

T&E COMMITTEE #2  
June 24, 2010

**MEMORANDUM**

June 22, 2010

TO: Transportation, Infrastructure, Energy & Environment (T&E) Committee  
FROM: *KL* Keith Levchenko, Senior Legislative Analyst  
SUBJECT: **Executive Regulation 2-10, Home Energy Loan Program**

On April 21, the County Executive transmitted Executive Regulation 2-10, Home Energy Loan Program (see ©1-5) under Method 2.<sup>1</sup>

**Summary of Major Issues Discussed in this Memorandum**

- Eligible Properties
- Energy Audit Requirements
- Fundamental Health and Safety Remediation Improvements Provision Added
- Cost Effectiveness Calculation and Exemptions Details
- Renewable Energy Device Eligibility
- Home Equity Requirement for Loan Approval
- Future Regulation to set fees and interest rate assumptions

Attachments

- County Executive Transmittal and Fiscal Impact Statement (©1-5)
- Executive Regulation 2-10 "Home Energy Loan Program" (©6-22)
- County Code Chapter 18A "Home Energy Loan Program Excerpts (©23)
- Comments Received by the County Executive on Regulation 2-10 (Summary listing of individuals and organizations who commented is attached on ©24. Full comments are included on the web version ([http://www.montgomerycountymd.gov/content/council/pdf/agenda/cm/2010/100624/20100624\\_TE2.pdf](http://www.montgomerycountymd.gov/content/council/pdf/agenda/cm/2010/100624/20100624_TE2.pdf)) of this packet only, beginning on ©25)

<sup>1</sup>As a Method 2 regulation, the Council may approve or disapprove the proposed regulation within 60 days after receiving it. If no action is taken within 60 days to approve or disapprove the regulation and the Council does not act to extend the deadline, then the regulation is automatically approved. On June 15, 2010, the Council extended the deadline. If approved by the Council, the regulation becomes effective the day after approval since no later date is specified in the regulation.

## **Background**

Executive Regulation 2-10 will implement the Home Energy Loan Program as created by the Council in Bill 06-09 on April 14, 2009.

The Home Energy Loan Program is intended to encourage property owners of single-family (attached or detached) homes and condominiums to make cost-effective energy efficiency improvements and/or install clean energy devices to their homes by providing loans which would be repaid over 15 years through property tax bill payments. The intent is for the energy savings from the improvement to fully offset the loan payments.

A key element of the program is that the loan is to be linked to the property (through the property tax bill) rather than to the property owner directly. This approach removes the concern a current property owner may have of committing to pay back a significant investment of dollars for savings that may accrue to a future owner of the property. Under a HELP loan, a future property owner would assume the loan payments.

The County has preliminarily allocated \$1.53 million from Energy Efficiency and Conservation Block Grant funds (funded by the American Recovery and Reinvestment Act, ARRA) to provide initial funding to start-up the program.<sup>2</sup> The intent is for the loan program to be self-supporting through fees, interest charges, and loan repayments being used to provide future loans to eligible property owners.

The program is to be overseen by the Department of Environmental Protection (DEP) and the Department of Finance. However, according to DEP staff, the day to day management of the loan program itself is likely to be done by a 3<sup>rd</sup> party. These details are still being developed as part of a "Program Plan" (discussed later).

## **Issues**

Council Staff has identified a number of issues for Council discussion.

### **Eligible Properties**

As mentioned earlier, all owners of single family (attached or detached) properties as well as condominiums are eligible to receive HELP loans. However, in the case of condominiums, the improvements "must be limited to the parts of the building that are under the exclusive control of the property owner." (see Section V on ©13). This requirement could be a severely limiting factor in some cases, since individual and common energy-related elements in a condominium setting are not always separable. As currently structured, the HELP program is best designed for single family homes.

**While there may be some opportunities for condominium owners to participate in the HELP program, Council Staff suggests that other initiatives to address energy**

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<sup>2</sup> An FY11 special appropriation for the County Government portion of the ARRA funding is expected to be transmitted to the Council shortly.

**efficiency in multi-family (and commercial) properties (such as those noted by the Sustainability Working Group) be developed as well.**

### **Energy Audit Requirements**

The regulation reiterates the language in Bill 06-09 that ALL loan applicants MUST get an energy audit from a certified energy auditor. The regulation (see Section VI) includes more detail than Bill 06-09 as to what requirements an auditor must meet to be certified as well as the audit parameters.

The definition on ©8 notes that the auditor must participate in the Maryland Home Performance with Energy Star Program and/or participate in a utility sponsored Home Performance with Energy Star Program or otherwise meet equivalent requirements approved by the Director (as published in the Program Plan).

Section VIA (©14) notes that, “Audits must be based on the HPwES (Home Performance with Energy Star) process developed, promoted and monitored by the US Environmental Protection Agency’s ENERGY STAR Program.”

Section VIA3 includes a provision to allow an alternative to Building Performance Institute (BPI) certification if it is deemed equivalent by the EPA under the Home Performance with Energy Star (HPwES) program and accepted by the applicable HPwES sponsor.

The intent of these specific criteria is to ensure consistency of audits across all of the loan applicants and to minimize extra administrative and programmatic infrastructure needs. The “equivalent requirements” provision is included in case the other provisions go away or are replaced by successor programs.

**These details are consistent with the intent of Bill 06-09 and Council Staff supports the language included in the regulation.**

### **Fundamental Health and Safety Remediation (FHSR)**

Executive Regulation 2-10 includes an FHSR provision (Section IVB, see ©12) which is not mentioned in Bill 06-09. This provision would allow for certain non-energy efficiency or clean energy improvements costing up to 10% of the energy improvement cost (not to exceed 10% of the non FHSR costs, up to a \$1,500 maximum). These improvements must be recommended by the applicable contractor or auditor as being required to properly install the energy efficiency or renewable energy improvements. The cost of the FHSR improvements would NOT be considered in the cost-efficiency calculation (discussed later).

The intent of this new language is to ensure that FHSR issues that may be identified in an energy audit process and which should be mitigated in advance or as part of future improvements can be affordably addressed by the property owner. **Council Staff supports this provision. While these costs would increase future loan payments in comparison to assumed energy**

savings, the \$1,500 cap and the loan term of 15 years will minimize the impact.

### Cost-Effectiveness Calculation and Exemptions

A key element of the HELP program is the assumption regarding cost-effectiveness. A basic definition is included in the regulation (see Section II8 on ©8) which focuses on the estimated time for an improvement to pay for itself (i.e. the payback period). This information is confirmed in an energy audit and helps a homeowner decide which improvements to pursue.

However, the nature of the HELP program requires a slightly different definition for purposes of loan program eligibility. Since the intent of the HELP program is for the loan payments on the property tax bill to be offset (if not exceeded) by the energy savings realized, the interest payments (in addition to the principal payments) must be included in the cost-effectiveness calculation for purposes of loan program eligibility. This means that the interest rate for the loan will have an effect in determining eligibility. **Council Staff supports the approach of assuming both principal and interest for purposes of determining cost effectiveness for the loan, since this is consistent with the intent of the law to make the ongoing obligation to the property owner at least cost-neutral.**

**As noted earlier, a major exception is that FHSR costs are assumed NOT be included in the cost-effectiveness calculation (see Section IVA5a on ©11). This means that it is possible for one's HELP loan payments to be higher than the energy savings achieved. While Council Staff supports this approach for reasons stated earlier, this means that a loan participants payments may not be fully offset by energy savings. As mentioned earlier, the impact is likely to be small given the 1,500 FHSR cap and the loan period of 15 years.**

However, with regard to non FHSR costs, Section IVA5b (©11-12) will need to be revised, since the current regulation language incorrectly reads,

“The calculation of project cost-effectiveness will not include the following...the cost of the initial energy audit, financing, or loan origination fees.”

The Executive's intent is to exempt the energy audit and any loan origination fees but NOT the financing costs. Executive Staff have agreed that the word “financing” should be removed from the above section.

**Bill 06-09 specifically allows for the energy audit cost<sup>3</sup> to be built into the loan as well. Under the same logic used to support including the interest costs in the cost-effectiveness calculation, it would make sense to NOT exempt any financed costs (except for FHSR costs) from the cost-effectiveness calculation.**

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<sup>3</sup> The full audit cost (typically \$300 to \$500) could be a barrier to program participation, and therefore having the option to roll the audit cost into the HELP loan may be worthwhile. Fortunately, the audit cost may not be a factor for many potential participants since PEPCO and Allegheny Power customers are eligible for substantially subsidized audits. For instance, PEPCO customers can currently get an energy audit for \$100.

**Council Staff suggests that for consistency, that Section IVA5b be revised to read:**

**“The calculation of project cost-effectiveness will not include the following...any Home Energy Loan Program related costs, such as the cost of the initial energy audit or loan origination fees which are not financed in the HELP loan.”**

In some cases, homeowners may wish to pursue projects which, in isolation, are not cost effective. However, when packaged with other projects, the overall package is cost-effective. This approach is allowed for in Bill 06-09 and reiterated in the regulation.

Council Staff is concerned about how the cost-effectiveness calculation would address requests for partial funding of improvements. For instance, could an applicant assume to pay for a portion of the improvement up front and then seek a lower loan amount, thus improving the cost-effectiveness calculation? If so, this could create a situation where those applicants with sufficient cash resources could use a HELP loan to partially finance projects that were otherwise not good candidates. Section IVA3 (©11) appears to preclude this from happening, as it states that “Projected project costs will consist of all necessary...costs.” **Therefore, while incentives (such as Federal and State tax credits or utility rebates) can be considered to reduce the project cost, a participant’s own up front contribution to a project cost cannot. While no additional regulation language appears to be needed here, Council Staff has highlighted this point so that there is no confusion as to the intent of the Council in this regard.**

#### Renewable Energy Devices

Two other cost-effectiveness exemptions are also included in the regulation and could have a significant effect on project eligibility particularly with regard to renewable energy devices.

1. The regulation exempts property tax credits provided by Montgomery County. In the case of renewable energy devices, applicants are commonly eligible for as much as a \$5,000 property tax credit. However, there is a significant waiting list to receive these funds and it could take two or more years to receive the credit. Therefore, while the Federal tax credit for renewable energy devices (30% of total cost) and the Maryland rebate (based on type of system and capacity) are assumed in the regulation to be considered in the cost-effectiveness measure, the Montgomery County credit is not because of this annual under funding.
2. Proceeds from the sale of environmental attributes (such as Renewable Energy Credits) are also not to be considered in the cost-effectiveness calculation. These credits (while substantial) are subject to market fluctuations and are more and more speculative over the 15 year loan period.

Another case can be made for not including the Montgomery County credit or the sale of environmental attributes with regard to renewable energy devices. Because these devices (such as

solar panels, windmills, and geothermal) have major up-front costs, if the Montgomery County credit and energy attributes were considered in the cost effectiveness calculation, then HELP program funding could be swallowed up quickly by renewable energy device requests, at the expense of the energy conservation component (which is the original intent behind Bill 06-09).

**Given the historic under funding of the Montgomery County tax credit, and the concern that renewable energy devices could crowd out most other improvements, Council Staff concurs with exempting the Montgomery County Tax credit and sale of environmental attributes. NOTE: There are still several ways that renewable energy systems can qualify for funding. These are discussed in the next section.**

### **Renewable Energy Device Eligibility**

Section IVD (©13) identifies three ways renewable energy devices can qualify for HELP loan funding, even if they do not qualify under the regular cost-effectiveness criterion mentioned earlier.

First, as with energy conservation devices, the renewable energy device can be packaged with other improvements that collectively meet the standard cost-effectiveness criterion discussed earlier. However, this is unlikely given the up-front costs of renewable energy devices and the \$25,000 cap on any loan, and the fact that a renewable energy device's cost effectiveness measure cannot include the Montgomery County tax credit or the sale of environmental attributes. In fact, the renewable energy device could make otherwise eligible energy conservation devices, ineligible if packaged together.

Second, if the property in question has already achieved a high level of energy efficiency (a score of 7.5 or equivalent using the ENERGY STAR yard stick), then renewable energy devices are eligible, regardless of cost-effectiveness.

Third, if the renewable energy device is packaged with energy efficiency improvements that elevate a home to a 7.5 ENERGY STAR score or a 25% improvement in energy performance, then the renewable energy devices are eligible, regardless of cost-effectiveness.

**The intent of these provisions is to provide some flexibility to allow for HELP loan financing of renewable energy devices but to emphasize energy conservation first or at least in tandem with renewable energy devices. Council Staff concurs with this approach.**

### **Details in Bill 06-09 Assumed to Be Addressed by Regulation**

Sec. 18A-29. of Bill 06-09 (see ©23) lays out a number of items to be addressed by Method 2 Regulation. These are listed below along with how they are addressed in this regulation:

- lending standards and priorities (See Section VIII B and C, "Credit Standards" and "Loan Terms")

The regulation requires that that applicants be up to date on their mortgage and property tax payments, have no other outstanding debts owed to Montgomery County or the State of Maryland, and have sufficient equity in their home, based on assessed value, to cover the amount of the HELP loan.

**The equity requirement is intended to protect potential applicants from taking on too much debt while also protecting the County's investment should a future tax sale be required. However, given current market conditions, this provision could freeze out many homeowners who might otherwise be interested in the loan program and who are not in a financially precarious situation. In fact, the loan program is intended to be cost-neutral (or even cost-beneficial) to the applicant; thus improving the applicant's financial situation.**

**The loan application process has a "credit worthiness" provision (see VIID1FI on ©19) which would be a fairer way to address these concerns and assess the risk of a particular applicant. While equity may be one factor in considering credit worthiness, Council Staff suggests that the separate provision requiring sufficient equity be removed from the Executive Regulation.**

- minimum and maximum loan amounts; (set at no less than \$2,500 with a cap of \$25,000)
- interest rates, terms, and conditions (See Section VIIC "Loan Terms")

**All loans are for a 15 year term with annual payments. Bill 06-09 allows for a longer term (but not shorter), but Executive Staff believe the 15 year term is reasonable given the cost effectiveness for the most common energy conservation improvements should be well within that term. Council Staff concurs.**

**The interest rate and other fees (such as loan origination fees, title searches, and fees for the registration of energy auditors, for instance) are noted as to be set at a level to cover the County's costs. Since these costs are not known at this time and may change frequently in the future, the regulation assumes that the specifics will be established as part of the "Program Plan." Council Staff has some concerns about this approach which are noted later in this memorandum.**

- application procedures, including necessary supporting documentations (See Section VIID)
- criteria for adequate security (see Section VIID "Application Process.")
- procedures to refer applicants to other sources of funds, and to cooperate with other public and private sources of funds (See Section VIB4)
- procedures to ask the Director to reconsider any denial of a loan or any decision on interest rates, terms, and conditions (See Section VIID3)

- procedures for nonpayment or default (See Sections VIIC7 and VIIE3 and 4)
- procedures and requirements for post-installation inspection (See Section VIA5 and Section VIIE1b-f)
- disclosure requirements for real estate transactions (See Section IX).

*The Executive notes in his transmittal that the regulation language was revised based on feedback from the Greater Capital Area Association of Realtors (GCAAR).*

- criteria for loan disbursement. (See Section VIIE).

### **Issues Addressed by County Executive as a result of Public Comments**

Below are issues specifically noted by the County Executive in his transmittal memorandum (see ©1-3).

- Direct Payment of Contractors (instead of payments going to property owners)

**Based on concerns raised by contractors that direct payment to homeowners instead of to contractors could lead to contractor payment delays and possibly lead to contractors charging more for services, the regulation establishes a process (and safeguards) for program funds to be paid directly to contractors (see Section VIIE, “Disbursement of Loan Funds.”)**

- Standards for Wood Stoves, Biomass

**The Executive has inserted language tying eligibility to Washington State standards for these systems.**

- Changes to Cost Effectiveness Calculation (previously discussed in this memorandum)
- Energy Audit Standards Modified

**Section VIA3 includes a provision to allow an alternative to Building Performance Institute (BPI) certification if it is deemed equivalent by the EPA under the Home Performance with Energy Star (HPwES) program and accepted by the applicable HPwES sponsor.**

- Disclosure Requirements at the Transfer of the Property (previously discussed in this memorandum)

## **Elements to be included in a Program Plan instead of a regulation**

As mentioned earlier, one key issue is that the Executive is assuming to include a number of key program details in a future "Program Plan." For example, the specific loan terms (such as interest rate) and other loan-related fees would be identified in the Program Plan and likely updated on a frequent basis. In fact, all of the specifics that might result from the County utilizing a private financing company which, while consistent with the parameters in the Executive Regulation would be detailed in the Program Plan.

To assure the program is cost-neutral in a fluid market environment, Executive Staff believe flexibility is required in terms of fee and interest rate setting. From the Council's perspective, the downside of this approach (versus setting rates and fees via a Method 2 or other regulation) is the reduced formal Council oversight involved.

Based on discussions with Council Legal Staff, Council Staff believes Bill 06-09 intended that the fees and interest rate parameters<sup>4</sup> would be established by regulation (see ©23). This is consistent with how many other fees are established in the County and it guarantees the Council future oversight.

**Council Staff recommends that when the HELP program is further along in implementation that a temporary regulation is done to set the fees and interest rate parameters. Once the temporary regulation is in place, a Method 2 regulation can be promulgated later without risk of program delay. Section VIII C should be revised to note the future transmittal of a fee regulation.**

### **Summary of Council Staff Recommendations**

**Council Staff recommends that the Executive submit an amended Executive Regulation 2-10 which:**

- **Clarifies the exceptions to the cost-effectiveness provision (Section IVA).**
- **Removes the requirement that an applicant must have sufficient equity in their property to cover the cost of the requested HELP loan. *Instead, the equity issue should be considered in the broader context of an applicant's credit worthiness.***
- **Notes that fees and interest rate parameters will be established by a separate Method 2 regulation. *To avoid delays in the program implementation, this can be done initially with a temporary regulation.***

### **Attachments**

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<sup>4</sup> One option with the interest rate would be to link it to a published index so that it could change over time without future regulation changes required. Note: Bill 06-09 defines loans (see ©23) under HELP as "zero or low interest loans." However, Regulation 2-10 only notes that the loans must cover all program costs.



OFFICE OF THE COUNTY EXECUTIVE  
ROCKVILLE, MARYLAND 20850

Isiah Leggett  
County Executive

MEMORANDUM

April 21, 2010

TO: Nancy Floreen, President  
County Council

FROM: Isiah Leggett   
County Executive

SUBJECT: Executive Regulation 2-10 – Home Energy Loan Program

2010 APR 21 PM 4:19

RECEIVED  
MONTGOMERY COUNTY  
COUNCIL

Section 18A-29 of the County Code requires the Executive to establish regulations to administer the Home Energy Loan Program (HELP). It is my pleasure to transmit proposed Executive Regulation 2-10 as well as public comments on the proposed regulation, and a fiscal impact statement for consideration by the Council. Key issues related to the development of this proposed regulation are detailed below.

**Public Process:**

Executive Regulation 2-10 was posted for public comment in the County Register on March 1, 2010, and a hearing was conducted on March 25, 2010. The period for public comment closed on April 1, 2010. Testimony was received from 19 individuals and organizations including the Maryland Energy Administration, county residents, energy service companies, and the Greater Capital Area Association of Realtors (GCAAR).

**Concerns Addressed During Regulation Development:**

*Banking and Lending Community Concerns:* Key concerns were initially raised in the context of the Home Energy Loan Program, and property assessed clean energy (PACE) programs nationwide, about the potential effects of the repayment provisions on the lending industry and ability of residents to refinance.

The Department of Economic Development (DED), based on the experiences of other similar programs, determined that the repayment provisions of HELP would not burden the lending industry or hinder homeowners from obtaining re-financing. In addition, DED believes

the borrower's additional cash flow from energy savings and potentially enhanced home value would largely offset any impacts of the HELP loan.

However, based on national best practices published by the Department of Energy for PACE programs, the County incorporated key protections as part of the proposed regulation. A resident must have sufficient equity, based on the full assessed value of the property, to cover the amount of HELP loans, less any mortgage or deed of trust liens against the property. In addition, loans are capped at the lesser of 5 percent of assessed value or \$25,000. Furthermore, the County anticipates developing robust educational components as part of the program, emphasizing financial literacy and the financial implications of a HELP loan. Members of the banking and lending community were included in an email to program stakeholders announcing the public comment period for the regulation. No representatives from the banking and lending industry testified at the March 25 public hearing or submitted written testimony.

*Energy Audit Cost:* Initial concerns were raised regarding the costs of energy audits to consumers, as an energy audit is a prerequisite to program financing. At the time the original legislation passed, qualifying full scope energy audits cost between \$350 and \$600 per home. Meanwhile, each of the electric utilities (Pepco, Allegheny and BGE) serving Montgomery County has implemented home energy audit programs. Pepco and Allegheny significantly subsidize audits, \$100 and \$180 respectively per audit, while all three utilities provide enhanced incentives for retrofits for individuals that undertake compliant audits. All three utilities indicate that the HELP program enhances their programs and coordination is anticipated.

#### **Comments Received During Comment Period:**

Written and oral testimony was supportive of the program, and included suggestions for improving the regulation. Comments that were adopted are detailed below.

*Direct Payment of Contractors and Service Providers:* The draft regulation called for the loan funds to be provided to the homeowner, who would then pay the contractors that performed the work. The auditor and contractor community testified that the significant delay could occur between a resident receiving a check from the County and passing that payment to the contractor. Such a delay could potentially result in contractors charging more for their services. The final regulation provides for direct payment to contractors, upon notification by the homeowner that the work has been satisfactorily completed, in order to maintain low prices and streamline administration.

*Standards for Wood Stoves and Biomass Energy:* The Alliance for Green Heat suggested that the County adopt standards, as permitted by the originating legislation, to ensure

any wood stoves or fireplace inserts covered by the program comply with the Washington State standards, which are widely recognized as the gold standard for efficiency and low emissions.

*Cost-Effectiveness:* Several entities testified that the County's proposed calculation for cost-effectiveness should include incentives for which the consumer is eligible. This would improve the cost-effectiveness of the retrofits allowing a much larger package of incentives to be funded, yielding greater energy savings. The cost-effectiveness calculation has been modified to allow the project costs to be reduced by incentives the consumer is eligible to receive. However, these calculations do not include the County Property Tax Credit which is not sufficiently funded to assure that residents applying for the loan will ultimately receive the credit, nor the sale of environmental attributes for which markets are highly speculative.

*Energy Audit Standards:* Two entities testified that the County should recognize energy audit standards that are equivalent to those maintained by the Building Performance Institute. The regulation was amended to allow these standards to be adopted where appropriate.

*Disclosure:* Disclosure requirements have been further detailed to enhance clarity in response to comments from GCAAR.

**Conclusion:**

I firmly believe that this regulation, within the authority granted by the legislation, balances the concerns of the various stakeholders involved in the development of this program. We anticipate that the HELP program will provide substantial benefits for residents, enabling them to adopt energy-efficiency measures and overcome the initial costs of making these improvements. I look forward to your prompt review and approval of this regulation so the County can implement this exciting program to benefit our residents and energy service businesses. Please contact Bob Hoyt in the Department of Environmental Protection at 240-777-7781 or [bob.hoyt@montgomerycountymd.gov](mailto:bob.hoyt@montgomerycountymd.gov) to discuss this regulation.

Attachments



OFFICE OF MANAGEMENT AND BUDGET

Isiah Leggett  
County Executive

Joseph F. Beach  
Director

MEMORANDUM

April 19, 2010

TO: Joseph F. Beach, Director, Office of Management and Budget

VIA: Jacqueline Carter, Management and Budget Manager *JAC*

FROM: John Greiner, Management and Budget Specialist *JMG*

SUBJECT: Executive Regulation 2-10, Home Energy Loan Program

**REGULATION SUMMARY**

This executive regulation implements the Montgomery County Home Energy Loan Program (HELP), Chapter 18A, Article 4, incorporated into County Code by the passage of Bill 6-09. HELP provides loans to homeowners, re-paid through the property tax bill, for energy efficiency and renewable energy improvements.

**FISCAL SUMMARY**

The County has allocated \$1,526,780 from its anticipated Energy Efficiency and Conservation Block Grant funded by the American Recovery and Reinvestment Act to provide initial funding to build program infrastructure, provide initial operating capital, and market the program. This will be supplemented, as necessary, by additional fees and interest surcharges added to the loans to cover all operating costs of the program. Repayments of loan funds originating from grant sources will be recycled into future loans to consumers.

Additional capital for loans will be provided through additional grant resources that may become available, the issuance of bonds, or other options as identified by the Department of Finance.

Although it is expected that the Department of Environmental Protection and the Department of Finance will incur administrative costs in connection with this program, this regulation provides that the interest rate and/or loan fees be set at levels adequate to cover all costs. Hence, the program will be self-supporting, with no fiscal impact to the County.

