



THE TOWN OF UNIVERSITY PARK, MARYLAND  
6724 Baltimore Ave.  
University Park, MD 20782

Tool Kit Framework  
Small Town Energy Program (STEP)

FINAL 2013 – 12 – 12



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## Overview and Introduction

University Park, Maryland (“UP” or the “Town”), is a small town of 2,540 residents, 919 homes, 2 churches, 1 school, 1 town hall, and 1 breakthrough community energy efficiency initiative: *the Small Town Energy Program (“STEP”)*. STEP was developed with a mission to “create a model community energy transformation program that serves as a roadmap for other small towns across the U.S.”

STEP first launched in January 2011 in UP and expanded in July 2012 to the neighboring communities of Hyattsville, Riverdale Park, and College Heights Estates. STEP, which concluded in July 2013, was generously supported by a grant from the U.S. Department of Energy (DOE). More information about the DOE grant portfolio can be found at the DOE web site: [Better Buildings Neighborhood Program](#).

In less than three years, STEP achieved the following results in University Park:

- **30%** of community households participated voluntarily in STEP
- **25%** of households received a Home Performance with ENERGY STAR assessment
- **16%** of households made energy efficiency improvements to their home
- **64%** of households proceeded with an upgrade after their assessment

Estimated Energy Savings - Program Totals	
kWh Electricity	204,407
Therms Natural Gas	24,800
Gallons of Oil	2,581
<b>Total Estimated MMBTU Saved (Source Energy)<sup>1</sup></b>	<b>5,474</b>
<b>Total Estimated Annual Energy Cost Savings</b>	<b>\$61,343</b>

STEP clients who undertook a home energy upgrade invested on average \$4,500, resulting in a 13% reduction in annual energy use and utility bill savings of \$325. Rebates and incentives covered 40%-50% of retrofit cost, resulting in an average simple payback of about 8 years.

The goal of this handbook is to assemble all the key elements that went into the design and delivery of STEP. The target audiences for the handbook include interested citizens, elected officials and municipal staff who want to establish and run their own efficiency program within a small community or neighborhood, using elements, materials and lessons from STEP. The tool kit is developed in four sections: Strategy Development; Planning; Implementation; and Evaluation. In addition, there is a fifth section – Attachments - in which we include all of the support materials that were used in STEP. More information about STEP can be found at: [www.smalltownenergy.org](http://www.smalltownenergy.org).

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<sup>1</sup> Total estimated source energy savings is calculated by DOE.

**SECTION I - Strategy Development**

The Town spent five months in planning and preparation for STEP. Following are some of the main issues that were considered key parts of this planning process.

**A. Market Assessment**

Prior to submitting the proposal to the Department of Energy, the Town conducted a brief market survey of Town residents to understand basic awareness of and interest in an energy efficiency program. The survey confirmed overwhelming interest (92%) in running a community efficiency program, and that few homeowners had previously participated in such a program (<10%). The Town Council and STEP team identified many areas in which such a program would add value to Town residents, including:

- Community Building: the program would allow residents to work together on something positive and of benefit to the Town.
- Political: the program would help to project UP as a progressive leader in energy and environmental issues.
- Economic: the program would create jobs for contractors, consultants and services.
- Environmental: the program would have measurable environmental benefits in terms of reductions in energy use and corresponding greenhouse gas emissions.
- Health & Safety: energy upgrades have the co-benefits of improved indoor air quality, assessment of mold and moisture issues in homes and identification and mitigation of combustion issues.
- Operating Costs and Re-Sale Value: reduced utility bills make local homes more cost-effective to operate, and improve re-sale value.

The STEP team also identified anticipated market barriers to such a program, including:

Anticipated Barriers to Participation	STEP Response Measures
<p>Information and Trust Barriers</p> <ul style="list-style-type: none"> <li>• Conflicting sources of information about energy efficiency programs and practices</li> <li>• Lack of information about individual impact</li> <li>• Lack of trust in the entire efficiency process</li> </ul>	<ul style="list-style-type: none"> <li>• Extensive use of Community Based Social Marketing</li> <li>• User-to-user education</li> <li>• An independent Energy Coach working on behalf of the client to develop trust</li> </ul>

Anticipated Barriers to Participation	STEP Response Measures
<p>Transaction Barriers</p> <ul style="list-style-type: none"> <li>• Efficiency not top of mind – many competing priorities</li> <li>• Lack of confidence in tradespeople</li> <li>• Difficulty locating financing, tradespeople</li> </ul>	<ul style="list-style-type: none"> <li>• Energy Coach helps client through every transaction</li> <li>• Transparent contractor review</li> <li>• Energy Coach helps clients locate and access resources</li> </ul>
<p>Financial Barriers</p> <ul style="list-style-type: none"> <li>• Cost of implementation</li> <li>• Efficiency competes with other investments</li> </ul>	<ul style="list-style-type: none"> <li>• Leverage all available rebates, loan option</li> <li>• Offer time-limited, attractive incentives</li> </ul>

## B. Determination of an Appropriate Business Model

University Park deployed STEP as a project of the Town. The Town also employed a logic model – accounting for assumptions, resources, and anticipated outcomes - to identify how best to build STEP and position it in the market.



