

### Project/Performance Site Location(s)

**Project/Performance Site Primary Location**  I am submitting an application as an individual, and not on behalf of a company, state, local or tribal government, academia, or other type of organization.

Organization Name: Maryland Department of Housing and Community Development

DUNS Number: 0284925980000

\* Street1: 100 Community Place

Street2:

\* City: Crownsville County:

\* State: MD: Maryland

Province:

\* Country: USA: UNITED STATES

\* ZIP / Postal Code: 21032-2037 \* Project/ Performance Site Congressional District: MD-003

**Project/Performance Site Location 1**  I am submitting an application as an individual, and not on behalf of a company, state, local or tribal government, academia, or other type of organization.

Organization Name:

DUNS Number:

\* Street1:

Street2:

\* City: County:

\* State:

Province:

\* Country: USA: UNITED STATES

\* ZIP / Postal Code: \* Project/ Performance Site Congressional District:

## Application for Federal Assistance SF-424

Version 02

* 1. Type of Submission:		* 2. Type of Application:		* If Revision, select appropriate letter(s):	
<input type="checkbox"/> Preapplication		<input checked="" type="checkbox"/> New		<input type="text"/>	
<input checked="" type="checkbox"/> Application		<input type="checkbox"/> Continuation		* Other (Specify)	
<input type="checkbox"/> Changed/Corrected Application		<input type="checkbox"/> Revision		<input type="text"/>	
* 3. Date Received:		4. Applicant Identifier:			
<input type="text" value="12/14/2009"/>		<input type="text"/>			
5a. Federal Entity Identifier:			* 5b. Federal Award Identifier:		
<input type="text" value="DUNS 028492598"/>			<input type="text"/>		
<b>State Use Only:</b>					
6. Date Received by State:		7. State Application Identifier:			
<input type="text"/>		<input type="text"/>			
<b>8. APPLICANT INFORMATION:</b>					
* a. Legal Name: <input type="text" value="Maryland Department of Housing and Community Development"/>					
* b. Employer/Taxpayer Identification Number (EIN/TIN):			* c. Organizational DUNS:		
<input type="text" value="526002033"/>			<input type="text" value="028492598"/>		
<b>d. Address:</b>					
* Street1:	<input type="text" value="100 Community Place"/>				
Street2:	<input type="text"/>				
* City:	<input type="text" value="Crownsville"/>				
County:	<input type="text"/>				
* State:	<input type="text" value="MD: Maryland"/>				
Province:	<input type="text"/>				
* Country:	<input type="text" value="USA: UNITED STATES"/>				
* Zip / Postal Code:	<input type="text" value="21032"/>				
<b>e. Organizational Unit:</b>					
Department Name:			Division Name:		
<input type="text" value="Dept. Housing &amp; Comm. Dev't"/>			<input type="text"/>		
<b>f. Name and contact information of person to be contacted on matters involving this application:</b>					
Prefix:	<input type="text"/>	* First Name:	<input type="text" value="Clarence"/>		
Middle Name:	<input type="text"/>				
* Last Name:	<input type="text" value="Snuggs"/>				
Suffix:	<input type="text"/>				
Title:	<input type="text" value="Deputy Secretary"/>				
Organizational Affiliation:					
<input type="text"/>					
* Telephone Number:	<input type="text" value="410-514-7006"/>	Fax Number:	<input type="text" value="410-987-8763"/>		
* Email:	<input type="text" value="Snuggs@mdhousing.org"/>				

**Application for Federal Assistance SF-424**

Version 02

**9. Type of Applicant 1: Select Applicant Type:**

A: State Government

Type of Applicant 2: Select Applicant Type:

Type of Applicant 3: Select Applicant Type:

\* Other (specify):

**\* 10. Name of Federal Agency:**

Environmental Management Consolidated Business Cen

**11. Catalog of Federal Domestic Assistance Number:**

81.128

CFDA Title:

Energy Efficiency & Conservation Block Grant Program

**\* 12. Funding Opportunity Number:**

DE-FOA-0000148

\* Title:

Recovery Act: Energy Efficiency and Conservation Block Grants: Competitive Solicitation: Retrofit Ramp-up and General Innovation Fund Programs

**13. Competition Identification Number:**

Title:

**14. Areas Affected by Project (Cities, Counties, States, etc.):**

Berlin (Worcester County)  
Cambridge (Dorchester County)  
Chestertown (Kent County)  
Cumberland (Allegany County)  
Denton (Caroline County)  
Easton (Talbot County)

**\* 15. Descriptive Title of Applicant's Project:**

Investment in Main Street:  
Energy Efficiency for Economic Growth

Attach supporting documents as specified in agency instructions.

Add Attachments

Delete Attachments

View Attachments

## Application for Federal Assistance SF-424

Version 02

## 16. Congressional Districts Of:

\* a. Applicant MD-003

\* b. Program/Project MD-a11

Attach an additional list of Program/Project Congressional Districts if needed.

Add Attachment

Delete Attachment

View Attachment

## 17. Proposed Project:

\* a. Start Date: 05/31/2010

\* b. End Date: 05/01/2013

## 18. Estimated Funding (\$):

* a. Federal	32,251,801.00
* b. Applicant	0.00
* c. State	0.00
* d. Local	0.00
* e. Other	270,307,545.00
* f. Program Income	0.00
* g. TOTAL	302,559,346.00

## \* 19. Is Application Subject to Review By State Under Executive Order 12372 Process?

- a. This application was made available to the State under the Executive Order 12372 Process for review on
- b. Program is subject to E.O. 12372 but has not been selected by the State for review.
- c. Program is not covered by E.O. 12372.

## \* 20. Is the Applicant Delinquent On Any Federal Debt? (If "Yes", provide explanation.)

Yes  No

21. \*By signing this application, I certify (1) to the statements contained in the list of certifications\*\* and (2) that the statements herein are true, complete and accurate to the best of my knowledge. I also provide the required assurances\*\* and agree to comply with any resulting terms if I accept an award. I am aware that any false, fictitious, or fraudulent statements or claims may subject me to criminal, civil, or administrative penalties. (U.S. Code, Title 218, Section 1001)

 \*\* I AGREE

\*\* The list of certifications and assurances, or an internet site where you may obtain this list, is contained in the announcement or agency specific instructions.

## Authorized Representative:

Prefix:  \* First Name: Clarence

Middle Name:

\* Last Name: Snuggs

Suffix:

\* Title: Deputy Secretary

\* Telephone Number: 410-514-7006 Fax Number: 

\* Email: Snuggs@mdhousing.org

\* Signature of Authorized Representative: Elise Reuschenberg \* Date Signed: 12/14/2009

**Application for Federal Assistance SF-424**

Version 02

**\* Applicant Federal Debt Delinquency Explanation**

The following field should contain an explanation if the Applicant organization is delinquent on any Federal Debt. Maximum number of characters that can be entered is 4,000. Try and avoid extra spaces and carriage returns to maximize the availability of space.

# DISCLOSURE OF LOBBYING ACTIVITIES

Complete this form to disclose lobbying activities pursuant to 31 U.S.C.1352

Approved by OMB  
0348-0046

<b>1. * Type of Federal Action:</b> <input type="checkbox"/> a. contract <input checked="" type="checkbox"/> b. grant <input type="checkbox"/> c. cooperative agreement <input type="checkbox"/> d. loan <input type="checkbox"/> e. loan guarantee <input type="checkbox"/> f. loan insurance	<b>2. * Status of Federal Action:</b> <input type="checkbox"/> a. bid/offer/application <input checked="" type="checkbox"/> b. initial award <input type="checkbox"/> c. post-award	<b>3. * Report Type:</b> <input checked="" type="checkbox"/> a. initial filing <input type="checkbox"/> b. material change
<b>4. Name and Address of Reporting Entity:</b> <input checked="" type="checkbox"/> Prime <input type="checkbox"/> SubAwardee * Name: Maryland Department of Housing and Community Development * Street 1: 100 Community Place    Street 2: _____ * City: Crownsville    State: MD: Maryland    Zip: 21032 Congressional District, if known: MD-003		
<b>5. If Reporting Entity in No.4 is Subawardee, Enter Name and Address of Prime:</b>		
<b>6. * Federal Department/Agency:</b> Department of Energy	<b>7. * Federal Program Name/Description:</b> Energy Efficiency & Conservation Block Grant Program CFDA Number, if applicable: 81.128	
<b>8. Federal Action Number, if known:</b> FOA-DE-0000148	<b>9. Award Amount, if known:</b> \$ _____	
<b>10. a. Name and Address of Lobbying Registrant:</b> Prefix _____ * First Name: N/A    Middle Name: _____ * Last Name: N/A    Suffix: _____ * Street 1: _____    Street 2: _____ * City: _____    State: _____    Zip: _____		
<b>b. Individual Performing Services</b> (including address if different from No. 10a) Prefix _____ * First Name: N/A    Middle Name: _____ * Last Name: N/A    Suffix: _____ * Street 1: _____    Street 2: _____ * City: _____    State: _____    Zip: _____		
<b>11.</b> Information requested through this form is authorized by title 31 U.S.C. section 1352. This disclosure of lobbying activities is a material representation of fact upon which reliance was placed by the tier above when the transaction was made or entered into. This disclosure is required pursuant to 31 U.S.C. 1352. This information will be reported to the Congress semi-annually and will be available for public inspection. Any person who fails to file the required disclosure shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure. <b>* Signature:</b> Elise Reuschenberg <b>* Name:</b> Prefix _____ * First Name: Clarence    Middle Name: _____ * Last Name: Snuggs    Suffix: _____ <b>Title:</b> Deputy Secretary <b>Telephone No.:</b> 410-514-7006 <b>Date:</b> 12/14/2009		
<b>Federal Use Only:</b>		Authorized for Local Reproduction Standard Form - LLL (Rev. 7-97)

# Investment in Main Street: Energy Efficiency for Economic Growth

Submitted by the Maryland Department of Housing and Community Development  
in response to

*Recovery Act: Energy Efficiency and Conservation Block Grant, Retrofit Ramp-up Program (Topic 1)*

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## 1. PROJECT APPROACH

Since its founding in the mid-1970's, the State of Maryland's Department of Housing and Community Development (DHCD) has demonstrated a history of using innovative programs and partnerships to leverage limited funding in a wide variety of applications in order to obtain the maximum reach and benefit for Maryland residents. DHCD programs run the gamut from administration of the Federal Housing Choice Voucher Program, to the Federal Low-Income Housing Tax Credit (LIHTC) program, to foreclosure prevention and counseling, to revitalization initiatives through the State's Community Legacy Program, Main Street Maryland Program, Community Investment Tax Credit, and

The Maryland Department of Housing and Community is proud to be at the forefront of implementing housing policy that not only promotes and preserves affordable housing and homeownership, but also creates innovative community development initiatives that meet the challenges of a growing Maryland.

DHCD continues to focus on building on past successes to maintain its reputation as a national leader in housing finance and an innovator in community revitalization.

Neighborhood BusinessWorks Program, to the Community Development Block Grant program, to homeless prevention programs, to implementing the State's Building Codes, to programs that promote energy efficiency and green building. DHCD's single and multifamily finance programs generate several hundred million dollars through municipal bond issuances each year in order to provide affordable housing for Marylanders across the state, with a total mortgage portfolio of \$2.4 billion.

Specifically regarding energy efficiency and conservation efforts, the DHCD has administered the DOE Weatherization Assistance Program (WAP) since 1987, leveraging an average annual budget of \$2.5 million dollars with other state, local and utility company funds to assist thousands of Maryland households each year. The Department also operates an energy efficiency and green building program funded by the John D. and Catherine T.

MacArthur Foundation (the Department's Green Grant Program), uses part of its Regional Greenhouse Gas Initiative funding allocation toward energy efficiency measures, and gives bonus points in its competitions for multifamily housing funds using LIHTCs to projects that promote and provide greater energy efficiency. In addition, the Department's Building Codes Office has already adopted the new International Energy Conservation Code, which will go into effect in 2010, more than six year's ahead of the national 2017 deadline.

The DHCD's vast programmatic capacity and demonstrated wealth of financing expertise makes the opportunity presented by the Energy Efficiency and Conservation Block Grant (EECBG) Retrofit Ramp Up, a serendipitous chance to expand and develop innovative programming that might otherwise have been delayed due to limited funding. The DHCD is requesting \$32,251,801 in funding (\$2.25 million is for operations expenses), to be leveraged with approximately \$270 Million in state and private financing. Federal funding through the EECBG opportunity represents, to these cost and energy-saving DHCD programs described herein, the difference between implementation within several months, versus implementation within several years. Furthermore, the DHCD has identified the need for Federal funding through the EECBG opportunity not only to expedite the delivery of these programs, but to broaden the reach of this funding to a geographically diverse population, including urban, suburban and some of Maryland's more rural communities. In providing these tools to a wider variety of areas, the DHCD intends to not only bring about greater energy efficiency and savings for Marylanders, but also intends to expand upon a growing "Green" workforce and spur economic growth to stabilize and revitalize the State.

### 1.1. Project Description, Goals and Objectives

The goals of Maryland's "Investment in Main Street: Energy Efficiency for Economic Growth" response to the EECBG Retrofit Ramp-up opportunity are threefold.

- First, the DHCD intends to dramatically reduce the level of energy consumption in homes, businesses and multifamily rental buildings in 15 targeted communities throughout the State.
- Second, the DHCD intends to incentivize these retrofit opportunities in order to facilitate widespread adoption of energy efficiency measures and retrofits to expand upon a burgeoning Maryland “Green Workforce” and further the creation of jobs and resources in the energy conservation field.
- Third, the DHCD intends for these programs to be sustainable, and will utilize existing programs, funds and partnerships to complement financing mechanisms developed for this initiative to ensure a lifespan well beyond the initial 36-month grant period.

The 15 targeted communities were selected by weighing what would benefit the greatest number of Marylanders, taking into consideration those areas that have not yet received an allocation of EECBG funding. The 15 areas selected are all in communities where there is significant leveraging and partnership activity. Each area has a Main Street Maryland program, numerous multifamily developments, and is a target area for other funds through DHCD. In addition, 10 of the 15 areas are located in Maryland’s non-EECBG-formula-eligible areas, as designated by the Department of Energy. The targeted communities are:

Berlin (Worcester County)	Oakland (Garrett County)
Cambridge (Dorchester County)	Princess Anne (Somerset County)
Chestertown (Kent County)	Dundalk (Baltimore County)
Cumberland (Allegany County)	Westminster (Carroll County)
Denton (Caroline County)	Havre de Grace (Harford County)
Easton (Talbot County)	Salisbury (Wicomico County)
Elkton (Cecil County)	Takoma Park (Montgomery County)
Frostburg (Allegany County)	

The DHCD’s “Investment in Main Street: Energy Efficiency for Economic Growth” strategy proposes a holistic, community-based approach to target individual households, multifamily rental properties and commercial properties for energy-efficiency retrofits that will result in significant, measurable reductions in energy consumption. This approach will be combined with an educational component to reach out to stakeholders with information for behavior changes that reduce energy consumption, and a monitoring component to collect information on energy consumption patterns that will be relayed back to consumers, owners and occupants as persuasive proof of the effectiveness of energy conservation. The residential, multifamily and commercial retrofit approach is further complemented by the development of a statewide purchasing cooperative and training and outreach component for the adoption of updated building codes. These elements are woven into a statewide plan to target 15 communities in the State of Maryland. The fabric of existing DHCD financing, services and programs in these communities will be leveraged to strengthen and expand the above retrofit initiatives. DHCD partners are already in place in these communities and will work quickly to market and reach out to individual owners and occupants for an expedited “Investment in Main Street: Energy Efficiency for Economic Growth” Ramp-up. The homeownership, multifamily and commercial approaches all involve slightly different models for revolving loan funds, as detailed below.

#### **1.1A. Homeownership Model: The Efficient Home Program (\$8 million)**

The DHCD intends to use eight million in EECBG funding to create the Efficient Home Program (EHP). This program will utilize a revolving loan financing mechanism and private lending partnerships to reach out to moderate-income households for energy efficiency retrofits and the purchase of Energy Star appliances. EHP will cooperate with utility companies throughout the State through the EmPOWER Maryland program and an existing network of contractors organized and trained by the Maryland Energy Administration (MEA). This retrofit strategy is based on the Assisted Home Performance (AHP) model

currently in place, and created through a partnership between the DHCD and MEA. Four million in EECBG funds will be used to provide credit enhancement for \$20 million in unsecured loans through private lending partners, who will offer individual loans of up to \$15,000 for energy efficiency retrofits and the purchase of Energy Star appliances to 2000 homeowners during the initial three-year start-up period. To incentivize the program, free energy audits will be offered within the 15 targeted communities.