Joseph F. Beach, Director, Office of Management and Budget  
April 19, 2010  
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Stan Edwards of the Department of Environmental Protection, Glenn Wyman of the Department of Finance, and John Greiner of the Office of Management and Budget contributed to and concurred with the analysis.

JFB:jg

- c: Kathleen Boucher, Assistant Chief Administrative Officer
- Stan Edwards, Department of Environmental Protection
- Glenn Wyman, Department of Finance
- John Greiner, Office of Management and Budget
- John Cuff, Office of Management and Budget

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OMB REVIEW

Fiscal Impact Statement approved  4-19-10  
OMB Director

Fiscal Impact Statement not approved, OMB will contact department to remedy.



# MONTGOMERY COUNTY EXECUTIVE REGULATION

Offices of the County Executive • 101 Monroe Street • Rockville, Maryland 20850

<b>Subject</b> Montgomery County Home Energy Loan Program	<b>Number</b> 2-10
<b>Originating Department</b> Department of Environmental Protection/Department of Finance	<b>Effective Date</b>

Montgomery County Regulation on:

## MONTGOMERY COUNTY HOME ENERGY LOAN PROGRAM

DEPARTMENT OF ENVIRONMENTAL PROTECTION AND  
DEPARTMENT OF FINANCE

Issued by: County Executive  
Regulation No. 2-10

Authority: Chapter 18A, Article 4  
Council Review: Method (2) under Code Section 2A-15  
Register Vol. 27, No. 3

Comment Deadline: April 1, 2010  
Effective Date:  
Sunset Date: None

**Summary:** This regulation establishes the administrative procedures for implementing the Montgomery County Home Energy Loan Program.

**Address:** Written comments on these regulations should be sent to:

Stan Edwards, Chief  
Division of Environmental Policy and Compliance  
Department of Environmental Protection  
255 Rockville Pike  
Rockville, Maryland 20850

Glenn W. Wyman  
Debt and Cash Manager  
Department of Finance  
101 Monroe Street, 15<sup>th</sup> floor  
Rockville, Maryland 20850

**Staff Contact:** For further information or to obtain a copy of this regulation, contact Eric Coffman at (240) 777-7754.



# MONTGOMERY COUNTY EXECUTIVE REGULATION

Offices of the County Executive • 101 Monroe Street • Rockville, Maryland 20850

<b>Subject</b> Montgomery County Home Energy Loan Program	<b>Number</b> 2-10
<b>Originating Department</b> Department of Environmental Protection/Department of Finance	<b>Effective Date</b>

## Sec. 1. Regulation

### Section I: General Provisions

- A. Authority. In accordance with the authority conferred under Chapter 18A, Article 4, of the Montgomery County Code, 2004, as amended (hereinafter referred to as the "Code"), the County Executive hereby promulgates this regulation to implement County law pertaining to the administration of the Home Energy Loan Program (hereinafter referred to as the "Program" or "HELP"). The Program provides loans to homeowners, re-paid through the property-tax bill, for energy efficiency and renewable energy improvements.
- B. Applicability. This regulation applies to the administration of the Program by the County Government and participation in the program by consumers, auditors, and contractors.

### Section II: Definitions

For purposes of this regulation, the following words and phrases have the following meanings unless the context clearly indicates otherwise:

1. Amortization Period – The period over which a HELP loan is repaid to the County by a borrower.
2. Annual Real Property Tax Bill – The annual real property consolidated tax bill that the County mails each year to property owners in the County.
3. Annual Tax Lien Sale – A sale of real property tax liens that the County conducts on the second Monday of each June to recover amounts owed to the County in delinquent taxes and charges on real property.
4. Applicant – An owner of a residential property in the County who submits a HELP loan application to the Department of Finance, the Department of Environmental Protection or their designee.
5. Assessed Value – The full cash value as indicated on the most recent assessment notice from the Maryland Department of Assessments and Taxation.
6. Borrower – An applicant who has received a HELP loan.



# MONTGOMERY COUNTY EXECUTIVE REGULATION

Offices of the County Executive • 101 Monroe Street • Rockville, Maryland 20850

<b>Subject</b> Montgomery County Home Energy Loan Program	<b>Number</b> 2-10
<b>Originating Department</b> Department of Environmental Protection/Department of Finance	<b>Effective Date</b>

7. Contractor – An individual or business entity meeting the program requirements established by the Department of Environmental Protection to perform work associated with energy audits and energy related home improvements.
8. Cost-Effectiveness – The maximum estimated amount of time it takes for an energy efficiency improvement to pay for itself through reduced energy costs (the “payback” period), as determined by the Department of Environmental Protection.
9. County – Montgomery County, Maryland.
10. Department – The Department of Environmental Protection or DEP.
11. Director – The Director of the Department of Environmental Protection or the Director’s designee.
12. Director of Finance – The Director of the Department of Finance or the Director’s designee.
13. Energy Auditor – An individual or company that:
  - (a) is a participating auditor with the Maryland Home Performance with ENERGY STAR Program;
  - (b) is participating in a utility sponsored Home Performance with ENERGY STAR Program; or
  - (c) meets any other equivalent requirements approved by the Director as published in the Program Plan.
14. Eligible Cost – The cost of buying and installing an energy efficiency improvement or renewable energy device, including any part, component, or accessory necessary to operate the improvement or device, less any amount received from a public or private program because the improvement or device is or will be made or installed.
15. Energy Efficiency Improvement – A cost-effective improvement to an existing single family home that reduces the home’s energy consumption and cannot be readily removed as defined in Section 18A-24 of the County Code.



# MONTGOMERY COUNTY EXECUTIVE REGULATION

Offices of the County Executive • 101 Monroe Street • Rockville, Maryland 20850

<b>Subject</b> Montgomery County Home Energy Loan Program	<b>Number</b> 2-10
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16. ENERGY STAR Rating - The ENERGY STAR rating developed by the U.S. Environmental Protection Agency (EPA) which rates a product's energy efficiency and other factors.
17. Environmental Attributes – Environmental benefits for which there are accessible and quantifiable markets. Environmental attributes include renewable energy certificates (RECS) and carbon offsets.
18. Fundamental Health and Safety Remediation or FHSR - means improvements necessary to remedy health or safety issues that may be exacerbated by energy efficiency or renewable energy improvements (e.g., moisture mitigation); or alternatively, measures necessary to ensure the fundamental function of the improvement.
19. Home Energy Audit - An evaluation of the energy efficiency of a home which includes any test or diagnostic measurement conducted by a registered energy auditor that the Department finds necessary to:
  - (a) assure that a home's energy efficiency is accurately measured; and
  - (b) identify cost-effective steps that can be taken to improve a home's energy efficiency.
20. Home Energy Loan Fund or Fund - The fund established under Section 18A-30 of the County Code to provide funding for the Home Energy Loan Program.
21. Home Energy Loan Program (HELP or Program) – The program established under Section 18A-25 of the County Code to assist single-family homeowners to make energy efficiency improvements or install a renewable energy device; establish a loan fund to provide homeowners loans under the Program; and generally amend the environmental sustainability law.
22. Home Energy Yardstick - The U.S. Environmental Protection Agency's ENERGY STAR Program tool for assessing the relative performance of existing homes.
23. Home Performance with ENERGY STAR or HPwES - The energy audit and quality assurance program offered through the EPA and delivered through local program sponsors that recruit and train home improvement contractors and consultants that are qualified to perform comprehensive energy audits.
24. Home Performance with ENERGY STAR Sponsor or HPwES Sponsor - A non-profit organization, state or local government, or utility that signed a partnership agreement with the EPA to administer an HPwES program.



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25. Program Plan - The fundamental operating manual developed by the Director outlining the Program's administrative, marketing, education and outreach components.
26. Property Owner or Homeowner – The person who is listed on the County's tax records as the owner of the property where the energy improvements will be installed.
27. Renewable Energy - Energy derived from solar, wind, geothermal, and any other energy source or technology which the Director finds is derived from natural processes that do not involve the consumption of exhaustible resources, and is specified by the U.S. Department of Energy (DOE), EPA, or Maryland Energy Administration (MEA).
28. Renewable Energy Measure or Device- A measure that:
  - (a) converts, or actively uses renewable energy;
  - (b) is permanently installed on the home or property; and
  - (c) meets safety and performance standards set by a nationally recognized testing laboratory for that kind of device, if these standards are available.
29. Renewable Energy Product Provider- A specialized contractor installing technologies and products that use renewable energy.
30. Single Family Home – A single family detached or attached residential building. A single family home includes a condominium.
31. Test-out – A series of diagnostic tests and post-installation quality control and assurance inspections required by the EPA or HPwES sponsor to verify the quality of workmanship, and performed by an energy auditor.

### Section III: Program Established

There is a Home Energy Loan Program (HELP) under which the County encourages energy conservation and the use of clean energy by making loans available to residential property owners interested in making energy efficiency and renewable energy improvements to their homes. The loans finance a package of improvements, adhere to defined cost-effectiveness criteria, and are approved based on the results and



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recommendations of an energy audit. The loans must be repaid through the County real property tax bill for the home of the borrower.

### Section IV: Eligible Energy Efficiency and Renewable Energy Measures

The Program provides loans to fund cost-effective energy efficiency and renewable energy improvements to single family homes within the County. Renewable energy installations that do not satisfy cost-effectiveness criteria may be funded through HELP loans in concert with energy efficiency improvements that collectively achieve a prescribed minimum level of performance.

- A. An energy efficiency improvement or renewable energy measure will be deemed cost-effective if the sum of projected energy cost savings resulting from the improvement or measure is equal to or greater than the sum of principal and interest payments of the loan obtained to finance the improvement or measure over a 15 year amortization period. Cost-effectiveness will be determined as follows:
- (1) Projected energy savings will be calculated based on the energy cost savings identified by an energy auditor, using a broadly accepted software package, or estimates by a renewable energy product provider, using a broadly accepted renewable energy calculator. Energy cost savings must be calculated using energy costs, provided by the Director, based on applicable tariffs and other commonly available energy cost information and published periodically in the Program Plan or provided by a widely accepted source (e.g., DOE).
  - (2) Principal and interest of the estimated loan amount will be based on the projected costs of the energy-efficiency improvement or renewable energy measure as estimated by the auditor, contractor, or renewable energy product provider and included in the loan application by the homeowner.
  - (3) Projected project costs will consist of all necessary labor, services, materials and equipment costs necessary to install the improvement or measure for which the loan was approved.
  - (4) Projected project costs may be reduced to represent the net cost including all incentives which the applicant is eligible to receive.
  - (5) The calculation of project cost-effectiveness will not include the following:
    - (a) FHSR necessary to ensure well-being or effective deployment of the measure (e.g., combustion safety improvements);



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- (b) the cost of the initial energy audit, financing, or loan origination fees;
- (c) property tax credits provided by Montgomery County; or
- (d) proceeds from the sale of environmental attributes.

**B. Fundamental Health and Safety Remediation (FHSR).**

- (1) Applicants may receive additional loan funds, which will not be included in cost-effectiveness calculations, of up to 10 percent of the energy efficiency or renewable energy project costs not to exceed \$1,500 for FHSR. The total loan must not exceed the cap specified in Section VIII (C) of this regulation.
- (2) The loan for FHSR must only be authorized in connection with an energy efficiency improvement or renewable energy measure. The additional loan funds may only be used to remediate a structural, mechanical, electrical or other issue that directly jeopardizes the well being of building occupants, quality of the indoor environment, or the durability or longevity of the structure.
- (3) Loan applications requesting FHSR must be signed by the applicable contractor or auditor specifying or performing the work, describing the reason why FHSR is required to properly install the energy-efficiency or renewable energy improvement.

**C. An applicant for a loan to finance energy efficiency improvements and renewable energy measures must satisfy the following requirements:**

- (1) The applicant must have commissioned and received the final report from an energy auditor.
- (2) The proposed improvements or measures must be identified in the applicant's home energy audit.
- (3) Improvements that are fundamentally dependent on another improvement identified in the home energy audit report must be combined. These specifically include:
  - (a) Insulation and comprehensive air-sealing where needed;
  - (b) Heating, ventilating, and air conditioning (HVAC) unit replacement and duct sealing where needed; or
  - (c) Other devices where significant evidence exists that coupled performance improves overall cost-effectiveness, as defined in the Program Plan.
- (4) The applicant must have obtained a cost proposal for the energy efficiency improvement or renewable energy measure from the contractor or renewable energy product provider that will be responsible for installing the improvement.



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(5) In cases where FHSR is required, the applicant must provide cost estimates and the cost cannot exceed the criteria established in subsection (B).

D. Renewable energy measures that do not meet the requirements of subsections (A) and (C) may also qualify for a loan if:

- (1) The single-family home where the renewable energy measure is to be installed has already achieved a prerequisite level of energy efficiency, equivalent to a score of 7.5 using the ENERGY STAR Home Energy Yard Stick as calculated by the applicant's energy auditor, or equivalent methodology approved by the Director;
- (2) The proposed renewable energy measure is part of a package of energy efficiency improvements that collectively meet the cost-effectiveness requirements established in subsection (A); or
- (3) The proposed renewable energy measure is part of a package of energy efficiency improvements projected, as calculated by the applicant's energy auditor, to elevate the home to a score of 7.5 on the ENERGY STAR Home Energy Yard Stick or that result in at least a 25 percent improvement in the energy performance of the applicant's home.

E. Specialized systems, may qualify if they meet the following requirements.

- (1) In the case of wind energy systems, the application must include an analysis and site plan by the renewable energy product provider or consultant estimating the annual generation of the system based on the characteristics of the site and specified turbine, or equivalent as defined by the Director in the Program Plan.
- (2) Solar water heating systems application must be certified by the Solar Rating Certification Corporation, or equivalent as defined by the Director in the Program Plan.
- (3) Wood, pellet, or biomass heating systems must meet Washington State emission standards, codified at Wash. Admin. Code §§ 173-433-100 and 173-433-130, and be included on that state's approved list of stoves, or equivalent as defined by the Director in the Program Plan.
- (4) Specifications and requirements for renewable energy systems not included in this regulation must meet the requirements specified by the Director in the Program Plan.

## Section V: Eligible Properties

All eligible homes must be located within Montgomery County. Properties eligible for a HELP loan include both existing attached and detached single family homes and condominium units. If the property for which the loan is requested is a condominium, the work to be performed must be limited to the parts of the building that are under the exclusive control of the property owner.



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## Section VI: Eligible Home Energy Audits and Auditors

All applications for loans for energy efficiency improvements and renewable energy measures must include a comprehensive home energy audit. The home energy audit must satisfy the following requirements:

- A. Audits must be based on the HPwES process developed, promoted and monitored by the U.S. Environmental Protection Agency's ENERGY STAR Program.
- (1) Auditors providing services must be registered energy auditors as defined in Section VII of these regulations and the Program Plan.
  - (2) Home energy audits must be based on the Building Performance Institute's (BPI) audit requirements as included in the certification program for building analysts. Auditors must remain current in their skills as required under both the federal HPwES program and its state-level counterpart implemented by MEA. Auditors and contractors must comply with standards adopted by EPA, MEA, or the HPwES sponsor within one year after adoption. The Director may amend requirements where MEA, HPwES sponsor or EPA standards are inconsistent.
  - (3) Alternatives to BPI certification may be accepted, if they are deemed equivalent by the EPA under the HPwES program, and accepted by the applicable HPwES sponsor.
  - (4) Audit analysis must be conducted using software accepted by HPwES.
  - (5) A formal test-out procedure, including application of a blower door test, must be conducted by the energy auditor after the installation of energy efficiency improvements.
  - (6) In the case of a lapse in both the MEA's HPwES program and utility sponsorships of HPwES programs, the Director will recommend whether the County should engage in a HPwES sponsorship as a local government.
- B. In order for the home energy audit to be eligible for the Program, it must comply with HPwES requirements and must also:
- (1) Identify a package of cost-effective energy efficiency improvements or renewable energy measures that meet the requirements of subsection (A) and, at the request of the applicant, identify a package of cost-effective energy efficiency improvements or renewable energy measures that are projected to yield annual energy savings greater than the annual principal and interest payment for the improvements;
  - (2) Provide projected energy savings from energy efficiency improvements or renewable energy measures to be financed under the program;



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- (3) Address all major fuel sources used in the home;
  - (4) Identify any public or private financing mechanism that can be used to implement energy efficiency improvements or renewable energy measures (e.g., property tax credits, federal tax credits, and utility incentives);
  - (5) Include, or link to, program application and educational materials;
  - (6) Disclose any business relationship where an auditor specifies a contractor, manufacturer, vendor or service provider; and
  - (7) Adhere to any additional requirements identified in the Program Plan.
- C. An applicant may utilize an audit performed within the 12 months preceding the effective date of this regulation if the audit satisfies all the requirements of subsection (A) and (B).

## **Section VII: Requirements for Energy Auditors, Contractors, and Renewable Energy Product Providers**

- A. In order to deliver services to homeowners under the Program, all auditors, contractors, and renewable energy product providers must register with the County or its designee, and agree to the requirements in Section VI (B) as defined in the Program Plan.
- B. Energy auditors must:
- (1) Use the cost-effectiveness calculations and methods identified in Section IV (D) of this regulation;
  - (2) Deliver audits adhering to the requirements of Section VI;
  - (3) Adhere to Program marketing and customer education requirements developed by the County and published in the Program Plan;
  - (4) Agree to provide a test-out, including all diagnostics prescribed by the HPwES program, within 14 days after receiving a request from the consumer; and
  - (5) Adhere to all other requirements and conditions specified by the Director in the Program Plan.
- C. Contractors and energy auditors performing energy efficiency improvements must:
- (1) Maintain an active home improvement contractor's license issued by the Maryland Department of Labor, Licensing and Regulation;
  - (2) Possess, in the case of Contractors providing air-sealing services, a valid BPI Envelope Professional certification;



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- (3) Adhere to any Program marketing and customer education requirements developed by the County;
- (4) Agree to take all reasonable measures to resolve complaints; and
- (5) Adhere to all other requirements and conditions specified by the Director in the in the Program Plan.

D. Renewable energy product providers must:

- (1) Use cost-effectiveness calculations and methods identified in Section IV (D) of this regulation;
- (2) Maintain an active home improvement contractor's license issued by the Maryland Department of Labor, Licensing and Regulation;
- (3) Adhere to Program marketing and customer education requirements developed by the County;
- (4) Agree to take all reasonable measures to resolve complaints; and
- (5) Adhere to all other requirements and conditions specified by the Director in the Program Plan.

E. All auditors, contractors, and product providers must comply with all applicable permitting and licensing requirements mandated by the County, state and, if applicable, the municipality.

F. The County may charge fees for registration of auditors, contractors, and renewable energy product providers sufficient to offset its administrative costs. Fees will be specified by the Director and documented in the Program Plan.

G. The County may revoke the registration, and eligibility to participate in the Program if a provider fails to comply with the requirements of this Section. However, the County will not guarantee, warranty, or be responsible for the qualifications or performance of any auditor, contractor, or product provider in connection with any home improvement or measure paid for under the Program.

### Section VIII: Program Financing

HELP loans and repayments are a lien on the borrower's property that conveys with the property. Therefore, if title to the property is transferred, the obligation for payment of the loan transfers with the property to the new owner.

A. Financial Eligibility

- (1) The applicant must be the owner of record of the property. The County, or its designee, will perform a title search for each application.



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- (2) The total amount of HELP loans outstanding on each property must not exceed the maximum described in subsection (C) (4).
- (3) All real property taxes due and owing on the property must be paid in full. Any property that is in tax sale or has liens against the property, other than mortgage liens, will not be eligible for a HELP loan.
- (4) Applicants must meet the credit eligibility standards of the Program described, in subsection (B).

## B. Credit Standards

- (1) An applicant must not have any outstanding debts owed to the County or the State of Maryland. In addition, an applicant must be current on any mortgage or deed of trust debt on the property.
- (2) An applicant must have paid all real property taxes on the property on time for the previous three years. If the applicant has owned the property for less than three years, the applicant must be up to date on all real property taxes and must not have defaulted on taxes for any real property owned in the County in the three years prior to the application.
- (3) The applicant must not be in bankruptcy.
- (4) A property must have sufficient equity, based on the assessed value, to cover the amount of HELP loans, less any mortgage or deed of trust liens against the property.

## C. Loan Terms

- (1) All loans must be paid in annual installments over 15 years.
- (2) The interest rate on loans will be based on the County's cost of funds, as determined by the Director of Finance, used to capitalize the program plus any costs of administration, loan processing, Program marketing and any required reserve funds.
- (3) Origination and application fees may be imposed to cover the cost to the County, or its designee, of loan processing, appraisals, title search and other program operational costs. These costs will be non-refundable and identified in the Program Plan.



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- (4) HELP loans are available in amounts not less than \$2,500 and may not exceed 5 percent of property's assessed value up to a maximum of \$25,000.
- (5) Loan payments on all loans are due on September 30th of each year. The HELP loan payments are included on the annual real property tax bill. Borrowers that are permitted to pay their property taxes semi-annually will pay one-half of the loan payment amount by September 30th and the second half of the loan payment by December 31st of that same year.
- (6) Any payment delinquency after the due dates will be subject to collection through the County's annual property tax lien sale.
- (7) The loan amount and any accrued interest are a first lien on the real property. Under Maryland law, delinquent amounts are collectable by suit or tax sale like all other real property taxes. In addition, interest and penalties accrue on the unpaid balance at the rate of 20 percent per annum.
- (8) A property owner may pay off the entire balance of a HELP loan at any time without penalty. A request for a pay-off balance must be made to the Montgomery County Department of Finance, Attn: Director of Finance. In order to pre-pay a HELP loan, all principal and accrued interest up to the payment date must be paid in full.
- (9) Partial annual loan payments are not accepted. However, a borrower may reduce the total amount of principal owed by making a lump sum payment against the outstanding balance of the loan. The single payment will be applied first to interest owed and then to principal. A new loan balance will be calculated and the annual payment amount will be adjusted based on the new loan balance. Lump sum payments must be arranged through the Department of Finance. Lump sum payments may not be made in lieu of the regular annual payment.
- (10) The property owner must disclose, in the initial application and with the request for loan disbursement, the amount of any energy efficiency or renewable energy incentives received from both public and private sources. The total HELP loan for which the applicant is eligible will be reduced by that amount.

## D. Application Process

- (1) HELP loan applications must be completed and submitted to the Department of Finance, the Department of Environmental Protection, or their designee, as described in the Program Plan. Applications must include the following:



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- (a) Completed application form;
  - (b) Copy of audit report clearly indicating auditors recommended actions and annual energy savings;
  - (c) Estimate of project costs;
  - (d) Names and contact information of all auditors, contractors and renewable service product providers involved in the project;
  - (e) Application fees;
  - (f) Releases necessary to process the application, including information to:
    - (i) establish credit-worthiness; and
    - (ii) request energy usage history from applicant's utilities; and
  - (g) Acknowledgement of Program terms and conditions, including agreements from contractors to comply with all applicable federal, state, and local laws.
- (2) The applicant will receive a confirmation from the County, or its designee, concerning the disposition of the loan application. If the loan is approved, the confirmation notification will indicate the terms and conditions of the loan. The applicant must acknowledge the confirmation notification, agree to the terms and conditions of the loan, and return the document to the County or its designee.
- (3) If the HELP loan application is not approved, the applicant may seek a reconsideration of the decision from the Director of Finance. Any request for reconsideration must be in writing and must include the reasons for the request. A request for reconsideration must be made within 14 days after notification that the loan application was not approved or the Director's decision becomes final.
- (4) The terms of disbursement, as described in subsection (E) must be included in the application to the Department of Finance.



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## E. Disbursement of Loan Funds

All projects must be completed within 180 days after the Director of Finance approves the HELP loan, unless an extension is granted. The borrower and the auditor, contractor, or renewable energy product provider (collectively, the parties) must agree to how payments for work will be disbursed at the time that they agree on the scope and price of the work. Those terms may include a single payment or up to three progress payments depending on the scope of work and the mutual agreement between the parties.

- (1) Smaller projects that can be completed in less than 14 days from the date of approval will qualify for a single payment and are subject to the following requirements:
  - (a) The borrower must certify that the work is acceptable within 14 days after completion, or test-out, if applicable.
  - (b) The borrower must notify the Director of Finance within 14 days after project completion or test-out if there is a dispute between the parties. The parties will have 45 days from the date of project completion or test-out to resolve the dispute.
  - (c) If the borrower certifies satisfactory completion of the work under subparagraph (a) the County will pay the auditor, contractor or renewable energy product provider. If no certification is received or the parties have not resolved their dispute as required in subparagraph (b) the County will pay the applicable auditor, contractor, or renewable energy product provider.
- (2) Projects larger in scope that will take more than 14 days to complete may qualify for progress payments to the auditor, contractor, or renewable energy product provider.
  - (a) The Director of Finance will authorize a payment of 30 percent of the contractor estimated costs upon approval of the loan application.
  - (b) The Director of Finance will authorize a second progress payment if agreed to by the parties to the contract at a pre-determined event during installation. That event must be identified in the contract between the parties. The borrower must contact the Department of Finance, as specified in the Program Plan, to authorize payment. The second progress payment will be 40 percent, unless the contract provides for a different amount.