Some of the key logic model assumptions include:

- **Small town resources are constrained:** STEP has to work in places, such as UP, where volunteer Councils face restricted budgets, modest tax bases, and a stretched civic infrastructure. To be replicable in other small towns, STEP *must* minimize additional cost and burden to the town. As such, **the STEP model is one of leverage:** making use of existing utility and state Home Performance with ENERGY STAR program rebates and qualified contactors, STEP functions like an “app”, leveraging these existing resources and making them more user-friendly.
- **Community Based Social Marketing works in small communities:** The effective use of social marketing is proven in leading efficiency programs across the country. UP has an established spirit of civic participation and neighborly interaction, coupled with active social channels through the school, churches, clubs, and town events. By leveraging these community strengths and having neighbors as STEP ambassadors, STEP can achieve effective outreach without expensive purchased media.

- ***Individual facilitation will be the key to success in small communities:*** Unlike broad statewide or utility efficiency programs, *STEP* provides UP residents with facilitation at an individual household level. Working directly with each homeowner, the *STEP* Energy Coach determines the factors that will best motivate program participation. S/he also identifies the particular financial, transaction and/or information barriers that may be holding back each specific resident. The Energy Coach then aligns the best mix of incentives and support to address each homeowner's unique situation. Individual support – impossible to provide in a broadcast efficiency program but playing to the strength of UP and other small towns - is the central key to the STEP model
- ***UP is a typical small town.*** UP homes are of average age (1947), and UP residents are of average middle class means, with median household incomes of \$110,000. Among respondents of a baseline survey conducted for this proposal, most residents identified their energy efficiency knowledge as “average”. In short, what happens in UP is replicable in almost any small, middle class town.
- ***UP residents are motivated to participate in an energy program:*** This assumption was confirmed through a baseline survey, in which 92% of respondents indicated a “very strong” interest in program participation. The motion to submit this proposal was passed unanimously at a special session of Council attended by over 30 town residents..

### C. Setting Goals and Objectives

The following STEP goals were derived from the original proposal and became the benchmark against which STEP measured program success:

- 25% of UP homes will have the *Home Performance with ENERGY STAR* assessment, a whole-house energy evaluation of the home based on Building Performance Institute (“BPI”) requirements and protocols. **Goal achieved.**
- 20% of UP homes (80% of those audited) will undertake a home energy upgrade based on their assessment, aiming for a goal of 15% reduction in overall energy use per upgrade. **Achievements:** 16% of University Park households undertook a home energy upgrade, achieving on average a 15% reduction in annual home energy use. This represents an audit-to-retrofit conversion rate of 64%.
- An additional 5% reduction in measureable community-wide energy use will be achieved through streetlight retrofits, a solar project, composting, and a program to reduce vehicle miles travelled (VMT). **Achievements:**
  - 96% of the Town's 196 street lights were retrofit to high pressure sodium fixtures - 60 mercury vapor and 128 incandescent;

- A 65kW photovoltaic solar array was installed on the roof of the local school, the first such installation on a public school in the County;
  - A 150 household weekly curbside compost pick-up program, the first of its kind in the County, was implemented. The program diverts 25 tons annually from the local landfill, where it would otherwise breakdown under anaerobic conditions and create methane.
  - A policy study was concluded to implement a circulator bus to reduce VMT.
- 85 other small towns will download the free, ready-to-use tool-kit of templates, replicable best practices, and community case studies from *STEP*. One percent of these towns will use the STEP model to implement some iteration of their own program in the 3-year duration of the project.

**Achievements:** STEP was successfully delivered in three neighboring communities: Hyattsville, Riverdale Park and College Heights Estates, MD. In total, 416 local households undertook a Home Performance with ENERGY STAR audit, and 240 of these proceeded with a home energy efficiency upgrade (57% audit-to-retrofit conversion). More than half a dozen other communities in Virginia, Ohio, North Dakota and Maryland are now implementing a modified version of STEP in their respective markets.

#### D. Identification of Partners

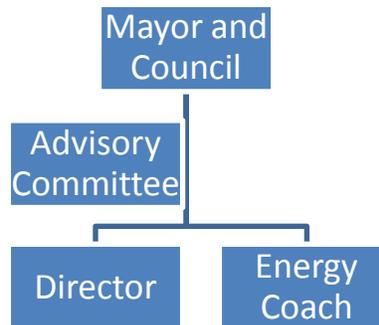
The Town did not have any spare resources to put towards the development or implementation of STEP, nor the in-house expertise to deliver such a program. It was therefore imperative to identify existing and potential partners and programs that could be leveraged to deliver STEP. Some of the key partners included:

<b>STEP Partner</b>	<b>Leveraged Services</b>	<b>Leveraged Resources</b>
Department of Energy	EERE and ENERGY STAR programs DOE "Solution Center" site	BBNP grant funds federal tax credit
Town of University Park	Mayor, Council, town staff STEP Advisory Committee	UP civic infrastructure UP resident expertise
Utilities: <ul style="list-style-type: none"> <li>• PEPCO</li> <li>• Washington Gas</li> </ul>	Utility bill data Home Performance with ENERGY STAR program	EmPOWER rebates Pre-qualified BPI contractors
Sandy Spring Bank	Loan management	private equity for a low interest revolving loan
Maryland Energy Administration (MEA) and Department of Housing and Community Development	Maryland Home Performance with ENERGY STAR program DHCD BeSMART program	EmPOWER rebates Pre-qualified BPI contractors
Prince George's County Public School System	Board solar agreement Student / classroom participation	School roof

## E. Determination of Program Design

### 1. Governance:

The Mayor of UP serves as the head of Town Council and its Chief Executive Officer. Since STEP was a program of the Town, the Mayor served as the business point of contact with the Department of Energy and was the ultimate authority on STEP.