In addition, the DHCD will partner with Maryland Habitat for Humanity (HFH) and its network of 18 affiliates Statewide by investing an additional four million in EECBG seed capital to provide a revolving loan fund for energy efficiency retrofits with HERS-rated improvements to lower-income homeowners. During the three-years of this grant, the DHCD estimates that roughly 240-300 Habitat for Humanity homes will receive retrofit loans, which will generate revenues that will allow the program to be sustained indefinitely beyond the initial funding period. Habitat for Humanity brings numerous additional partners and external funding sources to the table and expects to highly leverage funds for a large-scale impact. It is anticipated that by expanding the single family initiative in this way, the effects of the retrofit efforts will be of a much larger scale, and the revitalization effect on the surrounding communities will be pronounced. These retrofit loan programs will benefit from a coupling with the DHCD's Single Family lending programs by setting aside \$10 million in Maryland Mortgage Program (MMP) funds each year to offer mortgages with a ¼ point interest rate reduction to first-time homebuyer that purchase Energy Star appliances. These efforts will extend the reach of current energy efficiency and Weatherization efforts beyond the 60% Area Median Income (AMI) demographic to households earning up to 120% of AMI and take great strides toward market transformation. The Efficient Home Program aims to implement retrofit improvements to 2300 households within the targeted communities within the first three years, and will result in a leveraging of funds greater than 6:1.

#### ***About the EmPOWER Maryland Energy Efficiency Act of 2008***

Maryland's EmPower Act identified energy efficiency as among the least expensive ways to meet the growing electricity demands while providing affordable, reliable, and clean energy for consumers. Beginning in January of 2008, and measured annually until through 2015, the State set goals to achieve energy efficiency, conservation, and demand response targets, based on the 2007 electricity consumption. The targets include:

- 1) 15% reduction in per capita electricity consumption by 2015;
- 2) 15% reduction in per capita peak demand by the end of 2015.

The Act required investor-owned electric companies ("IOUs") and the Southern Maryland Electric Cooperative ("SMECO")<sup>1</sup> to submit plans to the Public Service Commission by September of 2008 detailing the electric companies' proposals for achieving the electricity savings, demand reduction targets and cost recovery. These utilities collaborate with efforts by the Maryland Energy Administration and with the Maryland Department of Housing and Community Development.

#### **1.1B. Multifamily Model: Preservation and Energy Efficiency Program (\$10 million)**

For the Preservation and Energy Efficiency Program fund, \$10 million in EECBG funding will be used to provide the initial capitalization for a flexible financing program to make targeted investments in an estimated 20 rental properties during the fund's first three years. The fund will be used in a variety of ways, depending on the particulars of each property. Anticipated uses include direct, short, and long-term lending on a cash flow and must-pay basis, loan guarantees, grants, and forgivable loans. Repayments on assistance provided by the fund will be recycled into future energy retrofit projects.

Twelve of the 20 properties assisted by the fund will be located in non-EECBG-formula-eligible areas. Each project is expected to consist of approximately 100 rental units, and will be the recipient of an average of \$500,000 of EECBG funds (\$5,000 per unit) to perform two key activities: 1) installation of

<sup>1</sup> *EmPower Maryland* utilities include: Baltimore Gas and Electric Company; Potomac Electric Power Company; Delmarva Power & Light Company; The Potomac Edison Company DBA Allegheny Power; and Southern Maryland Electric Cooperative, Inc.

an energy usage monitoring system to collect real time energy usage data; and 2) completion of energy efficiency retrofits based on the recommendations of investment-grade energy audits. In addition to ensuring the energy efficiency and affordability of these 20 rental properties (which will include over 2,000 housing units), this initiative will provide baseline data that will enable DHCD to promote systemic change within the conventional lending community. EECBG funds will leverage significant private and public capital, including DHCD funding through its Multifamily Bond Program, Low Income Housing Tax Credit (LIHTC) Program and Rental Housing Fund.

The two types of projects assisted by the fund will be four full-scale building rehabilitation and 16 small-scale energy efficiency retrofit-only projects. The full-scale projects will involve acquisition and complete building rehabilitation, with total average per project costs estimated at \$12.5 million, or \$125,000 per unit. The small-scale retrofit projects will incorporate the same level of energy efficiency improvements as the full-scale projects, but without a full building rehabilitation. These projects will involve leveraging of the existing project financing and equity, for an estimated total average per project costs of \$8.5 million, or \$85,000 per unit. The \$10 million EECBG funding will finance four full-scale building rehab projects, and sixteen small-scale retrofit projects, for a grand total of over \$175 million in leveraged funds.

Properties assisted through the loan fund will include existing affordable multifamily rental housing developments currently in the DHCD's lending portfolio. Projects may be partially or wholly income-restricted and may be subject to HUD Section 8 contracts. As such, outreach and property identification will be a relatively simple matter, and will be primarily dictated by the following factors: 1) geographic location; 2) demonstrated need for energy efficiency retrofits; 3) development team composition, and 4) financial feasibility. Properties selected will undergo an investment grade energy audit and critical needs assessment. Construction specifications will be developed to result in the highest possible energy efficiency within achievable cost parameters. By focusing on properties within the DHCD's portfolio, the fund will become active on an expedited basis and generate very quick results. In some circumstances, the DHCD may apply EECBG funds to properties in the portfolios of other governmental entities such as HUD, USDA and local governments.

The Multifamily initiative will assist an estimated 2,000 units in 20 properties, which will each undergo a retrofit to generate immediate savings and benefits to residents and property owners. These savings -- whether accruing to the benefit of the individual tenant (through lower utility bills) or to the property owner (through lower operating expenses) -- will result in increased disposable income of the tenant or increased cash flow at the property; either result will improve the financial stability of the property and thereby enhance its long-term viability as an affordable housing resource. Perhaps more importantly, the increased knowledge and experience promoted by this undertaking will contribute to a paradigm shift in the way energy efficiency is viewed and assessed in the financing marketplace for multifamily housing.

### **1.1C. Commercial Model: The Green Retrofit Incentive Program (GRIP) (\$10 million)**

The Green Retrofit Improvement Program (GRIP) will be implemented during the initial three-year start-up period in 15 of the 23

State-designated Main Street Maryland communities and will assist small business owners and

**Main Street Maryland** is a comprehensive downtown revitalization program created in 1998 by the Maryland Department of Housing and Community Development (DHCD). The program strives to strengthen the economic potential of Maryland's traditional main streets and neighborhoods. Using a competitive process, Main Street Maryland selects communities who have made a commitment to succeed, and helps them improve the economy, appearance and image of their traditional downtown business districts.

To accomplish Main Street goals, DHCD partners with the National Trust for Historic Preservation's National Main Street Center, and utilizes its Main Street Four-Point Approach™ to downtown revitalization, focusing on promotions, organization, economic development and design. Since 1980, the national program has been implemented in more than 2,000 communities nationwide.

commercial property owners in realizing substantial, immediate, and ongoing cost savings through energy efficient retrofit improvements, while promoting sustainable business practices. During the first three years of the program, GRIP will utilize \$9 million in EECBG funding to capitalize a loan mechanism that will assist roughly 900 historic commercial properties, ranging on average from 2,500 to 20,000 square feet. The DHCD will utilize one million in EECBG funding to provide initial grants to 15 local Main Street organizations, who in turn will offer grants to small business owners and/or property owners as incentive to complete energy audits to identify the retrofit/energy improvements needed. In subsequent years, once the initial grant funds have been used, the Main Street organizations will be able to leverage the DHCD's Community Investment Tax Credit (CITC) program to raise funds from private resources to continue to be able to offer energy audit grants to small businesses and/or property owners.

After an energy audit has been completed, business owners and/or property owners will utilize GRIP. This will leverage the Department's Neighborhood BusinessWorks (NBW) lending program to obtain loans with interest rates currently estimated to be between two and three percent (as allowable by market conditions), averaging \$10,000 per loan to finance the retrofit improvements. Additionally, business owners and/or property owners may be able to utilize local Main Street façade improvement programs or other local sustainability grants and loans to further maximize the funding. The objectives of GRIP are to increase energy efficiency in historic commercial properties, support small businesses in accessing the benefits, both sustainability and economic, of reducing their energy consumption, to provide incentives for developers, property owners and business owners to make retrofit improvements. The GRIP program intends to dramatically expand the market and demand for commercial energy efficiency retrofit loans, resulting in increased incentives for lenders offering these types of products.

#### **1.1D. Energy Efficiency Purchasing Cooperative (\$1 million)**

A total of one million in EECBG funds will be used by the DHCD to establish a state-wide Energy Efficiency Purchasing Cooperative to maximize the purchasing and negotiating power of landlords, property managers, developers, contractors and individual homeowners. The Purchasing Cooperative will enable these purchasers to reduce the cost premium associated with energy efficient building materials and techniques, further incentivizing energy conservation. Among the obstacles to the implementation of energy conservation measures is the actual cost or perceived cost of such measures. Energy efficient construction techniques and appliances can often result in a cost premium that is exacerbated in rural areas and for small property owners or individual homeowners, for whom market aggregation is a problem. Individual low or moderate income property owners, who would benefit most from energy conservation long-term, may not be able to afford the immediate outlays for implementation and may not have access to government programs that can offset the cost. Through the Energy Efficiency Purchasing Cooperative, the DHCD proposes to encourage the mobilization of a statewide partnership representing all aspects of the consumer spectrum to maximize purchasing power, passing the cost savings on to members. EECBG funds will be leveraged during the initial two years to assist with the development of the cooperative, so that the program can become self-sustaining during the third year. The DHCD will work closely with the Maryland Affordable Housing Coalition, Housing Association of Non-Profit Developers (HAND), Habitat Restore, the Maryland Association of Public Housing Authorities, Maryland engineer and architect organizations, and the Maryland Municipal League to effect the creation and strengthening of this co-op. We have an extensive working relationship with all of these organizations, which will certainly result in an efficient expansion of our efforts throughout the State.

The cooperative structure, with its tax-exempt status and the mandated pass-through of savings to members, will effectively incentivize and facilitate the use of energy efficient measures for members that might otherwise find such measures to be cost-prohibitive. Additionally, the Purchasing Cooperative will be structured to serve as a resource for locating the most cost and energy efficient materials available, and then educating members and the public as to how best achieve energy efficiency goals.

#### **1.1E. Adoption of Updated Building Codes (\$1 million)**

DOE has included, as a program policy factor for special consideration, the adoption of updated building codes. The DHCD is the entity in Maryland that has the authority to adopt building codes and has adopted the following:

- 1) A building energy code (or codes) for residential buildings that meets or exceeds the most recently published International Energy Conservation Codes, or achieves equivalent or greater energy savings; and
- 2) A building energy codes (or codes) for commercial buildings that meets or exceeds the most recently published ANSI/ASHRAE/IESNA Standard 90.1, or achieves equivalent or greater energy savings.

On a three-year cycle, the DHCD is charged with adopting the statewide building code known as the Maryland Building Performance Standards (MBPS) and the Model Performance Code (MPC). The International Code Council (ICC) develops and updates the International Building Codes that include the International Building Code (IBC) and the International Residential Code (IRC). These two primary codes and other ICC codes make up part of the Maryland Building Performance Standards (MBPS) and the Model Performance Code (MPC).<sup>2</sup>

The DHCD has adopted the latest versions of the IBC (2009), the IRC (2009) and also the latest version of International Energy Conservation Code (IECC) (2009). The State's administrative process will be completed on January 1, 2010. Local jurisdictions have until July 1, 2010 to adopt or amend the codes locally. (Local jurisdictions can only amend the 2009 IECC in order to make it more stringent.) DHCD requests that one million in EECBG funding be utilized to facilitate the adoption and implementation of these codes, particularly the latest energy codes, at the local level. Additional funding for leveraging may be provided by local jurisdictions, and supplemental funding has been requested through the Maryland Energy Administration's State Energy Program Fund. For the adoption and implementation of these recent codes, the DHCD proposes to use EECBG funds to assist local jurisdictions in achieving compliance with the most recently adopted building energy codes in at least 90 percent of new and renovated residential and commercial building space, which is the goal that is expected to be achieved within eight years of 2009, as follows:

- 1) Provide specific active training that will lead to the ICC-recognized certification for plan reviewers, inspectors, developers, engineers, architects, etc, and active enforcement of local code programs by local code jurisdictions;
- 2) Provide additional training and certification focusing on the ASHRAE 90.1 -2007, to further support implementation and compliance efforts by local code jurisdictions;
- 3) Explore the development of a joint state-local Request for a Proposal (RFP) for a pilot information systems project that would call for a joint state-local database to facilitate tracking and reporting on most recently adopted energy code implementation and compliance. This innovative project would be designed for the specific purpose of providing needed additional resources to local code jurisdictions to measure the rate of compliance each year as Maryland moves actively toward the 90 percent compliance goal mentioned above.
- 4) Create a feedback loop with the other elements of this proposal to identify specific barriers posed by the codes process that inhibit the effective implementation of energy conservation measures.

## 1.2. Potential Barriers

A number of barriers to these initiatives have been identified by the DHCD. Among them is the issue of popular perception of real energy savings compared against the risk of loans or financial expenditures required to make these improvements. It is a challenge, particularly given the past two years of economic unease, to convince homeowners of the value of long-term energy savings if these savings must come with any type of financial risk. It is the DHCD's plan to incentivize such programs through

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<sup>2</sup> Other codes recommended by the Maryland Fire Marshal and the Department of Labor, Licensing and Regulation, address fire, electric, and plumbing codes and these also become part of the statewide building code.

community marketing and educational outreach, and more importantly, to provide free or grant-funded energy audits to inform individuals of the very real energy savings associated with these measures. (It is the DHCD's experience through its Weatherization Assistance Program, that many households are not at all aware of the amount of energy that is lost through infiltrations in the home.) The DHCD's perspective is that educating the customer will result in an enhanced appreciation for energy efficiency retrofit measures, which in turn will result in a greater demand for this proposal's various retrofit models. It is also anticipated that partnering with private lending partners who have extensive community-lending background, will facilitate the relationships necessary to successfully promote the Efficient Home Program's loan product. Utility companies working through the EmPOWER Maryland program will further assist in reaching out and providing retrofits to households who may be reluctant to commit to a loan. The DHCD has extensive experience in creating statewide advocacy campaigns that utilize websites created and maintained by the DHCD, targeted mass mailing, Public Service announcements on television and radio, and personal representation at various community based events throughout the State. In the past year, we hosted over 100,000 visits on our websites, mailed out in excess of 500,000 individual reminders to clients and made presentations to 15,000 people at 126 forums. These competencies will be partnered with the efforts already in place through EmPOWER Maryland and the Maryland utilities.

A common barrier to small business tenants in historic commercial properties in implementing retrofit improvements is not only the inability to finance the improvements, but also the concern that they will be investing in properties that they do not own and will not receive a return on their investment. (Conversely, the property owner may not be interested in retrofit improvements because it would require owner investment when the tenants are the ones paying the bills and benefiting from energy savings.) These concerns are similar to beliefs once held about making simple façade improvements – new signage, paint and lighting – to the exteriors of buildings. Owners and tenants once believed that investment in those types of improvements were not worth the cost and held no direct benefit to either. Time and time again, Main Street programs have worked with tenants and property owners to understand the dollar return on these investments and have been successful in changing this view and proving that these investments have real benefit for both parties. Demonstrating this success, since 1980 Main Streets nationally have been engaged in over 200,000 façade improvements and building rehabilitations. Since the inception of the Main Street Maryland program in 1998, the State-designated Main Streets have completed over 1,500 private improvements. The Main Street program's outreach and education methods for convincing both tenants and property owners to invest in façade improvements will serve as a model for approaching tenants and landlords regarding GRIP, the Efficient Home Program, and the multifamily Preservation and Energy Efficiency initiative.

In the multifamily rental arena, there are many barriers to the expeditious implementation of corrective energy efficient measures. Lending decisions are typically based on appraisals that measure what has happened in the past rather than the possibilities of the future. Building professionals and architects are constrained by funding and must rely on past design experiences with no incentives to seek out innovative approaches, even when they can use proven technology. Developers pressed for immediate profits believe they cannot invest additional funds in projects even if those funds may increase cash flow in later years. Federal regulations, particularly those relating to the Low Income Tax Credits (LIHTC), may serve to inhibit or actually prohibit the expenditure of funds for retrofitting. The DHCD intends to use the opportunity presented by the EECBG funds to create a living laboratory to address these issues. Upon the completion of the multifamily initiative, the DHCD will use the results to work with other lenders, appraisers and property owners and managers to promote systemic change and incorporate proven energy efficiency techniques into a valid base for modifying the underwriting of lending for multifamily rental properties. Specifically, through the use of Energy Monitoring Systems (EMS) in properties assisted by EECBG funds, the DHCD will be creating a body of data which will validate the benefits of energy conservation and contribute to the industry's recognition of the contribution achieved by these measures. Installation of a permanent EMS at the whole-building and sub-system level will include both hardware (meters), as well as software to analyze and display data.

