

Behavioral Based Energy Efficiency
Home Energy Reports & Social Energy Pilot
Program Years One and Two – Final Report

Prepared By:

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Submitted to BPA:

02/25/2015

Executive Summary

Introduction

Clark Public Utilities partnered with O-Power and BPA to launch its first behavioral based energy efficiency (BBEE) pilot program during the fall of 2012. The pilot included two separate platforms; the home energy report product and Social Energy, a Facebook application developed by O-Power. The pilot was developed and implemented to determine whether home energy reports and social media were productive platforms for encouraging energy conservation via behavioral change. Twenty thousand residential households were selected to receive the home energy report and the Social Energy application was available and promoted for all residential customers in Clark County.

Pilot funding came directly from the Clark Public Utilities conservation budget with funding from BPA for a third party evaluation upon pilot completion.

Goals of the BBEE Pilot:

1. Determine if the home energy report product is an effective and consistent tool to promote conservation from behavioral change.
2. Determine if social media is an effective platform for communicating energy efficiency and conservation tips, advice and counsel.
3. Judge the impact of both products as they relate to customer service and customer satisfaction.
4. Develop a process for measuring and verifying energy savings derived from behavioral change programs. Capture verifiable savings from behavioral change products.
5. Assist our residential customers with behavior based solutions for reducing energy consumption.

Results Overview

The conservation results of the BBEE pilot program were overwhelmingly successful. That said, the path to achieve that success was filled with challenges, hurdles and frustrations. The pilot program was the first time the utility communicated with customers using energy reports and, while anticipated, we did receive mixed customer and staff feedback throughout the process. Through team work, dedication and proactive management success was the final result of the pilot. Beyond a successful pilot we also learned a significant number of lessons with regards to communicating with our customer base.

The Clark Public Utilities pilot resulted in significant energy savings derived from the launch of the home energy reports almost immediately. Savings results, as reported by O-Power, exceeded estimates both on a monthly basis and in aggregate. The actual savings per household as measured by a percentage of total consumption also exceeded O-Power expectations. We saw great success with customers interacting with the O-Power web portal; higher than average activity was measured in total volume of users of the web portal, time length on the web portal, number of page views and number of “tips” selected.

Conversely, we did not see the same success with the Social Energy Facebook platform. Initial customer interest was limited and those who signed up did not engage further in the application. Staff supported the launch with marketing focused on savings competitions for the social media platform as recommended by O-Power, but the program failed to gain momentum.

Key Lessons Learned

Several key lessons were learned while running the BBEE pilot:

- Proactive training, prior to launch, with customer service staff and other staff who could potentially interface with pilot participants is vital to a successful program. A quick summary will not properly prepare staff for the questions and difficult conversations that are sure to arise. Training must be thorough and done across customer facing departments.
- There is a demographic of customers who will become very upset when receiving the home energy report; preparation to deal with this customer segment is key to success.
- Specific language within home energy reports was predicted to make or break the program. O-Power asserted, based on research, using words like “neighbor” rather than “similar home” plays an important factor in emotional triggers that result in energy savings. Ultimately we found little difference in energy savings but a significant decrease in customer opt-outs. This may or may not be unique to Clark Public Utilities’ service territory.
- A social media application requiring personal/utility account information sharing and permissions is not the best way to interact with customers regarding conservation, energy efficiency and behavioral change.

Recommendations for Future BBEE Pilots:

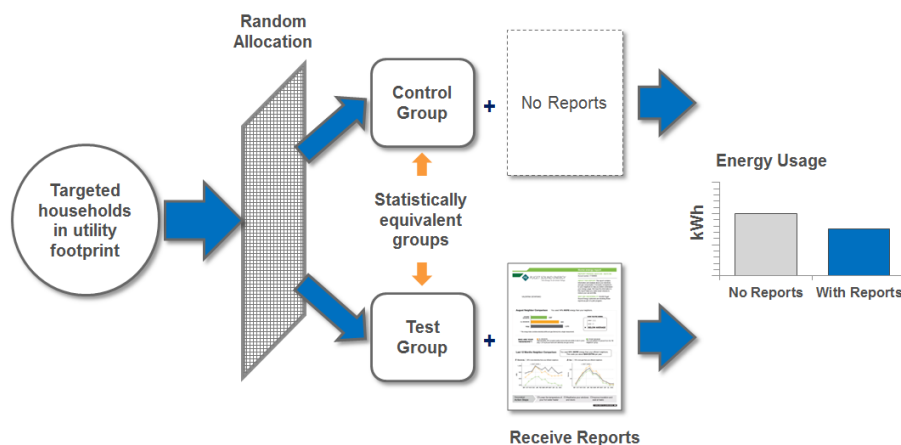
1. Begin training and preparation early; all staff who interact with the customer base should be properly trained on the program processes, details and reasons the organization is running such a program. Be prepared for the tough conversations that will be coming.
2. Clearly communicate with participating customers about the program. Clark Public Utilities delivered an explanation letter (see attachment A) to all customers receiving the home energy report. This letter explained what the home energy report product is, why Clark Public Utilities is participating in the program and what the utility can expect to achieve with the program. Clark Public Utilities program staff and senior management credit much of the pilot's success to this explanation letter.
3. Escalate upset and angry customers to the program manager or someone who is an expert on the program. Difficult customer situations can be mitigated but only with intimate program knowledge and confident customer communication skills.
4. BBEE programs are not for all customers; when a customer wishes to not participate in the program opt them out. Customers who are unsure about the program will often agree to continue, but customers who are adamant the program is not for them should be removed upon request.
5. Identify and negotiate any customization your utility may require prior to signing a BBEE contract; changes after the program launch are challenging and time intensive.
6. Be prepared to have utility Information Services and Communications staffs invest significant time in the early phases of the program.
7. Update customer's home profile at each and every opportunity to do so. Clark Public Utilities staff doing so greatly reduced customer anxiety with regards to the comparison portion of the reports.

