ANALYSIS REPORT

on STEP Participants'
and Non-Participants' Surveys
July 26, 2013

Prepared by:
Baltimore Research
and Pinnacle Communications

STEP | SMALL TOWN ENERGY PROGRAM

Small STEP. Big Impact.

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Communications Resource Company

BALTIMORE RESEARCH

Executive Summary of Findings

July 26th, 2013

Prepared by Jeff Henn

Background information on Baltimore Research

Founded in 1960, Baltimore Research is a 53-year old, full service marketing research firm and focus facility located in Towson, MD. We provide research consultation, research design, data collection, analysis, field management, and recruiting and focus facilities. The company offers both qualitative and quantitative research solutions.

Background information on Pinnacle Communications

Pinnacle Communications has been using award-winning strategies and creative services to develop and implement social marketing campaigns for 16 years. Our work has increased awareness about important issues and influenced positive behavior.

Report Authors

Jeff Henn is one of two in-house research consultants at Baltimore Research. He was certified at RIVA Inc. Training Institute, which is the industry gold standard for moderator education and research consultation. Jeff has been with Baltimore Research since the fall of 2002 and is an expert at conducting qualitative and quantitative field studies. He holds a Bachelor's degree in Psychology and a Master of Arts in Experimental Psychology, both from Towson University. He also is a member of the Marketing Research Association (MRA) and is a former board member of their Mid-Atlantic Chapter. Additionally, Jeff is a member of the Qualitative Research Consultants Association (QRCA).

Ted Donnelly has a formal and advanced education grounded in marketing research and consumer psychology. He has a Ph.D. in Consumer Behavior and Advertising Research from the Management School at the University of Edinburgh in Scotland. Dr. Donnelly also has a Master of Science degree in marketing research from the University of Edinburgh. He completed his Bachelor of Science at the Pennsylvania State University in Psychology with minors in Business and Sociology.

Ted is an expert in social research methodology and analysis in both quantitative and qualitative traditions. Ted has researched consumer behavior in both American and British cultures. Dr. Donnelly has designed and conducted academic research and developed theories in cross-cultural advertising, affective advertising appeals, the use of humor in advertising, consumer product involvement, consumer personality profiling, consumer processing and decision making, persuasion in advertising, and the effects of television program involvement and media placement on advertising effectiveness. He taught Marketing at Johns Hopkins University.

In his capacity as Managing Director, Ted oversees all business operations, strategy and finance. Additionally, he continues to consult on full service research design and fulfillment, serving as a focus group moderator and analyst. He specializes in branding research, new product development, communications concept testing, and advertising development. Additionally, Ted sits on the Marketing Research Association's (MRA) National Board of Directors, currently serving on the Executive Committee as Vice Chairman of the

Board. He also serves on the Professional Research Certification's (PRC) Board of Directors, recently completing a three year stint as Chairman. He sits on a number of MRA and PRC's subcommittees.

Tracey Haldeman has extensive experience working on social marketing, branding and marketing at national, regional, state and local levels with Pinnacle Communications. With over 23 years of experience working with government agencies, retail, health care, corporate and non-profits, Tracey has a deep practical understanding of designing and implementing strategies for successful change. As President of Pinnacle Communications, she has developed and implemented programs for energy conservation, reduction of solid waste disposal, smoking cessation, reduction of teen pregnancy, reduction of drunk driving, reduction of infant mortality and low birth weight babies, increasing recycling participation, and recruitment for social service volunteering. Tracey has earned a master's degree from Georgetown University's Communication, Culture and Technology program.

Research purpose and objectives

The Town of University Park, MD (the "Town") runs the Small Town Energy Program ("STEP"). STEP began with a three-year grant from the U.S. Department of Energy in 2010, and was exclusively for residents of College Heights Estates, Hyattsville, Riverdale Park and University Park, Maryland. The goals of the program were to transform the way residents use energy in their homes, and also to serve as a model for other small towns. The program ended on July 31, 2013.

Key programmatic elements of STEP include:

- Energy evaluations for residents
- Preferred home performance contractors
- Post-improvement reviews to ensure residents receive services that satisfy industry standards
- Rebates, low-interest loans and other financial incentives
- Ongoing support from a local Energy Coach

The purpose of the research was to determine the relevant knowledge, attitudes, beliefs and behaviors ("KABB") of program participants as compared to non-participants, and to link these to specific programmatic elements of STEP. In so doing, the ways in which the STEP program design is successful / not successful can be identified, along with actionable items through which to modify the program and make the case for future funding. More specifically, the Town is interested in ascertaining why the program was particularly successful in University Park as compared to the other communities in which it was run, and whether the program is replicable and scalable.

The first part of this report examines the differences in demographics between the Participant and Non-Participant survey respondents, as well as their responses to KABB questions related to their confidence in completing tasks, sources of information relied upon, the impact of affordability concerns, and the importance of particular program attributes.

Additionally, within the KABB information, the research sought to identify what **Stage of Change** the market may be in and to measure KABB as it applies to the **Health Belief Model**.

Stage of Change (also called the Transtheoretical model) can be broken out into these 5 phases:

1. Pre-contemplation
2. Contemplation
3. Preparation
4. Action
5. Maintenance

As this model applies to STEP, the objective was to determine the proportion of residents who have even thought about home energy efficiency issues, considered taking proactive measures, researched their options and/or followed through with any action.