### 1.3. Funding Structure

For the homeownership, multifamily and commercial models (all using variations on a revolving loan program), funding will be allocated by the DHCD to the three separate loan funds. The residential component will utilize the EECBG funding solely for credit enhancement, and will partner with a private lender to originate and manage the loan portfolio. (The DHCD will subgrant funds to Maryland Habitat for Humanity for their portion of the Efficient Home Program initiative.) The multifamily component will utilize the EECBG funds in conjunction with long-standing DHCD-managed loan funds. Similarly, the GRIP loan fund will be managed internally, following the Department's Neighborhood BusinessWorks loan program model. When possible, Community Investment Tax Credits (CITC) will be utilized to supplement individual projects.

### 1.4. Implementation Plan and Milestones

The various components of the DHCD's "Investment in Main Street: Energy Efficiency for Economic Growth" program will be implemented along similar timelines, with well-established relationships at the community level expediting the initial ramp-up process. Implementation of the DHCD's combined approach will begin with the convocation of an "Investment in Main Street: Energy Efficiency for Economic Growth" task force to begin targeting outreach and marketing efforts to the 15 designated communities in the spring of 2010. During this time, relationships with lending partners are being finalized or extended and documents pertaining to all EECBG-related lending processes are undergoing legal review. Upon receipt of the award, outreach and marketing efforts are expanded to identify program participants and begin working with potential participants, performing energy audits when appropriate, utilizing the Maryland Energy Administration's network of BPI-certified auditors, and reviewing multifamily applications and "shovel-ready" projects for application of EECBG loan funds. This component of the program will be ongoing, but will ramp up to full production between the summer of 2010 and the winter. By the winter it is expected that at least five multifamily developments will be underway with EECBG funding. Based on prior experience with the Assisted Home Performance program, the DHCD is confident that 200-300 loans for the homeownership component and 150 loans for the commercial component will be either in the pipeline or in the retrofit installation phase of the project. Beginning in the spring of 2011 (twelve months into the program), it is anticipated that loan processes will be moving smoothly with an eye towards reaching 18-month program goals.

During the initial months leading up to the award, the GRIP initiative will establish an Advisory Committee composed of representatives from public-private partner organizations. The GRIP Advisory Committee will be responsible for reviewing loan applications to ensure that they meet GRIP goals, promoting the use of GRIP to small business owners, developers and property owners in 15 Main Street communities and assisting with monitoring GRIP projects after loans have closed.

#### Timeline and Key Milestones:

##### *January 2010:*

- Building Codes: Adoption of the Maryland Building Performance Standards, which include the IECC 2009.
  - Prepare RFP to hire the trainer for the certification programs.
  - Begin to explore the development of a joint state-local RFP for a pilot information systems project that would facilitate tracking and reporting on most recently adopted energy code implementation and compliance.

##### *February 2010:*

- GRIP: Meet with local Main Street organizations and other partners to finalize roles and responsibilities. Review outreach and education strategies.
- Efficient Home Program: Finalize agreement with private lending partners and begin provision of energy audits within target communities.

- Distribute EHP marketing materials to existing DHCD borrowers.
  - Preservation and Energy Efficiency: Identify potential multifamily rental properties from the DHCD's existing portfolio for inclusion in program. Initiate discussions with appraisers and selected lenders.
  - Building Codes: Advertise for the trainer and select firm.
- March-May 2010: (Assumption: EECBG awards will be made in this timeframe.)*
- GRIP: Create and distribute marketing materials, including SWITCH campaign. Target marketing of the DHCD's proposed programs and initiatives to stakeholders.
    - Expand service providers listing for auditors and contractors.
    - Create, in partnership with the Maryland Historical Trust and Penza Bailey Architects, a handbook describing best practices and materials for use in retrofitting historic buildings.
  - Efficient Home Program Goal: Provide 1000 retrofit loans within first 18 months.
    - Ramp-up with marketing and community outreach efforts.
  - Building Codes: Develop training program with Maryland Codes Administration, staff who will handle administration of the certifications of participants.
- June-July 2010:*
- GRIP: The DHCD to provide an application for and award funding to Main Street organizations to implement local grant programs for small business owners and/or property owners to complete energy audits.
  - Efficient Home Program: Identify first loan borrower to create publicity for the program and advertise the borrower's energy savings.
    - Work with utility companies to access previous 12 months of energy consumption data for borrower participants.
    - Begin lending funds while maintaining and increasing outreach efforts.
    - Work with Habitat for Humanity to identify properties for retrofits.
  - Building Codes: Local code jurisdictions adopt the latest MBPS; begin training at local jurisdictions.
    - Expanded energy Codes training will be coordinated with enhanced building codes training for coastal regions and for "smart growth" buildings on the use of Maryland's rehab codes (formerly "Smart Codes").
  - Preservation and Energy Efficiency Program: Identify eligible multifamily projects in the pipeline that would benefit from EECBG funding.
- August-December 2010:*
- GRIP: Perform energy audits on historic commercial properties– complete 150 audits by December 31, 2010, and 300 audits by May 2011.
  - Efficient Home Program: Complete (or have in the application pipeline) roughly 660 loans.
    - Increase outreach to new DHCD first time homebuyers for a lower interest rate mortgage with retrofit commitment.
  - Building Codes: Organize and hold a public forum for Maryland stakeholders and code officials
- January-March 2011:*
- GRIP: Compile data and findings on energy audits performed and retrofit recommendations made.
    - For small business owners and/or property owners "ready to proceed" with retrofit improvements, collect data on previous 12 months of property's utility costs.
- January-December 2011:*
- GRIP: Contractors will make retrofit improvements to historic commercial properties in the 15 Main Street communities.
  - Building Codes: Continue enhanced training efforts and provision of needed resources to local jurisdictions to ensure the most rapid and efficient implementation of recently adopted building

codes; ongoing strengthening of state-local partnerships between and among all building code stakeholders will continue to be explored and supported.

- Efficient Home Program: Continue providing retrofit loans, focusing on 100 Habitat for Humanity homes within the first 12 months.
- Preservation and Energy Efficiency Program: Begin utilizing EMS for data analysis to be applied to projects in the pipeline. Complete (or have in the pipeline) four to six projects.

November 2012:

- “Investment in Main Street: Energy Efficiency for Economic Growth” project to have committed 100% of EECBG funding.

### 1.5. Outreach and Marketing Strategy

The DHCD’s outreach and marketing strategy will be a broad, community-based approach that will utilize the Department’s many partnerships and leverage synergistic programs currently in place. The DHCD has created the SWITCH campaign and creative collateral materials to encourage residents, small business owners and/or property owners in targeted communities to *make the SWITCH to energy efficiency*. Some elements of the SWITCH campaign include decals for businesses windows, posters, building and community signage, and targeted emails promoting the DHCD’s energy conservation incentives and programs and advertisements. SWITCH will generate excitement and community support for energy conservation by making it desirable to be a part of *making the SWITCH to sustainable practices*.

The DHCD will also leverage existing networks and partnerships with utility companies through EmPOWER Maryland to expand a comprehensive outreach and marketing strategy. Informational flyers and program descriptions will be distributed to residents and business owners in target communities during community events, association meetings, trainings related to Building Codes adoption and will be provided during State Weatherization training sessions (organized by the DHCD) held at the Maryland network of community colleges. Informational materials will be distributed by utility partners in monthly statements, and the program will be promoted on relevant State websites.

These outreach efforts will continue to use the existing Main Street organizations, the affiliated small business councils, community advocate groups and our local government partners. Each of the targeted communities has at least one Main Street Maryland Program, which will serve as a key resource for the DHCD’s outreach and marketing plan. Each local Main Street has the ability to reach stakeholders – residents, small business owners and/or property owners - directly through a host of activities including, but not limited to convening “Town Hall” meetings, utilizing web, email, and social media platforms, and addressing local chambers of commerce and business associations. Following the National Trust for Historic Preservation’s National Main Street Center’s proven four-point approach to community revitalization, local Main Street programs offer a unique ability to reach consumers. Because of their direct relationship and involvement in improving the appearance of downtowns, Main Street programs have a persuasive advantage in swaying small business owners and property owners to utilize the DHCD’s proposed programs. As mentioned earlier, The Main Street Program’s outreach and education methods will serve as models for approaching tenants and landlords regarding GRIP, the Efficient Home Program, and the multifamily Preservation and Energy Efficiency initiative.

Additionally, other public partners such as Preservation Maryland and Baltimore Heritage Inc., will participate in promoting the DHCD’s energy efficiency programs and incentives and will assist in identifying specific historic commercial properties within the 15 designated communities. These organizations will also be able to assist in outreach efforts by targeting and attracting private investment from developers and lending institutions for properties in these communities. Furthermore, the DHCD will engage other state agencies such as the Department of Planning/ Historical Trust, Department of Business and Economic Development and the Department of Labor, Licensing and Regulation in these efforts.

All outreach discussions and materials will include information on the benefits of energy efficiency both at home and in business. This will range from simple best practices such as compact fluorescent light bulb use to the installation of energy-efficient heating and cooling systems and other devices to promote energy conservation. Information will also include cost-savings data, both initial and long-term, related to the specific energy improvement. Materials will include energy tips and quick facts related to energy conservation as well as other "Green" strategies.

For the multifamily initiative, the DHCD will make use of an already efficient and extensive outreach program. Currently the Department maintains ongoing contact with developers, property owners and local government officials on a regular basis. As part of the MacArthur grant initiative for the preservation of affordable housing in BRAC impacted areas, the DHCD is actively engaged with local officials to create strategies to preserve housing stock. That vehicle will be modified to include the EECBG initiative. The Department has initiated systematic contacts with a variety of energy companies and technology companies involved in the energy field. Best Practices Conferences and publications will also be utilized as part of the out reach efforts.

### **1.6. Monitoring and Verification**

As mentioned earlier, part of the strategy for monitoring and verifying energy savings and for reporting the results back to program stakeholders for educational or research purposes, will involve the installation of Energy Monitoring Systems (EMS) in the multifamily and several commercial projects. The EMS will provide the foundation for immediate energy savings and, at the same time, will identify energy efficiency projects or major refurbishments that result from an in-depth analysis of buildings systems and operational/maintenance processes. Based on industry studies, the EMS implementations are expected to provide:

- *Energy savings of 25-30%*<sup>3</sup> via early identification of deficiencies through metering and behavioral changes. By virtue of the continuous nature of the monitoring, EMS implementations are expected to identify operational problems such as equipment cycling and excessive simultaneous heating and cooling;
- *Persistent energy savings, to prevent degradation of savings through lack of maintenance;*
- *Resource utilization trend data* to plan major refurbishment projects and supplying cost-benefit justifications in support of retrofit project loan applications; and
- *Research metrics* by building type. We plan to require each site to supply online access for energy utilization metrics to the Department, as part of financing requirements.

Upon the completion of energy efficiency retrofits, the Department intends to work with property owners through ongoing energy monitoring and energy efficiency education programs for both tenants and management. As a result of these efforts, the DHCD intends to create standardized energy audit formats that will be used by property owners and managers to make informed decisions about achievable energy conservation measures. In addition, the DHCD will incorporate into an energy audit format, information that will allow and encourage lenders to accurately evaluate the financial benefit of energy conservation and make loan decisions based on this information and will require the inclusion of relevant energy information in all property appraisals performed for the Department. The DHCD will work with individual appraisers and appraisal organizations to develop such appraisal standards, and will encourage their adoption throughout the state.

Monitoring and verification of the residential energy savings will require greater organization and cooperation with the utility companies and Public Service Commission (PSC), but in this area the DHCD will benefit from the EmPOWER Maryland program and solid working partnerships with regional utility

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<sup>3</sup> Source: *Monitoring-Based Commissioning* by Evan Mills, Ph.D and Paul Mathew, Ph.D., Lawrence Berkeley, National Laboratory, June 2009

companies. As they have been doing with the Department's existing Assisted Home Performance (AHP) residential retrofit grant program, utility companies provide the most recent twelve months of energy consumption data prior to the installation of energy efficiency measures. This data is in some cases noted on each month's utility statement, but in others is provided as a package directly to the DHCD and its subcontractor. Educational materials will be provided to consumers along with their retrofit installation, and upon completion of the retrofit a Quality Control inspection will be performed to verify that the project will result in a minimum energy-savings to investment ratio. Energy savings from that point will be monitored on a monthly basis and will be provided to the customer with monthly comparisons and energy-saving tips. To assist with these purposes, the DHCD will hire a program clerk to monitor and synthesize energy savings reports and provide necessary information to the Maryland Energy Administration and U.S. Department of Energy as necessary. Costs for this additional staff will not exceed \$50,000 per year and will be incorporated into the master budget (attached).

### **1.7. Feedback and Program Improvement**

The DHCD will solicit program participant feedback throughout the retrofit process and on various levels. The presence of the DHCD's community programs will play a vital role in the receipt and communication of this feedback, as will its community lending partners and developers. The DHCD is experienced in handling programmatic issues, service issues and financial issues, and takes customer feedback very seriously, routinely conducting customer feedback surveys and reporting on how efficiently and effectively the DHCD operates its programs to the Governor through Maryland's StateStat system. A clerical employee will be hired to assist the EECBG program administrator in handling and responding quickly to all customer inquiries. As these programs are designed to replenish funds for sustainability and expansion to areas of the state not targeted during the initial three years, customer feedback is a vital part of the "Investment in Main Street: Energy Efficiency for Economic Growth" process. The DHCD anticipates that its models will be easily replicable for similar communities across the nation, but will refine any rough edges or programmatic challenges in large part through the input from customers and developers. The DHCD's lending programs have a history of responding quickly to its customers, whether on a large scale, such as the DHCD's foreclosure response and creation of the Maryland Home Owners Preserving Equity (HOPE) initiative, or whether on a small scale through per-client consideration of second loan subordination. The DHCD is structured to react efficiently to these situations with customer responses and action taken within a set period of time. DHCD welcomes all types of customer feedback and is pleased to work alongside Marylanders in shaping the programs that benefit them the most.

On an ongoing basis throughout this project and beyond, the DHCD will implement information feedback loops with all interested and involved parties. Regular focus groups will be convened to assist in the review and codification of findings and to provide input on how documents, procedures, regulations and policies should be modified to further energy efficiency goals. As obstacles arise, participants will review ways in which these obstacles can be navigated. Results of EMS will be evaluated and made available in a manner that respects the privacy of the individual but provides useful material on which to base future decisions.

The Department will initiate a Best Practices Conference on an annual or semi-annual basis. These conferences will be designed to provide practical hands-on information to parties interested in energy efficiency. Professional from all disciplines (lenders, contractors, architects, investors, consumer groups, etc.) will be invited to participate as either presenters or audience members. The conferences will be supplemented by a best practices publication which will be issued on a periodic basis.

### **1.8. Environmental, Health and Safety Issues**

The DHCD possesses great breadth of experience in the many challenges of housing finance, lending and affordable housing development. The DHCD and developer partners are informed and

prepared to address the various permitting requirements involved in the multifamily developments and retrofit improvements. Additionally, the Department is informed and prepared to address necessary permit requirements for its commercial retrofits. The properties targeted in this proposal will be reviewed prior to commitment for any potential environmental needs, structural problems and issues related to the project's location. All pertinent information will be collected and evaluated prior to the commencement of work. To this extent, the Department is well-versed in the DOE and HUD requirements for a National Environmental Policy Act (NEPA) review and is easily able to determine when a project merits such a review (and in those cases, is competent in the execution of the review). In most multifamily project examples, a development is categorically exempt from the performance of a NEPA review if there is no change in the building's usage. The DHCD is prepared to handle situations where a NEPA review might be necessary (and is knowledgeable of the time period that would be necessary in order to complete the review). Most importantly however, is the value that the DHCD places on the health and safety of its employees, partners, and customers. All workplace safety precautions are taken both in office and construction settings. The DHCD only hires or partners with companies and individuals that are licensed and have a proven track record of safe and successful operation. The efforts outlined in the "Investment in Main Street: Energy Efficiency for Economic Growth" proposal are no exception.

The Department is particularly concerned about Lead safety and proper Lead Paint abatement techniques when working in homes where this is a factor. As part of the State's Weatherization Training Program, the DHCD is currently working with a curriculum specialist at the Construction and Energy Technologies Education Consortium (CETEC) to develop a Lead Safety course for retrofit installers, weatherization technicians, crew leaders and energy auditors. The DHCD is utilizing curricula from the Department of Energy and the Maryland Department of the Environment (MDE) in conjunction with DOE's Core Criteria for Weatherization and curriculum from the New York State Energy Research and Development Authority (NYSERDA). All contractors who will be working in buildings where lead is a factor are required to either have taken a similar course approved by DOE/MDE or to take the class being offered by the state through the State Weatherization Training program.

