

Public Hearing

MEMORANDUM

March 20, 2009

TO: County Council

FROM: Amanda Mihill, Legislative Analyst *A. Mihill*

SUBJECT: **Public Hearing:** Expedited Bill 6-09, Home Energy Loan Program - Establishment

Expedited Bill 6-09, Home Energy Loan Program – Establishment, sponsored by Councilmembers Berliner, Elrich, Ervin, Trachtenberg, Floreen, and Leventhal, was introduced on February 24, 2009. A Transportation, Infrastructure, Energy and Environment Committee worksession is tentatively scheduled for March 26 at 3:00 p.m.

Expedited Bill 6-09 would establish a Home Energy Loan Program to assist single family homeowners to make an energy efficiency improvement or install a renewable energy device, establish a revolving loan fund to provide homeowners loans under the Program, and generally amend the environmental sustainability law.

This packet contains:

	<u>Circle</u>
Expedited Bill 6-09	1
Legislative Request Report	12
Press Release from Councilmember Berliner	13
Excerpt from the Sustainability Working Group Report	19

Expedited Bill No. 06-09
Concerning: Home Energy Loan
Program - Establishment
Revised: 2/20/2009 Draft No. 5
Introduced: February 24, 2009
Expires: August 24, 2010
Enacted: _____
Executive: _____
Effective: _____
Sunset Date: _____
Ch. _____, Laws of Mont. Co. _____

COUNTY COUNCIL FOR MONTGOMERY COUNTY, MARYLAND

By: Councilmembers Berliner, Elrich, Ervin, Trachtenberg, Floreen, and Leventhal

AN EXPEDITED ACT to:

- (1) establish a Home Energy Loan Program to assist single-family homeowners to make an energy efficiency improvement or install a renewable energy device;
- (2) establish a revolving loan fund to provide homeowners loans under the Program;
and
- (3) generally amend the environmental sustainability law.

By adding

Montgomery County Code
Chapter 18A, Environmental Sustainability
Article 4, Home Energy Loan Program

Boldface	<i>Heading or defined term.</i>
<u>Underlining</u>	<i>Added to existing law by original bill.</i>
[Single boldface brackets]	<i>Deleted from existing law by original bill.</i>
<u>Double underlining</u>	<i>Added by amendment.</i>
[[Double boldface brackets]]	<i>Deleted from existing law or the bill by amendment.</i>
* * *	<i>Existing law unaffected by bill.</i>

The County Council for Montgomery County, Maryland approves the following Act:

1 **Sec. 1. Chapter 18A, Article 4 is added as follows:**

2 **Chapter 18A. Environmental Sustainability**

3 * * *

4 **Article 4. Home Energy Loan Program**

5 **18A-24. Definitions.**

6 In this Article, except as provided in Section 18A-30, the following words
7 have the meanings indicated:

8 Certified energy auditor means any individual who:

9 (a) is a participating contractor/auditor with the Maryland Home
10 Performance with ENERGY STAR Program; or

11 (b) meets other equivalent requirements approved by the Director.

12 Cost effective means the maximum estimated amount of time it takes for an
13 energy efficiency improvement to pay for itself through reduced energy costs
14 (the “payback” period), as determined by the Department.

15 Department means the Department of Environmental Protection.

16 Director means the Director of the Department or the Director’s designee.

17 Eligible cost means the net cost of buying or installing an energy efficiency
18 improvement or renewable energy device, including any part, component, or
19 accessory necessary to operate the improvement or device.