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- (c) A final progress payment will be made to the auditor, contractor, or renewable energy product provider at the time of project completion.
- (d) The borrower must certify, as specified in the Program Plan, that the work is acceptable within 14 days after completion or test-out, if applicable
- (e) The borrower must notify the Director of Finance, as specified in the Program Plan, within 14 days after project completion or test-out if there is a dispute between the parties. The parties will have 45 days from the date of project completion or test-out to resolve the dispute.
- (f) If the borrower certifies satisfactory completion of the work under subparagraph (d) the County will pay the auditor, contractor, or renewable energy product provider. If no certification is received or the parties have not resolved their dispute as required in subparagraph (e) the County will pay the applicable auditor, contractor, or renewable energy product provider.

## F. Post-Loan Administration

- (1) Beginning the first tax levy year following the first disbursement of HELP loan funds, the annual HELP loan payment will appear on the property owner's annual real property tax bill.
- (2) After final payment of the HELP loan to the County, the loan payment will be removed from the annual real property tax bill.
- (3) Delinquent loan payments may be collected through the Annual Tax Lien Sale or by any other means authorized by law.
- (4) In the event of a foreclosure by a lending institution during the life of the loan, only the amount due or delinquent, including accrued interest, fees, charges, or penalties, must be paid at the time of foreclosure.

## IX: Real Estate - Disclosure Requirements

- A. If the borrower transfers title to the property, the borrower (grantor) must disclose to the new owner (grantee) that the grantee must continue to repay the HELP loan through the annual real property tax



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bill. The required disclosure must occur in accordance with the grantor's obligation to disclose real property tax information to new owners of property, as described in Section 40-12C of the Montgomery County Code. Disclosures must include:

1. The estimated full-year property tax bill that a grantee would be obligated to pay in the next full tax year after the property is transferred; and
2. The existence of the HELP loan and that the obligation to repay the HELP loan transfers with the property, the original purpose of the loan, the maturity date of the loan, the annual payment amount, and the approximate pay-off.

B. The disclosure described in subsection (A) must also be given to the grantee before transfer of title to the property and the grantee must sign a statement indicating that the grantee understands that the HELP loan is being assumed, that the grantee will be responsible for future payments, and that failure to make future payments could result in the property being included in the County's Annual Tax Lien Sale.

### Sec. 2. Severability

If a court holds that a portion of this regulation is invalid, the other portions remain in effect.

### Sec. 3. Effective Date

This regulation takes effect upon approval by the County Council.

Isiah Leggett,  
County Executive

### Distribution:

- Clerk, County Council
- County Executive
- Chief Administrative Officer
- County Attorney
- Director, Department of Environmental Protection
- Director of Finance

Approved as to Form and Legality  
Office of County Attorney

By

Date 4/19/10

Walter E. Wilson

## Chapter 18A “Home Energy Loan Program” Excerpts

### Sec. 18A-24. Definitions (excerpt).

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

- *Home Energy Loan Program* or *Program* means the program that provides zero or low interest loans to install an energy efficiency improvement or renewable energy device.
- *Low interest loan* means a loan with an interest rate below prevailing rates for residential home improvement loans, and which reflects:
  - (a) the County’s current cost of borrowing funds or the cost, if any, of federal funds made available to the County for this purpose; and
  - (b) the cost of administering the Program. (2009 L.M.C., ch. 8, § 1.)

### Sec. 18A-25. Established; purpose.

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

- (a) improve energy efficiency;
- (b) promote energy conservation;
- (c) reduce greenhouse gas emissions; and
- (d) reduce consumption of fossil fuels by County residents; and
- (e) create jobs. (2009 L.M.C., ch. 8, § 1.)

### Sec. 18A-29. Regulations.

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

- (a) lending standards and priorities;
- (b) minimum and maximum loan amounts;
- (c) interest rates, terms, and conditions;
- (d) application procedures, including necessary supporting documentations;
- (e) criteria for adequate security;
- (f) procedures to refer applicants to other sources of funds, and to cooperate with other public and private sources of funds;
- (g) procedures to ask the Director to reconsider any denial of a loan or any decision on interest rates, terms, and conditions;
- (h) procedures for nonpayment or default;
- (i) procedures and requirements for post-installation inspection;
- (j) disclosure requirements for real estate transactions; and
- (k) criteria for loan disbursement. (2009 L.M.C., ch. 8, § 1.)

Written Testimony in Response to Executive Regulation 2-10 Home Energy Loan Program

Individual	Organization
John Ackerly	Alliance for Green Heat
Joyce Breiner	N/A
Beau Engman	E2 Capital Partners
Jay Fisette	Metropolitan Washington Council of Governments
Joe Glitchell	N/A
Doris Ickle	CMC Energy Services
Adam Landsman	Abaris Realty
Authur Lazerow	Home Energy Team
Peter Mellen	Mellen Investment Properties
Shelly Murray	Greater Capital Area Association of Realtors
Suzanne Parmet	Live Green LLC
Bill Prindle	N/A
Gary Skulnik	Clean Currents
Phillip Stiff	N/A
Brian Toll	Efficiency First/Eco Beco
Malcolm Woolf	Maryland Energy Administration
N/A	Energy and Air Quality Advisory Committee

Comments from the Alliance for Green Heat

Submitted by John Ackerly  
Alliance for Green Heat  
6930 Carroll Ave, Suite 407  
Takoma Park, MD 20912

In support of the proposed Executive Regulation 2-10  
Montgomery County, Home Energy Loan Program

March 25, 2010

The Alliance for Green Heat is very supportive of the HELP program and grateful that the Department of Environmental Protection and Department for Finance for making Montgomery County a leader among leaders of low carbon counties in the United States.

The Alliance for Green Heat is an independent non-profit advocating for low carbon heating technologies. We have worked with many states and counties implementing these property assessed loan programs, and we urge all jurisdictions to only allow the cleanest and most efficient biomass appliances to qualify for loans.

We urge the county to adopt the strictest possible emission standards for wood and pellet stoves, which are the standards developed by the State of Washington. The federal EPA standard allows up to 7.5 grams per hour but it is outmoded and obsolete. The State of Washington requires a maximum of 4.5 grams per hour and requires that all wood stoves be third party tested for emissions. The Washington state standards can be found here ([Get a list of wood stoves that meet Washington standards](#)) and is also attached. More information is here:

[http://www.ecy.wa.gov/programs/air/indoor\\_woodsmoke/wood\\_smoke\\_page.htm](http://www.ecy.wa.gov/programs/air/indoor_woodsmoke/wood_smoke_page.htm).

Since the HELP program offers loans up to \$25,000, this may be an opportunity for some resident to apply to install larger biomass systems, such as masonry stoves, boilers and furnaces. We recommend leaving this up to the discretion of the Director.

1. Masonry stoves do not pose emissions problems and just need to conform with ASTM E-1602.
2. Outdoor wood boilers are by far the most problematic appliance and fortunately, Maryland already bans the most polluting units. Maryland does allow the cleaner Phase 2 EPA qualified outdoor wood and pellet boilers, but in more densely populated areas, there should be a 100 – 200 foot setback requirement, even for those Phase 2 wood boilers. The wood pellet Phase 2 boilers do not need more than a 50-foot setback and can be safely run in more densely populated areas.
3. Indoor wood and pellet boiler and furnaces can also be tricky, largely because they have been exempt from EPA regulations so there are no common standards for them. Generally, one fueled by wood pellets are likely to be extremely clean and suitable for this county. Some indoor wood units, especially those manufactured in Europe, can also be very clean burning and efficient. However, indoor boilers and furnaces fueled with wood should be closely scrutinized. The Alliance for Green Heat is available for confidential consultations on this.

An additional benefit of this program is that it may stimulate some homeowners to put clean burning wood and pellet stoves in an existing fireplace and thus prevent the fireplace being used. Fireplaces are by far the most polluting way to burn wood.

In addition to providing these suggestions on the eligibility of biomass appliances, we also urge the county to calculate project costs on a “net” basis instead of full value cost. Most people interested in biomass appliances in Montgomery County will be offsetting natural gas, which for now is relatively inexpensive. The price of biomass varies widely, from free for those who procure it themselves as many low and middle-income people do, to pellet delivered and stacked in your garage, which is likely to be the highest priced biomass fuel. While even pellets stoves are almost always less expensive per unit of renewable energy produced solar panels or geothermal systems, sometimes the payback periods can be long.

Lastly, we also encourage the county to allow homeowners to receive up to two HELP loans, if the second proposal meets the same rigorous tests that the first one did.

Thank you for this opportunity to provide comments and we are more than happy to provide additional information and assistance.

**From:** Joyce Breiner Yaney [jkbreiner@comcast.net]

**Sent:** Thursday, April 01, 2010 11:55 AM

**To:** Coffman, Eric

**Subject:** Comments: Montgomery County Home Energy Loan Program

I was unable to attend the public hearing on March 25, 2010 regarding the County Executive's proposed Executive Regulations to implement the Home Energy Loan Program (HELP).

I want to add my voice in strong support of this proposed county regulation.

Early last year, my husband and I had a home energy audit performed which showed we could benefit from improved sealing and attic insulation even though our home was only 9 years old.

Since the addition of insulation and sealing of recessed lighting work was completed a little over a year ago, we have saved an average of 20-25% on our energy costs to heat and cool our home.

We fully expect the cost of this home improvement to pay for itself in a year or so (approximately 2-3 years after the improvement was completed). It is by far, the best home improvement we have made to our home.

I strongly urge support of the proposed Montgomery County Home Energy Loan Program regulation. It will enable citizens to make affordable improvements to their homes that will pay off handsomely and quickly in reduced energy costs and lower families' carbon footprints.

Sincerely,

Joyce Breiner  
2 Hackett Ct  
Poolesville MD 20837  
301-349-5052  
[jkbreiner@comcast.net](mailto:jkbreiner@comcast.net)

**From:** Beau Engman [Beau@e2capitalpartners.com]

**Sent:** Monday, March 29, 2010 6:01 PM

**To:** Coffman, Eric

**Subject:** Considerations

Eric,

I enjoyed coming to hearing you held last week. I wanted to follow-up for the purposes of reiterating some of my points.

1. **Disbursement to designated contractor** – It is my recommendation to support a qualified contractor (or general contractor) to post a request on behalf of the homeowner and ultimately get paid directly by the county – rather than having payment go to the homeowner and then the contractor. My assumption is that the current process adequately support the fact that the customer has to signoff and approve the work before disbursement can be made, so it is my view that this does not provide any problems to the process. I am interested to know of any reasons why this is not viewed as a favorable approach so I can have the opportunity to counter them.
  - a. Rationale: Performing services whereby all the costs are recovered at the tail end, with no consideration provided before or during construction, the contractors will already be utilizing their own credit and cash reserves to support the improvements – not the homeowner. The task of having payment going directly to the homeowner for services and costs already approved, puts the contractor in the position to have to collect the money, which can take time. And time further extends the credit and cost of the improvements. Overall, making disbursements directly to contractors, for the benefit of homeowners, makes the process much more scalable, lowers cost, and credit reduces risk. Secondly, is there any provision that ensures that the homeowner actually pays the contractor?? By paying the contractor directly, it mitigates the further red tape associated with making sure contractors are paid. **This in my view is considered critical to the program.**
2. **Increased Dollar Value** – it is my recommendation to increase the allowance from 5% to \$25K to 5% to \$50K.
  - a. Rationale: This will support more comprehensive measures to reduce overall energy performance. For example, in cases where consumers are trying to achieve overall performance targets within the ANSI National Green Building Standard (Emerald or Gold), [www.nahbgreen.org](http://www.nahbgreen.org), for existing homes prior to 1980, there are means to accomplish it that require comprehensive improvements including new windows and/or geothermal systems. This could quickly push the cap on \$25K. In my view, its compelling to deploy a business at achieving this performance standard within the county program. Increasing the \$25K to \$50K will make that more realistic.
3. **Geothermal as an approved Energy Conservation Measure** – It is my recommendation that geothermal energy, hvac, and hot water systems be included as approved measures. The energy efficiency benefits are tremendous and the technology is proven.
  - a. Rationale: We should encourage consumers to take measures that have the most dramatic impact on energy usage – geothermal systems fall in that category in that they typically reduce energy demand by up to 75% for heating, air conditioning, and hot water heating.

4. **1 Project per Property** – I like the current limitation that allows only one project per property. In my testimony I said otherwise, but after thinking about it, I believe its important to get consumers in the mindset to make the most dramatic improvements as possible within their energy efficiency project.
  - a. Rationale: There are cost savings due to doing many energy conservation measures (ECM) in a single project. If consumers know they only get one chance to take advantage of this program, they will be more inclined to take a more comprehensive approach to energy conservation. If they know they can get multiple grants, they will implement one ECM at a time which reduces the effectiveness of the program.
5. **Rebates** – to the extent there are utility or government rebates associated with energy conservation measures, the corresponding rebate value should be deducted from the cost basis.
  - a. Rationale – The purpose of the incentives is to influence the purchase of certain renewable energy measures. Not including the rebate value diminishes the value of those programs.

Feel free to follow-up with me on any of these points.

Thanks in advance.

Beau

**Beau Engman**

Managing Partner

E2 Capital Partners, LLC

4800 Hampden Lane, Suite 200

Bethesda, MD 20814

Direct: 240-482-3755

Cell: 240-462-9745

beau@e2capitalpartners.com



*Local governments working together for a better metropolitan region*

March 24, 2010

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MAR 29 2010

Environmental  
Protection

**District of Columbia**

Bladensburg\*

Bowie

College Park

Frederick

Frederick County

Gaithersburg

Greenbelt

Montgomery County

Prince George's County

Rockville

Takoma Park

Alexandria

Arlington County

Fairfax

Fairfax County

Falls Church

Loudoun County

Manassas

Manassas Park

Prince William County

\*Adjunct member

Hon. Isiah Leggett, County Executive  
Executive Office Building  
101 Monroe Street,  
Rockville, MD 20852-2540

**Subject:** Comments on Montgomery County Regulation 2-10 (Home Energy Loan Program)

Dear County Executive Leggett:

The Climate, Energy and Environment Policy Committee (CEEPC) of the Metropolitan Washington Council of Governments (COG) wishes to congratulate Montgomery County for creating the groundbreaking Home Energy Loan Program (HELP).

We strongly support the program as an innovative measure to assist homeowners with reducing their energy use, and increase clean energy generation by borrowing money to retrofit their homes, with repayment through the property tax bill. HELP offers homeowners a unique opportunity to obtain cost-effective financing for home improvements that will result in lower energy bills. This program also directly benefits the economy by creating new opportunities for local businesses and workforce.

By requiring home energy audits based on the Home Performance with Energy Star process and requiring Building Performance Institute (BPI) certification for contractors, the HELP program will meet the highest professional standards and result in effective energy savings. The way HELP is designed also ensures the cost-effectiveness of improvements financed under the program, is designed to result in a positive cash flow for the homeowner and limited financial risk for banking institutions.

COG's *National Capital Region Climate Change Report* found that the residential sector accounts for 33 percent of the energy demand in the region. The COG Board of Directors adopted targets to reduce greenhouse gas emissions by 2012, 2020 and 2050. Encouraging homeowners to weatherize their homes, purchase efficient appliances, install programmable thermostats, and adopt other cost effective measures to reduce energy use and produce clean energy will contribute significantly to achieving regional greenhouse gas and energy reduction goals.

We believe that Property Assessed Clean Energy (PACE) programs are a very attractive way to assist homeowners maximize energy efficiency and clean energy use in their

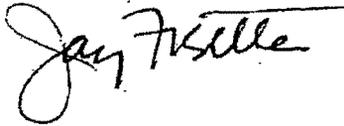
777 North Capitol Street, N.E. Suite 300 Washington, D.C. 20002-4290

Telephone (202) 962-3200 Fax (202) 962-3201 TDD (202) 962-3213 Website [www.mwco.org](http://www.mwco.org)

homes. We are hopeful that the Montgomery County HELP program will be able to offer attractive interest rates and, if possible, provide exemption from the three year rule for new homeowners.

We believe the HELP program has the necessary ingredients to be successful and provide a model for other jurisdictions in the metropolitan Washington region to follow. We look forward to hearing about your experience with the program as it is implemented over the coming year.

Sincerely yours,

A handwritten signature in black ink that reads "Jay Fisetle". The signature is written in a cursive style with a long horizontal line extending from the top of the "y".

Jay Fisetle, Chair  
COG Climate, Energy and Environment Policy Committee

cc: Stan Edwards, Eric Coffman

**From:** Joe Gitchell [joe.gitchell@gmail.com]  
**Sent:** Thursday, March 11, 2010 8:26 PM  
**To:** Coffman, Eric  
**Subject:** Montgomery County Regulation 2-10  
Dear Mr. Coffman,

I am writing in support of the adoption of the proposed HELP program. I believe that the county and other governments can do a lot by incentivizing individual citizens to pursue investments and adopt behaviors that improve efficiency and end up reducing cost and greenhouse gases. I hope that the Council will move expeditiously with this regulation.

Thank you for your consideration.

Joe Gitchell

--

Joe Gitchell  
4301 Stanford ST  
Chevy Chase, MD 20815

33



March 2, 2010

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MAR 05 2010

Environmental  
Protection

Stan Edwards, Chief  
Division of Environmental Policy and Compliance  
Department of Environmental Protection  
255 Rockville Pike  
Rockville, Maryland 20850

Glenn W. Wyman  
Debt and Cash Manager  
Department of Finance  
101 Monroe Street, 15th floor  
Rockville, Maryland 20850

Regarding: CMC Energy Services' Comments on Regulation No. 2-10  
Montgomery County Home Energy Loan Program

CMC Energy Services commends the Department of Environmental Protection and Department of Finance on their work to develop Montgomery County's Home Energy Loan Program. This is a tremendous opportunity for local homeowners to save energy, save money and live more comfortably. To succeed, CMC hopes Montgomery County will combat the barriers to implementation faced by Home Performance with Energy Star (HPwES) programs in other jurisdictions. Solutions include targeting niche markets such as recent home buyers; offering the energy audit for free; streamlining training and certification requirements for contractors; and using trusted home inspectors rather than contractors to conduct audits. To meet Maryland's goal of 15% energy reduction by 2015, we must structure the program with enough flexibility to help, not hinder this goal.

Below please see CMC's comments on the proposed regulation.

**1) Section V, A. (2): Audit analysis must be conducted using software accepted by HPwES (e.g. Beacon).**

This is a bit vague, as neither the MD HPwES program nor the national guidelines list software criteria. CMC's Home Tune-up software produces a user-friendly report proven to be a powerful sales tool that persuades homeowners to make deep investments in energy efficiency. Please see our attached audit report with new additions on page 3, including all BPI-required health and safety checks. Would our software be approved by the HELP program?

**2) Section II, 13. (c) An energy auditor is an individual or company that meets any other equivalent requirements approved by the Director as published in the Program Plan.**

CMC is pleased to see this language included in the draft. Given CMC's 33 years of experience helping Maryland homeowners save energy, with over 325,000 audits performed, and as a woman-owned Montgomery County based firm, does CMC meet these equivalent requirements? CMC has been encouraged to participate in HPwES by Kathleen Hogan, EPA's former Director of the Climate Protection Partnership Division that oversees the national HPwES program. Please see attached letter.

3) Can you tell us what the total loan budget is (approximately), what the loan's interest rate will be and how soon you plan to start the program?



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460

OFFICE OF AIR AND RADIATION

Climate Protection Partnership Division  
U.S. EPA 6202J  
Washington, DC 20460

Ms. Doris M. Ikle'  
CMC Energy Services  
7010 Glenbrook Rd  
Bethesda, MD 20814

July 31, 2009

Dear Doris,

I appreciated the opportunity to learn more about CMC's residential activity and how your company can better participate in our ENERGY STAR programs. As a long standing player in the energy efficiency industry, you and your concerns are important to us as we implement national programs with very large goals.

The Home Performance with ENERGY STAR team has encouraged CMC to participate in current sponsored programs – especially where you have trained resources such as in New Jersey. There are several areas where CMC could contribute, either as a front end consultant performing the comprehensive home energy assessments or as a contractor delivering the needed up grades – or both. With your extensive experience, we believe many of our program sponsors would gladly include CMC as a contractor to help them reach performance goals.

As you are aware, our Home Performance with ENERGY STAR sponsors are given flexibility in designing their programs. Many choose to hire an implementation contractor to design, market, and manage their entire program. In New Jersey, the Board of Public Utilities has hired an implementation contractor to run all aspects of the program, from contractor recruitment to quality assurance. Further, this implementation contractor has its own existing residential modeling tool that all participating contractors are required to use. With one computer based tool, the program data management is more efficient.

We do not require our sponsors to use a rating under Home Performance with ENERGY STAR. Ratings have a useful purpose to establish a home's performance measure relative to a home built to the model energy code, and raters all over the country are contributing to the Home Performance with ENERGY STAR programs – either as stand alone consultants or with companies delivering remediation. Our current guidance to our sponsors on selecting estimating modeling tools is to consider either RESNET approved software or software used within the Department of Energy's Weatherization Assistance Programs. This is only guidance and we are allowing

sponsors to select estimating tools they believe are best suited for their programs.

However, there is a new existing homes software testing protocol, under development by National Renewable Energy Laboratory, called BestTest EX. Once this testing software is fully vetted our guidance will likely request that estimation tools used by sponsors have passed this testing protocol. There is much interest from contractors and sponsors alike to use more existing homes specific estimating tools that are easier to deploy and contribute toward "selling" home performance remediation. Certainly homeowners can still seek a rating if desired, but most are interested more in correcting the energy and comfort deficiencies in their homes.

I understand you have connected with the National Renewable Energy Laboratory and are planning to submit TuneuP for review. This will be a big step toward positioning your comprehensive audit tool with future Home Performance with ENERGY STAR sponsors. Beyond getting TuneuP through the BestTest EX process, we encourage you to contact our sponsors and explore enrolling in their programs as either a consultant or contractor.

We will certainly consider your comments about listing "auditors" as well as "raters" on our website. The market is certainly changing as energy efficiency becomes increasingly important. We will look for opportunities to include more of the energy efficiency community on our ENERGY STAR web-site as new certifications emerge from the various retrofit programs across the country.

Thank you for your continued interested in our programs.

Sincerely,



Kathleen Hogan, Director  
Climate Protection Partnership Division

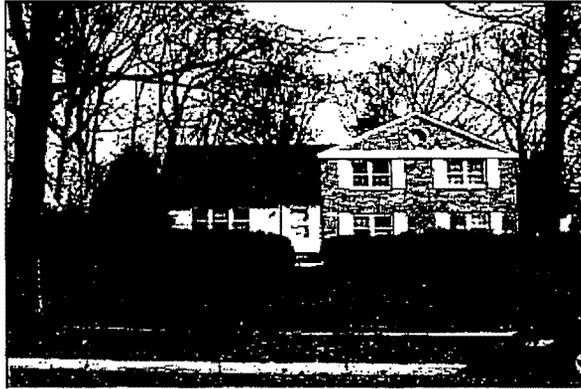
cc. David Lee  
Chandler von Schrader  
Dale Hoffmeyer



## Home Tune-up Report

Mr. Justin Green

1248 Maple Street, Pompton Plains, NJ 07444



Report prepared by:

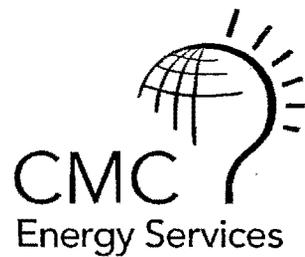
CMC Energy Services, Inc.

Steve Luxton

866-336-5262

[sluxton@cmcenergy.com](mailto:sluxton@cmcenergy.com)

[www.hometuneup.com](http://www.hometuneup.com)



2/8/2010

This Home Tune-uP report:

- Lists energy efficiency improvements and their estimated savings and costs;
- Identifies the group of improvements that save more than they cost;
- Lists features examined but not recommended;
- Explains each recommendation in detail;
- Provides information on implementation and contractor resources;
- Suggests additional energy efficiency measures;
- Gives guidance on indoor air quality.

Implementing these recommendations will reduce your energy bills and make your home more comfortable and more valuable. It will also help the environment. The energy savings realized by making improvements may pay for the monthly cost of the improvements when financed. Thus investing in energy efficiency can be profitable from day one.

Inspection ID:	1021
Structure type:	Detached
Date built (est.):	1963
# of bedrooms:	4
House size (sq. ft.):	1660
House volume (cu. ft.):	13280
Heating fuel:	Natural Gas
Price of heating fuel:	\$1.500/Therm
Price of electricity:	\$0.160/kWh - Summer \$0.140/kWh - Winter

The estimates in this Tune-uP Report are based on the data obtained from measuring and inspecting your home. The information was analyzed using CMC Energy Services' Home Tune-uP software, which takes account of local weather, energy prices and implementation costs. CMC's experience, based on more than 250,000 home energy inspections since 1977, has shown the accuracy of CMC estimates to compare favorably to others. The savings estimates do not reflect variations in the behavior of the occupants nor future weather changes. The actual costs will vary from the estimated costs due to variations in the complexity of the job as well as price differences among contractors and suppliers. To speed up the loan process, the amount financed will be based on the "estimated cost" from the RS Means Repair & Renovation estimates for the region, rather than on an approved contractor's bid.