## **2. PROJECT IMPACT**

### **2.1. Economies of Scale**

One of the major advantages that the DHCD possesses in administering the "Investment in Main Street: Energy Efficiency for Economic Growth" program is that all housing and community development programs are operated within the Department, so that staff can easily direct and manage resources. In addition, the DHCD is nationally-recognized in these programs, receiving seven awards from the National Council of State Housing Agencies (NCSHA) and the Council of State Community Development Agencies (COSFDA) within the last three years. The DHCD has existing partnerships with local governments to administer CDBG, Rental Allowance Program (RAP), Community Legacy, Weatherization and other programs, and can easily add new initiatives to these existing structures and relationships. These capacities facilitate creation and expansion of programs for the Department, and make it a logical choice to administer initiatives requiring economies of scale.

The DHCD chose the 15 target communities within the "Investment in Main Street: Energy Efficiency for Economic Growth" program for a number of reasons, among them their geographic distribution across the state. Each community will serve as a center for experience and project expansion as the "Investment in Main Street: Energy Efficiency for Economic Growth" initiatives continues beyond its initial 36-month grant period. These 15 communities will provide 15 economies of scale across the state of Maryland. From cooler, mountainous Western Maryland to low-lying, coastal Eastern Maryland, these communities will offer variations in housing and building type and regional climate, and will provide research to compare and contrast different levels of success within a diverse range of geography. By "seeding" this initiative in multiple communities across the State, the DHCD will yield a far broader and informative impact. Moreover, these areas, many of them rural, often have access to fewer resources than larger communities with access to major cities in the Central Maryland area. For some households

within our targeted communities, energy savings of several hundred dollars annually could provide the necessary savings to prevent a family from going into foreclosure. In addition, targeted outreach and marketing efforts in these communities will inform property owners and occupants of other beneficial State resources and synergistic programs, yielding even greater benefits beyond the expected results of this program's energy efficiency improvements.

## **2.2. Quantitative Impact: Energy Savings and Emissions Reduction**

The DHCD has projected that the homeownership and multifamily initiatives will save at least 1.1 metric tons of carbon dioxide emissions equivalent for multifamily units (averaging 750 square feet), and 4.7 metric tons of emissions for a single family home averaging 1800 square feet. These projections were made using conservative estimates of initial energy savings and utilized DOE and EPA tools and emissions calculators (which may not yield data as accurate as that which is generated by more specific scientific formulas). For the homeownership projections, the DHCD utilized an average energy savings of 18.2% per year per household, based on the most recent 18 months of the existing Assisted Home Performance (AHP) data. It is expected that this number is actually lower than what will result in this proposal's targeted communities, as a large portion of the homes retrofitted through AHP are located in central Maryland and are predominantly row homes with brick construction. Retrofits of these types of homes are likely to show smaller energy improvements, as there is less sealing and infiltration reduction to be done. Because "Investment in Main Street: Energy Efficiency for Economic Growth" efforts are targeting communities outside of central Maryland, there will be fewer homes with brick construction and row homes will be a rarity. It is expected that average energy savings within these targeted communities will yield energy savings more in the 30% range.

Considering that the multifamily Preservation and Energy Efficiency strategy will retrofit twenty buildings with an average of 100 units per building, the amount of carbon dioxide emissions reductions for these 2000 units will be 2200 metric tons, equal to annual emissions from the consumption of 247,469 gallons of gasoline per year<sup>4</sup>. This is an astonishing projected reduction in emissions, and the DHCD estimates that actual savings will be greater (particularly in circumstances where energy efficient appliances are installed on a large scale). Projections for the DHCD's homeownership program were based solely on energy efficiency retrofit installations and did not take into account the installation of any energy efficient appliances or HVAC systems. According to a recent DOE study<sup>5</sup>, the average annual energy savings potential for an Energy Star refrigerator is 105 kWh. This is the equivalent of .08 metric tons of carbon dioxide emissions. When multiplied by the 2000 homes targeted through the Efficient Home Program, this number increases to 160 metric tons of carbon dioxide annually.

Once operational, the Energy Efficiency Purchasing Cooperative should be able to benefit a substantial number of the individual home owners in this program as well as a significant number of the owners of multifamily properties. The market share of the Purchasing Cooperative should increase with time as the cost benefits of membership are evaluated and advertised.

### **2.2.A. Reasonableness of Projections of Building Numbers**

The DHCD has utilized unit, home and property retrofit estimates that we are confident the "Investment in Main Street: Energy Efficiency for Economic Growth" initiative can meet or exceed. Though the number of loans closed each year will vary, given current market conditions, the DHCD can usually expect to provide between 1,000 and 1,600 mortgage loans for first-time homebuyers each year. Ramping-up from 400 smaller retrofit loans in the first year to 800 retrofit loans in the second and third

<sup>4</sup> Calculation determined by the U.S. Environmental Protection Agency's Greenhouse Gas Equivalencies Calculator, available online at <http://www.epa.gov/RDEE/energy-resources/calculator.html#results>.

<sup>5</sup> U.S. Department of Energy. *Refrigerator Market Profile 2009*. Available online at: [http://www.drintl.com/HtmlEmail/Refrigerator\\_Market\\_Profile\\_2009\\_Final.pdf](http://www.drintl.com/HtmlEmail/Refrigerator_Market_Profile_2009_Final.pdf).

year will be facilitated by the DHCD's experienced financial staff. Similarly, our estimates of retrofitting 900 businesses and 20 multifamily buildings (over three years) are equally conservative. The DHCD has experienced partners in these arenas and with the addition of additional staff, will absorb this additional volume easily.

## **2.2B. Reasonableness of Projections of Average Utility Savings**

The projections of average utility savings provided in Appendix H, Project Impact Tables, are based on a number of key assumptions detailed therein. As mentioned above, initial numbers are based on estimates or studies of other similar markets and are intended as a guide. Within the first 12 to 18 months of implementation, the DHCD will have more accurate data to recalculate these projected savings amounts.

## **2.3. Extent of Replication of Project**

As part of the DHCD's commitment to energy savings and project impact, we are dedicated to sharing the results and program elements with other state and local agencies. The DHCD believes that these efforts, while effective on a statewide scale, can be successfully replicated on a smaller regional scale as well. Many of the initiatives outlined in this proposal are innovative expansions or variations on currently existing programs, and are designed to continue on after EECBG grant funds have been exhausted. As the DHCD succeeded in establishing its statewide training program for the Weatherization Assistance Program through Recovery Act funds from DOE, so will this initiative succeed in fine-tuning successful models for broad-scale energy efficiency improvements.

## **2.4. Project Relevance and Justification**

Particularly during this time of economic instability when families must work to stretch every dollar to its limit, it is crucial that supportive agencies implement programs to assist families and further them in their efforts to save money and reduce expenses. The EECBG program announcement seeks to transform energy markets, making energy efficient options the first choice through programs that are sustainable beyond the expenditure of grant monies. By leveraging EECBG funds with our own resources, we anticipate that this program will yield significant market transformation, and will further be complemented by our partner efficiency efforts through the Weatherization Assistance Program, our Green Grant program, our Regional Greenhouse Gas Initiative funding, our preference for energy efficient multifamily projects through our LIHTC program, and EmPOWER Maryland programs. These efforts are in keeping with other DHCD initiatives as part of the State's "Smart, Green and Growing" campaign. The EECBG program announcement seeks innovative financing tools, large-scale leveraging and the participation of multiple agencies. As the State Department of Housing and Community Development, we have many of those tools and partnerships already in place.

## **3. LEVERAGING AND SUSTAINABILITY**

### **3.1. Financial Tools and Strategies**

The DHCD will exceed overall project leveraging of 5:1 by utilizing existing project funds and partnerships as detailed above. The homeownership, multifamily and commercial loan models are all forms of revolving loan funds, with some differences between them. The homeownership approach utilizes \$20 million in funds from a private lender, with EECBG funds simply being held as credit enhancement to allow for a seven-year loan term and lower interest rate. These loans will in some cases be complemented by contributing efforts from Maryland utility companies through the EmPOWER Maryland program. (Different utilities provide various services, depending on the utility company covering the specific area.) To further incentivize energy efficiency improvements, the DHCD is setting

aside \$10 million in Maryland Mortgage Funds per year (for a total of \$30 million during the grant period) to provide interest rates with a ¼ point reduction to first-time homebuyers who purchase Energy Star appliances. Energy efficiency retrofits that are done in collaboration with the Maryland Habitat for Humanity partnership will experience a leveraging of roughly \$40 million during the grant period in contractual building services, materials, in-kind labor and funds from other partner organizations. These retrofit loans may also be leveraged (when eligible) by grant-funded services through the DHCD's Weatherization Assistance Program (through American Recovery and Reinvestment Act funding by the Department of Energy), and for new homebuyers through any of the DHCD's homeownership and Downpayment and Settlement Expense Loan Programs (DSELP).

The multifamily revolving loan fund uses EECBG funds as capital, with plans to supplement recovered principal and interest payments early in the program with additional funding sources, until the loan fund amount is large enough to sustain itself. The fund will be used in a variety of ways depending on the particulars of each property. Anticipated uses include direct, short, and long-term lending on a serviced and non-serviced basis, loan guarantees, grants, and forgivable loans. The DHCD will leverage its existing strategic relationships with numerous entities in implementing the Multifamily Initiative. These entities include the John D. and Catherine T. MacArthur Foundation, the Maryland Energy Administration, Enterprise Community Partners and their Green Communities initiative, the Maryland Housing Fund, the Community Development Trust, The Reinvestment Fund, and the Maryland Affordable Housing Coalition.

The DHCD has a wide range of strategic relationships that will be leveraged for the creation of the purchasing cooperative. To this extent, the DHCD has over 60 lender partner banks throughout the State that it works with for mortgage financing, in addition to numerous private and non-profit developers that collaborate in the financing, development and management of affordable rental housing. Furthermore, the DHCD has strong, long-term working relationships with local municipal staffs throughout the State which will facilitate the broad impact of the purchasing cooperative. EECBG funds will serve as seed money for the start-up costs associated with the cooperative, which plans to begin sustaining its overhead and administrative costs through revenues toward the end of the second year of the program.

The GRIP program will leverage funding from the Neighborhood BusinessWorks Loan Program, the Community Legacy Program, the Neighborhood BusinessWorks Grant Program, and the Community Investment Tax Credit Program. Additional leverage will be through the National Trust for Historic Preservation's National Trust Loan Fund as well as the City of Havre de Grace's Revolving Loan Fund. In addition, the DHCD will leverage strategic relationships with public and private partners.

**Leveraging Chart:**

<b>Program Element</b>	<b>DOE Contribution</b>	<b>% of Budget</b>	<b>Leveraged Resources</b>	<b>Leveraging Sources</b>
Efficient Home Program – retrofits + energy audits	\$4,000,000	13.33%	\$20,000,000	Private lender
Efficient Home Program – mortgages	\$0	0.00%	\$30,000,000	Maryland Mortgage Fund/DESLP (3 yr)
Efficient Home Program – Habitat for Humanity	\$4,000,000	13.33%	\$40,000,000	Habitat for Humanity*
Efficient Home Program – Workforce Energy Training	\$0	0.00%	\$1,000,000	DHCD and MEA
GRIP – audits	\$1,000,000	3.33%	\$400,000	CITC
GRIP – retrofit loans	\$9,000,000	30.00%	\$1,000,000	Neighborhood BusinessWorks

			\$815,000	Community Legacy
			\$742,545	NBW Grant Program
			\$750,000	Nat'l Trust for Hist. Preservation
			\$100,000	Havre de Grace
Building Codes Adoption Initiative	\$1,000,000	3.33%	\$500,000	MEA State Energy Program (Pending)
Multifamily Preservation and Energy Efficiency – retrofit loans	\$10,000,000	33.33%	\$176,000,000	DHCD Multifamily financing tools**
Purchasing Cooperative	\$1,000,000	3.33%	\$500,000	In-kind contributions
<b>TOTAL</b>	<b>\$30,000,000</b>		<b>\$271,807,545</b>	

\*Habitat for Humanity resources include funding, donated materials, and in kind contributions of labor)

\*\* DHCD Multifamily financing tools including Low Income Tax Credit (LIHTC), Multifamily Energy Efficiency and Affordability (MEEHA) program, Rental Housing Fund, Green Grant Rental Housing Program, MacArthur Green Grant and Preservation Funds.

### 3.2. Market Transformation

The DHCD believes that it will effect the greatest market transformation through this strategy of targeting households, businesses, and larger multifamily properties. By reaching out to these populations, the DHCD is targeting major changes at the consumer level, with the basic economic assumption being that consumer demands drive product availability, pricing and innovation. By creating large-scale change and demand for energy efficiency measures at the consumer level, the DHCD will assist thousands of Maryland households in saving money through energy conservation, learning about and adapting to more efficient behaviors, and reducing harmful emissions into the environment, efforts that will then translate vertically into larger scale changes at the institutional level. Changing individual value systems in this way is part of Maryland's "Smart, Green and Growing" campaign that targets energy efficiency on individual, institutional and policy levels.

The DHCD's transformative efforts through this proposal are further complemented by the Departments \$61.4 million Weatherization Assistance Program, which is almost nine months into its 36-month grant period and has partnered with the Maryland Energy Administration and Maryland community colleges through the Construction and Energy Technologies Education Consortium (CETEC) to create a comprehensive statewide training program for Weatherization and energy analysis. The DHCD has administered the Maryland Weatherization Program since 1987, and through increased Recovery Act funding has recently had the opportunity to dramatically expand the number of clients reached through this program. The WAP program has traditionally served households earning less than 175% of the federal poverty level. This income level was increased to 200% of the poverty level (or 60% of Area Median Income) with the recent award of Recovery Act dollars, allowing the WAP to serve an even greater number of people. The DHCD's EECBG initiatives for savings and conservation through energy efficiency pick up where WAP leaves off, making funds available to households earning above 60% of Area Median Income. In this way, the DHCD is reaching a very large portion of Maryland's working class households. As described above, the actions and behaviors of this population play a very large role in bringing about dramatic market transformation for the promotion and provision of energy efficiency through conservation.

The DHCD is also uniquely positioned to be a first-mover in making energy efficiency a key factor in lenders' underwriting standards. With over thirty years of experience as a lender, the DHCD has a history of introducing new financing products, from which a wide variety of private lenders have joined

to become partners in making financing available to new markets. Through the Preservation and Energy Efficiency Program fund, the DHCD will be able to demonstrate to the conventional lending community the reliability of lending against (and/or guaranteeing) the eventual cost savings achieved by energy retrofits. The DHCD will not be alone in these efforts, and in its capacity as a lender and project portfolio manager, has already begun to work with the Maryland Energy Administration, Enterprise Green Communities, energy software developers, and local Energy Service Companies to develop a standardized energy audit format for multifamily buildings that will take into account both the technical and the financial requirements necessary to make financing energy efficiency a demand-driven process that is supported by the conventional lending markets.

What will make these efforts at transforming the market successful is the role that the DHCD plays in Maryland as a respected lender with a strong history of prudent financing, proactive asset management, and responsive policy-development. The DHCD listens closely to its many partner organizations in order to meet the needs of both the marketplace and local communities, and to gain the buy-in necessary to achieve a public purpose through private and non-profit partnerships. Beginning in 2010, the DHCD, in conjunction with eight partner counties, other public and private lenders, and technical experts, will be undertaking a year-long process of developing a common set of loan documents and underwriting and rehabilitation standards for multifamily housing.

As the nexus of this effort, the DHCD will have the opportunity to promote energy efficiency as a central component of affordable housing and community revitalization activities. This will be a rare opportunity to solicit the feedback of all relevant parties, and their engagement as part of this ongoing concerted effort will provide a forum whereby barriers to market transformation can be mutually understood and comprehensively addressed. This effort has the potential for a national scope, as the goal is to create a replicable finance model that incorporates energy efficiency.

### 3.3. Sustainability

As mentioned during the introduction of this proposal, these initiatives are programs that have been designed by the Department or modeled on existing successful programs to further the DHCD's energy efficiency and conservation efforts, in conjunction with the State's "Smart, Green and

Growing" campaign and the DHCD's own efficiency goals. Federal funding is needed as seed capital and in order to expedite the development and delivery of these programs, but the fundamental mechanisms of these programs do not require sustained federal funding. Each program leverages numerous existing funds at the Department, and is structured to allow for continual replenishment and growth of capital in order to sustain and expand the lending.

