

2015 Achievement Awards Virginia Association of Counties

APPLICATION FORM

All applications must include the following information. Separate applications must be submitted for each eligible program. **Deadline: June 1, 2015.** Please include this application form with electronic entry.

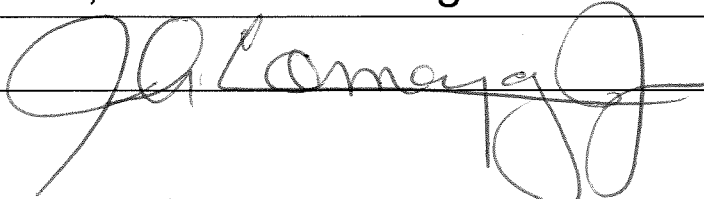
PROGRAM INFORMATION

Locality: Fairfax County
Program Title: Burkeholder Admin Boiler Upgrade
Program Category: Environmental

CONTACT INFORMATION

Name: Garrick Augustus
Title: Energy Coordinator
Department: Facilities Management & Office of County Executive
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SIGNATURE OF COUNTY ADMINISTRATOR OR CHIEF ADMINISTRATIVE OFFICER

Name: Jose Comayagua
Title: Director, Facilities Management
Signature: 



2015 Achievement Awards, VACo

Fairfax County, Virginia

Subject: Burkeholder Admin Boiler Upgrade

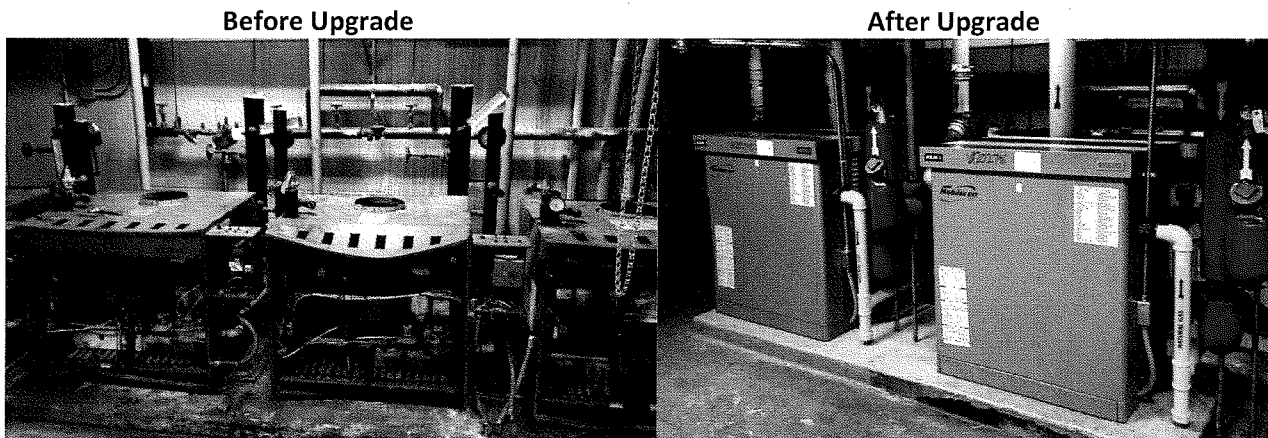
The Burkholder building had four Burnham natural gas fired gravity vented boilers that were at the end of their useful lives. Upon investigation, there appeared to be one boiler that continually operated in its attempt to keep up with the building's load. It was unclear whether or not the other boilers were able to operate either in tandem or even in a typical lead/lag fashion so it was further suspected the associated controls were no longer functioning as they should. It was decided to replace the boilers with higher efficiency condensing type models and interlock them with modern controls.

It was determined that two appropriately sized boilers could be utilized in place of the existing four thus two Aireco Modulex models were provided. These units have a 14:1 turndown ratio thus utilizing the most appropriate fraction of fuel consumption to meet the building's comfort demands.

Statement of the Problem: Improving building's heating system, and energy efficiency.

Actions:

1. Energy Manager correctly sized boiler upgrade, and recommended two boilers to replace the existing four, with one boiler working in backup mode.
2. To assist further with energy savings, the setback temperatures were programmed to provide the hottest supply water only on the coldest days. For days typically termed "shoulder" days, the supply temperature would be between 120°F and 140°F, instead of the typical 160°F to 180°F range.
3. The old flue assembly was removed in its entirety and replaced with a specialty polymer flue material. As part of this new assembly, the new units now draw combustion air directly from outside the building envelope, and not from the mechanical room itself (conditioned building air). Having done this, the mechanical room no longer serves as the conduit for combustion air thus improving building envelope and eliminating the need of introducing unconditioned air into the building—a costly energy and humidity problem.