**CMC Energy Services does not offer any warranty, either expressly or implied, for the estimated savings or costs in this Report. Should you find an error in the Report, please call us at 866-336-5262. The liability of CMC Energy Services for any errors or omissions in this Report is limited to the fee paid for this Report.**

## Energy Efficiency Improvement Opportunities

The following table summarizes the energy efficiency improvement opportunities available for your home and lists estimates of the annual savings, costs, and payback (the cost divided by the annual savings). Details for each improvement opportunity are provided in the recommendations section of the report.

Table 1

Feature	Recommendation	Estimated Annual Savings	Estimated Cost	Payback (Years)
Programmable Thermostat - Unit 1	Install	\$230	\$270	1
Water Heater - Basement	Add tank insulation	\$40	\$41	1
Duct Sealing	Seal ducts	\$147	\$296	2
Knee Wall Insulation - Original House	Insulate to R 13	\$22	\$73	3
Air Sealup	Seal air leaks	\$157	\$566	4
Duct/Pipe Insulation	Insulate	\$74	\$262	4
Attic/Ceiling Insulation - Original House	Insulate to R 38	\$178	\$1,379	8
1 Window(s) Insulating Shade	Install thermal shade(s)	\$30	\$231	8
1 Large Window(s)	Replace with double-pane, low-e	\$54	\$483	9
Refrigerator - Kitchen	Replace due to age	\$84	\$810	10
Gas Furnace - Basement	Replace due to age	\$326	\$3,450	11
4 Medium Window(s)	Replace with double-pane, low-e	\$137	\$1,472	11
Cooling System - Basement	Replace due to age	\$294	\$3,770	13
11 Window(s) Solar Shade	Install solar shade(s)	\$63	\$1,379	22
Clothes Washer - Utility Room	Replace due to age	\$34	\$775	23
<b>Total</b>			<b>\$15,257</b>	

\*Total annual savings are not included since each savings estimate assumes that all other features remain the same.

Implementing all these recommendations would result in an annual reduction of Greenhouse Gases equivalent to not driving a car for 8.4 months.

## Improvements That Save More Than They Cost

The table below identifies the group of improvements you cannot afford to pass up because the monthly energy savings they create exceed their monthly costs when financed. Furthermore, they will make your home more comfortable while also increasing its value. (These estimates are based on a 30-year loan with a 6.00% interest rate.)

Table 2

Feature	Recommendation	Estimated Annual Savings*	Estimated Cost	Payback (Years)
Water Heater - Basement	Add tank insulation	\$40	\$41	1
Programmable Thermostat - Unit 1	Install	\$161	\$270	2
Duct Sealing	Seal ducts	\$103	\$296	3
Knee Wall Insulation - Original House	Insulate to R 13	\$15	\$73	5
Air Sealup	Seal air leaks	\$110	\$566	5
Duct/Pipe Insulation	Insulate	\$52	\$262	5
Refrigerator - Kitchen	Replace due to age	\$84	\$810	10
Attic/Ceiling Insulation - Original House	Insulate to R 38	\$125	\$1,379	11
1 Window(s) Insulating Shade	Install thermal shade(s)	\$21	\$231	11
1 Large Window(s)	Replace with double-pane, low-e	\$38	\$483	13
Gas Furnace - Basement	Replace due to age	\$216	\$3,450	16
<b>Total</b>			\$7,861	
<b>Estimated Monthly Savings and Cost When Financed**</b>		\$80	\$74	

\* The annual and monthly savings estimates displayed in Table 2 take account of the interaction between the measures and may therefore be less than the savings listed in Table 1. For example, if the efficiency of the heating system is improved and insulation is added, the savings from the improved heating system will be less because the added insulation reduces the heating load, and likewise the savings from the improved insulation will be less because the new heating system will be more efficient.

\*\* The total monthly cost is the monthly payment, including interest, required to pay for all the improvements listed in Table 2 when financed with a 30-year loan at 6.00%

## Health and Safety

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Your Home Tune-up Inspector conducted a safety inspection of all gas and/or oil fueled appliances, such as heating equipment, ovens and water heaters, that could pose a combustion spillage risk. This included:

- A test for carbon monoxide (CO) during the operation of the appliances;
- An evaluation of possible backdrafting of combustion by-products that spill into the house rather than going up the exhaust flue;
- A test to measure that chimneys have proper draft during natural conditions when all fans in the house are working and the house is depressurized;
- Possible gas leaks in all readily accessible piping.

The tests showed the following problems:

The heating system spilled combustion gases for close to 60 seconds until proper draft occurred. Recommend installing a spill-switch to ensure against future exhaust gas spillage. Consult a qualified heating system specialist to further evaluate this matter and to install the spill-switch.

The auditor also examined:

- The presence of operable smoke and carbon monoxide detectors on all floors and in the mechanical room;
- The clothes dryer exhaust to ensure there were no obstructions;
- No exposed asbestos-like materials.

## Other Comments From Your Energy Inspector

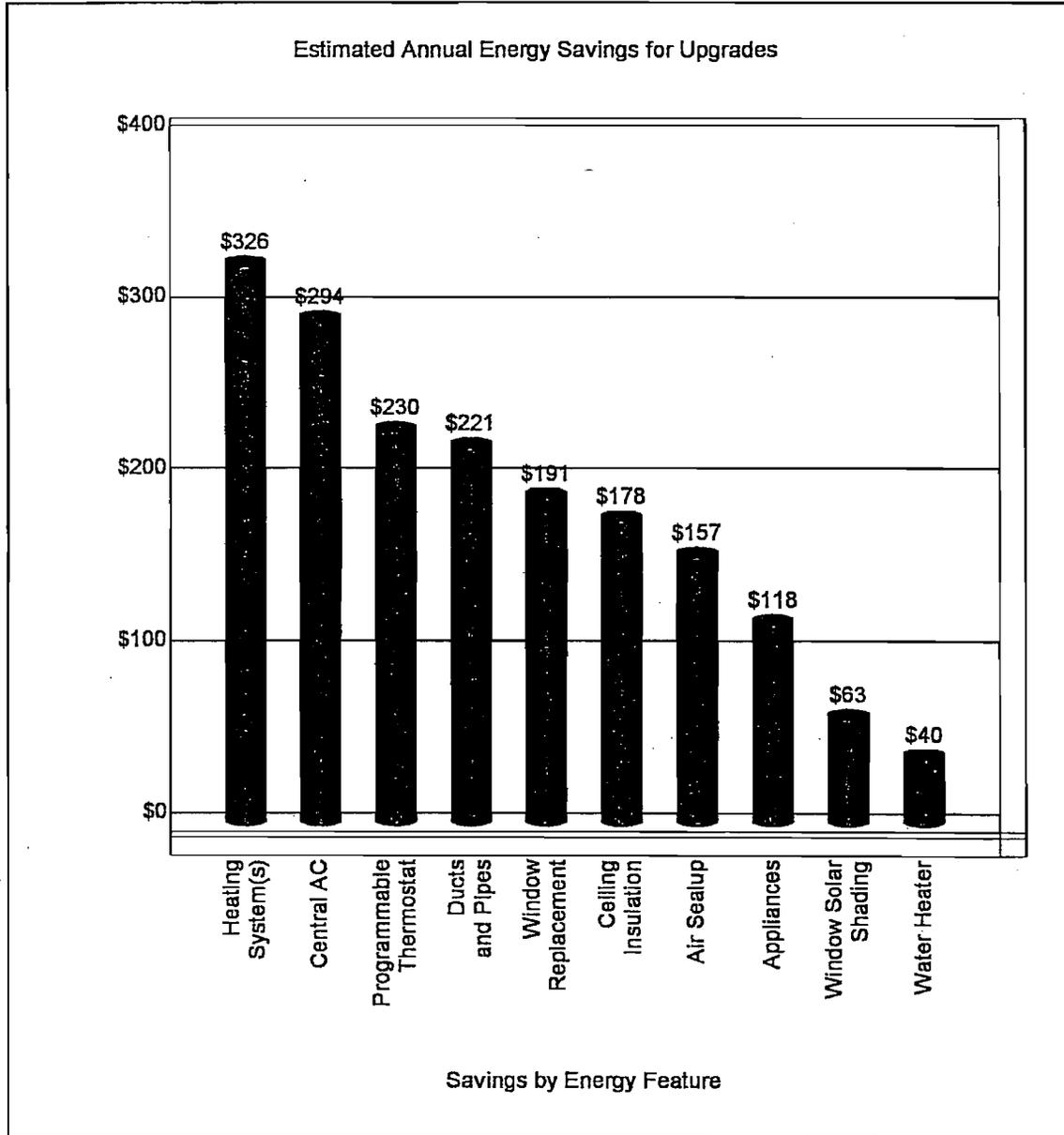
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Suggest installing a timer or motion sensor on exterior lighting.

Check with pool specialist to determine minimum number of hours pool filter pump needs to run. Consult with a licensed electrician to install a timer and set on/off times accordingly.

## Recommendations

The major factors that affect the comfort of your home—and your utility bills—are insulation, windows, air leaks, heating and cooling systems, the water heater(s) and major appliances. The chart below, based on the savings in Table 1, shows which improvements will save the most money and energy in your home.



## Insulation - Attic/Ceiling

---

	Area #1
Location:	Original House
Existing insulation type:	Blanket / Batt - Fiberglass
Existing R-value:	10
Area (sq. ft.):	1100
Attic floored:	No
Roof type:	Pitched
Ceiling type:	Flat
Room to add insulation:	Yes
Recommendation:	Insulate to R 38
Estimated cost:	\$1,379
Estimated annual savings:	\$178

A well-insulated ceiling reduces energy loss, makes your home more comfortable, and lowers your energy bills. It helps protect your home from fire and moisture damage, and is an effective sound-proofing material. During warm weather, ceiling insulation reduces the heat transfer from the hot attic to the rooms below.

### Inspector Comments:

- The hatch entry to the attic should be weather-stripped and insulated on the attic side to reduce air leakage and heat loss/ heat gain.



Replace displaced insulation in attic.

### Homeowner Notes:

## Insulation - Knee Walls

---

	<b>Area #1</b>
<b>Location:</b>	Original House
<b>Insulation present:</b>	No
<b>Area (sq. ft.):</b>	120
<b>Recommendation:</b>	Insulate to R 13
<b>Estimated cost:</b>	\$73
<b>Estimated annual savings:</b>	\$22

Knee walls separate the short wall of a finished attic room from the unconditioned roof area. While this is a relatively small portion of the total wall, it is important to insulate otherwise heat may be lost and the temperature in the room will be difficult to control. The top of the insulation in the knee walls should fit snugly against the angled roof in order to minimize air passage. Batt and blanket insulation are frequently used.

### Inspector Comments:

As discussed, insulate all exposed and accessible sections of sheetrock in knee wall attic eaves area. The affected sections form the thermal boundary and should be insulated with fiberglass batts.

### Homeowner Notes:

## House Air Leakage

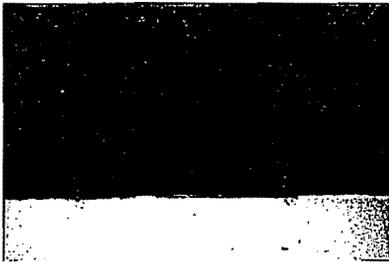
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**Est. air leakage condition:** Average  
**Recommendation:** Seal air leaks  
**Estimated cost:** \$566  
**Estimated annual savings:** \$157

Many homes, especially older ones, have air leaks that allow heated and cooled air to escape when the air pressure differs between the inside and the outside of the home. Because these leaks allow unconditioned air to enter as conditioned air is lost, air leaks can be a significant waste of energy and money. They also make the house drafty. Many homes have hidden air leaks that require a weatherization technician to find the leaks and seal them. It is recommended that you find a seal-up technician who uses a blower door to help identify where the air is leaking and, after sealing the leaks, verifies the reduction in leakage. Homes with indoor air pollution caused by combustion heating, tobacco smoking, or moisture problems may require more ventilation than an average house.

### Inspector Comments:

As discussed, insulating all readily accessible areas of the basement rim joist is strongly recommended to reduce air leakage and conductive heat loss.



Rim joist

### Homeowner Notes:

## Windows and Glass Doors - Replacement

Number of Windows	Window Size/Type/Condition	Recommendation	Cost	Savings
2	Small/Double/Good	None - Satisfactory		
14	Medium/Double/Good	None - Satisfactory		
4	Medium/Single/Poor	Replace with double-pane, low-e	\$1,472	\$137
3	Large/Double/Good	None - Satisfactory		
1	Large/Single/Poor	Replace with double-pane, low-e	\$483	\$54
1	Oversized/Double/Good	None - Satisfactory		

Glass is a very poor insulator and much heat is lost through windows during the winter. A single pane of glass loses fifteen times more heat than a section of insulated wall of the same size. By adding a second pane of glass, the amount of energy lost through windows is cut almost in half. Using low-e glass for the second pane reduces energy loss by an additional 10%. In warm climates, the heat of the sun shining through windows accounts for up to half of the cooling costs. Solar tinted glass, or a solar film on existing windows, or a solar shade, can reduce total air-conditioning costs by up to 25%. Replacing windows is expensive, but if the window frames are in poor condition, this may be the best solution. The National Fenestration Rating Council rates the energy efficiency of replacement windows. The quality of the installation is as important as the quality of the product, therefore check references of the installer before signing a contract.

### Inspector Comments:

The combination of the single glazed primary interior window and intact exterior storm windows are comparable to a double-glazed window. Ensure that the upper and lower sashes are fully in place during heating season to ensure that air is trapped between the windows.

### Homeowner Notes:

## Windows - Solar Shades

### Solar Shades

Number of Windows	Side of House	Recommendation	Cost	Savings
11	Front	Install solar shade(s)	\$1,379	\$63

### Solar Films

Number of Windows	Side of House	Recommendation	Cost	Savings
11	Front	None - Satisfactory		

Windows account for about 50% of heat gain in hot weather. Installing either solar film or solar shades on windows that receive direct sunlight will help to reduce heat gain. Solar window film applied directly to the interior glass deflects heat in the summer and can reduce solar heat gain by 30-40%.

Mylar pull-down solar shades with solar tinting will reduce solar gain. If possible they should be sealed to the window frame. If not sealed, much of the rejected solar heat escapes into the room through the side of the shade. In climates with heating and cooling seasons, solar shades can be raised to capture the solar energy during the heating season. The most effective solar shades are those installed on the outside of the window since they reject the solar heat before it passes through the window.

### Inspector Comments:

None

### Homeowner Notes:

## Windows - Insulating Shades

Number of Windows	Window Size	Recommendation	Cost	Savings
1	Oversized	Install thermal shade(s)	\$231	\$30

A drawn insulating window shade will keep the heat inside a room more effectively than the best window without a shade. In general, shades or drapes increase comfort by making the window feel less cold in the winter and reducing the solar radiation in the summer. To take advantage of the heat from the sun in the winter, open shades on southern and eastern windows during the day and close them at sunset to retain heat.

### Inspector Comments:

None

### Homeowner Notes:

## Heating System

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	Unit #1
Location:	Basement
Type:	Gas Furnace
Age/Design life (years):	28/20
Size (Btu/hr):	100000
Efficiency (AFUE)	
- Existing:	63
- ENERGY STAR®:	90
- Range Available:	78 - 96%
Percent of heat supplied:	100
Recommendation:	Replace due to age
Estimated cost(1):	\$3,450
Estimated savings / yr (1):	\$326
Estimated cost(2):	\$3,968
Estimated savings / yr (2):	\$357

(1) – Estimates for replacement with an ENERGY STAR® model.

(2) – Estimates for replacement with an industry best model.

A heating system is expected to last from 20-25 years, depending on the system. If the system is nearing the end of its life, it is better to replace it sooner rather than later to avoid being without heat for several days when it fails. This way, you will have time to compare bids, check references and ensure that the contractors are bonded and insured. A load calculation for the house should be made to determine the proper size based on the current conditions of the house since older homes often have heating systems that are oversized.

### Inspector Comments:

- A ceiling fan will improve warm (and/or cool) air circulation, increasing the comfort of your home and allowing you to lower (or raise) the thermostat temperature and save money.

### Homeowner Notes:

## Central Cooling System

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	<b>Unit #1</b>
<b>Location:</b>	Basement
<b>Type:</b>	Split System
<b>Age/Design life (years):</b>	28/19
<b>Size (Btu/hr):</b>	36000
<b>Efficiency (SEER):</b>	
- Existing:	6
- ENERGY STAR®:	14
- Range Available:	12.5 - 16
<b>Percent of cooling supplied:</b>	100
<b>Recommendation:</b>	Replace due to age
<b>Estimated cost(1):</b>	\$3,770
<b>Estimated savings / yr (1):</b>	\$294
<b>Estimated cost(2):</b>	\$4,460
<b>Estimated savings / yr (2):</b>	\$322

(1) – Estimates for replacement with an ENERGY STAR® model.

(2) – Estimates for replacement with an industry best model.

Central air conditioning systems are expected to last from 15-20 years. Waiting for an older air conditioner to stop working before replacing it makes little sense since the old one will cost twice as much to operate each day you wait. Older homes often have air conditioners which require twice as much electricity as the current Energy Star® air conditioner.

### Inspector Comments:

None

### Homeowner Notes:

## Ducts/Pipe Insulation

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### Heating Pipe Insulation:

Length of uninsulated heating pipes (ft.):	0
Recommendation	Insulate
Estimated cost:	\$262
Estimated annual savings:	\$74

### Duct Insulation:

Length of uninsulated ducts (ft.):	60
Location of duct gaps:	
Recommendation:	None - Satisfactory
Estimated cost:	
Estimated annual savings:	

### Duct Leakage:

Duct leakage test recommended?	Yes
Recommendation:	Seal ducts
Estimated cost:	\$296
Estimated annual savings:	\$147

Uninsulated ducts or pipes passing through unconditioned spaces waste energy. Insulating will often pay for itself within one year if you do it yourself and within two years if a contractor does it. Seal the joints and any gaps with mastic before insulating ducts. After insulating the ducts, seal the insulation seams with foil scrim kraft tape (FSK) or web tape. If you have steam pipes wrapped in asbestos and the outside sheathing appears to be flaky or parts are missing, contact a qualified insulation contractor to do the work. Insulating ducts and pipes can often be done as part of insulating the home or as part of a weatherization job.

One of the easiest ways to save energy is to look for gaps in the joints of the ducts. Close these gaps and seal them with mastic. Some duct repair can be done easily by homeowners, but more extensive work should be done by a professional. Duct repair and sealing can usually be done as part of a seal-up or weatherization job or by insulation contractors.

Leaky ductwork is a common problem. It wastes energy and can make it difficult to regulate a home's comfort. However, it may cost more to repair leaky ducts than the savings if the ducts are in an inside wall or in a conditioned space. A contractor with special instrumentation will have to find the hidden leaks and decide how best to seal them.

### Inspector Comments:

Recommend removing exposed fiberglass duct wrap in basement, sealing ducts, and installing foil faced duct wrap



Air leak in duct seam



Air leakage noted in duct boot.

**Homeowner Notes:**

## Programmable Thermostat

	Unit #1
Heating system type:	Gas Furnace
Cooling system type:	Split System
Estimated cost:	\$270
Estimated annual savings for day and night setback:	\$230
Estimated annual savings for night only setback:	\$125
Recommendation:	Install

A programmable thermostat is recommended for night setback as well as for day setback when no one is at home during the day. Programmable thermostats that have the ENERGY STAR rating contain no mercury. If properly used, programmable thermostats can save 10% to 15% annually in heating and cooling costs. They generally pay for themselves in a year. Contact a licensed electrician to install your timed thermostat.

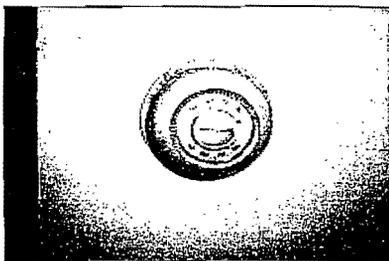
Most thermostats come with four pre-programmed temperature settings for typical weekday and weekend routines. Resist the urge to override the pre-programmed settings. Every time you do, you use more energy and end up paying more on your energy bill. Set the "hold" button at a constant energy-saving temperature when going away for the weekend or on vacation.

Install your thermostat away from heating or cooling registers, appliances, lighting, doorways, skylights, and windows, and areas that receive direct sunlight or drafts. Interior walls are best.

For heat pumps, a smart recovery thermostat is required in order for the house to slowly heat up in the winter without the use of auxiliary heating strips.

### **Inspector Comments:**

Recommend taking advantage of a setback programmable thermostat. Depending on lifestyle, setting back at least five to ten degrees for eight hours during sleep hours and/or at times when home is unoccupied will potentially save ten to fifteen percent on energy costs.



Replace analog manual thermostat

### **Homeowner Notes:**

## Water Heater

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	<b>Unit #1</b>
<b>Location:</b>	Basement
<b>Type:</b>	Natural Gas
<b>Age/Design life (years):</b>	3/13
<b>Size (gallons):</b>	40
<b>Unit recommendation:</b>	None - Satisfactory
<b>Unit estimated cost:</b>	
<b>Unit est. annual savings:</b>	
<b>Insulation recommendation:</b>	Add tank insulation
<b>Insulation estimated cost:</b>	\$41
<b>Insulation est. annual savings:</b>	\$40
<b>Timer recommendation:</b>	None - Satisfactory
<b>Timer estimated cost:</b>	
<b>Timer est. annual savings:</b>	

The design life of most water heaters is 13 years. It is advisable to replace a water heater if it is older than its design life rather than waiting until it unexpectedly breaks down. If a water heater is not working properly, a technician should decide whether it should be repaired or replaced. Lower the temperature of the water heater to 120° F to save energy and reduce the chance of scalding. If the hot water supply is insufficient at this setting, increase the water heater temperature by 5 degrees Fahrenheit and try it for a few days. CAUTION: If your dishwasher does not have a booster heater and your dishes do not come out clean, you should raise the water temperature to the setting recommended by the dishwasher manufacturer.

Energy can be saved by installing an insulating blanket around the water tank to reduce standby heat losses. When the water heater is located in a conditioned space that requires cooling in the summer, insulating will also lower the cooling load. Many homeowners can install this product themselves. CAUTION: If the tank has a warning label against the installation of additional insulation, do not install a wrap.

Another energy saving option is an electric timer which shuts off an electric water heater when hot water is not needed, thus reducing standby losses. This measure typically saves between 5%–12% of the energy used by the water heater. CAUTION: Contact a qualified electrician to perform the installation of the electric timer (the breaker must be turned off or the fuse must be disconnected).

### Inspector Comments:

None

### Homeowner Notes:

## Refrigerator

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	Unit #1
Location:	Kitchen
Age/Design life (years):	16/10
Size (cubic feet):	22
Condition:	Good
Recommendation:	Replace due to age
Estimated cost:	\$810
Estimated annual savings:	\$84

Refrigerators consume more electricity than any other appliance in most homes, and today's efficient refrigerators use about half the electricity of those made 15 years ago. If the house has two refrigerators, see if you can substitute them for one larger unit. When buying a refrigerator, ask for an Energy Star® model which uses about 10% less energy.

### Inspector Comments:

None

### Homeowner Notes:

## Clothes Washer

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	<b>Unit #1</b>
<b>Location:</b>	Utility Room
<b>Age/Design life (years):</b>	11/10
<b>Size:</b>	Medium / Large
<b>Condition:</b>	Good
<b>Recommendation:</b>	Replace due to age
<b>Estimated cost:</b>	\$775
<b>Estimated annual savings:</b>	\$34

The energy used for washing clothes is primarily (85%) determined by the temperature of the water used, not by the efficiency of the washing machine. To save energy, use cool water. With today's detergents, most laundry can be successfully washed in cold or warm water, and all can be rinsed in cold water. Also, washing two small loads uses approximately twice as much energy as combining them into one full load.

Front-load washers use less water than top-load machines and have high-speed spin cycles that remove more water from washed clothes, thereby, requiring less time in the dryer. In tests, front-load washers were also found to clean clothes better. Since the front-loading machines "wash whiter", "spin dryer" and are quieter than the top loading machines, they deserve serious consideration.

**Inspector Comments:**  
None

**Homeowner Notes:**

## **Implementation and Contractors**

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Finding experienced, professional contractors and suppliers to implement home improvements can be difficult. To ensure that the efficiency improvements you invest in will actually save energy, they must be properly and safely installed. This requires that a third party inspect each completed job and that participating contractors agree to rectify work found to be unsatisfactory at no additional cost. If possible, you should work with contractors and suppliers you know and trust. The energy inspectors who advise you as to which improvements to make and who provide information as to the savings and costs, should not have any financial interest in the improvements they recommend.

