House Economic Matters Committee

HB 904 - Public Utilities - Energy Efficiency and Greenhouse Gas Emissions Reductions - Alterations and Requirements (Energy Savings Act)

Favorable

March 2, 2023

Dear Chair Wilson and Members of the Committee:

I am Alice Wilkerson, Executive Director of Advance Maryland and I'm testifying in support of HB 904, the Energy Saving Act. At Advance Maryland, our vision is a Maryland with thriving, healthy and inclusive communities where all Marylanders have access to opportunity, including safe and affordable housing, economic prosperity, quality healthcare, reliable transportation, a restorative justice system, and a livable future. We support SB689 because it will deliver more energy efficiency savings to the rate payers who pay into the program, especially low-income households, and it aligns our energy efficiency incentives with the state's greenhouse gas reduction goals.

As a recipient of EmPOWER rebates myself, I wanted to talk about my direct experience with the program, which I have utilized twice since 2013. The first time I used the program everything was new to me. I had heard of an energy audit but didn't really understand how it worked or how comprehensive it was. I contacted a contractor through PEPCO, they handled all the paperwork and I paid the discounted $100 rate for the energy audit on my 1930s era home. The audit utilized a blower system to identify air leakage and infiltration, evaluated my heating and cooling system and water heater for efficiency, and provided me with a detailed analysis of my home's energy use. Some of the issues were simple fixes such as caulking and weatherstripping, while others were more expensive like insulation and a new air conditioning system. One of the most helpful parts of the audit was learning which problems were the most important (lack of insulation), and which improvements would lead to the biggest efficiency gains. It also identified up to $2,000 in rebates that I was eligible for. In the end, I wound up installing insulation myself and spent a lot of time learning how to use a caulk gun.

Fast forward to 2021, after moving to a new home, I again utilized the EmPOWER program for an energy audit for my 1970s era house. This audit performed the same type of analysis and again identified weatherization and energy efficiency improvements we could make. This time, the type and extent of insulation we needed was beyond our ability to DIY, and we took advantage of the $2,181 in

rebates, which covered 50% of the total insulation cost. The audit also evaluated the air exchange in our house and determined we had unhealthy air circulation rates and recommended installation of a whole home exhaust. It's safe to say that without the audit we wouldn't have prioritized the insulation and would have likely replaced our windows instead when the windows are actually in good condition. We also wouldn't have known about the need to improve air circulation.

The rebate process was exceptionally smooth and fast. The company who did the audit and installed the insulation filed all of the rebate paperwork for us and we simply cashed the rebate check when it arrived a few weeks later. We have seen a reduction in our heating and cooling bills following the energy efficiency improvements, as well as increased comfort in multiple rooms.

I've enclosed a copy of the 2021 EmPOWER rebate form that outlines the projects that were rebate eligible. I'm happy to discuss my experience with any members of the committee. Thank you for your time. We request a favorable report on HB 904.

BGE Home Performance with ENERGY STAR®

Prioritized List of Measures

Customer: Alice Wilkerson
Address: [redacted]
Inspection Date: 11/06/20
Scenario ID: [redacted]
Electric Incentive Rate: $20.00
Natural Gas Incentive Rate: $3.00
Generation Date: 01/19/21

Thank you for participating in BGE's Home Performance with ENERGY STAR (HPwES) Program. Based on the results of your Home Performance Energy Audit, we have attached a Prioritized List of Measures that details a range of energy efficiency improvements that may help ensure your family's health and safety and has the potential to reduce your home's energy use. In order to qualify for BGE's HPwES Program rebates, each project or phase of energy efficiency improvement(s) must be installed in compliance with ENERGY STAR, Building Performance Institute (BPI) and HPwES Program Standards.

In addition to the proposed scope of work and estimated energy savings, this report also provides you with all projected incentives. Projected incentives are based on the estimated lifetime savings that are calculated through the program's proprietary energy-savings modeling software. The lifetime energy savings, by measure, are all converted to a single energy unit if applicable for multi-fuel homes) and are then multiplied by an incentive factor (monetary value per energy unit) that calculates the projected incentive. This report is informational for your use only and is not a written contract between you and the Participating Contractor of your choice.

Questions about your audit, the upgrade process or your recommended projects? Contact one of our Energy Coaches. These independent home performance experts are standing ready to put their knowledge to work for you—at no additional cost. You'll receive prompt, courteous help tailored to your specific needs. Simply call 833.261.1246 or email EnergyCoachBGE@icf.com.

Health and Safety Concerns

Health and Safety items are not eligible for rebates and must be completed prior to the start of energy efficiency improvements. Corrections of health and safety items need to be verified by a certified BPI professional before starting work on any other items in the Prioritized List of Measures.

Item found	Correction needed
Whole House Ventilation - System 1	Diagnostic testing results indicate that Whole House Ventilation - System 1 does not satisfy ventilation requirements set forth by the Building Performance Institute's referenced whole-building ventilation standard. Adequate ventilation to the living area of the home is required prior to air sealing the building shell. A properly sized mechanical ventilation system must be installed prior to any shell improvement measures.

Prioritized List of Energy Efficiency Improvements

This below list of recommended improvements has been grouped into packages, which include individual improvements recommended to treat the suggested area effectively. Both the suggested package(s) and individual improvements, within the list, have been prioritized based on the cost effectiveness (SIR ratio); beginning with the most cost effective. Packages and/or individual measures on this list may be eligible for rebates through the HPwES Program if completed in compliance with current Program standards.