As STEP expanded into other communities, the Mayor and Council were always the first route into the new communities. For unincorporated communities, a homeowners association or some other organizational body served in place of an elected Mayor / Council as the first point of contact.

The Mayor of UP selected a voluntary citizen Advisory Committee. The Advisory Committee was critical in helping to guide the development of the program, and to identify the best ways in which to work with the UP community. As STEP expanded into other communities, de facto Advisory Committees were established for each new community, typically comprised of key Town staff and leading citizens in each town.

The STEP Director led the program design, coordination, reporting, outreach, service contracting (ex: communications), media and stakeholder liaison. The Energy Coach was the primary point of contact with the clients, helping them throughout the energy assessment and upgrade process, as well as with the contractors. The Energy Coach also had primary responsibility for data tracking. Both the Director and the Energy Coach reported to Council and worked closely with the UP Town staff: Director of Public Works, Town Attorney, Treasurer, Clerk and Mayor.

## 2. Program Structure

STEP was set up as a project of the Town, but could also be established elsewhere as a project or service offering of a community organization, or even as a stand-alone non-profit organization. Regardless of the specific business model, the key to STEP is the community focus. Tying STEP directly into the community is essential and quality is key – nothing will spread more quickly in a small town than news that the program does not deliver value as promised. To help ensure that community ties and program quality were maintained, STEP relied on several contract positions in addition to the Director and Energy Coach.

- a. **Technical Consultant:** The contract technical consultant provided regular quality assurance and quality control for the project, and responded to specific technical issues on an as needed basis. The Technical Consultant was an expert in home energy efficiency. The ability to conduct regular QA/QC provided homeowners with a sense of trust that they were receiving fair value from contractors. It also provided incentive for the contractors to do quality work, knowing that one of their industry peers would be reviewing and reporting on the outcome.
- b. **Interns:** Summer interns were hired, mostly from the University of Maryland. The interns' roles involved door-to-door neighborhood outreach, data entry and special projects. The door-to-door outreach was a low-cost way to help neighbors understand the program in a direct way and, more importantly, encourage them to attend one of the community launch events.
- c. **Volunteers:** Throughout the program, volunteers were recruited from within the neighborhood to help with a variety of tasks, including: media help, editorial and review functions, and most often help with implementing community events.
- d. **Marketing & Communications Consultant:** STEP hired a marketing and communications firm (Pinnacle Communications) to assist with designing the web site and all collateral program materials.
- e. **Program Analysis Consultant:** STEP hired a firm (ICF Incorporated, LLC) to help with the technical analysis of calculating energy savings from utility bills, as well as associated emission reduction. In addition, STEP hired a consulting team (Baltimore Research and Pinnacle Communications) to assist with the development and analysis of surveys, to assess the differences between program participants and non-participants, and to measure impacts and program satisfaction.
- f. **Town Personnel:** The Town Clerk, Director of Public Works, Town Attorney and members of the Town Police were all instrumental in STEP. Tasks ranged from ensuring STEP was on Council agendas, to legal review of all external documents, to direct program support.

### 3. Program Elements

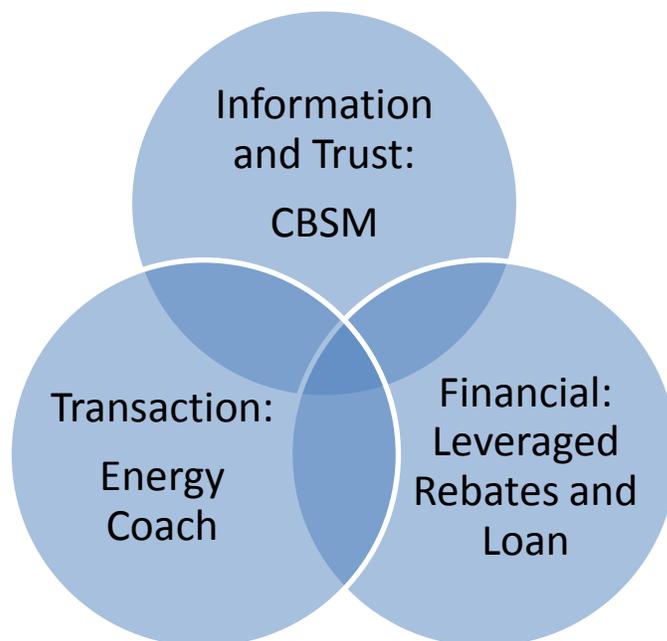
STEP was designed to address the three barriers to program participation identified in the Table in Section 1A.