Introduction

BBEE Pilot Overview

The Clark Public Utilities BBEE pilot was designed with a two prong approach aimed at influencing customers' behavior resulting in energy conservation. The primary strategy was to begin a two year home energy report program with 20,000 residential accounts. O-Power was hired to deliver its home energy report product on an every-other month cadence. Recipients received six paper reports via USPS each program year. An additional 10,000 residential customers were selected as the "control group" which was necessary in order to properly exercise the Experimental Design measure and verification process.

Experimental Design:

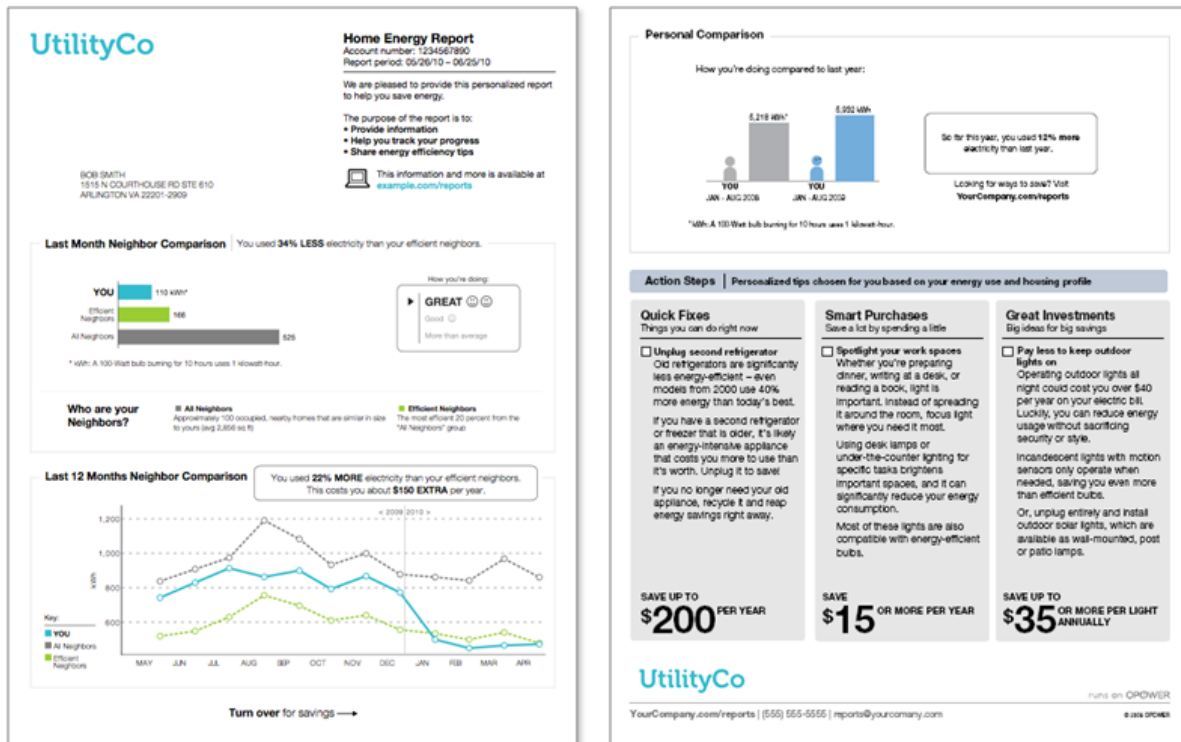


The secondary strategy was to employ a social media platform aimed at influencing customers' behavior through awareness and engagement resulting in energy conservation. O-Power provided a Facebook application, Social Energy, which was launched and promoted to the entire residential sector. The communications team at Clark Public Utilities developed several promotions and challenges for customers to participate in. The utility Facebook account and employee newsletter was utilized in the promotion of these challenges and employees were heavily encouraged to participate in order to generate interest and word of mouth.

BBEE Pilot Design

Clark Public Utilities implemented the standard O-Power home energy report in the *off the shelf* form. At the start of the program, the O-Power product lacked flexibility and allowed for little customization. Utilities now have more options for customization of the report, in part due to feedback provided to O-Power throughout this pilot.

Home Energy Report example:



Home Energy Report Delivery Cadence (program year 1):

1. September 2012 (Launch, 1st report)
2. November 2012
3. January 2013
4. March 2013
5. May 2013
6. July 2013

Participating customers were given the option to receive home energy reports via email rather than a hard copy through the US mail. Customer service staff was asked to promote the email option and encourage

customers to take advantage of the alternative delivery method. Staff recognized early that direct mail is counterintuitive to a conservation program and the option to receive the reports via email helped to mitigate this issue with concerned customers.