The DHCD has been expanding its repertoire of energy efficiency and conservation initiatives, to which extent EECBG funds will provide needed assistance in ramping-up and expediting delivery of programs. Earlier this year and in partnership with the Maryland Energy Administration, the DHCD created the Multifamily Energy Efficiency and Housing Affordability program to provide grants for energy audits, energy efficiency improvements, and/or renewable energy improvements. The DHCD has also received funding through the MacArthur Foundation's Preservation Initiative to provide funds for energy audits and/or for the U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED) accreditation and training as part of the State's efforts to promote awareness of the

#### *Going Green Downtown*

This collaboration between the Maryland Department of Housing and Community Development (DHCD) and the Maryland Department of Natural Resources (DNR) is designed to provide communities throughout Maryland with an important set of principles, guidelines, and examples of how to pursue and implement sustainable practices. Sustainability emphasizes the balance between economic, social and environmental resources needed for today with the need to preserve those same resources for future generations. In order to maintain and even expand those resources, there needs to be a focus on best practices such as compact mixed use development, rehabilitation and reuse, and pedestrian orientated design — all major characteristics found in Maryland's historic Main Street communities.

benefits of energy efficiency and green building concepts. In the homeownership arena, the DHCD has provided roughly 200 energy efficiency retrofit grants through its Assisted Home Performance (AHP) program. The DHCD's Division of Neighborhood Revitalization has a number of programs to assist local business owners in the greening and efficiency enhancement of their properties, and has published *Going Green Downtown: A Sustainability Guide for Maryland's Main Streets* for partners, residents and businesses. These are just a few examples of the initiatives that the DHCD has already undertaken. Programs that benefit from the capitalization and expedited delivery of EECBG funds are planned to become self-sustaining by the third year, with the intent that availability of these programs will be expanded beyond the 15 target communities following the completion of the 36-year grant funding.

#### **4. PARTNERSHIP STRUCTURE AND CAPABILITIES**

##### **4.1. Range of Partners**

The range of organizations collaborating with the DHCD on EECBG and other departmental initiatives ranges from foundational partners, non-profit organizations, other state agencies and private partners. Partners for the Preservation and Energy Efficiency multifamily initiative include the John D. and Catherine T. MacArthur Foundation, the Maryland Energy Administration, Enterprise Community Partners and their Green Communities initiative, the Maryland Housing Fund, the Community Development Trust, The Reinvestment Fund, and the Maryland Affordable Housing Coalition. Partners for the Efficient Home Program include Maryland Habitat for Humanity, the Maryland Energy Administration, private lending partners, the DHCD's Local Weatherization Agency network, Baltimore Gas & Electric (BG&E), other utilities through the EmPOWER Maryland program and training centers at the State's community colleges through the Construction and Energy Technologies Education Consortium (CETEC).

Partners collaborating on the GRIP program include the National Trust for Historic Preservation, Preservation Maryland, Baltimore Heritage, Inc., TerraLogos Energy Group, the Maryland Historical Trust/State Historic Preservation Office and Penza Bailey Architects (PBA). In these efforts, the DHCD is also in the process of engaging other state agencies such as the Maryland Department of Planning/Maryland Historical Trust, Maryland Department of Business and Economic Development and the Maryland Department of Labor, Licensing and Regulation.

The Multifamily initiative will utilize a well established network of partners. These will include individual property owners and developers, lenders active in the financing of affordable housing, county officials throughout the impact area and state wide, trade associations such as the Maryland Affordable Housing Coalition and HAND, Enterprise Green Communities and private sector providers of technical support.

##### **4.2. Roles**

As part of its "Investment in Main Street: Energy Efficiency for Economic Growth" initiative, the DHCD will develop and maintain a list of service providers for both energy audits and contractors for use by business and/or property owner. TerraLogos Energy Group has already committed to be among the first on this list and will be available to conduct energy audits related to GRIP, TerraLogos maintains a Sustainable Contractors Network, which will serve as the initial list of contract providers that the DHCD will offer as part of the service provider list. The Network includes pre-qualified contractors who understand the energy improvements recommended and can perform the upgrades properly. The DHCD will seek similarly qualified companies, such as TerraLogos Energy Group and the Sustainable Contractors Network, to be a part of its service provider list. Other key partners will include Penza Bailey Architects and TerraLogos. Through its GreenWorks strategy, PBA will assist the GRIP program and collaborate with the Maryland historic Trust by serving in an advisory capacity to provide recommendations on retrofit improvement materials and products that are compatible with historic structures. Preservation Maryland and Baltimore Heritage Inc., will be able to participate in promoting the DHCD's energy efficiency programs and incentives and identify specific historic commercial properties

within these 15 communities as well as Baltimore City's 10 city-designated Main Street neighborhoods. These organizations will also be able to assist in outreach efforts by targeting and attracting private investment from developers and lending institutions in properties in these communities.

As discussed earlier, for the Efficient Home Program, the DHCD's private lending partner will serve as the lending institution to provide funds for the energy-efficiency retrofits. Maryland Habitat for Humanity (HFH) will work through the Efficient Home Program to provide HERS-rated energy efficiency retrofits and Energy Star appliances through low-interest revolving loans to HFH customers. HFH will leverage EECBG funds with its network of partners and other funders to sustain the initial capitalization of the loan fund by EECBG. The DHCD will work through the Maryland Energy Administration's (MEA) trained network of Building Performance Institute (BPI) certified auditors and retrofit installers to provide the retrofit work. Quality control inspectors from the DHCD's Weatherization Assistance Program and MEA's energy analyst network will be utilized to perform inspections of the work to ensure that careful, correct completion. Partnerships with BG&E and other regional utility providers will be utilized to compile monthly energy usage data and to provide complementary efforts through EmPOWER Maryland.

## **5. AMERICAN RECOVERY AND REINVESTMENT ACT INFORMATION**

### **5.1. Promotion of Recovery Act Objectives**

Through the "Investment in Main Street: Energy Efficiency for Economic Growth" initiative, The DHCD strives to maximize opportunities for job creation and retention, as well as for the expansion of Maryland's "green" workforce. The models selected for this initiative were chosen with a careful eye to the timeframe that would be necessary in order to inject the first dollars into the State. Each approach within our proposal provides for a speedy ramp-up and the commitment of all funds within the initial 18 months of the 36-month grant period. Furthermore, these approaches have been shaped in order to offer the largest economic impact within Maryland and the country and are geared towards utilizing community banks, community businesses, and community developers to keep these dollars flowing through Maryland's target communities.

### **5.2. Job Creation**

The DHCD anticipates that increasing the audience for innovative energy-efficiency retrofit installations will increase the demand for skilled workers. We anticipate that the need for a skilled workforce able to provide the efficiency improvements as well as the energy audits will be well beyond the numbers projected to be employed directly through these efforts (as noted in Attachment H: Project Impact Table). To this extent, the Department proposes to provide workforce training through the recently-established State Weatherization Training program, utilizing curricula, instructors, and facilities that are already in place and leveraging funding from the Department of Energy and the Maryland Energy Administration.

### **5.3. Other Direct Economic Recovery Impacts**

Through the initiatives described in this proposal, the DHCD is pairing impacts related to energy efficiency, conservation and job creation with the preservation of affordable housing. Within every effort to seal and tighten a building are efforts to save the resident or owner money in order to ensure the continued affordability of that residence or business. Affordable housing has experienced an increasingly steep decline due to the foreclosure crisis at a time when citizens need stable, affordable housing the most. Within each of the initiatives that comprise the "Investment in Main Street: Energy Efficiency for Economic Growth" program are efforts to revitalize targeted communities and preserve home affordability within these areas. Neighborhoods that are safer and more stable due to steady economic activity and availability of affordable housing make for safer and more secure citizens, which is the ultimate goal of the DHCD and other state agencies.

## **Investment in Main Street: Energy Efficiency for Economic Growth**

### **Abstract**

*(Funding amount requested: \$32.25 million)*

The DHCD's "Investment in Main Street: Energy Efficiency for Economic Growth" strategy proposes a holistic, community-based approach to target individual households, multifamily rental properties and commercial properties for energy-efficiency retrofits that will result in significant, measurable reductions in energy consumption. To transform energy use at the individual household level through the Efficient Home Program (requesting \$8 million in EECBG funds), the DHCD will utilize partnerships with private lenders to provide \$20 million in unsecured loans for energy retrofits. \$4 million in EECBG funds will be used to provide credit enhancement to lower interest rates and extend the terms of these loans. An additional \$4 million will be utilized through Maryland Habitat for Humanity to provide HERS-rated, measurable energy retrofits for low-income households. The Efficient Home Program will expand on DHCD's existing Weatherization and Assisted Home Performance programs to provide energy efficiency retrofit improvements to moderate-income households earning more than 60% of Area Median Income.

The Preservation and Energy Efficiency multifamily component (requesting \$12 million in EECBG funds) will utilize \$11 million in EECBG funding to seed a loan fund for energy efficiency improvements and long-term sustainability for multifamily rental properties and landlords. This will leverage existing partnerships with the MacArthur Foundation and the Maryland Energy Administration, among others. This innovative loan fund will provide energy efficiency retrofits for 20 multifamily developments in partnership with a variety of public and private lenders, including Enterprise Green Communities. Complementing this component and assisting homeowners, renters and business-owners alike is DHCD's Energy Efficiency Purchasing Cooperative, which will utilize an additional \$1 million in EECBG funding for expenses related to start-up. This strategy will assist in overcoming barriers to energy efficiency for smaller developers and businesses by aggregating materials, resources and transportation to reduce cost and increase the availability of efficiency and conservation measures.

To reach local businesses and governments, the DHCD has created the Green Retrofit Incentive Program (GRIP). Elements of GRIP (requesting \$10 million in EECBG funds) include energy audits, innovative retrofit loans and collaborative efforts through the Department's Main Street Maryland, Neighborhood BusinessWorks and Community Legacy programs. \$1 million in funds will provide energy audits, which will be leveraged beginning in the second year of grant funding by Community Investment Tax Credits (CITC). \$9 million in funds will provide capital for a retrofit loan program for local businesses, partnering with other State initiatives to offer interest rates between two and three percent.

The DHCD will leverage EECBG funding to implement targeted outreach, compliance and educational efforts for the implementation of the 2009 International Energy Conservation Code (IECC), recently adopted in Maryland and required for local jurisdictions by July 2010. All elements of the "Investment in Main Street: Energy Efficiency for Economic Growth" project will be combined with targeted educational outreach to provide stakeholders with quick tips and comprehensive conservation strategies to reduce energy consumption. For multifamily properties and businesses, the DHCD will implement monitoring systems to collect information on energy consumption patterns and relay the details back to stakeholders as persuasive proof of the effectiveness of energy conservation.

These elements are woven into a statewide plan targeting 15 communities in the State of Maryland. The DHCD partnerships with local governments, lenders, businesses and other State agencies are already in place and will work quickly to market and reach out to customers for an expedited "Investment in Main Street: Energy Efficiency for Economic Growth" Ramp-up. Through these wrap-around initiatives, the DHCD proposes significant, targeted change that will build upon existing best practices and support innovative efforts statewide, while bolstering Maryland's workforce and educating its citizens.

## **Investment in Main Street: Energy Efficiency for Economic Growth**

### **Attachment A**

#### **Key Resumes:**

Jane Willeboordse (Principal Investigator)

William Ariano

Tonna Phelps

Patricia Sylvester

Stuart Wechsler

James J. McAtcer

Amy Seitz

Matthew Schmid

## Jane Willeboordse, *Architect*, LEED AP

### Education and Training:

North Carolina State University, College of Design,  
Bachelor of Architecture, 1985  
Bachelor of Environmental Design in Architecture, *magna cum laude* 1983  
LEED AP, *Leadership in Energy and Environmental Design*,  
*Accredited Professional* GBCI # 10172920  
Maryland, Architecture license MD # 8311

Governor's Commission for Institutional Accessibility 2001-2003  
Co-founder, Potomac Region Solar Energy Society (PRSEA) 1994-2003  
Baltimore County Design Review Panel 1992-2000  
Neighborhood Design Center (NDC), Baltimore City 1985-1989

### Professional Experience:

**Ms. Willeboordse** has over twenty years of experience in areas of sustainability for the built environment, including: environmental site and building design; institutional and community outreach; and leadership roles in the public and private sectors; as well as with non-governmental (NGO) and nonprofit organizations. She has specialized in neighborhood revitalization work throughout Baltimore, and has completed a term as the Executive Director of a Community Development Corporation (CDC) and Community Housing Development Organization.

### Maryland Department of Housing and Community Development

Weatherization Inspector and Utility Liaison 2009  
Jane Willeboordse, *Architect*, **Environmental Design** 2006-2009, 1991-1999  
Worked nationally and internationally on sustainability projects with targets to reduce energy and water consumption, and introduce renewable energy alternatives.  
**Dundalk Renaissance Corporation**, Baltimore, Maryland  
Executive Director 2003-2006  
Developed a strategic plan for redevelopment projects and created a new CDC with 600 household members, created a *Maryland Main Street* office in an historic commercial storefront, and placed the National Historic District back on the Baltimore map with federal, state and local funding. Renovated and preserved historic townhouses as energy efficient housing examples, for both affordable and market rate new homeowners. Implemented *Community Legacy* funds from the inception of this state grant with an initial community-based Urban Design Assistance Team (UDAT) charrette that led to sound revitalization projects connecting the historic town to the industrial waterfront.

### Baltimore County Office of Community Conservation

2000-2003

Revitalization Project Manager for Priority Funding Areas with emphasis on East Towson, for twenty (20) energy-efficient housing renovations and new infill homes for an historic African-American neighborhood.

*Architectural /Urban Design firms - Baltimore:*

**Hord Coplan Macht, Inc., ArchPlan Architects Inc.,** 2000-1999  
Multi-family, CDA tax-credit projects for senior assisted living.

### National Association of Home Builders Research Center

1988-1991

Lead Architect for energy-efficiency, resource management and accessibility.

Designed prototype houses for the Community of Civano, Arizona, with sustainability goals of a fifty percent reduction in both water and energy use.

**Synergistic Activities:**

**Chair, Design Assistance Team** – Wallowa County, Oregon, 2006. Directed all activities to lead a ten-person Rural Design Assistance team (RDAT); created a county-wide plan for an environmental campus; incorporated community and county input to identify sustainable economic niches for conservation of this rural, ranching and timber community. Compiled RDAT Recommendations for the future of the County.

**Renewable Energy Advocate** – NGO/Government Liaison for the International Solar Energy Society (ISES) and the American Solar Energy Society (ASES), 1994-2000. Worked nationally and internationally on discussions of Climate Change to prepare *Recommendations to the United Nations Commission on Sustainable Development* in preparation for the Earth Summit in Rio de Janeiro.

**Sustainable Community Relocation Design Team**, Federal Emergency Management Association (FEMA), 1994. Design Charrette team recommended relocation for the community of Valmeyer, Illinois after extensive flooding of the Mississippi River Valley.

**Energy Design Tools Workshops**, U.S. Department of Energy – Facilitated a series of workings session on energy and environmental design resources for the building industry, DOE and NREL, with the AIA/ACSA Council on Architectural Research.

**Buildings for a Sustainable America**, to the U.S. Senate on resource conservation in buildings for ASES and the Passive Solar Industries Council, 1993, in cooperation with Environmental and Energy Study Institute and the U.S. Department of Energy.

**Selected Publications:**

<i>Building On Our Pioneer Spirit</i> , Wallow County, Oregon RDAT 2007	
<i>A Second Century Vision</i> Dundalk, Maryland UDAT	2002
<i>Recommendations to the UN Commission On Sustainable Development</i> , International Solar Energy Society	1995
<i>Energy at the UN</i> , SunWorld Vol. 17 No. 3, August	1993
<i>Military Housing Retrofit Guide</i> , NAHB Research Center	1991
<i>Urban Design in Action</i> , student editor	1985

**WILLIAM F. ARIANO, JR.**

**407 Gittings Avenue  
Baltimore, Maryland 21212  
410-435-2189**

**July 2007 to present**

**Deputy Director**

**Community Development Administration**

The Community Development Administration is the Housing Finance Agency for the State of Maryland Department of Housing and Community Development.

I am responsible for the daily operations related to programs functions associated with affordable housing lending including mortgage, special population loans, multi-family housing financing, and programs associated with the Departments Goals.

Assistant to the Assistant Secretary of the Maryland Department of Housing and Community Development with responsibilities for carrying out the Community Development Administration functions in his absence.

**August 2004 to July 2007**

**Vice-President**

**Chesapeake Bank of Maryland**

Together with the President of Chesapeake Bank ensured the continued growth of a strong correspondent lending operation for a community bank with a desire to increase their portfolio. I had responsibility for staff hiring, training, management, as well as secondary marketing, reporting, compliance, policy development. I was the Bank CRA officer.

**May 2003 to March 2004**

**Vice-President**

**Carrollton Mortgage Services, Inc.**

Co-managed the establishment of a strong correspondent lending operation for a community bank. We went from zero production and no third party approvals or relationships to \$12,000,000 a month in 9 mo.

**September 2002-May 2003**

**Assistant Director of Residential Lending**

**Americas Bank**

Established a strong correspondent lending operation for a community bank. Secured agency approvals and established procedures.

**October 1996-July 2002**

**Vice-President of Residential Lending**

**Key Bank and Trust**

Lead a residential lending division of a community bank. Profits increased in the first year from 0 which was the historical profit to 65 basis points on volumes of \$58,000,000 in production. We reached a sustainable level of \$112,000,000 a year by year four.