First, the barrier of information and trust was addressed by an exclusive focus on Community Based Social Marketing (CBSM) for program outreach.

Second, transaction barriers were overcome by the Energy Coach working hand in hand with the clients throughout the process.

Finally, financial barriers were addressed by leveraging existing incentives and through a low interest loan product. Each element is described in more detail in the following sections of the Tool Kit.

#### Barriers Addressed in the Design of STEP:



## SECTION II - Planning

### A. Driving Demand

The first element driving demand for STEP was the exclusive use of *Community Based Social Marketing (CBSM)*. CBSM works to the strengths of a small town, leveraging the existing, trusted community channels for program outreach. Residents receive information from those very sources they most trust, providing a level of legitimacy for the program. The small community also functions like an “echo chamber”, where neighbors speak with neighbors about the program, further driving demand.

CBSM can equally be applied to neighborhoods or boroughs within a big city. For although 80% of the US population lives within only 300 metro areas, within those metro areas more than half the population lives in jurisdictions of less than 25,000. In other words, even large metro areas are essentially a collection of small towns.

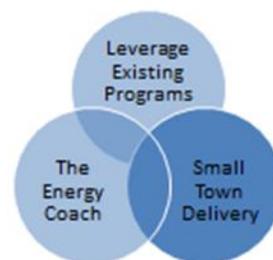
CBSM is also low cost, since all of the CBSM outreach infrastructure already exists within each community, and nearly all of it is free. For STEP, outreach costs were less than 5% of all program costs, compared with 30% for a typical, mature efficiency program. Using CBSM, outreach costs are further reduced by targeting communities that best fit the program demographic, rather than by spreading materials in low-potential neighborhoods

## Small Town Delivery



### Target Communities with Demographic Fit

- Councils, wards, HOAs
- Town list serve, events and newsletter
- “house parties”
- Civic association
- clubs, churches
- school and PTA



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The second element driving demand for STEP was the *Energy Coach*, who became the centerpiece of the STEP value proposition. Particularly for STEP’s middle class target market, the axiom “time is money” was addressed by the Energy Coach working for and with each resident throughout every step of the process. An additional degree of trust

was established in having the Energy Coach work for the program and not representing a contractor or the utility. The critical role of the Energy Coach can be seen in the following statistics:

- Number of Energy Coach contacts with each client: 6-10
- Client satisfaction rating with the Energy Coach: 97%
- Typical comments received on program surveys: “Making efficiency upgrades to my home is something I had wanted to do for years, but I never had the time nor the confidence to do it on my own. I never would have followed through with these measures if it wasn’t for the Energy Coach.”
- Conversion rate from assessment to upgrade: 64% for the mature program. In other words, for every three homes that had an assessment, two went on to make upgrades. This is more than twice the average conversion rate for utility-run energy efficiency programs.

## Program Deployment



### The Energy Coach

- *Transaction Barriers:* the audit, contracting and rebate process is confusing and inconvenient.
  - application, waiver, contractor selection, review audit report, review retrofit proposals, rebates
- The Coach makes it simple, transparent and trustworthy – working independently with clients at each and every step.



The third element driving demand for STEP was in the *reduction of financial barriers*. This was done by STEP leveraging the abundant energy efficiency rebates and incentives available through the local electric utility (Pepco), two state programs (Maryland Energy Administration and the Department of Housing and Community Development), as well as the federal tax credit. In addition, STEP used some of its grant money to provide an additional \$400 to homeowners who completed upgrades.

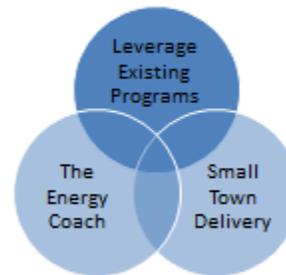
STEP developed a low interest loan product with Sandy Spring Bank, a local Maryland financial institution. Despite having an attractive interest rate (4%) and terms (no collateral, up to \$10,000 for 4 years), not a single household took up the loan option.

## Program Structure



### Leverage Existing Programs

- STEP sits atop an existing utility Home Performance with ENERGY STAR (HPwES) program.
- STEP functions like an app, leveraging:
  - Utility contractor qualifications and pools
  - Data and reporting requirements
  - State programs
- Leverages rebates: ~50% of job cost



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## B. Development of Evaluation Plans

The STEP evaluation plan involved regular tracking in three key areas: program sign ups, Home Performance with ENERGY STAR energy evaluations, and energy efficiency upgrades. Progress was benchmarked against the initial program goals. In addition, data was collected through survey instruments to measure the relevance and impact of the program. Complete survey instruments are enclosed as Attachments, and include:

1. Demographics: Census data was collected on households in the program's service areas. In addition, surveys of participating and non-participating residents provided additional demographic data.
2. Hard Metrics: Data with respect to energy evaluations, energy upgrades, job creation and investment activity were collected and regularly reported to the Department of Energy.
3. Knowledge, Attitudes, Behaviors and Beliefs (KABBs): Using pre- and post-participation surveys, STEP sought to determine the impact of the program on client and non-client KABBs.
4. Customer Service: STEP regularly surveyed clients about their program experience.