The **Health Belief Model** is a means for evaluating behavioral change, which states that for a change to occur (i.e.: undertaking home energy efficiency upgrades), individuals must progress through the following stages:

1. There must be a perceived threat (e.g. wasted money, lost comfort, health threat)
2. There must be a solution presented to mitigate that threat (e.g. home energy efficiency upgrades)
3. Person must feel capable of performing the desired behavior (e.g. believe it is easy/convenient)
4. Person must believe that successfully performing the behavior will produce the desired outcome (e.g. believe it is effective)

The research was structured to identify what threats the community members may perceive, whether they are aware of solutions, if they feel capable of performing energy upgrades, and whether they believe the energy upgrades will produce the desired results.

The second part of this report examines the KABB differences between program participants who were "Ready" (e.g. signed up to participate) and those that progressed through to "Save" (e.g. completed energy efficiency upgrades) and those that didn't progress through to completing upgrades. In doing so, we can identify what attributes are important and might predict that someone will move entirely through the process vs. dropping out and not finishing. Additionally, we can analyze whether there was any "spillover" effect on behavior. In other words, what other behaviors were affected by the program in addition to the ones we were promoting? While the completion of energy efficiency upgrades is the promoted behavior, did that, for example, encourage anyone to take shorter hot showers or recycle more?

Initially, one goal of the research was to identify "net-to-gross" of all the participants in the STEP program. (In other words, how many STEP participants were people who were going to do energy efficiency upgrades anyway but just piggy backed on the STEP program for the extra benefits vs. how many people were encouraged to have energy upgrades because of the STEP program?) In an effort to reduce survey length, a direct question to answer net-to-gross was not included; however, we try to extrapolate this answer based on the responses to questions about perceived confidence levels in completing critical energy efficiency upgrade tasks in the absence of STEP.

Data Collection

The survey was delivered via town newsletters, emails, newspaper ads, flyers posted in the community, etc. Notification included website reference for the survey and a “prize” for taking the survey.

Participants vs. Non-Participants

Demographics

The average profile of a STEP Participant vs. a STEP non-Participant was rather similar. As detailed in figure one, the average ranges for most demographic variables were very close to one another. Some slight but noteworthy differences are that participants tended to be older, more educated, higher-earning, and more likely to be married than non-participants. Also, the participant sample was a bit more homogenous racially than the non-participants, with a higher percentage of Caucasians. One figure that stayed truly consistent from one sample to the other was average # per household at 2.9 people. These differences were evaluated for statistically significant differences using an independent samples t-test. The only statistically significant difference observed ($p < 0.05$) was that STEP participants were more likely to have an advanced degree than non-participants.

