partner to audit their facilities, identify the best projects available and install the improvements with guaranteed results.

Siemens acted as general contractor during the construction phase of the \$33.6 million contract—the largest EPC agreement since HUD began authorizing them in 1992.



Siemens Solutions

- Siemens team of national housing experts worked in tandem with local Siemens professionals to provide the day-to-day, project management and supervision of CMHA's upgrades.
- Siemens-implemented facility improvements, including:
 - New high-efficiency lighting and water conservation improvements
 - Weatherization to building envelopes
 - New windows and blinds
 - New roofing
 - New energy-efficient furnaces, hot water heaters and central heating systems
 - CMHA's 25 high-rise buildings were retrofitted with Siemens APOGEE automation systems.
 - Seven mid-rise buildings in CHMA's Lakeview Terrace complex were equipped with sustainable green roofs. Green roofing benefits include the reduction of storm water runoff, a minimization of urban heat islands through the reduction of rooftop temperatures, a reduction in air and noise pollution and longer roof life.

- All CHMA residents were invited to attend an on-site educational course which detailed the sustainable and energy efficient improvements being made to their buildings and their community.

"EPC supports CMHA's mission to provide our residents with quality affordable housing options. Under the EPC, we were able to upgrade and replace existing plumbing fixtures, windows, roofs, lighting, and heating and cooling systems with new sustainable and energy efficient equipment."

*George A. Phillips,
CMHA Executive Director*

Client Results

- The facility improvements identified and implemented by Siemens will result in a minimum guaranteed energy savings for the CMHA equivalent to \$47 million.
- Working with the Housing Authority's Construction Department, Siemens managed energy conservation and optimization upgrades to 45 of CMHA's 47 housing developments—with improvements made to approximately 7,000 of the CMHA's 10,000 building units.
- Siemens worked with contractors to employ CMHA residents for 28 percent of the total hours worked on the project—exceeding original goals for the project and providing on-the-job training and employment opportunities for the residents.

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