## SECTION III - Implementation

### A. Use of Tools & Development of Resources

A multitude of tools and resources were developed to enable the launch of STEP. Key program resources included: local asset materials, partner materials, personnel materials, project tool materials, program administrative materials, outreach materials, and surveys. All of these materials have been included in the Attachments section at the end of this Tool Kit for ease of reference, modification and for use by others.

1. Local Asset Materials. A key step to getting STEP set up in each community, and to keep the program running smoothly, was to communicate directly and continuously with local government officials (e.g. Council members) and community organizations (e.g. PTA, churches), and to participate in community events (e.g. Azalea Classic, CHEA-fest). Examples of key local asset materials (e.g. letters of understanding, PowerPoint presentations, Council reports) are included in Attachment section A.
2. Partner Materials. Another key component of the program was developing positive working relationships with organizations running programs that could be leveraged by participants (e.g. utility home performance program, state energy agency). In addition, STEP partnered with those outside the community for services needed but not available internally (e.g. financing program developed with Sandy Spring Bank, agreement with Alliance to Save Energy to provide staff resources and educational programs). Examples of key partner materials are included in Attachment section B.
3. Personnel Materials. In addition to the Energy Coach and Project Director, STEP was run, managed and/or assisted by the services of a variety of individuals and firms, including a Technical Consultant, interns, an Advisory Committee, a Marketing and Communications Consultant, a Program Analysis Consultant, a Salesforce Consultant, volunteers, and UP staff (providing administrative and legal assistance). Examples of key personnel materials are included in Attachment section C.
4. Project Tool Materials. A variety of tools were used to create, disseminate, collect and analyze information. These tools included the following:
  - a. *Survey Monkey*: This on-line survey tool was used to deliver all of STEP's surveys. Survey Monkey was selected because it is inexpensive, easy to use, and provides basic response analysis and reporting capabilities.
  - b. *Salesforce*: This Customer Relationship Management (CRM) software was used to track all program data for each client and develop operational reports. Salesforce was an ideal choice based on it being very flexible, easy to customize and extremely powerful. STEP had a local Salesforce consultant customize the interface for our program purposes. This cost a few thousand dollars and took a matter of a couple of weeks – far less time and expense than a custom program.

- c. BEACON: BEACON Home Energy Advisor is the software used in Maryland by the local Home Performance with ENERGY STAR programs. Having a standard technical platform ensured that the hard metric data was being entered, tracked and modeled as consistently as possible.
  - d. Website: A consultant (Pinnacle Communications) was hired by STEP to create a dedicated program website in DRUPAL ([www.smalltownenergy.org](http://www.smalltownenergy.org)). This was linked to the Town web site, and served as the major hub of news, information and forms throughout the program.
  - e. Facebook: STEP used social marketing, including Facebook and links to various web sites. The program's Facebook page provided regular updates, and informed residents of upcoming events.
  - f. iPad and Dropbox: The Energy Coach was armed with an iPad with Dropbox and wireless internet access. This enabled her to effectively meet with STEP participants in their homes or elsewhere, having all necessary program resources and specific participant materials easily accessible.
5. Program Administrative Materials. STEP developed a number of forms to enable the program to be delivered and managed efficiently, including:
- a. Participation Agreement: The participation agreement was the threshold document signed by all STEP participants. The form was divided into two parts: Part I with the sign-up information, and Part II with conditions and necessary background information. The form's multiple objectives were:
    - i. To provide client contact information
    - ii. To indemnify the Town/program from legal action
    - iii. To acknowledge the program Benefits, Requirements, Limitations
  - b. Utility Data Release Form: By signing this form, the participant provided permission for STEP to access their utility records. This was done in order to measure program impact on energy use, and was subject to strict confidentiality rules.
  - c. Preferred Contractor Summary Chart: The objective of this form was to assist homeowners in making a selection of their Home Performance with ENERGY STAR evaluation firm or contractor.
  - d. Financial Incentives Summary Chart: The objective of this form was to provide a matrix of all the available financial incentives for energy efficiency in the State of Maryland, so participants could see quickly and clearly the incentives to which they may be entitled.

- e. Financing Options Summary Chart: This form was used to provide information to participants who were interested in various energy efficiency loan options.
- f. Residential Energy Efficiency Programs Summary Chart: This form was for information purposes only, so that prospective participants could see all of the programs operating throughout the state to which they may be entitled.
- g. Request for Incentives Form: This form served as the close-out for participants, and provided all of the necessary details for tracking and recording purposes, as well as a prompt for STEP to release final incentives.
- h. Form Emails: Template email messages were developed, to enable the Energy Coach to quickly and easily provide useful operational information to participants at each phase of the program, including (among others): at the time a potential participant requested information regarding sign up, upon sign up for the program by participants who wanted STEP to assist with the selection of their energy evaluator or those who wanted to select their energy evaluator themselves, upon delivery of an energy evaluation report, once improvements had been completed but incentive applications had not yet been filed, after STEP's incentive was processed, and to remind folks who had signed up for STEP but hadn't yet had the energy evaluation that it was time to move forward.
- i. Technical Consulting Forms: STEP's Technical Consultant was available to participants, as needed, to provide more in-depth technical consultations than the Energy Coach was able to address (such as to help determine the best approach to addressing a problem or building area), to analyze and compare improvement proposals, and to review energy evaluations and improvements for quality assurance. Forms were developed to document each of these services.

