

## **PALATKA HOUSING AUTHORITY: IMPROVING QUALITY-OF-LIFE FOR RESIDENTS WITH ENERGY PERFORMANCE CONTRACTING**

### **SOLUTION OVERVIEW**

The Palatka Housing Authority is a small- to medium-sized public housing authority (PHA) that owns and manages 420 units across seven properties in north-central Florida. Similar to the experience of many smaller public housing authorities, Palatka Housing Authority lacks not only significant capital and operating funds, but also the ability to access traditional bank loans for making improvements to its properties. However, seeing a need to make quality-of-life improvements for residents while also making them financially self-sustaining, leaders at Palatka Housing Authority decided to employ the Energy Performance Contracting (EPC) option available to PHAs. “This is a great opportunity for us to provide some new energy-efficient appliances to our units,” said President/CEO John Nelson, “I know our residents are excited because they are getting something new. That doesn’t happen too often, especially with federal budget cuts.”

### **ORGANIZATION TYPE**

Public Housing Authority

### **BARRIER**

Limited options for making capital investments to improve the quality of life for residents and reduce energy usage and operating costs

### **SOLUTION**

Engage an Energy Services Company (ESCO) to bring upfront capital, identify and install improvements, guarantee savings, and track and report results

### **OUTCOME**

Updated lighting, appliances, fixtures, and windows for residents; lower operating and maintenance costs for the property owner

### **POLICIES**

Energy Performance Contracting policies for PHAs are set by the U.S. Department of Housing and Urban Development (HUD), Office of Public and Indian Housing (PIH). The leadership team at

Palatka Housing Authority had previous experience with this policy framework from their individual professional backgrounds, and navigated the process together to successfully engage an Energy Services Company (ESCO) and achieve implementation of the improvements.

Another key driver for the leadership team at Palatka Housing Authority was HUD's utility allowance policy, which pays 75 percent of the difference if there is a decrease in utility costs, but only 25 percent if there is an increase. This further encouraged the team to find ways to improve energy and water efficiency while enhancing the quality of life their properties could provide to residents.

## **PROCESS**

Palatka Housing Authority issued a Request for Proposals (RFP) for contractors (ESCOs, in the case of an EPC) in March 2009 and ultimately selected a large, internationally-recognized firm as its ESCO. The Authority negotiated and entered into a Performance Services Agreement (PSA) with the ESCO in September 2012 for a 16-year term.

As energy performance contracting is a collaborative partnership between housing professionals and energy service companies, the best solution to fulfilling both the Palatka Housing Authority's desires and the ESCO's obligations required discussions based on mutual trust and respect. Palatka Housing Authority staff worked with the ESCO to determine which quality-of-life improvements could be made while ensuring that the energy and water savings from the improvements could pay for the annual contract costs. The negotiated PSA included the following improvements within six of Palatka Housing Authority's properties:

- 184 lamp replacements, which not only reduce energy consumption but also enhance the atmosphere of the homes as well as the safety and security of the residents;
- 447 new water-conserving toilets, 447 low-flow showerheads, and 839 low-flow aerators which help give the homes a fresh look and feel while reducing water consumption;
- 384 updated, instantaneous gas hot water heaters, which enhance the tenants' experience in their homes, improve efficiency, and lower energy costs; and
- 718 replacement windows, which improve the property curb appeal, interior aesthetics, resident comfort, and energy efficiency.

With a final scope of work in place, the ESCO commenced construction in October 2013 and completed installation of the improvements in March 2014. After final acceptance of the installed improvements by Palatka Housing Authority, the savings guarantee began in July 2014.