Create an in-house Bridge loan and a construction/perm product. Reorganized the back room function, replaced key personnel including the Director of Operations, closer, shipper, and created a branch operation. Total staff included 16 originators and back room of 27 employees. Reported to the President of the bank and the Board of Directors.

Familiar with all regulatory issues including RESPA, CRA, HMDA.  
Producing manager with a production in excess of \$8 Million annually.

Delegated Endorsement authority with FHA. Delegation from various lenders of up to \$1 million in lending authority. I was a member of the loans review committee of the bank for in-house conforming and non-conforming product, which included construction/perms, purchase/rehabs, and other banks specialty product.

**April 1991-September 1996**

**Senior Loan Originator**

**B.F. Saul Mortgage Company**

Loan originator with experience with all loan products including FHA/VA, conventional, conforming, jumbo, arms, no-docs, and construction/perms. Average \$10,000,000 a year.

**January 1991-April 1991**

**Business Manager**

**H&H Marine Towing**

Ran financial operations: contracts, payroll, payables and receivables.

**December 1987-September 1989** **Business Manager/Legal Administrator**

**Fugett and Associates**

Responsible for the administration of accounting including payroll, billing, payables and receivables advised firm principals, managed legal secretaries, and legal clerks. Worked with clients to develop business plans for small businesses and start up business operations.

**June 1982-November 1987**

**Executive Director**

**Housing Assistance Corporation**

Chief executive of a Baltimore City "quasi-public" agency responsible for the development, financing, construction, sales or rental and management of housing for families with low to moderate income. Development averaged over \$2,000,000 a year and resulted in the production of 50 rental units and 150 home ownership units for families with low to moderate income.

**June 1981-May 1982**

**Consultant**

Campaign manager or advisor for several local candidates running for Circuit Court Judge, Maryland Assembly, Baltimore City Council,

**March 1979 to May 1981**

**Training Director**

**National Center for Urban Ethnic Affairs**

Provided training to community based organization in the areas of organizing, finance, administration, mgt. and community Ec. Dev't.

**1973-February 1979**

**Executive Director**

**South East Community Organization**

Directed a community based organization involved in housing, economic and commercial development, commercial revitalization, community mental health, community services and "Alinsky" style community organizing.

**Education: B.A.  
MBA**

Mount Saint Mary's University  
Loyola College

Emmitsburg, Maryland  
Baltimore, Maryland



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8415 Gullane Court  
Pasadena, MD 21122  
410-514-7509 (Office) 410-360-2185 (Home)

**Maryland Department of Housing and Community Development  
Community Development Administration.**

**Director, Single Family Housing (January 2003 – Present)**

Manage the Department's Single Family Programs. Full responsibility for the administrative, operational and program management of all Single Family Housing related programs, including: the Maryland Mortgage Program, the Individuals with Disabilities Loan Program, Maryland Home Financing Program, Settlement Expense Loan Program, Maryland Housing Rehabilitation Program, Group Home Financing Program, Indoor Plumbing Program, Accessory, Shared and Sheltered Housing Program, Residential Lead Hazard Reduction Grant and Loan Program, Senior Home Repair Program, Special Targeted Applicant Rehabilitation Program, Special Housing Opportunities Program, federal HOME Program, and Federal Lead Hazard Reduction Program, as well as the Maryland Affordable Housing Trust. Administration of the programs requires supervision of a staff of 30 including 15 professionals and making decisions and recommendations which change, interpret or lead to the development of public policies and programs.

**Senior Manager, - Housing Development Programs (1992-2002)**

Manage a variety of housing and community development activities including: the federal HOME Program and the Emergency Shelter Grants Program; the Maryland Shelter Transitional Housing and Emergency Shelter Grant Program; the Partnership Rental Housing Program, the Infrastructure Program; the Self-Help Homeownership Technical Assistance Program; the Operating Assistance Grants Program; Technical Assistance Grant Program; the Maryland Affordable Housing Trust; technical assistance for non-profits; and other related activities. Supervise a staff of seven.

### **Other Related Activities**

- Departmental representative on the Mental Hygiene Advisory Board
- Departmental Representative on the NGA Team for Early Childhood Care and Education
- Member of the State Management Team under the Systems Reform Initiative
- Departmental representative for the Service Linked Housing Initiative sponsored by the Maryland Department of Human Resources
- Departmental representative for the HUD Supportive Housing Program
- Departmental representative for customer service initiative developed by Arthur Andersen Consulting, Inc.

### **EDUCATION**

- |      |   |
|------|---|
| 1993 | B.S. University of Baltimore, Merrick School of Business,   |
| 1994 | Maryland Government Executive Institute<br>Co-sponsored by The University of Maryland College of Business and Management and The School of Public Affairs |
| 1986 | AA Degree -Business and Public Administration (summa cum laude)<br>Anne Arundel Community College   |
| 2001 | Graduate of Leadership Anne Arundel Class of 2000-2001  |

**PATRICIA RYNN SYLVESTER**

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Columbia, Maryland 21045  
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**Professional History**

**Department of Housing and Community Development (1991-1993 and 1997-present)**

**Director, Multifamily Housing, Community Development Administration (CDA) (2003-present)**

- Lead and currently manage a 60-person staff;
- Direct the department's rental-housing finance programs, federal Low-Income Housing Tax Credit (LIHTC) program, and state and federal rental assistance programs.
- Spearheaded legislation to retool existing programs to preserve existing affordable housing and to increase housing opportunities for individuals with disabilities.
- Reengineer and use existing department programs to address critical housing needs effectively.

**Director, Single-Family Housing, CDA (2002)**

- Led and managed the department's single-family homeownership programs, which provide financing to purchase or improve primary residences, including the Maryland Mortgage Program (MMP).
- Reorganized the unit into cross-functional teams and improved the unit's processing times.

**Deputy Director, Multifamily Housing, CDA (1999 - 2002)**

- Managed day-to-day operations and implemented new systems to expedite processing and improve accountability.

**Y2K Team Leader for DHCD (1999 - 2000)**

- Team leader for the department's Year 2000 remediation and contingency planning efforts; oversaw outside consultants and department staff.

**Chief Administrative Officer of DHCD (1997-1998)**

- Provided oversight, coordination, and assistance with the department's programs, policy, personnel, and administrative activities and supervised staffers responsible for state and federal legislation, policy analysis and research, customer service, and public and press relations. Member of Executive Management.
- Served as the Secretary's designee on the Commission to Revise the Landlord Tenant Laws, and Governor Glendening's Managing for Results Steering Committee.

**Legislative Liaison and Executive Assistant (1991-1993)**

- Chaired a departmental Task Force on Fair Housing, represented the Secretary on the Commission to Revise the Administrative Procedure Act, and worked with the subcabinet on Growth Management.
- Exercised overall administrative responsibility for the Department's legislative activities, including reviewing, tracking, and preparing departmental positions and testimony on privately sponsored legislation, including lead paint and manufactured homes.

### Maryland Office of Administrative Hearings (OAH)

#### **Director, Government and Public Policy and Administrative Law Judge (1993 -1997)**

- Served as one of seven members of the office's executive staff; acted as liaison to the Maryland General Assembly, the media, the public, and other governmental agencies.
- Drafted and reviewed all proposed legislation and regulations - by the office or other state agencies - which would affect administrative hearings.
- Performed all ALJ duties; conducted mediations and administrative hearings and issued written decisions in accordance with the Maryland Administrative Procedure Act for state programs including special education; personnel; insurance; entitlements; child abuse and neglect; and drivers' licensing.
- Served as presenter for the Maryland Institute for Continuing Professional Education for Lawyers (MICPEL) programs on OAH and administrative hearings and child abuse and neglect hearings

### Maryland Department of Legislative Reference

#### **Counsel, Joint Committee on Administrative, Executive, and Legislative Review (1991)**

- Reviewed and evaluated all proposed regulations by state agencies

#### **Co-counsel, House of Delegates' Constitutional and Administrative Law (CAL) Committee (1988 -1991)**

- Primary counsel to CAL on issues concerning housing and employment discrimination; procurement; primary and secondary education; state government; administrative procedure; municipal and county government; and personnel.
- Analyzed bills, amendments and testimony; prepared Chairman Anne Perkins and Vice Chairman Elijah Cumming for the House floor; drafted bills and amendments.

### U.S. Department of Health and Human Services, Social Security Division

#### **Office of the General Counsel (1986-1987)**

- Provided in-house counsel to the Social Security Administration on matters relating to the administration of Title II of the Social Security Act, including review of proposed regulations and rulings, interpretation of court decisions, and analysis and tracking of legislation pending before the 100th Congress.
- Prepared briefs filed in U.S. District and Circuit courts supporting the agency's decision to deny Social Security benefits and responding to Motions for Attorney Fees under the Equal Access to Justice Act.

### **Education**

<b>University of Maryland School of Law</b>	J.D. with Honors; 1985 (Maryland Bar Admission; 1985)
<b>Johns Hopkins University</b>	B.A. in Natural Sciences; 1976

### **SELECTED CONTINUING EDUCATION AND VOLUNTEER ACTIVITIES**

2007	Member: Howard County Housing and Community Development Board
2006	Member: Howard County Task Force on Affordable Housing
2004-2005	Member: Commission to Revise the Maryland Annotated Code - Housing and Community Development Article and Public Housing Authorities Article
2004	National Council of State Housing Finance Agencies (NCSHA) Executive Management Program: University of Notre Dame (Indiana)
1997 - 1998	Managing For Results training: U. of Baltimore School of Business
1994	Mediation training by U.S. Arbitration and Mediation, a private, national mediation firm
1992	Maryland Government Executive Institute: University of Maryland
1990	Volunteer Attorney with the Homeless Person's Representation Project
1983 - present	Member and volunteer: St. John the Evangelist Roman Catholic Church and Wilde Lake Interfaith Center, Columbia, Maryland
1979 - 1981	Member: Boards of Directors of Neighborhood Housing Services (NHS) of Baltimore and NHS of Patterson Park
1978 - 1982	Rehabilitated a circa -1900 row house in the Butchers Hill Community of Baltimore City

**REFERENCES** - *Furnished on request.*

## Stuart Wechsler

Stu Wechsler is currently a Housing development officer with the Multi-Family Section of CDA. He has been employed by the Agency since 1987.

### Education and Training

1960-1963	City College of New York
1978	Center for Creative Leadership
1991	Governor's Executive Leadership Training

### Professional Experience

1987-2009 Maryland DHCD

Responsibilities include the underwriting of multi-source loans for affordable housing projects. Project size ranged from \$1,000,000 or less up to \$40,000,000. Sources include conventional and government loans including bond funds, state allocated funds tax credits and many types of grants. Position requires knowledge of the requirements for all loan and equity sources and the ability to identify and negotiate through conflicting requirements. Currently Mr. Wechsler is involved in the administration of the McArthur Grant initiative and the application of energy funds granted to the Department through the Maryland Energy Administration.

1985-1987

Conservator for the State of Maryland

Worked for the Conservator of state savings and loans seized as a result of the collapse of many S and L's during the crisis of 1985. Evaluated troubled loans and took steps to resolve problems or liquidate assets. Goal was to maximize the value of the institutions assets and reduce the cost to the state.

1982-1985

National Consumer Cooperative Bank

Vice President of Real Estate, Supervised staff responsible for originating and underwriting cooperative real estate loans through out the country. The position was responsible for the creation of lending policies and their implementation in accordance with sound lending practices.

1978-1982

Federal Home Loan Mortgage Corporation

Assistant Director for Urban Lending: responsible for initiating a program to increase the purchase of more loans in urban areas and to increase the volume of purchase activity from minority managed S and L s. Coordinated a program to create a tool to identify areas that had a disproportionately lower share of loan purchases by the Corporation. Chaired a task force representative of the organizations 5 regional offices to provide a feed back loop on new initiatives to achieve the urban lending goals of the organization and ensure lending was still in conformance with prudent lending standards.

1963-1968

Field Secretary Congress of Racial Equality

Responsible for community organizing and voter registration in several southern states during the Freedom Summer Campaign of 1964. Assistant director of CORE's Target City Project on Baltimore and headed the projects housing programs activities.

**JAMES J. McATEER**

ADDRESS: 329 Riding Ridge Road  
Annapolis, Maryland 21403  
Phone (410) 268-8089

EDUCATION: B. S. DEGREE, University of Wisconsin-Oshkosh  
December 1974  
MAJOR: Urban and Regional Studies  
MINOR: Geography

PROFESSIONAL EXPERIENCE:

**STATE OF MARYLAND – Department of Housing and Community Development (DHCD)**

September 1999 to Present

*Title: Senior Manager:*

**Primary Program Responsibility:** Weatherization Assistance Program,

**State Manager for U.S Department of Energy (DOE) Weatherization Assistance Program:** Responsible for managing all aspects of this energy conservation program for very low income residents in Maryland. Maintain program funding, secure local weatherization agencies (LWA's) and monitor agency performance. Manage the preparation of all reports and serve as liaison to DOE for program implementation. Solicit potential funding sources to leverage program funds. Develop strategies and policies to improve program efficiencies and effectiveness. Manage the expansion of the program due to the dramatic increase in funding from the American Recovery and Reinvestment Act. The expansion included increasing the number of LWA's, the development of a comprehensive statewide training program and a program software system to improve program efficiency and reporting. Develop partnerships with other State agencies and Utility companies to increase funding and expand the services provided to help more people. Supervise a staff of ten that includes two Assistant Managers and a Field Supervisor.

**Federal Lead Hazard Control Program and HOME Investment Partnership Program**

**HUD Lead Hazard Control (LHC) Grant (through December 2007):** LHC Grants help make Maryland homes lead safe for young children. Manage all aspects of grant to meet program goals. Develop and implement policies and procedures. Maintain a working relationship with various local and state agencies and other partners to meet program objectives. Monitor performance, prepare all reports and serve as liaison to HUD for program implementation.

**HUD HOME Investment Partnership Program (HOME) (through January 2007):** Manage all phases of the federal HOME for the Maryland program that provides financing for affordable housing activities. Make internal funding recommend within DHCD. Manage the HOME

Initiatives Program and Community Housing Development Organization set aside requirements. Develop policies for use of program funding, review applications for funding eligibility, and ensure ongoing compliance with program regulations and with other federal regulations as required. Maintain HUD Integrated Disbursement and Information System. Prepare various HOME reports as required for program funded activities. Supervise one professional position.

January 1982 to September 1999:

Included professional and management level experiences with DHCD. Experiences include working with Section 8 housing programs, loan underwriting and grants management.

**PRIOR EXPERIENCE**

Professional and management level experiences with a Community Action Agency in Wisconsin from 1975 to 1981 and as an Assistance Planner for the City of Oshkosh, Wisconsin in 1975.

**Equipment:**

Proficient with computer programs including Word, Excel, Power Point and Access

**AMY E. SEITZ**  
3810 Roland Avenue  
Baltimore, Maryland 21211  
(410) 662-1227

#### **CAREER RELATED EXPERIENCE**

**Maryland Department of Housing and Community Development (DHCD), Director, Community Access & Partnership: Division of Neighborhood Revitalization, February 2006- Present.** Responsible for maintaining and cultivating relationships with partner organizations and key stakeholders in community development and other related fields, such as economic development, to advance the Division of Neighborhood Revitalization's objectives to strengthen and expand the marketplace for its programmatic services and technical assistance. Analyze trends in the local, state, and national community development field and assess opportunities to meet Division goals. Provide on-going advice and assistance to stakeholders at the statewide and local level as well as represent Neighborhood Revitalization as a collaborator with other State agencies in various local working groups and task forces. Serve as Statewide Coordinator for the Main Street Maryland program focusing on the revitalization of Maryland's traditional business districts.

**Maryland Department of Housing and Community Development (DHCD), Director, Office of Marketing & Promotions, November 2004 – February 2006.** Responsible for all marketing, advertising, promotional materials, and special events for DHCD's products and programs related to community revitalization, expanding homeownership, and development and financing housing opportunities. Designed and produced all print collateral including advertisements, brochures, newsletters, exhibits, and displays. Created and implemented long and short term marketing strategies to raise awareness, among target audiences, of DHCD programs such as mortgage/rental assistance, small business development, and grant funding. Advised Secretary and Deputy Secretary on initiatives to further promote DHCD products and services. Supervised and directed activities of a staff of five - Graphic Designer, Production Manager, Writer, Special Events Coordinator, and Office Manager.

**Preservation Maryland, Director, Development & Communications, September 2001 – November 2004.** Created and implemented comprehensive development and marketing strategy incorporating special events, tours, annual meeting, annual conference, and corporate member activities. Responsible for coordinating logistics and planning as well as direct follow-up involved with special events and meetings. Developed collateral material, including invitations, conference programs, and favors, to support the annual meeting, conference, and direct mail solicitation. Prepared and tracked budgets and membership reports. Maintained and expanded vendor relationships, work required supervision of contract staff and volunteers. Produced and managed correspondence including the quarterly newsletter, press releases, membership letters, and corporate and grant solicitations.

