

ACDS Brings Comfort, Cost Savings to Annapolis Apartments

With most of its residents earning no more than 30% of the area's median income, tenants in Annapolis's **Harbour House Apartments** can ill-afford the high utility bills that are a by-product of a leaky, inefficient building. Lowering their energy usage through building science not only significantly reduces residents' energy cost burden, but also makes their homes more comfortable.

Arundel Community Development Services, Inc. (ACDS), a nonprofit corporation dedicated to providing affordable housing and community development services in Maryland's Anne

Arundel County, received an award through MEA's 2015 Clean Energy Communities Low-to-Moderate Income (LMI) Grant Program to support energy efficiency retrofits in 142 units at the Harbour House Apartments. As a result of the installed measures at Harbour House, each residence is estimated to save an average of \$600 annually. Over their useful life, the installed energy measures will improve the living environments of an estimated 2,576 Marylanders.



Housing Authority of the City of Annapolis Project Manager Mark Ford, ACDS Construction Specialist Chris Maruyama, MEA Program Manager Dean Fisher and ACDS Construction Specialist Carson Arnold at the Harbour House Community

The goal of MEA's **LMI program** is to finance energy efficiency projects that benefit low-to-moderate income Marylanders, particularly by employing innovative strategies that help buildings, neighborhoods or entire communities save energy, save money, and increase comfort. In the case of the Harbour House, an early energy analysis indicated considerable air movement between all three floors of the units. The units on the middle floors were leeching energy from the top and bottom floors. As a result, these units were not meeting a strict 1:1 Savings to Investment Ratio (SIR) or better for planned weatherization and energy efficiency measures, a shortfall that disqualified the project from funding through other programs. The structure of the LMI Program, however, allows for a whole building approach to modeling estimated energy savings that measures all proposed efficiency upgrades in aggregate. The program allowed for coverage of additional measures that could not be installed through other programs, including weatherization of all floors to correct the improper airflow of the entire building.

On completion of the work, many tenants noted with gratitude their changed living environments. "I've seen a noticeable reduction in my energy bill," says Mable Cromwell. "The unit is much more comfortable to live in, especially in the winter; it holds the heat much longer."

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Before and After: Adding attic insulation greatly improved both the energy efficiency of the apartments and the comfort level of residents.

ACDS stretched its grant dollars by taking advantage of economies of scale. As ACDS Construction Specialist Chris Maruyama notes, the typical \$7,000 cost for the installation of a 92% AFUE furnace and 15 SEER air conditioning systems dropped to \$4,650 when the units were purchased and installed in bulk. As a result of this savings, ACDS was able to upgrade additional residences.

Leveraging additional funds and resources also helped ACDS maximize the energy savings it could achieve at Harbour House. Rebates from the BGE Smart Energy Savers Programs helped support the purchase of HVAC equipment and ENERGY STAR qualified refrigerators. Through the LMI program, contractors are authorized to apply directly for the rebates, thus enabling them to reduce their prices accordingly. As the leveraged funds lowered the overall cost burden for installed items, ACDS was able to weatherize additional units.

Thanks to these combined strategies, the \$600 per residence annual savings from the weatherization and energy efficiency measures installed at Harbour House will help residents stretch their limited budgets to cover more of life's essentials.