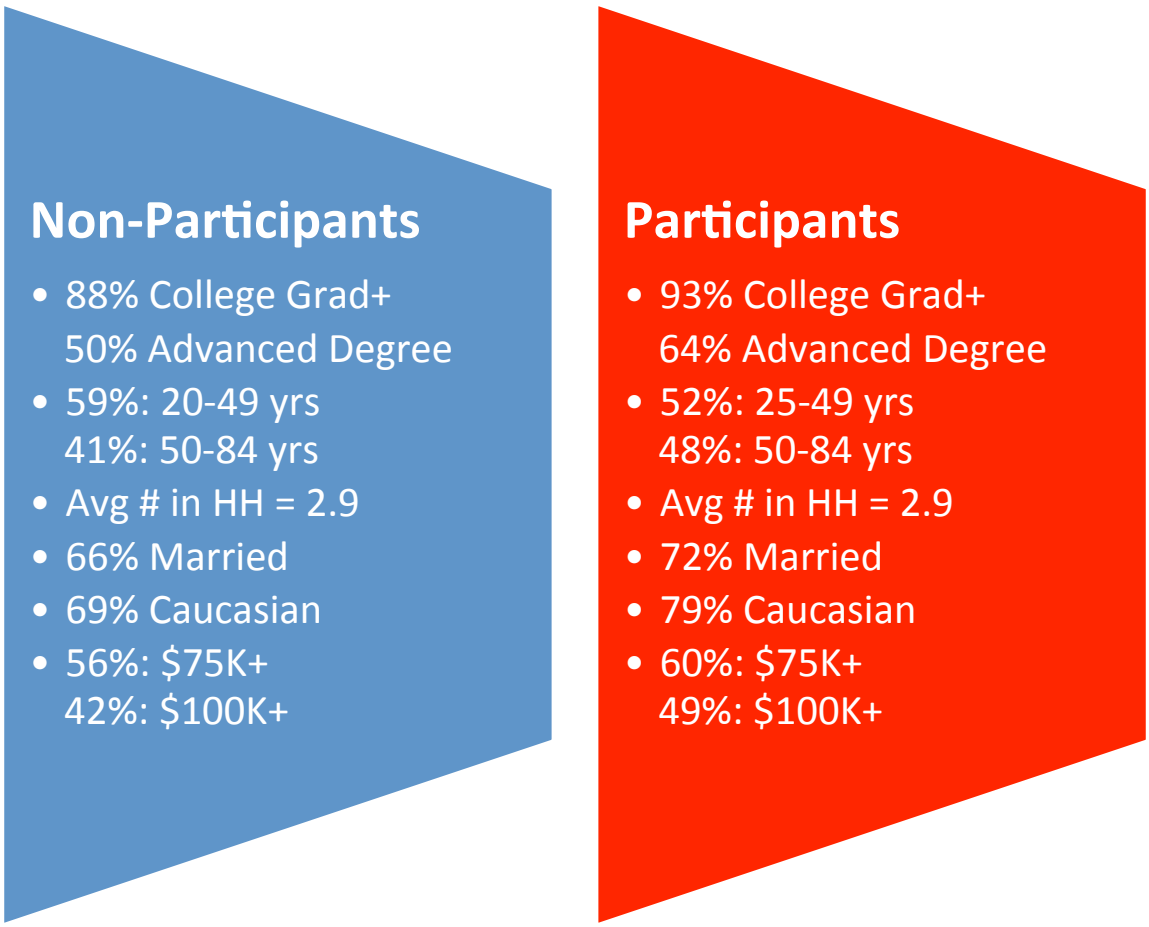


Figure 1. Comparison of key demographic variables.

KABBs

When it came to differences in knowledge, attitudes, beliefs and behaviors ("KABB"), the participant and non-participant samples did not greatly differ on most scales. A few areas however that did stand out are detailed below in tables one through three. Details on all KABB data collected are provided in the accompanying deep dive participant and non-participant reports.

Confidence in Completing Tasks

Specifically, with **confidence in completing tasks** that relate to conducting a whole-house energy evaluation, there are some key differences that emerged between non-participants and participants. Most notable are the proportion of "very confident" ratings found in the **non-participant** population. These differences were evaluated for statistically significant differences using an independent samples t-test, with nearly all differences tested being found to be statistically significant. Consistent with this finding is that **participants** were statistically more likely to report feeling unsure about completing the bottom two tasks: *Evaluate if the job was done correctly* and *identify and obtain the applicable incentives / rebates*.

Please rate how confident you are in your ability to complete each of the following tasks on your own			
Answer Options	**Non-Participants 5 VERY CONFIDENT**	**Participants 5 VERY CONFIDENT**	**Statistically Significant (p <0.05)**
Find a qualified energy evaluator	26%	15%	☑
Schedule the home energy evaluation	39%	34%	☒
Review the home energy report	41%	20%	☑
Select the appropriate upgrade measures based on the report	35%	14%	☑
Obtain proposals to get the improvements done	34%	15%	☑
Review the proposals and select a qualified improvement contractor	30%	9%	☑
Evaluate if the job was done correctly	20%	6%	☑
Identify and obtain the applicable incentives / rebates	21%	5%	☑

Table 1. Difference in Very Confident ratings between Participants and Non-Participants

These observed differences could be the result of a natural tendency for individuals who are less comfortable undertaking these tasks opting into a program that will provide the necessary guidance. Alternatively, it could be that those who have not participated are less informed about the complexities surrounding these activities, thereby overestimating their capabilities. Without further investigation, the reason behind this observed difference is unknown. However, if it's the former, the directional insight is that messaging should be crafted to address how STEP makes it easy to navigate through this process for those who have apprehension.

Consistent with this trend are the differences in agreement from non-participants to participants on the statement “We don’t need the evaluation because our house is already as energy efficient as it needs to be,” and “We don’t need the evaluation because we already know how to make our home more energy efficient.”

	NON-Participants We don’t need the evaluation because our Non-Participants house is already as energy efficient as it needs to be	PARTICIPANTS We don’t need the evaluation because our Participants house is already as energy efficient as it needs to be	Stat Sig Top 2/ Bottom 2 Box Ratings (p < 0.05)
1 Strongly Disagree	36%	71%	☑
2 Somewhat Disagree	27%	17%	
3 Neither Agree nor Disagree	20%	9%	
4 Somewhat Agree	10%	1%	☑
5 Strongly Agree	4%	1%	

Table 2. Percentage differences on “house is already as efficient as it needs to be” between Non-Participants and Participants.

	NON-Participants We don’t need the evaluation because we already know how to make our home more energy efficient	PARTICIPANTS We don’t need the evaluation because we already know how to make our home more energy efficient	Stat Sig Top 2/ Bottom 2 Box Ratings (p < 0.05)
1 Strongly Disagree	18%	42%	☑
2 Somewhat Disagree	30%	31%	
3 Neither Agree nor Disagree	20%	15%	
4 Somewhat Agree	17%	7%	☑
5 Strongly Agree	12%	2%	

Table 3. Percentage differences on “we already know how to make our home more energy efficient” between Non-Participants and Participants.

As illustrated by the red boxed percentages in tables two and three, there is a clear and significant perceptual difference in the necessity of an energy evaluation between participants and non-participants. Non-participants were more likely than participants to believe an evaluation is **not** needed because they thought their homes were as efficient as could be, or because they already know what to do on their own. The corollary to this is that if you want to penetrate the minds of the average consumer, understand that they may overrate their own confidence in do-it-yourself (D-I-Y) actions and underestimate the importance of an energy

evaluation, and speak to the benefits that can be made to one's home by using a true professional.