**Hampden Village Main Street, Executive Director, September 2000 – September 2001.** Coordinated all efforts associated with the start-up of the private, non-profit Main Street organization utilizing the National Trust for Historic Preservation's Main Street Center approach. Worked directly with the Board of Directors, the four volunteer committees, and local business owners. Managed the day-to-day operation of the office including budget development, public inquiry, and accounts payable/receivable. Organized and delivered a technical assistance program; communicated complex information effectively both verbally and in writing; prepared and supervised development of publications and promotional materials; and planned, managed, and executed presentations, training sessions, and conferences. Served

as liaison with public and private organizations, including Baltimore Main Streets, state government agencies, and the National Main Street Center.

**Howard County Economic Development Authority, Manager, Marketing & Communications, November 1998 – September 2000.** Directed the development and implementation of communications strategies for all of the Authority's activities. Administered media relations and advertising program. Established and maintained investor relations, including hosting a series of Investor-related events and securing additional funds from corporate leaders. Created and instituted marketing strategies for business retention/prospect development for the Business Resource Center, and the Equal Business Opportunity Committee. Responsible for coordinating all logistics and planning involved with the Annual Meeting, Annual Report, Business Appreciation Week, trade shows, and other special events. Produced and designed collateral materials, including the Authority newsletter, website, brochures, and advertising. Selected vendors, managed contractors, and supervised administrative staff.

**Profiles, Inc., Account Executive, July 1998 – November 1998.** Developed and implemented strategic marketing and communication programs for clients representing a variety of industries. Provided integrated promotion and advertising campaigns to further the goals, objectives, and services of both profit and non-profit organizations. Liaison with client staff to identify news and pitch local and national media. Produced and designed written communication including newsletters, websites, and press releases.

**Chesapeake Communications Group, Inc., Account Manager, January 1998 - July 1998.** Formulated and executed public relations strategies and tactics for a variety of clients. Maintained client activity through press releases, identifying news, pitching stories, special event planning, and other promotions. Developed local and national media lists specific to client needs. Operations management of direct mail campaigns. Trafficked creative projects through various advertising agencies. Responsible for all crisis management. Established professional relations with clients through routine account meetings.

**The Muscular Dystrophy Association, Program Coordinator, October 1996 - January 1998.** Maximized fund-raising potential through the management of multiple projects. Established new levels of support and increased the pledge of existing programs. Planned and executed an individual budget in order to satisfy a \$140,000 goal. Developed and justified written and oral reports to the Executive Committee. Organized, directed, and trained volunteer and temporary staff utilizing visual aides, written materials, and personal communication. Maintained business relationships with corporate sponsors, key volunteers, and all media.

#### **ADDITIONAL WORK EXPERIENCE**

A. Alan Seitz, Jr. Funeral Home, Baltimore, Maryland, April 1996 - October 1996  
Roland Park Country School, Baltimore, Maryland, November 1995 - February 1996  
Greenhorne & O'Mara, Inc., Greenbelt, Maryland, May 1994 - September 1995.

#### **EDUCATION**

B.A., Historic Preservation, Mary Washington College, Fredericksburg, VA, May 1994.

#### **PROFESSIONAL TRAINING**

Currently pursuing *Certified Economic Developer*, International Economic Development Council  
*Standards of Excellence Certification*, Maryland Association of Nonprofit Organizations  
*Preservation Leadership Certification*, National Trust for Historic Preservation  
*Main Street Four-Point Certification*, National Main Street Center

# MATTHEW SCHMID

6 Williams Dr.  
Annapolis, MD 21401

978-476-1012  
matthewjschmid@gmail.com

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## Experience

Governor's Policy Fellow Aug 2009 - Present  
State of Maryland, Dept. of Housing and Community Development Crownsville, MD

- Managing start-up and implementation of federally-funded, inter-agency energy efficiency improvement program for the State's affordable multifamily rental housing
- Managing start-up and implementation of broad, multi-county, multi-program initiative funded by the MacArthur Foundation to preserve affordable multifamily rental housing stock

Intern May 2008 – July 2008  
City of Jacksonville, Housing and Neighborhoods Department Jacksonville, FL

- Assisted economic development, neighborhood outreach, and housing coordinators
- Gained policy-level experience by routinely shadowing Department Director

Intern Winter 2007/08  
City of Haverhill, Office of the Mayor Haverhill, MA

- Presented a plan detailing a restructuring of Public Works Dept., including each needed change of language in the city code; report well-received by Mayor who has sought implementation
- Researched the legal potential for new water fees by analyzing language in the city code; report forwarded to legal team for action

Intern Jan. 2007 – May 2007  
Office of U.S. Congressman Kevin Brady Washington, DC

- Performed administrative functions while helping Staffers with research
- Responded to constituent phone calls and letters, and gave tours of U.S. Capitol

Intern June 2006 – Aug 2006  
Bureau of Near East Affairs, U.S. Department of State Washington, DC

- Assessed policy implications of commercial export requests for weapons technologies, granting approval accordingly
- Researched and drafted various reports, letters, etc.
- Restructured and updated public and internal websites, gaining the cooperation of colleagues in other offices to gather relevant information and implement changes; improved format still in use

Facilities/Operations Manager Dec. 2003 – July 2005  
Veteran's Northeast Outreach Center Inc. Haverhill, MA

- Initially a work-study student, volunteered for these positions after Facilities and Operations Managers both left, working 30 hours per week while enrolled as a full-time student
- Balanced both positions by supervising several resident employees and utilizing volunteers
- Worked to rehabilitate difficult population of 53 homeless veterans in transitional housing program, assigning individualized chores, conducting weekly meetings, and responding to resident concerns
- Contracted or performed maintenance on five aging buildings and conducted safety/livability inspections and drills according to federal, state, and local requirements; facilities were consistently highly rated during impromptu inspections by the Department of Veterans Affairs

Section Head/Radio Repairman  
U.S. Marine Corps

Aug 1999 - Aug. 2003

- Took charge of maintenance section after original section head (17 year veteran) was removed, overseeing 5 personnel, training technicians, and continuing own repairman duties; subsequently recommended for meritorious promotion as actions enabled section to become operational
- Creatively managed communications repair cycle for a Marine Expeditionary Unit (approx 2,200 personnel); section awarded for keeping entire unit at over 94% readiness despite tour extension
- Overhauled maintenance section by analyzing workload composition and altering quotas for the number and type of repair parts, test equipment, and technicians to be allocated to a Marine Expeditionary Unit (MEU); efforts resulted in less than 1% of work orders unable to be repaired on ship and framework adopted by subsequent MEU's

## Education

*\*Personally financed 100% of education*

The Bush School of Government and Public Service, Texas A&M University

May 2009

Master of Public Service and Administration

College Station, TX

Concentrations in State and Local Policy and Management, Nonprofit Management

## **Projects completed while at the Bush School:**

Capstone Project on behalf of the Houston Galveston Area Council

Sep 2008 – May 2009

- Our team presented our research and recommendations to the Houston-Galveston area Metropolitan Planning Organization regarding the institutional, collaborative, and legislative methods of adapting the local transportation infrastructure for climate-change resiliency.

Performance Management Project on behalf of the Capital Area Food Bank

Spring 2009

- Developed and presented a balanced scorecard performance measurement system for the Austin, TX area food bank to focus organizational efforts around their redefined mission.

Economic Development Project on behalf of the City of Beaumont, TX

Fall 2008

- As part of an ongoing partnership, our team presented our research and recommendations to city officials regarding tools for economic development in one of the city's distressed neighborhoods.

Grant-Writing Project to create NOLA Community Build

Fall 2007

- Our team developed and presented a grant proposal to create a community-based economic development and job training organization in New Orleans' Lower 9<sup>th</sup> Ward.

Georgetown University,

May 2007

Bachelor of Arts in Government

Washington, DC

## Honors and Activities

Editor-in-Chief, The Public Servant newsletter, The Bush School

Aug 2008 – May 2009

"Hoyas Outreach Programs and Education", Georgetown University

Fall 2006

- Laid groundwork to restart defunct dental care program for Washington DC's homeless

"After School Kids" Program, Georgetown University

Fall 2005

- Mentored at-risk youth in Washington DC, as an alternative to their incarceration

Writing Awards, Northern Essex Community College

Fall 2003, Fall 2004

Mathematics Award, Northern Essex Community College

Spring 2004

Navy Achievement Medal, U.S. Marine Corps

June 2003

Meritorious Promotion, U.S. Marine Corps

June 2000

## **Investment in Main Street: Energy Efficiency for Economic Growth**

### **Attachment C: Budget Justification**

For its “Investment in Main Street: Energy Efficiency for Economic Growth” program, the DHCD proposes the following modest administrative expenses in order to for swift and effective implementation of the various program elements. The largest cost will be for the hiring of additional staff. The DHCD will hire one administrator and one administrative clerk for the overall management of this \$30 million dollar grant. The salaries for the administrator and clerk will be approximately \$60,000 and \$40,000, with fringe benefits calculated as stipulated by the State of Maryland.<sup>1</sup> In addition to the EECBG administrator and clerk, three full-time employees will be hired at \$40,000 salary to oversee the Efficient Home Program and to provide administration and underwriting two and a half years for the Green Retrofit Incentive Program (GRIP). Two additional staff and a third in a supportive function will be hired to implement the Energy Efficiency Purchasing Cooperative. Additional salary-related expenses for the adoption of Building Codes will be used to pay for contractual trainers.

Travel expenses are budgeted at an average of \$330 per trip, allowing for the EECBG administrator, clerk and Efficient Home administrator to travel once a year (or more frequently, within the State) and the senior GRIP underwriter to travel once a year. (No travel has been budgeted for the second GRIP underwriter.) Amounts budgeted for supplies include desks (\$150), Blackberries (\$100), computers (\$300) and assorted items (paper, staplers etc.). For the Efficient Home Program, \$10,000 has been budgeted for the purchase and implementation of a data management system to track and report on the energy efficient loans. An additional \$5,000 per year has been budgeted under Contractual Services to provide for the expansion of the State’s Hancock Energy Software system, currently being used by the Weatherization Assistance and Assisted Home Performance programs. \$5,000 per year will allow for additional contractors to access the system for the tracking of Efficient Home Program loans and work orders and will also provide additional help desk and technical training opportunities. An additional \$7,500 has been budgeted to allow for the construction and related expenses for three new offices for the EECBG administrator, clerk and Efficient Home Program administrator (to be built out at DHCD’s Crownsville location). Administrative overhead of 10% per initiative has been added in to account for expenses related to use of DHCD’s vehicles, office space, copiers, printers and information technology services. For the GRIP program, an additional \$50,000 has been budgeted to allow for marketing-related expenses including printing and distribution expenses for brochures, posters, informational publications and window stickers for participating businesses. Design expenses related to the SWITCH campaign are provided by DHCD as additional leveraging (as work for the SWITCH promotional materials is already underway).

Because DHCD intends to have the full allocation of EECBG funds committed within the first 18 months of the program, efforts are already underway to ensure that ramp-up processes are expedited. To this extent, DHCD will be requesting the full funding amount within the first

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<sup>1</sup> To determine fringe benefits, the calculation for social security and related costs is Salary x 17.3%. An additional \$11,000 is added to this amount for annual health, dental and vision insurance expenses.

year and a half to two years of the grant period. Having these funds in place early on is particularly important for the Preservation and Energy Efficiency program, where the funds are to be used to capitalize the loan program.

DHCD will be building on its existing structure for the multifamily portion of this grant and will not require any sources for the staffing of those activities related to the retrofit of the 20 multifamily buildings. Fund requirements in the budget are calculated on the commitment date for each project. At each closing DHCD will show the funds as obligated and will commit to the disbursement of funds using our standard draw policy which requires verification of work in place prior to the disbursement of funds.

The Energy Efficiency Purchasing Cooperative will be a newly staffed entity owned by its members. During the first two quarters of the grant period it is anticipated that the cooperative will use office space provided by the state. Thereafter it will be located in an area most convenient to the membership. Contractual services will include rent, organizational expenses (legal, accounting, etc.) and market studies. Salaries for the cooperative are based on the provision of two professionals and a support staff of one, with fringe benefits calculated according to State procedures.

Expenses related to the adoption of new building codes are broken down according to the following table for expenses related to the training sessions:

	<u>Per Seminar</u>	<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Total</u>
<b>Training Seminars (25 per yr)</b>					
Facility	3,000	75,000	75,000	75,000	225,000
Instructor(s)	3,000	75,000	75,000	75,000	225,000
ICC certification reimbursement	7,200	216,000	216,000	216,000	648,000
Training materials & equipment	1,500	37,500	37,500	37,500	112,500
	14,700	403,500	403,500	403,500	1,210,500
<b>Program Personnel &amp; Administration</b>					
Project Manager	20% (80,000)	16,000	16,000	16,000	48,000
Admin Mgr	75% (60,000)	45,000	45,000	45,000	135,000
Administrative Assistant (NEW)		50,000	50,000	50,000	150,000
Administrative costs		20,000	20,000	20,000	60,000
<b>Total Budget</b>		<b>\$ 534,500</b>	<b>\$534,500</b>	<b>\$534,500</b>	<b>\$1,603,500</b>

**Investment in Main Street:  
Energy Efficiency for Economic Growth**

**Attachment E: National Environmental Policy Act**

**NEPA FORM for Completion  
U.S. DEPARTMENT OF ENERGY**

**ENVIRONMENTAL SUMMARY (To Be Completed by Potential Recipient)**

The Department of Energy (DOE) is required by the National Environmental Policy Act (NEPA) of 1969 as amended (42 U.S.C. 4332(2), 40 CFR parts 1500-1508) and DOE implementing regulations (10 CFR 1021) to consider the environmental effects resulting from federal actions, including providing financial assistance. Please provide the following information to facilitate DOE's environmental review.

**PART I: General Information**

Title:

FOA Number: **DE-FOA-0000148**

1. Please describe the intended use of DOE funding in your proposed plan. For example, would the funding be applied to the entire project or only support a phase of the project? Describe the activity as specifically as possible, i.e. planning, feasibility study, design, data analysis, education or outreach activities, construction, capital purchase and/or equipment installation or modification.

**Funding requested through EECBG will be used to capitalize revolving loan funds, to provide training and outreach (in conjunction with other State and local funds), and when combined with other sources will be used to finance the development of multifamily rental projects.**

2. Does any part of your project require review and/or permitting by any other federal, state, regional, local, environmental, or regulatory agency?

**Yes**

No

3. Has any review (e.g., NEPA documentation, permits, agency consultations) been completed?

Yes

**No**

If yes, is a finding or report available and how can a copy be obtained?

4. Provide information about the potential environmental issues, concerns, and impacts associated with your proposal. Please provide as much detail as possible in the following areas: specifics of proposed activities, project locations, size, layout, commitments to waste management and historic preservation. If project specific information is unknown, describe your plan for obtaining this information.

**The DHCD will take all steps necessary to ensure the preservation of historical structures and environmental purity. As buildings for project work have not yet been identified, additional site-specific information is not available. The Department's plan for obtaining above information is detailed in application documents for DHCD financing.**

**Investment in Main Street:  
Energy Efficiency for Economic Growth**

**Attachment F: Project Impact Tables for Topic 1**

**Project Impact Table for Efficient Home Program**

Project Impact Metrics	During Project Period				Post project period, years 4 to 6		
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	
Number of buildings retrofitted	400	800	800	600	600	600	
Total square footage of buildings retrofitted	400x1800 ft <sub>2</sub> = 720,000 ft <sub>2</sub>	800 x 1800 ft <sub>2</sub> = 1,440,000 ft <sub>2</sub>	800 x 1800 ft <sub>2</sub> = 1,440,000 ft <sub>2</sub>	600 x 1800 ft <sub>2</sub> = 1,080,000 ft <sub>2</sub>	600 x 1800 ft <sub>2</sub> = 1,080,000 ft <sub>2</sub>	600 x 1800 ft <sub>2</sub> = 1,080,000 ft <sub>2</sub>	
Average utilities savings (e.g. cost and fuel savings) achieved per house retrofitted	6,480 kWh (18% reduction) \$957.75 per house annually at current rates	6,480 kWh (18% reduction) \$957.75 per house annually at current rates	6,480 kWh (18% reduction) \$957.75 per house annually at current rates	6,480 kWh (18% reduction) \$957.75 per house annually at current rates	6,480 kWh (18% reduction) \$957.75 per house annually at current rates	6,480 kWh (18% reduction) \$957.75 per house annually at current rates	
Jobs created or retained	43 per year	87/yr	87/yr	65/yr	65/yr	65/yr	
Average emissions reductions (MMT CO <sub>2</sub> <sup>1</sup> ) per house	4.7 metric tons per house x 400 homes = 1,880 MT	4.7 metric tons per house x 800 homes = 3,760 MT	4.7 metric tons per house x 800 homes = 3,760 MT	4.7 metric tons per house x 600 homes = 2,820 MT	4.7 metric tons per house x 600 homes = 2,820 MT	4.7 metric tons per house x 600 homes = 2,820 MT	
EECBG Funds Expended	*For this model EECBG funds are used only as credit enhancement to leverage other funding.						
Leveraged Funds and In-Kind Resources Expended	\$4,000,000	\$8,000,000	\$8,000,000	\$6,000,000	\$6,000,000	\$6,000,000	

<sup>1</sup> MMT CO<sub>2</sub> is million metric tons carbon dioxide equivalent

**Assumptions:**

All calculations are based on an all-electric, single-family, wood frame homes (the most common type in western and eastern/southern Maryland). In addition, the Maryland Mortgage Program elements are not included in these calculations, as their energy savings are solely through more energy efficient appliances.