## 5. Outreach Materials.

- a. Information fliers: Fliers were developed for STEP in English and Spanish, including a simple door-drop flier and a tri-fold flier with more information.
- b. Event collateral: Fliers and postcards were developed to inform residents about STEP house parties, community events and other activities.
- c. Ready-Set-Save flier: This flier summarized the entire process for STEP participants, and became *the* touchpoint document for the Energy Coach in guiding participants through the program.
- d. Yard signs: For STEP participants who voluntarily wanted to demonstrate their participation in the program, STEP developed a yard sign. The yard sign

proved to be an extremely effective outreach tool. Participants were eager to let their neighbors know that they were participating in the program, and upon deploying the signs in the neighborhood, new program sign-ups surged.



- e. Case studies: STEP developed a series of text and video case studies with early adopters of the program. These case studies helped prospective participants understand from their neighbors why they participated in STEP.
7. Surveys. STEP went through many iterations of survey forms. In the end, STEP settled on a “Ready, Set, Save” framework for the surveys, mirroring the “Ready, Set, Save” sequence for the program delivery process. The complete battery of STEP surveys included:
- a. Non-Participant Survey: This survey was given to residents in the participating STEP towns who opted NOT to participate in the program. The survey provided some baseline data against which to compare and benchmark program participants.
  - b. “Ready” Survey: This survey provided baseline information for incoming program participants, asking basic demographic questions as well as KABB questions related to home energy efficiency.
  - c. “Set” Survey: This was a mid-stream survey which asked more detailed questions about participant experiences with the home energy evaluation, likelihood of progressing to the upgrade phase, and barrier identification.
  - d. “Save” Survey: This was the close-out survey asking detailed questions about participant experiences with the improvement process. In addition, this

provided a way to measure the ways in which the program may have impacted the KABB of participants.

- e. Event-specific surveys: STEP conducted voluntary surveys at many of our public events to determine participant perception and areas of value.

## B. Delivery of Program

STEP developed and employed a program delivery model called “Ready, Set, Save”. This program flow provided a touchpoint for participants and for the Energy Coach at every stage of the program. The different STEP forms and surveys were likewise tied to each specific stage (see enclosed “READY, SET, SAVE” form).

### 1. “READY”

The “READY” stage introduced residents in the participating STEP towns to the program, and prepared them to become program participants. This stage was the first in which residents received program outreach through the community-based social marketing. It was also the first time that prospective participants got in touch with the Energy Coach, the point at which all program sign-up documentation was completed, and triggered the entering of new participants’ information into the Salesforce database.

The “READY” stage included the following steps:

- a. **Learning About the Program:** This step was absolutely key to the success of the program, and it involved a carefully sequenced use of community-based social marketing and other collateral.

Establishing STEP as a Community Program: This involved outreach, diplomacy and presentations to the Mayor, Council or Association President in participating STEP communities. The objective was to introduce to them the value proposition of such a program for their residents, and to seek their permission to run STEP as a program in their community. Community “ownership” and leadership on STEP is essential to overcoming major trust barriers for prospective participants.

Beginning Initial Community Outreach: In each new community, STEP was formally announced through a letter to constituents from the Mayor or Association President. Thereafter, a series of CBSM tools were used to inform residents of the program, drive them to the STEP web site, and – most importantly – inform them of an upcoming launch event. CBSM tools included: newsletters, blogs, Mayor’s letter, Facebook and community list serve(s).

Conducting a Community Event(s): A community event, often serving as the official launch of the program, was a key part of the CBSM sequence. Sometimes this was a standalone “Energy Fair”, and at other times it was a distinct part of a larger community event (like an Arts Festival). In either case, there were common ingredients, including: presence of the Mayor or other official to announce the program; introducing and featuring the Energy Coach; offering a drawing for a cash prize for program eligible households who attended the event and signed up on a list to learn more about STEP; the presence of STEP staff with outreach materials to explain the program; and the presence of preferred Home Performance with ENERGY STAR contractors for people to meet and speak with directly. Program sign-ups from the community event were extremely high. The events were always extremely well attended.

Ongoing Community Outreach and Events: Once the program had been established through the community event, there was ongoing outreach through regular use of the Town newsletter, list serve, web site, Facebook and occasional mailing, as well as regular updates and reports to the sponsoring Councils and Association. Content included any new program developments, statistics and case studies. This was also the time to widely deploy yard signs.

Another CBSM technique was the “house party”, in which an early adopter agreed to host an evening with some neighbors interested in the program. Like the Community Event (but much smaller), STEP staff and one contractor attended, and brought the drinks and snacks. Sign up rates from house parties were in excess of 80%.

Indirect outreach was undertaken through community partners, including schools, PTAs, places of worship and various clubs and associations. A level of trust was developed by residents upon receiving information about STEP through one of their trusted community partners and institutions.

Developing a Website: the Town hired a consultant to develop the STEP website, which provided interested residents with clear information regarding the program benefits and requirements. The web site also hosted information about upcoming events, sign-up documents, and means of contacting the Energy Coach.