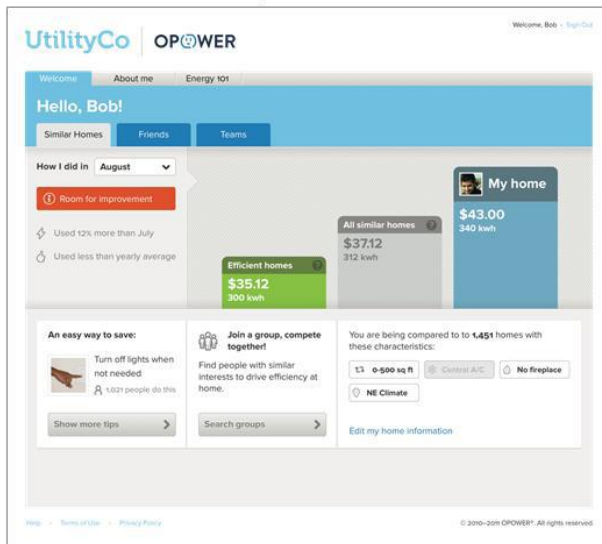
Social Energy Pilot

Beginning in September, 2012 the Social Energy Facebook application was available to the entire residential sector. A promotion plan to raise awareness and motivate participation is attached. It was clear early in the development that there were significant barriers to participation. These concerns were communicated to O-Power prior to the launch but Clark Public Utilities agreed to launch and promote the application as a test. Concerns included:

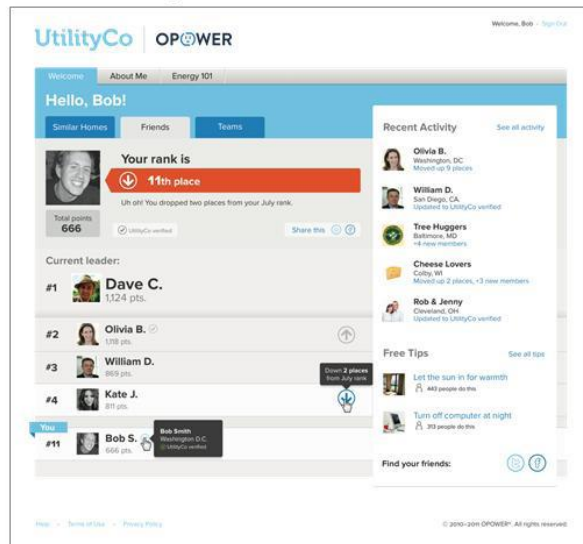
1. Participation required significant sharing of information and permissions between the utility account holder and the Facebook application.
2. Only the account owner is eligible to participate, multiple members of the same household cannot use the application.
3. The effort to engage is high. Participants must be actively participating in ways unlike other successful Facebook apps at the time.

Social Energy Screenshot:

Similar Home Comparison



Friend Comparison



The graphic features the OPOWER logo in blue, with the letter 'O' containing a stylized smiley face. Below the logo, the text asks, "Do you use more or less energy than your Facebook friends?" and provides the website "social.opower.com". A tagline at the bottom reads, "Join to compare, share, compete, and save." The illustration shows a yellow house on a green hill with a utility pole and a tree, and two blue buildings of different heights on another green hill. Callout bubbles above each building indicate energy usage: 480 kWh for the house, 350 kWh for the medium building, and 200 kWh for the tall building. The background includes light blue clouds.

OPOWER

Do you use more or less energy than your Facebook friends?

Find out on social.opower.com

Join to compare, share, compete, and save.