20 Energy efficiency improvement means a permanent improvement made to an
21 existing single-family home that:

22 (a) reduces the consumption of energy in the home, including:

23 (1) caulking and weatherstripping doors and windows;

24 (2) heating and cooling system efficiency modifications, including:

25 (A) replacing a burner, furnace, heat pump, or boiler, or air
26 conditioner with a high efficiency model;

- 27 (B) a device to modify flue openings that increases the energy
28 efficiency of the heating system;
- 29 (C) any electrical or mechanical furnace ignition system which
30 replaces a standing gas pilot light; and
- 31 (D) any tune-up that increases the operating efficiency;
- 32 (3) a programmable thermostat;
- 33 (4) ceiling, attic, wall, or floor insulation;
- 34 (5) whole house air sealing;
- 35 (6) water heater tune-up, water heater insulation, pipe insulation, or
36 charge-out to ENERGY STAR qualified water heater;
- 37 (7) storm windows or doors or ENERGY STAR qualified window or
38 door replacement;
- 39 (8) air distribution system improvements, including duct insulation
40 and air sealing;
- 41 (9) any device which controls demand of appliances and aids load
42 management; and
- 43 (10) any other conservation device, renewable energy technology, and
44 specific home improvement that the Director finds reduces the
45 consumption of energy in the home; and
- 46 (b) meets safety and performance standards set by a nationally recognized
47 testing laboratory for that kind of device, if these standards are
48 available.

49 Energy efficiency improvement does not include a standard household
50 appliance, such as a washing machine or clothes dryer.

51 ENERGY STAR rating means the ENERGY STAR rating developed by the
52 federal Environmental Protection Agency which rates a product's energy
53 efficiency.

54 Home energy audit means an evaluation of the energy efficiency of a home
 55 which includes any test or diagnostic measurement that the Department finds
 56 necessary to:

57 (a) assure that a home's energy efficiency is accurately measured; and

58 (b) identify cost effective steps that can be taken to improve a home's
 59 energy efficiency.

60 Home Energy Loan Fund or Fund means the revolving loan fund established
 61 under Section 18A-30 to provide funding for the Home Energy Loan Program.

62 Home Energy Loan Program or Program means the program that provides
 63 zero or low interest loans to install an energy efficiency improvement or
 64 renewable energy device.

65 Home Energy Rating System or HERS means the energy efficiency rating
 66 system for residential buildings developed by the Residential Energy Services
 67 Network.

68 Low interest loan means a loan with an interest rate below prevailing rates for
 69 residential home improvement loans, and which reflects:

70 (a) the County's current cost of borrowing funds or the cost, if any, of
 71 federal funds made available to the County for this purpose; and

72 (b) the cost of administering the Program.

73 Renewable energy means the following energy sources or technology:

74 (a) solar;

75 (b) wind;

76 (c) geothermal; and

77 (d) any other energy source or technology which the Director finds is
 78 derived from natural processes that do not involve the consumption of
 79 exhaustible resources.

80 Renewable energy device means a device that:

- 81 (a) creates, converts, or actively uses renewable energy;
 82 (b) is permanently installed on the home or property; and
 83 (c) meets safety and performance standards set by a nationally recognized
 84 testing laboratory for that kind of device, if these standards are
 85 available.

86 Single-family home means a single-family detached or attached residential
 87 building. A single-family home includes a condominium.

88 **18A-25. Established; purpose.**

89 The Director must create and administer a Home Energy Loan Program to:

- 90 (a) improve energy efficiency;
 91 (b) promote energy conservation;
 92 (c) reduce greenhouse gas emissions; and
 93 (d) reduce consumption of fossil fuels by County residents.

94 **18A-26. Eligibility; use of funds.**

- 95 (a) The Director may loan funds to an owner of a single-family home to
 96 fund eligible costs to make an energy efficiency improvement that is
 97 projected to be cost effective or install a renewable energy device in the
 98 single-family home, up to the maximum loan amount set by regulation.
 99 (b) To be eligible for a loan under this Program, a property owner must:
 100 (1) have a home energy audit performed on the owner's single-
 101 family home by a certified energy auditor, as required under
 102 Section 18A-27;
 103 (2) have the energy efficiency improvement completed or renewable
 104 energy device installed within 6 months after receiving the loan;
 105 and

