

# project profile



## Federal Research Center at White Oak

The Federal Research Center at White Oak is a state-of-the-art 3.9 million square foot, \$1.5 billion Food and Drug Administration office and lab compound built by the General Services Administration. The campus is located on the site formerly occupied by the Naval Surface Warfare Center. The final build-out of the campus will be comprised of five groups of interconnected buildings and their shared infrastructure.

**Honeywell**

# FDA Federal Research Center Gets a Sustainable Operations Consolidation

## The Customer

### Federal Research Center at White Oak, Montgomery County, MD

- The Food and Drug Administration (FDA) and the General Services Administration (GSA) are working to consolidate FDA operations with a focus on energy efficiency, reliable infrastructure and cost reduction

## The Problem

### Dynamic environment — a blending of ESPC projects with new construction was necessary for a positive result

- FDA was housed in leased facilities that did not adequately support the goal of its critical mission
- FDA's facility requirements and evolving federal energy and sustainability mandates were complicating progress while the campus was being constructed
- Using traditional funding for energy infrastructure development would delay FDA's move to world-class facilities
- A series of ESPC projects were used to reduce costs and provide reliable, energy efficient infrastructure to the new buildings on the White Oak campus
- ESPC approach provided flexibility to address changes in facilities acquisition timing and energy requirements

## Honeywell Solution

### Develop and construct a combined heating and power central utilities plant

- The facility would generate electricity primarily through a dual-fueled reciprocating engine and multiple gas turbines, as well as solar energy solutions
- Power, heating and cooling needs of the entire campus were designed with expansion in mind
- In addition to the operation and maintenance of the central plant, Honeywell provides total operations and maintenance for all White Oak campus buildings
- Honeywell identified the following solutions: energy infrastructure master planning, establishment of a microgrid, critical load redundancy/firm capacity, demand response capability, energy VE of building designs, phased energy infrastructure development, adaptive reuse of a historic building and support for building LEED certification

## The Results

### A performance contract of 20 years was initiated with a guarantee to recoup investments

- Reduced first-cost to government
- Reduced recurring costs to government
- More energy efficient campus
- Fixed accountability for systems performance
- Flexibility to meet evolving program requirements
- Enhanced energy security

### Energy and environmental benefits

- Expected Annual Energy Savings:
  - 640,000 MBtu (Current)
  - 275,000 MBtu (In Construction)
- Expected Annual Pollution Prevention:
  - 50,000 metric tons CO<sub>2</sub> equivalent (Current)
  - 22,000 metric tons CO<sub>2</sub> equivalent (In Construction)



*“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.”*

*—Shapour Ebadi, Director Office of Campus Development, GSA*

## Honeywell Building Solutions White Oak Project Technical Data and Specs

### CENTRAL PLANT EQUIPMENT

#### Generation Equipment/Systems

(Current)

- One 5.8 MW dual fuel engine-driven generator
- Four 4.5 MW turbine-generators
- One 2 MW standby diesel generator
- 30 kW photovoltaic array
- Integrated plant controls and building automation systems

(In Construction)

- Two 7.5 MW turbine-generators (dual fuel)
- One 4.5 MW turbine-generator (natural gas only)
- One 5 MW steam turbine-generator
- Two 2.25 MW diesel black-start generators
- Integrated plant controls and building automation system expansion

#### Cooling

(Current)

- Three 1,980 ton electric centrifugal chillers
- Two 1,130 ton absorption chillers
- Two 1,130 ton electric centrifugal chillers

(In Construction)

- Three 2,500 ton electric centrifugal chillers
- 2 million gallon thermal energy storage

#### Heating

(Current)

- Three 10 MMBtu/hr dual fuel hot water boilers
- 52 MMBtu/hr heat recovery boilers

(In Construction)

- 132,000 PPH heat recovery steam generators
- 25,000 PPH dual fuel steam boiler

#### Distribution

(Current)

- Hydronic and electric distribution systems

(In Construction)

- Hydronic and electric distribution systems expansion
- Steam distribution system

## Find Out More

To learn more about Honeywell Building Solutions, contact your local Honeywell representative, visit [honeywell.com/buildingsolutions](http://honeywell.com/buildingsolutions) or call **1-800-345-6770, ext. 640.**

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Honeywell is proud to support the Clinton Climate Initiative, USGBC, ACUPCC and other groups that encourage the responsible use of our natural resources.

Nearly 50 percent of Honeywell's product portfolio is linked to energy efficiency, and our work helps eliminate millions of pounds of carbon dioxide emissions each year.

Honeywell has been recognized with multiple awards including the "Green Innovation of the Year" award from Frost & Sullivan.

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