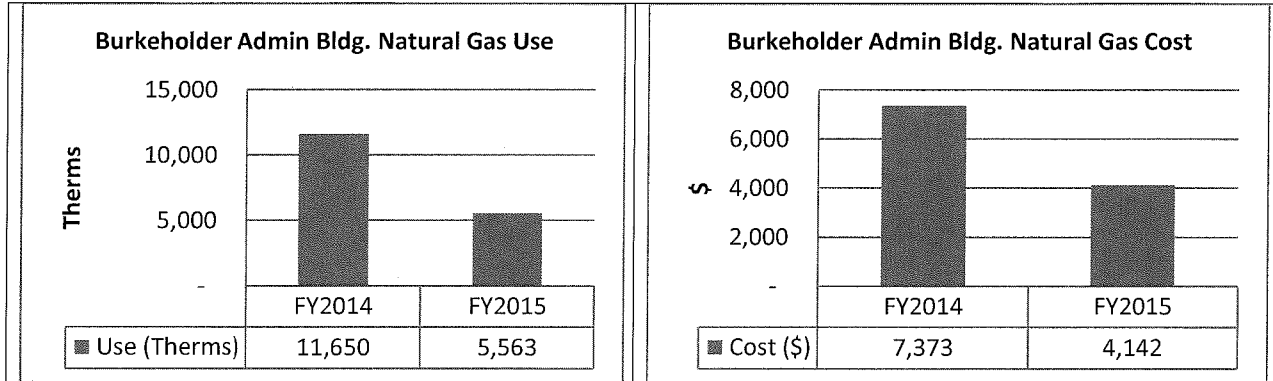


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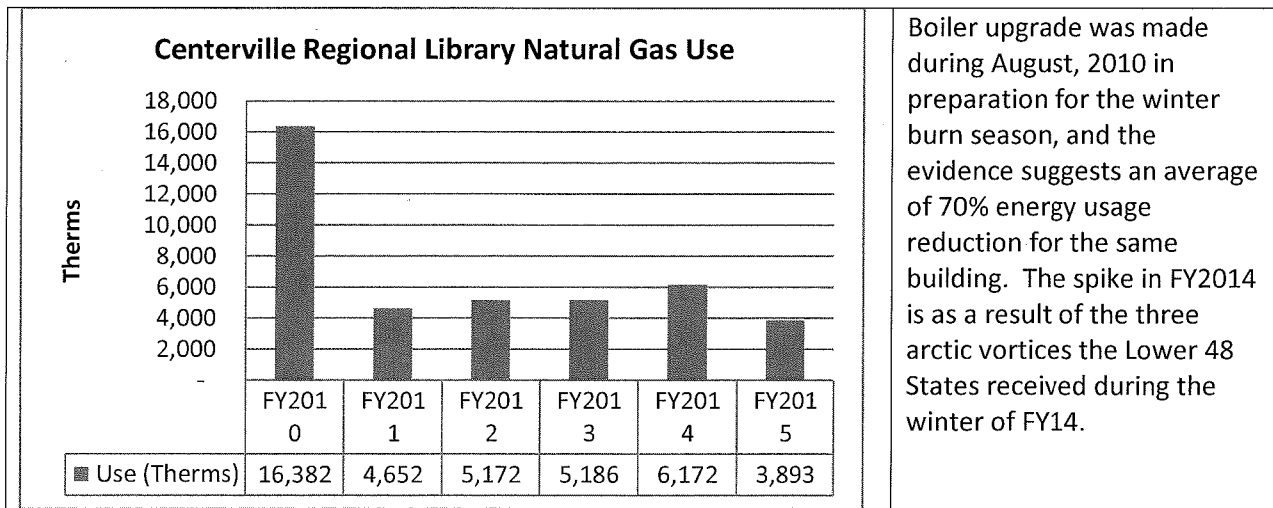
Fairfax County, Virginia

Results:

- 1.
2. The building now operates on one, instead of four boilers, with the second use only for back-up support.
3. This upgrade resulted in adjacent occupied spaces creating less demand for heat and has increased occupant comfort.



Special Note: The Centerville Regional Library was outfitted with a condensing heat boiler, at the end of the useful life of the initial convective heat boiler, in 2010, similar in many respects to the Burkeholder project, and provides a longer history of energy efficiency with the use of these highly energy-efficient heating systems.

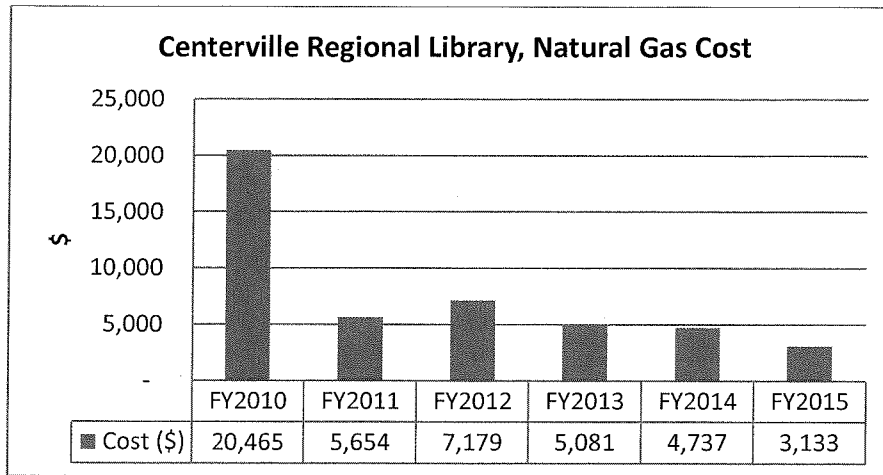


Below is the Cost data, which is equally impressive:



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Fairfax County, Virginia



Key Participants: Gregory Gross; Neal Bickers & Garrick Augustus

Contact Information:

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