- 106 (3) agree to repay the loan amount borrowed through the County tax
 107 bill for that home, as required by Section 18A-28.
- 108 (c) The Department of Permitting Services must certify that the
 109 improvement or device for which the funds were loaned has been
 110 properly installed. The Department must accept a certification by
 111 another government agency, including a municipality, that the
 112 improvement or device has been [[property]] properly installed. The
 113 County Executive may assign the responsibility under this subsection to
 114 another entity, including a third party.
- 115 (d) The term of the loan must be 15 years[[,]] unless the Director sets a
 116 different loan term by regulation.
- 117 (e) *Use of funds for an energy efficiency improvement.*
- 118 (1) A person may borrow funds for eligible costs to make an energy
 119 efficiency improvement, less any amount received from a public
 120 or private program because the improvement is or will be made.
- 121 (2) Except as provided by subsection [[(f)(2)]] (e)(3), funds must be
 122 loaned only for an energy efficiency improvement that is
 123 projected to be cost effective.
- 124 (3) Funds may be loaned for an energy efficiency improvement that
 125 is not cost effective if that improvement is part of a package of
 126 improvements financed under the Program that cumulatively is
 127 cost effective.
- 128 (f) *Use of funds for a renewable energy device.*
- 129 (1) A person may borrow funds for eligible costs to install a
 130 renewable energy device only if:
- 131 (A) the single-family home has a HERS score of 100 or below;
 132 or

- 133 (B) the owner has a home energy audit performed on the
 134 owner's home and, based on the audit recommendations,
 135 makes energy efficiency improvements that result in a 30
 136 percent increase in efficiency.
- 137 (2) A person may borrow funds for eligible costs to install a
 138 renewable energy device, less any amount received from a public
 139 or private program because the device is or will be installed.
- 140 (3) A person must not borrow funds to install a renewable energy
 141 device if that person receives a property tax credit for renewable
 142 energy devices under Section 52-18R.

143 **18A-27. Home energy audit.**

- 144 (a) An applicant for a loan under this Program must have and submit to the
 145 County a home energy audit performed on the owner's home by a
 146 certified energy auditor.
- 147 (b) The auditor must prepare a written report that:
- 148 (1) contains findings and recommendations to improve the home's
 149 energy efficiency;
- 150 (2) identifies those cost effective energy efficiency improvements
 151 which would generate projected annual energy cost savings,
 152 based on projected energy costs set by Method (3) regulation, that
 153 are equal to or more than the estimated cost of the improvements
 154 to be financed under the County Program when the cost of the
 155 improvements are amortized over 15 years; and
- 156 (3) identifies any public or private financing mechanisms known to
 157 the auditor that could be used to implement energy efficiency
 158 improvements.
- 159 (c) The cost of the audit may be included in the amount of the loan.

160 **18A-28. Repayment of funds; lien.**

- 161 (a) The owner of single-family home must agree to repay the loan amount
 162 borrowed, amortized over 15 years, through the County property tax bill
 163 for that home.
- 164 (b) If the owner of the single-family home sells the home, the seller must
 165 disclose that the buyer must continue to repay the loan through the
 166 property tax bill.
- 167 (c) The loan amount and any accrued interest constitute a first lien on the
 168 real property to which the loan applies until paid. The loan amount and
 169 accrued interest are collectable by suit or tax sale like all other real
 170 property taxes, to the extent allowed by State law. [[In the event of a
 171 failure to]] If the property owner does not pay the loan and accrued
 172 interest as required, the property may be certified to the Department of
 173 Finance and the lien may be sold at the tax sale conducted by the
 174 County. The deferred fees constitute a personal liability of the owner of
 175 the property.

176 **18A-29. Regulations.**

177 The Executive must adopt regulations under Method (2) to administer the
 178 Program, including:

- 179 (a) lending standards and priorities;
- 180 (b) minimum and maximum loan amounts;
- 181 (c) interest rates, terms, and conditions;
- 182 (d) application procedures, including necessary supporting documentation;
- 183 (e) criteria for adequate security;
- 184 (f) procedures to refer applicants to other sources of funds, and to
 185 cooperate with other public and private sources of funds;

- 186 (g) procedures to ask the Director to reconsider any denial of a loan or any
 187 decision on interest rates, terms, and conditions;
 188 (h) procedures for nonpayment or default;
 189 (i) procedures and requirements for post-installation inspection; and
 190 (j) disclosure requirements for real estate transactions.