Sources of Information

A **key question** sought to be answered by this research was: "What worked so well in University Park (UP)?" That community had a 30% participation rate in STEP community-wide. Why? Looking at differences between UP STEP READY participants and other communities' STEP READY participants, coupled with differences between UP Non-Participants and other communities' Non-Participants, there are a few obvious differences to be found between the UP residents and those in the other communities. One noteworthy finding that may lend insight to guide future campaigns is **sources of information** relied upon to learn about the program**.**

While community newsletter, community list serve, and STEP participant / neighbor / word-of-mouth were the top three key information sources in general, community newsletter was a clear front-runner and had one of the highest penetrations of source type across samples amongst all UP respondents. In University Park, the high readership of the community newsletter was a tool that worked well. High public engagement with community-based communications helped University Park reach a healthy participation rate. (See table four for a complete analysis by community.) While the individual sample sizes were not large enough to verify the observed differences had statistical significance, they may offer directional insight. It is also important to note that the program was available to University Park residents for a longer period of time than to residents of the other towns. Additional time to implement the STEP program in the other towns would be helpful to measure participation rates in the new communities and then compare participation rates to UP.

Non-Participant Towns	Information SOURCE		
	STEP Participant / Neighbor / WOM	Community Listserv	Community Newsletter
College Heights	55%	55%	73%
Hyattsville	36%	65%	58%
Riverdale Park	67%	33%	33%
University Park	57%	**79%**	**86%**
Participant Towns	**Information SOURCE**		
	STEP Participant / Neighbor / WOM	Community Listserv	Community Newsletter
College Heights	67%	20%	47%
Hyattsville	51%	54%	55%
Riverdale Park	27%	46%	36%
University Park	43%	52%	**86%**

Table 4. Most frequently mentioned sources of information by community across surveys.

Affordability

Because affordability was identified as a concern by a substantial portion of the survey respondents in both participant and non-participant surveys, it is helpful to see if the primary statement about affordability was rated differently by different segments. Given that both samples tended to skew upper educated and high earning, it stands to reason that those with more disposable income would be less put out by costs in general. However, caution must be exercised with such an interpretation. As shown in tables five and six, while there was more agreement than disagreement to the statement "[a whole-house energy evaluation] will tell us we need to make improvements we cannot afford" among those in the $100-$149K income range, there was still enough agreement among those in the upper ranges to suggest that income alone is not predictive of agreement with this statement. This suggests that any messaging campaign about STEP should appeal to the financial benefits of participation and the more immediate energy waste it can address.

STEP PARTICIPANTS	It will tell us we need to make improvements we cannot afford.						
Answer Options	1 STRONGLY DISAGREE	2 Somewhat disagree	3 Neither agree nor disagree	4 Somewhat agree	5 STRONGLY AGREE	Response Percent	Response Count
Less than $25,000	1	0	0	0	0	0.7%	1
Between $25,000 and $49,999	1	0	0	4	1	4.4%	6
Between $50,000 and $74,999	0	0	7	5	1	9.6%	13
Between $75,000 and $99,999	0	2	5	7	2	11.8%	16
Between $100,000 and $149,999	1	5	3	19	11	28.7%	39
Between $150,000 and $199,999	3	3	5	4	1	11.8%	16
$200,000 or more	2	2	6	3	0	9.6%	13
Prefer not to answer	3	6	13	10	0	23.5%	32
						answered question	**136**

Table 5. Step participants' agreement with affordability broken out by income.

NON-PARTICIPANTS	It will tell us we need to make improvements we cannot afford.						
Answer Options	1 STRONGLY DISAGREE	2 Somewhat disagree	3 Neither agree nor disagree	4 Somewhat agree	5 STRONGLY AGREE	Response Percent	Response Count
Less than $25,000	0	0	0	0	1	1.1%	1
Between $25,000 and $49,999	0	0	1	2	3	6.4%	6
Between $50,000 and $74,999	2	0	0	5	4	11.7%	11
Between $75,000 and $99,999	2	2	2	3	3	12.8%	12
Between $100,000 and $149,000	1	1	7	7	5	22.3%	21
Between $150,000 and $199,000	0	2	4	4	3	13.8%	13
$200,000 or more	1	1	2	3	0	7.4%	7
Prefer not to answer	4	2	5	5	7	24.5%	23
						answered question	**94**

Table 6. NON-Step participants' agreement with affordability broken out by income.

Another important question going into this study was whether the success of adoption in UP is scalable to other similar communities. As shown earlier, one predictor of adoption success will be if similar communities have high engagement of residents with community-based publications.

When compared to national averages, UP is a relatively affluent community. Nevertheless, there is still some degree of frugality, which was observed in the survey results. This is a very important finding in pitching this to folks who may have the means to follow through with STEP, but also a degree of skepticism about its true efficacy. There seems to be one subset that gets it, believes in it and will stand behind it based on direct experience. Specifically, conversion rates, on the surface, appear high and the satisfaction level reported by participants is extraordinary. There is another subset that recognizes the threat, but is dubious of the behaviors being worth their while. Unfortunately there doesn't seem to be an obvious demographic correlation. Regardless of how we segmented the data, they all shared a very similar amount of variance.

As with any offering, there will be the early adopters, main-streamers, and laggards. Targeting early adopters in other communities will be the most effective way to replicate the success found in UP. Both participants and non-participants gave very high ratings for the level of importance of all reasons to conduct a whole–house energy evaluation and subsequent improvements. Table ten showcases the similarities between participants and non-participants with the average rating for each reason presented.

A few areas that did stand out and may warrant additional exploration are some perceptual differences held by participants versus non-participants regarding program attributes. For example, as illustrated by table ten, non-participants on average rated attributes of STEP as being slightly less important than participants. Also, both sample sets rated **our community supports the program**, and **a low interested rate loan is available** as less important than the top three attributes.