- The dollar amount spent on electric utilities prior to retrofits is based on Maryland's current electric utility rate of \$.1478.
- The average electric usage was based on a 1,800 sq. ft. house using 36,000 kWh of electricity per year.
- Average electric utility savings from retrofits are assumed at 18%, based on estimates given by local Energy Services Companies who are participating in DHCD's Assisted Home Performance (AHP) and experienced with energy retrofits in the area. This rate is believed to be quite a low estimate (as it was based in large portion in homes retrofitted in Baltimore City, which are for the most part row-homes that experience smaller savings percentages), but will leave plenty of room to outperform this initial projection.
- To calculate emissions reductions, DHCD utilized the EPA's emissions calculation tool available at <http://www.epa.gov/RDEE/energy-resources/calculator.html#results>. According to the calculator, 6,480 kWh is equal to 4.7 metric tons of carbon dioxide equivalent.
- To calculate the number of jobs created or retained, DHCD followed the EECBG instructions and utilized the job calculator tool (available here: [http://www.eecbg.energy.gov/Downloads/EECBG\\_Estimated\\_Benefits\\_Calculator.xls](http://www.eecbg.energy.gov/Downloads/EECBG_Estimated_Benefits_Calculator.xls)), whereby 1 job is created or retained per \$92,000 of project funding.

**Project Impact Table for Multifamily Preservation and Energy Efficiency**

Project Impact Metrics	During Project Period			Post project period, years 4 to 6		
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Number of buildings retrofitted	4	6	10	10	11	12
Total square footage of buildings retrofitted	334,480	501,720	836,200	836,200	919,820	1,003,440
Average utilities savings (e.g. cost and fuel savings) achieved per unit retrofitted	1,500 kWh (20% reduction) \$221.70 at current rates	1,500 kWh (20% reduction)	1,500 kWh (20% reduction)	1,500 kWh (20% reduction)	1,500 kWh (20% reduction)	1,500 kWh (20% reduction)
Jobs created or retained	391	565	956	1,010	1,146	1,239
Average emissions reductions (MMT CO <sub>2</sub> ) per unit	1.1 MT	1.1 MT	1.1 MT	1.1 MT	1.1 MT	1.1 MT
EECBG Funds Expended	\$2,000,000	\$3,000,000	\$5,000,000			
Leveraged Funds and In-Kind Resources Expended	\$36,000,000	\$52,000,000	\$88,000,000	\$93,000,000 (funds expended w/o EECBG)	\$105,500,000 (funds expended w/o EECBG)	\$114,000,000 (funds expended w/o EECBG)
{APPLICANT CAN ADD QUANTITATIVE METRIC}						

**Assumptions;**  
**The Applicant should list key assumptions made to form the projections listed in this table:**

<sup>2</sup> MMT CO<sub>2</sub> is million metric tons carbon dioxide equivalent

**[Add assumptions here in bulleted form]**

**Assumptions**

All calculations are based on a model, 100-unit multifamily building.

- Breakdown by number of bedrooms and square ft.:
  - 60 – 1 BD @ 650 sq.ft. each
  - 30 – 2 BD @ 850 sq.ft. each
  - 10 – 3 BD @ 950 sq.ft. each
  - Common areas = 9,620 (13% of building total)
- The dollar amount spent on electric utilities prior to retrofits is based on Maryland's current electric utility rate of \$.1478/kWh. The average electric usage was based on a 750 sq. ft. unit in Maryland, which uses roughly 7,500 kWh of electricity per year.
- Average electric utility savings from retrofits are assumed at 20%, based on estimates given by local Energy Services Companies who are familiar with performing energy retrofits in the area.
- The number of jobs created or retained is based on the guidance provided through the EECBG Estimated Benefits Calculator, whereby 1 job is created or retained per \$92,000 of project funding.
- The emissions calculations are based on the Environmental Protection Agency's Greenhouse Gas Equivalencies Calculator located at <http://www.epa.gov/RDEE/energy-resources/calculator.html#results>
- Funds expended and leveraged are based upon the following assumptions:
  - As outlined in the narrative, we will have two types of projects that vary by scope: Full-scale Rehabs and Small-scale Retrofits.
    - Full-scale Rehabs will involve a complete building rehab, with total project costs estimated at \$12.5 million/project.
    - Small-scale retrofits will involve leveraging the existing project financing and equity, with an estimated \$8.5 million in total project costs.
  - For both types of projects, we assume \$500,000 in EECBG funds spent for each project.
  - The number of each type of these projects to be completed over the 6-year period is as follows:

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
1 full scale	1 full scale	2 full scale	2 full scale	3 full scale	3 full scale	3 full scale
3 small scale	5 small scale	8 small scale	8 small scale	8 small scale	8 small scale	9 small scale

**Project Impact Table for Green Retrofit Improvement Program**

Project Impact Metrics	During Project Period			Post project period, years 4 to 6		
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Number of buildings retrofitted	300	300	300			
Total square footage of buildings retrofitted	300x3000 ft <sub>2</sub> = 900,000 ft <sub>2</sub>	300x3000 ft <sub>2</sub> = 900,000 ft <sub>2</sub>	300x3000 ft <sub>2</sub> = 900,000 ft <sub>2</sub>			
Average utilities savings (e.g. cost and fuel savings) achieved per property retrofitted	101,250 kWh (15% reduction) \$14,964 per building annually at current rates	101,250 kWh (15% reduction) \$14,964 per building annually at current rates	101,250 kWh (15% reduction) \$14,964 per building annually at current rates			
Jobs created or retained	per year					
Average emissions reductions (MMT CO <sub>2</sub> <sup>3</sup> ) per property	4.83 metric tons per property x 300 homes = 1,449 MT	4.83 metric tons per property x 300 homes = 1,449 MT	4.83 metric tons per property x 300 homes = 1,449 MT			
EECBG Funds Expended						
Leveraged Funds and In-Kind Resources Expended	\$	\$	\$	\$	\$	\$

<sup>3</sup> MMT CO<sub>2</sub> is million metric tons carbon dioxide equivalent

**Assumptions:**

All calculations are based on an average square footage of 3,000 sq.ft. Small businesses and properties assisted by the Green Retrofit Improvement Program may range in size from 2,500 to 20,000 sq.ft.

- The dollar amount spent on electric utilities prior to retrofits is based on Maryland's current electric utility rate of \$.1478.
- The average electric usage was based on a 3,000 sq. ft. building using 675,000 kWh of electricity per year.
- Average electric utility savings from retrofits are assumed at 15%, based on estimates given by local Energy Services Companies who are participating in DHCD's Assisted Home Performance (AHP) and experienced with energy retrofits in the area. This rate is believed to be quite a conservative estimate.
- To calculate emissions reductions, DHCD utilized the expertise of a Project Engineer from Constellation Energy. According to the professional, 300 buildings with an average of 3,000 sq.ft. has 2,025,000 kWh which is equal to 1,451 metric tons of carbon dioxide equivalent.

*Consider 300 buildings/year and average 3000 SF per building*

- Total annual square footage to be upgraded:  $300 \times 3000 = 900,000$  SF
- Average electric consumption (based on 15 kWh/SF/year\*) =  $900,000 \times 15 = 13,500,000$  kWh
- Annual savings from energy conservation measures (estimated 15% of existing level) =  $13,500,000 \times 15\% = 2,025,000$  kWh
- Equivalent CO2 emission = 1,451 metric ton

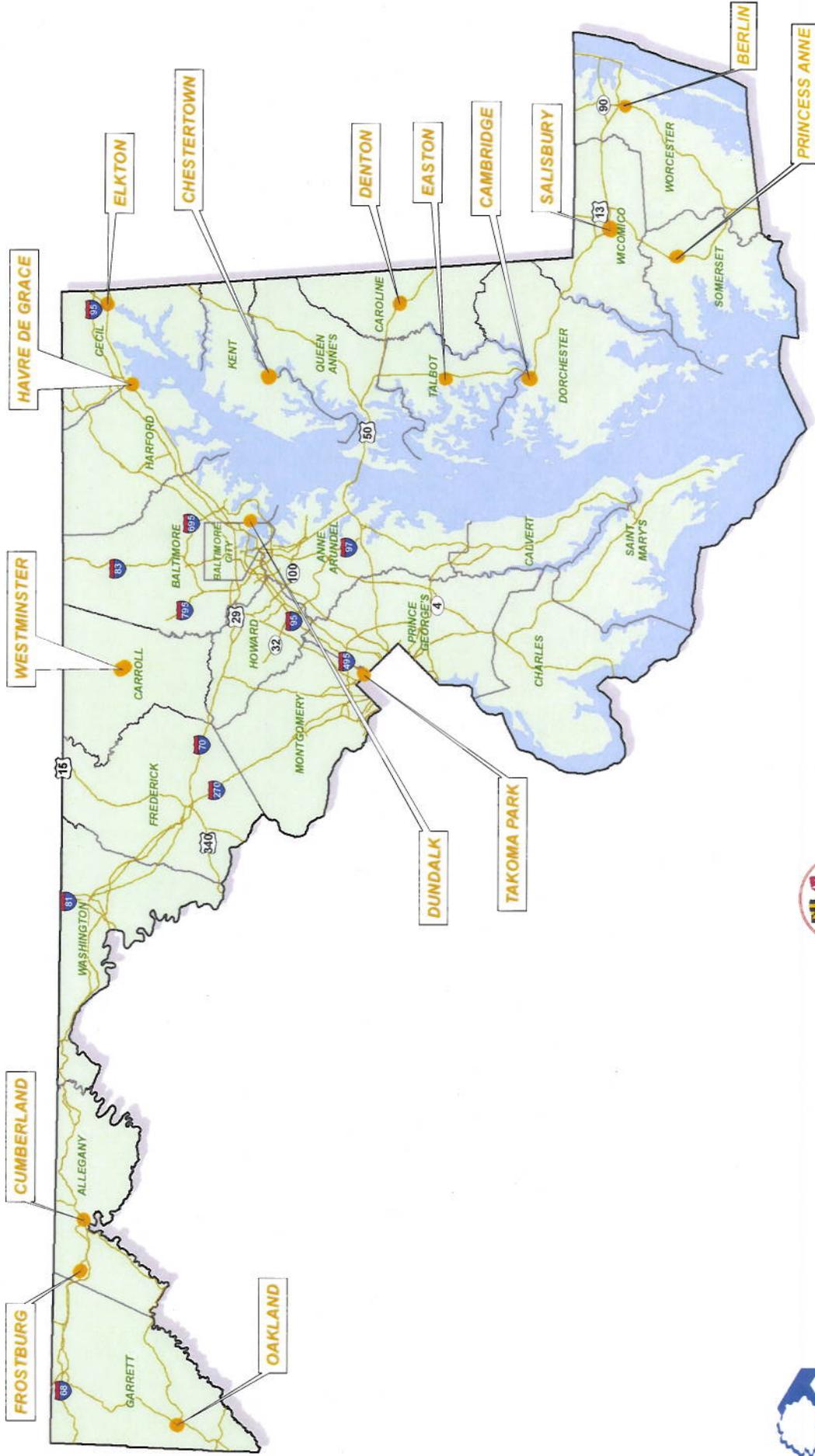
*Note: \*15 kwh/SF is conservative number since we are not, for this purpose, categorizing the type of business -- it is assumed that a retail business will use less electric consumption than a restaurant*

- To calculate the number of jobs created or retained, DHCD

# Maryland Department of Housing & Community Development

## Green Retrofit Improvement Program

### Target Communities: Main Street Maryland

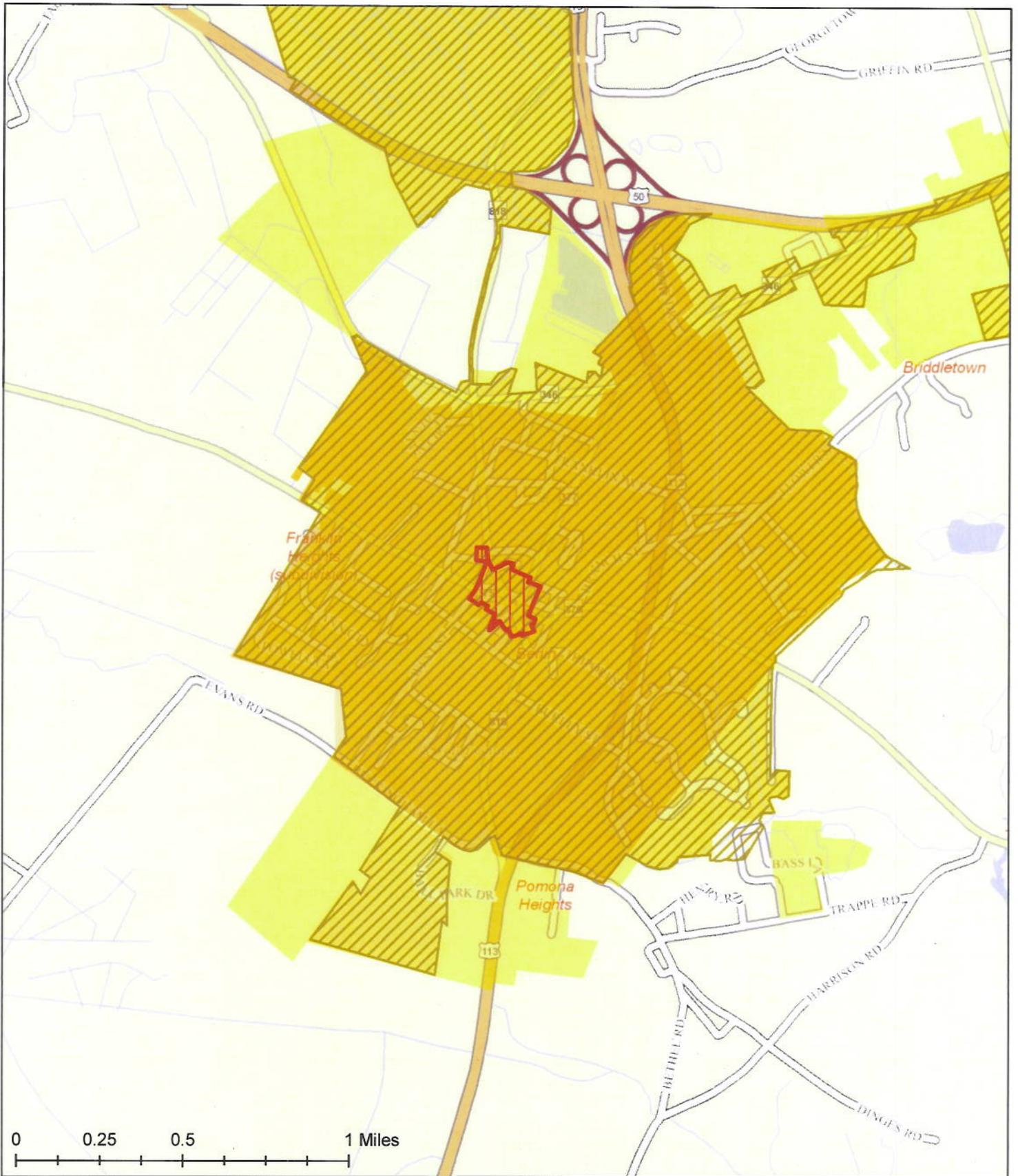


Martin O'Malley, Governor  
 Anthony G. Brown, Lt. Governor  
 Raymond A. Skinner, Secretary  
 Clarence J. Snuggs, Deputy Secretary



# Main Street Maryland

Town of Berlin, Worcester County



Martin O'Malley, Governor  
 Anthony G. Brown, Lt. Governor  
 Raymond A. Skinner, Secretary  
 Clarence J. Sniggs, Deputy Secretary

-  Main Street Area
-  Designated Neighborhoods
-  Community Legacy Areas
-  Priority Funding Areas

# Main Street Maryland

Town of Cambridge, Dorchester County



Martin O'Malley, Governor  
 Anthony G. Brown, Lt. Governor  
 Raymond A. Skinner, Secretary  
 Clarence J. Snuggs, Deputy Secretary

- Main Street Area
- Designated Neighborhoods
- Community Legacy Areas
- Priority Funding Areas