191 **18A-30. Revolving loan fund.**

192 (1) Definitions. In this Section, the following words have the meanings
 193 indicated:

194 Department means the Department of Finance.

195 Revolving loan fund or Fund means the special, nonlapsing fund to
 196 finance the Home Energy Loan Program established under this Article.

197 (b) The Fund consists of:

- 198 (1) money appropriated in the County budget for the Program;
 199 (2) money received from any public or private source;
 200 (3) interest and investment earnings on the Fund;
 201 (4) repayments and prepayments of principal and interest on loans
 202 made from the Fund; and
 203 (5) any other available funds to support the Program.

204 (c) The Department must:

- 205 (1) disburse funds and collect payments for a loan made under the
 206 Program; and
 207 (2) maintain loan records and provide an annual report to the
 208 Department of Environmental Protection.

209 **18A-31. Annual report.**

210 Each August 15, the Director must submit a report to the County Executive
 211 and County Council that identifies;

- 212 (a) the number of recipients of loans;

- 213 (b) the amount of funds loaned; and
 214 (c) any activities during the previous fiscal year to market the Program.

215 **18A-32. Third party contract.**

216 (a) The County may contract with a non-profit or for-profit organization to
 217 take any action necessary to fulfill the purposes of this Article,
 218 including:

- 219 (1) prepare and review, evaluate, and approve applications;
 220 (2) execute loan agreements;
 221 (3) secure and service loans;
 222 (4) collect loan payments; and
 223 (5) conduct collections for defaulted loans.

224 (b) The County, or a contractor for the County, may charge an applicant or
 225 borrower usual and customary fees, including:

- 226 (1) application fees;
 227 (2) loan origination fees;
 228 (3) delinquency fees;
 229 (4) costs of collection; and
 230 (5) other program fees to support verification of program
 231 requirements.

232 **Sec. 2. Initial regulations.**

233 The County Executive must adopt and submit to the County Council, not later
 234 than (date 3 months after enactment of bill), regulations to implement Article 4 of
 235 Chapter 18A, as added by Section 1 of this Act.

LEGISLATIVE REQUEST REPORT

Expedited Bill 6-09, *Home Energy Loan Program - Establishment*

DESCRIPTION:	Expedited Bill 6-09 would: (1) establish a Home Energy Loan Program to assist single-family homeowners to make an energy efficiency improvement or install a renewable energy device; and (2) establish a revolving loan fund to provide homeowners loans under the Program.
PROBLEM:	Making energy efficiency improvements to homes is a cost-effective way to reduce greenhouse gas emissions. However, the lack of accessible and low-cost financing options is a barrier to many homeowners and prevent them from making these energy efficiency improvements.
GOALS AND OBJECTIVES:	To establish a program to provide homeowners with a low-cost financing option to make energy efficiency improvements to their homes, thereby reducing energy costs and greenhouse gas emissions.
COORDINATION:	Departments of Environmental Protection, Finance, and Permitting Services.
FISCAL IMPACT:	To be requested.
ECONOMIC IMPACT:	To be requested.
EVALUATION:	To be requested.
EXPERIENCE ELSEWHERE:	To be researched.
SOURCE OF INFORMATION:	Amanda Mihill, Legislative Analyst, (240) 777-7815.
APPLICATION WITHIN MUNICIPALITIES:	To be researched.
PENALTIES:	N/A



Montgomery County Council

From the Office of Councilmember Roger Berliner

January 15, 2009

Contact Councilmember Berliner's Office: 240-777-7828

HELP Is on the Way

County's Sustainability Working Group Report Supports Berliner Home Energy Loan Program (HELP)

ROCKVILLE, Md., January 15, 2009 – Today the Sustainability Working Group issued its first set of climate change recommendations in response to legislation sponsored by Councilmember Roger Berliner. The SWG report recommends a comprehensive and diverse package of initiatives that will benefit residents and businesses and save them money in the long term by investing in clean energy, green buildings, energy efficiency and mass transportation choices.