*New instantaneous gas hot water heaters and water conserving bathroom fixtures are among the improvements now installed at the homes of Palatka Housing Authority residents.*

## OUTREACH

- Palatka Housing Authority leadership interviewed and recommended the ESCO, which was then approved by resolution by the Board of Commissioners. The Board of Commissioners was kept informed of the project process and toured some of the units with the improvements installed.
- Palatka Housing Authority coordinated with the ESCO to conduct resident education workshops before, during, and after implementation. Training included describing what improvements were going to be made, how tenants were responsible for their energy usage, and how to ensure continued energy savings.
- The ESCO met separately with staff and residents to explain which improvements would be made and discuss the construction schedules for each property.
- Palatka Housing Authority and the ESCO encouraged and monitored Section 3 hiring by the ESCO subcontractors for the construction work.

## TOOLS AND RESOURCES

The links below can help other PHAs learn more about HUD policies and processes involved when employing the EPC option:

- [HUD EPC Overview](#)
- [Approval Process Diagram](#)
- [24 CFR 990.185](#)

## OUTCOMES

<https://betterbuildingssolutioncenter.energy.gov/implementation-models/palatka-housing-authority-improving-quality-life-residents-energy-performance>

For more information, visit <https://betterbuildingssolutioncenter.energy.gov>

In addition to enhancing residents' quality of life, avoiding increases in capital and operating costs for the property owner, and providing energy and water consumption reductions, the installed conservation measures also lead to reduced emissions overall, helping the Palatka Housing Authority be a "greener neighbor" by lowering its carbon footprint and supporting a better and healthier environment.

The ESCO uses the Greenhouse Gas Equivalencies Calculator from U.S. Environmental Protection Agency's website to calculate carbon dioxide emissions for its annual report to the Palatka Housing Authority. This calculator uses the Emissions & Generation Resource Integrated Database (eGRID) to convert reductions of kilowatt-hours into avoided units of carbon dioxide emissions. For the second PSA reporting period of July 2015 – June 2016, the ESCO calculated a reduction of 88,963 kWh.

The total emissions reduction associated with the reduced electrical and gas consumption achieved at this smaller public housing authority is itself equivalent to 52.7 passenger vehicles driven for one year and 1.328 railcars' worth of coal.

### Electricity Reduction



### Gas Reduction

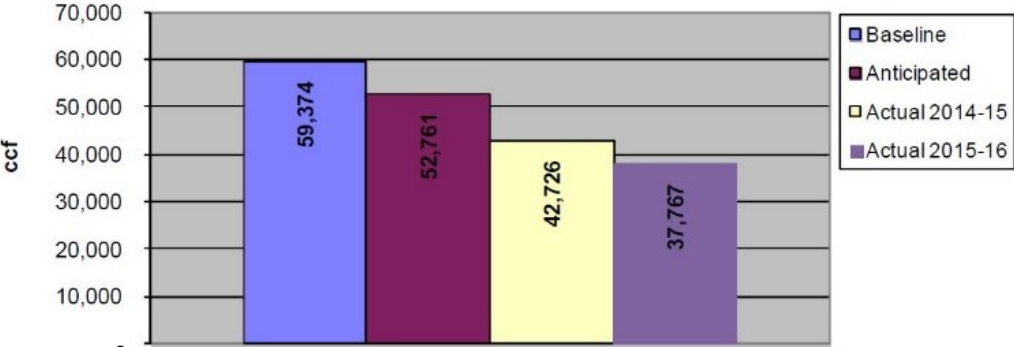


### **MEASURING SUCCESS**

During each year of the PSA, the ESCO produces a report which provides numerous detailed charts of the energy and water consumption and cost savings achieved, and compares them to the contractual frozen baseline as well as the guaranteed savings. Using a comparison of actual utility data to calculate the savings, the second annual report from the ESCO for the period July 2015 – June 2016 shows the following total annual savings over that 12-month period alone:

- \$204,750
- 88,963 kWh of electricity
- 48,189 ccf of natural gas
- 15,024 kilo-gallons of water

AMP 12 Natural Gas Consumption



One of the numerous charts included in the ESCO's annual report, illustrating actual savings achieved for two consecutive years vs. the baseline year.