CMC does not recommend or endorse any contractors or suppliers. A technical expert is available at the Tune-up help-line to advise you. Call 866-336-5262 between 9 AM and 5 PM EST for assistance.

## **Nationwide Contractor Resources**

### **Contractors.com**

Contractors.com specializes in online contractor listings, with over one million contractors listed by zip code and service type. You can search for contractors in your area, review contractor profiles, read service ratings and testimonials provided by past clients of the contractor, visit the contractor web sites, and submit projects to obtain free estimates from contractors.

<http://www.hometuneup.com/contractors.asp>

### **Angie's List**

Angie's List is a word-of-mouth network for consumers. It's a growing collection of homeowners' experiences with local service companies. The people who join Angie's List are looking for a way to find trustworthy companies that perform high-quality work. There is a small membership fee to join the Angie's List network. Members can view Angie's List to find out what people in their area are saying about the companies they've hired in the area.

[www.angieslist.com](http://www.angieslist.com)

### **Building Performance Institute**

BPI provides professional accreditation services for contractor organizations and their professional staff in the building performance industry. The BPI contractors combine the role of advising the homeowner as to which improvements to make and making the improvements. Contractors who are professionally certified by BPI in their skills area have demonstrated competency through both written and field practical examinations. For more information and to locate a BPI certified contractor near you visit

[www.bpi.org](http://www.bpi.org)

### **North American Technician Excellence (NATE)**

NATE provides certification for contractors/technicians in the heating, ventilation, and air conditioning industry. The NATE certification tests are rigorous, and taking them is voluntary. For more information and to locate a NATE certified contractor near you visit

[www.natex.org/consumer\\_locator.htm](http://www.natex.org/consumer_locator.htm)

## Local Contractor Resources

### **Personal Property Managers (PPM)**

PPM offers services in Pennsylvania and New Jersey and is a one-stop, single-point of contact for home remodeling, renovation, and maintenance work. PPM personally coordinates, manages, and oversees home and property projects work on a daily basis. PPM works with pre-screened and fully insured service providers.  
<http://www.personalpropertymanagers.com>

## **Additional Energy Efficiency Measures**

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### **Lighting Options**

Compact fluorescent light bulbs use only one-third the electricity consumed by incandescent bulbs, yet last up to thirteen times longer. They produce less heat, are available in warm colors, and can be screwed into many existing light fixtures. While they cost more initially, their energy savings and long-life saves money and hassles in the long run. Consider installing hardwired fluorescent lights in your study or den and in your kitchen. Consider putting outside lights on a sensor so that they are lit only when someone approaches the house.

### **Recycling and Disposal of CFLs**

Although compact fluorescents are fast becoming the most popular form of efficient residential lighting, they are also starting to be seen in our landfills. Because of their mercury content, it's best to handle CFLs the same way you would other household hazardous waste products like paint or batteries. They should never be incinerated. While most states and communities do not require recycling of compact fluorescents, check with your community recycling center or local government about your recycling options. For information on disposal laws and recycling programs in your area, see [www.epa.gov/bulbrecycling](http://www.epa.gov/bulbrecycling).

If you break a CFL, the Environmental Protection Agency recommends you take the following steps:

- Open a window to disperse any vapor that may escape and leave the room for 15 minutes or more.
- Carefully scoop up the fragments and powder with stiff paper or cardboard and place them in a sealed plastic bag; use disposable rubber gloves if available. Do not use your bare hands.
- Wipe the area clean with damp paper towels or disposable wet wipes and place them in the plastic bag.
- Place the plastic bag in a second sealed plastic bag and dispose of in the trash. Some states require that broken and unbroken CFLs be taken to a recycling center.
- Do not use a vacuum cleaner or broom to clean up the broken bulb on hard surfaces.
- For carpet cleaning and additional information on CFL disposal, see the Energy Star CFL page.

### **Ceiling Fans**

During the winter, ceiling fans set at slow speed can push warm air away from the ceiling and move it around the room, spreading heat evenly and making you feel more comfortable without creating a draft. During the summer, ceiling fans will move the air to make you feel cooler.

### **Laundry**

The energy used for washing clothes is primarily (85%) determined by the temperature of water used, not by the efficiency of the washing machine. To save energy, use cool water. With today's detergents, most laundry can be successfully washed in cold or warm water, and all can be rinsed in cold water. Also, washing two small loads uses approximately twice as much energy as combining them into one full load. Front-load washers use less water than top-load machines and have high-speed spin cycles that remove more water from washed clothes so they require less time in the dryer. In tests, front-load washers were also found to clean clothes better. Since the front-loading machines "wash whiter", "spin dryer" and are quieter than the top loading machines, they deserve serious consideration.

### **Energy-Saving Showerheads**

Energy-efficient showerheads have become common in recent years, having been required in new homes since 1994. A good quality efficient showerhead saves a significant amount of energy and water.

### **Fireplace**

A fireplace can be a major drain on home energy. To burn, a fire draws conditioned air from your rooms to be replaced by cold outside air. Warm air will escape through the chimney to the outside if the damper is not completely closed or sealed when not in use. The fireplace should have well-closing glass doors and a direct source of outside air. If you do not use your fireplace at all, seal the damper [flue] with a specially designed inflatable plug or balloon inserted into the fireplace beneath the damper. This type of product is available at hardware stores or online and can pay for itself in one mid-winter heating bill.

### **Dishwasher**

ENERGY STAR® dishwashers are 30% more efficient than the 1994 standards. Models with an "energy-saver" or short-wash cycle option use less hot water. Reduce the total number of loads washed by running full loads. Turn off the drying heater so that dishes air dry.

### **Stove and Range**

Solid disk elements and radiant elements take longer to heat and use more electricity than halogen and induction elements. Self-cleaning ovens use less electricity than ovens without that feature because they are better insulated. Use a microwave, or toaster oven, rather than a full-sized oven or the stove. Smaller appliances use less energy than a stove and can reduce cooking time.

## Guidance on Indoor Air Quality

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### Inadequate Ventilation

Most older homes need to be weatherized to reduce energy loss. This can reduce the amount of air infiltrating the home resulting in inadequate ventilation and concentrations of indoor air pollutants from sources inside the home. Signs of inadequate ventilation include stuffy air, moisture condensation on cold surfaces, or mold and mildew growth (see [www.epa.gov/mold](http://www.epa.gov/mold)). If the house appears to be too tight, an air-to-air energy recovery ventilator should be installed to increase air circulation without losing much heat. Having adequate air ventilation is important for maintaining good indoor air quality.

### Reducing Toxins

Equally important is using less toxic materials in the home. Unfortunately, many home improvement products have significant "off-gassing," where the chemicals leach out of the product and into the home. Painting and carpeting are the two most common household improvements that people make when moving into a house, and both contain toxic chemicals.

### Paints

There are serious health and environmental concerns surrounding paint. Using paints that are free of Volatile Organic Compounds (VOCs) such as benzene and toluene, free of heavy metals such as lead or cadmium, and/or made of post-consumer recycled content can aid in reducing exposure to toxins for both you and your environment. However, the fact that a paint is VOC free does not necessarily mean that it is free of toxins such as formaldehyde, ammonia, acetone or odor-masking agents. Fortunately, paints with reduced levels of VOCs, or even VOC-free, are available.

### Carpeting

Scientists have not yet determined whether the chemicals emitted by new carpets are responsible for causing a variety of symptoms in household residents. Therefore, if you are installing new carpet, you may wish to take the following steps:

- Ask the carpet retailer for information on emissions from carpet.
- Ask the retailer to unroll and air out the carpet before installation.
- Ask for low-emitting adhesives (if adhesives are needed).
- Consider leaving the premises during and immediately after carpet installation.
- Make sure the installer follows the Carpet and Rug Institute's installation guidelines.
- Ventilate the house to the outdoors during and 48 to 72 hours after the new carpet is installed.
- Contact your carpet retailer if objectionable odors persist.
- Follow the manufacturer's instructions for proper carpet maintenance.

### Resources

The Environmental Protection Agency (EPA) has a consumer booklet, *The Inside Story: A Guide to Indoor Air Quality*. [www.epa.gov/iaq/pubs/insidest.html](http://www.epa.gov/iaq/pubs/insidest.html)

New American Dream has information on Green Seal certified paint manufacturers: [www.newdream.org/consumer/paint.php](http://www.newdream.org/consumer/paint.php)

## **Financing Energy Efficiency**

Energy improvements are unique because they create a stream of income in reduced monthly energy bills that may cover the monthly cost of the investment. Financing energy efficiency improvements as part of your home mortgage is the best possible way to go—you have the advantage of (i) low monthly payments due to a 30-year term and a relatively low interest rate; and (ii) interest that is deductible from your income tax.

### **Nationwide Financing Resources**

#### **Streamlined (k) Limited Repair Program**

The Streamlined (k) Limited Repair program is ideal for financing energy-efficiency improvements and upgrades to existing homes. Homebuyers can finance up to an additional \$35,000 in their mortgage for improvements identified by a home inspector or an FHA appraiser. This loan can be issued by any FHA lender. HUD's Mortgagee Letter 2005-50 explains the program. For more information visit [www.hometuneup.com/step4.asp](http://www.hometuneup.com/step4.asp).

#### **Fannie Mae Energy Loan**

Some lenders offer an unsecured Fannie Mae Energy Loan for \$1,000 to \$20,000. The approval for this loan is fast and simple. The Energy Loan's 10 year term and interest rates are generally better than those offered by contractors or suppliers.

### **Local Financing Resources**

#### **Utility Rebate or Loan Programs**

A number of utilities offer special energy efficiency rebate and/or loan programs. Program details may vary from what energy efficiency products or services qualify for these programs and how much the rebates or loans are for. In some cases, utility rebates may cover most of the product or service cost. Visit your utility's website to find out if it offers energy efficiency rebates or loans. Additional information may also be available at [www.dsireusa.org](http://www.dsireusa.org), a website dedicated to tracking state incentives for energy efficiency and renewable energy development.

#### **COOLAdvantage Program**

The program's objective is to improve the energy efficiency of new central electric air conditioners and heat pumps. To promote both the sale of energy efficient units and proper installation techniques, the N.J. Clean Energy Program offers rebates through the participating utilities that range from \$50 to \$400. The unit must meet a minimum energy efficient standard, based on its SEER, EER or HSPF ratings, with higher ratings granted higher rebates. The different rebate amounts and unit specifications can be found at the program website. Customers of Atlantic City Electric, Jersey Central Power & Light, PSE&G and Rockland Electric Company are eligible to apply for this rebate. Those participating in the New Jersey Energy Star Home New Construction Program are not eligible to apply. [www.NJCleanEnergy.com](http://www.NJCleanEnergy.com)

## Montgomery County Home Energy Loan Program Comments on the Draft Regulation

Abaris Realty, Inc. is a residential real property management company based in Rockville, MD focused on common ownership communities. Common ownership communities include Homeowner Association (HOA), Condominium, and Cooperative communities. Abaris Realty was founded in 1976 and has grown to manage a portfolio of over 16,000 residential units in the Washington metropolitan area with over 8,000 units under management in Montgomery County alone.

Abaris Realty strongly commends the county for its leadership on residential energy efficiency and we are thankful for the hard work of Eric Coffman and others in the County Department of Environmental Protection. The proposed Home Energy Loan Program (HELP) will make significant progress towards breaking down the financial barriers for Montgomery County residents to undertake cost effective energy efficiency retrofit projects. By removing up front capital costs, allowing for long-term low-interest repayment, and by making the loan obligation run with the property rather than the originator, we anticipate that the HELP program will have broad appeal. We believe that residents of our HOA communities will be particularly interested in taking advantage of this program.

Abaris Realty shares the County's desire to assist homeowners in saving money by lowering their energy costs, increasing the value of their property, and increasing the comfort and livability of their homes. Below are three specific issues that should be addressed to improve the effectiveness and equality of the proposed HELP program. We thank you for your consideration and would welcome the opportunity to discuss these further.

### **1) HELP's applicability to condominiums**

We are concerned that the program will only allow for improvements to a condominium unit owner's individual elements. The largest portion of energy expenses for the average condominium building is related to operating heating, ventilation, and cooling (HVAC) equipment. This is true for buildings with centrally metered utilities and equipment, as well as those with individually metered utilities and equipment. If a condominium owner has individually metered utilities and also has their own hot water heater, AC unit, split system, or convector unit then the HELP program will be able to assist that owner with retrofitting those items. However, the program will not be able to assist with retrofits to common elements such as common area lighting and elevators, which are also significant energy users. More importantly, the program will not address building-wide air flow issues related to a building's envelope or ventilation systems, making it difficult for an energy auditor to model projected savings.

Individual and common elements are interrelated with respect to energy use and cannot be easily addressed separately. From a public policy perspective, only addressing part of

a building's energy use (individual elements) will lead to a sub-optimal outcome. The best way to ensure the greatest possible reduction of energy consumption is to take a 'whole building' approach to retrofiting. We strongly recommend a mechanism that allows for an energy auditor to take into account both individual and common elements, and we are open to further discussions on how to best structure a whole building approach to condominium retrofits.

In addition to the issues highlighted above, the problem is even greater for condominium building with centrally metered utilities and central HVAC systems. For these buildings, the vast majority of energy use is tied to common systems which are paid for by owners through their condominium fees. In a centrally-metered building, each unit owner pays a portion of the total common energy costs based on their percentage of ownership.

For example, imagine a condominium building with a central HVAC system and 100 identical units. In this situation, each unit owner would also own 1 percent of the common area, and would be responsible for 1 percent of common energy expenses. Therefore, if one owner takes on a loan obligation to retrofit their limited individual elements, the subsequent energy savings would accrue to all owners in the building because they all share energy expenses.

The above scenario creates a free rider problem. The rational unit owners will be discouraged from taking on an individualized financial obligation that disburses benefits to a wider group. In these centrally-metered buildings, we recommend a mechanism that allows for a PACE loan to be extended directly to the condominium association, which is a not-for-profit corporation and a taxable entity. We understand that this suggestion may be outside of the scope of HELP's authorizing legislation, and welcome the opportunity to discuss specific legislative fixes to overcome this disincentive.

## **2) HELP's equality of benefits for homeowners**

Unlike single family and town homes, condominiums represent a more varied and complex form of home ownership. Often they are misunderstood, which has in the past led to disparities in benefits for condominium owners. Unfortunately, this situation seems to be repeating itself with HELP. The underlying issue is one of equality for Montgomery County homeowners. As it is currently written, the HELP program creates strong benefits for owners of singly family and town homes, but effectively does not extend the same benefits to owners of condominiums. Both types of homeowners hold mortgages, pay property taxes, and vote in the county, but only one is aided by this program. As an advocate for condominium owners and associations, Abaris Realty welcomes any opportunity to assist Montgomery County to modify the proposed regulation or to help design an accompanying regulation that addresses this disparity.

## **3) Programmatic funding shortfalls**

The proposed HELP program is currently designed to be funded through general obligation bonds. In its current fiscal condition, the amount of debt that Montgomery County will be able to issue will not be sufficient to meet this program's demands. For example, if HELP were funded to provide \$6 million in loans (which is what we

understand is currently proposed), the program would only be able to fund 600 retrofits of \$10,000 each. From our perspective, and in light of impending federal legislation of a \$6 billion Home Star retrofit rebate program, we expect demand to quickly outstrip this program's funding supply.

Based on recent discussions with local community banks, we can attest to a strong desire from the banking sector to take part in energy efficiency retrofit financing. Striking down the regulatory wall between public and private sources of capital would strengthen HELP's funding position, allowing it to make a significantly larger impact. We urge the County Executive to work with his attorneys and County Departments of Finance and Environmental Protection to develop innovative funding solutions for HELP that take into account the desired participation of private capital.

**Written Comments based on Testimony  
of Arthur S. Lazerow Regarding**

**MONTGOMERY COUNTY EXECUTIVE REGULATION  
M/C HOME ENERGY LOAN PROGRAM (HELP)  
Regulation 2-10**

**I. Executive Summary Regarding Auditors and Contractors for  
HELP**

1. As the Regulations are currently drafted with respect to auditors and contractors, the limitations as to which energy auditors and contractors can provide services to homeowner/borrowers in HELP are overly restrictive and should be more broadly based.
2. Both Building Performance Institute (BPI) and the Residential Energy Service Network (RESNET) have certification programs for auditors and contractors and companies and individuals with these certifications should be included in allowable HELP participants.
3. Any company or individual holding an auditor or contractor certification from BPI or RESNET, whether or not they participate in the Maryland Home Performance with Energy Star program, should be permitted to perform work under HELP. This will permit HELP to be served by a wider array of auditors and contractors without weakening quality.

With respect to quality assurance, the first line of quality control is the test-in and test-out comparison procedures to establish the efficacy of the contractor's work. The test-out should be performed by an auditor not associated with the contractor.

4. The Maryland Home Performance with Energy Star program (MD HPw/ES) should be utilized for a second layer of quality control.
5. Around the United States, the jurisdictions with the widest acceptance by homeowners of energy efficiency retrofit programs have been those programs that provided full or partial subsidy of the energy audit. Research such as the TVA study indicates that the energy audit itself stimulates actions to improve energy utilization even without a loan program such as HELP.
6. The benefits for Montgomery County, its homeowners and HELP by incorporating the suggestions made above are as follows:
  - a. Home Energy Team Institute has trained over 40 RESNET Diagnostic Home Energy Survey Professionals and BPI Analysts since June in metropolitan Washington, so there will be more qualified energy auditors available to perform energy audits, improving competition for audits and resulting in more competitive pricing for homeowners.

- b. There will be more qualified contractors available to do energy efficiency retrofit improvements under HELP, which supports the employment opportunity of local residents through HELP, just as the federal HomeStar program has morphed from a residential energy efficiency improvement program into an employment program supported by Democrats and Republicans in Congress.
- c. A subsidy program will jump start participation by Montgomery County home owners. The timing of the PEPCO audit subsidy program may very well dovetail with HELP, benefiting our home owners and PEPCO.
- d. DOE recognizes both BPI and a RESNET as the premier national standards writing and certification organizations on residential energy efficiency issues. No other certifications have the level of credibility with federal agencies. Having RESNET and BPI as the standard for certifications will be viewed positively and as significant by federal agencies, which will serve to enhance Montgomery County applications for block grants and other funding.

## **II. Proposed Regulation Language Amendments**

1. Definition of Contractor (Definition 7). For clarity, contractor should refer to an energy efficiency renovation company, as opposed to lumping energy auditors into the term "Contractor." This is a vestige from the MD HPwES. There is a separate definition of "Energy Auditor."
2. Definition of Energy Auditor (Definition 13). Change existing (c) to (d). Add as new: "(c) is certified by BPI or RESNET to perform existing home energy audits and has the skills necessary to comply with this Program, as demonstrated in the application for participation provided by the Director."
3. As a certified RESNET Rater energy auditor who has taken BPI contractor training, I concur with the public testimony on March 25 that the "Energy Efficiency Improvements" listed in Definition 15.(a) should be prioritized with whole house air sealing at the top of the list, insulation improvements next, and caulking and weather-stripping third. Window replacement should be dropped to the end of the list.
4. Section V: Eligible Home Energy Audits and Auditors.
  - a. Section A.(2) should state "...based on RESNET or BPI audit requirements..." Furthermore, the second sentence should include "...skills commensurate with the requirements of RESNET, BPI or HPwES..."
  - b. Section A.(3) should include software accepted by HPwES (e.g., Beacon) or other industry accepted software which computes reduction in energy utilization based on test-in field data.

5. Section VI: Requirements for Energy Auditors, Contractors...
  - a. Section B.(4). Add resolution of complaints received by BPI or RESNET.
  - b. Delete Section C.(2). This is applicable to BPI accredited contractors only. RESNET Qualified Contractors do not hold a BPI building envelop certification and should not be excluded from participation in the work of HELP.
  - c. Section C.(4). Include resolution of complaints received by BPI or RESNET.

### **III. Supporting Information and Arguments**

1. The undersigned is president of Alban Inspections, a metropolitan Washington home inspection and energy auditing firm that participates in the Maryland Home Performance with Energy Star Program. I am a RESNET RATER and have taken BPI contractor training. I hold two Maryland Home Improvement Commission licenses and am a nationally accredited home inspector by the American Society of Home Inspectors.

He is also Chief Operating Officer of Home Energy Team, a National Alliance of Energy Auditors which now operates in 23 States and the District of Columbia and Home Energy Team Institute, an auditor and contractor training firm for both Building Performance Institute and RESNET. Both companies are headquartered in metropolitan Washington.

As a result of the above resume, I am at the crossroads of energy auditing and contractor certifications and work performance standards.

2. I strongly desire to help fine tune this wonderful program. With expertise in energy auditing, training of energy auditors for both RESNET AND BPI, contractor training and knowledge of many state programs around the United States, I am uniquely qualified to understand issues relating to auditors and contractors.
3. The testimony I presented at the public hearing on March 25 stated that as currently proposed, the AUDITOR and CONTRACTOR participation requirements are OLD SCHOOL. Advances in certifications by BPI and RESNET should be given credence and included in these regulations. Quality control is determined by the initial test-out, which to be conclusive should be performed by an independent auditor. All HELP loans should be reported to Home Performance w/Energy Star and a specified percentage of those should be checked as quality control. The federal HomeStar Program is proposing that 15% of projects be verified by an independent third party, such as a state HPwES.
4. When I state "old school," energy auditing for many years in the past has been performed by many highly qualified people, such as engineers, scientists, environmentalists and academic types. With respect, I call them "Gray Beards." But during these last 2 years, the industry has BLOSSOMED! Certifications have been revised and new certifications have been developed by BPI and RESNET to allow knowledgeable BUILDING PROFESSIONALS, such as home inspectors and building contractors and others new to the energy industry to understand building science and energy flow concepts, scope of work, prioritization of work sequences and fossil fuel combustion safety principles.

5. The energy efficiency improvement, weatherization contracting, and residential energy audit industry has blossomed from a plodding, ho-hum industry into an INDY race car speed industry. Our industry is amazing and it's exciting. HomeStar, Federal REEP, PACE (which was written about in the March 25, 2010 Wall Street Journal), the Obama administration, DOE and HUD's movement towards mandatory energy audits, and the DOE HESPro computer software for mandatory labeling of homes are all coming. Thus a large number of energy auditors are required to perform both energy audits and quality assurance tasks.
6. Energy efficiency contracting is changing. Under BPI, a company with 2 certifications becomes a BPI Accredited Contractor. They can test in and Test out and do the work and should be specifically allowed to participate.
7. RESNET's concept for auditor certifications and for contractors certification is different. RESNET a year ago created certifications for auditing existing homes and there are more developments that will be in place in several months that will create a RESNET Building Performance Analyst, who's skills are comparable to a BPI Analyst. Both can test in and test out and use computer programs to determine cost efficiencies as required by the Regulations.
8. Three weeks ago at the RESNET national Conference, DOE officials strongly urged the RESNET Board of Directors to create a certification and standards for qualified energy efficiency retrofit contractors. Over the weekend of March 20-21, the RESNET Board took the first step in this effort by sending a proposed draft certification for Qualified Contractors to its committees to start the certification approval process required by their standards of practice and by ANSI Standards. Ultimately, the combination of a RESNET Building Performance Analyst and a Qualified contractor will be equivalent to a BPI accredited contractor. Test-in and Test-out can be performed by an independent auditor and the work accomplished properly by a trained work force.
9. Undoubtedly many benefits shall accrue to Montgomery County from expanding the participation opportunities to many more individuals for energy auditing and contract work under HELP. These were discussed above. I strongly encourage the County Executive and staff to amend this Regulation to provide expanded opportunities for participation in the work needed to facilitate HELP.

Respectfully Submitted:

**Arthur S. Lazerow**

Arthur S. Lazerow, Chief Operating Officer  
Home Energy Team  
Home Energy Team Institute  
8602 Long Acre Court  
Bethesda MD 29817  
(301) 807-9022      email: aslaz@erols.com



**Comments on Montgomery County Proposed Executive Regulation 2-10**

**March 25, 2010**

**Presented by**

**Peter Mellen, President**

**Mellen Investment Properties**



## **Introduction**

Thank you for the opportunity to provide testimony on Executive Regulation 2-10 to implement the Montgomery County Home Energy Loan Program (HELP). I am a commercial real estate investor and a Montgomery County homeowner. I also helped to establish a property assessed clean energy (PACE) program similar to HELP in Annapolis, Maryland. I am currently working to pass national legislation that secures federal tax exemption for interest paid to investors in PACE programs. I have been involved with PACE programs since 2008. As a professional who has a stake in the success and scalability of PACE programs nationwide, my goal is to offer feedback that will enhance the long-term success of the Montgomery County program.