Importance of STEP Attributes. 5 = Very important, 1 = Very unimportant.			
Answer Options	**Average rating by non-participants**	**Average rating by participants**	**Statistically Significant (p <0.05)**
An Energy Coach is available to provide unbiased advice and assistance throughout the process	4.0	4.6	☑
The program helps us get Pepco and State incentives / rebates for making improvements	4.1	4.6	☑
The program provides additional financial incentives / rebates for making improvements	4.0	4.5	☑
Our community supports the program.	3.6	4.1	☑
A low interest rate loan is available to participants	3.3	3.2	☒

Table 10. Importance of STEP Attributes

While both samples placed a relatively higher value on having an **energy coach** available to help as compared with other program attributes, it is interesting that this STEP attribute also shows the biggest discrepancy between samples. Perhaps those who have enrolled in the program have invested more than non-participants in terms of time and money and, therefore, rate the value of a coach higher than they would have had they not invested. Additionally, the added knowledge that participants have of what a coach can do likely has a positive impact on their perceptions of the value of the coach relative to non-participants. And, as previously stated, those feeling less confident with the process may be more likely to self-select into the program. Such individuals would likely rate the value of an energy coach higher. Either way, the availability of an energy coach and the benefits this individual can provide in simplifying the process and making it more convenient should be clearly communicated given the high satisfaction levels reported by participants.

Also noteworthy are the differences in the average ratings each sample gave to statements regarding reasons to improve the energy efficiency of one's home (see table eleven). Again, participants rated each one slightly higher than non-participants. The two statements that showed the biggest differences were "to find out how much energy we use in our household and for what purposes," and "to reduce our household's carbon footprint." Also of statistical significance (as compared with the answers of non-participants) were participants' likelihood to value energy savings, comfort and the ability to audit health and safety issues. The relative importance that each sample places on these attributes is likely a function of knowledge, or lack thereof, of what a program like STEP can actually do to positively impact an individual household's energy usage and carbon influence.

Reasons for improving the energy efficiency of your home. 5 = Very important, 1 = Very unimportant.			
Answer Options	**Average rating by non-participants**	**Average rating by participants**	**Statistically Significant (t-test for means, p <0.05)**
To find out how much energy we use in our home and for what purposes	3.6	4.3	☑
To find out if there are any health or safety issues in our home (e.g. moisture, gas leaks)	3.9	4.3	☑
To increase the value of our home	3.6	3.9	☒
To save money on our energy bills	4.1	4.5	☑
To make our home less drafty/temperatures more consistent between rooms	4.0	4.5	☑
To reduce our household's carbon footprint	**3.6**	**4.3**	☑

Table 11. Reasons for making energy efficiency improvements

Stage of Change

The non-participants appear to be somewhere between contemplation and preparation for stage of change. Looking at table four from the in depth non-participants' report, only about 22% were unaware of a whole-house energy evaluation. The large majority (56.9%) were aware but "opted not to have it performed for other reasons." It is not surprising that a large majority of non-participants were aware of the program as the single largest representation of any one community in the non-participant sample came from University Park, which has a significant participation rate in STEP and a high level of awareness of the program. While a few from the non-participant sample may have gone as far as having a whole house energy audit, we did not ask them whether or not they've implemented any improvements recommended by such an evaluation (In the non-participant report, it shows that 8% had an evaluation 1-2 years ago, while 7% had an evaluation 2 or more years ago).

In contrast, the participants seemed to be more in the "pre-contemplation" stage prior to STEP. Over 64% did not know that such a service existed before enrolling. However, the question remains: were they thinking about doing something anyway, were predisposed to being receptive to STEP, and simply piggy-backed on STEP for the perks? While we cannot answer that question directly from the data, we did ask what their perceived confidence levels would have been in completing critical tasks in the absence of STEP. Table twelve below shows the average ratings each sample gave to the list of tasks. Note that there was a slight but possibly important difference in the way this was phrased for the participants versus non-participants. The non-participants were asked "please rate how confident you are in your ability to complete each of the following tasks." Whereas the participants were asked "please rate how confident you are in your ability to complete each of the following tasks **in the absence of STEP**."

Average rating for each statement. 5 = Very confident, 1 = Very unsure			
Answer Options	Non-Participants	STEP Participants that did NOT progress to SAVE	STEP Participants that DID progress to SAVE
Find a qualified energy evaluator	**3.3**	**3.1**	2.7
Schedule the home energy evaluation	3.8	3.8	3.5
Review the home energy report	3.9	3.6	3.0
Select the appropriate upgrade measures based on the report	3.8	3.3	2.7
Obtain proposals to get the improvements done	3.6	3.2	3.0
Review the proposals and select a qualified improvement contractor	3.5	**3.2**	2.9
Evaluate if the job was done correctly	**3.2**	**2.7**	2.3
Identify and obtain the applicable incentives / rebates	3.3	**2.6**	2.4

Table 12. Average ratings of key tasks across samples.

The biggest differences are the relative confidence levels between non-participants and those participants who progressed to SAVE. As previously stated, reasons for this could be due to naivety amongst non-participants or a function of participants who require more guidance self-selecting into the program.

Health Belief Model

It seems the non-participants either do not perceive the threat (e.g. house is already as efficient as it needs to be), or they do not believe there is a viable solution to mitigate the threat (e.g. they can do it on their own). The participants who progressed from the STEP READY through the STEP SAVE phase do recognize the threat, see the value in the solution and have engaged in the desired energy efficiency upgrade behaviors. As mentioned previously, participants (both those who completed only the Ready survey and those who completed both the Ready and Save surveys) had the lowest self-rated confidence levels in completing key tasks absent STEP.