480 kWh

350 kWh

200 kWh

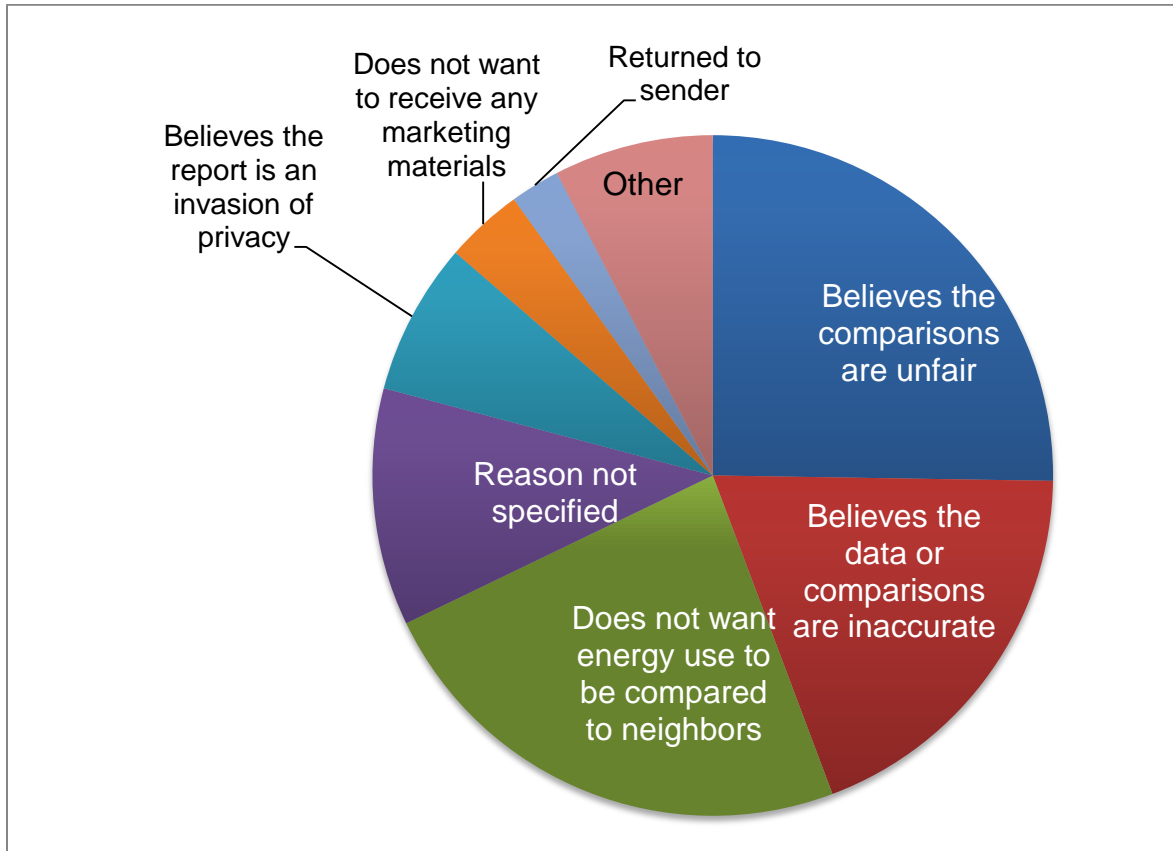
BBEE Pilot Goals

As outlined in the executive summary, the goals of the BBEE pilot were focused on developing a method to measure, verify and report behavioral based energy conservation. Like most utilities, Clark Public Utilities has been promoting behavior change for a very long time. Implementing the O-Power home energy report program provided an opportunity to capture those savings as part of the utility's planned conservation.

Further, program goals included gathering information and learning how to best communicate with our customers when discussing behavior change. The pilot provided an opportunity to compare engagement between a more traditional platform like the home energy report and an interactive digital platform like Social Energy.

Lastly, by examining customer feedback we knew we would gain additional perspective on how our customers feel about conservation programs. We utilized the "opt-out" data O-Power provided to gain insights into customer sentiment regarding BBEE products.

Opt-Out Data:



Implementation Lessons Learned

1. Proactive training is a key to success. In preparation for the BBEE pilot utility staff understood extensive training would be needed in order to launch and run a successful program. Staff did not realize how extensive that training should be, however. Customer service teams were given in depth training from PowerPoint presentations and O-Power provided training material. Supervisors in the Customer Service teams received additional and more in-depth training. The additional training proved to be instrumental in mitigating customer concerns and would have been extremely beneficial to provide the more in-depth training to all customer service staff.
2. Specific language used within the home energy reports is crucial to triggering emotion, program results and customer satisfaction. The word “neighbor” was found to be highly effective in

triggering emotion which in turn triggers action. That said, when emotions are triggered it should be expected that customers will contact the utility and on occasion air their emotions whether positive or negative.

3. BBEE programs simply are not for all your customers. There is a demographic of customers who will be personally insulted just by receiving the home energy report. The reports can be seen as a utility overreach, even described as “big brother” on occasion. It is important to mitigate these customers concerns by fully explaining the use of public data, privacy policies and program goals. When a customer chooses to not participate or has an objection to the program based on their values, simply remove them from the program and stay positive; it’s impossible to please everyone.
4. Few utility customers are interested in participating in conservation programs that are run via a social media platform. While the idea of running a social media conservation program sounds exciting and cutting edge, the amount of information sharing and permissions involved in accessing the customer’s energy use created far too many barriers to participation. The utility raised these concerns early on but was willing to offer the social product as a test. One benefit is that it provided a way to participate in the program if the customer was interested but not selected to receive home energy reports. This occurrence was very rare but on occasion a customer requested home energy reports and was directed to the Social Energy application as an alternative.
5. Comparisons are more accurate when customers update their home profile using the O-Power portal. Every time a customer calls into the utility it is an opportunity to update the home profile and make the reports more relevant and useful.

Mid-Course Corrections

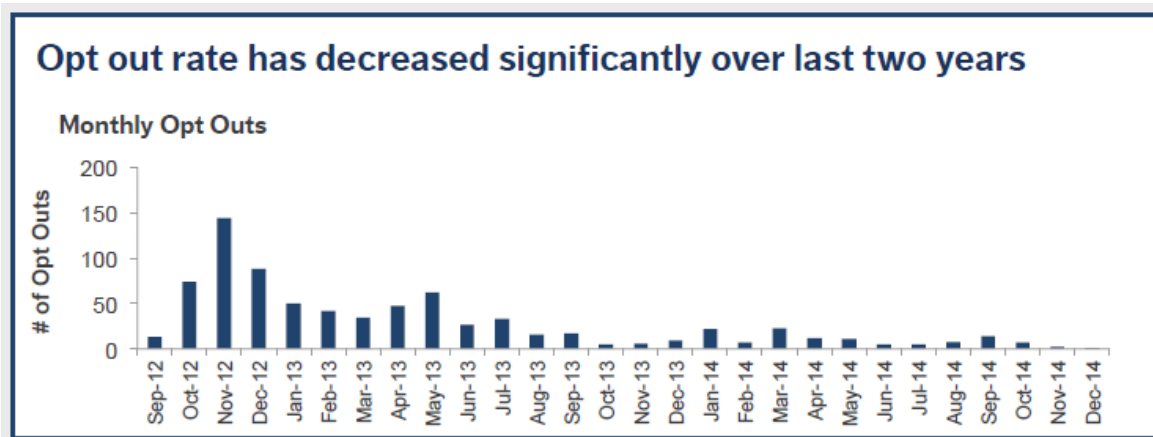
Clark Public Utilities’ staff implemented two significant mid-course corrections during the first program year of the BBEE pilot. The first action was taken after the first home energy report was delivered to the participants. We saw an immediate spike in customer calls to the utility and it became clear most of the customers calling were either upset about the program or confused about the program. Therefore, the communications staff drafted an “explanation letter” that was delivered to all customers receiving the home energy reports. (Attachment A)

