In 2014, Viridiant partnered with Housing Virginia and the Virginia Tech Center for Housing Research on a first-of-its-kind study to demonstrate the impact of energy efficient incentives in the construction of affordable rental housing. The study, conducted over the course of a year and published in 2015, analyzed actual utility usage data from 15 Low-Income Housing Tax Credit (LIHTC) properties across the state of Virginia of varying types - new construction, rehabilitation, adaptive reuse, senior and family. All 15 projects were built and certified to EarthCraft Multifamily standards, a nationally recognized green building program that uses high performance building practices to achieve energy and sustainability improvements. This study evaluated the value of EarthCraft Multifamily certification by analyzing actual utility consumption data within the EarthCraft certified, LIHTC units and correlating behavior surveys.

**KEY RESEARCH QUESTIONS**

- What are the estimated household utility costs (energy modeled savings) of energy efficient design for new construction and renovation LIHTC projects?
- What are the actual household utility costs for energy efficient design among new construction and renovation as well as senior and non-senior LIHTC projects?
- What is not change in household utility costs, pre- and post-energy efficiency, new construction and renovation for senior-and-non-senior-based occupancy?
- What are other net effects of utility costs on the household's other consumption?

**Certification Process**

1. Pre-Review (spec/plan submittal, preliminary modeling)
2. Pre-Construction (registration, workbook/ plans, design review)
3. Construction (construction kick-off meeting, site visits, preliminary testing)
4. Project Closeout (final inspection/testing, workbook)
5. Certification (compliance verification, plaque, certificate, labels and HERC)

**Certification Costs**

- $500 pre-review fee*
- approximately $300 - 700 per unit

*Fees may be higher for renovation.

**IMPACT**

This study demonstrates the value of green building implementation through public-private partnerships to achieve monthly utility savings for residents, maximize financial investments, and support sustainable communities. The results of this study are extremely encouraging - the tenants who save money every month and the builders and developers who now have assurance that energy efficiency programs with third party oversight result in significant savings.

*Between 2007 and today, Viridiant has certified almost 17,000 EarthCraft Multifamily LIHTC units in Virginia. If each of these households saves the average amount on energy consumption and bills, the total savings per year amount to:

- over $11 million
- over 94 GWh of energy

For more information, visit: viridiant.org/VThousingstudy

**THE IMPACT OF GREEN AFFORDABLE HOUSING**

The report, The Impact of Green Affordable Housing (published in January 2016), looks at 18 affordable, LIHTC housing developments in AL, GA, NC and SC - 11 of which are green building program certified, 7 of which are conventional or "non-green."