Granted there was a significant portion of the STEP READY sample that did not progress through the SAVE phase. Is it merely a matter of time and would they have migrated eventually? Or is there something unique about those who progress through STEP SAVE that is predictive of their likelihood of participation? A simple correlation analysis showed weak relationships between five KABB variables and whether or not one progressed through SAVE. As shown in table 13, most had an inverse or negative relationship.

	Review the home energy report	Cost is a barrier to having the evaluation performed because it has a fee, or the fee is too high	A low interest rate loan is available to participants	There is not much I can do to decrease the amount of energy used in my home.	My efforts to save energy and help the environment only make a difference if others do it too	Progressed to SAVE
Progressed to SAVE	-0.2197	-0.2638	-0.2209	-0.2116	0.22406	1

Table 13. Variables correlated to participation in SAVE.

- In the case of one's confidence in "reviewing a home energy report", those who tended to be less sure were slightly more likely to participate.
- Those who were less likely to see cost of an evaluation as a barrier were more likely to progress to SAVE.
- Those who rated "a low interest rate loan…" as less important were slightly more likely to participate.
- Those who felt less empowered to decrease home energy consumption were slightly more likely to participate.
- Those who agreed with the statement "My efforts to save energy…" were slightly more likely to participate.

STEP READY + SAVE vs. STEP READY ONLY

Demographics

Generally speaking, participants who progressed from the STEP READY phase through the STEP SAVE phase were not much different demographically nor did they differ significantly in terms of knowledge, attitudes, beliefs and behaviors (KABBs). While a perfect conversion rate would be ideal, to have 35 of 139 (25%) progress from STEP READY through STEP SAVE is respectable. Additional time to complete the process would likely have shown more progression from READY through SAVE. In fact, overall program conversion rates are closer to 49%. The surveys were conducted approximately 2 years after the STEP program launched in the University Park community and 5 months after the STEP program was launched in the College Heights Estates, Hyattsville, and Riverdale Park communities. Therefore, the abbreviated timeframe of data collection for the survey does not accurately reflect conversion.

Demographic Variable	READY NO SAVE	READY + SAVE
Education	**Some grad school**	**Some grad school**
Age	**45-54 yrs**	**45-54 yrs**
# living in household	**2.9**	**2.6**
Marital status	**Married**	**Married**
Ethnicity	**Caucasian**	**Caucasian**
Household income	**$100-$199K**	**$100-$199K**
Total Sample Size	**104**	**35**

Table 14. Average demographic profile of those who progressed to SAVE versus those who did not.

KABBs

Looking in depth at the average ratings STEP READY participants gave for the attributes of STEP and the importance that they placed on various statements for why one might improve their home's energy efficiency, one fails to find a statistically significant difference between STEP READY participants who did not progress through STEP SAVE and those who did move on through the SAVE phase. For example, the mean ratings that they gave to statements regarding, "Why are you interested in finding out about and / or improving the energy efficiency of your home?" do not demonstrate a significant difference, as shown in table 15. The only statistically significant difference observed was the importance of a low interest rate loan. However, it was deemed less important by the STEP SAVE respondents, overall.

	Step Ready ONLY	Step Ready + SAVE	t-test for means Stat Sig (p<0.05)
The energy coach is available to provide unbiased advice and assistance throughout the process	4.56	4.56	☒
STEP helps us get Pepco and State incentives / rebates for making improvements	4.6	4.6	☒
STEP provides additional financial incentives / rebates for making improvements	4.51	4.44	☒
Our community supports STEP	4.05	4.24	☒
A low interest rate loan is available to participants	3.5	2.88	☑

Table 15. Average ratings of importance for STEP attributes between STEP READY only Participants and STEP READY + SAVE Participants. 5 = Very important, 1 = Very unimportant.

Behavior-wise, there were non-significant differences between those who progressed through STEP SAVE and those who did not. Table 16 shows that both subsets of the STEP READY survey respondents paralleled one another very closely. Also, the data does not reveal any spillover effect on behavior (i.e. what other behaviors were affected by the program other than the one STEP was promoting). A larger sample size is needed to lead to more enlightening data.

Behavior	READY NO SAVE	READY + SAVE	t-test for means Stat Sig (p<0.05)
Turn off lights when not in use	**4.6**	**4.5**	☒
Wash clothes in cold water	**4.2**	**3.9**	☒
Turn down thermostat in the winter	**4.2**	**4.2**	☒
Unplug appliances when not in use	**2.7**	**2.6**	☒
Dry clothes on the line instead of a dryer	**2.0**	**2.0**	☒

Table 16. Average ratings for frequency of behaviors between STEP SAVE participants and STEP NON-SAVE participants. 5 = Very often, 1 = Rarely.

FINAL REFLECTIONS

Program Success & Future Replication

Ultimately, the intent of the research was to determine whether the STEP program was successful and whether it can be replicated effectively. For successful replication, you must ensure you have the right *product* in place, can identify an appropriate target audience, and market the program with the messaging that will resonate the best through the most appropriate channels.