"I want to commend the members of the Sustainability Working Group for their dedication and hard work, particularly the public members who generously gave their time and thoughtful ideas," said Montgomery County District 1 Councilmember Roger Berliner (Bethesda, Chevy Chase, Potomac) "This report lays a path for the next generation of Climate Change initiatives. I look forward to working with the Executive to see enactment of those ideas that will help our constituents, our economy and create a sustainable Montgomery County."

Councilmember Berliner is particularly gratified that the Sustainability Working Group endorsed his initiative to create a Home Energy Loan Program (HELP). Councilmember Berliner proposed the establishment of HELP in an Energy and Environment White Paper he co-authored with Ken Brown, executive director of Climate Communities (attached). The white paper was released in December. Since then, Congressman Chris Van Hollen, with the editorial support of the Washington Post, has embraced the proposal and has recommended it to President-elect Obama and Congress for inclusion in the stimulus package.

Under Councilmember Berliner and Congressman Van Hollen's proposal, a property owner would receive a zero interest loan from the proposed Montgomery County Home Energy Loan Program (HELP) to pay for an energy audit and the recommended efficiency improvements. The property owner would repay the loan through a line item on their property tax bill. The advantage of this approach is that the property owners would only have to repay the loan while they owned the property. The new owner

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would continue to repay the loan through the property tax bill – and enjoy the lower energy costs – after they acquire the property.

“HELP is on the way,” said Councilmember Berliner. “This proposal, once enacted, will put money in our homeowner’s pockets, reduce greenhouse gas emissions by 20%, and create green jobs in Montgomery County. This is a winning combination whose time has come.”

“Local governments’ ability to tie home energy retrofit loans to the property is a game changer because a key barrier to investments in energy efficiency is the homeowners’ uncertainty about whether they will be in the house long enough to realize the benefits of their investment. Regardless of how long the homeowner stays in a property, the homeowner need only weigh the reduction in their utility bills against the monthly cost of the loan.”

Using this approach, a homeowner is likely to make a larger investment sooner, resulting in greater savings and a more marketable home to sell.

“Today, with current financing options, homeowners often opt for measures with a two to three year payback,” said Councilmember Berliner. “Under this model, measures with seven-year paybacks can be financed under terms that are attractive and more than pay for themselves.” Legislation will be introduced later this month.

The Sustainability Working Group (SWG) is comprised of 26 members representing a broad range of public and private sector interests. It is co-chaired by Montgomery County Department of Environmental Protection (DEP) Director Bob Hoyt and Jane Nishida. Nishida formerly served as the secretary of the Maryland Department of the Environment and currently is the senior environmental institutions specialist at the World Bank.

For more information about the Home Energy Loan Program, call 240-777-7828.

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**A Federal/Local Government Partnership
that Breaks the Home Energy Retrofit Conundrum**

An Energy & Environment White Paper
The Honorable Roger Berliner and Ken Brown, Executive Director of Climate
Communities

President-elect Obama has pledged to make the development of a green energy economy a hallmark of his Administration and the Democratic Congressional leadership has signaled its own commitment to a green future. Local governments are uniquely positioned to partner with the President-elect and Congress to transform this vision into reality.

Cities and counties across America are the first responders to the challenge of climate change – improving energy efficiency standards for buildings, promoting solar and geothermal projects, improving mass transit systems, and reducing vehicle miles traveled through local land use and smart growth policies.

Local governments can be particularly effective in reducing greenhouse gas (GHG) emissions caused by home energy consumption. This single source contributes almost one-third of our nation's and 10% of the world's GHG emissions. We all know that homes waste energy; last year GHG emissions from the residential sector increased more than any other source.