The focus of the letter was to explain what exactly the program consists of, why the utility was pursuing the program and how the program was designed to benefit the customer. In an attempt to

proactively identify customer concerns and answer those concerns we were able to greatly reduce the number of customer apprehensions and calls to the utility.

Additionally, the letter provided an opportunity for the utility to communicate to participants in its own voice since the language/tone of the home energy reports was unlike any other materials generated by the utility.

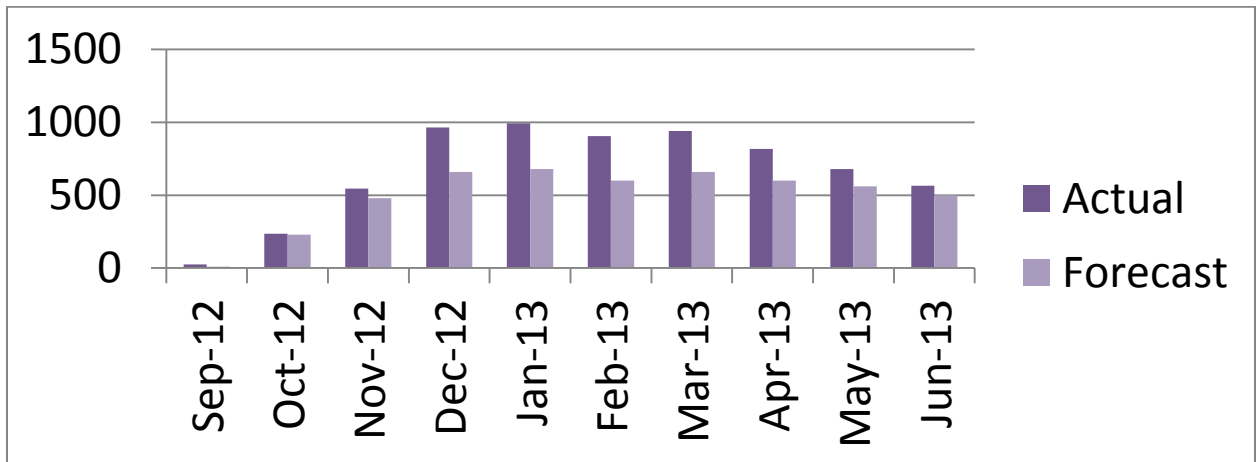
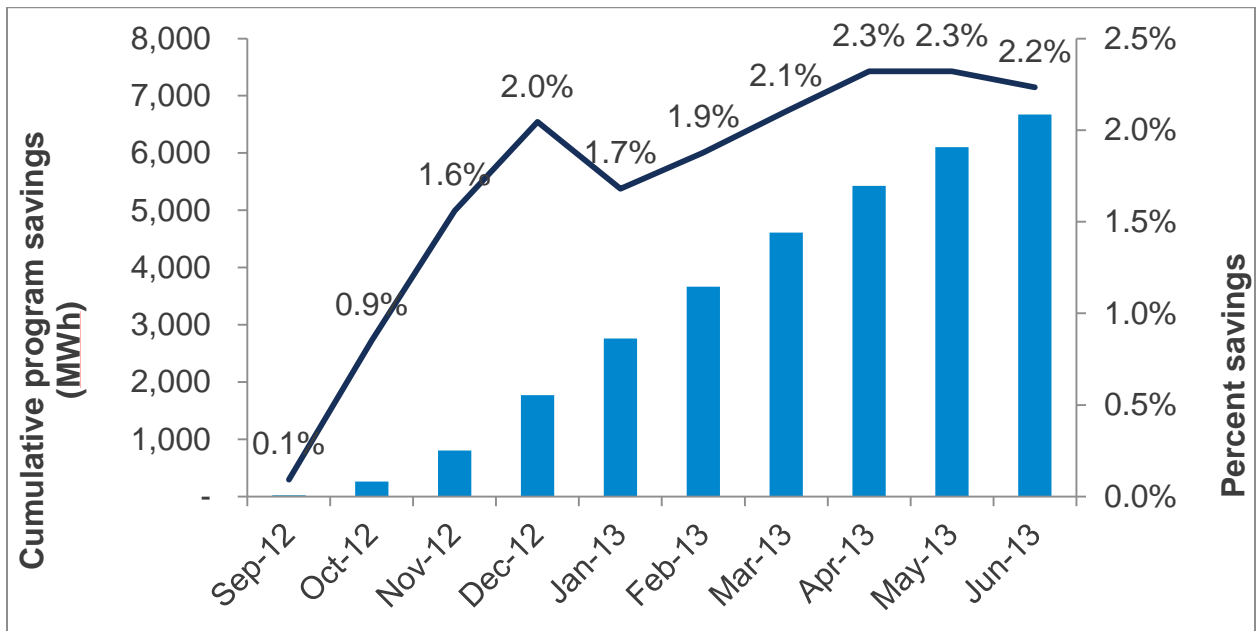
The second mid-course correction Clark Public Utilities implemented was a rhetorical change to the home energy report itself. The home energy reports were launched with all comparisons being referenced to “neighbors” and we found this specific word caused a significant amount of confusion for customers. Customers often called the utility to explain why the neighbor across the street uses less energy than their household and, therefore, why the report was inaccurate and not useful. In reality, the term neighbor was used to describe similar homes with regards to location, size, the number of occupants, heating fuel and system and year constructed. Once we identified the confusion point we requested O-Power change all mentions of “neighbor” to “similar home”. Almost immediately we noticed a decrease in customer calls and when customers did call their main concern was no longer around the homes they were being compared to and more focused on the program itself. O-Power warned us we may see a decrease in savings due to the change but that decrease never materialized. Utility staff remains convinced the rhetorical change was a positive change that increased participation and customer satisfaction.