Providing Information / Collateral Directly from the Energy Coach: Many interested households primarily learned about the program by contacting the Energy Coach directly, either by email or telephone. A template email and collateral materials were developed to enable the Energy Coach to quickly and easily provide all the information an interested resident would need to understand and sign up for the program, as well as other available resources.

**b. *Signing up for the Program***: This small but vital step was essential to get residents to cross the threshold and actually participate in STEP. It also involved residents making real commitments, including: signing the Participant Agreement, signing a Utility Data Release Form, agreeing to undertake a Home Performance with ENERGY STAR incentive, and completing the first of the surveys.

This step was also the step where the Energy Coach began to develop a relationship with new STEP participants. After initial interaction by email and/or telephone and the submission of sign-up documents, the Energy Coach would then follow-up with a welcome e-mail providing information on and collateral materials related to the next phase of the process. Also at this stage, the new participant was entered into the Salesforce database for regular tracking and management of their customer experience throughout the process.

## 2. “SET”

The purpose of the “SET” phase was for the Energy Coach to help participants move through the assessment process and have all the necessary information (technical and financial) to make a decision about whether to implement energy efficiency upgrades to their home.

- a. *Undertake a Home Performance with ENERGY STAR Evaluation:* The first major activity for new STEP participants was to undertake a home energy evaluation. This required the selection of a qualified assessor (energy auditor), which proved to be a significant barrier to participation for many, and most often required the assistance of the Energy Coach. Participants were allowed to select any qualified contractor that appeared on the list of eligible contractors for the state and utility efficiency programs. These extensive lists of contractors proved overwhelming for most clients, so STEP selected five “preferred contractors” from the lists. The intent was to provide choice for the client, but not an overwhelming amount of choice. Some participants elected to have the program select an auditor on their behalf.

Some of the common considerations that arose in the assessor selection process included: determining which incentive programs was applicable and, therefore, which set of contractors were eligible; whether to choose a firm that was fully integrated (performed audits and improvements) vs. a firm that only performed audits (and then referred the work to other contractors); the type of report that would be delivered (STEP provided sample reports on its website for its preferred contractors); the availability of the firm to perform audits at mutually convenient times; and the time between audit and delivery of the report.

- b. *Review the Report:* After completion of the energy evaluation, the auditor delivered a narrative report, which summarized the findings of the audit and their recommendations for energy efficiency improvements. Upon delivery of the report, the Energy Coach would contact the participant by email to offer them the opportunity to meet (either in person or by phone) to discuss the report, incentives, financing options and next steps. The breadth and clarity of these reports varied widely. In addition, they provided a lot of information that was new or unclear to most participants. As a result, most participants took advantage of the Energy Coach’s offer to meet.

- c. *Understand Financing and Incentives:* The various incentives and financing tools for making eligible improvements was discussed with clients as part of the Energy Coach's consultation. In addition, collateral materials summarizing financing and incentive information were prepared to enable the Energy Coach to easily disseminate the information to participants and for use as needed as reference material.
- d. *Consider Proposals:* Some contractors provided a work proposal along with their audit report; others waited for homeowners to request one (to avoid the appearance of a "hard sell"). Also, participants were encouraged to obtain at least one other proposal for comparison. The Energy Coach offered to review and compare proposals on participants' behalf, so participants could better understand the scope of work being offered and how they compared on an "apples-to-apples" basis. Many participants took advantage of this service.

The Energy Coach also offered to analyze the economics of the transaction, considering upfront costs, available incentives and estimated savings, to assist participants in evaluating the financial benefits of making the improvements. Very few participants took advantage of this service.

- e. *Take "Set" Survey:* Participants were asked to take the "Set Survey" after they had completed their review of the audit report. The Set survey asked the respondent to rate their experience with the energy evaluation process, the firm and the auditor, as well as their interaction with the Energy Coach during that phase.

### 3. "SAVE"

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The purpose of the "SAVE" phase was for STEP to help participants move forward with energy efficiency improvements to their home, to enable participants to obtain all the rebates and incentives to which they were entitled, and to track real savings over time through utility bill analysis. "SAVE" activities include:

- a. *Undertake Improvements:* Participants were advised to select a contractor that was participating in the incentive program for which they were eligible. They then entered into a work contract (a copy of which was provided to STEP), scheduled the improvements, and informed the Energy Coach of the arrangements made.
- b. *Have Test-Out Performed:* After the home energy upgrades were complete, the home performance contractor (or the auditor) performed certain post-installation testing, and then prepared (or assisted the client in preparing) paperwork to be submitted for payment of incentives from the utility and/or the state. The Energy Coach also assisted with this paperwork as and when needed, and explained the

process and followed up on issues relating to the process on behalf of program participants.

