Smart Buildings

Communities of all sizes have facilities and buildings that require updating and maintenance. Smart buildings projects give municipalities the opportunity to improve efficiencies and sustainability efforts at their facilities. Read on to learn about smart building solutions that reduce costs, increase sustainability, and improve safety.

FDA Research Center Consolidation

Montgomery County, MD

SCENARIO

The U.S. Food and Drug Administration (FDA) Federal Research Center faced a number of challenges in its transition to its new White Oak Campus and its 3.9 million square feet of world-class office and lab space.

Facility requirements and evolving federal energy and sustainability mandates were complicating progress during construction. Yet using traditional funding for energy infrastructure development would delay the FDA's move to the new campus. In the meantime, the research center's leased facilities did not adequately support critical mission goals.

SOLUTION

Using an "energy virtual environment" of building designs, Honeywell identified critical load redundancy, firm capacity, and demand response capabilities, then developed a master plan that included:

+ Adaptive reuse of a historic building

+ Support for building LEED certification

+ Phased energy infrastructure development

+ A microgrid

In the resulting energy infrastructure, dual-fueled reciprocating engines, multiple gas turbines, and solar energy solutions will generate electricity. Power, heating, and cooling systems are designed with expansion in mind. Honeywell provides total operations and maintenance for all White Oak Campus buildings.

The U.S. General Services Administration used a series of Energy Savings Performance Contract projects—an approach flexible enough to address changes in facilities acquisition timing and energy requirements—to reduce costs while supporting the construction of reliable, energy-efficient infrastructure.

RESULT
Honeywell's solution is expected to save 640,000 MBtu a year currently and 275,000 MBtu in construction and prevent 22,000-50,000 metric tons of CO2-equivalent pollution each year.

A twenty-year performance contract, with fixed accountability for systems performance and a guarantee to recoup investments, enables construction of a more energy-efficient campus with enhanced energy security, while reducing initial and recurring costs to the government.

> "Through the agreement, we're able to invest additional funds at the White Oak Campus, creating the best environment for the FDA and surrounding community, and **we're guaranteed to recoup that investment,** which demonstrates the benefits of this type of public-private cooperation."
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> – Shapour Ebadi, Director, Office of Design and Construction, U.S. General Services Administration