Results

Clark Public Utilities and BPA entered into a contract requiring BPA to provide a third party evaluation of the program results. O-Power provided annual savings data and results and the third party evaluator would evaluate the validity of O-Power's results.

Program Year 1 – O-Power Results:



Within one program year the cumulative savings total neared 7 million annual kWh. In order to achieve that level of savings using other conservation measures would have been significantly more expensive.

One program year of BBEE Home Energy Reports, or:

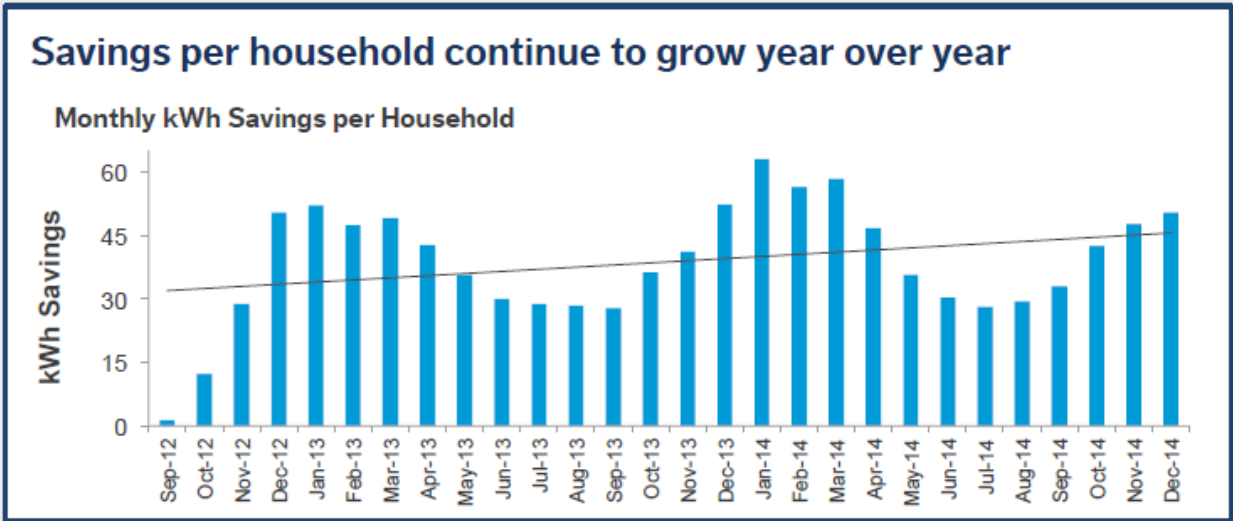
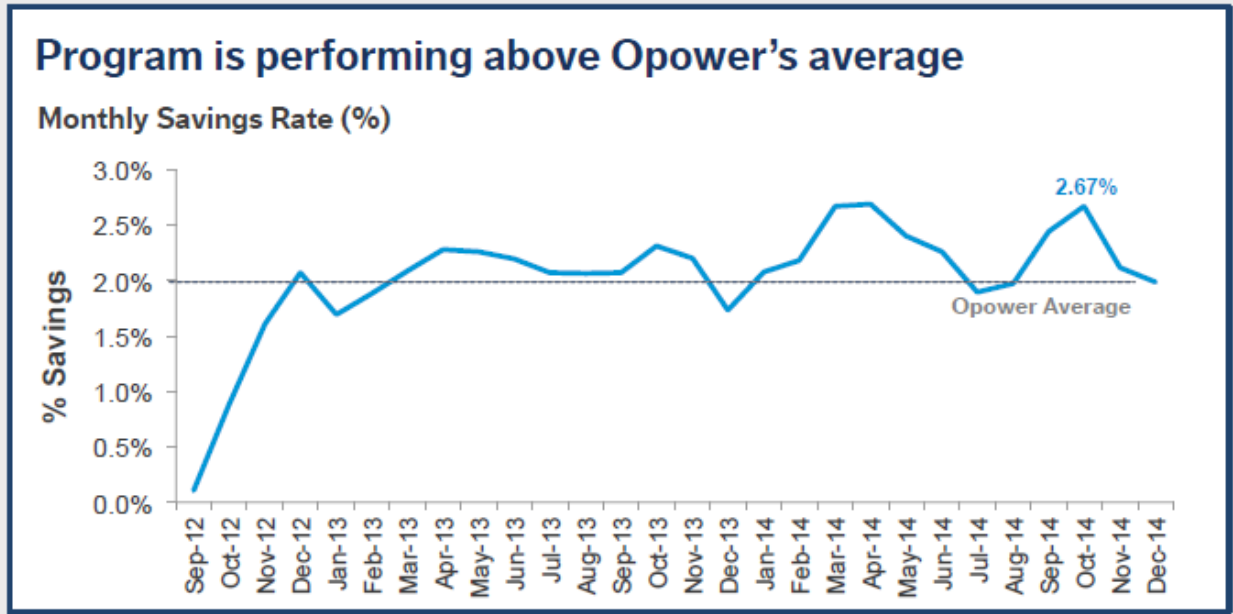
- 1,755 duct-less heat pumps installed at a utility cost of \$1,755,000
- 2,517 attics insulated from R-0 to R-38 at a utility cost of \$1,006,800
- 5,731 duct-sealing jobs at a utility cost of \$2,865,500