- c. *Obtain Incentives:* Once the Energy Coach was informed that the work had been completed, a template email was sent out to the participant, to congratulate them on the completion of the improvements, to inform them of the various incentives for which they were eligible and explain how and when they would be paid, and to request the remaining documentation needed for STEP to pay out its own additional incentive. All information received from the participant was logged into the Salesforce database.
- d. *Take “Save” Survey:* Participants were asked to take the Save Survey as part of completing the paperwork necessary to obtain the STEP incentive. The Save survey asked the respondent to rate their experience with the home energy upgrade process, the contractor and the installers, as well as their interaction with the Energy Coach during that phase.
- e. *Quality Assurance:* Participants were offered the opportunity to have STEP’s Technical Consultant perform a Quality Assurance Review of the improvements made to their homes. This service reassured participants that work was done properly and in accordance with the agreed-upon scope of work or, in some cases, revealed issues that required additional contractor intervention, which STEP ensured took place.

## **SECTION IV - Evaluation & Information Sharing**

### **A. Assess and Improve Processes**

#### **1. Survey Analysis.**

A consulting team (comprised of Baltimore Research and Pinnacle Communications) was hired by STEP to undertake research based on the responses to surveys the consultants developed and deployed. The purpose of the research was to determine the relevant Knowledge, Attitudes, Belief and Behaviors (KABBS) of program participants as compared to non-participants, and to link these to specific programmatic elements of STEP. The goal of doing so was to identify the ways in which the STEP program design was successful or not successful, along with actionable items through which to modify the program. The Town was also interested in ascertaining whether the program would be replicable and scalable.

Some of the key “take-away’s” from the research included the following:

- STEP was a success! Overall program conversion rates were high relative to other available programs, and satisfaction levels were extraordinary.
- For successful replication, it is necessary to ensure that the right product is in place, an appropriate target audience is identified, and the program is marketed with messaging delivered through the most appropriate channels.
- A significant proportion of participants were dubious that the contractors were unbiased in their recommendations. This mistrust could be a perceptual barrier that could preclude homeowners from advancing in the program.
- While financial incentives and rebates factored heavily into the decision to participate, the availability of low interest rate loans was far less critical. Given that a primary barrier was the cost of implementation, additional exploration is needed to determine whether participants enrolled with the intent to only implement lower cost improvements that they could afford to finance out-of-pocket, or if there was a limited awareness of financing options due to a communications issue.

Messaging statements that resonated most reflected general concerns about the impact of environmental factors on future generations. However, improving comfort in the home, addressing health and safety benefits, and reducing energy costs are more tangible calls to action. Also, addressing primary barriers to adoption – including, cost of implementation, inconvenience, and fees - is key to enrollment.

A copy of the Analysis Report is enclosed as Attachment H-1.

## **2. Programmatic and Utility Usage Data Analysis.**

A technical consultant (ICF Incorporated, LLC) was engaged by STEP to assess program impacts through utility bill analysis. More specifically, the consultant helped STEP collect and analyze pertinent programmatic and utility usage data for participants in order to gain a better understanding of the actual energy savings achieved through the efficiency upgrades completed in the program.

Due to limitations in the utility billing data available and the scope of the project, there was not a sufficient sample to make broad claims about actual energy savings that could be projected across the program with statistical significance. However, the analysis did indicate the following:

- A majority of participants were realizing a measurable reduction in natural gas and electricity use in the year after completing efficiency upgrades as compared to the year prior.

- The STEP program savings benchmarked well with another BBNP grantee in a similar climate region.

A copy of the Assessment Report is enclosed as Attachment H-2.

## **B. Communicating Progress & Impacts**

An important element of developing and maintaining an effective program is to communicate early and often with all stakeholders – including participants, sponsoring communities, local assets, and other partners. In addition to getting buy in for the program, and then generating program awareness, it is key to share insights into the program's progress as well as outcomes determined and insights gleaned.

Some of the information that STEP shared on a consistent basis by STEP included: program statistics, including: number of participants, number of energy evaluations completed, number of improvements completed

Some of the primary means that were used to share this information included:

- Regular updates to Council
- Ongoing use of CBSM, including Facebook posts, listserv announcements and group emails
- Website postings
- Presentations to partners and other interested groups
- Annual energy fairs

## **SECTION V - Attachments**

### **A. Local Asset Materials**

1. Original STEP proposal
2. Statement of Project Objectives (SOPO)
3. Sample Council report
4. Outreach letters to engage partner communities; letters of understanding
5. Copies of DOE metric reports
6. Advisory Committee agenda, minute template
7. Key correspondence, including relevant PowerPoint slide decks
8. Event templates

### **B. Partner Materials**

1. Key correspondence with Pepco, MEA, DHCD
2. Loan loss reserve documentation with Sandy Spring Bank
3. Community Partner documents
4. Consultant documents

**C. Personnel Materials**

1. Energy Coach
2. Project Manager
3. Technical Consultant
4. Intern

**E. Program Administrative Materials**

1. Participation Agreement
2. Utility Data Release Form
3. Preferred Contractor Chart
4. Financial Incentives Chart
5. Financing Options Chart
6. Energy Efficiency Programs Summary Chart
7. Request for Incentives Form
8. Form Emails
9. Technical Consulting Forms

**F. Outreach Materials**

1. Information brochures
2. Event collateral
3. Ready-Set-Save with STEP Flyer

**G. Surveys**

1. Non-Participant Survey
2. Ready Survey
3. Set Survey
4. Save Survey
5. All consultant reports