Every reputable study makes clear that retrofitting our homes with simple things like sealing and caulking, as well as energy-efficient lighting, windows, insulation, and heating and cooling systems, is the single most cost-effective way to reduce GHG emissions. Saving energy from homes is not only inexpensive; it can actually result in a positive cash flow for homeowners. The icing on the cake is that by investing in home energy efficiency we would produce thousands of local green jobs for contractors and builders that have been devastated as the housing market has tanked.

Bottom line: we could put money in people's pockets, stimulate our economy, create new green jobs, reduce our dependence on foreign oil and help

save the planet. So what stands in the way? The lack of an accessible and low-cost financing option that makes sense for homeowners. This remains the principle barrier to plucking the lowest of the low hanging fruit.

Fortunately, the broad parameters of a solution are coming into focus—a combination of energy audits that help owners identify cost-effective efficiency measures; low cost financing; and the unique ability of local governments to tie repayments of the loan to the property through the property tax bill.

Here is how it would work. Suzie and Harry Homeowner receive a \$5,000 loan from the proposed Montgomery County Home Retrofit Revolving Fund to pay for an energy audit and the recommended efficiency improvements. The Homeowner family would repay the loan through a line item on their property tax bill. The advantage of this approach is that the Homeowners would only have to repay the loan while they owned the house. The new owner would continue to repay the loan through the property tax bill – and enjoy the lower energy costs – after they acquire the property.

Local governments' ability to tie home energy retrofit loans to the property is a game changer because a key barrier to investments in energy efficiency is the homeowners' uncertainty about whether they will be in the house long enough to realize the benefits of their investment. Regardless of how long the homeowner stays in a property, the homeowner need only weigh the reduction in her utility bills against the monthly cost of the loan.

Using this approach, a homeowner is likely to make a larger investment sooner, resulting in greater savings and a more marketable home to sell. Today, with current financing options, homeowners often opt for measures with a two to three year payback. Under this model, measures with seven year paybacks can be financed under terms that are attractive and more than pay for themselves.

The County estimates that a \$5,000 package of home retrofit measures under this program will reduce the family's energy consumption and carbon emissions by 20% a year and put a net \$230 a year back into their stressed family budget.

This same model will encourage investment in solar technology. The front-end cost of solar and the timeframe to realize "payback" often acts as a deterrent to purchasing home solar systems. Low-cost financing, solar tax credits, and a repayment plan that is linked to the property make investment in solar energy much more affordable. The combination of robust energy efficiency measures and

solar energy production could easily reduce GHG emissions from our residential building sector by half.

The role of local government is critical to breaking financial the barriers to home energy retrofits. We want a significant percentage of homeowners to invest \$5,000 to improve the energy efficiency of their homes. In order to achieve these goals, we need a robust source of funds. Local governments in this economy are already at the breaking point. We need the assistance of the federal government to make this model work nationwide and to provide the zero interest financing that only the federal government is in a position to provide.

The economic recovery legislation that is being developed by President-elect Obama and Congress should include federal funding to capitalize Local Government Home Retrofit Revolving Funds across the country. Certainly if we can provide trillions for Wall Street with unknown results, we can provide billions for a secure revolving fund that will put people back to work in communities across the country, revitalize our economy, and preserve our planet.

***Roger Berliner**, an energy lawyer, is Vice President and Lead Member for Energy & Environment on the Montgomery County, Maryland County Council. **Ken Brown** is a partner at The Ferguson Group and the Executive Director of Climate Communities, a national coalition of cities and counties working to ensure that federal policies empower local climate action.*

The Washington Post

AN INDEPENDENT NEWSPAPER

Renewable Idea

Two green stimulus proposals underscore the need to put a higher price on carbon.

REPS. CHRIS Van Hollen (D-Md.) and Zach Wamp (R-Tenn.) have sent a letter to President-elect Barack Obama outlining two promising ideas for inclusion in the stimulus package that would help get renewable energy companies off life support and encourage homeowners to make their dwellings more energy-efficient. Both ideas are worthy — but both also point, once again, to the importance of Congress doing something to raise the cost of using oil, gas and coal, either through a carbon tax or a cap-and-trade system.