Simply put, the BBEE home energy report program is a cost effective conservation measure.

With regard to customer interaction with the O-Power web portal we saw above average participation during the first program year:

-  Unique Visitors 1,807
-  Average Time on Site 7:55
-  Average Page Views 10.75
-  Tip Actions 5,307

Program Year 2 – O-Power Results:



Digital engagement is strong but there is opportunity to grow

Channel	Clark PUD	Opower Avg
Web Visitors Taking Online Action	87%	64%
Open Rate by Email Recipients	62%	46%
Click through Rate by Email Recipients	7%	4%

Third Party Evaluation

BPA contracted with Navigant to perform the third party evaluation for Clark Public Utilities' BBEE pilot program (program years 1 & 2). That evaluation is currently underway and scheduled to be complete in the spring of 2015.

Preliminary draft results from Navigant:

1. Preliminary results show greater savings than O-Power reported.
2. Program Year 1: 1.89% Savings
3. Program Year 1: 7,844 MWh
4. Program Year 2: 2.23% Savings
5. Program Year 2: 9,027 MWh

Program Results to Date (via O-Power):

- 19.3 GWh
- \$1,572,284 in utility bill savings
- Clark Public Utilities continues to see a higher than average household savings rate

Attachment A – Explanation Letter



Commissioners

Nancy E. Barnes
Carol J. Curtis
Byron H. Hanke

*Chief Executive Officer/
General Manager*

Wayne W. Nelson

CUSTOMER
ADDRESS

Dear XXX,

By now you've likely received your first Home Energy Report from Clark Public Utilities. If you've been curious, we hope this letter answers any questions you may have about the program.

The Home Energy Reports are part of Clark Public Utilities' ongoing effort to help customers learn more about energy use and ways to lower monthly energy bills. The program also helps us comply with the voter-enacted Washington State Initiative 937, requiring electric utilities to pursue all cost-effective energy conservation measures. Other utilities across the country have found Home Energy Reports to be an affordable and successful way to meet both of these goals.

Common questions you might have are:

- 1) When you say "neighbors" are you talking about the people right next door?
- 2) Where did this information come from, is it confidential?
- 3) What can I do if the comparison is incorrect or there are reasons why my usage is higher?

In these reports, "neighbors" means other homes in the general area that are similar in size, have the same heating type and have similar features (e.g. a pool or fireplace). The data is gathered from public sources, remains confidential and incorrect information can easily be updated online so future comparisons you receive are more accurate and useful. For instance, if you have a larger family your profile can be changed to reflect more people living in the home.

The goal is to help customers who may think they've done all they can to cut energy waste or may not have thought it was possible to pay less for power without sacrificing comfort. These reports are customized for your home with specific tips you might not have tried yet.

If you haven't already, we encourage you to log on at clarkpublicutilities.com/energyreports and update your home information to make future comparisons more accurate. For help updating your home information or to stop receiving reports, please call 360-992-3000 or email energyreports@clarkpud.com.

We hope the reports are useful and provide ideas for lowering your bill as winter approaches.

Matt Babbitts
Home Energy Reports program coordinator

Attachment B – Customer Service Response Letter



Commissioners

Nancy E. Barnes
Carol J. Curtis
Byron H. Hanke

*Chief Executive Officer/
General Manager*

Wayne W. Nelson

CUSTOMER
ADDRESS

Dear XXX,

Thank you for taking the time to call and talk with us about the Home Energy Report you recently received.

The Home Energy Reports are part of Clark Public Utilities' ongoing efforts to help customers reduce energy waste and lower energy bills. The program also fulfills part of the voter-enacted Washington State Initiative 937 requirements that utilities pursue all cost-effective energy conservation measures.

It is our hope that customers who receive the reports find them useful and informative. Based on a model used by electric utilities across the country, the reports use public record data to compare your energy usage with 100 other homes near yours of similar size and heating type.

Similar programs in other areas here in the Northwest have shown that knowing how usage compares to others can be helpful in finding new ways to reduce energy waste and lower the electric bill. The Home Energy Reports are a cost-effective way to provide this kind of information and can help illustrate savings in your home over time.

If you haven't already, we encourage you to log on to the website listed on your Home Energy Report and update your home information to make the comparison even more accurate. All your information is confidential and the purpose of the reports is only to help you learn more about your own energy use and make changes if you choose.

