

Recommendation #11

Accelerate Implementation of Deep Energy Retrofits and Community-wide Energy Efficiency and Weatherization Efforts

Description

A deep energy retrofit is a holistic approach to updating a building or residential home with energy-efficient mechanisms that lead to 50% or more energy savings than pre-retrofitted conditions. Updates are typically prioritized when there is an end-of-life replacement or code upgrades needed. They can be done all together or individually over time, depending on the owner's financial situation. Examples of updates that would be completed as part of a deep energy retrofit include lighting, HVAC, windows, insulation, electricity, and appliances. Completion of building electrification can also be part of a deep energy retrofit. Prince George's County has already secured funding to complete one deep energy retrofit of a senior center and will upgrade at least 30 more buildings over the next ten years.

Prince George's County should partner with local utilities to create financial and other incentives to accelerate the number of homes and businesses implementing deep energy retrofits. County programs should help community members assess the benefits of implementing deep energy retrofits and incrementally making changes through energy efficiency and weatherization. Leveraging connections within the community and energy coaches, the County can engage and educate community members on the available incentives and resources. In addition, the County must ensure that seniors, low-income, and other vulnerable communities are prioritized when implementing these programs and put measures in place to prevent retrofitted buildings from becoming too expensive for these groups. The County needs to lead by example and conduct deep energy retrofits toward reducing the consumption by county buildings by 50%.

Proposed Measurement & Tracking

On an annual basis, the following should be tracked:

- Number of county buildings retrofitted
- Energy and cost savings achieved in retrofitted buildings
- Number of buildings/homes that participate in retrofit programs
- Number of buildings/homes in energy resilience zones that participate in retrofit, resiliency, and weatherization programs

Co-Benefits



● Within County Control

● Alignment with Existing Initiatives

● Technical Feasibility

● Cost-Effectiveness

Time Frame

3-8 years

Capacity and Funding:

What Capacity and funding is necessary to enact this recommendation?

- The County will need increased capacity and funding to partner with PEPCO and the Low-Income Energy Efficiency Program (LIEEP).
- Additional dedicated funding for DHCD weatherization program and additional initiatives for deep energy retrofits.

Implementation Steps

Step 1: Assess current policies and programs that incentivize or hinder deep energy retrofits. Work with PEPCO and the Low-Income Energy Efficiency Program (LIEEP) to identify existing programs, technical assistance, incentives, and financing to support deep energy retrofits. Identify gaps and document the need for additional support (to inform step 4).

Consider adopting the following code, permit, and guideline requirements to accelerate community-wide transitions towards more energy-efficient buildings:

- Non-residential buildings will be subject to an energy reporting requirement. These buildings would be required to meet energy and water conservation performance standards.
- Require electrification of heating and hot water equipment during significant renovations of commercial and multifamily housing
- Provide guidance and support for completing deep energy upgrades over time. Consider a different permit process to avoid duplicative permit processes as the upgrades are phased.

Step 2: Support Community Education and Outreach related to deep energy retrofits. Develop and distribute additional educational materials about deep energy retrofits, including information about incentives and financing options.

Step 3: Lead by example. The County should lead by example by undertaking deep energy retrofits of at least X buildings by 2030. Data from energy benchmarking can help support building prioritization. The retrofit projects should be developed as case studies and help educate the community, including owners of commercial buildings.

Step 4: Advocate. Using the success and metrics from these programs, encourage the State of Maryland to set standards and expand financial incentives for deep energy retrofits.

Equity Consideration:

Seniors, low-income, and other vulnerable communities may not be able to afford or have the resources to implement deep energy retrofits and therefore not experience the benefits.

How can the recommendation be implemented to lead to equitable outcomes?

- Incentivize and subsidize the implementation of deep energy retrofits in energy resilience zones and equity areas.

- Ensure landlords engaged in deep energy solutions do not pass disproportionate costs to occupants of low to moderate-income households.

Helpful Resources

- **Resource:**
 - Rocky Mountain Institute; [Guide to Managing Deep Energy Retrofits](#)
 - This resource provides a framework with detailed guidance for planning and implementing deep energy retrofits of commercial buildings.
- **Resource:**
 - Rocky Mountain Institute; [Design Guide for Commercial Building Deep Energy Retrofits](#)
 - This resource provides technical guidance for deep energy retrofit teams to optimize energy savings in commercial buildings.
- **Resource:**
 - US Department of Energy; [1910 Home Deep Energy Retrofit Case Study](#)
 - This case study highlights the process, costs, energy use savings, and lessons learned for a deep energy retrofit of a home built in 1910.