## **Statement of Support**

It is tremendously exciting to see Montgomery County taking a leadership role to become one of the first communities on the East Coast to implement a PACE financing program. By reducing barriers to the adoption of clean energy improvements, the PACE model has tremendous potential to save energy, reduce greenhouse gas emissions, and create green jobs. The people charged with implementing this program have done trailblazing work to move the program forward by involving multiple stakeholders and understanding the many issues involved with implementing this new and innovative energy financing program.

## **Residential PACE Programs in Context**

I strongly support this legislation as a first step in building a robust PACE program that will have a meaningful impact on reducing greenhouse gas emissions and creating green jobs. I will also preface my comments by noting that PACE is a rapidly evolving form of financing. When the County Council first passed HELP legislation in early 2009, the majority of PACE programs in the United States (and for that matter the world) focused almost exclusively on residential projects.

In the course of creating and implementing programs over the past 12-18 months, some challenges have emerged regarding PACE financing for residential properties:

- Homeowner demand for PACE programs is still relatively unproven.
- Customer acquisition costs can be high
- Audit costs and application fees can represent a material outlay for consumers, reducing the likelihood that they will participate in the program
- Financing and administration costs are very high for these programs relative to the cost of improvements being financed.

- Achieving a material impact on greenhouse gas reduction and green job creation requires aggregating large numbers of homes.

These challenges are not insurmountable. The County should absolutely proceed with launching the HELP and signing up homeowners to participate. It is also worth noting that many new programs, including the one in Washington DC, are turning their attention to PACE financing for commercial projects.

PACE programs which include commercial projects can achieve scale more quickly and have a much bigger impact on achieving public policy goals of greenhouse gas reduction and green job creation. The cost of administering these programs relative to the amount financed is much more efficient for commercial properties than for residential. Completing a single commercial PACE project can have the same impact as literally hundreds of residential projects. I urge the County to keep this additional opportunity in mind as it takes the first step of launching and administering HELP.

### Specific Suggestions

Regarding the specifics of the legislation, I offer the following comments:

**(1) Determine financial feasibility by using net cost instead of full value cost.**

Section IV.A.2.c (the section is not labeled as section c, but it immediately follows section b) lays out the parameters for calculating total project cost. The proposed regulations define project cost as the full value of the improvements financed, without taking into account rebates or tax credits. This “full value” project cost will always be higher than the “net” project cost, which can be as much as 30 to 50 percent lower depending on the incentives available from utilities, federal and state government, and other sources.

By using the full value project cost as a yardstick for cost-effectiveness, HELP is setting the highest bar possible to determine whether or not a project is economically feasible. Projects that might easily qualify as cost effective after incentives are taken into account will be disqualified.

Using the full value method for calculating project cost in effect negates the clean energy incentives that utilities and state and federal governments work hard to promote. It substantially limits the scope of the improvements that qualify for financing, and consequently reduces the capacity of the program to achieve its public policy goals of greenhouse gas reduction and green jobs. I suggest that the County consider calculating project cost on a “net” basis, so that financial feasibility calculations take into account financial incentives designed to promote adoption of clean energy improvements.

**(2) Define the PACE obligation as a special assessment instead of a lien.**

Section VII defines the obligation to repay a HELP loan as a “lien” on the borrower’s property. Defining the obligation of the property owner as a lien may trigger consumer lending law requirements (which adds to the complexity and cost of program administration) and cause complications when title to the property transfers. It may be more accurate and expeditious to define the obligation of a property owner to repay the loan as a “special assessment”, where any delinquent payments get escalated to lien status in the event of property owner default.

**(3) Allow property owners to finance more than one HELP project per property.**

Section VII.A.2 specifies that a property owner may only receive one HELP loan per property.

It's easy to imagine a scenario where property owners would start with a small project to get a sense of how the program works, then scale to additional projects as they gained more experience with the program. The current language would prevent owners from making additional improvements to their home, and a limit of one loan per property seems arbitrary. Is it possible to increase this number?

**(4) Record notice of HELP repayment obligations on property title.**

Section VIII requires the borrower to disclose the HELP loan to a new owner when selling the property. This is currently the only legal mechanism for ensuring that subsequent property owners are notified of an obligation to repay the HELP loan, and it is an unreliable one. Despite their best intentions, current property owners might easily forget their obligation to notify new owners of the obligation to repay. In Annapolis, we considered recording a notice on the property title of the obligation to repay the PACE loan.

## SCRAPS

On a related note, one of the toughest challenges with launching a PACE program is finding project financing to pay for the improvements. PACE is still a new form of financing. Institutional investors are wary of putting money into PACE programs because many of the mechanisms and risk assumptions for the PACE model remain relatively unproven. Furthermore, PACE loans are paid back over a long (15 year) timeframe, which exposes investors to interest rate risk. There is no secondary market for PACE securities, which further exacerbates this risk.

A number of forward-thinking investors are implementing an alternative form of financing, where a large commercial property owner borrows directly from an investor instead of going through the intermediate step of borrowing from a government-administered fund. This owner-arranged approach has the advantage of eliminating the intermediate step of approaching





Via Electronic Mail

March 24, 2010

County Executive Ike Leggett  
Executive Office Building  
101 Monroe Street, 2<sup>nd</sup> Floor  
Rockville, MD 20850

RE: *"Executive Regulation 2-10, Montgomery County Home Energy Loan Program"*

Dear County Executive Ike Leggett:

I am writing to you on behalf of the Greater Capital Area Association of REALTORS® ("GCAAR") – the voice of Montgomery County and the District of Columbia's nearly 9,300 REALTORS®, property managers, title attorneys and other real estate professionals. I would like to express our support of the Home Energy Loan Program make some comments regarding Executive Regulation 2-10.

GCAAR strongly supports energy efficiency measures and we believe that the real estate market has been and continues to demand that homes move in that direction. REALTORS® see energy efficiency, conservation and the environment as very important issues that are not only important to us as REALTORS®, but as citizens and neighbors. We understand first hand that reducing one's utility bills and developing more sources of renewable energy, is critical in helping to preserve our environment. Therefore, GCAAR strongly supported Bill 6-09, which established the Home Energy Loan Program (HELP) because we see it as a way to provide a huge incentive for homeowners on a voluntary basis to take advantage of a cost-effective way for them to make energy efficiency improvements to their home. We believe the program is extremely important because it will not only benefit the homeowners by being able to reduce their utility costs, but more importantly it will increase the number of resale homes in Montgomery County that can be seen as energy efficient. As REALTORS® we also feel that this will make it easier for agents and buyers to better identify energy efficient resale homes.

#### **Loan on the Property Tax Bill**

In our discussions with the County Council and the Department of Environmental Protection, we also expressed support for attaching the HELP loan to the property tax bill. And it was our understanding that this is similar to the way a front foot benefit charge is currently handled as a lien on the property. GCAAR also felt it would be beneficial that the loan run with the sale of a property. This way the financial obligation runs with the property not the homeowner that acquired the loan. A homeowner would no longer have to worry and do a cost benefit analysis

based on how long they may own that home. They can focus more on the immediate effects of reduced utility bills and long-term savings.

### **Disclosure Requirements**

GCAAR also discussed the need to make sure that buyers of a property with a HELP loan be properly notified at the time of listing and prior to signing of a contract. However, we do not believe that Section VIII: Disclosure Requirements references the correct executive regulations. Montgomery County Code of Regulations 40.12C.01.01 are regulations related to the disclosure of estimated property taxes in real estate advertisements subject to the property tax disclosure requirements under County Code Sec. 40-12C Disclosure of actual property tax amount. This regulation defines the phrase “any written or electronically transmitted material that a seller produces or distributes in connection with the advertisement for sale of specific residential real property.”

The disclosure requirement of whether or not a home is under the HELP loan program should be defined in legislation and added to Chapter 40. Real Property Article III. Sale of Real Property of the Montgomery County Code. Sellers are already required to provide a copy of the property tax bill to potential buyers under County Code Section 14-17 due to development districts listed on the tax bill. Therefore, we recommend a simple legislative bill to add a disclosure of whether or not a home is subject to the HELP loan program. This can be added to Chapter 40 Article III of the County Code.

Again, we would like to thank you and the County Council for the vision in addressing this very important issue. We appreciate your consideration of GCAAR’s perspective on the regulations and we look forward to working with Department of Environmental Protection on any further details. Please feel free to contact Meredith Weisel, GCAAR’s VP of Public Policy at 301-590-8790 or [mweisel@gcaar.com](mailto:mweisel@gcaar.com) with any questions or concerns.

Sincerely,



Shelly Murray  
2010 GCAAR President



**LIVE GREEN LLC HOME PERFORMANCE SERVICES**

4318 Curtis Road Chevy Chase Maryland 20815 - 5161  
T / F: 301.652.5272 M: 301.300.0639 MHIC: 127267  
W: www.livegreenhome.com E: info@livegreenhome.com

To: Eric Coffman

From: Suzanne Parmet, President, Live Green, LLC

Date: March 17, 2010

Re: Comments re Proposed Montgomery County HELP Regulations (Montgomery County Regulation 2-10)

Thank you for the opportunity to submit comments on the proposed HELP regulations. The following are my comments based on a preliminary review of these regulations. Please note that while many of these comments are "clean up" items (e.g. correcting punctuation, and noting undefined terms and inconsistencies), substantive comments are interspersed, where applicable.

Please let me know if you have any questions regarding the following.

Section II, 3: Insert "property" after "sale of real".

Section II, 7: Insert a comma after "Protection". Replace "energy audits" with "Home Energy Audits". Define "energy related home improvements" (and use the same terminology elsewhere; it is referred to as "energy improvements" in most other locations).

Section II, 8: This definition is not correct. It is defined in Section IV, A. Time is a factor in determining cost effectiveness but is not the outcome of the calculation. It is some ratio or percentage determined by the amount of reduced energy costs relative to the time it takes for the improvement to pay for itself. Also, capitalize "energy efficiency improvement".

Section II, 10, 11 & 12: Insert "County" before "Department".

Section II, 14: What is meant by "net cost"? By reducing the cost by "any amount received from a public or private program..." the Eligible Cost is, by definition, net. By including "net" before cost, it implies that some other costs are netted out before deducting the amount received from a public or private program. Also, by saying the amount is "received" implies that funds to be received in the future will not be taken into account – is that what is intended?

Section II, 15(a)(5): Why "whole house" air sealing? Some homes only need air sealing in the basement or the attic, for example, but not everywhere.

Section II, 15(a)(7): Any "storm windows or doors"? Rewrite "Energy Star qualified window or door replacement" to say "replacement of windows or doors with Energy Star qualified units". As is, it implies that only "replacement" units are included; new units should also be acceptable.

Section II, 14: Capitalize "energy efficiency improvement" and "renewable energy device".

Section II, 15(a)(10): Capitalize "program plan".

Section II, 18: Delete "energy efficiency or renewable energy improvements" and insert in lieu thereof "Energy Efficiency Improvements or Renewable Energy Measures".

Section II, 19: Delete "certified energy auditor" and insert in lieu thereof "Energy Auditor".

Section II, 21: Insert a colon after the first "to" and capitalize "energy efficiency improvement" and "renewable energy device".

Section II, 23: Delete the semi-colon after "program sponsors".

Section II, 26: Replace "properties" with "property's". Homestead Cap is a capitalized term but not defined.

Section II, 28: Replace "and" with "or". Replace the period of the end of the first sentence with a comma. Add "another" before "credible".

Section II, 30: Capitalize "renewable energy".

Section III: Capitalize defined terms. And, use consistent terminology.

Section III: Define the "HELP Loan" then use this defined term, as applicable, throughout the regulations.

Section IV: Capitalize defined terms. And, use consistent terminology.

Section IV, A(2): Insert a comma after "cost effectiveness".

Section IV, B(2)(b): What is this referring to?

Section IV, C: Replace "and" with "and/or".

Section IV, C(3)(a): While air sealing and insulation work together, it is not always necessary to do both (e.g. the house is already sufficiently tight but insufficiently insulated).

Section IV, C(3) & (4): Renumber. Delete "Registered" or add this as a defined term.

Section IV, D, Intro: Replace "also" with "nonetheless". Are 1, 2 & 3 to be either/or, or must one satisfy all 3?

Section IV, D(1): Delete "Registered" or add this as a defined term.

Section V (second reference): Renumber section (should be VI), capitalize defined terms, and use consistent terminology.

Section V (second reference), Intro: Does the application "include" the Home Energy Audit, have it attached, or is it based upon it?

Section V (second reference), A(4): Add "or the Contractor" after "Auditor".

Section V (second reference), B(1): How are the first and second clauses of this sentence different?

Section V (second reference), B(3): What does "address" mean?

Section V (second reference), B(4): Auditors are not accountants and shouldn't be responsible for knowing all available public and private financing mechanisms. (Does private include available bank loans???) Knowing what applies should be the responsibility of the Program; the Auditors can then apply the identified mechanisms to their analyses. Therefore, this section should indicate that the auditor will take into account all mechanisms identified by the Program as being applicable.

Section VI: Renumber section (should be VII), capitalize defined terms, and use consistent terminology. Why list qualifications in V and then again in VI? It is confusing and potentially inconsistent; they should be combined into one section.

Section VI, B(4): Replace "and" with "or".

Section VI, C(2): Why is this required when doing improvements but not if doing an audit? It is an advanced certification for auditors, not home improvement contractors.

Section VI, C(4): Replace "and" with "or".

Section VI, D(4): Replace "and" with "or".

Section VII: Renumber section (should be VIII), capitalize defined terms, and use consistent terminology.

Section VII, Intro: In the first sentence, replace "HELP loan payments" with "The HELP Loan is". In the second sentence, replace "loan" with "Help Loan".

Section VII, A(3): By when must the property taxes be paid in full? Won't many have taxes that are due and owing but not necessarily overdue?

Section VII, B(1): Including a parking ticket? Or taxes not yet overdue?

Section VII, B(4): Add "or as otherwise acceptable to the County" at the end of the first sentence. I think the second sentence would make more sense if it was reworded as follows: "The Assessed Value of the property less the outstanding principal balance of any first and second mortgage liens on the property must equal or exceed the amount of the HELP Loan."

Section VII, C(1): Will the loan be amortized over 15 years?

Section VII, C(7): Add to the end "the maximum interest rate allowed by applicable law, if such amount is lower".

Section VII, C(8): In the second sentence, replace "payment" with "prepayment".

Section VII, C(10): What is the "request for payment"? Should it be incentives "received" or applied for?

Section VII, D(1)(c): Replace "and" with a semi-colon.

Section VII, D(1)(d) – first reference: Delete.

Section VII, D(1)(e): Is this referring to release forms that will be included in the application package and that the applicant needs to sign?

Section VII, D(1)(f): Will this be a form in the application package?

Section VII, D(3): Add "receipt by the applicant of" after "within 10 business days after".

Section VII, D(4): Will there be more than 1 distribution of HELP Loan funds? Replace the semicolon with a comma.

Section VII, E(1): "Generally" the funds "may" be disbursed at completion? That's extremely vague. Will there be forms provided to the applicant to make the certifications required by this Section?

Section VII, E(1)(d): Replace "and" with a semicolon.

Section VII, E(3): The check will be sent to the owner to then deliver to the contractor? And, the contractor has to wait how long before all of this processing takes place??? Why not just reimburse the homeowner for the amount paid to the contractor, up to the loan amount? Why should the contractor have to finance the homeowner's improvements?

Section VII, F(4): Insert "mortgage" before the second reference to "loan" in the first sentence.

Section VIII: Renumber section (should be IX), capitalize defined terms, and use consistent terminology.

## Comments on Montgomery County Home Energy Loan Program Draft Regulation

William R. Prindle  
2406 Hayden Drive  
Silver Spring, MD 20902  
301-649-4698 (home)  
202-492-9698 (cell)  
Prindles2004@msn.com

These comments are submitted in support of the proposed program, with recommended changes in specific provisions as noted herein. The comments are organized sequentially by the sections/subsections in the draft regulation.

**Section IV. A. Eligible measures.** The draft calls for energy costs savings from eligible projects to meet or exceed the sum of principal and interest payments over a 15-year amortization period. This approach would make it very difficult for the measures with the greatest energy savings, including solar PV or hot water, heating and cooling systems, and envelope improvements such as insulation and windows, to be found cost-effective. For example (these are rough estimates, based on federal RECS survey data and the author's experience):

- Heating and cooling equipment replacement that reduces heating and cooling costs by \$500 annually would save \$7500 over 15 years. However, replacing both AC and heating equipment would cost at least \$8-10,000 plus interest costs.
- A package of insulation, window, and air sealing improvements could save up to \$400 annually, or \$6000 over 15 years. But the costs would run at least \$7-9,000, plus interest.
- Solar PV in a 2-kW array might optimistically produce 3000 kWh annually, which at current power prices of about \$.015/kWh would be worth \$6750 over 15 years. But such a system might cost \$15-20,000 installed, plus interest.

This cost-effectiveness formulation would thus rule out many if not most of the kinds of "deep savings" measures that the program hopes to promote. It is also inconsistent with the way that governments typically conduct cost-effectiveness analyses, which is on a life-cycle basis. The life-cycle approach allows energy cost savings over the full service life of the measures to be included in the analysis. On a lifecycle basis, all of the measure types shown above would have a much better chance of being found cost-effective (examples below ignore interest costs and are illustrative only):

- The heating and cooling equipment replacement that reduces heating and cooling costs by \$500 annually would save \$15,000 over a thirty-year service life. This would exceed the \$8-10,000 installation costs.
- The package of insulation, window, and air sealing improvements that saves \$400 annually would save \$12,000 over 30 years, exceeding the \$7-9000 installation costs.
- The PV 2-kW array that produces 3000 kWh annually would save \$18,000 over a 40-year service life, which might cover installation costs in the \$15-20,000 range.

Moreover, a lifecycle cost analysis should take into account future increases in energy costs. Most analysts agree that energy prices will rise in the coming decades, so the County should not hobble investments today by ignoring their saving value in the future. One way to account for future increases in energy costs would be to include a carbon dioxide proxy price to current fuel and electricity prices. I suggest \$20/ton as a nominal figure often used by policy modelers today.

The intent of Section IV.A. appears to be to provide “positive cash flow” to the homeowner, and possibly also to demonstrate to mortgage lenders that current and future mortgageholders’ ability to repay their basic mortgages would not be compromised by loan payments in the HELP program. Lenders are justifiably concerned about adding debt to properties in today’s real estate markets. However, there is a simple way to do this that doesn’t harm the underlying cost-effectiveness of clean energy technologies. That would be to limit loan principal to the amount needed to produce cash flow neutrality based on projected energy savings. For example, if a project’s costs resulted in 15-year P+I payments of \$7,500, and energy savings were projected at \$6,000, the loan principal could be limited to the amount needed to keep P+I no higher than \$6,000.

This solution would also increase the HELP program’s leverage by encouraging homeowners to participate in utility programs, claim federal tax credits, and participate in the proposed federal Home Star program to help pay the balance of project costs. With these other sources of financial incentive available, there is no need for HELP to fund 100% of projects. Moreover, homeowners with more “skin in the game” in the form of their own funds are more likely to take the responsibilities of this program seriously, and would be less likely to default.

**Section VII.B. 4. Credit Standards.** This section requires that the HELP loan principal, combined with those of any other secured loans on the property, be less than the tax-assessment value of the property. This could severely limit eligibility for the HELP program, because tax assessment values are typically lower than market appraisal values. Yet in the home financing market, homes often have total indebtedness that exceeds assessed value, without exceeding mortgage industry loan-to-value ratios. Given this market fact, imposing a lower limit on total indebtedness will unnecessarily exclude homeowners from the program. These effects could be felt disproportionately in lower-income areas of the county, making the program needlessly discriminatory.

The nation’s most widely-used secured home energy efficiency program, the FHA Energy Efficient Mortgage (EEM) program, allows up to 5% of appraised (not assessed) value to be added to loan principal, without changing loan underwriting criteria or total loan-to-value ratios. EEMs can also allow total loan principal to exceed FHA’s maximum loan principal amounts. For example, if a home is appraised at \$200,000, and has a first mortgage of \$190,000, the EEM program allows up to \$10,000 to be added to the loan principal, without requiring the borrower to show additional income needed to pay the higher loan payment, and without exceeding FHA’s maximum loan-to-value ratio.

FHA's rationale is that energy savings offset increased loan payments, so that borrowers remain equally income-qualified. They also reason that the energy improvements add resale value comparable to their cost, so that loan-to-value ratios need not be revised within the range of the EEM principal impact.

I recommend that the County take a similar approach for the HELP program, specifically:

- Base total indebtedness on market appraisal value, not on tax assessment value;
- Set the total indebtedness limit at 95% of appraised value;
- Omit the HELP loan principal from the calculation of total indebtedness.

These modifications would put the program largely in line with the FHA program, and would make it more widely available across all parts of the County.

**Alignment with the federal Home Star program.** The Home Star program would create federal rebates of up to 50% of project costs for home energy retrofits, covering most of the same energy efficiency measures eligible for the HELP program. However, Home Star may require slightly different procedures, certifications, and so on, and it would behoove the County to be prepared to make adjustments in HELP to be able to apply HELP financing to the same projects eligible for Home Star. I recommend that the County include in this regulation a reservation of the right to modify the program as needed to work in concert with Home Star, without requiring further regulatory review, because the implementation timeframe for Home Star would be very fast, and would not allow for cycles of review and comment on revised regulations.

**From:** Gary Skulnik [gskulnik@cleancurrents.com]

**Sent:** Friday, March 05, 2010 2:00 PM

**To:** Coffman, Eric

**Subject:** Montgomery County Regulation 2-10

Eric,  
I've reviewed the proposed regulation and would like some clarification on some items.

Section VI A - what exactly do you mean by "registered with the County?" Is there a formal process to register?

Section VI D #4 - I do not think companies should be required to register with the BBB. I am not that impressed with that group and think it is not necessary. I think you should leave this as the County office of Consumer Protection. Also, I assume this does not apply to solar installers - " or received a satisfactory rating from the applicable HPwES sponsor" We would not have an HPwES sponsor, would we?

General Point on the payback requirement - I understand the goal of the program is to reduce energy use and thus the biggest energy hog households would be great candidates for it. However, people that took the initiative to reduce energy use on their own dime, prior to any program in place, should not be penalized. I suspect there are not that many households that fall into this later category, so I don't think the fiscal impact of allowing them in would be large. Perhaps a good change would be to have the 15 year payback for houses that fall under a certain level of inefficiency (ie the energy hogs) and a 25 year payback standard for houses that pass certain energy efficiency criteria. This way, you are rewarding those of us who have taken action to reduce energy use. As it currently stands, the regs may inadvertantly prevent people in energy efficient homes who also behave in a way to conserve energy from participating in the program. For example, if I want to replace my furnace, but the energy audit shows only a modest improvement because I a) have already installed new windows and insulation and b) keep the heat at 68 degrees during the day and 65 degrees at night during the winter, that makes no sense. I would then be perversely better off if I went a full year blasting my heat in the winter to say 76 during the day and night, got a new audit to show a better payback for a furnace, etc. etc. I hope the county does not want to encourage bad behavior and penalize people that have already done the right thing with their own money.

Another general point - in calculating the solar pv payback, are we allowed to value the SRECs that the customer gets? I see we are not allowed to take tax credits into account. However, I assume it is possible for a customer to apply for a loan from the program for only 70% of the cost of the solar system, right? In this case, the county would do the 15 year payback figure on the actual loan amount (ie 70% of the total cost) and not on the total cost, correct?

Gary Skulnik

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President/Partner  
Clean Currents, LLC  
155 Gibbs St., Suite 425  
Rockville, MD 20850  
301-754-0430 x701  
(cell) 202-413-8534  
(fax) 301-279-2112  
www.cleancurrents.com

**From:** Philip Stiff [phil.stiff@gmail.com]  
**Sent:** Thursday, March 18, 2010 11:28 AM  
**To:** Coffman, Eric; Phil Stiff  
**Subject:** Montgomery County Regulation 2-10  
Mr. Coffman,

Please consider this both my written comments and testimony which I would like to present at the public hearing for regulation 2-10 on March 25th, 2010. Let me know if there is a specific procedure or form I should use for submitting this comment and testimony. Thank you.

I enthusiastically support the new Home Energy Loan Program. The ability for a homeowner to amortize valuable energy-savings assets over a long-term period that survives property transfer creates a much more attractive investment opportunity than we've ever had before. This is an example of good policy innovation that should help improve the cost-effectiveness of our precious energy assets.

I have two main concerns about the regulation as written:

- 1.) The risk-share for long-term performance of the energy-efficiency assets is disproportionately low for the contractor.
- 2.) The possibility of origination, audit, financing, and application fees being levied on the homeowner and not being considered in the cost-effectiveness of the project seems like a disincentive to the homeowner.