We hope the reports will be useful to you going forward. Thank you again for contacting us.

Customer Service
Clark Public Utilities

Attachment C – Social Energy Promotion and Engagement Plan



CURRENTS

Published monthly for the customer-owners of Clark Public Utilities

SEPTEMBER 2012

Find ways to cut waste on Facebook

Clark Public Utilities customers can now share and compare their energy use with friends on Facebook with a social energy app. Designed to provide you with a better sense of your home's energy use while fostering friendly competition, the app provides new ways to find and defeat energy waste and lower your bill.

The tool provides a new place to connect and converse around energy use and share tips and experiences you've had trying to use less. To get started, visit social.opower.com/cpu or search for the "Opower" app on Facebook and connect to your Clark Public Utilities account.

When you sign up you'll immediately see how your energy use compares to others, providing context for how efficient your home is versus other similar ones. Once you're in, you can use the tool to:

- Compare energy use to similar homes: Benchmark your home energy use against a national database of millions of homes. The comparison data is generalized, anonymous and completely private.



- Compare energy use among friends: Feeling competitive? Invite friends to compare their energy use against your own and share tips for reducing energy waste.
- Form a team: Families, friends, neighbor and coworkers can form teams to achieve collective goals or compete against other groups. Lower your use and everyone wins!

The result of a partnership between Opower, Facebook, and the Natural Resources Defense Council, the social energy app is being offered as a new way for customers to get further engaged in their energy use and cut unnecessary energy costs. The program is funded in part through the Bonneville Power Administration as a pilot to evaluate new methods for encouraging behavior changes resulting in energy conservation.

It's not replacing any existing tools we use to help customers increase efficiency at home. If you've never considered energy conservation before, or have made so many changes you aren't sure what to do next, this tool could help you take the next step in reducing wasted energy and spending only what you need to on electricity each month. ♦



LIGHT LINES

LEARN ABOUT SOLAR ENERGY

The Washington Solar Tour invites you to see first-hand how solar energy can be comfortable, practical, and affordable. The tour of various renewable energy projects starts at 10 a.m. on Saturday, October 6, with a brief presentation in our community room located at 1200 Fort Vancouver Way. Learn energy efficiency strategies and methods. Self-guided tour books are \$5 and will be available the day of the event until 1 p.m. You can tour the homes until 4 p.m.

Tour stops will have the project owner or an expert available to answer questions. You can talk with them about how the technology works, what it costs, and when it makes sense.

This year's tour features solar water heaters and solar panel generators. For more information, call us at 360-992-3355.



TO CONTACT CLARK PUBLIC UTILITIES

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360-992-3400

TO REPORT
POWER OUTAGES:
360-992-8000

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mailbox@clarkpud.com

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www.clarkpublicutilities.com

Attachment C – continued “Social Energy”

The image shows the top portion of the Clark Public Utilities website. At the top left is the Clark Public Utilities logo. To its right are two images: a waterfall and wind turbines. Below these is a navigation bar with links: MY ACCOUNT, YOUR HOME, YOUR BUSINESS, PAYMENT OPTIONS, OUR ENVIRONMENT, COMMUNITY INVOLVEMENT, and 828. A search bar is located to the right of the navigation bar. Below the navigation bar is a green banner with the text "WELCOME TO CLARK PUBLIC UTILITIES" and three sub-links: ABOUT US, CONTACT US, and JOB OPPORTUNITIES. The main content area is divided into two columns. The left column has a heading "What would you like to do?" followed by a list of links: View My Account information or make a payment online, Explore payment options, Learn about paperless bills and online payments through My Account, Start, stop or transfer service, Find out about incentives for energy conservation, and Get prepared in case of power outages. Below this is a section titled "Learn ways to cut energy waste!" with a paragraph of text and a link to a home energy calculator. The right column features a large graphic for "OPower" with the tagline "Compare, Share, Compete, & Save". The graphic includes a house and a building with energy usage icons. Below the graphic is a "Try it now" button and a paragraph of text about Facebook friends and energy waste.

The image shows the header and navigation bar of The Columbian website. On the left is the The Columbian logo. To its right is the weather information: 46° and Clark County, WA Weather Blog. On the far right is a traffic light icon. Below the logo and weather information is a navigation bar with links: News, Sports, Business, Life, Opinion, Blogs, Community, Obituaries, and Find a Bus. Below the navigation bar are two sub-links: Staff Blogs and Community Blogs.

Energy Adviser: Cut waste with app for social energy

Thursday, August 30, 2012
Recommend 0 Send Tweet 2 +1 2 Pin Digg submit

Starting in September, residents of Clark County will have a new way to help cut down on energy waste at home.

For most of us, the monthly electric bill isn't a big surprise and usage is comparable to the month or the year before. What we probably don't know is how that compares to others, which can be a great tool for finding out new ways to track down and defeat energy waste.

The image shows a Facebook post from Clark Public Utilities. The post is dated October 10 and features a link to the Opower website. The text of the post reads: "Looking for ways to lower your electric bill? Team up with friends, coworkers or family members to bring down your bill this year. Cut energy waste by 3% and prove to your Facebook friends it's possible to outsmart energy waste." Below the text is a small graphic for Opower with the URL social.opower.com and a description: "See how your energy use stacks up against friends and homes across the US. Join groups and discover how you can save even more." At the bottom of the post, there are links for Like, Comment, and Share, and a notification that 112 people saw this post.