From a product perspective, STEP appears to have been a success. The overall program conversion rates from STEP READY through STEP SAVE are around 49%. The reported satisfaction levels are extraordinary, with 98% of STEP SAVE and a perfect 100% of STEP SET participants reporting satisfaction! Those who have progressed through the program reported high satisfaction scores both with the selected firms for the **energy evaluation** as well as the **contractors** selected for **implementation**. The evaluators were seen as competent and professional and the reporting thorough and easy to understand. The implementation contractors received a comparable review. This indicates that STEP has developed an **effective method to vet** the necessary contractors.

Further, the review of experiences with their **energy coach** are equally exceptional. Indeed, the primary challenge lies in attracting the appropriate audience and *getting a foot in the door*. Presuming the process is in place to replicate the standards elsewhere, much of the focus should lie in effective marketing communications.

From a programming perspective, there are two possible soft areas to address. While most ultimately selected contractors from STEP's preferred list, there was a significant proportion of participants who were dubious the contractors were unbiased in their recommendations. This **mistrust** could be a perceptual barrier that precludes homeowners from advancing in the program.

The second issue is related to **low interest rate loans**. 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, this stands out as an anomaly. It could be that participants enrolled with the intent to only implement lower cost improvements that they could afford to finance out of pocket. However, it's possible that awareness of financing options was low due to a communications issue. Why this program feature is not as important a factor in decision making given the significance of cost warrants further exploration.

KABBs & Sources of Information

The most effective means of learning about STEP were newsletters, listservs, and word of mouth. Community newsletter was a clear front runner among both non-participants and participants. The program will be most successfully implemented in communities where residents are highly engaged with community publications. Given the awareness level reported in this study, these channels should be replicated, where possible.

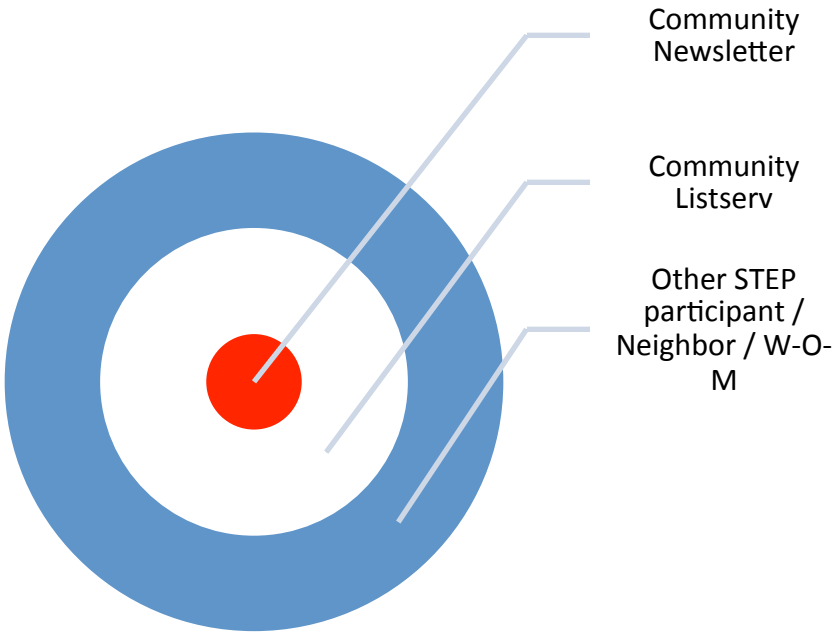
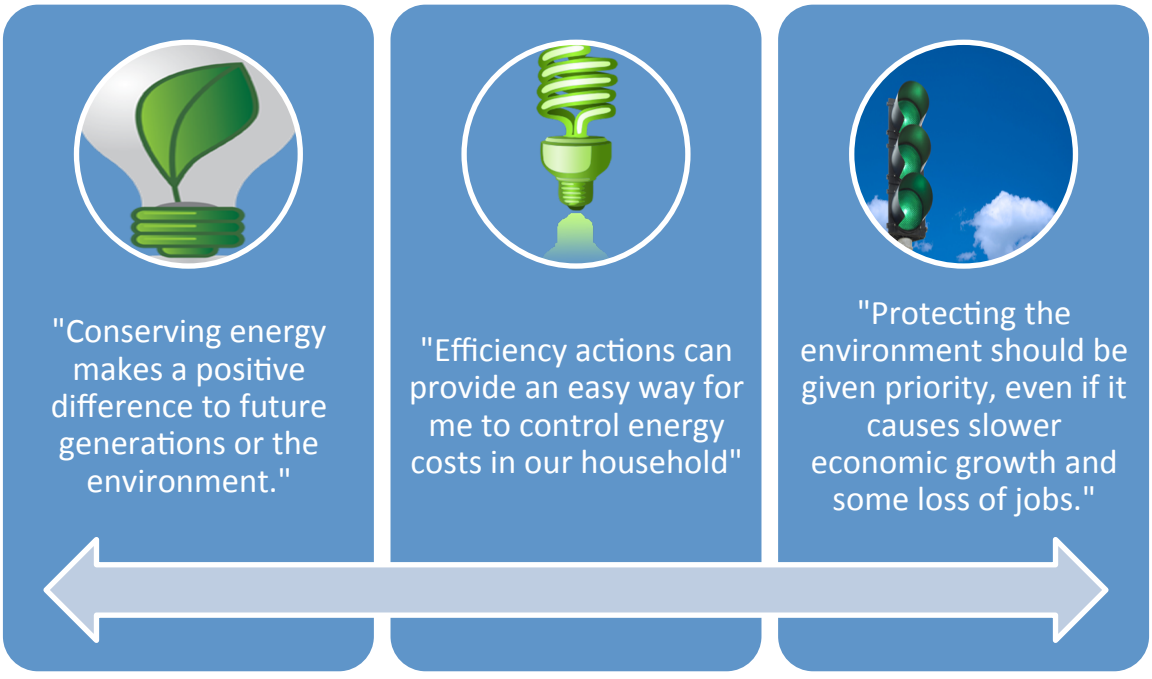


Figure 2. Hitting the target on effective means of communication.