The Home Energy Savings Revolving Fund would provide zero-interest loans to help homeowners pay for energy-efficient lighting, windows, doors, insulation and other improvements. The money would be provided by local governments, which would tie repayments to the homeowner's property tax bill. Annual payments on the loans would be lower than the resulting reduction in a home's energy costs, providing an incentive to participate. Unpaid loan balances would convey with the property, so that even a homeowner who expected to move within a couple of years could feel free to invest in long-term improvements. The measure could create jobs in the hard-hit housing and construction industries without adding new homes to a glutted market.

The National Clean Energy Lending Authority, or "green bank," would offer loan guarantees to renewable energy projects that have already attracted private capital but are endangered because of the credit crisis and the drop in oil prices. For instance, Mr. Van Hollen showed us a list of 53 wind energy projects that have been sidelined for a lack of financing. He said that every public dollar could be leveraged into \$10 in private capital. If successful, many of those wind, solar, geothermal and cellulosic-ethanol projects sitting on drawing boards could come to fruition.

Both of these ideas have merit, but they have something else in common: They're needed, in part, because plummeting oil prices have reduced the incentive to invest in conservation and alternative energy. Rather than pick and choose technologies or individual projects to back, as would the green bank, Congress could pass legislation that would guarantee a gradual increase in the price of greenhouse-gas-emitting fuels. Business would get the price signal it needs to invest in clean energy technologies; consumers would change their behavior to make those new businesses viable. And the federal government could get out of the business of picking winners and losers in renewable energy.

curtailment of some loads (e.g., water heaters or air conditioners). The displays can also complement other programs seeking to reduce consumer energy consumption such as weatherization and CFL give-away programs, allowing residents to see the immediate cost savings resulting from energy efficiency improvements.

The County should establish a goal that 10% of County homeowners receive an in-home energy meter by the end of 2010, rising to 50% by 2020 unless superseded by utility supplied programs.

Implementation Steps

- Incorporate information on in-home energy displays into County energy and sustainability educational programs.
- Continue to advocate for utility programs that provide in-home energy displays as part of direct load control and advanced metering programs. Collaborate with utilities in marketing benefits and attributes of the programs.
- Collaborate with electricity and natural gas utilities to develop a pilot to buy-down the initial cost of commercially available in-home energy displays for customers.
- Provide financial incentives, in the absence of utility based programs, to reduce the cost of an in-home energy display by adding the home energy display as a qualifying energy-efficiency device under the County's Energy Conservation Property tax credit.



EER-4 Recommendation: *Develop a low cost loan program to facilitate residential energy efficiency improvements.*

The technologies needed to make long-term reductions in home energy consumption exist today. While each home's needs are different, a combination of insulation; heating, ventilating, and air conditioning; and lighting properly applied can result in substantial reductions in energy consumption, increase the value of a home, and save money. Implementing energy efficiency improvements can also create green job opportunities and markets for products and services.

Residents are increasingly aware of the need to improve the energy performance of their homes. Two key barriers to undertaking improvements are identifying the actions that will result in real and sustained energy savings, and paying for those actions.

The first barrier – identifying cost-effective energy efficiency improvements – can be addressed by a high-quality energy audit delivered by a trained professional. To help alleviate this issue, the Maryland Energy Administration has sponsored Maryland Home Performance (MDHP), a program that trains and certifies contractors to perform energy audits and in many cases install whole house energy improvements. Certified auditors recommend energy efficiency improvements based on their effectiveness. Where owners adopt recommendations, a follow-up visit verifies the effectiveness of the improvement after it is installed. PEPCO's recently approved programs for energy efficiency and demand side management programs include incentives for MDHP energy audits.

The second barrier, paying for the improvements, must be addressed in order for large numbers of County homeowners to undertake improvements to their homes. Based on audits conducted in 2008, the average MDHP audit identifies opportunities that can reduce household energy consumption, energy costs and emissions by 20%, at an implementation cost of approximately \$5,000, resulting in a payback period of approximately seven years. However, the initial cost is more than the average homeowner can afford, even after applying utility rebates and property tax credits offered by the County. While installer financing is available to homes with high credit ratings, the terms may not be favorable. In addition, the loan is tied to the individual and must be repaid even if the individual moves or sells the house, while the benefits of the energy savings are reaped by the home's next owner.