1st. For the risk-share to the contractor. Section VI F. indicates that the County will not guarantee performance of improvements, but may revoke registration of a provider with failure to comply with requirements. While, I am glad that this consequence exists for contractors who underperform, I am concerned that there still could be many homeowners left with loan payments that are much higher than the savings estimated by the contractor. This program is much like Energy Savings Performance Contracts (ESPCs) which exist in the commercial and government industry today. In the case of ESPCs, the contractor is at-risk for both the payments of the loan and for periodic measurement and verification of energy and/or cost savings. While I understand that instituting such a scheme for this program would be impractical, I think that having a complete lack of long-term risk on the contractors' part is a recipe for suboptimal program value. It will be the homeowner's expectation that they will always, on average, save at least as much on their utility bills as they are paying on the loan. In an atmosphere where this is not the result or there is no policy to assure this result then I fear that participation in and value of this program will wane.

In order to mitigate long-term failure, but in an attempt to keep it somewhat simple, I suggest that the regulation include language indicating the county's right to perform random audits on a periodic basis to evaluate:

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- a) the long term performance of the installed assets and the contractor's installation practices as well as the auditor's audit practices
- b) whether homeowners are operating and protecting the installed assets (as a program evaluation tool, not as a privacy invasion method)
- c) the value of the utility-bill savings being achieved and the customer satisfaction reported

Clearly this would have to be administered in an atmosphere of permissiveness by the homeowner. Offering homeowners an incentive after project completion for enrolling as a long-term quality-process participant may be helpful to achieve performance evaluation success. It is important that enrollment in the quality process take place after project completion to ensure the contractor does not recognize quality-process participants in advance of installation. I realize that funding is tight therefore I suggest that this be written in as a service provided at Montgomery County's discretion but with a minimum requirement for representative, long-term quality assurance for some number of projects per year.

Finally, my second concern is for the willingness of homeowners to pay points for origination, audit fees, and application fees. Section IV A. (b) indicates that the cost of the initial energy audit, financing, or loan origination fees will not be included in calculating cost-effectiveness of project costs. However, we know that most homeowners will be calculating this cost if they are responsible for them. As such, I believe that leaving these costs out of the cost-effectiveness equation will only serve to lose some portion of the customer base for the program.

Thank you for offering me this opportunity to comment. I look forward to a rapid start of this valuable new program.

Phil Stiff  
355 Elmcroft Blvd, #6204  
Rockville, MD 20850  
240-676-0196  
[phil.stiff@gmail.com](mailto:phil.stiff@gmail.com)

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**From:** Brian Toll [brian.toll@ecobeco.com]

**Sent:** Thursday, March 18, 2010 2:56 PM

**To:** Coffman, Eric

**Subject:** RE: Montgomery County Home Energy Loan Program - Executive Regulation 2-10  
Eric,

I finally sat down with this. Yeah! It's a fun read. Overall I am happy with it but I have some questions/clarifications. Let me know if you need this in a formal letter. Have other folks given you these questions yet?

1. In Section 2

- a. #13a you probably want to use "or" at the end
- b. #13b say "..STAR Program in Maryland"
- c. In #14, I am unclear what you mean by "amount received." Do you mean amount received at time of application, or amount expected to be received in the future? Do you mean both grants and tax credits anticipated in the future? I'm concerned that these anticipated benefits are not real and could
- d. In #15, you might define what is meant by a "permanent improvement". Would you view LED lighting as permanent? Or a low-flow showerhead that lasts 10 years. Caulk only lasts 5. What about those highly controversial KVAR devices?  
<http://www.kvar.com/1000/home/>
- e. The term "Registered Contractor" is not defined here and should be.

2. In Section 4

- a. In part A, it is unclear to me how one would determine if the project is cost-effective. Will you create a tool to help them do that?
- b. In part C, why is HVAC unit replacement and duct sealing linked?

3. In Section 5

- a. I don't see how auditors are in a position to identify cost-effective improvements. The reality is that we can identify measures and energy savings from the measures. You have to have the costs defined to do that, and auditors are not responsible for costs. That's the contractors. I think you need to strike out B (1) completely.
- b. For B(4), are you just talking about pointing customers to DSIRE or something else? I would prefer if the County provided us a handout or something to meet this requirement along with B(5)

4. Section 6

- a. For C, let's be clear that energy auditors do not perform improvements. Contractors perform improvements. You should strike "and energy auditors"
- b. For C(2), the BPI Envelope is for doing whole home air sealing. This reads like BPI Envelope is needed for the whole list on page 4, many of which have nothing to do with air sealing.

5. Section 7

- a. For A(2) you state one loan per property. There are many challenges from a policy like this. Perhaps there is a way to amend a loan in progress (refinance)? (90)  
Timing matters on some things.. for example a furnace that is 15 years old now will

need replacing in 5 years... we would normally tell the person to wait until the furnace is 20 years old... we don't want HELP to force a early retirement on HVAC appliances do we? It's not optimal. Other issues would stem from a home owner who inherits a home with a HELP loan would have their hands tied if they can't amend the loan. Perhaps they have things they want to do that the original owner didn't want to do.

b. For D(1c), it is unclear who provides the estimates. Is it a "best guess" from an auditor? Or is it a "Not to Exceed \$X" bid from a contractor? How would you handle a change in estimates vs. final costs? Is there a calculation of cost-effectiveness that occurs as part of 7 – disbursement?

c. For D(1eii), you probably want the future utility bills as well as historical.

d. For D(2), I'm not 100% sure that you want the actual audit report. Perhaps what you want is the BEACON document? Or maybe you take either one. There are so many models of HVAC equipment, so many choices of insulation type, etc... we could end up with customers asking us to run many energy models so they can figure out the best value. For example, if we tell them to get a 16 SEER Heat Pump, but they only want to buy a 14 SEER (the minimum energy star standard), then we have to re-run beacon with 14 SEER. That's time and effort for us, and I expect we will start to charge for these iterations. But I also expect that you will accept the adjusted BEACON output and not require me to literally redo my audit report. You really want to match the items implemented to the items listed in the model. Let's be clear that you need a level of detail here to allow you to match. If an auditor report says "get a new heat pump" then you have no idea what was modeled unless you look at BEACON.

e. For E(e), you are saying that the test-out has to be completed before the contractor gets paid? There seems to be a requirement that the test out is "administered by the auditor" but you might instead allow a fully integrated contractor to perform their own test out... perhaps "administered by an auditor" is better here. If you require the original auditor then the contractor is at the mercy of someone who has no incentive to schedule quickly.

f. For E(3) why not send directly to the contractor and just cc the home owner? Why insert another week or two of contractor not getting paid?

The mechanics determining whether a set of measures qualifies are a little confusing. I still think the best way is to start with energy savings from the auditor for the "package of items", and then you develop an on-line tool that creates a "Maximum Loan Amount Allowed" for any energy savings amount. Using the interest rate and the 15 year requirement, you should be able to publish an "effectiveness factor" that defines the maximum allowed loan that would be considered cost-effective. So if I have \$500 in savings, and the effectiveness factor is 14, then  $500 \times 14$  is the allowed amount. You need to create a form of some kind that says:

Audit Estimated Savings	\$500
Audit Savings * Effectiveness Factor 14	
Allowed Costs	\$7,000

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Measure #	Measure Name	Measure Cost (not to exceed)
1	Air Sealing	\$5,000
2	HVAC replace	\$3,500
Total Costs (not to exceed)		\$8,500
Loan Amount		\$7,000
Home Owner Responsibility		\$1,500

This form provides flexibility in that it allows customers to purchase more than their effectiveness factor allows. There could be lots of reasons to do this such as comfort or whatever...but the key point is that the value is preserved for the loans.

Overall, my biggest concerns are that we have certainty in the math used to determine the loan amounts. I think that ignoring anticipated reimbursements is the best way to go. Smart customers will not take out loans they don't need, so they can self-adjust as needed. My second biggest concern is how you deal with unexpected costs that occur during the project that were not anticipated (the expects vs. actual costs issue). My third concern is the amount of time auditors and contractors will need to spend in order to match proposals with audit reports. My fourth is the amount of time it will take contractors to get paid by the program, especially if there are rules requiring weekly payment of the crew vs. a 8-12 week for the County to cut a check and then send it to the wrong place. You should do a direct deposit program to the contractor.

Thanks,  
Brian

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Brian P. Toll  
Founder and Chief Executive Officer, Ecobeco LLC  
5465 Randolph Rd. Unit B, Rockville, MD 20852  
[brian.toll@ecobeco.com](mailto:brian.toll@ecobeco.com)  
Office Direct: (240) 396 2141 x 704  
Customer Sales: (240) 396 2141 x 2

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 Please consider the environment before printing this email.

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**From:** Coffman, Eric [mailto:Eric.Coffman@montgomerycountymd.gov]  
**Sent:** Monday, March 01, 2010 5:22 PM  
**To:** Coffman, Eric  
**Subject:** Montgomery County Home Energy Loan Program - Executive Regulation 2-10

Dear Stakeholders, Community Members and Interested Parties,

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The proposed Executive Regulation 2-10 for the Montgomery County, Home Energy Loan Program has been posted in the March County Register <http://www.montgomerycountymd.gov/mcgtmpl.asp?url=/content/EXEC/Register/Mar10ProposedRegs.asp>. An electronic copy of the regulation is attached to this email.

Written comments in response to this regulation will be accepted until April 1, 2010. A public hearing has been scheduled for March 25, 2010, 7:00 PM to be held in the Executive Office Building auditorium, lobby level, 101 Monroe Street, Rockville, MD 20850. All written comments and testimony as well as requests to testify should be addressed to me with the subject line "*Montgomery County Regulation 2-10*".

Thank you for your interest,

- Eric

Eric R. Coffman, CEM, CDSM, LEED-AP  
Senior Energy Planner  
Montgomery County Maryland  
Department of Environmental Protection  
255 Rockville Pike, Suite 120  
Rockville, Maryland 20850  
240-777-7754  
[Eric.Coffman@montgomerycountymd.gov](mailto:Eric.Coffman@montgomerycountymd.gov)

Keep in touch with energy and climate news in Montgomery County. Subscribe to our e-newsletter "Energy InfoWIRE" at <https://ext01.montgomerycountymd.gov/entp/s1p/esubpublic/newssubscriber.do>

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# Maryland Energy

ADMINISTRATION

*Powering Maryland's Future*

Martin O'Malley, *Governor*  
Malcolm D. Woolf, *Director*  
60 West Street, Suite 300  
Annapolis, MD 21401  
p.410.260.7655  
800.72.ENERGY  
f.410-974-2250  
[www.energy.maryland.gov](http://www.energy.maryland.gov)

## Testimony in Support of the Montgomery County Home Energy Loan Program

Public Hearing, Proposed Executive Legislation 2-10

Executive Office Building, 101 Monroe Street, Rockville, Maryland 20850

March 25, 2010

County Executive Isiah Leggett:

I am writing to convey my support for the pending proposed regulation to establish the Montgomery County Home Energy Loan Program (HELP). The Maryland Energy Administration (MEA) has worked over the course of many months with Councilman Roger Berliner, his staff, County Department of Environmental Protection (DEP) staff, and the Maryland Clean Energy Center (MCEC) to develop and implement sustainable property-assessed clean energy (PACE) loans in Maryland, and HELP is an ambitious and pioneering step in that direction.

Maryland property owners face two main challenges with regard to improving the energy efficiency of their homes: first, the initial up-front cost; and second, the long payback period required to reap the full benefits of the efficiency measures. Montgomery County's HELP loans will allow property owners to meet those challenges, which will lead to decreased energy usage, increased savings, improved comfort, and smaller carbon footprints.

Aside from the benefits that will be reaped by property owners who opt for HELP loans for energy efficiency and renewable energy, MEA also recognizes the market-transforming potential of PACE-type clean energy financing. When successfully implemented in Maryland's largest county, HELP offers the promise of lower statewide energy demand and the creation of sustainable jobs in Maryland's emerging "green" sector. Home Performance auditors and contractors, along with qualified renewable energy installers, will likely see increased demand for their professional services at a time when Maryland's economy needs every available resource to grow.

In closing, I encourage the adoption of this proposed regulation. MEA views the future success of HELP, and the greater access to reasonable financing for energy efficiency and renewable energy made available to property owners, as an important component of Maryland's overall energy independence.

Malcolm D. Woolf  
Director

Montgomery County Regulation on:  
MONTGOMERY COUNTY HOME ENERGY LOAN PROGRAM  
DEPARTMENT OF ENVIRONMENTAL PROTECTION AND  
DEPARTMENT OF FINANCE

Sec. 1. Regulation

**Section I: General Provisions**

A. Authority. In accordance with the authority conferred under Chapter 18A, of the Montgomery County Code, 2004, as amended (hereinafter referred to as the "Code"); the County Executive hereby promulgates this regulation to implement County law pertaining to the administration of the Home Energy Loan Program (hereinafter referred to as the "Program" or "HELP"). The Program provides loans to homeowners, re-paid through the property-tax bill, for energy efficiency and renewable energy improvements.

B. Applicability. This regulation applies to the administration of the program by the County Government and participation in the program by consumers, auditors, contractors and financial entities.

**Section II: Definitions**

For purposes of this regulation, the following words and phrases have the following meanings unless the context clearly indicates otherwise:

1. Amortization Period – The period over which a HELP loan is repaid to the County by a borrower.
2. Annual Real Property Tax Bill – The annual real property consolidated tax bill that the County mails each year to property owners in the County.
3. Annual Tax Lien Sale – A sale of real ~~that the County conducts on the second Monday of~~ each June to recover amounts owed in delinquent taxes on real property in the County. Comment: Insert "estate" (JMD)
4. Applicant – An owner of a residential property in the County who submits a HELP loan application to the Department of Finance.
5. Assessed Value – The full cash value ~~as indicated on the most recent assessment notice from~~ the Maryland Department of Assessments and Taxation. Comment: Insert "of a property" (JMD)

6. Borrower – An applicant who has received a HELP loan.

7. Contractor – An individual or company meeting the program requirements, established by the Department of Environmental Protection to perform work associated with energy audits and energy related home improvements.

8. Cost-Effectiveness – The maximum estimated amount of time it takes for an energy efficiency improvement to pay for itself through reduced energy costs (the “payback” period), as determined by the Department.

9. County – Montgomery County, Maryland.

10. Department – The Department of Environmental Protection or DEP

11. Director – The Director of the Department of Environmental Protection or the Director’s designee.

12. Director of Finance – The Director of the Department of Finance or the Director of the Department of Finance’s designee.

13. Energy Auditor – An individual or company that:

(a) is a participating auditor with the Maryland Home Performance with ENERGY STAR program;

(b) is participating in a utility sponsored Home Performance with ENERGY STAR Program; or

(c) meets any other equivalent requirements approved by the Director as published in the Program Plan.

**Comment:** It is important that Energy Auditor firms participating in this program hold a valid Maryland Home Improvement Commission license. By doing so, the auditors demonstrate (i) a commitment to the home improvement industry, (ii) they are familiar with all of the rules and regulations governing home improvement projects, and (iii) they are backed by meaningful levels of insurance. Also, by requiring this license, the County has an avenue to seek recourse in the event an auditor performs poorly. (JMD)

14. Eligible Cost – The net cost of buying or installing an energy efficiency improvement or renewable energy device, including any part, component, or accessory necessary to operate the improvement or device, less any amount received from a public or private program because the improvement or device is or will be made or installed.

**Comment:** I read this as saying that the County will cover the purchase OR installation of an energy efficiency or renewable energy device. I recommend that the “or” be replaced with “and/or”. (PB)

15. Energy Efficiency Improvement – A permanent improvement made to an existing single-family home that:

(a) reduces the consumption of energy in the home, including but not limited to:

(1) caulking and weather-stripping doors and windows;

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

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

(B) a device to modify flue openings that increases the energy efficiency of the heating system;

(C) any electrical or mechanical furnace ignition system which replaces a standing gas pilot light; and

(D) any tune-up that increases the operating efficiency;

(3) a programmable thermostat;

(4) ceiling, attic, wall or floor insulation;

(5) whole house air sealing;

(6) water heater tune-up, water heater insulation, pipe insulation, or change out to ENERGY STAR qualified water heater;

(7) storm windows or doors or ENERGY STAR qualified window or door replacement;

(8) air distribution system improvements, including duct insulation and air sealing;

**Comment:** Reference to "permanent" is contradicted by inclusion of tune-ups in subpar 2 (D) and 3 Par 28. would combine sentences to allow Director, based on DOE or other credible sources. (AM)

**Comment:** Replace with: Reduces the consumption of energy in the home. Eligible improvements include, but are not limited to: (DF)

**Comment:** Energy Efficiency Improvement defines a heating and cooling system to include 4 examples but in sub-part (C) the word "and" implies that all four modifications would need to be made. The "and" should be replaced with an "or." (PB)

**Comment:** What are "devices to modify flue openings that increase the energy efficiency of the heating system?" If the document is referring to flue liners, this seems like it is more of a health and safety issue rather than an "efficiency modification." (JMD)

**Comment:** Comment on allowing devices such as flue dampers (I'm assuming that is what this covers), which may or may not save energy or could potentially cause operational problems (stuck open/close). (EB)

**Comment:** Do you get credit for just going from your current furnace to a minimum efficiency furnace (which in effect does this)? (EB)

(9) any device which controls demand of appliances and aids load management; and

(10) any other conservation device, renewable energy technology, and specific home improvement that the Director finds reduces the consumption of energy in the home as published in the program plan;

(b) meets safety and performance standards set by a nationally recognized testing laboratory for that kind of device, if these standards are available; and

(c) conforms to guidelines published in the Program Plan approved by the Director.

16. ENERGY STAR Rating - The ENERGY STAR rating developed by the U.S. Environmental Protection Agency which rates a product's energy efficiency and other factors.

**Comment:** Which ENERGY STAR Rating? Current one, or regularly updated one. (MC)

17. Environmental Attributes - Environmental benefits for which there are accessible and quantifiable markets. Environmental attributes include renewable energy certificates(RECS) and carbon offsets.

18. Fundamental Health and Safety Remediation or FHSR - means improvements necessary to remedy health or safety issues that may be exacerbated by energy efficiency or renewable energy improvements (e.g., moisture mitigation); alternatively, measures necessary to ensure the fundamental function of the improvement.

**Comment:** Delete (DF)

**Comment:** Improvements (DF)

**Comment:** Insert comma (DF)

19. Home Energy Audit - An evaluation of the energy efficiency of a home which includes any test or diagnostic measurement conducted by a certified energy auditor that the Department finds necessary to:

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

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

20. Home Energy Loan Fund or Fund - The fund established under Section 18A-30 of the County Code to provide funding for the Home Energy Loan Program.

21. Home Energy Loan Program (HELP or Program) – The program established under Section 18A-25 of the County Code to assist single-family homeowners to make energy efficiency improvements or install a renewable energy device; establish a loan fund to provide homeowners loans under the Program; and generally amend the environmental sustainability law.

22. Home Energy Yardstick - The U.S. Environmental Protection Agency's ENERGY STAR program tool for assessing the relative performance of existing homes.

23. Home Performance with ENERGY STAR or HPwES - The energy audit and quality assurance program established by the U.S. Environmental Protection Agency (EPA) and adopted by governmental, non-governmental, or utility HPwES program sponsors; who are approved and monitored by the EPA.

24. Home Performance with ENERGY STAR Sponsor or HPwES Sponsor - A non-profit organization, state or local government, or utility that has signed a partnership agreement with the U.S. Environmental Protection Agency to administer a HPwES program.

25. Program Plan - The fundamental operating manual developed by the Director outlining the Program's administration, marketing, education and outreach components.

26. Property Assessment – For the purpose of determining the property assessment for HELP, the assessment is the properties' taxable assessment from the prior year's tax levy plus any Homestead Cap or other credits that would normally reduce the full market assessment on the property.

27. Property Owner or Homeowner – The person who is listed on the County's tax records as the owner of the property where the energy improvements will be installed.

28. Renewable Energy - Energy derived from solar, wind, geothermal, and any other energy source or technology which the Director finds is derived from natural processes that do not involve the consumption of exhaustible resources. Or as defined by the U.S. Department of Energy, U.S. Environmental Protection Agency, Maryland Energy Agency or credible source.

29. Renewable Energy Measure or Device- A measure that:

**Comment:** Program Plan should include the word "guidelines" after the word "programs" (PB)

**Comment:** Is property assessment the same as "assessed value"? Is there a time difference between the two terms? If they represent the same quantity, but both terms are used for some reason, they should cross-reference each other. If they are different somehow, this definition could include a note saying how it differs from "assessed value". I think readers could get confused between the two. (DF)

**Comment:** It is unclear in the definition of "Property Assessment" why any "Homestead Cap or credits that would normally reduce the full market assessment" would be added to the properties' taxable assessment. Also, is it appropriate to subtract a credit from the assessment? It seems any credits relate to the properties' annual tax bill and not the properties' assessment. (JMD)

**Comment:** Or, energy from any source or technology defined as renewable by the (DF)

**Comment:** Insert "any other", to avoid the implication that the previous agencies are not credible. (SG)

**Comment:** Perhaps require energy be used for the home and not simply be a system on the site? (AM)

(a) converts, or actively uses renewable energy;

(b) is permanently installed on the home or property; and

(c) meets safety and performance standards set by a nationally recognized testing laboratory for that kind of device, if these standards are available.

**Comment:** Insert "or in" (SG)

30. Renewable Energy Product Provider- A specialized contractor installing technologies and products that use renewable energy.

31. Single Family Home – Single family detached or attached residential building. A single family home includes a condominium.

**Comment:** Would it be good for the two terms to be consistent in structure? One way would be to rename the term in item 29 to be "Renewable Energy Product – A measure or device that ...." and continue as is from there, leaving item 30 essentially as is. However, could the word "specialized" in the definition for item 30 cause confusion? Some readers may infer that contractors must provide renewable products only in order to qualify for this designation. I presume that contractors who provide and install both conventional and renewable products could qualify as Renewable Energy Product Providers as long as they meet the criteria set forth later. Would "qualified" or some other descriptor be more helpful than "specialized"? (DF)

**Section III: Program Established**

There is a Home Energy Loan Program (HELP) under which the County encourages energy conservation and the use of clean energy by making loans available to residential property owners interested in making energy efficiency and renewable energy improvements to their homes. The loans finance a package of improvements, adhere to defined cost-effectiveness criteria, and are approved based on the results and recommendations of an energy audit. The loans are repaid through the County property tax bill for the home of the borrower.

**Comment:** Insert "or any subsequent owner of the property" (JMD)

**Comment:** Is it important that annual savings exceed annual principal and interest payments? Many projects can have early year annual savings that are smaller than early year annual principal and interest payments, but exhibit very favorable economics over fifteen years. (JMD)

**Comment:** Replace with "Do not" (DF)

**Comment:** I don't understand why the county should fund or help to fund non cost-effective efforts. The county is hurting for cash. We should be getting low hanging fruit and funding or loaning to cost-effective efforts. E.g., I rip off my roof, reinsulated and put on a brand new roof for \$20,000 for the roof, and insulation for \$3000. total \$23000...??

Or in alternative, for part D, for a renewable energy measure, like new roof (mine needs repairs) so I can put solar panels on the roof.

How about including an inspection after asserted, "completion of the project", after all the county requires such when you put in a rain garden (I think this is the case, before it will disburse funds even) -- for rain garden it hardly makes sense, but for projects under HELP it does make sense, to ensure it was done properly, hangs an axe over the contractors head, i.e., they don't get paid until the inspection says it was done properly (TS)

**Section IV: Eligible Energy Efficiency and Renewable Energy Measures**

The Program provides loans to fund cost-effective energy efficiency and renewable energy improvements. Renewable energy installations that may not satisfy cost-effectiveness criteria may be funded through HELP loans in concert with energy efficiency improvements that collectively achieve a prescribed minimum level of performance.

**Comment:** I read this paragraph as saying that renewable energy products that are not cost-effective can be combined with a separate package of efficiency improvements that meet certain performance criteria in and of themselves; that is, NOT in combination with the renewable energy installation. In other words, this paragraph is placing no requirement at all on cost effectiveness or any other potential benefit of such renewable installations; if efficiency improvements meet the criteria for funding, a renewable ... [1]

A. An energy efficiency improvement or renewable energy measure will be deemed cost-effective if the sum of projected energy cost savings resulting from the improvement or measure is equal to or greater

**Comment:** I presume that cost effective here is determined relative to the costs of the HELP loan only. This leaves the door open for improvements or measures that may not be cost effective from a broader perspective, but this program does not care about that. I raise this point because of a comr ... [2]

**Comment:** Improvements or measures (JMD)

than the sum of principal and interest payments of the loan obtained to finance the improvement or measure over a 15 year amortization period.

(1) Projected energy savings will be calculated based on the savings identified by a registered energy auditor, using a broadly accepted software package, or estimates by a renewable energy product provider, using a broadly accepted renewable energy calculator. Energy cost savings must be calculated using energy costs, provided by the Director, based on applicable tariffs and other commonly available energy cost information and published annually in the Program Plan or provided by a widely accepted source (e.g., U.S. Department of Energy).

