
FAST FACT
**FUEL-SWITCHING AND
 IMPROVED ENERGY
 EFFICIENCY HAVE CUT
 THIS FACILITY'S CO₂
 EMISSIONS BY 33%.**

ABOUT AIRE

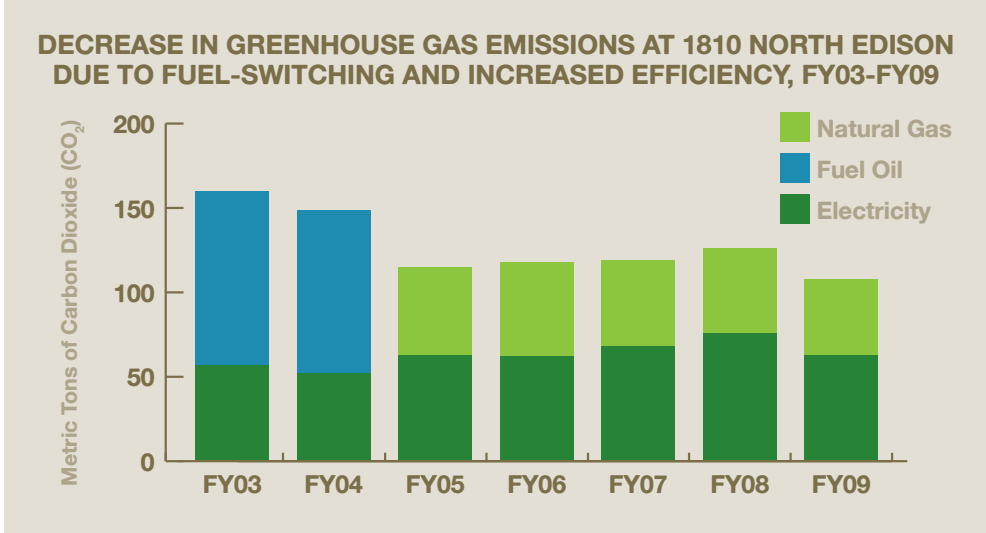
Climate disruption is one of the most serious challenges facing our world today. To protect the health and economic well-being of current and future generations, we must reduce our emissions of heat-trapping gases by using the technology and practical solutions already at our disposal. The Fresh AIRE program—Arlington Initiative to Reduce Emissions—began in 2007 with the goal of reducing greenhouse gas emissions (primarily carbon dioxide (CO₂)) across the County.

Arlington is committed to cutting greenhouse gas emissions from government operations to 10% below 2000 levels by 2012. We will achieve this by improving energy efficiency in our buildings, vehicles, and infrastructure; using alternative fuels and green power; increasing recycling; conserving and protecting water; and maintaining and enhancing the tree canopy in Arlington.

AIRE is supporting and encouraging the community to join us by committing to actions that will make Arlington a more sustainable place to live, work, and play.

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1810 North Edison is a 10,500 square foot, single-story brick building constructed in 1945, and now occupied by staff and programs of Arlington’s Department of Human Services (DHS). Over the years the facility has housed various DHS programs, and is now the workplace for staff in the DHS Behavioral Health Care Division.



OUR IMPROVEMENTS

In 2004, Facilities Maintenance and the energy management program converted this building from oil heat to natural gas heat, which included installing a new boiler. Heating fuel oil has a higher carbon content than natural gas. Burning fuel oil to produce one million Btu of heat creates 186 pounds of CO₂, whereas burning natural gas to produce one million Btu of heat creates only 120 pounds of CO₂.

From Fiscal Year 2003, with light occupancy and the old oil boiler, the building’s energy use created 160 metric tons of CO₂. By Fiscal Year 2005, with the new natural gas boiler, the building’s energy use was responsible for 115 metric tons of CO₂.



EVERYDAY TIPS

Get an Energy Audit. No matter what type, size, or style building you occupy, understanding how energy is being used enables you to make better decisions about proper efficiency investments that yield the most financial return.

Reduce, Reuse, then Recycle. When possible, purchase goods made from durable, recycled, toxin-free materials with minimal packaging. Reuse, repurpose, donate, or sell unwanted items. Recycle packaging. You'll minimize materials processing and prevent toxic materials from getting back into our environment.

Travel Smart. Getting around Arlington is easy with the extensive network of bike/walk paths, bus routes, Metro stations, and car-sharing options. Think twice about how you get around town, go to work, and get out and play.

Consider Green Power. Homeowners, businesses, and organizations can choose to buy power from wind, solar, or other renewable sources. Buying green power reduces your carbon footprint and stimulates the market for renewable energy.



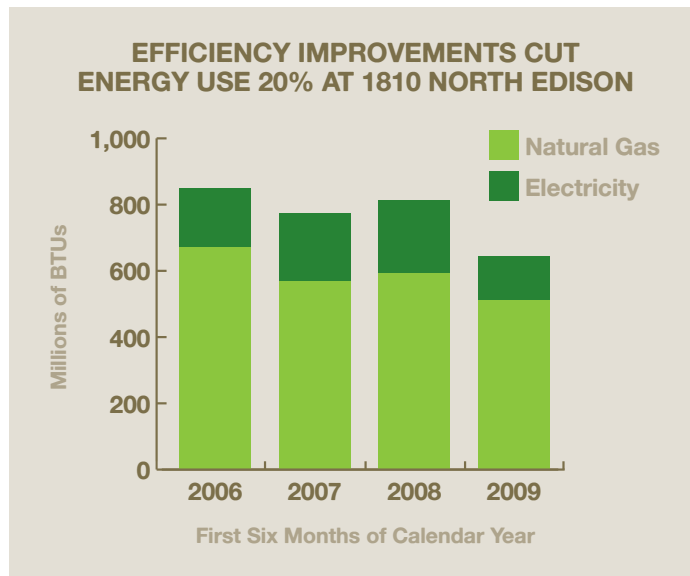
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In December 2008, Facilities Management and the AIRE team received complaints of too much heat from some staff at 1810. Upon investigation we found and repaired steam valves and thermostats that were not working properly. In addition, we found opportunities for energy-efficient lighting upgrades and retrofits. AIRE staff met with DHS staff to discuss both technical fixes for their building and important day-to-day practices that can help cut energy use, such as turning off unused lights and equipment.

Following \$10,000 worth of improvements in January 2009, and enthusiastic participation in energy-smart practices by staff, the building is using 20% less energy than it was in comparable periods of prior years.



VALUE TO THE COUNTY

The building efficiency improvements during Fiscal Year 2009 are already paying for themselves. We expect this building to use 35,000 fewer kWh of electricity over a full year, saving about \$3,000 per year. The adjustments and repairs to the heating system will cut gas use by over 1,000 therms per year, saving over \$1,200. More importantly, the building is more comfortable now for employees and they can be more productive.

HOW DO WE RATE?

This building presents a great example of workers calling attention to conditions—in this case too much heat—that, when addressed, can result in dramatically lower energy use. We are taking the lead in building improvements through this holistic approach.

FOLLOW OUR LEAD

As this story has proven, Facility Managers and operators can gain insight into potential opportunities by listening to the people who work in the spaces and experience conditions eight hours a day. The lighting retrofits we performed in this building are relatively simple and very cost-effective. Moreover, replacing central heating equipment more than 20 years old can often pay for itself through energy savings. State and federal incentives are emerging to help pay for such energy improvements.

Visit the AIRE website, www.arlingtonva.us/aire, for more information.