A solution to this key barrier is for the County to develop a loan program to facilitate financing of effective energy efficiency improvements. The County would facilitate collection of loan repayments via the property tax collection process, a program design that has been implemented or is under development in Berkeley, California, Annapolis, Maryland, and Palm Desert, California.

The framework for this program consists of the following steps:

- An audit by a MDHP certified auditor, or equivalent audit, would be required in order to be eligible for financing. This ensures that cost-effective improvements are identified.
- A MDHP certified auditor, who is also a licensed contractor in Maryland, would then perform the work as a contractor or verify the installation by a homeowner or other contractor.
- Consumers can opt for a low-cost long-term loan through a County supported program, confident that monthly energy savings will be greater than the cost of financing, ensuring positive cash flow for the current and future owners of the home.
- Repayment of the loan balance would be collected annually through the County's property tax bill, giving lenders a greater reassurance of repayment and lessened administrative costs.
- If the homeowner sold the home before the financing was paid in full, the loan balance along with the benefits of the energy-efficiency improvements would transfer to the new owner.

The essential uncertainty that needs to be evaluated is how the financing will be funded and administered. There are three potential options:

Option 1 – Advocate for a federally-sponsored loan program. Under this option the County would advocate for federal funding from economic stimulus or other legislation to establish loan programs with the agreement that the County would administer repayment through the property tax collection process. However, funding is not guaranteed.

Option 2 - Issue a taxable bond to fund loans administered by the County. This allows the County to secure favorable interest rates for a revolving loan. The County would collect funds to repay the bond through the property tax collection process. However,

this implementation mechanism is subject to the County's debt ceiling and risk may be incurred from consumer defaults on loan balances.

Option 3 – Partner with a non-profit or pool of certified lenders to offer financing. Under this option, the County would secure collection of loan repayment via the property tax collection process but financing would be provided by private sector lenders. Under this option the interest rate is uncertain, but would likely be reduced below market due to the County's administering of repayment.

It is recommended that the County immediately begin developing a framework for a residential energy-efficiency loan program based on the most favorable model that can be developed in order to achieve implementation at the earliest possible date.

Implementation Steps

- Advocate for federal funding of a residential revolving loan program.
- Direct the Departments of Finance and Environmental Protection to immediately create a plan for a revolving loan program for residential energy-efficiency improvements in order to achieve implementation at the earliest possible date.
- Identify and develop sources of below market rate financing.
- Establish quality criteria for energy audits, equivalent to those delivered by Maryland Home Performance trained auditors.
- Identify a process to collect loan repayment through the Montgomery County Department of Finance.
- Develop an outreach and marketing campaign, in partnership with utilities and community organizations, to build consumer awareness of the benefits of energy-efficiency and availability of the loan program.
- Evaluate options for expanding the program to renewable energy technologies and the commercial and multi-family sectors.

Recommendation EER-5: *Create an effective residential energy education and outreach program with the goal that 50% of Montgomery County homeowners will take steps to reduce the annual consumption of energy in their homes by at least 25% by 2020.*

Public education is critically important to achieving the County's goal of reducing GHG emissions by 20% by 2020. In the residential energy sector, much of this reduction will be as a result of voluntary actions by homeowners. Fortunately, there are ample opportunities to achieve substantial reductions in energy use in existing single family homes.

Significant amounts of energy can be saved in the average home through sealing and insulating the building envelope, upgrading HVAC equipment, and replacing old appliances with ENERGY STAR models. For example, the U.S. EPA estimates that homeowners can reduce heating and cooling costs by 20% by air sealing their homes and adding insulation in attics, floors over crawl spaces, and accessible basement rim joists (www.energystar.gov). ENERGY STAR appliances can cut energy costs by as much as 50%.