



## Arlington's Energy Lending Library: Creating a Climate for Change

By Adam Segel-Moss

Arlington's population is growing, new buildings are being constructed, and we live lives that need ever more energy. This trend doesn't show any sign of stopping soon. Arlington's Community Energy Plan (CEP), adopted in 2013, establishes a greenhouse gas emission reduction goal for the County -- reducing GHG emissions by approximately 75 percent by 2050. Extraordinary measures are required to achieve this goal and the entire community must be actively engaged and involved.

Many Arlington homes were built with little to no insulation and have had multiple home improvements over the decades. This leaves Arlington with an aging housing stock that can benefit from home energy retrofits to make them more comfortable, save energy, and leave a lighter footprint on the environment.

[Arlington County's Initiative to Rethink Energy \(AIRE\)](#) is Arlington's energy management program. In 2016, the AIRE program launched the award-winning [Energy Lending Library \(ELL\)](#). In partnership with Arlington Public Libraries, the ELL offers residents tools to spot and fix home energy issues. It's now as easy as checking out a library book to borrow a thermal camera, a box of 10 different LED bulbs, energy meters to manage home electricity use, and DIY energy retrofit books. Arlington is the first community in the country to roll out an Energy Lending Library and the concept has been emulated by more than a dozen jurisdictions regionally and nationally.

### Energy lending library components

Thermal cameras, which see what you can't with your eyes, are the cornerstone of this program. The small camera attaches to a smart phone and, with the addition of a free app, displays thermal images. These thermal images show temperature differences around your home, inside and out, that indicate where insulation may be missing or where air is leaking in or out of the house. The comprehensive instructions and helpful hints included with the camera detail what to do if a resident identifies areas that need insulation and air sealing.

Six thermal cameras were placed in circulation (3 Apple and 3 Android versions) in April 2016. Within the first week of launching them, there was a waiting list of almost 8 months! To meet demand, additional cameras we purchased and there



are now 24 cameras (17 Apple and 7 Android) in circulation. The cameras have been used continuously and there is now only a ~2 week waiting period.

Supplemental Information provided with the camera:

- Using a Thermal Camera Guide: <http://bit.ly/2qkJUSE>
- Thermal Camera Video: <http://bit.ly/2rVdxeu>

### LED bulb sampler boxes

Purchasing the right lightbulb has become rather confusing, yet changing to LED bulbs is the easiest way to reduce energy use at home. The AIRE Program makes purchasing the right LED bulbs easy, as the ELL now includes an LED Bulb Sampler box for residents. The Bulb Sampler allows library patrons to sample ten different bulbs at home without having to buy a variety of expensive bulbs they may not like.

The Sampler includes standard bulbs of different brightness levels and color, recessed fixture bulbs, chandelier bulbs, a bathroom vanity bulb, a 3-way bulb, and an LED nightlight. All of these bulbs are dimmable. The LED bulbs are loaned in a custom-made case with information noting each type of bulb, cost, brightness, color, and brand. A shopping guide is also included.

Supplemental Information provided with the box:

- LED Shopping Guide: <http://bit.ly/2qX7uHb>
- Bulb Info: <http://bit.ly/2qX7uHb>



### Electric usage meters (aka Kill-a-Watts)

The typical American home has 40 devices that are continuously using power. This is also known as “vampire” power or standby power. It may only be a small amount of power per house but it adds up over time. Some of the main energy culprits in the home are your computer printer, DVD players, laptop, coffee maker, TV, stereo system, game console, microwave oven, or cell phone charger. Many devices have lights that continue to operate after the appliance is turned off.

The Energy Lending Library includes 22 energy usage meters (aka Kill-A-Watt) available for patrons to checkout. These devices let patrons track what is using energy at their house, how much, and what it is costing them.



### **Making it easier than ever to take action**

The County's Home Energy Rebate program offers rebates to residents for making energy efficient changes at home. Over the past year and a half, the Rethink Energy Program has helped more than 500 homeowner's complete energy retrofits on their homes.

Rebates up to \$575 are available to Arlington homeowners who complete qualifying projects. Rebates are available to install insulation, seal air leaks, seal air ducts, and for high efficiency water heaters, furnaces, and air conditioners.

Learn more about Arlington's Rethink Energy Program by [visiting the website](#). Energy action at home has never been more accessible and important.

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