

Arlington Initiative to Rethink Energy (AIRE)

Community Energy Plan (CEP) Implementation Initiatives

10/24/17

BUILDINGS

INITIATIVE	STATUS
Green Building Density Incentive Program	The Green Building Density Incentive Program, created in 1999 for site plan development, has led to the development of over 38 LEED certified commercial, apartment, and hotel developments. Together these buildings are estimated to reduce greenhouse gas emissions by over 15,000 metric tons per year, saving building owners over \$2 million in energy costs. In addition, water use is reduced by an estimated 40 million gallons per year (estimated \$544,00 annually). Selection of low toxicity materials, non-smoking requirements, daylighting, and access on-site open space supports the health of Arlington's workers, residents, and visitors.
Residential Energy Efficiency Rebate Programs	Home Energy Rebates have been issued to more than 570 homeowners. Rebates are offered for energy efficient HVAC units and water heater, insulation and duct sealing. Projects completed so far are estimated to reduce 1 million pounds of greenhouse gas emissions per year with an estimated annual energy savings for residents of \$119,700 (average savings is \$223 per household per year).
Green Home Choice	The Green Home Choice program has certified over 300 homes. Each new GHC home uses an average of 42% less energy than code-built new homes. Each GHC renovation uses 55% less energy than pre-renovation, on average. A new Green Home Choice Kitchen and Bath certification program was launched in September 2017 to guide the selection of energy and water efficient appliances and fixtures and non-toxic finishes.
Commercial Property Assessed Clean Energy (C-PACE) Financing	The County is focused on launching the C-PACE program by the end of this year. The C-PACE program will offer private sector financing to commercial properties for energy and water efficiency and renewable energy improvements to new and existing buildings. The plan is to evaluate the potential for a Residential PACE program after the Commercial PACE program is fully operational.

INITIATIVE	STATUS
Residential PACE	Our plan is to work with PACE advocates and other statewide stakeholder groups at the appropriate time to address any questions regarding Residential PACE. There is no timeline for launching an Arlington R-PACE program.
Commercial Building Energy Benchmarking	Challenging, but progress underway. State officials convened a stakeholder forum on options and obstacles to allowing localities the authority to require energy benchmarking of large commercial buildings (many cities nationwide have such requirements in place).

RENEWABLE ENERGY

INITIATIVE	STATUS
Solar Co-op	Over 110 Arlington residents have installed solar panels on their homes as part of the solar co-op programs. Total installed capacity on the 110 homes is more than 700 kW. (Other homeowners have installed solar panels without the co-op assistance. Exact capacity is not available).
Solar photovoltaics on public facilities	The County has 70 kW solar PV on buildings; APS has approximately 600 kW solar PV on schools. Both the County and APS are pursuing 'power purchase agreements' for large PV installation paid by 3 rd (private) parties.

COUNTY GOVERNMENT OPERATIONS

INITIATIVE	STATUS
County energy efficiency projects	The County is on track to meet the Better Buildings Challenge target of 20% reduction in energy/sf across the entire County government portfolio by 2022 (County joined program in 2012). Project examples include: 1) New natural gas-fired boilers for space heating installed at Central Library over the summer, a joint project with AIRE and DES's Facilities Maintenance Bureau. This reinvestment is expected to cut energy costs by \$10,000 a year, and reduce natural gas use by up to one-third. 2) The lighting retrofit at Ballston Garage completed in 2015 and was recognized by the Virginia Energy Efficiency Council in its inaugural VAEEC Leadership in Energy Efficiency Awards event in November 2016, for documented energy improvements at a facility that serves the commercial sector. The retrofit improved lighting quality throughout the garage while saving the County 1 million kWh per year (approximately \$80,000 per year in energy and maintenance costs).

Community Energy Plan update	Arlington’s award-winning Community Energy Plan (CEP), adopted as an element of the Comprehensive Plan in June 2013, will be five years old next summer. That ground-breaking plan was the product of over three years of study and extensive community involvement. County staff will work with consultants from now into 2018 to assess energy-related technology and market changes, to update assumptions and ensure the CEP reflects current conditions and emerging needs of the community. After that analysis, staff will discuss with community stakeholder groups a draft, updated Community Energy Plan. An updated CEP will be brought to the County Board in the second half of 2018.
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EDUCATION & HUMAN BEHAVIOR

INITIATIVE	STATUS
Energy Lending Library	In partnership with Arlington Public Libraries, the Energy Lending Library offers patrons thermal cameras, and LED bulb sampler, and a selection of books on home energy efficiency. These tools are available to all Arlington residents, educating them on energy efficiency issues in their homes and directs them to County programs to help improve energy efficiency. This award-winning program has been emulated by other jurisdictions in the region and around the country.
Residential Outreach Campaign	AIRE promotes its energy efficiency programs through a variety of creative means: monthly newsletter, ARLNow blog, presence at community and faith-based events, Energy Scavenger Hunts, Green Games, Energy Journey, Rethink Energy podcast series, Passive House video series, training for builders and developers, and the Energy Lending Library. Thousands of residents receive AIRE’s energy efficiency message each month.

DISTRICT ENERGY

INITIATIVE	STATUS
Integrated Energy Master Plans District Energy implementation	The Crystal City/Pentagon City and the Courthouse Square Integrated Energy Master Plans (IEMPs) have been completed. Based on the results from these in-depth feasibility studies, staff do not recommend moving forward with district energy implementation in either study area at this time. This recommendation reflects the modest economic savings offered by a district energy system in either study area compared to business-as-usual. However, staff do recommend that a district energy system should be re-evaluated when the County redevelops Court Square West, due to the rapid and ongoing changes that are occurring in the utility industry.

TRANSPORTATION

INITIATIVE	STATUS
Master Transportation Plan implementation	<ul style="list-style-type: none">• Based on our research and analysis from 2016, we have reduced 91,800 tons of CO₂ from the air by people using transit, walking, biking and teleworking instead of driving.• 85% of the County-owned streetlights have been converted to LED (which last five times longer than high-pressure sodium bulbs and are 75% more efficient)• Increased Capital Bikeshare stations from 81 in FY15 to more than 100 in FY18• Arlington Transit provided more than 3.4 million rides over the past year.