- **Savings to investment ratio (SIR):** *SIR is a savings-to-cost calculation that shows the cost-effectiveness of an energy efficiency improvement. For example, if you spend $1,000 on an energy improvement and that improvement saves you at least $500 over its lifetime, your SIR is 0.5 ($500/$1,000) for that improvement.*

Recommended Improvement	Existing Condition	Improved Condition	Proposed Lifetime Savings[1]	Proposed Incentives
Whole House Air Sealing Package (2)				
Air Sealing Level	Air leakage rate of 2640 cubic feet per minute at 50 Pascals.	Reduce leakage from living space to 2109 CFM50	$581.20	$230.32
		Package Totals:	**$581.20**	**$230.32**
Basement/Foundation Package				
Upper Floor Cantilever - Group 1	Area is not currently insulated	Add 37.68 square feet of Fiberglass Batt	$140.85	$63.77
		Package Totals:	**$140.85**	**$63.77**
Attic Package				
Attic Insulation - Attic Area 1	Current insulation level is 1" and condition is poorly insulated	Insulate 854.08 square feet w/ Fiberglass (open blow): 17 inches	$3,602.47	$1,887.69
		Package Totals:	**$3,602.47**	**$1,887.69**
		Comprehensive Project Totals:	**$4324.52**	**$2181.78**

[1]**Proposed Lifetime Savings -** *Potential monetary savings that the energy efficiency improvement may generate over its lifetime through lowered utility bills. The recipient of this document acknowledges that actual energy impacts may vary from the results produced by this tool; and that BGE and any of its Participating Contractors do not guarantee realization of these estimated energy impacts.*

[2]*Program Standards require that an effective air barrier between the living space and the attic is identified or installed prior to installing any other insulation or air sealing measures.*

Proposed incentives for air sealing are dependent on the actual reduction of the air sealing achieved as part of the scope of work. If the contractor is within 2 percentage points of their estimated reduction, rebates will be issued on the proposed air sealing reduction.

[3]*Whenever the recommendation is made to replace an operating HVAC system that has not reached or exceeded its determined useful life, customers may be eligible for increased incentives based upon the electric and/or natural gas savings provided that the following conditions have been verified or addressed:*

The existing conditions of the home do not require additional attic air sealing and the attic insulation is equal to or greater than R-49 (or filled as space allows), or the scope of work includes attic air sealing and the attic insulation to R-49 (or filled as space allows).

List of Additional Energy Efficiency Improvements

Items on this list are not eligible for rebates through the BGE HPwES program, but rebates may be available through other BGE program offerings.

Recommended Improvement	Description of Improvement	Available resources
Lighting Package		
Replacement Lighting	Your home has opportunities to upgrade existing lighting from standard incandescent bulbs to high efficiency bulbs. These high efficient bulbs use about 75% less energy and can last 10 to 25 times longer than incandescent bulbs.	BGE's Smart Energy Savers
Appliances Package		
Smart Strips	Your home has opportunities to install smart power strip(s) for electronic devices to help reduce standby energy consumption. Average household standby consumption can account for 5-10% of total electricity use. Smart strips automatically turn off the flow of electricity to products that go into standby mode, and shut down other peripheral devices that are not in use.	
Water Heating Package		
Storage (Tank) Water Heater - System 1	Your home's water heater could benefit from a system tune-up. Proper maintenance by a qualified technician is one of the most important steps you can take to keep your system running efficiently.	BGE's Smart Energy Savers

Building Performance Improvements

Some items on this list may be eligible for rebates. Discuss with your participating contractor.

Item to be addressed	Reasoning
Attic Ventilation (vents, baffles)	The attic is not properly ventilated. Properly venting the attic will ensure durability of attic and roof building materials.
Install New Exhaust Fans	One or more locations were found to be in need of a new exhaust fan or correction due to ineffectiveness. Properly exhausting moisture laden air from kitchens and bathrooms to the exterior of the building will prevent moisture-related durability and health & safety issues from occurring.
Vent Existing Exhaust Fans	The existing exhaust in one or more of your bathrooms are not properly vented to the exterior of the home. Properly exhausting moisture laden air from bathrooms to the exterior of the building will prevent moisture-related durability and health & safety issues from occurring. All existing exhaust fans must be properly vented to the exterior of the home prior to performing any shell improvement measures.
Bathroom 1 - Ventilation	Bathroom 1 was identified as failing to include an effective means of ventilation. Bathrooms are a source of excess moisture and should always be mechanically ventilated. Ventilation to the exterior will help avoid moisture-related durability and health & safety issues. All exhaust ducts must terminate to the exterior of the building shell.

Customer Verification of Receipt Statement

CUSTOMER: This form is intended to demonstrate a prioritized list of energy-efficient improvements that may reduce energy consumption. The anticipated rebate for each completed measure is included, assuming the measure has been installed in compliance with program standards. Customer acknowledgment of receipt of this form and the requested incentive amount is required. All requested incentives are subject to review and approval by Program administration. By signing below, I acknowledge receipt of this document and proposed incentives.

Customer Signature: [redacted] Requested Incentive: $2181.78 Date: 1/19/2021

EmPOWER Maryland programs are funded by a charge on your energy bill. EmPOWER programs can help you reduce your energy consumption and save you money. To learn more about EmPOWER and how you can participate, go to BGESmartEnergy.com.