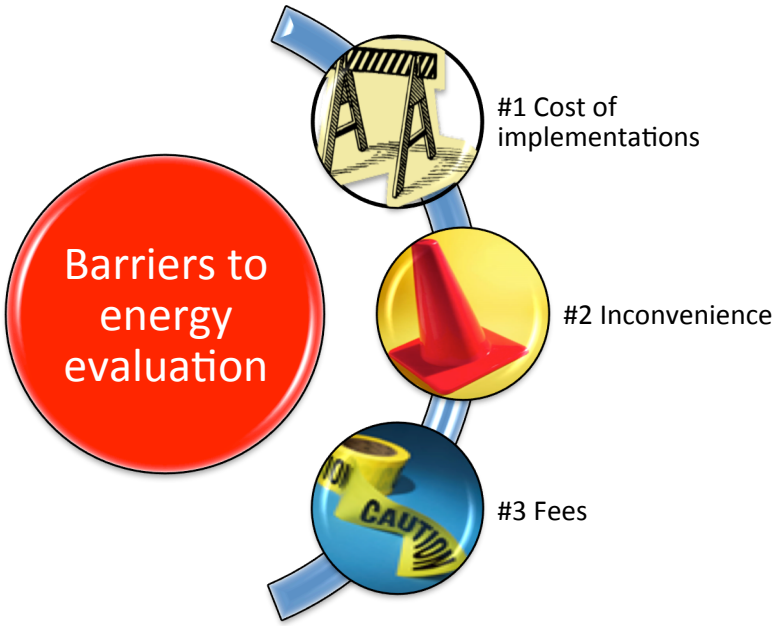
KABBs & Messaging

The **message statements that resonated** most for both the participants and non-participants alike were:



While these general themes should be incorporated into the appeal of STEP, it may not be enough to drive growth. **Environmental factors** and the impact on future generations is a noble response to the question of "why?"; however, it may not drive enrollment unless the more immediate question, "why now?" is addressed. **Comfort** in the home and **health and safety** benefits, as well as a focus on **reducing energy costs** would provide more tangible calls to action. However, awareness of STEP was extremely high in the marketplace and energy waste in the home is a ubiquitous subject in the media. Consequently, addressing primary barriers to adoption is key to growing enrollment.

The biggest **barriers to adoption** identified by this survey included:



The lower levels of **confidence** navigating through the process of auditing home energy and implementing change were two of the most significant differences observed in participants. Furthermore, **convenience** related issues emerged as barriers amongst the participants (i.e.: time consuming to find an evaluator and perceived difficulty finding the time to have services performed). To successfully appeal to likely candidates, the marketing messaging should focus on how easy STEP makes the process and the support made available through the **energy coach.**

Affordability of implementing improvements is another clear barrier. How this is addressed in the marketing of the program is likely a key to success. While long-term ROI is one way to frame this, a focus on the more immediate monthly or annual energy waste of *not* acting and how it may affect the household budget/lifestyle may be more impactful.

Given the satisfaction expressed by program participants, messaging should incorporate slice of life **testimonials** from satisfied participants. The **satisfaction level and conversion data** would also likely be effective messages.

Future research would be recommended to evaluate specific **message concepts** as well as **creative platforms** for execution. Additionally, further exploration on other cost effective and modern means to promote the program is warranted. Specifically, the role **social media** could play in effectively engaging the community on education and promotion merits consideration. Those with **advanced degrees** are more likely to participate. This should be a factor when selecting additional communities and determining the appropriate media to effectively target such individuals within a given community.

Appendix 1: Words of caution when interpreting small sample sizes

Caution is warranted in comparing and interpreting results between different sample sizes. While any research effects are already subject to chance fluctuations, having unequal sample sizes can serve to compound chance findings. Furthermore, there may be qualitative differences between those who completed the survey and those who opted to terminate the survey that were not captured by this study. For example, several people in the Non-Participant survey dropped out after the agreement questions to having a whole house energy evaluation. Responses from such individuals could have altered the patterns to the attitudinal questions, behavioral questions, demographic questions, or a combination of one or more types of questions. Generalizations made about the data that were collected must be kept in this perspective.

	Non-Participants	STEP READY Participants	STEP SET Participants	STEP SAVE Participants^
Start	139	141	50	41
Finish	97	135	50	40
Attrition	**30%***	4%	0%	2%

Table 17: Survey response and attrition rate

^Looking at the STEP SAVE data (n = 35), less than half of that subset came from University Park. Comparing UP STEP SAVE Participants with other communities' STEP SAVE Participants would draw spurious conclusions at best due to the very small sample sizes.

* While sample sizes started out with similar counts, survey completion rates were quite different. For the non-participants survey 139 started and 97 finished. For the STEP READY participant survey, 141 started and 135 finished. As with any survey, there is a natural attrition due to survey fatigue. Generally speaking, the longer a survey one has, the higher the attrition rate will tend to be (this is summarized in table 17 above).