(2) For the purposes of calculating cost-effectiveness project costs will consist of all necessary labor, services, materials and equipment costs necessary to install the improvement or measure for which the loan was approved. The calculation of project costs will not include the following:

- (a) FHSR necessary to ensure well-being or effective deployment of the measure (e.g., combustion safety improvements); and
- (b) the cost of the initial energy audit, financing, or loan origination fees.

**Comment:** Do we want homeowners to be able to finance projects that may be uneconomical at first analysis, but become economical if the homeowner pays for a portion of the project him or herself. In other words, when evaluating these projects, is the cost of the project the total cost of the project or the amount of the total cost that is financed. For example, say a homeowner wants to install an experimental fuel cell system for \$40,000 and the initial analysis determines it is uneconomical. If, by contributing \$20,000 out of pocket, the project is now economical, should this type of project be financed? (JMD)

**Comment:** Insert hyphen i.e. "15-year" (SG)

**Comment:** 15 years may be necessary for renewable energy but would think seven is sufficient for efficiency Par. A and Section VII(C) seem to contradict on reduction for other benefits (or am I missing something?) (AM)  
The amortization period is 15 years, which is longer than the average or typical lifetime of some of the products listed in Section II. How does the program handle products with a life expectancy of less than 15 years, say water heaters? (EB)

**Comment:** ). The County requires that for an energy efficiency improvement the statement of a registered energy auditor is required. I understand this requirement is based on the need for a comprehensive, unbiased assessment of the home's needs; however, when it comes to renewable energy savings the County is willing to allow a renewable energy product provider (i.e., for- ... [3]

**Comment:** Do you mean that energy cost savings must be calculated using energy prices, rather than costs, provided by the Director or some other source? If you are going to accept tariff information from a source such as DOE, do you want to stipulate what minimum level of geographic disaggregation is acceptable for such prices to be used? Much information available from ... [4]

**Comment:** •It isn't clear to me whether or why you need to discuss project costs in conjunction with determining cost effectiveness. In paragraph A., cost effectiveness is defined in terms of energy cost savings relative to the total cost of the loan. If energy savings does not cover the total cost of the project over a 15-year period, but the amount of the project fun ... [5]

Total project costs will not be discounted by public or private incentives from federal, state, or local governments, utilities, or other sources, or by the sale of environmental attributes.

**B. Fundamental Health and Safety Remediation (FHSR).**

(1) Applicants may receive an additional loan allowance, which will not be included in cost-effectiveness calculations, of up to 10% of the energy efficiency or renewable energy project costs not to exceed \$1,500 for FHSR.

**Comment:** Insert space (SG)

(2) The loan for FHSR must only be authorized in connection with an energy efficiency improvement or renewable energy measure. The loan funds may only be used for the following purposes:

**Comment:** Rephrase: The loan for FHSR can be authorized only in conjunction with an energy efficiency improvement or renewable energy product. The loan funds may be used only for the following purposes (DF)

(a) To remediate a structural, mechanical, electrical or other issue that directly jeopardizes the well being of building occupants, quality of the indoor environment, or the durability or longevity of the structure; or

**Comment:** Insert hyphen (SG)

(b) To install any other necessary cost-effective energy efficiency or renewable energy measure.

**Comment:** By "necessary" in this item, do you mean necessary for FHSR? If so, I think that ought to be said (DF)

**C. An applicant for a loan to finance energy efficiency improvements and renewable energy measures must satisfy the following requirements:**

(1) The applicant must have commissioned and received the final report from a registered energy auditor.

(2) The proposed measures must be identified in the applicant's home energy audit.

(3) Improvements that are fundamentally dependent on another improvement identified in the home energy audit report must be coupled, where applicable. These specifically include:

(a) Insulation and comprehensive air-sealing;

(b) Heating, ventilating, and air conditioning (HVAC) unit replacement and duct sealing; and

(c) Other devices where significant evidence exists that coupled performance improves overall cost-effectiveness, as may be defined in the Program Plan.

(3) Applicant must have obtained a cost proposal for the energy efficiency improvement or renewable energy measure from a Registered Contractors.

**Comment:** Should be (4) (MC)

**Comment:** Delete (SG)

(4) In cases where FHSR is required, the applicant must provide cost estimates and the cost cannot exceed the criteria established in Section IV(B).

Comment: Should be (5) (MC)

Comment: As it is worded, Section IV(B) establishes a criterion limiting the loan size for FHSR, not the total cost of FHSR projects. Is the \$1,500 an implicit limit on the total cost of FHSR, which if exceeded will sink the application for energy efficiency/renewable energy improvements? This looks like another place where a loan is assumed necessary to cover total project costs, but nothing is stated explicitly. I think clarification is needed here (DF)

D. Renewable energy measures that do not meet the requirements of Section IV(A) and (C) may also qualify for a loan if:

(1) The single-family home where the renewable energy measure is to be installed has already achieved a prerequisite level of energy efficiency, equivalent to a score of 7.5 using the ENERGY STAR Home Energy Yard Stick as registered by the applicant's Registered Energy Auditor, or equivalent methodology.

Comment: I would also recommend (although much more involved) allowing other rating systems, such as a HERS or LBNL Home Energy Savers, to be used as well. The Yardstick is great to know where you stand relative to the "typical home" but does not evaluate the potential for energy savings related to specific measures, in my opinion. It does say "or equivalent methodology" but I would suggest greater clarification. (EB)

(2) The proposed renewable energy measure is part of a package of energy efficiency improvements that collectively meet the cost-effectiveness requirements established in Section IV (A).

(3) The proposed renewable energy measure is part of a package of energy efficiency improvements projected, as registered by the applicant's Registered Energy Auditor, to elevate the home to a score of 7.5 on the ENERGY STAR Home Energy Yard Stick or that result in at least a 25% improvement in the energy performance of the applicant's home.

Comment: I presume that a 25% improvement in a home's energy performance equates to the home using 25% less energy. In making this calculation, is electricity consumption counted at 3,412 Btu/kWh, or are generation and transmission losses figured in? Also, does the 25% less energy mean 25% less purchased energy? A PV project, for example, might of itself not change the electricity use of the home, but would substitute for purchased electricity (not to mention sales back to the grid). Would PV-generated electricity in this example count as zero energy use in determining a home's energy performance? I presume it would. It might be good to add a definition of "energy performance" to Section II. (DF)

### Section V: Eligible Properties

All eligible homes must be located within Montgomery County. Properties eligible for a HELP loan include both attached and detached single family homes and condominium units. If the property for which the loan is requested is a condominium, the work to be performed must be limited to the parts of a building that are under the exclusive control of the property owner. All work must also satisfy any requirements applicable to single family homes.

### Section V: Eligible Home Energy Audits and Auditors

Comment: Should be VI (MC)

All applications for loans for energy efficiency improvements and renewable energy measures must include a comprehensive home energy audit. The home energy audit must satisfy the following requirements:

A. Audits must be based on the HPwES process developed, promoted and monitored by the U.S. Environmental Protection Agency's ENERGY STAR Program.

(1) Auditors providing services must be registered home energy auditors as defined in these regulations and the Program Plan.

(2) Home energy audits must be based on the Building Performance Institute's (BPI) audit requirements as included in the certification program for building analysts. Auditors must maintain and update their skills commensurate with the requirements of the HPwES and MDHPwES program operated by the Maryland Energy Administration. Within one year, or as specified by HPwES or MDHPwES, registered auditors must obtain all necessary training to fulfill skill update or maintenance requirements.

**Comment:** It is also important that Energy Auditor firms participating in this program hold both the BPI Building Analyst certification and also the BPI Envelope Professional certification. Only one employee per firm need hold the Envelope Professional certification. These two certifications form a minimum threshold of training needed for a firm to knowledgably and effectively perform a residential energy audit. (JMD)

(3) Audit analysis must be conducted using software accepted by HPwES (e.g., Beacon).

**Comment:** of what date or event? (DF)

(4) A formal test-out procedure, including application of a blower door test, must be conducted by the Registered Home Energy Auditor after the installation of energy efficiency improvements.

**Comment:** This part requires a test-out procedure after the installation of the energy efficiency improvement. I'm not sure if this test-out is included in the initial energy audit required, but if it is not it may be an unnecessary expense on the part of the homeowner because this section does not say what happens if the test-out results reveal a negative finding (e.g., a worsening effect or no change at all). (PB)

(5) In the case of a lapse in both the Maryland Energy Administration's HPwES program and utility sponsorships of HPwES programs, the Director will recommend whether the County should engage in a HPwES sponsorship as a local government.

B. In order for the home energy audit to be eligible for the Program, it must comply with HPwES requirements and also:

(1) Identify a package of cost-effective energy efficiency improvements that meet the requirements of Section IV(A) and, at the request of the applicant, identify a package of cost-effective energy efficiency improvements that are projected to yield annual energy savings greater than the annual principal and interest payment for the improvements;

**Comment:** Here the issue of "what exactly is meant by cost effective?" comes up again. This item seems to support the contention that cost effectiveness is based upon the energy cost savings and loan costs, not total project costs. If changes are made in the cost effectiveness wording earlier in the document, there may need to be changes made here as well. (DF)

(2) Provide projected energy savings from energy efficiency improvements or renewable energy measures to be financed under the program;

(3) Address all major fuel sources used in the home;

(4) Identify any public or private financing mechanism that can be used to implement energy efficiency improvements (e.g., property tax credits, federal tax credits, utility incentives);

(5) Include, or link to, program application and educational materials; and

(6) Adhere to any additional requirements identified in the Program Plan.

C. An applicant may utilize an audit conducted within 12 months before the effective date of this regulation if the audit satisfies all the requirements of Section V (A) and (B).

**Section VI: Requirements for Energy Auditors, Contractors, and Renewable Energy Product Providers**

Comment: VII<sup>2</sup> and etc (MC)

A. In order to deliver services to homeowners under the Program, all auditors, contractors, and renewable energy product providers must register with the County or its designee.

B. Energy auditors must:

- (1) Use the cost-effectiveness calculations and methods identified in Section IV;
- (2) Deliver audits adhering to the requirements of Section V and maintain credentials identified within Section V;
- (3) Adhere to Program marketing and customer education requirements developed by the County;
- (4) Have satisfactorily resolved any complaints, or received a satisfactory rating from the applicable HPwES sponsor, the County Office of Consumer Protection, and the Better Business Bureau; and
- (5) Adhere to all other requirements and conditions identified in the Program Plan.

C. Contractors and energy auditors performing energy efficiency improvements must:

Comment: insert "or audits" (JMD)

- (1) Maintain an active home improvement contractor's license issued by the Maryland Department of Labor, Licensing and Regulation;
- (2) Have BPI Envelope Professional certification;
- (3) Adhere to Program marketing and customer education requirements developed by the County;
- (4) Have satisfactorily resolved any complaints, or received a satisfactory rating from the applicable HPwES sponsor, the County Office of Consumer Protection, and the Better Business Bureau; and
- (5) Adhere to all other requirements and conditions identified in the Program Plan.

D. Renewable energy product providers must:

- (1) Use cost-effectiveness calculations and methods identified in Section IV;

(2) Maintain an active home improvement contractor's license issued by the Maryland Department of Labor, Licensing and Regulation;

(3) Adhere to Program marketing and customer education requirements developed by the County;

(4) Have satisfactorily resolved any complaints, or received a satisfactory rating from the applicable HPwES sponsor, the County Office of Consumer Protection, and the Better Business Bureau; and

(5) Adhere to all other requirements and conditions identified in the Program Plan.

E. All auditors, contractors, and product providers must comply with all applicable permitting and licensing requirements mandated by the County and, if applicable, the municipality.

F. The County will not guarantee the performance of improvements funded under the Program. However, the County may revoke the registration of a provider for failure to comply with the requirements of this Section.

### Section VII: Program Financing

HELP loan payments are a lien on the borrower's property that conveys with the property. Therefore, if title to the property is transferred, the obligation for repayment of the loan and the associated loan payments transfers with the property to the new owner.

#### A. Financial Eligibility

(1) The applicant must be the record owner of the property.

**Comment:** "recorded owner" or "owner of record" (DF)

(2) Except as provided in Section IV (B), a property owner may only receive one HELP loan per property.

**Comment:** You should include a time limit? Is the one HELP loan per property in perpetuity? Annual? I would like to think that over time a property owner might want to make both energy efficiency improvements and also renewable energy changes, but not at the same time. You should consider putting a time limit on the condition. (PB)

(3) All real property taxes due and owing on the property must be paid in full. Any property that is in tax sale or has liens against the property, other than mortgage liens, will not be eligible for a HELP loan.

(4) Applicants must meet the credit eligibility standards of the Program.

#### B. Credit Standards

(1) An applicant must not have any outstanding debts owed to the County or the State of Maryland. In addition, an applicant must be current on any mortgage or deed of trust debt on the property.

(2) An applicant must have paid all real property taxes on the property on time for the previous three years.

**Comment:** why must the applicant have paid all property taxes on time for the prior three years? Why three years? why not 1, why not 7? and why on time? what if there was something beyond their reach or responsibility that led to them being paid late one of those years? How about instead county ensure they are up to date in paying their taxes. (TS)

(3) The borrower must not be in bankruptcy.

**Comment:** Does this preclude any first time home buyers? (EB)

(4) A title search will be performed for each application by the County, or its designee. The property must be titled in the name of the applicant and there must not be any liens on the property except those liens placed by a mortgage lien holder. A property must have sufficient equity, based on full assessed value, to cover the amount of the HELP loan, minus any first and second mortgage lien placed on the property.

**Comment:** – How will it be determined if a property has “...sufficient equity...to cover the amount of the HELP loan...?” Is it okay to have 100% financing (existing mortgage principal plus HELP loan = assessed value)? This kind of leverage has gotten many homeowners into trouble before. Should a minimum level of equity remain after the addition of a HELP loan (say, 20% of the assessed value of the property)? (JMD)

### C. Loan Terms

(1) All loans must be repaid annually over 15 years.

**Comment:** Move this phrase to the end of the sentence, so that full assessed value and the mortgage subtractions are stated contiguously. (DF)

(2) The interest rate on loans will be based on the County’s cost of funds, as determined by the Director of Finance, used to capitalize the program plus any costs of administration, loan processing, Program marketing any necessary reserve funds.

**Comment:** Maybe give a range between which the interest rate will fall – or specify not above x%, to enable homeowners/contractors to estimate payback costs better. (MC)

(3) Origination and application fees may be levied to cover the cost to the County, or its designee, of loan processing, appraisals, and other program elements. These costs will be non-refundable and identified in the Program Plan.

(4) Energy improvements must be reasonable in relation to property value. As a guideline, HELP loans are available in amounts not less than \$2,500 and may not exceed 5% of property's assessed value up to a maximum of \$25,000.

(5) Loan payments on all loans are due on September 30th of each year. The HELP loan payments are included on the annual real property tax bill. Therefore, borrowers that elect to pay their property taxes semi-annually will pay one-half of the loan payment amount by September 30th and the second half of the loan payment by December 31st of that same year.

(6) Any payment delinquency after the due dates will be subject to special collection through the County's annual property tax lien sale.

(7) The loan amount and any accrued interest is a first lien on the real property. Under Maryland law, unpaid amounts are collectable by suit or tax sale like all other real property taxes. In addition, interest and penalties accrue on the unpaid balance at the rate of 20% per annum.

**Comment:** Should "and penalties" be inserted after "interest"? Or are penalties not included in a first lien in case of default? (DF)

(8) A borrower may pre-pay the entire balance of a HELP loan at any time without penalty. A request for a pay-off balance must be made to the Montgomery County Department of Finance, Attn: Director of Finance. In order to pre-pay a HELP loan, all principal and accrued interest up to the payment date must be paid in full.

(9) Partial loan payments are not accepted. However, a borrower may reduce the total amount owed by making a lump sum payment against the outstanding balance of the loan. The single payment will first be applied to interest owed and then to the principal. A new loan balance will be calculated and the annual payment amount will be reduced based on the new loan balance. Lump sum payments must be arranged through the Department of Finance.

(10) Applicants must indicate, in the initial application and the request for payment, the amount of any energy efficiency or renewable energy incentives received from both public and private sources. The total HELP loan for which the applicant is eligible will be reduced by that amount.

**Comment:** If there is a cap of \$25,000 on HELP loans, does that mean that any project that is eligible for public or private incentives is prohibited from receiving the maximum loan amount? Or could there be a case where a homeowner is proposing a set of improvements with \$40,000 total cost and is eligible for \$15,000 in Federal, State, and local incentives. Could that homeowner still get a \$25,000 loan? This item reads as if the maximum HELP loan that this homeowner could receive is \$10,000. (DF)

#### D. Application Process

(1) Applications for the County's Home Energy Loan Program must be completed and submitted to the Montgomery County Departments of Finance, Environmental Protection, or their designee, via the mechanism to be prescribed in the Program Plan. Applications must include the following:

**Comment:** What if public and private incentives are available but the homeowner does not apply for them. Will they receive a larger HELP loan than if they sought and received those incentives? Should homeowners be required to seek all generally available public and private incentives before calculating the size of a HELP loan? (JMD)

- (a) Completed application form;
- (b) Copy of audit report clearly indicating auditors recommended actions and annual energy savings;
- (c) Estimates of project cost and \_\_\_\_\_
- (d) Identifies program contractors \_\_\_\_\_
- (d) Application fees; \_\_\_\_\_
- (e) Releases necessary to process the application, including information to:
  - (i) establish credit-worthiness; and
  - (ii) request energy usage history from applicant's utilities; and
- (f) Acknowledgement of Program terms and conditions, including agreements from contractors to comply with all applicable federal, state, and local laws.

**Comment:** is something left off the end? (DF)

**Comment:** To make this statement parallel with others in the series, the statement should be "names of program contractors who will perform the improvements" or something like that. (DF)

**Comment:** e

**Comment:** f

**Comment:** g

(2) The applicant will receive a confirmation from the County, or its designee, concerning the decision on the applicant's loan application. If the loan is approved, the confirmation letter will indicate the terms and conditions of the loan. The applicant must sign the confirmation letter, agreeing to the terms and conditions of the loan and return the document to the County or its designee.

(3) If the HELP loan application is not approved and the applicant wishes to seek a reconsideration of the decision, the applicant may request reconsideration from the Director. Any request for reconsideration must be in writing and must include supporting reasons for the request. A request for reconsideration must be made within 10 business days after the Director's decision not to approve a loan application.

(4) Beginning the first tax levy year following the first disbursement of HELP funds; the annual HELP loan payment will appear on the property owner's annual real property tax bill.

E. Disbursement of Loan Funds

(1) Generally, HELP loan funds may be disbursed by the County at the completion of the energy efficiency improvement or renewable energy measure. The property owner must provide the Department, or the County's designee, with a certificate of completion signed by the property owner acknowledging satisfactory completion of the work before any loan funds may be disbursed. The completion certificate must include the following:

**Comment:** This part requires that all improvements in the audit report must be completed. Find this unreasonable. If an audit report indicates a long list of items that should be done, but the homeowner is willing to do one or just a few, they would be barred from this program unless they implemented every audit finding.  
(PB)

(a) Confirmation that all improvements noted in the audit report have been completed or an explanation as to why an improvement cannot be completed;

(b) Final project costs;

(c) Certification by all contractors that applicable County or municipal permitting requirements have been met;

(d) Certification that all funding requirements, including any requirements necessary to use federal funds, have been satisfied by all parties and

(e) Any diagnostic test-out procedures, administered by the auditor, required by the applicable HPwES sponsor; and

(f) Other information required by the County, as documented in the Program Plan.

**Comment:** requires owner certification with supporting documents. shouldn't the County be able to audit or require more if there is anything questionable? (AM)

(2) If the Director, or the County's designee, finds that all of the County's requirements have been satisfied, the Director, or the County's designee, must sign the completion certificate before any loan funds may be disbursed.

(3) After receiving a completion certificate signed by the Director, the Department of Finance must issue a check to the property owner made payable to the contractor.

#### F. Post Loan Administration

(1) Upon final payment of the HELP loan to the County, the portion of the real property tax bill that is attributable to the HELP loan payment will no longer appear on the annual property tax bill.

(2) Delinquent loan payments may be collected through the Annual Tax Lien Sale or by any other means authorized by Maryland Code of Regulations Tax Property Act Title 14, section 14-817.

(3) In the event of a foreclosure by a lending institution during the life of the loan, only the amount of the unpaid HELP loan balance, including accrued interest, fees, charges, or penalties that are due or in default must be paid at the time of foreclosure.

(4) At any time during the life of the HELP loan, a borrower may pay off the loan prior to maturity. Any amounts due, including but not limited to principal, accrued interest, legal fees due the County or lien holders, and potential penalties must be paid in full to pay-off the loan.

### **VIII: Disclosure Requirements**

If the borrower transfers title to the property, the borrower must disclose to the new owner that the new owner must continue to repay the HELP loan through the real property tax bill. The required disclosure occurs in accordance with the seller's obligation to disclose real property tax information to new owners of the property, as described in the Montgomery County Code of Regulations 40.12C.01.01 .

#### **Effective Date**

This Executive Regulation takes effect upon approval by the County Council.

#### **Sec. 2. Severability**

If a court holds that a portion of this regulation is invalid, the other portions remain in effect.

#### **Sec. 3. Effective Date**

This regulation takes effect 30 days after approval by the County Council.

Isiah Leggett,

County Executive

Distribution:

Clerk, County Council  
County Executive  
Chief Administrative Officer  
County Attorney  
Director, Department of Environmental Protection  
Director of Finance

**Additional EAQAC Comments:**

1. What happens when the property is sold? Is the loan paid off during the transaction (since it is the first lien), or does it transfer (I would assume the former)? (EB)
2. Has Montgomery County reached out to lenders as well as real estate agents to see if they have any concerns? The lenders to me are important, as the goal should be to create something sustainable, which without private financing, is not likely to last beyond the initial burst. (EB)
3. I believe most homeowners replace their HVAC systems upon system failure. Under the administrative procedures proposed here a homeowner would be hard-pressed to seek an audit first under such dire circumstances. I understand the need for a comprehensive evaluation by a certified auditor, but if you do not address the situation of a homeowner under exigent circumstances you will miss out on a large portion of people who could take advantage of this program. My only recommendation would be to allow an auditor or energy efficient provider (HVAC company) to certify that the replacement unit meets the highest efficiency rating. (PB)

Page 7: [1] Comment Melitta 3/17/2010 2:19 PM

I read this paragraph as saying that renewable energy products that are not cost-effective can be combined with a separate package of efficiency improvements that meet certain performance criteria in and of themselves; that is, NOT in combination with the renewable energy installation. In other words, this paragraph is placing no requirement at all on cost effectiveness or any other potential benefit of such renewable installations; if efficiency improvements meet the criteria for funding, a renewable installation can ride along with no restrictions. Is that what is meant here? (DF)

Page 7: [2] Comment Melitta 3/17/2010 1:02 PM

I presume that cost effective here is determined relative to the costs of the HELP loan only. This leaves the door open for improvements or measures that may not be cost effective from a broader perspective, but this program does not care about that. I raise this point because of a comment two bullets down from this one.(DF)

Page 8: [3] Comment Melitta 15/1/1918 4:36 AM

). The County requires that for an energy efficiency improvement the statement of a registered energy auditor is required. I understand this requirement is based on the need for a comprehensive, unbiased assessment of the home's needs; however, when it comes to renewable energy savings the County is willing to allow a renewable energy product provider (i.e., for-profit company) to give the County the same comprehensive, unbiased estimates. I see the two approaches as contradictory. I would recommend that you allow both energy efficiency and renewable energy product providers to provide estimates "using a broadly accepted software package". As long as both use the accepted methodology you should come out with the same result. (PB)

Page 8: [4] Comment Melitta 15/1/1918 4:32 AM

Do you mean that energy cost savings must be calculated using energy prices, rather than costs, provided by the Director or some other source? If you are going to accept tariff information from a source such as DOE, do you want to stipulate what minimum level of geographic disaggregation is acceptable for such prices to be used? Much information available from DOE may be for much broader geographic areas, and may not reflect Montgomery County reality (DF)

Page 8: [5] Comment Melitta 3/17/2010 1:55 PM

It isn't clear to me whether or why you need to discuss project costs in conjunction with determining cost effectiveness. In paragraph A., cost effectiveness is defined in terms of energy cost savings relative to the total cost of the loan. If energy savings does not cover the total cost of the project over a 15-year period, but the amount of the project funded by the loan is covered, is that OK? If it is, a project could be made cost effective relative to the costs associated with the loan simply by restricting the size of the HELP loan until the loan cost falls within the projected energy cost savings. Or is the consideration of cost-effectiveness driven by an implicit assumption that the HELP loan will finance the entire cost of the project? If so, maybe the last sentence of paragraph A. should be clarified to indicate that the principal and interest costs would be for a loan to finance the entire cost of the improvement or measure (less the listed exceptions, of course). Either that, or simply define cost effectiveness in paragraph A in terms of energy savings and total project costs as defined here. (DF)